# EDITORIAL HIGHLIGHTS

## 02-11-2026

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# GS 3: ECONOMY
# THE HINDU PAGE: 08

# Even as unemployment falls, lack of 'decent work' in India


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India's unemployment rate fell from 6.1% in 2017-18 to 3.2% in 2023-24. At the same time, female workforce participation increased for the first time in decades as has been widely reported in government documents. In light of these positive developments, it is the right time to ask what kind of jobs have been generated in India recently, and what working conditions accompany them.

This is important because employment alone does not inherently ensure dignity, security, or a stable livelihood. A worker engaged in garment sewing without a formal contract, a gig worker without insurance coverage, or a construction labourer without paid leave may technically be considered employed, but they remain outside the promise of decent work. The International Labour Organization (ILO) defines 'decent work' as employment that offers equitable income, workplace rights, social security and dignity. This principle is integrated into Sustainable Development Goal 8 (SDG-8), which advocates "decent work for all". Measured this way, India's labour market persistently exhibits high levels of informality, insecure employment, and increasing inequalities.

## Measuring decent work

Using two rounds of the Periodic Labour Force Survey (PLFS), 2017-18 and 2023-24, the quality of employment in India has been analysed. By constructing a multidimensional Decent Work Index (DWI) based on three subdimensions – employment status, employment opportunity, and social security – across five major industries (agriculture, manufacturing, construction, wholesale and retail, and transport), it was observed that India has made progress in improving work conditions over time. The overall DWI increased from 0.247 in 2017-18 to 0.302 in 2023-24. While this indicates some improvement in job quality, the overall level remains alarmingly low. More importantly, progress has been uneven across sectors, regions, gender and caste groups.

Manufacturing in the secondary sector and transport in the tertiary sector showed the highest improvement in decent work conditions during this period. The manufacturing sector's DWI increased from 0.324 to 0.411 due to a gradual rise in formalisation and digitalisation. The transport sector also experienced significant progress (from 0.285 to 0.35), largely due to the expansion of urban logistics and app-based platform work. However, these improvements also reveal an important concern. Even in sectors where employment conditions have improved, access to social security remains limited. A large number of workers still do not have written contracts, paid leave, provident fund benefits or insurance coverage. Though employment opportunities are increasing, labour protections and job security are not improving at the same pace. Agriculture, which continues to employ the largest share of India's workforce, remains the lowest-quality employment generating sector. The agricultural sector's DWI marginally increased from 0.211 to 0.267 during the study period; most agricultural workers continue to be self-employed or unpaid family workers without stable income or labour protections. The issue is not merely low productivity; rather it is the rise of informal jobs. Construction and retail sectors tell a similar story. Workers remain dependent on casual employment, subcontracting chains and insecure labour arrangements. Welfare schemes exist on paper but implementation gaps continue to exclude millions of workers.

> Poor-quality employment generation has consequences for economic growth. Workers without social security spend less, save less and remain vulnerable to economic shocks

Nearly 90% of India's workforce remains informally employed, a share that has risen since 2019, according to the India Employment Report 2024 (ILO-IHD). It has expanded into supply chains, app-based work in the gig and platform economy, logistics, home-based production, and in even organised industries through contractualisation and outsourcing.

The challenge becomes even more serious when viewed in the context of social inequality. The analysis by the authors shows that decent work outcomes improve significantly with education, formal enterprise employment and skill training. However, informalisation of jobs reduces decent work creation in India over time. Especially concerning is the growing intersection of caste and gender disadvantage: women from Scheduled Tribes and Other Backward Classes experienced a decline in decent-work outcomes between 2017-18 and 2023-24, even as outcomes for men improved. The labour market penalty for being both female and socially marginalised has intensified after the COVID-19 pandemic. This shows that inequality in India's labour market is not just economic, it is also structurally rooted in caste and gender hierarchies.

Regional disparities further expose the uneven nature of labour market progress. States such as Goa, Keralam, Tamil Nadu, and Haryana perform substantially better in terms of decent-work creation; in contrast, Bihar, Jharkhand, and Uttar Pradesh continue to lag behind.

The findings point to a serious policy concern: while India has been able to create more jobs, it is still struggling to ensure that these jobs provide decent working conditions and security.

