



TELEGRAM CHANNEL: <https://t.me/patrioticIAS>
YOUTUBE CHANNEL: <https://www.youtube.com/@PatrioticIAS>
CONTACT: 9971932488



PATRIOTIC IAS

DAILY CURRENT AFFAIRS

THE HINDU NEWSPAPER

08 JUNE 2026

YouTube link: <https://www.youtube.com/@PatrioticIAS>

Telegram Channel: <https://t.me/patrioticIAS>

PCS Special:		08 June 2026
08J6	Modi congratulates Major Abhilasha Barak on UN Award मोदी ने मेजर अभिलाषा बराक को संयुक्त राष्ट्र पुरस्कार मिलने पर बधाई दी	
08J6	QUIZ	



PCS

Modi congratulates Major Abhilasha Barak on UN Award

Prime Minister Narendra Modi on Sunday congratulated Major Abhilasha Barak on being conferred the UN Military Gender Advocate of the Year Award and said the honour is a recognition of her exemplary service and also of India's longstanding contribution to the United Nations peacekeeping efforts. Major Barak, currently serving with the United Nations mission in Lebanon, has been honoured with the award for her outreach efforts with women and girls during her deployment in the West Asian nation. She is also the first woman combat helicopter pilot of the Indian Army. PTI

08J6. Modi congratulates Major Abhilasha Barak on UN Award

मोदी ने मेजर अभिलाषा बराक को संयुक्त राष्ट्र पुरस्कार मिलने पर बधाई दी

• Prime Minister Narendra Modi on Sunday congratulated Major Abhilasha Barak on being conferred the UN Military Gender Advocate of the Year Award and said the honour is a recognition of her exemplary service and also of India's longstanding contribution to the United Nations peacekeeping efforts.

रविवार को प्रधानमंत्री नरेंद्र मोदी ने मेजर अभिलाषा बराक को यूएन मिलिट्री जेंडर एडवोकेट ऑफ द ईयर अवार्ड से सम्मानित किए जाने पर बधाई दी और कहा कि यह सम्मान उनकी उत्कृष्ट सेवा तथा संयुक्त राष्ट्र शांति स्थापना प्रयासों में भारत के दीर्घकालिक योगदान की भी मान्यता है।

• Major Barak, currently serving with the United Nations mission in Lebanon, has been honoured with the award for her outreach efforts with women and girls during her deployment in the West Asian nation.

मेजर बराक, जो वर्तमान में लेबनान में संयुक्त राष्ट्र मिशन के साथ सेवा दे रही

हैं, को पश्चिम एशियाई देश में अपनी तैनाती के दौरान महिलाओं और लड़कियों के साथ किए गए जनसंपर्क प्रयासों के लिए इस पुरस्कार से सम्मानित किया गया है।

- She is also the first woman combat helicopter pilot of the Indian Army. वह भारतीय सेना की पहली महिला कॉम्बैट हेलीकॉप्टर पायलट भी हैं।

Questions and Answers to the previous day's daily quiz:

1. What was the name of the World Cup before it was changed to the FIFA World Cup Trophy since 1974? Ans: Jules Rimet trophy

2. Who scored the first-ever goal in World Cup Football history? Ans: Lucien Laurent of France

3. Which country has taken part in all 22 editions of the Football World Cup held so far? Ans: Brazil

4. Which country has the dubious distinction of having played the World Cup final the most times yet still to win it on a single occasion? Ans: Netherlands (3) – 1974, 1978 & 2010

5. Which country has reached the semi-finals the most times in World Cup history? Ans: Germany (12 times – played as West Germany before unification)

Visual: Identify this player who holds a unique record in World Cup history of having played in three consecutive finals? Ans: Cafu, Brazil (1994-2002)

Early Birds: Prem Raj P. | Sadhan Panda | Prem Nath Tiwari | Keshav Raturi | Pulkit Sathe

08J6. QUIZ

1. What was the name of the World Cup before it was changed to the FIFA World Cup Trophy since 1974?

Answer: Jules Rimet Trophy

• The original FIFA World Cup trophy was known as the Jules Rimet Trophy, named after Jules Rimet, the former FIFA President who played a key role in establishing the FIFA World Cup in 1930. Initially called "Victory," it was renamed in his honour in 1946.

• The trophy was awarded from 1930 to 1970. After Brazil won the World Cup for the third time in 1970, it received permanent ownership of the trophy. Consequently, FIFA introduced the FIFA World Cup Trophy in 1974, which continues to be awarded today.

2. Who scored the first-ever goal in World Cup Football history?

• The distinction of scoring the first goal in FIFA World Cup history belongs to Lucien Laurent of France. He achieved this landmark feat on 13 July 1930 during the inaugural FIFA World Cup held in Uruguay.

- Laurent scored against Mexico in the match played at Estadio Pocitos, Montevideo.
- France eventually won the game 4–1. His goal marked the beginning of World Cup scoring history and secured his place in football folklore as the first-ever World Cup goalscorer.



3. Which country has taken part in all editions of the FIFA World Cup held so far?

Answer: Brazil

- **Brazil** is the only nation to have participated in **every FIFA World Cup tournament** since the competition began in **1930**. As of the latest completed edition (**2022 FIFA World Cup**), Brazil has appeared in **all 22 editions** of the tournament.
- The country is also the most successful team in World Cup history, having won the title **five times** (1958, 1962, 1970, 1994, and 2002).

4. Which country has played the World Cup final the most times without ever winning it?

Answer: Netherlands

- The **Netherlands** holds the unfortunate record of reaching the FIFA World Cup final the most times without winning the tournament.
- The Dutch team finished as runners-up on **three occasions** — in **1974, 1978, and 2010**. In 1974 they lost to **West Germany**, in 1978 to **Argentina**, and in 2010 to **Spain** after extra time.

5. Which country has reached the semi-finals the most times in World Cup history?

Answer: Germany

- **Germany** holds the record for the highest number of **FIFA World Cup semi-final appearances**.
- Including appearances as **West Germany** before reunification and as unified Germany thereafter, the nation has reached the semi-finals **13 times** (updated after the 2022 World Cup cycle).
- Germany's remarkable consistency has also translated into **four World Cup titles** (1954, 1974, 1990, and 2014) and multiple runner-up finishes.

GS Paper 1: Society		08 June 2026
TOPICS COVERED		
08J6	A targeting in the name of demography जनसांख्यिकी के नाम पर लक्षित कार्रवाई	
08J6	A movement losing momentum and daughters गति और बेटियों दोनों को खोता एक आंदोलन	



A targeting in the name of demography

SS I: Society

SS III: Economy

India is on the cusp of a demographic upheaval. Fertility rates across the country have been falling for decades and are now on or below replacement levels. We will soon have to shift from the challenges of finding jobs for the youth bulge to preparing to care for an ageing population.

You would not think so looking at the Terms of Reference (ToRs) of the High-Level Committee on Demographic Change that the government constituted at the end of May. The ToRs are peppered with the need to address "illegal immigration" and border management. Home Minister Amit Shah said on the social media site X while announcing the formation of the committee that "illegal infiltration and other reasons leading to Unnatural Demographic Change is a very big challenge for the present and future of any nation." It is no wonder that the committee does not have a single demographer to guide its work. Its chairperson is a retired Supreme Court of India judge; it has a retired IAS officer and a retired IPS officer, the Census Commissioner and an economist.

The infiltration narrative expands

Using strong words about "infiltrators", the Prime Minister had announced the need for such a committee from the ramparts of Red Fort on August 15, 2025. Indeed, this was the culmination of years of building a mythology that undocumented (Muslim) migrants from Bangladesh are swamping the districts on the border, spreading across the country and influencing electoral outcomes. It was way back in 2018 that Amit Shah, then Bharatiya Janata Party (BJP) President, said that Bangladeshi migrants were termites. The mythology about hordes of immigrants has seeped into the citizen's consciousness and has served well the electoral purposes of the BJP.

It has worked very well in Assam during a couple of election cycles, and it was stunningly effective in West Bengal during the recent elections where the need to deal with "infiltration" was a central feature of the BJP campaign. It is perhaps time now to make it a nation-wide campaign aided by the recommendations of the Demographic Change Committee.

Given how the issue has been highlighted and framed, we can have a fair idea of what the recommendations of this committee will be. It is still important to understand why this has little to do with demographic challenges and is all about moving to the next stage of the "Othering" of India's minorities, especially Muslims.

To begin with, what is the evidence of large-scale undocumented immigration from Bangladesh? It is revealing that the only kind of official evidence we have so far of "demographic change" (i.e., immigration from Bangladesh



C. Rammanohar Reddy

Writer based in Hyderabad

affecting population size and composition) are observations by the Home Minister of large increases in the population of a few of the border districts. Highlighting such increases without reference to domestic migration or differential fertility behaviour among communities is not proof of undocumented immigration. It is instructive that studies that had been done by official agencies showing evidence of demographic change in the border districts were removed without explanation, according to a report in this daily ("Government proposal in 2024 for a panel on 'demographic challenges' never took off", August 16, 2025). We can only presume that they were deleted because they did not stand scrutiny.

This is not about undocumented migration

For decades there has indeed been cross-border migration between India and Bangladesh across what is an integrated riverine ecology. But given the economic transformation that has taken place in Bangladesh in recent decades, it would be hard to argue for economic distress driving large-scale migration from Bangladesh to India. India's neighbour is no "basket case" as it was derisively described decades ago.

According to World Bank data, Bangladesh's per capita income (in nominal dollar terms) grew faster than India during 2005-23 (10.4% versus 7.70% compound annual growth rate); it now has roughly the same income as India's. In purchasing power parity terms, India's growth is slightly higher. Both countries presently have roughly the same per capita income however measured, and both now have the same levels of human development, according to the UNDP's Human Development Index. But the change in Bangladesh has been much faster. Why then would there be migration to India of a scale that there should be talk of being swamped? There would certainly remain pockets of distress forcing the poor to consider migrating to India and the more skilled to West Asia. But we cannot find economic evidence to suggest waves of Bangladeshis being pushed by distress to migrate to India, ending up affecting jobs and electoral outcomes here.

Of course, all this is not about undocumented migration. All this is really a code for the place of Muslims in India and an acceleration of the social, economic and political discrimination of this community of Indian citizens that has taken place over the past 12 years. And here the government has given a more dangerous diktat to the committee. Item (iv) reads "to analyse structural population changes at the level of religious or social communities, particularly where they deviate from broader trends". This in particular is about the fertility behaviour of Muslims and "where they deviate from broader trends".

For a century now, the Hindutva campaign has

whipped up fears of Muslims overtaking Hindus in population.

This is now firmly impregnated in the minds of Hindus of all ages, classes, castes and regions. It is to be found in everyday social conversations, on social media of course, and it is expressed in less than thinly veiled terms during electoral campaigns.

When facts are ignored

It is tiresome to repeat the facts, but one has to, even when confronted by a wall of disinformation and prejudice. Yes, the share of Muslims in India's population has risen from 10% in 1951 to 14% in 2011, at the time of the last Census. Yes, in the past, the Muslim community on a whole has shown a higher fertility than the Hindus and other religious denominations. This has been on account of its poorer economic status, lower education of women and perhaps even religious beliefs. However, fertility among Muslim women has begun falling rapidly, with the result that the gap between Muslims and Hindus has narrowed and will soon disappear. On the desired number of children that women want to have, there is now almost no difference between Hindus and Muslims. So much for Muslims now having more children than Hindus. And to repeat what is well-known, the best example of why religion is not the determinant of fertility behaviour: Muslim women in Tamil Nadu, Kerala and Jammu and Kashmir exhibit lower fertility than the Hindu women of Bihar and Uttar Pradesh. Poverty and education matter more. This is the deviation that needs to be addressed, not fertility behaviour according to religion.

To speak then about Muslim fertility "deviating from broad trends", as one of the ToRs of the committee indicates, is to ignore the facts on the ground and fall back on familiar tropes about the behaviour of this minority, giving official validation of age-old misinformation.

We cannot escape from the realisation that this committee is being asked to recommend steps to target minorities under the cover of checking undocumented migration. After all, we have already become an inhumane society where, according to reliable reports, government agencies have flown Rohingya refugees from Delhi to the Andamans and then pushed them into the sea with life jackets. So when the Demographic Change Committee is asked "to recommend a streamlined and permanent operational mechanism for the legal, fair, and time-bound identification, detention, and deportation of illegal immigrants already residing in the country", there is a chilling similarity between the language of this "permanent operational mechanism" and the "Final Solution" practised in 1940s Europe.

We should not say we have not been forewarned.

The Demographic Change Committee may become a platform to institutionalise the targeting of minorities

08J6.A targeting in the name of demography

जनसांख्यिकी के नाम पर लक्षित कार्रवाई

- It is no wonder that the committee does not have a single demographer to guide its work. यह आश्चर्य की बात नहीं है कि समिति के कार्य का मार्गदर्शन करने के लिए उसमें एक भी जनसांख्यिकी विशेषज्ञ नहीं है।
- Its chairperson is a retired Supreme Court of India judge; it has a retired IAS officer and a retired IPS officer, the Census Commissioner and an economist. इसके अध्यक्ष भारत के सर्वोच्च न्यायालय के एक सेवानिवृत्त न्यायाधीश हैं; समिति में एक सेवानिवृत्त आईएस अधिकारी, एक सेवानिवृत्त आईपीएस अधिकारी, जनगणना आयुक्त तथा एक अर्थशास्त्री शामिल हैं
- According to World Bank data, Bangladesh's per capita income (in nominal dollar terms) grew faster than India during 2005-23 (10.4% versus 7.70% compound annual growth rate); it now has roughly the same income as India's.

विश्व बैंक के आंकड़ों के अनुसार, 2005-23 के दौरान बांग्लादेश की प्रति व्यक्ति आय (सांकेतिक डॉलर के आधार पर) भारत की तुलना में अधिक तेज़ी से बढ़ी (10.4% बनाम 7.70% चक्रवृद्धि वार्षिक वृद्धि दर); अब उसकी आय लगभग भारत के समान है।

- In purchasing power parity terms, India's growth is slightly higher.
क्रय शक्ति समता (PPP) के आधार पर भारत की वृद्धि दर थोड़ी अधिक है।
- Both countries presently have roughly the same per capita income however measured, and both now have the same levels of human development, according to the UNDP's Human Development Index.
मापन की किसी भी पद्धति से देखें, वर्तमान में दोनों देशों की प्रति व्यक्ति आय लगभग समान है, और यूएनडीपी के मानव विकास सूचकांक के अनुसार दोनों का मानव विकास स्तर भी समान है।
- Yes, the share of Muslims in India's population has risen from 10% in 1951 to 14% in 2011, at the time of the last Census.
हाँ, अंतिम जनगणना के समय भारत की जनसंख्या में मुसलमानों की हिस्सेदारी 1951 में 10% से बढ़कर 2011 में 14% हो गई थी।
- Yes, in the past, the Muslim community on a whole has shown a higher fertility than the Hindus and other religious denominations.
हाँ, अतीत में समय रूप से मुस्लिम समुदाय ने हिंदुओं तथा अन्य धार्मिक समुदायों की तुलना में अधिक प्रजनन दर प्रदर्शित की है।
- However, fertility among Muslim women has begun falling rapidly, with the result that the gap between Muslims and Hindus has narrowed and will soon disappear.
हालाँकि, मुस्लिम महिलाओं में प्रजनन दर तेज़ी से घटने लगी है, जिसके परिणामस्वरूप मुसलमानों और हिंदुओं के बीच का अंतर कम हो गया है और शीघ्र ही समाप्त हो जाएगा।
- On the desired number of children that women want to have, there is now almost no difference between Hindus and Muslims.
महिलाएँ जितने बच्चे चाहती हैं, उस वांछित संख्या के संदर्भ में अब हिंदुओं और मुसलमानों के बीच लगभग कोई अंतर नहीं रह गया है।
- And to repeat what is well-known, the best example of why religion is not the determinant of fertility behaviour: Muslim women in Tamil Nadu, Kerala and Jammu and Kashmir exhibit lower fertility than the Hindu women of Bihar and Uttar Pradesh.
और यह दोहराना आवश्यक है कि धर्म प्रजनन व्यवहार का निर्धारक नहीं है; इसका सर्वोत्तम उदाहरण यह है कि तमिलनाडु, केरल और जम्मू-कश्मीर की मुस्लिम महिलाएँ, बिहार और उत्तर प्रदेश की हिंदू महिलाओं की तुलना में कम प्रजनन दर प्रदर्शित करती हैं।
- Poverty and education matter more.
गरीबी और शिक्षा अधिक महत्वपूर्ण कारक हैं।
- So when the Demographic Change Committee is asked "to recommend a streamlined and permanent operational mechanism for the legal, fair, and time-bound identification, detention, and deportation of illegal immigrants already residing in the country", there is a chilling similarity between the language of this "permanent operational mechanism" and the "Final Solution" practised in 1940s Europe.
इसलिए जब जनसांख्यिकीय परिवर्तन समिति से "देश में पहले से रह रहे अवैध प्रवासियों की कानूनी, निष्पक्ष और समयबद्ध पहचान, निरुद्धीकरण तथा निर्वासन हेतु एक सुव्यवस्थित और स्थायी परिचालन तंत्र" की सिफारिश करने को कहा जाता है, तो इस "स्थायी परिचालन तंत्र" की भाषा और 1940 के दशक के यूरोप में अपनाए गए "फाइनल सॉल्यूशन" के बीच एक भयावह समानता दिखाई देती है।

A movement losing momentum and daughters

Launched by PM Modi in Panipat in 2015, the Beti Bachao, Beti Padhao campaign initially delivered strong results. Haryana's Sex Ratio at Birth rose from 838 in 2010 to 923 by 2019, driven by strict raids on pre-natal testing centres, inter-State crackdowns, monthly video conference reviews, and fixed accountability. However, data for the first four months of 2026 show that the number of girl babies born has dipped below 900, sparking fears that the programme is losing focus and momentum, reports **Ashok Kumar**

At 31, Bijli Devi weighs just 44 kg. Weak and pregnant, she has come to Katlupur sub-centre in Sonapat district for a routine vaccination. The doctor has flagged her pregnancy as high risk. This is her seventh in 12 years. She has six daughters, 2 to 12. "I have little choice," she says. Her husband, an agricultural labourer, and in-laws want a son. She doesn't know what will happen if the seventh is a girl too. Her two oldest daughters have dropped out of school. They now work as farm labourers alongside their father. "We never went for sex-determination," Bijli Devi adds. "We don't have the means." A sex-determination test, illegal in India, costs ₹50,000-60,000 on the black market.