Poor-quality employment generation has consequences for economic growth. Workers without social security spend less, save less and remain vulnerable to economic shocks. Moreover, informality depresses productivity, weakens tax capacity, and increases inequality. India cannot measure labour market success only through reduction in unemployment rates and income growth. A country aspiring to become Viksit Bharat by 2047 cannot rely indefinitely on insecure, low-paid and unprotected labour. Economic growth without decent work can create a workforce that may have jobs, but still lives with insecurity, instability and a lack of protection. India has to shift from a 'job-counting approach' to a 'job-quality approach'.

## The way forward

The findings point toward where policy should focus. First, social protection must extend to all workers – gig and platform workers, self-employed, farmers, and informal workers – through systems that are portable and accessible regardless of employment status. Platforms such as e-Shram are a good start, but registering alone does not guarantee protection; workers need real protection, not just a database entry.

Second, formalisation policies should focus on labour conditions, not just business registration. Enterprises receiving tax incentives or subsidies should be linked to mandatory worker protections such as written contracts, paid leave, and social security contributions.

Third, labour policies need to be more intersectional. Given that women from marginalised caste groups are the group whose outcomes worsened rather than improved, targeted measures – childcare facilities, safe transportation, skill training and safeguards against workplace discrimination – should not be an afterthought. Finally, labour reforms should be designed around the needs of workers first, rather than being framed primarily as a means of easing the cost of doing business.

The four Labour Codes were introduced in 2025 with the promise of simplifying labour regulation and expanding protections. However, implementation remains partial and inconsistent. Critics argue that while compliance has been eased for businesses, worker protections may have diminished with rising contractualisation.

The real test of development is not whether workers have some kind of work; it is whether that work provides dignity and security. Until then, India's employment success story will remain incomplete – no nation can call itself developed while its workforce remains insecure.

# GS 3: SCIENCE AND TECHNOLOGY

# (Space)

# THE HINDU PAGE: 8

## Slow recovery

### ISRO needs more human and material resources to fulfil its mandate

With the successful launch of the GSLV-F18 mission and the NVS-03 satellite's healthy status, the Indian Space Research Organisation (ISRO) is on course to heave a sigh of relief. Its last 18 months have been constrained by the consequences of two launch failures involving PSLV rockets, which share some of their design aspects with GSLV, to the extent that the F18 mission was only the second successful launch of 2026. If the NVS-03 satellite is successfully manoeuvred into its final intended orbital slot and commissioned, ISRO will also have pulled off a rescue mission for the 'Navigation with Indian Constellation' (NavIC) programme, which has been at least one functional satellite short for the last six months and thus unable to meet its primary purpose of providing standalone positioning services over the Indian subcontinent. The three second-generation NVS satellites thus far are distinguished by having at least one indigenously made atomic clock onboard, in line with the recommendations of the Parliamentary Standing Committee (PSC) on Science and Technology and India's investments in quantum timekeeping, and away from the imported clocks onboard the first-generation IRNSS satellites.

The PSC had also flagged procurement bottlenecks across ISRO's programmes, including difficulties with obtaining specialised components and ensuring vendor readiness on the timelines that NavIC needs. The ISRO Space Applications Centre's 'request for proposals' in 2025 also specified a large lead time of nearly two years between a contract's start and the first two flight models. The Electronics Component Manufacturing Scheme and the programme to modernise the Semiconductor Laboratory can be tweaked to serve these needs, with the Electronics Ministry also setting aside dedicated funds for developing specialised components and their qualification tests in a five- to seven-year programme. In tandem, the government must allocate around ₹17,000 crore in the 2027-28 Union Budget for the Department of Space, against ₹13,705.6 crore in 2026-27, with the hike focusing on manufacturing launch vehicles, replacing satellites, and recruitment. Besides, NavIC also requires a dedicated operator, so that ISRO can be left to focus on its core mandate, and India needs a national space law addressing private participation in this enterprise, and liability. Two successful orbital missions in five-sixths of a year is unbecoming of a national space programme with imminent plans of human spaceflight, a space station, and reusable launch vehicle capabilities. Without significant measures, ISRO will lurch from one mission to the next as and when its inadequate workforce is able to make do with its inadequate allocation.