In May this year, a secret sex-determination racket, running in the middle of Gurugram, was busted. At Aay Hospital in Hari Nagar, a mere 2 kilometres north of Sector 37 police station, along the frenetic arterial stretch of Khandas Road off the Delhi-Jaipur Highway, sleuths dismantled a syndicate peddling prenatal genetic testing. Arrested consultant radiologist Manjit Kumar would allegedly conduct the sex-determination test for ₹40,000.

Here, in the pulsating heart of the Millennium City, directly opposite the cacophonous Sector 10A market, thrived the illicit sex-determination centre. This, more than a decade after the clamour call of "Beti Bachao Beti Padhao" (BBBP) echoed from Panipat, more than a thousand surgical raids executed, and upwards of 4,000 miscreants incarcerated.

The bust wasn't just about catching criminals. It exposed a deeper failure: the slow collapse of monitoring and the fading fear of law among offenders. For the enforcement teams, the brazenness of it all was a jolt.

The rupture surfaced against an ominous backdrop: Haryana's Sex Ratio at Birth (SRB) has plummeted to 898 girls per 1,000 boys in the first four months of 2026. Only four of the 23 districts — Nuh, Rewari, Sonapat, and Panchkula — breached the 900 mark. At the bottom of the table, Charkhi Dadri recorded 768 girls per 1,000 boys. Since BBBP's inception, annual SRB figures had ascended, cresting at 923 in both 2019 and 2025.

The May raid revealed an uncomfortable truth. Between the gap of slogans and supervision lies the old persistent practice of eliminating female foetuses.

Lost focus and direction
In May, another sex-determination racket at Leelawati Hospital in NIT Faridabad was also busted. The accused, Om Prakash, was not a doctor. A senior secondary pass-out, he ran the centre out of a room, used a foetal doppler, a handheld ultrasound tool used to listen to a baby's heartbeat, for sex-determination, fooling desperate parents seeking sons. The hospital sits a stone's throw from the district's Chief Medical Officer's office.

Sex-determination centres running openly in metro cities, along with the SRB slide, signal that a programme which once raised hope of fixing the skewed ratio is losing steam, say those associated with the programme for the past several years, adding that it demands a renewed, sustained crackdown and constant monitoring to restore accountability.

A Food and Drug Administration official who has participated in over 30 raids, including inter-State operations, says the Beti Bachao Beti Padhao campaign has lost "focus" and "direction."

Women often get sex-determination done outside Haryana, then use easily available MTP kits for abortion — even over the counter. When we report cases, no action is taken against the women because proving an illegal abortion is difficult

SUNITA
President,
Haryana ASHA
Workers' Union

"The two key components of the programme — constant monitoring and the crackdown — are now missing," says the officer, requesting anonymity. He partially links the decline to the change of guard in Haryana and the transfer of then Additional Principal Secretary out of the State. He is now the Additional Secretary in the Union Health Ministry. The programme was personally monitored by then Chief Minister Manohar Lal, who was replaced by the incumbent Nayab Singh Saini before the 2024 Lok Sabha poll.

"The number of raids and FIRs has gone down, and the focus has shifted from action against illegal sex-determination centres to the medical termination of the pregnancies, putting the cart before the horse," he remarks. The previous machinery used raids, FIRs, daily accountability.

From a peak of 271 FIRs in 2016, the crackdown collapsed to just 85 cases in 2023 and 47 in 2024. Though 154 cases surfaced last year, the priority had shifted. For the first time, cases filed under the Pre-conception and Pre-natal Diagnostic Techniques Act, 1994, stood at 37. However, FIRs under the Medical Termination of Pregnancy (MTP) Act, 1971, were by up 117. In 2026, only 28 FIRs have been registered until May.

"The monthly video conferences held with district officers, including Deputy Commissioners, before 2021, have now become a thing of the past, making the officers complacent," he says.

The racket adapts, moves, hides

From its launch in Panipat on January 22, 2015, by Prime Minister Narendra Modi until September 2021, the Beti Bachao, Beti Padhao programme in Haryana had one constant — nodal officer Rakesh Gupta.

Every month, he ran video conferences with Deputy Commissioners, Chief Medical Officers, and Food and Drug Administration officials from all districts. Files moved, and so did teams on the ground. As raids intensified, the racket didn't vanish; it migrated. Sex-determination centres cropped up across the border in Uttar Pradesh, Punjab, Rajasthan, Delhi, and Uttarakhand. Ha-

ryana officials then began holding meetings with bureaucrats and political leadership in neighbouring States, pushing for joint action.

COVID-19 disrupted the rhythm. Despite health officials being diverted to pandemic duty, for three years after the pandemic, the SRB ranged between 914-917, before a dip in 2024.

Formal tip-offs and informal networks fed the raids. Because illegal sex-determination centres must market themselves to find clients, word spreads through decoys to catch doctors and touts red-handed. But conviction rates stayed low, admit officials, though they do not disclose how low.

The 'market' told its own story. A sex-determination test that cost ₹5,000 to ₹15,000 before the crackdown shot up to ₹1.5 lakh. Demand didn't fall, but supply crashed under monitoring and raids.

Rejecting allegations of policy failure, health officials assert that Haryana's Sex Ratio at Birth has rebounded to 923 in 2025, driven by a renewed "crackdown effect". They concede that post-pandemic complacency from 2019-2024 weakened enforcement, with fewer raids, causing SRB to slip to 910. The 2025 recovery, they argue, reflects revived surveillance.

However, the monthly SRB hovered between 889 and 910 through the first half of 2026. The final three months posted abnormally high ratios, ranging from 930 to 997. The pattern has raised eyebrows among officials and activists alike, casting doubt on whether the "2025 Recovery" reflects genuine improvement or statistical manoeuvring. Critics within the Health Department allege that male births were deliberately under-registered towards December to artificially inflate the annual average.

Responding to *The Hindu's* query on the late-2025 spike and early-2026 dip in Sex Ratio at Birth, the Haryana Health Department argued that SRB was calculated for the calendar year and monthly fluctuations were routine. "Historically, SRB declines in the summer months and shows an upward trend from September to December," the department stated. It added that total birth registrations increased in 2025 compared to 2024. As per CRS data, 5,36,402 births were registered in 2024, while 2025 recorded 5,19,691 registrations. The department maintained that seasonal variation, not data manipulation, explains the monthly swings in SRB.

It also said that top-level monitoring is ongoing, with weekly video conferences, and review meetings. A State Task Force chaired by Additional Chief Secretary (Health) meets regularly, while District Task Forces led by Deputy Commissioners convene monthly. Their approach was one of "reverse tracking", targeting those resorting to illegal abortions.

The department flagged some key challenges in tackling female foeticide: the misuse of handheld, mobile-sized ultrasound machines; repeat offenders undeterred by legal action; and legal sex detection in countries like Thailand and Singapore, where people go to get sex-determination tests.

The son preference

"The Beti Bachao, Beti Padhao mission in Haryana took a back seat towards the end of 2021 and the Swachh Bharat Mission came to the fore," says Manasi Mishra, who heads the Research and Knowledge Management Division at Delhi-based non-profit Centre for Social Research (CSR) that

works in the gender space.

CSR had been implementing the Meri Shakti Meri Beti programme since 2007, targeting prenatal sex selection and girl empowerment. After the Beti Bachao, Beti Padhao programme was launched, CSR became the nodal agency for five skewed-SRB districts in Haryana: Gurugram, Ambala, Kurukshetra, Jhajjar, and Mahendragarh. The NGO ran BBBP there until 2021.

Mishra adds that once the sex ratio at birth showed improvement, the government began to relax. "There was no official announcement, but the call of the day was, since this target has been achieved, we should be more focused on the Swachh Bharat Mission and to make the State Open Defecation Free," Mishra says.

Government officials working on BBBP were largely moved to sanitation work, she says. "All of a sudden, this change happened in every district. In the five districts I had been working with, BBBP took a backseat."

Her 25 community watch groups reported rampant sex-selection and zero monitoring during the pandemic. "They kept sending me messages that during the pandemic, sex selection went on rapidly and there was no check." She warns that northern states like Haryana and Punjab have deep-rooted son preference and without economic upliftment of girls and visible role models, gains will soon be reversed.

"There is no concentrated effort to sustain the achievements of Beti Bachao, Beti Padhao. It remains a slogan only." Earlier success came from multi-stakeholder work: Panchayat engagement, medical audits with PC-PNDT authorities, and mobilising ASHA and anganwadi workers.

Sunita, president of the CITI-affiliated Haryana ASHA Workers' Union, attributes the post-CoVID slowdown in enforcement to "fatigue," frequent top-level transfers, and a disconnect from ground realities. Officers at the helm, she says, lack field insight, and there's little action against violators. ASHAs are tasked with tracking pregnant women whose first child is a daughter.

"These women often get sex-determination done outside Haryana, then use easily available MTP kits for abortion — even over the counter," Sunita explains. "When we report cases, no action is taken against the women because proving an illegal abortion is difficult."

The demoralisation runs deeper. "Many private clinics sealed for illegal sex selection reopen after some time. It de-motivates teams that worked hard to bust them," she says.

At the Katlupur vaccination centre, Mee-nakshi, 37, has two daughters, both of whom were delivered by caesarean sections. Doctors warned her against a third pregnancy. She says there was no pressure from her husband or in-laws. She wanted a son. "My husband is unwell. His elder brother died. I thought a male child should carry forward the family name." Her aunt, she claims, knows people who run illegal sex selection centres. She says she has never tried it.

The son preference remains entrenched. "A family in Nahari village celebrated for 17 days when a boy was born," says Sunita. In September last, the ASHA Workers' Union ran a month-long inquiry across Haryana to understand why female foeticide persists. "We didn't find a single family that opted for family planning after their first child was a girl. But many stopped after a boy. The mindset has not changed," Sunita says. "Everyone still wants a son."

ashok.kumar@thehindu.co.in



Bijli Devi, 31, is pregnant with her seventh child, and has come for a vaccination at Katlupur health sub-centre in Haryana's Sonapat. Her family hopes she will have a son. SUSHIL KUMAR VERMA

08J6. A movement losing momentum and daughters

गति और बेटियों दोनों को खोता एक आंदोलन

- Launched by PM Modi in Panipat in 2015, the **Beti Bachao, Beti Padhao** campaign initially delivered strong results.
2015 में प्रधानमंत्री मोदी द्वारा पानीपत में शुरू किया गया बेटि बचाओ, बेटि पढ़ाओ अभियान प्रारंभिक दौर में मजबूत परिणाम देने में सफल रहा।
- Haryana's Sex Ratio at Birth** rose from **838** in 2010 to **923** by 2019, driven by strict raids on pre-natal testing centres, inter-State crackdowns, monthly video conference reviews, and fixed accountability.
हरियाणा का जन्म के समय लिंगानुपात 2010 में 838 से बढ़कर 2019 तक 923 हो गया, जिसका श्रेय प्रसवपूर्व जांच केन्द्रों पर सख्त छापा, अंतर-राज्यीय कार्रवाई, मासिक वीडियो कॉन्फ्रेंस समीक्षा और निश्चित जवाबदेही को जाता है।



- However, data for the first four months of 2026 show that the number of girl babies born has dipped below 900, sparking fears that the programme is losing focus and momentum, reports Ashok Kumar.
हालाँकि, 2026 के पहले चार महीनों के आंकड़े दर्शाते हैं कि जन्मी बच्चियों की संख्या 900 से नीचे चली गई है, जिससे यह आशंका पैदा हुई है कि यह कार्यक्रम अपना फोकस और गति खो रहा है, जैसा कि अशोक कुमार की रिपोर्ट में बताया गया है।
- A sex-determination test, illegal in India, costs ₹50,000-60,000 on the black market.
भारत में अवैध लिंग निर्धारण परीक्षण की काला बाज़ार में कीमत ₹50,000-60,000 होती है।

GS Paper 1: Geography		08 June 2026
TOPICS COVERED		
08J6	Missed call चूकी हुई चेतावनी	

GS I: Geography

Missed call

India must brace itself for a deficient southwest monsoon

The southwest monsoon reached Kerala on June 4, three days past its normal date and four days behind the India Meteorological Department's own forecast. This is the first time since 2015 that the agency has misjudged the onset beyond its margin of error. A late arrival, in itself, is no calamity. The date on which the rains touch the Kerala coast has little statistical bearing on how much falls over the four months that follow. Many times in the past, the monsoon has begun early and failed, and also begun late and recovered. It is what the monsoon has in store over the next four months that is unsettling. The India Meteorological Department has pegged seasonal rainfall at 90% of the long-period average, with a 60% probability of an outright deficient year – its most pessimistic pre-season call in a decade. Only the northeast is expected to see normal rain; the northwest, central India, the peninsula and the monsoon core zone that waters most of the country's rain-fed farmland are all forecast to fall short. As monsoon watchers have often cautioned, it is the distribution – the sudden long dry spells, sown crops that then face the danger of being unwatered – that matters. Every monsoon is consequential for India. This one is exceptionally so, because it arrives atop an input crisis. The West Asia conflict and the disruption at the Strait of Hormuz earlier this year throttled energy supply and fertilizer production.

History offers little comfort. Around 60% of El Niño years since 1951 have brought deficient or below-normal rains; 2002, 2009 were the severest droughts of the century with significant shortfalls in 2014 and 2015. With El Niño now near-certain through the heart of the season, the government must not count on a late, redeeming swing of the Indian Ocean Dipole. That means activating the Agriculture Ministry, Jal Shakti Ministry and Consumer Affairs Ministries on a war footing along with the disaster management authorities, with advisories steering farmers toward short-duration pulses, oilseeds and millets over thirsty paddy. Disciplined groundwater and reservoir management are necessary and crop insurance and relief provisioning must be readied. India will also have to brave more days of severe heat, which a parched landscape will only sharpen. The government as recently as last week claimed to deliver a record kharif production. While hoping for the best, it must prepare for the worst. A weak monsoon would fall on a farm economy whose nutrients and fuel are both already scarce and dear.

08J6. Missed call

चूकी हुई चेतावनी

- India must brace itself for a **deficient southwest monsoon**.
भारत को कमज़ोर दक्षिण-पश्चिम मानसून का सामना करने के लिए स्वयं को तैयार करना चाहिए।
- Only the **northeast** is expected to see normal rain; the **northwest, central India, the peninsula and the monsoon core zone** that waters most of the country's rain-fed farmland are all forecast to fall short.
केवल पूर्वोत्तर भारत में सामान्य वर्षा होने की संभावना है, जबकि उत्तर-पश्चिम, मध्य भारत, प्रायद्वीपीय क्षेत्र तथा देश के अधिकांश वर्षा-आधारित कृषि क्षेत्रों को सिंचित करने वाला मानसून कोर ज़ोन सभी में वर्षा सामान्य से कम रहने का अनुमान है।
- With **El Niño** now near-certain through the heart of the season, the government must not count on a late, redeeming swing of the **Indian Ocean Dipole (IOD)**.
चूँकि इस मौसम के मुख्य भाग में **एल नीनो** की स्थिति लगभग निश्चित है, इसलिए सरकार को **हिन्द महासागर द्विध्रुव (IOD)** के देर से अनुकूल होने की संभावना पर निर्भर नहीं रहना चाहिए।
- That means activating the **Agriculture Ministry, Jal Shakti Ministry and Consumer Affairs Ministry** on a war footing along with the disaster management authorities.
इसका अर्थ है कि **कृषि मंत्रालय, जल शक्ति मंत्रालय, उपभोक्ता मामले मंत्रालय** तथा आपदा प्रबंधन प्राधिकरणों को युद्धस्तर पर सक्रिय किया जाए।
- **Disciplined groundwater and reservoir management are necessary and crop insurance and relief provisioning must be readied**.
सुव्यवस्थित भूजल एवं जलाशय प्रबंधन आवश्यक है तथा **फसल बीमा और राहत प्रावधानों** को भी तैयार रखा जाना चाहिए।

GS Paper II: Polity		08 June 2026
TOPICS COVERED		
08J6	The Ordinance question before the SC उच्चतम न्यायालय के समक्ष अध्यादेश का प्रश्न	

The Ordinance question before the SC

The Collegium's acceptance of an Ordinance that creates four additional judges' posts raises questions about judicial independence, security of tenure and the appearance of detachment from the executive; court has taken a calculated risk by staking its independence on the goodwill of the government and Parliament

SS II Policy

LETTER & SPIRIT

V. Venkatesan

In February 1937, the President of the United States of America, Franklin D. Roosevelt, asked Congress to enlarge the nine-judge Supreme Court. He sought a new justice for each one past 70 who refused to retire, up to 15 in all. The Senate Judiciary Committee saw through it. It preferred "an independent Court, a fearless Court," to one that bent "out of fear or sense of obligation to the appointing power." The Senate refused, with 70 members voting against and 20 in favour, and the plan was dead.