# GS 3: ENERGY
# THE HINDU PAGE: 09

# An energy revolution in the making



**Pralhad Joshi**

is Union Minister for New and Renewable Energy, Government of India & President of ISA Assembly

More than 21 lakh of the 65 lakh homes with PM Surya Ghar rooftop solar have received a zero electricity bill. Life for young Indians, once marked by monthly bills and regular power cuts, has seen a sea change. Now, they ask how an inverter works, what a battery costs, and whether AI can run decentralised solar. Such questions are creating engineers, entrepreneurs, skilled technicians, and informed citizens. India is raising its first generation of power producers and innovators, and I believe they will shape our energy economy for Viksit Bharat by 2047.

This rests on a decade of initiatives led by Hon'ble Prime Minister Shri Narendra Modi. In the last 12 years, India has achieved both speed and scale, with installed solar capacity up by around 6007%, from 2.8 GW in 2014 to 171 GW today. Solar power that cost around ₹8 a unit in 2014-15 now sells for as low as ₹2.15, thanks to an ecosystem, including PM-KUSUM scheme, built on the vision to achieve 500 GW of installed power capacity from non-fossil fuel sources by 2030. India stands as the only G20 country to have met its 2030 target of 50% non-fossil capacity five years early. This first chapter has proved that solar works for Indian households.

Now, the second will take agri-photovoltaics to farmers under PM-KUSUM 2.0, pair storage with solar, prioritise State-level green corridors, deepen rooftop solar penetration, and digitise our networks for more renewables. Our 500 GW commitment needs $220 billion investment - $150 billion domestic and $70 billion as FDI. Capital, manufacturing, storage, and people will decide how well we do it, along with Global South partners.

Solar power that cost close to ₹10 a unit in 2014 now sells for as low as ₹2.15, thanks to an ecosystem built on the vision to achieve 500 GW of installed power capacity from non-fossil fuel sources by 2030

Capital comes first. The first milestone of one lakh PM Surya Ghar solar installations took months; now, we achieve the number every six days. Under PM-KUSUM, our 'annadata' has become our 'urjadata' too, with over 30 lakh standalone solar pumps installed. The private sector will lead the build-out, with our States as partners, by building parks such as Khavda, the world's largest hybrid renewable energy park. Next, rooftops and pumps must become a bankable asset class with a clear pipeline for Indian and foreign pension funds and institutional investors.

Manufacturing is next. The PLI scheme brought high-efficiency module-making home. The capacity of solar module now exceeds 225 GW and around 45 GW of cells. Investment must now go into cells, wafers, and polysilicon. The National Green Hydrogen Mission is building an electrolyser industry for 5 million tonnes a year by 2030.

Storage comes third. The Central Electricity Authority sees a need for 236 GWh of batteries by 2031-32, and the Cabinet-approved third phase of the Green Energy Corridor will support 50 GWh with ₹50,000 crore and new transmission.

The last but most important is people. Rooftop solar creates significantly more jobs than ground-mounted projects. It requires local teams for surveying, designing, installing, connecting and servicing the systems – taking green jobs beyond major cities to places closer home for lakhs of youth. It also employs a high share of women. Our 500 GW target and the Green Hydrogen Mission could also support lakhs of full-time-equivalent jobs by 2030.

Under India's 2023 G20 Presidency, the African Union joined the G20 permanently, and leaders agreed to work towards tripling renewables capacity by 2030. This September, as BRICS Chair, we saw the New Delhi Declaration adopted unanimously, backing a BRICS Solar PV Cooperation Roadmap and principles for smart grids and storage.

The International Solar Alliance, launched by India and France in Paris in 2015, turns that agenda into delivery. The first 1,000 GW of global solar power took 25 years; the next came in two. With 130 signatory and member countries, ISA is helping build skills through a Global Capability Centre, an AI-driven ISA Academy, and centres of excellence in 17 countries, with capital from the $200-million Africa Solar Facility, managed with Africa50.

The Bharat Renewable Energy Summit & Expo 2026 at Bharat Mandapam on November 2-5, to be inaugurated by the Hon'ble Prime Minister, will host, for the first time, the Ninth ISA Assembly and the Fourth International Conference on Green Hydrogen together. With the participating countries and institutions, we will discuss what solar can do for them and how they can achieve reliable power, energy security without imported fuel, and food security through solar irrigation, all in the spirit of Vasudhaiva Kutumbakam.