In Delhi last week, five judges took the oath; three occupy chairs, that no statute has created. They sit because the President, by Ordinance, lifted the sanctioned strength from 34 to 38.

Ordinance-made seats

The five are fit for office: four sat as Chief Justices of High Courts, the fifth came from the bar. Their elevation is not the grievance the manner of it is. The Ordinance was promulgated on May 16, when the Court sat at 32 against a sanctioned 34. Two lawful vacancies existed; two of Tuesday's appointments filled them. The other three rest on the Ordinance alone.

Article 124(1) leaves the number of judges to what Parliament may prescribe. An Article 123 Ordinance carries, for its life, the force of an Act. Independence of the judiciary is a basic feature of the Constitution. It is also about whether the court holds its seats free of obligation to the political branch. A court that owes three chairs to a six-week renewable Ordinance holds them at the executive's sufferance.

A test of principle

In 2015, a Constitution Bench decided *Supreme Court Advocates-on-Record Association vs Union of India*. It struck down the 99th Amendment and the National Judicial Appointments Commission. Parliament had passed it 367 to nil in the Lok Sabha, with the States ratifying. The commission was to have six members: the Chief Justice, the two senior-most judges after him, the Union Law Minister, and two eminent persons. The eminent persons were to be chosen by a panel of the Prime Minister, the Chief Justice, and the Leader of the Opposition. That composition was meant to keep the choice neutral. Yet the Act provided that any two members could veto a name. The court feared that the Law Minister and even one eminent person could thus block a candidate the judges favoured. It held that this destroyed the judiciary's primacy in its own appointments.

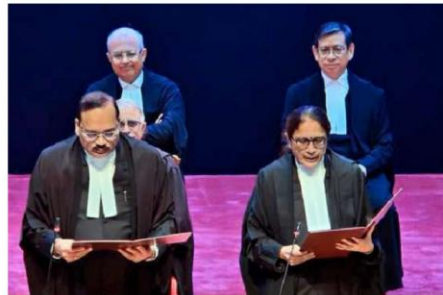
Yet the Supreme Court Collegium has accepted an Ordinance that seats three of its own, despite the uncertainty over its fate. Under Article 123, the President may withdraw an Ordinance at any time. Both Houses may disapprove it by resolution. Otherwise, it ceases to operate six weeks after Parliament reassembles.

The court itself taught the country to distrust the Ordinance. In *D.C. Wadhwa vs State of Bihar* (1980), it called governance by promulgated ordinance a fraud on the Constitution. In *Krishna Kumar Singh vs State of Bihar* (2017), a seven-judge Bench ruled against using ordinance-making power as a parallel source of legislation.

If the Bill replaces the Ordinance, the



GETTY IMAGES



C.J. Surya Kant administers the oath of office to Justice V. Mohana as a judge of the Supreme Court, in New Delhi on June 2. She is only the second woman to be elevated directly from the Bar to the court. PTI

anomaly closes. If not, the apex court's strength reverts to 34, and the executive cannot bridge the gap by reappointment, the fraud *Wadhwa* condemned. Whether a judge appointed to an Ordinance-created post can be removed once that post lapses is untested. Their judgments hold under the de facto doctrine, affirmed in *Gokaraju Rangaraju vs State of Andhra Pradesh* (1980). The subtler harm is to appearance; in any matter touching the Union, the government whose majority must regularise their seats may appear before them. A judge whose tenure lies, even loosely, in one party's gift cannot wear the detachment the office demands.

The calculated risk

The court sits at 37; the 38th and last sanctioned post is empty, the calendar suggests why. Justice Pankaj Mishra retires on June 16 and Justice J.K. Maheshwari on June 28. Their retirements reopen two lawful seats, into which two of the three Ordinance judges move. A judge in the 38th post would be the junior-most. Its occupant would reach a lawful seat only at Justice Satish Chandra Sharma's retirement on November 29, months after the Ordinance expires. Leaving it empty spares the court a judge stranded that long.

That leaves Justice V. Mohana, alone of the five from the bar and so junior-most,

The five are fit for office: four sat as Chief Justices of High Courts, the fifth came from the bar

on an Ordinance post. She can reach a lawful seat only when Justice Sanjay Karol retires on August 22. Here, the Collegium seems to have taken a calculated risk. Justice Karol's retirement all but coincides with the Ordinance's likely lapse, six weeks into the monsoon session. The replacing law should thus arrive first, and even a short delay is caught by his vacancy, which absorbs her. Her position turns precarious only if the Ordinance is rejected or lapses before August 22. Then the strength reverts to 34, the court still sits at 35, and she holds a post that the law no longer recognises. That a judge of the highest court should depend on which reading prevails, and on when Parliament meets, is the disquiet.

Larger question

The wager will likely be won; the government has the numbers, and the Opposition will not unsettle freshly sworn judges. But that is not the point. The court has staked its independence and its judges' security of tenure on the goodwill of the executive and Parliament.

The U.S. Senate's warning of 1937 was against a court bound by obligation to the appointing power. The graver danger is a court that no longer notices the obligation. Independence of the judiciary is not only the right to say no to the executive. It is the instinct to want to. (V. Venkatesan is Contributing Editor at *Supreme Court Observer*. Views expressed are personal)

THE GIST

Five judges were sworn in to the Supreme Court after the sanctioned strength was raised from 34 to 38 through a Presidential Ordinance; while two appointments filled existing vacancies, three were made to newly created posts.

The Supreme Court has previously held in cases such as *D.C. Wadhwa vs State of Bihar* and *Krishna Kumar Singh vs State of Bihar* that ordinance-making power cannot become a parallel source of legislation and that repeated promulgation of ordinances is unconstitutional.

If Parliament does not replace the Ordinance with a law, the court's sanctioned strength would revert to 34, raising unresolved questions about the status of judges appointed to Ordinance-created posts and the legal implications of such appointments.

08J6. The Ordinance question before the SC

उच्चतम न्यायालय के समक्ष अध्यादेश का प्रश्न

- The **Collegium's acceptance** of an **Ordinance** that creates four additional judges' posts raises questions about **judicial independence**, **security of tenure** and the appearance of **detachment from the executive**; the court has taken a calculated risk by staking its independence on the **goodwill of the government and Parliament**.

चार अतिरिक्त न्यायाधीशों के पदों के सृजन वाले एक अध्यादेश को कोलेजियम द्वारा स्वीकार किए जाने से न्यायिक स्वतंत्रता, पद की सुरक्षा तथा कार्यपालिका से पृथक्ता की प्रतीति को लेकर प्रश्न उत्पन्न होते हैं;

न्यायालय ने अपनी स्वतंत्रता को सरकार और संसद की सद्भावना पर आधारित करके एक सोचा-समझा जोखिम उठाया है।

- The **Senate** refused, with **70 members voting against** and **20 in favour**, and the plan was dead.

सीनेट ने इस प्रस्ताव को अस्वीकार कर दिया; 70 सदस्यों ने विरोध में और 20 ने समर्थन में मतदान किया, जिसके साथ ही यह योजना समाप्त हो गई।

- **Article 124(1)** leaves the number of judges to what **Parliament** may prescribe.

अनुच्छेद 124(1) न्यायाधीशों की संख्या निर्धारित करने का अधिकार संसद को देता है।

- An **Article 123 Ordinance** carries, for its life, the force of an Act.

अनुच्छेद 123 के अंतर्गत जारी अध्यादेश अपनी वैधता की अवधि तक कानून के समान प्रभाव रखता है।

- A court that owes three chairs to a **six-week renewable Ordinance** holds them at the executive's sufferance.

ऐसा न्यायालय जिसके तीन पद छह सप्ताह के लिए नवीकरणीय अध्यादेश पर आधारित हों, वे पद वस्तुतः कार्यपालिका की इच्छा पर निर्भर माने जा सकते हैं।

A test of principle

सिद्धांत की परीक्षा

- In 2015, a **Constitution Bench** decided **Supreme Court Advocates-on-Record Association vs Union of India**.

2015 में एक संविधान पीठ ने सुप्रीम कोर्ट एडवोकेट्स-ऑन-रिकॉर्ड एसोसिएशन बनाम भारत संघ मामले का निर्णय दिया।

- It struck down the **99th Constitutional Amendment** and the **National Judicial Appointments Commission (NJAC)**.

इसने 99वें संविधान संशोधन तथा राष्ट्रीय न्यायिक नियुक्ति आयोग (NJAC) को निरस्त कर दिया।

- **Parliament** had passed it **367 to nil** in the **Lok Sabha**, with the States ratifying it.

लोकसभा में इसे 367 मतों से बिना किसी विरोध के पारित किया गया था और राज्यों ने भी इसका अनुमोदन किया था।

- The commission was to have **six members**: the **Chief Justice of India**, the **two senior-most judges after him**, the **Union Law Minister**, and **two eminent persons**.

इस आयोग में छह सदस्य होने थे: भारत के मुख्य न्यायाधीश, उनके बाद के दो वरिष्ठतम न्यायाधीश, केंद्रीय विधि मंत्री तथा दो प्रतिष्ठित व्यक्ति।

- The **eminent persons** were to be chosen by a panel of the **Prime Minister**, the **Chief Justice**, and the **Leader of the Opposition**.

इन प्रतिष्ठित व्यक्तियों का चयन प्रधानमंत्री, मुख्य न्यायाधीश तथा विपक्ष के नेता की समिति द्वारा किया जाना था।

- That composition was meant to keep the choice neutral.

इस संरचना का उद्देश्य चयन प्रक्रिया को निष्पक्ष बनाए रखना था।

- Yet the Act provided that **any two members could veto a name**.

फिर भी अधिनियम में यह प्रावधान था कि कोई भी दो सदस्य किसी नाम को वीटो कर सकते थे।

- The court feared that the **Law Minister** and even **one eminent person** could thus block a candidate the judges favoured.

न्यायालय को आशंका थी कि विधि मंत्री और एक प्रतिष्ठित व्यक्ति मिलकर उस उम्मीदवार को रोक सकते हैं जिसे न्यायाधीश समर्थन देना चाहते हों।

- It held that this destroyed the judiciary's **primacy in its own appointments**.

न्यायालय ने माना कि इससे न्यायपालिका की अपनी नियुक्तियों में प्रधानता समाप्त हो जाती है।

- Yet the **Supreme Court Collegium** has accepted an **Ordinance** that seats three of its own, despite the uncertainty over its fate.



फिर भी **सुप्रीम कोर्ट कॉलेजियम** ने ऐसे **अध्यादेश** को स्वीकार किया है जिसके आधार पर उसके तीन सदस्य नियुक्त हुए हैं, जबकि उसके भविष्य को लेकर अनिश्चितता बनी हुई है।

- **Under Article 123, the President may withdraw an Ordinance at any time.**
अनुच्छेद 123 के अंतर्गत **राष्ट्रपति** किसी भी समय अध्यादेश को वापस ले सकते हैं।
- **Both Houses may disapprove it by resolution.**
संसद के दोनों सदन प्रस्ताव पारित कर उसे अस्वीकार कर सकते हैं।
- **Otherwise, it ceases to operate six weeks after Parliament reassembles.**
अन्यथा, संसद के पुनः सत्रारंभ होने के **छह सप्ताह** बाद अध्यादेश स्वतः समाप्त हो जाता है।
- In **D.C. Wadhwa vs State of Bihar (1986)**, it called governance by **repromulgated ordinances a fraud on the Constitution**.
डी.सी. वाधवा बनाम बिहार राज्य (1986) मामले में न्यायालय ने बार-बार पुनः जारी किए गए अध्यादेशों के माध्यम से शासन को **संविधान के साथ छल** बताया था।
- In **Krishna Kumar Singh vs State of Bihar (2017)**, a **seven-judge Bench** ruled against using **ordinance-making power** as a parallel source of legislation.
कृष्ण कुमार सिंह बनाम बिहार राज्य (2017) में सात न्यायाधीशों की पीठ ने अध्यादेश निर्माण शक्ति को समानांतर विधायी स्रोत के रूप में उपयोग करने के विरुद्ध निर्णय दिया था।
- **Whether a judge appointed to an Ordinance-created post can be removed once that post lapses is untested.**
यह प्रश्न अभी तक अनुत्तरित है कि अध्यादेश द्वारा सृजित पद पर नियुक्त न्यायाधीश को उस पद की समाप्ति के बाद हटाया जा सकता है या नहीं।
- **Justice Karol's retirement all but coincides with the Ordinance's likely lapse, six weeks into the monsoon session.**
न्यायमूर्ति करोल की सेवानिवृत्ति लगभग उसी समय होती है जब **मानसून सत्र** शुरू होने के छह सप्ताह बाद अध्यादेश के समाप्त होने की संभावना है।
- **Her position turns precarious only if the Ordinance is rejected or lapses before August 22.**
उनकी स्थिति केवल तभी संकटपूर्ण होगी जब **22 अगस्त** से पहले अध्यादेश अस्वीकृत हो जाए या समाप्त हो जाए।

GS Paper II: Governance		08 June 2026
TOPICS COVERED		
08J6	'Detailed NFHS report will provide a broader picture' 'विस्तृत एनएफएचएस रिपोर्ट एक व्यापक तस्वीर प्रदान करेगी'	
08J6	How ICMR is rewiring the health ecosystem आईसीएमआर किस प्रकार स्वास्थ्य पारितंत्र को पुनर्संरचित कर रहा है	
08J6	India's pension scheme lags in terms of coverage, contribution कवरेज और अंशदान के मामले में भारत की पेंशन योजना पीछे है	
08J6	The retirement trap India is walking into unprepared भारत जिस सेवानिवृत्ति जाल में बिना तैयारी के प्रवेश कर रहा है	



‘Detailed NFHS report will provide a broader picture’

GS II: Governance
Press Trust of India
NEW DELHI

Union Health Ministry sources addressed criticism directed at “missing” indicators, such as anaemia, sanitation, and coverage of clean cooking fuel, in the National Family Health Survey (NFHS)-6 factsheets saying those are being monitored through dedicated national surveys and administrative databases, and were not “duplicated” in the preliminary release.

Responding to “commentary in sections of the media regarding the absence of certain indicators”, official sources said the factsheets represent the first stage of dissemination and cover 101 major indicators intended to provide a concise snapshot of India’s most critical health and demographic trends.

“The factsheets are the first stage of dissemination. The detailed national report will provide a much broader picture,” sources said. The report will be released subsequently with a much wider range of indicators, detailed analyses and methodological documentation.

“The aim is to ensure

that each indicator is reported through the most appropriate and authoritative source, reducing duplication and improving overall data coherence,” sources said. They said several indicators cited as “missing” from the factsheets are being monitored through dedicated national systems. Sanitation and clean cooking fuel coverage, for instance, are tracked through specialised surveys and administrative platforms such as Swachh Survekshan Grameen and the Statistics and Programme Implementation Ministry’s surveys, making duplication within the factsheets unnecessary, they said.

Key statistics relating to mortality, birth registration and population characteristics continue to be generated through systems such as the Sample Registration System, Civil Registration System and Census framework.

On the absence of anaemia estimates in the factsheets, they said that haemoglobin testing was not undertaken in NFHS-6 due to concerns surrounding the capillary blood sampling methodology used in previous rounds.

08J6. ‘Detailed NFHS report will provide a broader picture’

‘विस्तृत एनएफएचएस रिपोर्ट एक व्यापक तस्वीर प्रदान करेगी’

- Union Health Ministry sources addressed criticism directed at “missing” indicators, such as **anaemia, sanitation, and coverage of clean cooking fuel**, in the **National Family Health Survey (NFHS)-6 factsheets** saying those are being monitored through dedicated national surveys and administrative databases, and were not “duplicated” in the preliminary release.

केंद्रीय स्वास्थ्य मंत्रालय के सूत्रों ने राष्ट्रीय परिवार स्वास्थ्य सर्वेक्षण (एनएफएचएस)-6 फैक्टशीट्स में एनीमिया, स्वच्छता और स्वच्छ खाना पकाने के ईंधन की कवरेज जैसे “गायब” संकेतकों को लेकर की गई आलोचना का जवाब देते हुए कहा कि इनकी निगरानी समर्पित राष्ट्रीय सर्वेक्षणों और प्रशासनिक डेटाबेसों के माध्यम से की जा रही है, और प्रारंभिक रिलीज में इन्हें “दोहराया” नहीं गया था।

- Responding to “commentary in sections of the media regarding the absence of certain indicators”, official sources said the factsheets represent the first stage of dissemination and cover **101 major indicators** intended to provide a concise snapshot of India’s most critical **health and demographic trends**.

“कुछ संकेतकों की अनुपस्थिति को लेकर मीडिया के कुछ वर्गों में की गई टिप्पणियों” के जवाब में आधिकारिक सूत्रों ने कहा कि ये फैक्टशीट्स प्रसार के पहले चरण का प्रतिनिधित्व करती हैं और **101 प्रमुख संकेतकों** को शामिल करती हैं, जिनका उद्देश्य भारत के सबसे महत्वपूर्ण **स्वास्थ्य और जनसांख्यिकीय रुझानों** की संक्षिप्त झलक प्रदान करना है।

- **Sanitation and clean cooking fuel coverage**, for instance, are tracked through specialised surveys and administrative platforms such as **Swachh Survekshan Grameen** and the **Statistics and Programme Implementation Ministry’s surveys**, making duplication within the factsheets unnecessary, they said.

उन्होंने कहा कि उदाहरण के लिए **स्वच्छता और स्वच्छ खाना**

पकाने के ईंधन की कवरेज का आकलन स्वच्छ सर्वेक्षण ग्रामीण तथा सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय के सर्वेक्षणों जैसे विशेषीकृत सर्वेक्षणों और प्रशासनिक प्लेटफॉर्मों के माध्यम से किया जाता है, जिससे फैक्टशीट्स में इनकी पुनरावृत्ति अनावश्यक हो जाती है।

- Key statistics relating to **mortality, birth registration and population characteristics** continue to be generated through systems such as the **Sample Registration System, Civil Registration System and Census framework**.
मृत्यु दर, जन्म पंजीकरण और जनसंख्या की विशेषताओं से संबंधित प्रमुख आँकड़े नमूना पंजीकरण प्रणाली, नागरिक पंजीकरण प्रणाली और जनगणना ढाँचे जैसी प्रणालियों के माध्यम से तैयार किए जाते रहेंगे।



- On the absence of **anaemia estimates** in the factsheets, they said that **haemoglobin testing** was not undertaken in **NFHS-6** due to concerns surrounding the **capillary blood sampling methodology** used in previous rounds.

फैक्टशीट्स में एनीमिया के आकलनों की अनुपस्थिति पर उन्होंने कहा कि एनएफएचएस-6 में हीमोग्लोबिन परीक्षण नहीं किया गया, क्योंकि पिछले दौरों में उपयोग की गई केशिकीय रक्त नमूना पद्धति को लेकर

How ICMR is rewiring the health ecosystem

GS II: Governance

As the nation advances toward the vision of Viksit Bharat 2047, the question is not only about how to treat disease, but how one builds a health system that is anticipatory, equitable, and innovation-driven. At the heart of this transformation lies a reimagined approach to health, one that connects data to decisions and decisions to impact.

Building on the hard-earned lessons of the COVID-19 pandemic, the Indian Council of Medical Research (ICMR), India's apex body for biomedical research, has undertaken a series of forward-looking reforms. These reforms range from reimagining its institutional architecture to strengthening the way research is funded and translated into impact. This shift reflects a deliberate move towards integrated, institute-led research aligned with national priorities, where science is designed not just to generate knowledge, but to solve pressing public health challenges.

A strategic reorientation

A cornerstone of this transformation is the restructuring of the ICMR's institutional architecture. Recent reforms have expanded the mandates of several institutes, repositioning them as interdisciplinary hubs rather than narrowly defined entities. The evolution of institutes toward domains such as digital health and data science, child health, and women's health reflect the changing contours of India's disease burden and technological capabilities. Another important step is the creation of a network of regional National Institutes of Health Research across the country, from Dibrugarh in the Northeast to Jodhpur in the west. These institutes will conduct operational research with State and district health systems to ensure that relevant research is conducted and the output is used on the ground. These changes signal a strategic reorientation toward future-ready science,

चिंतारं थीं।



Rajiv Bahl

Secretary to Govt. of India, Department of Health Research, Ministry of Health & Family Welfare and Director-General, Indian Council of Medical Research

The roadmap to 2047 will be shaped by advances in digital health, bio-manufacturing, and sustainable development, with a strong emphasis on capacity building and global collaboration

where AI, genomics, and real-time data systems are integral to public health decision-making.

Equally important is the shift from compartmentalised functioning to a connected national research ecosystem. Institutes are now envisioned as resource centres that contribute to a shared national mission, ensuring that evidence generated in one setting informs action across the country. This systems-level thinking is critical in an era where health challenges, be it antimicrobial resistance, pandemics, or non-communicable diseases, are complex and interconnected. Similarly, the research funding ecosystem is also going through a redesign.

This integrated continuum marks a decisive shift from funding projects to enabling solutions. It is further reinforced by the National Health Research Programme (NHRP), which has identified 13 priority areas ranging from antimicrobial resistance and tuberculosis to mental health, nutrition, and emergency care.

Technology, too, is playing a transformative role. The integration of AI into diagnostics, surveillance, and program implementation is helping bridge longstanding gaps between urban and rural healthcare. AI-enabled tools for tuberculosis and diabetic retinopathy screening are already supporting frontline health workers, while innovations such as AI-driven nutritional monitoring are improving program delivery at scale. The i-Drone initiative, which began with vaccine delivery and has expanded to transport critical medical supplies, exemplifies how cutting-edge technology can overcome geographic barriers and bring care closer to communities. At the frontier of science, advances across the medtech gamut, from medical devices and diagnostics to next-generation vaccines and therapeutics, are enabling more targeted, patient-centric interventions. In parallel, the integration of

traditional knowledge systems through innovative, evidence-based models is gaining global recognition. Schemes such as First in the World Challenge complemented with platforms such as MedTechMitra and the Medical Innovations-Patent Mitra initiative are accelerating the journey from research to commercialisation, ensuring that publicly funded science translates into affordable, accessible technologies for the people.

Towards universal access

The true measure of these reforms, however, lies in their impact on public health. Initiatives such as the India Hypertension Control Initiative have demonstrated how evidence-based strategies can transform chronic disease management at scale. Mission-mode programmes in emergency care, including mobile stroke units and rapid cardiac response systems, are redefining outcomes in life-threatening conditions. Expanded diagnostic networks and indigenous technologies are strengthening early detection and treatment across diseases ranging from cancer to infectious outbreaks. These efforts are closely aligned with the National Health Policy 2017, which emphasises preventive and promotive healthcare, universal access, and quality of care.

As we look to the future, the vision is clear. The ICMR will continue to serve as a catalyst, bringing together researchers, clinicians, policymakers, and the industry to build a resilient health ecosystem. The roadmap to 2047 will be shaped by advances in digital health, bio-manufacturing, and sustainable development, with a strong emphasis on capacity building and global collaboration. The transformation underway within the ICMR is an invitation to all stakeholders to participate in this journey and to ensure that science serves society in the most meaningful way.

08J6. How ICMR is rewiring the health ecosystem आईसीएमआर किस प्रकार स्वास्थ्य पारितंत्र को पुनर्संरचित कर रहा है

- As the nation advances toward the vision of **Viksit Bharat 2047**, the question is not only about how to treat disease, but how one builds a **health system that is anticipatory, equitable, and innovation-driven**.
जैसे-जैसे राष्ट्र **विकसित भारत 2047** के दृष्टिकोण की ओर अग्रसर हो रहा है, प्रश्न केवल रोगों के उपचार का नहीं है, बल्कि ऐसे स्वास्थ्य तंत्र के निर्माण का है जो **पूर्वानुमान आधारित, समतामूलक और नवाचार-प्रेरित** हो।
- Building on the hard-earned lessons of the **COVID-19 pandemic**, the **Indian Council of Medical Research (ICMR)**, **India's apex body for biomedical research**, has undertaken a series of forward-looking reforms.
कोविड-19 महामारी से प्राप्त महत्वपूर्ण अनुभवों के आधार पर, जैव-चिकित्सीय अनुसंधान की भारत की सर्वोच्च संस्था **भारतीय आयुर्विज्ञान अनुसंधान परिषद (ICMR)** ने अनेक दूरदर्शी सुधारों की शुरुआत की है।
- This shift reflects a deliberate move towards **integrated, institute-led research** aligned with national priorities, where science is designed not just to generate knowledge, but to solve pressing public health challenges.
यह परिवर्तन राष्ट्रीय प्राथमिकताओं के अनुरूप **एकीकृत एवं संस्थान-नेतृत्व वाले अनुसंधान** की दिशा में एक सुनियोजित कदम को दर्शाता है, जहाँ विज्ञान का उद्देश्य केवल ज्ञान उत्पन्न करना नहीं, बल्कि सार्वजनिक स्वास्थ्य की गंभीर चुनौतियों का समाधान करना भी है।

A strategic reorientation

एक रणनीतिक पुनर्संरखन

- Recent reforms have expanded the mandates of several institutes, repositioning them as **interdisciplinary hubs** rather than narrowly defined entities.
हाल के सुधारों ने कई संस्थानों के कार्यक्षेत्र का विस्तार किया है, जिससे वे सीमित परिभाषित इकाइयों के बजाय **बहुविषयक केंद्रों** के रूप में विकसित हो रहे हैं।
- The **evolution of institutes toward domains such as digital health and data science, child health, and women's health** reflect the changing contours of India's disease burden and technological capabilities.
डिजिटल स्वास्थ्य एवं डेटा विज्ञान, बाल स्वास्थ्य तथा महिला स्वास्थ्य जैसे क्षेत्रों की ओर संस्थानों का विकास भारत में बदलते रोग-भार और तकनीकी क्षमताओं को दर्शाता है।
- Another important step is the **creation of a network of regional National Institutes of Health Research across the country, from Dibrugarh in the Northeast to Jodhpur in the west**.
एक अन्य महत्वपूर्ण कदम देशभर में क्षेत्रीय **राष्ट्रीय स्वास्थ्य अनुसंधान संस्थानों** के नेटवर्क की स्थापना है, जो पूर्वोत्तर के **डिब्रूगढ़** से लेकर पश्चिम के **जोधपुर** तक फैला होगा।
- These changes signal a strategic reorientation toward **future-ready science, where AI, genomics, and real-time data systems are integral to public health decision-making**.
ये परिवर्तन भविष्य के लिए तैयार विज्ञान की दिशा में रणनीतिक पुनर्संरखन का संकेत देते हैं, जहाँ **कृत्रिम बुद्धिमत्ता (AI), जीनोमिक्स और वास्तविक समय डेटा प्रणालियाँ** सार्वजनिक स्वास्थ्य निर्णयों का अभिन्न हिस्सा होंगी।
- It is further reinforced by the **National Health Research Programme (NHRP)**, which has identified **13 priority areas ranging from antimicrobial resistance and tuberculosis to mental health, nutrition, and emergency care**.
इसे राष्ट्रीय स्वास्थ्य अनुसंधान कार्यक्रम (NHRP) द्वारा और अधिक सुदृढ़ किया गया है, जिसने **13 प्राथमिकता वाले क्षेत्रों** की पहचान की है, जिनमें **रोगाणुरोधी प्रतिरोध और तपेदिक** से लेकर **मानसिक स्वास्थ्य, पोषण और आपातकालीन चिकित्सा देखभाल** तक के विषय शामिल हैं।



Towards universal access

सार्वभौमिक पहुँच की ओर

- **AI-enabled tools for tuberculosis and diabetic retinopathy screening** are already supporting frontline health workers, while innovations such as **AI-driven nutritional monitoring** are improving program delivery at scale.
 तपेदिक (टीबी) और डायबिटिक रेटिनोपैथी जांच के लिए एआई-सक्षम उपकरण पहले से ही अग्रिम पंक्ति के स्वास्थ्यकर्मियों की सहायता कर रहे हैं, जबकि एआई-आधारित पोषण निगरानी जैसी नवाचार तकनीकें बड़े स्तर पर कार्यक्रमों के प्रभावी क्रियान्वयन को बेहतर बना रही हैं।
- The **i-Drone initiative**, which began with vaccine delivery and has expanded to transport critical medical supplies, exemplifies how cutting-edge technology can overcome geographic barriers and bring care closer to communities.
 आई-ड्रोन पहल, जिसकी शुरुआत वैक्सीन वितरण से हुई थी और जो अब महत्वपूर्ण चिकित्सा सामग्रियों के परिवहन तक विस्तारित हो चुकी है, यह दर्शाती है कि अत्याधुनिक तकनीक किस प्रकार भौगोलिक बाधाओं को पार कर स्वास्थ्य सेवाओं को समुदायों के अधिक निकट ला सकती है।
- At the frontier of science, advances across the **medtech gamut, from medical devices and diagnostics to next-generation vaccines and therapeutics**, are enabling more targeted, patient-centric interventions.
 विज्ञान के अग्रिम क्षेत्र में चिकित्सा प्रौद्योगिकी (मेडटेक) के विभिन्न क्षेत्रों में हुई प्रगति, चिकित्सीय उपकरणों और निदान प्रणालियों से लेकर अगली पीढ़ी के टीकों और उपचारों तक, अधिक लक्षित और रोगी-केंद्रित हस्तक्षेपों को संभव बना रही है।
- In parallel, the integration of **traditional knowledge systems** through innovative, evidence-based models is gaining global recognition.
 साथ ही, नवाचारी एवं साक्ष्य-आधारित मॉडलों के माध्यम से पारंपरिक ज्ञान प्रणालियों का एकीकरण वैश्विक स्तर पर मान्यता प्राप्त कर रहा है।
- Schemes such as **First in the World Challenge** complemented with platforms such as **MedTechMitra** and the **Medical Innovations-Patent Mitra initiative** are accelerating the journey from research to commercialisation, ensuring that publicly funded science translates into affordable, accessible technologies for the people.
 फर्स्ट इन द वर्ल्ड चैलेंज, मेडटेकमित्र तथा मेडिकल इनोवेशंस-पेटेंट मित्र पहल जैसे मंच अनुसंधान से व्यावसायीकरण तक की प्रक्रिया को तेज़ कर रहे हैं, जिससे यह सुनिश्चित हो रहा है कि सार्वजनिक धन से संचालित विज्ञान लोगों के लिए किफायती और सुलभ तकनीकों में परिवर्तित हो।

Towards universal access

सार्वभौमिक पहुँच की ओर

- The true measure of these reforms, however, lies in their impact on **public health**.
 हालाँकि, इन सुधारों का वास्तविक मूल्यांकन सार्वजनिक स्वास्थ्य पर उनके प्रभाव से होगा।
- Initiatives such as the **India Hypertension Control Initiative** have demonstrated how evidence-based strategies can transform chronic disease management at scale.
 इंडिया हाइपरटेंशन कंट्रोल इनिशिएटिव जैसी पहलों ने यह प्रदर्शित किया है कि साक्ष्य-आधारित रणनीतियाँ बड़े स्तर पर दीर्घकालिक रोग प्रबंधन को किस प्रकार परिवर्तित कर सकती हैं।
- These efforts are closely aligned with the **National Health Policy 2017**, which emphasises **preventive and promotive healthcare, universal access, and quality of care**.
 ये प्रयास राष्ट्रीय स्वास्थ्य नीति 2017 के अनुरूप हैं, जो निवारक एवं प्रोत्साहक स्वास्थ्य सेवाओं, सार्वभौमिक पहुँच तथा गुणवत्तापूर्ण स्वास्थ्य देखभाल पर बल देती है।
- As we look to the future, the vision is clear.
 भविष्य की ओर देखते हुए दृष्टि स्पष्ट है।



- The roadmap to 2047 will be shaped by advances in **digital health, bio-manufacturing, and sustainable development**, with a strong emphasis on **capacity building and global collaboration**.

2047 तक की रूपरेखा डिजिटल स्वास्थ्य, जैव-विनिर्माण तथा सतत विकास में प्रगति द्वारा निर्धारित होगी, जिसमें क्षमता निर्माण और वैश्विक सहयोग पर विशेष बल दिया जाएगा।

India's pension scheme lags in terms of coverage, contribution

The Centre's contribution to India's flagship pension scheme has remained the same while the add-on contributions by State governments have increased

GS II: Governance: Government Scheme

DATA POINT

Nitika Francis

The Indira Gandhi National Old Age Pension Scheme (IGNOAPS) – the Government of India's flagship cash assistance scheme for the elderly under its National Social Assistance Programme (NSAP) – is in dire need of a revamp as it remains frozen in time, since 2007, both in terms of the sum of ₹200 it offers per person per month and the roughly 2.2 crore beneficiaries it covers. The States and Union Territories (UTs) add their own contributions, ranging from ₹150 to ₹2,000, on top of the ₹200 offered by the Union government for the 60-plus age group or the ₹500 it offers for the 80-plus category.

Chart 1 shows how the Union government's contribution for this centrally-sponsored scheme has remained the same while the add-on contributions by State governments have increased between 2012 and 2023. States such as Telangana and Andhra Pradesh contribute the largest sums – of around ₹2,000. Many others do not bring as much to the table. Chhattisgarh offers ₹150, taking the total pension to ₹350, while West Bengal offers a total of ₹250. Goa and Manipur do not provide any additional amount.

The call for increasing the quantum of assistance, number of beneficiaries and linking the assistance with inflation, as it is done for the payment of Dearness Allowance to government employees, has been made at least since 2013, when the task force constituted by the Ministry of Rural Development (MoRD) first made such recommendations. The latest official recommendations came from the Public Accounts Committee (PAC) of the Lok Sabha in 2025 and the report released in May 2026 based on an independent evaluation of the NSAP commissioned by MoRD. The evaluation report said that the

real value of the assistance fixed at ₹200 has "significantly eroded due to inflation, and that the amount should be increased to ₹353 to retain its original purchasing power".

An analysis by *The Hindu* based on the changes in the Consumer Food Price Index (CFPI) (base year 2012) at the all-India level showed that since 2013, the value of ₹200 has eroded to just around ₹99. This means that beneficiaries can buy only half the quantity of food items they could earlier buy with ₹200. Conversely, they should be receiving a minimum of around ₹400 to be able to afford even the small quantity of items they could buy with ₹200 in 2013 (Chart 2).