# GS 2: INTERNATIONAL RELATIONS
# THE HINDU PAGE: 10

# The unending purge in Xi's China

China's Fifth Plenum confirmed the expulsion of 33 Central Committee members, including 16 Generals, signalling that Xi Jinping's anti-corruption purge is far from over; the purge has raised questions about PLA leadership and combat readiness, while Xi's succession plans remain unclear ahead of 2027 Party Congress

EXPLAINER

Ananth Krishnan

**The story so far:**

A four-day meeting of China's ruling Communist Party, which concluded in Beijing on October 29, ended with one key message – there is likely to be no end in sight to the ongoing anti-corruption purges that have roiled vast swathes of China's political and military establishments. The CPC's Fifth Plenum, an annual meeting that is one of the party's last major gatherings before its once-in-five-year congress convenes next autumn, confirmed that as many as 33 members of the Party's Central Committee, including 16 Generals of the People's Liberation Army (PLA), had been expelled from the party. Only 279 members of the Central Committee of the full 376 appointed to the body at the 20th Party Congress in 2022 were present at the meeting in Beijing.

**What were the outcomes of the plenum?**

A communique issued after the meeting said the party adopted a resolution on "Certain Major Issues concerning Persevering with Full and Rigorous Party Self-Governance", adding that it was "unanimously agreed that the Central Committee with Xi Jinping at its core demonstrated tremendous political courage and a strong sense of responsibility in confronting the grave situation marked by weak, hollow, and watered-down Party leadership, lax, superficial, and ineffective self-supervision and self-governance, as well as some startling problems within the Party."

The body had "introduced the most stringent measures and dedicated continuous efforts to tackle all these prominent issues", a result of which "the problem of lax and weak self-supervision and self-governance has been addressed at the root, unhealthy tendencies that had long gone unchecked have been curbed, deep-seated problems that had plagued the Party for years have been remedied, and serious dangers hidden within the Party, the state, and the military have been removed." At the same time, the communique signalled that the crackdown that has already removed hundreds of top officials had not abated, saying that it was needed to "persevere with full and rigorous Party self-governance from the strategic perspective of consolidating the Party's long-term governing position and realising the great rejuvenation of the Chinese nation." "We must build firm confidence, maintain resolve, and adopt higher standards and more concrete measures to carry forward the valuable experience of full and rigorous Party self-governance in the new era, handle and resolve the prominent problems in Party building, and consolidate and develop the sound political situation formed through Party self-supervision and self-governance," it added.



Members of the Politburo Standing Committee during the Fifth Plenary session on October 29. AP

**What are the implications for the party's future and the succession question?**

The plenum announced that the party would hold its 21st Party Congress in the second half of 2027, likely to be in October or November. The meeting will mark 15 years of Mr. Xi's rule, and likely mark the start of an unprecedented fourth five-year term. Still unclear is the question of who is likely to eventually succeed Mr. Xi, who will be 79 at the end of an expected fourth term. The "dilemma" he faces, observed Neil Thomas, Senior Fellow on Chinese Politics, Centre for China Analysis at the Asia Society Policy Institute (ASPI), in an analysis on the plenum, is that "concentrating authority in himself makes it harder to cultivate someone capable of inheriting it."

If anti-corruption was one message, the other was that Mr. Xi remains fully in charge. Briefing the media after the plenum, Tang Fangyu, head of the party's Policy Research Office, was at pains to point out that Mr. Xi, as "chief of the document drafting group, personally planned, guided throughout the process, and set the overall vision." The plenum announced a long list of officials who had been removed from the Party and the military. Among them were two Politburo members, Ma Xingrui and Zhang Youxia. The latter was also Vice Chairman of the Central Military Commission. Also removed were Liu Jianchao, former head of the CPC's International Department and a senior diplomat, and Jin Zhuanglong, former Minister of Industry.

**What does it mean for China's economy?**

The biggest concern for the Chinese public remains the state of the economy. The continuing real estate slowdown has left sentiment depressed with massive spillover effects, given the concentration of most people's savings in the real estate sector. There are serious concerns on jobs, with disruption from AI further dampening hiring.