Notably, the survey findings in the latest report highlighted that over 95% of the beneficiaries cited increase in prices as the main reason for their demand to increase the pension amount. More than 80% of them stated that the current pension amount does not cover their daily needs (Chart 5).

The task force's report in 2013, the PAC's 2025 report and the recent MoRD report have all recommended an increase in coverage, stating that the Union government was relying on outdated BPL data to fix ceilings on the number of beneficiaries. The MoRD report estimated that the IGNOAPS beneficiaries should be nearly 17 crore at present and about 20 crore by 2030, which is 10-fold higher than the present coverage of 2.2 crore people. Chart 3 shows how the number of beneficiaries have remained stagnant when compared with the projected growth of the elderly population.

The report also surveyed 6,000 beneficiaries across 600 Gram Panchayats across 10 sample States. In nine out of these 10 States, less than 10% of respondents thought that the scheme was "fully adequate", with a majority stating that it was only "somewhat adequate" or not adequate at all (Chart 4).

With inputs from Pon Visanth R. A.

Old and unsupported

The data for the charts were sourced from the Lok Sabha replies, the Ministry of Rural Development's report titled "Impact Assessment and Evaluation of NSAP", and the Ministry of Statistics and Program Implementation

CHART 1: The monthly pension offered by all States, barring few Union Territories, under the centrally-sponsored Indira Gandhi National Old Age Pension Scheme (IGNOAPS) as of 2023

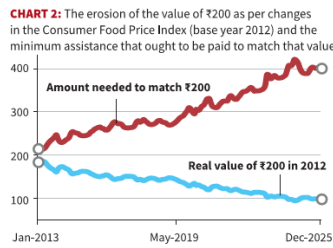
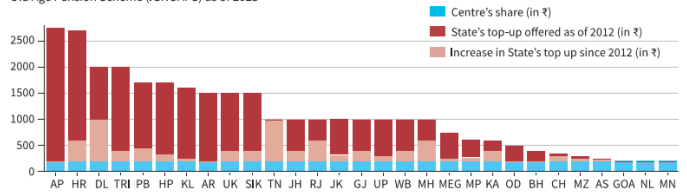


CHART 2: The erosion of the value of ₹200 as per changes in the Consumer Food Price Index (base year 2012) and the minimum assistance that ought to be paid to match that value

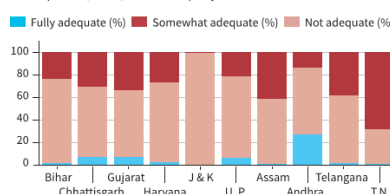


CHART 4: The response of surveyed beneficiaries in nine States and Jammu and Kashmir for a study commissioned by Ministry of Rural Development (MoRD) on the adequacy of assistance under IGNOAPS

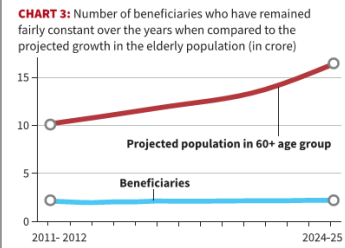


CHART 3: Number of beneficiaries who have remained fairly constant over the years when compared to the projected growth in the elderly population (in crore)

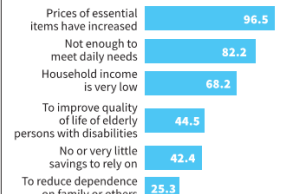


CHART 5: The reasons cited by respondents (%) of the MoRD study for the need to increase IGNOAPS assistance

08J6. India's pension scheme lags in terms of coverage, contribution

कवरेज और अंशदान के मामले में भारत की पेंशन योजना पीछे है

- The **Centre's contribution** to India's **flagship pension scheme** has remained the same while the **add-on contributions** by **State governments** have increased.

भारत की प्रमुख पेंशन योजना में केंद्र सरकार का अंशदान समान बना हुआ है, जबकि राज्य सरकारों द्वारा दिए जाने वाले अतिरिक्त अंशदान में वृद्धि हुई है।

Indira Gandhi National Old Age Pension Scheme (IGNOAPS)

इंदिरा गांधी राष्ट्रीय वृद्धावस्था पेंशन योजना (IGNOAPS)

- The **Indira Gandhi National Old Age Pension Scheme (IGNOAPS)** — the Government of India's flagship **cash assistance scheme** for the elderly under its **National Social Assistance Programme (NSAP)** — is in dire need of a revamp as it remains frozen in time, since **2007**, both in terms of the sum of **₹200 per person per month** and the roughly **2.2 crore beneficiaries** it covers.

इंदिरा गांधी राष्ट्रीय वृद्धावस्था पेंशन योजना (IGNOAPS) — जो राष्ट्रीय सामाजिक सहायता कार्यक्रम (NSAP) के अंतर्गत वृद्धजनों के लिए भारत सरकार की प्रमुख नकद सहायता योजना है — में व्यापक सुधार की आवश्यकता है, क्योंकि 2007 से इसमें न तो ₹200 प्रति व्यक्ति प्रति माह की सहायता राशि बढ़ाई गई है और न ही लगभग 2.2 करोड़ लाभार्थियों की संख्या में परिवर्तन हुआ है।

- The **States and Union Territories (UTs)** add their own contributions, ranging from **₹150 to ₹2,000**, on top of the ₹200 offered by the Union government for the **60-plus age group** or the ₹500 it offers for the **80-plus category**.

राज्य और केंद्रशासित प्रदेश (UTs) अपनी ओर से ₹150 से ₹2,000 तक का अतिरिक्त योगदान देते हैं, जो केंद्र सरकार द्वारा 60 वर्ष से अधिक आयु वर्ग के लिए दी जाने वाली ₹200 तथा 80 वर्ष से अधिक आयु वर्ग के लिए दी जाने वाली ₹500 की राशि के अतिरिक्त होता है।

- Chart 1** shows how the Union government's contribution for this **centrally-sponsored scheme** has remained the same while the add-on contributions by State governments have increased between **2012 and 2023**.

चार्ट 1 दर्शाता है कि इस केंद्र प्रायोजित योजना में केंद्र सरकार का योगदान स्थिर बना रहा, जबकि 2012 से 2023 के बीच राज्यों का अतिरिक्त योगदान बढ़ा है।

- The call for increasing the **quantum of assistance, number of beneficiaries** and linking the assistance with **inflation**, as it is done for the payment of **Dearness Allowance (DA)** to government employees, has been made at least since **2013**, when the task force constituted by the **Ministry of Rural Development (MoRD)** first made such recommendations.

सहायता राशि, लाभार्थियों की संख्या बढ़ाने तथा सहायता को मुद्रास्फीति से जोड़ने की मांग कम-से-कम 2013 से की जा रही है, जब ग्रामीण विकास मंत्रालय (MoRD) द्वारा गठित कार्यबल ने पहली बार ऐसी सिफारिशें की थीं। यह व्यवस्था सरकारी कर्मचारियों के महंगाई भत्ते (DA) की तरह होनी चाहिए।

- The **evaluation report** said that the real value of the assistance fixed at **₹200** has “significantly eroded due to inflation, and that the amount should be increased to **₹353** to retain its original purchasing power”.

मूल्यांकन रिपोर्ट में कहा गया कि ₹200 की सहायता राशि का वास्तविक मूल्य “मुद्रास्फीति के कारण काफी घट गया है और इसकी मूल क्रय शक्ति बनाए रखने के लिए इसे ₹353 किया जाना चाहिए।”

- An analysis by **The Hindu** based on the changes in the **Consumer Food Price Index (CFPI)** (base year **2012**) at the all-India level showed that since **2013**, the value of **₹200** has eroded to just around **₹99**.

उपभोक्ता खाद्य मूल्य सूचकांक (CFPI) (आधार वर्ष 2012) में हुए परिवर्तनों पर आधारित द हिंदू के विश्लेषण से पता चला कि 2013 के बाद ₹200 का वास्तविक मूल्य घटकर लगभग ₹99 रह गया है।



The retirement trap India is walking into unprepared

India is entering a phase where ageing, healthcare, personal finance will become deeply interconnected public issues; retirement can no longer be limited to tax-saving instruments

GS II: Governance

TWILIGHT ZONE

Vishwajeet Goel

India is growing older, at a pace most households are financially unprepared for. As per the **United Nations Population Fund (UNFPA)**, almost one of five Indians will be over the age of 60 by 2050. The elderly population in India is likely to rise from about 15 crore today to more than 34 crore over the next three decades. At the same time, healthcare costs continue to rise sharply, while inflation steadily chips away at household savings.

Yet, retirement planning in India still largely operates on assumptions built for another era.

We are living longer

Better healthcare access, improved sanitation, rising incomes and medical advancements have helped Indians live longer than previous generations.

But the longer people live, the more years they must fund without a regular income. For most people retirement calculations are based on current spends than future costs.

A family spending ₹75,000/month today may believe a few crores will comfortably sustain retirement. But inflation changes the picture dramatically. Even with moderate inflation, everyday expenses can multiply several times over two or three decades. The impact becomes even sharper in healthcare.



In recent years, medical inflation in India has stayed at 12-14%, much higher than the overall inflation. Treatment can now cost a chunk of retirement savings.

This is why retirement planning can no longer rely on traditional savings instruments. India needs stronger pension participation and long-term retirement-focused investing habits. Instruments such as the **National Pension System (NPS)** encourage sustained retirement planning via regulated and relatively low-cost structure. Its flexibility across equity, government securities and debt allocation allows investors to gradually align risk with age and retirement goals. More importantly, NPS addresses the absence of a structured pension culture outside of government employment.

In recent years, medical inflation in India has stayed between 12-14%, significantly higher than overall inflation. Treatment can now use a huge chunk of retirement savings.

India is witnessing a rapid rise in chronic conditions such as diabetes, hypertension and cardiac disorders which are long-duration illnesses requiring continuous medication, diagnostics, follow-up care and, in many cases, repeated hospitalisation.

While earlier genera-



Even with moderate inflation, everyday expenses can multiply several times over two or three decades. The impact becomes even sharper in healthcare.

tions often associated with retirement with reduced spending, modern retirees may experience the opposite. Healthcare, assisted living, home care support, diagnostics and medicines can become recurring monthly expenses changing the role of health insurance in household financial planning. Health cover today is increasingly becoming central to retirement protection. Without adequate coverage, even disciplined long-term savings can erode quickly after a major medical event.

Starting early

The advantage of starting early in instruments such as NPS is the ability to build a retirement corpus gradually over decades while benefiting from compounding and professional fund management. For younger earners especially, time is the biggest asset. Small but consistent contributions made early can potentially create significantly larger retirement outcomes compared with delayed investing later.

Traditional retirement strategies are not able to keep pace with realities.

Fixed deposits, long

considered the safest retirement instrument, often fail to generate inflation-beating post-tax returns over long periods. Realty is illiquid and does not always provide reliable rental income. Pension cover in India is also limited.

At the same time, Indian society is changing. Urbanisation, migration, nuclear families and changing career patterns mean many retirees may no longer have the same family support structures similar to earlier generations. Financial independence during retirement is an economic and a social necessity.

Starting early allows compounding to work over decades rather than years.

But retirement planning cannot be reduced to chasing market returns or accumulating the largest corpus. The larger objective is sustainability. People need savings that can survive inflation, market cycles and rising healthcare costs over long retirement periods.

India is entering a phase where ageing, healthcare, and personal finance will become deeply interconnected public issues. It's retirement conversation can no longer remain limited to tax-saving investments or fixed deposits.

The challenge is, how does a country prepare millions of people to financially sustain lives becoming longer, more expensive and medically more demanding? This would define the future of retirement planning in India.

(The writer is Head, Pensionbazaar)

08J6. The retirement trap India is walking into unprepared भारत जिस सेवानिवृत्ति जाल में बिना तैयारी के प्रवेश कर रहा है

- As per the **United Nations Population Fund (UNFPA)**, almost one of five Indians will be over the age of 60 by 2050.
संयुक्त राष्ट्र जनसंख्या कोष (UNFPA) के अनुसार, वर्ष 2050 तक लगभग हर पाँच में से एक भारतीय की आयु 60 वर्ष से अधिक होगी।
- The elderly population in India is likely to rise from about **15 crore** today to more than **34 crore** over the next three decades.
भारत में वृद्ध जनसंख्या वर्तमान लगभग 15 करोड़ से बढ़कर अगले तीन दशकों में 34 करोड़ से अधिक होने की संभावना है।
- Instruments such as the **National Pension System (NPS)** encourage sustained retirement planning via regulated and relatively low-cost structure.
राष्ट्रीय पेंशन प्रणाली (NPS) जैसे साधन विनियमित और अपेक्षाकृत कम लागत वाली संरचना के माध्यम से दीर्घकालिक सेवानिवृत्ति योजना को प्रोत्साहित करते हैं।
- Its flexibility across **equity, government securities and debt allocation** allows investors to gradually align risk with age and retirement goals.
इक्विटी, सरकारी प्रतिभूतियों और ऋण आवंटन में इसकी लचीलापन निवेशकों को उम्र और सेवानिवृत्ति लक्ष्यों के अनुसार जोखिम को धीरे-धीरे समायोजित करने की अनुमति देता है।
- India is witnessing a rapid rise in **chronic conditions such as diabetes, hypertension and cardiac disorders** which are long-duration illnesses requiring continuous medication, diagnostics, follow-up care and, in many cases, repeated hospitalisation.
भारत में मधुमेह, उच्च रक्तचाप और हृदय संबंधी विकारों जैसी दीर्घकालिक बीमारियों में तेजी से वृद्धि हो रही है, जिनके लिए निरंतर दवा, जांच, अनुवर्ती देखभाल और कई मामलों में बार-बार अस्पताल में भर्ती होने की आवश्यकता होती है।

GS Paper II: International Relations		08 June 2026
TOPICS COVERED		
08J6	Not seeking mediation on border: Nepal FM सीमा विवाद पर मध्यस्थता नहीं चाहते: नेपाल के विदेश मंत्री	
08J6	Bolivian Congress gives Paz power to use troops against crippling protests बोलीवियाई संसद ने पाज़ को व्यापक विरोध प्रदर्शनों से निपटने के लिए सेना के उपयोग की शक्ति दी	
08J6	Weighing ties with Russia and West, conflicted, cornered Armenia votes रूस और पश्चिम के बीच संबंधों को तौलते हुए, दुविधाग्रस्त और दबावग्रस्त आर्मेनिया मतदान कर रहा है	

Not seeking mediation on border: Nepal FM

Claim to the Kalapani-Lipulekh-Limpiyadhura trijunction is Kathmandu's focus, says Khanal

New 'political reality' in Nepal seeks to avoid 'old baggage' in ties with India, says Foreign Minister

To solve disputes through diplomacy; in contact with U.K. over documents not mediation: Khanal

GS II: IR
Kallol Bhattacharjee
NEW DELHI

Kathmandu is focused on establishing Nepal's claim on the Kalapani-Lipulekh-Limpiyadhura tri-junction and is not "asking for mediation" by third parties, Nepal's Foreign Minister Shisir Khanal said here on Sunday.

At a press conference at the Embassy of Nepal, Mr. Khanal said he represented a "completely new political reality in Nepal" that was determined to deliver "uncompromising good governance". The new government of Prime Minister Balendra Shah was not in favour of tying Nepal-India relations down to "old baggage", he added.

"We want to solve our disputes through diplomatic processes. We just want to see if we can access some of the docu-

ments that might be in libraries or museums in the U.K. Our position was not that we were asking for mediation," Mr. Khanal said, elaborating on Mr. Shah's remarks that Nepal was in contact with China and the U.K. on the Kalapani-Lipulekh-Limpiyadhura dispute with India.

Shah's statement

"The problems that existed when British India left the region still persist, so we believe Britain also has a role to play in this matter," Mr. Shah had said in Nepal's Parliament, stirring debates.

India's Ministry of External Affairs had issued a rebuttal, reiterating that India and Nepal had established a bilateral mechanism for discussing the dispute, and there was no scope for third-party intervention.

As the new generation



Field trip: Nepal's Foreign Minister Shisir Khanal visits the Embassy of Nepal in New Delhi on Sunday. ANI

of rulers, the Rastriya Swatantra Party (RSP) refuses to "look at India through the distorted, hypersensitive lens of 20th century geopolitics", Mr. Khanal said. "Instead, the RSP wants to shift the entire vocabulary of Nepal-India relations away from geopolitical friction and square it firmly on development diplomacy," he added.

After a gap of a few

years, the border issue between the two sides began simmering again when India on April 30 announced the Kailash-Manasarovar Yatra for 2026, scheduled to be conducted in 20 batches of 50 pilgrims each.

The Ministry of External Affairs announced that the pilgrimage would be conducted "in coordination with the Government of

the People's Republic of China" through the Lipulekh pass that is claimed by Nepal, and the Nathu La pass in Sikkim.

This announcement attracted a protest from Nepal, which communicated its objection to both India and China.

"We have expressed our position through an official diplomatic note to both India and China. We have clearly said to both countries that the land [Kalapani-Lipulekh-Limpiyadhura] belongs to us. That's been our historical claim," Mr. Khanal said in response to questions.

'More visits soon'

He said his visit to India had restarted the track of high-level interaction from the two sides, and more such visits would take place from Nepal's side soon with Finance Minister Swarnim Wagle expected

to visit Delhi “very soon”.

Mr. Khanal had held a formal meeting with External Affairs Minister S. Jaishankar on Saturday, when the two sides officially announced the operationalisation of peer-to-peer (P2P) cross-border payment transactions under a memorandum of understanding between Nepal Clearing House Ltd. and the National Payments Corporation of India, he said, which would enable digital and financial connectivity between the two sides.

The Nepal Prime Minister was focused on the "domestic front" as he was keen to show "early results" because of the "strong mandate" that the RSP had received in the May election, Mr. Khanal said, refusing to provide a "timeline" for Mr. Shah's visit to India.

The RSP led by Mr. Shah came to power after de-

feating the well-established, formerly dominant political players, including the Nepali Congress and the Maoist parties (Communist Party of Nepal-United Marxist-Leninist, or CPN-UML, and CPN-Maoist Centre).

Mr. Shah's rise to prime ministership took place against the backdrop of the "Gen Z uprising" in Nepal that overthrew the government of K.P. Sharma Oli after Mr. Oli launched a crackdown on Nepal's digital ecosystem in the first week of September 2025.

To a question on the fate of the report of the Eminent Persons Group set up over a decade ago to provide guidelines to India-Nepal bilateral ties, Mr. Khanal said, "The EPG was commissioned by an agreement of the two Prime Ministers, and the report can only be submitted to two Prime Ministers."

08J6. Not seeking mediation on border: Nepal FM

सीमा विवाद पर मध्यस्थता नहीं चाहते: नेपाल के विदेश मंत्री

- Claim to the **Kalapani-Lipulekh-Limpiyadhura trijunction** is Kathmandu's focus, says Khanal
कालापानी-लिपुलेख-लिम्पियाधुरा त्रि-जंक्शन पर दावा काठमांडू का मुख्य फोकस है, खानाल ने कहा।
- "We want to solve our disputes through diplomatic processes. We just want to see if we can access some of the documents that might be in libraries or museums in the **U.K.** Our position was not that we were asking for mediation," Mr. Khanal said, elaborating on Mr. Shah's remarks that **Nepal was in contact with China and the U.K. on the Kalapani-Lipulekh-Limpiyadhura dispute with India.**
"हम अपने विवादों को कूटनीतिक प्रक्रियाओं के माध्यम से सुलझाना चाहते हैं। हम केवल यह देखना चाहते हैं कि क्या हमें कुछ ऐसे दस्तावेज़ मिल सकते हैं जो **ब्रिटेन** के पुस्तकालयों या संग्रहालयों में हो सकते हैं। हमारा रुख यह नहीं था कि हम मध्यस्थता की मांग कर रहे थे," श्री खानाल ने कहा और भारत के साथ कालापानी-लिपुलेख-लिम्पियाधुरा विवाद पर नेपाल के **चीन** और **ब्रिटेन** के संपर्क में होने संबंधी श्री शाह की टिप्पणी को स्पष्ट किया।
- The **Ministry of External Affairs** announced that the pilgrimage would be conducted "in coordination with the Government of the **People's Republic of China**" through the **Lipulekh pass** that is claimed by Nepal, and the **Nathu La pass** in Sikkim.
विदेश मंत्रालय ने घोषणा की कि यह यात्रा "**जनवादी गणराज्य चीन** की सरकार के समन्वय से" नेपाल द्वारा दावा किए गए **लिपुलेख दर्रे** तथा सिक्किम के **नाथु ला दर्रे** के माध्यम से आयोजित की जाएगी।



Bolivian Congress gives Paz power to use troops against crippling protests

GS II: IR
Agence France-Presse
LA PAZ

Bolivia's legislature gave the green light on Sunday for President Rodrigo Paz to use the military to clear roadblocks that have crippled key cities for weeks.

A month of heated demonstrations calling for the centre-right Paz to step down have paralysed the Andean nation, with blockades causing severe food and medicine shortages.

Endless lines at the pump have also led many to sleep in the vehicles to not lose their place.

A Bill relaxing the country's strict rules surrounding states of emergency passed the lower chamber following 15 hours of over-



Fireworks and tear gas explode together as police officers try to clear a highway during a protest in San Julian, Bolivia. REUTERS

night debate, the body's President, Roberto Castro, announced.

Having already passed the Senate, it heads to Mr. Paz's desk for signature.

The new law comes a day after dozens of riot police backed by military veh-

icles fired tear gas as they attempted to clear a road in the town of San Julian.

The town is in the Santa Cruz region — an agricultural breadbasket supplying food to the country's western areas.

Protesters threw stones

and burned tires to try to halt the police's advance.

Mr. Paz on Sunday wrote on X that that the capital La Paz and second city El Alto are "still facing difficult times, but concrete progress is also beginning to be made".

The U.S.-backed, pro-business Paz took office in November promising to resolve the country's worst economic crisis in decades, but his unpopular economic reforms and failure to respond to social demands have roused public ire.

The new rules would allow troops to use force against protesters, and grants them a "presumption of legality" in situations of conflict.

08J6. Bolivian Congress gives Paz power to use troops against crippling protests

बोलीवियाई संसद ने पाज़ को व्यापक विरोध प्रदर्शनों से निपटने के लिए सेना के उपयोग की शक्ति दी

- **Bolivia's legislature** gave the green light on Sunday for President **Rodrigo Paz** to use the military to clear roadblocks that have crippled key cities for weeks.

रविवार को **बोलीविया** की संसद ने राष्ट्रपति **रोड्रिगो पाज़** को उन सड़क अवरोधों को हटाने के लिए सेना का उपयोग करने की अनुमति दे दी, जिन्होंने कई सप्ताहों से प्रमुख शहरों को ठप कर रखा है।

- A month of heated demonstrations calling for the **centre-right Paz** to step down have paralysed the **Andean nation**, with blockades causing severe food and medicine shortages.

मध्य-दक्षिणपंथी पाज़ के इस्तीफे की मांग को लेकर एक महीने से चल रहे तीव्र प्रदर्शनों ने **एंडियन राष्ट्र** को पंगु बना दिया है, जबकि नाकेबंदी के कारण भोजन और दवाओं की गंभीर कमी हो गई है।

- The town is in the **Santa Cruz region** — an agricultural breadbasket supplying food to the country's western areas.

यह नगर **सांता क़ूज़ क्षेत्र** में स्थित है, जो देश के पश्चिमी इलाकों को खाद्य आपूर्ति करने वाला प्रमुख कृषि क्षेत्र है।



Weighing ties with Russia and West, conflicted, cornered Armenia votes

With mounting pressure from Russia against Armenia joining European Union and a vocally pro-Russian Opposition, Prime Minister Nikol Pashinyan and his ruling Civil Contract party, which advocates balanced ties with U.S., Europe and Moscow, are seeking a strong mandate in parliamentary polls

GS II: IR
Associated Press
YEREVAN

Armenians will vote Sunday in parliamentary elections as the incumbent government, under mounting Russian pressure, seeks to loosen ties with Moscow and deepen cooperation with the West.

Prime Minister Nikol Pashinyan and his ruling Civil Contract party are looking for a strong mandate for a new geopolitical course. The Opposition they face includes some parties that are vocally pro-Russian.

Russian officials have hit Armenian exports with a barrage of restrictions in recent weeks, while high-ranking officials, including President Vladimir Putin, have made thinly veiled threats comparing Armenia's path to that already taken by Ukraine.

Armenian investigators said they issued six arrest warrants for members of the Opposition Strong Armenia party the day before the vote, accusing them of buying votes. The nation's Central Election Committee confirmed Saturday that the party could run after a member of another Opposition party, Republic, appealed for Strong Armenia to be barred over corruption allegations.

Armenia's Parliament, the National Assembly, must consist of at least 101 members who are elected



Making a choice: A woman casts her ballot at a polling station in Yerevan during Armenia's parliamentary election on Sunday. AP

for five-year terms. Parties must win at least 4% of the vote to take a seat, while blocs made up of three or more parties must hit 8%. Two political blocs and 17 parties are taking part in Sunday's election. Most pollsters and experts have predicted Mr. Pashinyan, who came to power in 2018 following sweeping street protests, will come out ahead.

Balanced foreign policy "I think Armenians expect, first of all, a peaceful, independent and prosperous Armenia from this election, as we have today," said Hripsime Grigoryan, a Civil Contract member of the outgoing Parliament.

Mr. Pashinyan has spoken on several occasions about the need for a ba-

lanced foreign policy ensuring Armenia maintains good relations with the United States, Europe and Russia, as well as regional powers such as Turkey and Iran. Despite this, he has attracted far more enthusiasm in the West than in Moscow. He has been endorsed by several European leaders, as well as U.S. President Donald Trump.

"Prime Minister Nikol Pashinyan, of Armenia, a great friend and Leader, is making his Country strong, wealthy, and very secure," Mr. Trump wrote on social media, urging Armenians to "Make (Armenia) Great Again."

This has displeased the Kremlin. Speaking to journalists after Russia's Victory Day parade on May 9,

Mr. Putin said if the Armenian people saw benefits in joining the European Union then "we will certainly have nothing to say against it." Yet he also reminded reporters, "We are currently living through everything that is happening in respect of Ukraine. And how did it start? It started with Ukraine's joining or attempting to join the EU."

Unlike the Civil Contract party, most of Armenia's Opposition supports building stronger relations with Moscow.

The Strong Armenia party seeks to develop business ties with Russia and has accused Mr. Pashinyan of attempting to start a war with Moscow. Party leader Samvel Karapetyan is on trial for allegedly advocating for the government's

overthrow, which the Armenian-Russian billionaire has rejected as a politically motivated case. He has coordinated the party's campaign while under house arrest, aided by his nephew Narek Karapetyan.

Other potential contenders include former President Robert Kocharyan, who leads the Hayastan bloc and has accused Mr. Pashinyan of "seriously undermining" relations with Russia, and the Prosperous Armenia Party led by pro-Russian business owner Gagik Tsarukyan. These parties also have strongly criticised Mr. Pashinyan for attempting to normalise relations with neighbour Azerbaijan.

The Armenian leader and Azerbaijani President Ilham Aliyev initiated a document on moving toward a peace deal at the White House alongside U.S. President Donald Trump in August. The two countries were locked in a decades-long conflict over the fate of Karabakh, a breakaway region that had been controlled for decades by ethnic Armenian forces backed by Armenia. Azerbaijan took control of the entire Karabakh region during a rapid offensive in 2023.

"I want this government to change because the condition of our country is getting worse," Sahakyan Elna, a supporter of the Prosperous Armenia Party, told AP at a rally Thursday. "I don't want to live with my enemies in unity."

'Economic coercion' Russian officials have slapped new restrictions on Armenian produce in the run-up to the parliamentary vote, banning the import of Armenian flowers, certain types of cognac and wine, eggplants, potatoes, dried fruits, fish and more. Russia says the bans are related to violations of agricultural import rules.

The European Commission on Thursday described the move as "nothing short of economic coercion." "By extending export restrictions on Armenian products, Moscow is weaponising economic relations for political pressure. We know this playbook all too well," the Commission said.

Moscow also controls a significant portion of Armenia's energy and infrastructure and supplies it with cheap gas, which is a point that Mr. Putin has been quick to drive home in his meetings with Mr. Pashinyan.

Mr. Putin also has stressed that Armenia cannot join the EU and remain within the Eurasian Economic Union, a Russian-led customs bloc. "Being in a customs union with the European Union and the Eurasian Economic Union is impossible," Mr. Putin said. "It's simply impossible by definition."

08J6. Weighing ties with Russia and West, conflicted, cornered Armenia votes
रूस और पश्चिम के बीच संबंधों को तौलते हुए, दुविधाग्रस्त और दबावग्रस्त आर्मेनिया मतदान कर रहा है

- With mounting pressure from **Russia** against **Armenia** joining the **European Union** and a vocally pro-Russian Opposition, Prime Minister **Nikol Pashinyan** and his ruling **Civil Contract** party, which advocates balanced ties with **U.S., Europe and Moscow**, are seeking a strong mandate in parliamentary polls.

यूरोपीय संघ में शामिल होने के खिलाफ रूस के बढ़ते दबाव और मुखर रूस-समर्थक विपक्ष के बीच, प्रधानमंत्री निकोल पशिनयान और उनकी सत्तारूढ़ सिविल कॉन्ट्रैक्ट पार्टी, जो अमेरिका, यूरोप और माँस्को के साथ संतुलित संबंधों की पक्षधर है, संसदीय चुनावों में मजबूत जनादेश की तलाश कर रही है।

- Armenians will vote Sunday in parliamentary elections as the incumbent government, under mounting Russian pressure, seeks to loosen ties with Moscow and deepen cooperation with the West.

रविवार को आर्मेनियाई नागरिक संसदीय चुनावों में मतदान करेंगे, जबकि मौजूदा सरकार बढ़ते रूसी दबाव के बीच माँस्को के साथ संबंधों को कमज़ोर करने और पश्चिम के साथ सहयोग को गहरा करने का प्रयास कर रही है।

- Mr. Pashinyan has spoken on several occasions about the need for a balanced foreign policy ensuring **Armenia** maintains good relations with the **United States, Europe and Russia**, as



well as regional powers such as **Turkey and Iran**.

श्री पशिन्गान कई अवसरों पर संतुलित विदेश नीति की आवश्यकता पर जोर दे चुके हैं ताकि आर्मेनिया संयुक्त राज्य अमेरिका, यूरोप और रूस के साथ-साथ क्षेत्रीय शक्तियों **तुर्किये और ईरान** के साथ भी अच्छे संबंध बनाए रख सके।

- Mr. Putin also has stressed that Armenia cannot join the **EU** and remain within the **Eurasian Economic Union**, a Russian-led customs bloc.

श्री पुतिन ने यह भी जोर दिया है कि आर्मेनिया **यूरोपीय संघ (EU)** में शामिल होने के साथ-साथ रूस-नेतृत्व वाले **यूरेशियन आर्थिक संघ** का सदस्य नहीं रह सकता।

- “Being in a customs union with the European Union and the Eurasian Economic Union is impossible,” Mr. Putin said.

श्री पुतिन ने कहा, “यूरोपीय संघ और यूरेशियन आर्थिक संघ दोनों के साथ एक ही सीमा शुल्क संघ में रहना असंभव है।”

GS Paper III: Economy		08 June 2026
TOPICS COVERED		
08J6	Testing times परीक्षा की घड़ी	
08J6	From borderland to India's strategic resource frontier सीमांत क्षेत्र से भारत के सामरिक संसाधन अग्रक्षेत्र तक	
08J6	Investing in gold and silver सोने और चांदी में निवेश	



GS III: Economy

Testing times

GDP data reveal some strengths, but they will come under strain

The GDP growth data released on Friday simultaneously portray recent economic strength and reveal some reasons for worry. The provisional estimates of GDP growth for 2025-26 have been pegged at 7.7%, which is marginally higher than the 7.6% predicted by the government in February. This suggests that March, the first full month since the West Asia crisis erupted, did not see enough of an impact to affect the full year's growth. That resilience will be dented in the months ahead. The data also showed that several key sectors of the economy, such as manufacturing and several services sectors, grew by double digits over and above a relatively high base. These are all good signs for an economy heading into severe supply-related headwinds due to the war in Iran. Notably, both Private Final Consumption Expenditure and Gross Fixed Capital Formation — metrics of household consumption and government and private sector investment activity, respectively — grew faster in 2025-26 than they did in the previous year. The consumption growth is especially welcome given that it had been at a tepid 5.8% for the previous two years. It remains to be seen how much of the investment growth was driven by the private sector. Even if this growth was driven by government spending, it has positive knock-on effects on the rest of the economy.

The weakness in the agriculture sector, however, is something to worry about. The sector's growth slowed to 3% in 2025-26 from 4.2% in 2024-25, despite the 2025 monsoon having concluded at 108% of its long period average (LPA). This is dire news, given that the India Meteorological Department has predicted that this year's monsoon will only be 90% of the LPA. That is not counting the fertilizer supply constraints that will really be felt in the months ahead. The data also show the rising dominance of services in the economy, with their share rising to 54.3% of total gross value added (GVA) in 2025-26, up from 51.9% in 2022-23. The agriculture sector, which continues to employ the largest share of the population by far, saw its share in GVA fall to below 20% from 22.1% in 2022-23. The manufacturing sector's share has remained largely unchanged, another cause for concern. This suggests that India is not growing its value-added manufacturing sector fast enough. The Reserve Bank of India (RBI), government, and independent economists are in agreement that 2026-27 will see growth slowing significantly. The RBI predicted growth will dip to 6.6%, and the Chief Economic Adviser said that he saw no need to second-guess this estimate. Last year's tariff-related disruptions were a test of India's export resilience. This year's energy supply disruptions will test the entire economy as well as the government's policy agility.

08J6. Testing times

परीक्षा की घड़ी

- The provisional estimates of GDP growth for 2025-26 have been pegged at 7.7%, which is marginally higher than the 7.6% predicted by the government in February.

2025-26 के लिए जीडीपी वृद्धि के अंतिम अनुमान 7.7% निर्धारित किए गए हैं, जो फरवरी में सरकार द्वारा अनुमानित 7.6% से थोड़ा अधिक है।

- Notably, both Private Final Consumption Expenditure and Gross Fixed Capital Formation — metrics of household consumption and government and private sector investment activity, respectively — grew faster in 2025-26 than they did in the previous year.

विशेष रूप से निजी अंतिम उपभोग व्यय (Private Final Consumption Expenditure) तथा सकल स्थिर पूंजी निर्माण (Gross Fixed Capital Formation) — जो क्रमशः घरेलू उपभोग और सरकारी एवं निजी निवेश

गतिविधियों के संकेतक हैं — ने 2025-26 में पिछले वर्ष की तुलना में अधिक तेज़ वृद्धि दर्ज की।

- This is dire news, given that the India Meteorological Department (IMD) has predicted that this year's monsoon will only be 90% of the LPA.