There is also a view in China that the strict corruption crackdown has slowed projects, leading to a paralysis in decision-making. The party appeared to respond to that sentiment, with a state media report following the plenum posing the question "if comprehensive strict governance of the Party is hindering economic and social development, or is it safeguarding and promoting economic and social development?" Mr. Xi, the report said, told the plenum that "if comprehensive strict governance of the Party has any impact on economic and social development, then that impact is positive rather than negative."

The post-plenum communique called on officials "to move faster to foster a new pattern of development, make full and proper use of macro policies, tap deeper into the potential of domestic demand, further deepen reform and opening up, and pursue sustained and high-quality economic growth driven by innovation." Officials will have to work on those tasks under the continuing gaze of anti-corruption officials who clearly remain as active as ever.

**What light has the plenum shed on China's military?**

Nowhere has the extent of the corruption crackdown been as evident as in the top leadership of the military. As the ASPI analysis of the plenum noted, of 44 uniformed officers elected as full Central Committee members in 2022, only two remain. Among those is General Zhang Shengmin, who led anti-corruption investigations in the military and is now the only other serving member of the Central Military Commission (CMC), the top body headed by Mr. Xi. All other Generals on the body have remarkably been purged.

"Xi's civilian purges are record-breaking, but the scale of his evisceration of the PLA top brass is in a category of its own," the analysis noted. "It raises serious questions about organisational leadership and combat readiness, even as China continues to unveil formidable new military hardware."

The plenum announced that two Lieutenant Generals Zhong Shaojun and Fang Yongxiang were expelled from the Central Committee. Both served as directors of the CMC's General Office, a key nodal body through which Mr. Xi, as CMC Chairman, commands the military. If the crackdown first removed Generals who were seen as having links to former leaders, it has since moved on to officers who have served with Mr. Xi for many years and those promoted by him, who are also facing the axe.

## THE GIST

- Xi Jinping has defended the anti-corruption drive as necessary to strengthen Party discipline and remove deep-seated problems within the political and military establishments
- China's economic slowdown, real estate crisis and weak job market have added to public concerns, while the crackdown is also seen as slowing projects and decision-making
- The purge has extended to officers who served with and were promoted by Xi, suggesting that even long-standing ties to the President offer no protection from the crackdown

# GS 3: CYBER SECURITY (ECONOMY – FINANCIAL MARKET)
# THE HINDU PAGE: 10



## What does the Binance hack mean for investors?

Who was responsible for the Binance hack, and what do investigators know about the attackers?

Sahana Venugopal

**The story so far:**

One of the world's top cryptocurrency exchange platforms, Binance, was hit by a cyberattack on October 29 that led to the loss of assets valued at over $6 billion.

**How did the Binance hack take place?**

On October 30, after independent crypto trackers posted warnings, Binance announced that it was aware of reports of a "potential security issue," but assured users that their funds were safe.

Binance then moved to pause deposits and withdrawals, promising they would resume after the security checks were complete – ideally within 48 hours. Deposits were later enabled again.

Hours later, Binance shared that the "security incident" led to estimated losses totalling around $6.3 billion. Adding that it worked with industry partners and other blockchain companies in order to freeze the stolen assets, Binance announced that around $3 billion had been frozen on-chain. Stablecoin companies Circle and Tether, which issue a more stable cryptocurrency pegged to the value of the U.S. dollar, said they froze assets linked to the hack.

Tether's CEO reported that Tether froze more than 1.567 billion USDT, while Circle's CEO announced that the company had frozen more than 800 million USDC. However, these statements have alienated some customers who believe in a 100% decentralised crypto system, where corporate leaders do not get involved in recovering other companies' lost funds. Some crypto advocates, though, classified this as proof of the industry coming together to mitigate cybercrimes.

According to Binance's initial investigation, the hack "may involve a compromised DevOps engineer's laptop," through which the attacker was able to access a service container and submit unauthorised withdrawal transactions.

Binance co-CEO Richard Teng defended the company's security protocols on social media. Mr. Teng stressed that the hack was a complex one, and that the attacker did not use a sole engineer's permissions or exploit a "one-click" action. Binance later disclosed "additional points of breach."

Binance said it found no evidence of any wallet private keys being leaked, and committed to sharing a detailed technical post-mortem once the facts were verified.

Binance committed to covering the stolen funds through its Secure Asset Fund for Users (SAFU) and the corporate treasury. While $5 billion of the funds were already held in the exact token assets that were impacted, per the company, it is buying the remaining amount in token assets through market channels and OTC channels.