यह अत्यंत चिंताजनक समाचार है, क्योंकि भारत मौसम विज्ञान विभाग (IMD) ने अनुमान लगाया है कि इस वर्ष का मानसून केवल LPA के 90% तक ही रहेगा।

- That is not counting the fertilizer supply constraints that will really be felt in the months ahead.

इसके अतिरिक्त आने वाले महीनों में महसूस की जाने वाली उर्वरक आपूर्ति संबंधी बाधाओं को इसमें शामिल नहीं किया गया है।

- The data also show the rising dominance of services in the economy, with their share rising to 54.3% of total gross value added (GVA) in 2025-26, up from 51.9% in 2022-23.

आँकड़े अर्थव्यवस्था में सेवा क्षेत्र के बढ़ते प्रभुत्व को भी दर्शाते हैं, जिसका हिस्सा 2025-26 में कुल सकल मूल्य वर्धन (GVA) का 54.3% हो गया, जबकि 2022-23 में यह 51.9% था।

- The agriculture sector, which continues to employ the largest share of the population by far, saw its share in GVA fall to below 20% from 22.1% in 2022-23.

कृषि क्षेत्र, जो अब भी सबसे अधिक जनसंख्या को रोजगार प्रदान करता है, का GVA में हिस्सा 2022-23 के 22.1% से घटकर 20% से नीचे आ गया।



From borderland to India's strategic resource frontier

GS III: Economy

Within days of one another, official platforms of the Ministry of Mines cast several northeastern States in a similar frame – as repositories of strategic minerals and untapped potential. Manipur was described as a “quiet mineral frontier”, Arunachal Pradesh as a “resource-rich frontier”, while Meghalaya and Mizoram were portrayed through comparable narratives that emphasised the hidden wealth beneath their hills. Governments routinely publicise natural resources and development opportunities, and such descriptions would ordinarily attract little attention.

Taken together, however, they point to a broader shift in the language through which the northeast is increasingly being framed in the national conversation and strategic picture.

The critical mineral push

The timing is significant because critical minerals have moved from geological discussions into strategic ones. Lithium, cobalt, graphite, nickel and rare earth elements increasingly shape industrial competition, technological manufacturing and energy transitions. Batteries, semiconductors, renewable technologies and defence systems depend upon them, and countries have begun repositioning themselves around access to these resources. India itself continues to depend on imports for several critical minerals and has consequently expanded exploration efforts. According to a Ministry of Mines reply in Parliament, the Geological Survey of India undertook 43 critical mineral exploration projects across northeastern States during the 2022-23, 2023-24 and 2024-25 field seasons, covering minerals such as graphite, vanadium, lithium, rare earth elements, nickel and cobalt. Exploration activity has expanded across Arunachal Pradesh, Meghalaya, Assam, Nagaland and Manipur. In Manipur, projects involving nickel, cobalt and chromium exploration have recently been initiated.

Geological surveys have pointed toward mineral potential across the region for years.



Sangman Hangsing

Researcher and alumnus of the Kautilya School of Public Policy

What appears to be changing is the language through which that significance is increasingly being understood. The northeast has long held strategic significance that extends beyond geology, but the framework through which that significance is understood now appears to be widening.

Shift in language

For decades, the northeast has figured in national strategy largely through the language of borders and security. Discussions have centred on insurgencies, territorial management, connectivity initiatives and geopolitics considerations involving neighbouring countries, while infrastructure and development were often justified as instruments of strategic access and territorial security.

The language of resources is increasingly entering a strategic space once dominated by concerns over borders and security. Critical minerals are now discussed alongside trade corridors and geopolitical access, with territorial and resource security converging. Places once viewed mainly as sensitive border regions are increasingly seen as strategic assets.

The repeated use of the word frontier is revealing, because frontiers rarely function as neutral descriptions. They do not merely describe geography; they often reflect how States imagine it. Historically, frontiers have been viewed as spaces awaiting integration, development or extraction because they appear as landscapes of future possibility.

The difficulty is that frontiers are rarely empty spaces waiting to be discovered. The hills and valleys of the northeast already contain dense social and political worlds structured around customary land systems, local institutions and long-standing relationships with territory. Questions of land often extend beyond economics, as they are also tied to authority, identity and memory. Resource extraction thus enters landscapes that already possess institutions and histories of their own.

These questions become particularly significant in regions where political uncertainties continue to shape everyday life. In Manipur, years of violence and displacement have intensified debates over land and territorial arrangements. Similar concerns about ownership, ecological vulnerability and local participation have surfaced across the northeast at different times. Projects involving land often acquire meanings that extend beyond development, as communities interpret them through the lens of trust, representation and political inclusion.

Resources and inclusion

India's search for critical resources is understandable within a global environment increasingly shaped by supply-chain uncertainty and strategic competition. The northeast itself also requires infrastructure, employment and economic opportunities that have remained uneven for decades. Questions surrounding resource development rarely fit neatly into positions of support or opposition.

How quickly these transitions unfold and who shapes them may matter as much as the resources themselves. For a very long time, national priorities and local realities in the northeast often moved at different speeds. Connectivity projects sometimes arrived without corresponding economic ecosystems, while strategic considerations frequently overshadowed questions surrounding participation and representation. Resource development risks reproducing similar tensions if extraction begins moving faster than institutions capable of managing its social consequences.

What is being debated extends beyond the minerals beneath the hills. The northeast has spent years being viewed first as a border to be secured and then as a corridor to be connected. If it now begins entering national imagination as a landscape of strategic resources, the question is whether this new frontier will finally include the people who already inhabit it, or merely assign another purpose to the land beneath their feet.

Critical mineral ambitions must account for the people, land and history of northeast India

08J6.From borderland to India's strategic resource frontier

सीमांत क्षेत्र से भारत के सामरिक संसाधन अग्रक्षेत्र तक

The critical mineral push

महत्वपूर्ण खनिजों की ओर बढ़ता जोर

- **Manipur** was described as a “quiet mineral frontier”, **Arunachal Pradesh** as a “resource-rich frontier”, while **Meghalaya** and **Mizoram** were portrayed through comparable narratives that emphasised the hidden wealth beneath their hills.

मणिपुर को “शांत खनिज सीमांत”, अरुणाचल प्रदेश को “संसाधन-समृद्ध सीमांत” के रूप में वर्णित किया गया, जबकि मेघालय और मिजोरम को भी इसी प्रकार की कथाओं के माध्यम से प्रस्तुत किया गया, जिनमें उनकी पहाड़ियों के नीचे छिपी संपदा पर बल दिया गया।

- **Lithium, cobalt, graphite, nickel and rare earth elements** increasingly shape industrial competition, technological manufacturing and energy transitions.

लिथियम, कोबाल्ट, ग्रेफाइट, निकेल तथा दुर्लभ मृदा तत्व औद्योगिक प्रतिस्पर्धा, तकनीकी विनिर्माण और ऊर्जा संक्रमण को लगातार प्रभावित कर रहे हैं।

- **Batteries, semiconductors, renewable technologies and defence systems** depend upon them, and countries have begun repositioning themselves around access to these resources.

बैटरियाँ, सेमीकंडक्टर, नवीकरणीय प्रौद्योगिकियाँ तथा रक्षा प्रणालियाँ इन पर निर्भर हैं, और विभिन्न देशों ने



इन संसाधनों तक पहुँच को ध्यान में रखते हुए अपनी रणनीतियों को पुनः व्यवस्थित करना प्रारम्भ कर दिया है।

- According to a **Ministry of Mines** reply in **Parliament**, the **Geological Survey of India** undertook **43 critical mineral exploration projects** across northeastern States during the **2022-23, 2023-24 and 2024-25 field seasons**, covering minerals such as **graphite, vanadium, lithium, rare earth elements, nickel and cobalt**.
संसद में खान मंत्रालय द्वारा दिए गए उत्तर के अनुसार, भारतीय भूवैज्ञानिक सर्वेक्षण (GSI) ने 2022-23, 2023-24 तथा 2024-25 के क्षेत्रीय सत्रों के दौरान पूर्वोत्तर राज्यों में 43 महत्वपूर्ण खनिज अन्वेषण परियोजनाएँ संचालित कीं, जिनमें ग्रेफाइट, वैनैडियम, लिथियम, दुर्लभ मृदा तत्व, निकेल तथा कोबाल्ट जैसे खनिज शामिल थे।
- In **Manipur**, projects involving **nickel, cobalt and chromium exploration** have recently been initiated.
मणिपुर में हाल ही में निकेल, कोबाल्ट और क्रोमियम अन्वेषण से संबंधित परियोजनाएँ प्रारम्भ की गई हैं।
- Discussions have centred on **insurgencies, territorial management, connectivity initiatives and geopolitical considerations** involving neighbouring countries, while infrastructure and development were often justified as instruments of strategic access and territorial security.
चर्चाएँ मुख्यतः उग्रवाद, क्षेत्रीय प्रबंधन, संपर्कता पहलों तथा पड़ोसी देशों से संबंधित भूराजनीतिक विचारों पर केंद्रित रही हैं, जबकि अवसंरचना और विकास को प्रायः रणनीतिक पहुँच और क्षेत्रीय सुरक्षा के साधन के रूप में उचित ठहराया गया है।



Investing in gold and silver

THINKINVESTOR

Geopolitical tensions around the world have made gold and silver important assets to have in one's investment portfolio. But you must be mindful of differences between the two assets.

GS III: Economy
 Venkatesh Bangaruswamy

You would have observed how gold and silver prices have moved in recent times. It is also highly likely you gained from the price movements over the last year. With gold prices near record highs and silver prices very volatile, many appear undecided on the next course of action on the two metals. Should you buy now or wait for a dip? If so, should you buy physical or financial asset? Here, we discuss why market timing on gold and silver **exchange traded funds (ETFs)** is optimal.

Market timing?

The important decision you should make is whether to buy the physical asset or its financial equivalent viz. ETFs. It is optimal to invest in ETFs for two reasons. One, it is operationally efficient to buy and sell ETFs. And two, gold and silver ETFs closely track the spot price of the underlying metal. True, these ETFs trade at a premium to spot price but you may be able to capture a similar premium when you sell the ETF. Selling price of 24-carat physical gold is typically lower than its spot price.

The question of whether you should buy ETF units now or wait for a dip depends on how you invest in gold and silver and manage the positions. Typically, gold and silver form part of satellite portfolio within the core-satellite framework. In this framework, the core portfolio is goal-based and the satellite is trading

portfolio, geared to capturing short-term price fluctuations in the market. That means you must be comfortable with market timing. To do this, you must be good at reading price charts – applying technical analysis. Otherwise, you could buy such research from investment professionals. Another choice would be to set up short-term systematic investment plans (SIPs) and take profit whenever the investment generates predefined absolute gains. This choice, however, removes market timing out of the decision process.

Conclusion

The geopolitical tensions around the world have made both gold and silver important assets to have in one's investment portfolio. But you must be mindful of the difference between the two assets. Gold is typically considered as safe haven during global crisis (referred to as flight to quality). Also, central banks across the world invest in gold to build reserves. Silver is primarily an input in manufacturing processes. So, their returns and price volatility may not always be similar.

(The author offers training programmes for individuals to manage their personal investments)

निकटता से अनुसरण करते हैं।

- True, these ETFs trade at a premium to spot price but you may be able to capture a similar premium when you sell the ETF.
 यह सही है कि ये ईटीएफ स्पाट कीमत से अधिक मूल्य पर कारोबार करते हैं, लेकिन जब आप ईटीएफ बेचते हैं तो आपको भी समान प्रीमियम प्राप्त हो सकता है।
- Selling price of 24-carat physical gold is typically lower than its spot price.
 24 कैरेट भौतिक सोने का विक्रय मूल्य सामान्यतः उसकी स्पाट कीमत से कम होता है।
- Typically, gold and silver form part of satellite portfolio within the core-satellite framework.
 आमतौर पर सोना और चांदी कोर-सैटेलाइट ढाँचे के अंतर्गत सैटेलाइट पोर्टफोलियो का हिस्सा होते हैं।
- In this framework, the core portfolio is goal-based and the satellite is trading portfolio, geared to capturing short-term price fluctuations in the market.
 इस ढाँचे में कोर पोर्टफोलियो लक्ष्य-आधारित होता है और सैटेलाइट पोर्टफोलियो एक ट्रेडिंग पोर्टफोलियो होता है, जिसका उद्देश्य बाजार में अल्पकालिक मूल्य उतार-चढ़ाव से लाभ कमाना होता है।
- Another choice would be to set up short-term systematic investment plans (SIPs) and take profit whenever the investment generates predefined absolute gains.

08J6. Investing in gold and silver

सोने और चांदी में निवेश

• If so, should you buy physical or financial asset?
 यदि खरीदना है, तो क्या आपको भौतिक संपत्ति खरीदनी चाहिए या वित्तीय संपत्ति?

• Here, we discuss why market timing on gold and silver exchange traded funds (ETFs) is optimal.

यहाँ हम चर्चा करते हैं कि गोल्ड और सिल्वर एक्सचेंज ट्रेडेड फंड्स (ETFs) में बाजार का सही समय चुनना क्यों उपयुक्त है।

• An ETF is a basket of securities such as stocks, bonds, commodities, gold, government securities, or a combination of assets.

• One, it is operationally efficient to buy and sell ETFs.
 पहला, ईटीएफ को खरीदना और बेचना परिचालन की दृष्टि से अधिक सुविधाजनक है।

• And two, gold and silver ETFs closely track the spot price of the underlying metal.

दूसरा, गोल्ड और सिल्वर ईटीएफ संबंधित धातु की स्पाट कीमत का

एक अन्य विकल्प अल्पकालिक सिस्टेमैटिक इन्वेस्टमेंट प्लान (SIPs) स्थापित करना है और जब भी निवेश पूर्वनिर्धारित निश्चित लाभ उत्पन्न करे, तब लाभ बुक करना है।

- **Gold** is typically considered as a safe **haven** during global crisis (referred to as **flight to quality**).

वैश्विक संकट के दौरान सोने को सामान्यतः सुरक्षित निवेश विकल्प (सेफ हेवन) माना जाता है, जिसे फ्लाइट टू क्वालिटी कहा जाता है।

- Also, **central banks** across the world invest in gold to build reserves.
इसके अतिरिक्त, दुनिया भर के केंद्रीय बैंक अपने भंडार बनाने के लिए सोने में निवेश करते हैं।
- **Silver** is primarily an input in manufacturing processes.
चांदी मुख्य रूप से विनिर्माण प्रक्रियाओं में उपयोग होने वाला एक इनपुट है।
- So, their returns and price volatility may not always be similar.
इसलिए, इन दोनों के प्रतिफल और मूल्य अस्थिरता हमेशा समान नहीं हो सकते।

GS Paper III: Science and Technology		08 June 2026
TOPICS COVERED		
08J6	Homo erectus fossil yields secrets long thought to be beyond genetics होमो इरेक्टस जीवाश्म ने ऐसे रहस्यों का उद्घाटन किया जो लंबे समय तक आनुवंशिकी की पहुँच से परे माने जाते थे	
08J6	Pyroprocessing: heat shows the way पाइरोप्रोसेसिंग: ऊष्मा मार्ग दिखाती है	



Homo erectus fossil yields secrets long thought to be beyond genetics

That modern humans carry DNA fragments from two other members of the genus *Homo* raised the possibility that they may also harbour genetic material from other extinct human species; but in the 14 years since the Denisovan genome was published, no new genome from any other extinct human relative has been uncovered — until now

GS III: S&T
Arun Panchapakesan

For much of modern history, human evolution was thought to progress in linear fashion, with one species replacing another, one by one. The famous 'ape turning to human' cartoon illustrating a stooped primate gradually straightening into a modern man essentially captures this idea.

That picture began to change in the second half of the 19th century when scientists started to unearth human-like fossils. At the time, scientists used geological clues such as the depth at which a fossil was found and the rock layers surrounding it to determine the age of fossils. This method could establish which fossils were older or younger than others but did not reveal precise dates.

The timeline suggested an intriguing possibility, however. It appeared that these different kinds of humans had not followed one another in succession but had lived alongside each other. Radiometric dating techniques later confirmed this idea: multiple human species had coexisted on the earth at various points.

Series of surprises

In 2003, the Human Genome Project announced the first high-quality sequence of the human genome. Human beings finally possessed the secret to their own identity — the reason(s) they were unique. That sense of identity, however, proved to be short-lived.

In 2010, scientists published the genome of the Neanderthals, our closest extinct relatives. When they compared Neanderthal DNA with the genomes of living people, they uncovered a remarkable result. Most humans alive today carry around 1-2% Neanderthal DNA in their own genomes. In Africans, this percentage is slightly lower, but even their DNA is 0.3-0.5% Neanderthal.

The surprises did not end there. In 2012, scientists sequenced the genome of Denisovans, another human lineage, finding that some present-day populations, particularly in Oceania and parts of Southeast Asia, had 3-6% Denisovan DNA.

That we carry DNA fragments from two other members of the genus *Homo* raised the possibility that we may also harbour genetic material from other extinct human species. But in the 14 years since the Denisovan genome was published, no new genome from any other extinct human relative has been uncovered.

DNA after death

The difficulty lies in the nature of DNA itself. The moment an organism dies, its DNA begins to break down. Enzymes



Representative image of the bones of the *Homo erectus* fossil 'Turkana Boy', the most complete fossil of the species found to date. EINSAMER SCHÜTZE (CC BY-SA)

released from dying cells cut DNA into small pieces. Microbes and fungi invade the remains and further degrade the genetic material. Water and oxygen promote chemical reactions that further damage DNA. Then there are temperature fluctuations, solar radiation, and UV damage. Over a few tens of millennia, the DNA is reduced to a few small pieces.