**Who is behind the Binance hack?**

The Binance hackers and their motives have not yet been confirmed. However, multiple crypto hackers have the backing of hostile states, with North Korean hackers often targeting crypto exchanges as a way to get around economic sanctions. The 2024 multi-million-dollar WazirX exchange hack, for example, was attributed to the North Korean Lazarus Group. Binance did not initially name a perpetrator or accuse any individuals. However, blockchain analytics platform Chainalysis said it observed funds, which were stolen by North Korea in another exploit, commingling with funds stolen from Binance. "We have a high degree of confidence that DPRK is responsible for the $6.4 billion hack of Binance," posted Chainalysis on X, attributing the attack to the TraderTraitor cybercrime group which has links to the Lazarus Group.

However, according to Chainalysis, the pattern of laundering the stolen assets suggested that the attackers were using automation to cover their tracks and loop funds through repeated addresses.

**What does this mean for the sector?**

Crypto hacks generally trigger widespread panic and anger; many traders know they are investing in a largely unregulated market and have few legal protections during a crisis. This time, social media users reacted with anger over learning that a compromised employee laptop was part of the security lapse. The Binance hack rattled the crypto markets, with the Bitcoin, Ethereum's Ether, and Binance-linked BNB cryptocurrencies seeing noticeable but not drastic price drops.

While Binance promised to weather the storm, it has already faced legal heat across jurisdictions. Take the U.S. Treasury, which in 2023 announced historic settlements with the exchange over its failure to stop and report suspicious transactions with terrorists, ransomware attackers, money launderers, criminals, and users in Iran, North Korea, Syria, and the Crimea region of Ukraine.

Now, the fact that the world's largest crypto exchange was exploited for billions of dollars will undoubtedly complicate Binance's already contentious operations.

# GS 3: ENERGY

# INDIAN EXPRESS PAGE: 08

# Energy security depends on if we electrify, and how we do it



NEHA DHINGRA

IN MARCH, as shipping through the Strait of Hormuz stalled, Indian families queued for cooking gas and induction cooktops sold out in several markets across the country. India imports about 60 per cent of its LPG, and nearly 90 per cent of those shipments pass through the strait. Within weeks, a conflict far from our shores affected our kitchens and factories.

Electricity offers a way to reduce that exposure. NITI Aayog's Scenarios Towards Viksit Bharat and Net Zero shows the scale of the shift ahead. In its net-zero scenario, electricity's share of final energy rises from 21 per cent in 2025 to 60 per cent by 2070, and the fuel import bill falls from about 4 per cent of GDP to 0.2 per cent. This makes electrification a strong component of economic and security strategy. India's clean power base is strong: In 2025, it became the world's fourth-largest producer of clean electricity. But how we electrify matters as much as whether we do.

Bureau of Energy Efficiency (BEE)-led programmes saved 53.6 million tonnes of oil equivalent in 2023-24. The same discipline must now guide electrification. Two places to start with this are industrial heat and the kitchen.

Factories use almost half of all the energy consumed in India, and most of it comes from burning coal, oil and gas on site. Electricity meets only about a quarter of Indian industry's energy needs; in China, it meets nearly half. Closing that gap would also cut India's fuel imports, help industries decarbonise and help exporters meet carbon border rules such as the EU's CBAM.

Industrial heat is the lowest-hanging fruit, and heat pumps are the way to pick it. A heat pump works like an air conditioner in reverse, drawing heat from air, water or waste streams and moving it to where it is needed. In Indian conditions, air-source models deliver 2.5 to 4 units of heat for every unit of electricity; an electric boiler delivers at most one. Swapping a coal boiler for an electric one adds its heat demand to the grid, but a heat pump meets the same need with a fraction of the electricity.

About half the heat used by Indian MSMEs is needed below 250°C, for steam, hot water, washing and drying; a large share of it is within the range heat pumps already serve. Dairies, food processors, textile units, pharmaceutical plants, hotels and hospitals depend on it, and much of it comes from coal, diesel or gas boilers. The kitchen follows the same logic. An induction cooktop delivers most of its energy directly to the pan, while a gas flame loses a large share to the surrounding air. The scope to switch is large: Surveys show that only 4 per cent of households own an induction cooktop.

Three things hold the market back: Cost, confidence and supply. A heat pump costs more to buy than a boiler and repays the difference rather slowly, given high industrial power tariffs and low fuel costs. Buyers have little way to judge the promised savings. Nearly 90 per cent of heat pumps sold in India are imported from China, leaving the market exposed to the kind of supply shocks electrification is meant to reduce.

Confidence is the first problem to solve. Manufacturers today quote efficiency figures tested under American, European or Chinese standards. A buyer has no way to compare the claims, because each was measured under a different foreign standard. But India has done it before. BEE's standards and labelling programme made the star label a signal consumers trust. Heat pumps need standards suited to Indian conditions, minimum performance requirements, backed by BIS certification, and a star label that gives buyers a way to compare products and claims. Work is underway on this.

During the LPG shortage, the government deferred mandatory star labelling for induction cooktops to January 2027 to keep the supply flowing. Standards should be in place before demand surges again, so that a buying rush does not fill homes and factories with substandard products. The outcomes would be tangible and energy efficient: Less imported fuel, lower energy bills for MSMEs, less new generation capacity to build, and a domestic manufacturing base for a growing global product.

*The writer is India director, CLASP*

Industrial heat is the lowest-hanging fruit, and heat pumps are the way to pick it. A heat pump works like an air conditioner in reverse, drawing heat from air, water or waste streams and moving it to where it is needed

# GS 2: INTERNATIONAL RELATIONS
# INDIAN EXPRESS : PAGE: 09



## Why Delhi mustn't take its eyes off Pakistan-Maldives



ADITYA GOWDARA SHIVAMURTHY

MALDIVIAN PRESIDENT Mohamed Muizzu made a three-day state visit to Pakistan last month. Both countries signed 20 MoUs "to strengthen their relations in various fields", including socio-economic development sectors, cybersecurity, drug trafficking, and defence and maritime security. They aim to increase trade from $13 million to $200 million in the next two years. The visit underscores Muizzu's interest in diversifying ties beyond India. This, however, risks compromising India's long-term security and strategic interests.

Geography and religion have largely shaped Maldives-Pakistan relations. Despite a stronger bond with India, the Maldives has, in principle, practiced neutrality and advocated for regional integration and peace between New Delhi and Islamabad. Pakistan has also assisted the country with medical and religious education and even supported the construction of the parliament building. Engagements with Pakistan have increased under Muizzu since his early days. This trend is more visible in defence partnerships. For instance, in addition to Pakistan, the Maldives has signed MoUs on defence cooperation with China and Turkey. The Maldives has also procured armoured vehicles from the UAE, and even joined the Saudi Arabia-led maritime defence coalition. Under Muizzu, the Maldives is thus enjoying growing defence ties with all members of the Mecca pact. For Islamabad, the visit is an opportunity to challenge India's presence and interests in the Indian Ocean Region (IOR). Since Operation Sindoor, Pakistan and China have held trilaterals with Bangladesh and Afghanistan. Pakistan has advocated for SAARC revival, and even proposed a new South Asian bloc without India. It also plans to expand its naval presence in the Bay of Bengal.

> The visit to Islamabad underscores Muizzu's interest in diversifying ties beyond India

India's policy with respect to the Maldives has been pragmatic. It has used economic assistance to create leverage and long-term goodwill. It offered multiple extensions for T-bills worth $150 million; restructured debts; extended credit lines worth Rs 4,850 crore; and currency swaps worth $400 million and Rs 30 billion.

New Delhi's policy has merit. With presidential elections just two years away and Muizzu's growing unpopularity, India does not want to fuel anti-Indian rhetoric and nationalism. Given strong religious and historic ties, India knows that Pakistan cannot be completely isolated from the archipelago nation. Instead, some MoUs between Pakistan and the Maldives, like countering cyber crimes and drug trafficking, could even benefit India. But, defence and security-related developments will have implications. Muizzu's meeting with Asim Munir, Pakistan's Chief of Army Staff, to discuss military cooperation, regional security, and defence relations and their interest to strengthen institutional relations, defence partnerships, and professional exchanges have fueled fears of Pakistan being another stakeholder in the Maldives' security architecture. These developments will crowd an already crowded IOR and bring Pakistan closer to India's maritime boundaries. India will therefore have to make clear its security concerns, and communicate its red lines.

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