To recover DNA from these ancient humans, scientists need to be very lucky. The specimen must have been exposed to cold, dry, and stable environments such as permafrost, frozen sediments, or the inside of a deep cave. This is very rare — and why only a small fraction of fossils contain usable DNA.

One such species whose DNA sequence has evaded us for a long time is *Homo erectus*, the species estimated to have originated over 2 million years ago and thought to be one of the first human relatives to spread widely across Africa, Europe, and Asia.

Acid etching

A recent study published in *Nature* has provided the first molecular sequences from *Homo erectus* fossils from China. Rather than attempting to recover DNA directly, the researchers extracted proteins preserved within the enamel of six *Homo erectus* teeth dated to around

400,000 years ago. Because proteins are the products of the DNA, their sequences can reveal portions of the underlying genetic information, providing a rare, albeit narrow, view into the genome of an extinct human species.

The method used to recover the genetic information is notable. Usually, recovering ancient DNA or proteins requires scientists to grind up part of a fossil, so museum curators are reluctant to permit such analyses, especially when there is no guarantee that usable genetic material will be recovered.

To overcome this problem, the researchers used acid etching, a technique where a small area of the tooth enamel is briefly exposed to a dilute acid solution, which dissolves microscopic amounts of tooth enamel and releases the proteins trapped within it. The fossil is left largely intact. Since tooth enamel is a highly mineralised tissue, it can trap and protect proteins for a long time.

The researchers proceeded to successfully recover enamel proteins from five male and one female *Homo erectus* individuals. When they compared the protein sequences with those of modern humans, Neanderthals, and Denisovans, they made two interesting discoveries.

First, all six *Homo erectus* individuals had a protein variant that has never been

found in any other known species in the genus *Homo*. Second, they carried another variant present in Denisovans. This suggests populations related to these Chinese *Homo erectus* may have interbred with Denisovans in East Asia.

Shared story

However, because the results come from only the enamel proteins and not the entire genome, they are not conclusive. It was long known that the Denisovan genome contains DNA from a much older species of the human lineage. While this study points to *Homo erectus* as a possible candidate, it does not prove it.

Nevertheless, the study represents an advance far beyond the information it has generated, which by itself is tiny. This is the first effort to recover meaningful molecular data from *Homo erectus* fossils, long thought to be beyond the reach of genetics.

Though Neanderthals, Denisovans, and others have vanished from the earth, traces of their existence endure within our DNA. The more we look, the more we find that the story of humans is not only ours: it is theirs as well.

(Arun Panchapakesan is an assistant professor at the Y.R. Gaitonde Centre for AIDS Research and Education, Chennai. arun.panchapakesan@gmail.com)

THE GIST

Radiometric dating techniques have confirmed that multiple human species had coexisted on the earth at various points

While the Human Genome Project in 2003 provided humans with a sense of unique identity, later studies showed the presence of Neanderthal and Denisovan DNA in the modern human genome

A recent study on enamel from *Homo erectus* teeth has revealed a protein variant never found before in the genus as well as another variant present in Denisovans

It was known that the Denisovan genome contains DNA from a much older species of human lineage and the study, while not conclusive, points to *Homo erectus* as a possible candidate

08J6. Homo erectus fossil yields secrets long thought to be beyond genetics

होमो इरेक्टस जीवाश्म ने ऐसे रहस्यों का उद्घाटन किया जो लंबे समय तक आनुवंशिकी की पहुँच से परे माने जाते थे

- That modern humans carry DNA fragments from two other members of the genus *Homo* raised the possibility that they may also harbour genetic material from other extinct human species; but in the 14 years since the Denisovan genome was published, no new genome from any other extinct human relative has been uncovered — until now.

यह तथ्य कि आधुनिक मनुष्य वंश होमो के दो अन्य सदस्यों के डीएनए अंश अपने भीतर धारण करते हैं, इस संभावना को जन्म देता है कि वे अन्य विलुप्त मानव प्रजातियों की आनुवंशिक सामग्री भी अपने भीतर संजोए हुए हो सकते हैं; किंतु डेनिसोवन जीनोम के प्रकाशित होने के बाद के 14 वर्षों में किसी अन्य विलुप्त मानव संबंधी का कोई नया जीनोम प्राप्त नहीं हुआ था — अब तक।

- Radiometric dating techniques later confirmed this idea: multiple human species had coexisted on the earth at various points.

बाद में रेडियोमेट्रिक डेटिंग तकनीकों ने इस विचार की पुष्टि की कि विभिन्न समयों पर पृथ्वी पर अनेक मानव प्रजातियाँ साथ-साथ विद्यमान थीं।

Series of surprises

आश्चर्यों की श्रृंखला

- In 2003, the **Human Genome Project** announced the first high-quality sequence of the human genome.
2003 में **ह्यूमन जीनोम प्रोजेक्ट** ने मानव जीनोम के प्रथम उच्च-गुणवत्ता वाले अनुक्रम की घोषणा की।
- In 2010, scientists published the genome of the **Neanderthals**, our closest extinct relatives.
2010 में वैज्ञानिकों ने हमारे सबसे निकटवर्ती विलुप्त संबंधियों **निएंडरथल्स** के जीनोम को प्रकाशित किया।
- **Enzymes released from dying cells cut DNA into small pieces.**
मरती हुई कोशिकाओं से निकलने वाले **एंजाइम** डीएनए को छोटे-छोटे टुकड़ों में विभाजित कर देते हैं।
- **Microbes and fungi invade the remains and further degrade the genetic material.**
सूक्ष्मजीव और **कवक** अवशेषों पर आक्रमण कर आनुवंशिक सामग्री को और अधिक नष्ट कर देते हैं।
- **Water and oxygen** promote chemical reactions that further damage DNA.
जल और **ऑक्सीजन** ऐसी रासायनिक अभिक्रियाओं को बढ़ावा देते हैं जो डीएनए को और अधिक क्षति पहुँचाती हैं।
- Then there are **temperature fluctuations, solar radiation, and UV damage.**
इसके अतिरिक्त **तापमान में उतार-चढ़ाव, सौर विकिरण** तथा **पराबैंगनी (UV) क्षति** भी प्रभाव डालते हैं।
- One such species whose DNA sequence has evaded us for a long time is **Homo erectus**, the species estimated to have originated over **2 million years ago** and thought to be one of the first human relatives to spread widely across **Africa, Europe, and Asia.**
ऐसी ही एक प्रजाति, जिसका डीएनए अनुक्रम लंबे समय से हमारी पहुँच से बाहर रहा है, **होमो इरेक्टस** है। यह प्रजाति लगभग **20 लाख वर्ष पूर्व** उत्पन्न हुई मानी जाती है और इसे उन प्रारम्भिक मानव संबंधियों में गिना जाता है जिन्होंने **अफ्रीका, यूरोप और एशिया** में व्यापक रूप से प्रसार किया।

Acid etching

अम्लीय उत्कीर्णन (एसिड एचिंग)

- A recent study published in **Nature** has provided the **first molecular sequences from Homo erectus fossils from China.**
हाल ही में **नेचर** में प्रकाशित एक अध्ययन ने **चीन** से प्राप्त **होमो इरेक्टस** जीवाश्मों से प्रथम आणविक अनुक्रम उपलब्ध कराए हैं।
- Rather than attempting to recover **DNA** directly, the researchers extracted proteins preserved within the **enamel of six Homo erectus teeth dated to around 4,00,000 years ago.**
प्रत्यक्ष रूप से **डीएनए** प्राप्त करने का प्रयास करने के बजाय, शोधकर्ताओं ने लगभग **4,00,000 वर्ष पुराने छह होमो इरेक्टस** दाँतों के एनामेल में संरक्षित प्रोटीनों को निकाला।
- **First, all six Homo erectus individuals had a protein variant that has never been found in any other known species in the genus Homo.**
पहली खोज यह थी कि सभी छह **होमो इरेक्टस** व्यक्तियों में एक ऐसा प्रोटीन प्रकार पाया गया जो **होमो** वंश की किसी अन्य ज्ञात प्रजाति में कभी नहीं मिला है।
- **Second, they carried another variant present in Denisovans.**
दूसरी खोज यह थी कि उनमें एक अन्य प्रकार भी मौजूद था जो **डेनिसोवन्स** में पाया जाता है।
- **This suggests populations related to these Chinese Homo erectus may have interbred with Denisovans in East Asia.**



यह संकेत देता है कि इन चीनी **होमो इरेक्टस** से संबंधित जनसंख्याओं का **पूर्वी एशिया** में **डेनिसोवन्स** के साथ अंतःप्रजनन हुआ हो सकता है।

- It was long known that the **Denisovan genome** contains DNA from a much older species of the human lineage.
यह लंबे समय से ज्ञात है कि **डेनिसोवन जीनोम** में मानव वंश की एक अत्यंत प्राचीन प्रजाति का डीएनए मौजूद है।
- Though **Neanderthals, Denisovans**, and others have vanished from the earth, traces of their existence endure within our **DNA**.
यद्यपि **निंडरथल्स, डेनिसोवन्स** और अन्य मानव प्रजातियाँ पृथ्वी से विलुप्त हो चुकी हैं, फिर भी उनके अस्तित्व के चिह्न हमारे **डीएनए** में आज भी विद्यमान हैं।

Pyroprocessing: heat shows the way

GS III: S&T

Vasudevan Mukunth

Pyroprocessing is a way to change a solid material physically or chemically using high temperature. It is a dry process and very energy-intensive. The three sectors that use it most are cement-making, metallurgy, and nuclear power.

Of these, cement-making uses pyroprocessing the most. First, finely ground limestone, clay and iron — the raw materials — are fed into a rotary kiln. As the temperature increases to 900° C, the limestone loses its carbon dioxide, and at around 1,450° C, the mix partly melts to form marble-sized nodules called clinker. The clinker is then ground to produce cement.

In metallurgy, pyroprocessing is used to extract metals from their ores in multiple stages. For example, sulphide ores are heated in air — or roasted — to convert them into metal oxides, like zinc sulphide. Smelting melts an ore to separate the metal from waste impurities called slag. Heating limestone to yield lime is likewise called calcining.

In the nuclear industry, pyroprocessing has a slightly different meaning. It is used to reprocess spent nuclear fuel, in techniques developed in the 1980s and 1990s. First, used nuclear fuel is broken up into pieces and placed in a salt bath — usually a mixture of lithium and potassium chlorides at 500° C or more. Then, an electric current is passed through the salt bath, causing



A rotary kiln is visible as the rust-coloured horizontal tube at the centre in this image of a cement plant in the U.S. GREG GOEBEL (CC BY-SA)

different elements to become separated depending on their electrochemical properties. Operators then recover the elements of interest in separate streams.

This form of pyroprocessing has been the subject of study in Japan, South Korea, and the U.S. and is used as part of programmes involving advanced fast reactors.

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

08J6. Pyroprocessing: heat shows the way

पाइरोप्रोसेसिंग: ऊष्मा मार्ग दिखाती है

- Pyroprocessing** is a way to change a solid material physically or chemically using high temperature.

पाइरोप्रोसेसिंग उच्च तापमान का उपयोग करके किसी ठोस पदार्थ में भौतिक अथवा रासायनिक परिवर्तन करने की एक विधि है।

- It is a dry process and very energy-intensive.

यह एक शुष्क प्रक्रिया है तथा इसमें अत्यधिक ऊर्जा की आवश्यकता होती है।

- The three sectors that use it most are **cement-making, metallurgy, and nuclear power**.

इसके सर्वाधिक उपयोग करने वाले तीन क्षेत्र **सीमेंट निर्माण, धातुकर्म तथा परमाणु ऊर्जा** हैं।

- Of these, **cement-making** uses pyroprocessing the most.

इनमें से **सीमेंट निर्माण** में पाइरोप्रोसेसिंग का सबसे अधिक उपयोग होता है।

- First, finely ground **limestone, clay**

and iron — the raw materials — are fed into a **rotary kiln**.

सबसे पहले बारीक पिसे हुए **चूना पत्थर, मिट्टी और लौह** — जो कच्ची सामग्री हैं — को एक रोटरी भट्ठी (रोटरी किर्न) में डाला जाता है।

- As the temperature increases to **900° C**, the limestone loses its **carbon dioxide**, and at around **1,450° C**, the mix partly melts to form marble-sized nodules called **clinker**.
जैसे-जैसे तापमान **900° सेल्सियस** तक बढ़ता है, चूना पत्थर अपनी **कार्बन डाइऑक्साइड** खो देता है, और लगभग **1,450° सेल्सियस** पर मिश्रण आंशिक रूप से पिघलकर संगमरमर के आकार की गांठें बनाता है, जिन्हें **क्लंकर** कहा जाता है।
- The **clinker** is then ground to produce cement.
इसके बाद **क्लंकर** को पीसकर सीमेंट तैयार किया जाता है।



- In **metallurgy**, pyroprocessing is used to extract metals from their ores in multiple stages.
धातुकर्म में पाइरोप्रोसेसिंग का उपयोग अयस्कों से धातुओं को अनेक चरणों में निकालने के लिए किया जाता है।
- For example, **sulphide ores** are heated in air — or roasted — to convert them into metal oxides, like **zinc sulphide**.
उदाहरण के लिए, **सल्फाइड अयस्कों** को वायु में गर्म किया जाता है — अर्थात् उनका **रोस्टिंग** किया जाता है — ताकि उन्हें धातु ऑक्साइडों में परिवर्तित किया जा सके, जैसे **जिंक सल्फाइड**।
- Smelting** melts an ore to separate the metal from waste impurities called **slag**.
स्मेल्टिंग में अयस्क को पिघलाया जाता है ताकि धातु को **स्लैग** कहलाने वाली अपशिष्ट अशुद्धियों से अलग किया जा सके।
- Heating limestone to yield lime** is likewise called **calcining**.
इसी प्रकार **चूना पत्थर** को गर्म करके **चूना** प्राप्त करने की प्रक्रिया को **कैल्सिनिंग** कहा जाता है।
- In the **nuclear industry**, pyroprocessing has a slightly different meaning.
परमाणु उद्योग में पाइरोप्रोसेसिंग का अर्थ कुछ भिन्न होता है।
- It is used to reprocess spent nuclear fuel**, in techniques developed in the **1980s and 1990s**.
इसका उपयोग **उपयोग किए जा चुके परमाणु ईंधन** के पुनर्प्रसंस्करण के लिए किया जाता है, जिनकी तकनीकें **1980 और 1990 के दशक** में विकसित की गई थीं।
- First, used nuclear fuel is broken up into pieces and placed in a salt bath** — usually a mixture of **lithium** and **potassium chlorides** at **500° C** or more.
सबसे पहले प्रयुक्त परमाणु ईंधन को टुकड़ों में विभाजित किया जाता है और एक **लवण स्नान (सॉल्ट बाथ)** में रखा जाता है — जो सामान्यतः **लिथियम और पोटैशियम क्लोराइड** के मिश्रण से बना होता है तथा जिसका तापमान **500° सेल्सियस** या उससे अधिक होता है।
- Then, **an electric current is passed through the salt bath**, causing different elements to become separated depending on their **electrochemical properties**.
इसके बाद लवण स्नान में विद्युत धारा प्रवाहित की जाती है, जिससे विभिन्न तत्व अपने **वैद्युत-रासायनिक गुणों** के आधार पर अलग हो जाते हैं।
- Operators then recover the elements of interest in separate streams.
इसके पश्चात संचालक आवश्यक तत्वों को अलग-अलग धाराओं में प्राप्त कर लेते हैं।
- This form of pyroprocessing has been the subject of study in **Japan, South Korea**, and the **U.S.** and is used as part of programmes involving **advanced fast reactors**.
पाइरोप्रोसेसिंग का यह स्वरूप **जापान, दक्षिण कोरिया तथा संयुक्त राज्य अमेरिका** में अध्ययन का विषय रहा है और इसका उपयोग **उन्नत तीव्र रिएक्टरों (एडवांस्ड फास्ट रिएक्टर्स)** से संबंधित कार्यक्रमों के एक भाग के रूप में किया जाता है।

GS Paper III: Environment	08 June 2026
TOPICS COVERED	
08J6	

A lush retreat



Greener pastures: Spotted deer graze on a clearing inside the Mudumalai Tiger Reserve, near Udhagamandalam, in Tamil Nadu on Sunday. Recent showers have helped improve the vegetation in the reserve, drawing deer to open grasslands. U. SATISHKUMAR

Greener pastures: Spotted deer graze on a clearing inside the **Mudumalai Tiger Reserve**, near **Udhagamandalam**, in **Tamil Nadu** on Sunday. Recent showers have helped improve the vegetation in the reserve, drawing deer to open grasslands.



BIG SHOT



As part of the Wilderness Project, wildlife experts who visited Angola's Lisima plateau in February have reported eight new species of dragonfly, three unknown grasshoppers, and some 60 new butterflies and moths in vivid hues. They have also found a spider species that fluoresces under ultraviolet light (shown). REUTERS

As part of the Wilderness Project, wildlife experts who visited Angola's Lisima plateau in February have reported eight new species of dragonfly, three unknown grasshoppers, and some 60 new butterflies and moths in vivid hues. They have also found a spider species that **fluoresces under ultraviolet light** (shown).

PATRIOTIC IAS