

POLITY

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POLITY AND GOVERNANCE

## Huge wins for ruling parties in Arunachal, Sikkim


**CONTEXT:** The Bharatiya Janata Party retained power for the third successive term in Arunachal Pradesh by winning 46 of the 60 seats in the Assembly as votes cast on April 19 were counted on Sunday, while Sikkim too saw a landslide victory, with the ruling Sikkim Krantikari Morcha winning 31 of the 32 seats.

Before polling, the BJP secured victories in 10 seats uncontested in Arunachal Pradesh. Despite having governed the state for over 30 years, the Congress could only field candidates for 19 seats. The National People's Party (NPP), typically aligned with the NDA, contested in 20 seats and maintained its 2019 performance by winning five seats. Former Minister Kumar Waii's victory in the Bameng seat prevented a complete rout for the

Congress, which had won four seats in the previous election. The remaining seats were distributed among the Nationalist Congress Party (three), the regional People's Party of Arunachal (two), and three Independents.

In Sikkim, the SKM secured victory in 32 seats, with Chief Minister Prem Singh Tamang winning two seats: Rhenock and Soreng-Chakung. The Sikkim Democratic Front (SDF) managed to win only one seat, with Tenzing Norbu Lamtha, who had previously switched from the SKM, as its sole winner. Although the SKM was previously allied with the BJP-led National Democratic Alliance, they ended their partnership before the April 19 election.

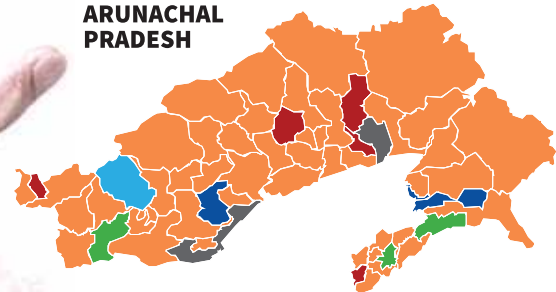
The BJP was believed to have been done in by the fears that its victory would lead to the dilution of Article 371F that guarantees special status for Sikkim. The fear was triggered by the expansion of the definition of 'Sikkimese' beyond the indigenous Bhutia, Lepcha, and Nepali people, in the Finance Act, 2023.



**Sweeping victory**

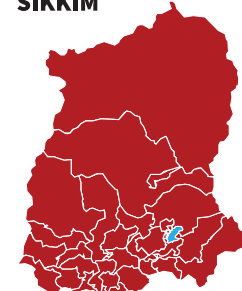
The Bharatiya Janata Party and Sikkim Krantikari Morcha recorded landslide victories in the Assembly election in Arunachal Pradesh and Sikkim, respectively. The BJP secured 46 of 60 seats in Arunachal, while the SKM won 31 of 32 seats in Sikkim

**ARUNACHAL PRADESH**



Party	Seats won	Vote share %
BJP	46	54.6
NPP	5	16.1
NCP	3	10.4
PPA	2	7.2
Cong.	1	5.6
IND	3	-

**SIKKIM**



Party	Seats won	Vote share %
SKM	31	58.4
SDF	1	27.4

NPP: National People's Party | PPA: People's Party of Arunachal | SKM: Sikkim Krantikari Morcha | SDF: Sikkim Democratic Front

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POLITY AND GOVERNANCE

# Fewer women are being hired for leadership positions

LinkedIn's Economic Graph data reveals concerning trends in women's representation in the workforce. Despite previous progress, the advancement of women into senior roles has stagnated since 2022, with a decline observed in 2024. Women are primarily concentrated in sectors like healthcare and education, while industries such as manufacturing and construction show lower female participation. Moreover, the rate of progress in promoting women to senior leadership positions has been slow, with minimal increases between 2016 and 2022. If the downturn observed in January 2024 persists, this already sluggish growth may halt altogether.

The recent stagnation and decline in women's representation in senior positions can be attributed to a slowdown in the hiring of women for leadership roles, as highlighted by data trends. While there was significant growth between 2016 and 2021, with the share of women in senior positions increasing from 18.8% to 25.2%, this positive trajectory reversed thereafter. LinkedIn's Economic Graph data underscores persistent obstacles such as bias, societal norms, and structural barriers hindering women's progress into leadership roles. However, there is a growing focus on "women-led development," prompting collaborative efforts among policymakers and business leaders to address these challenges effectively.

An analysis of women's representation in senior leadership positions across industries reveals significant disparities. Sectors like oil, gas,

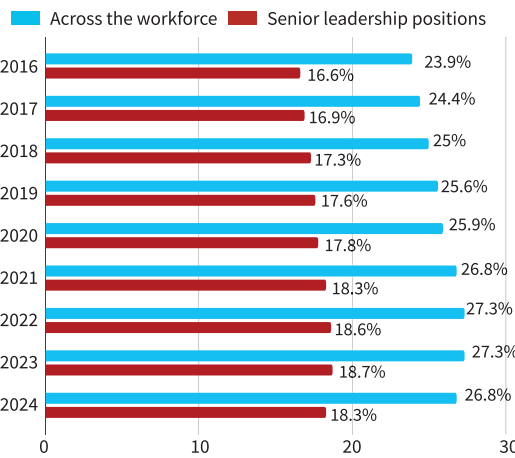
mining, construction, and utilities have the lowest representation, with only 11% to 14% of leadership roles held by women, with the oil industry showing the lowest share at around 11%. Other sectors, including accommodation, food services, financial services, retail, technology, and media, show slightly better representation, ranging from 15% to 20%. The highest representation is observed in administrative and support

## Tough to break the glass ceiling

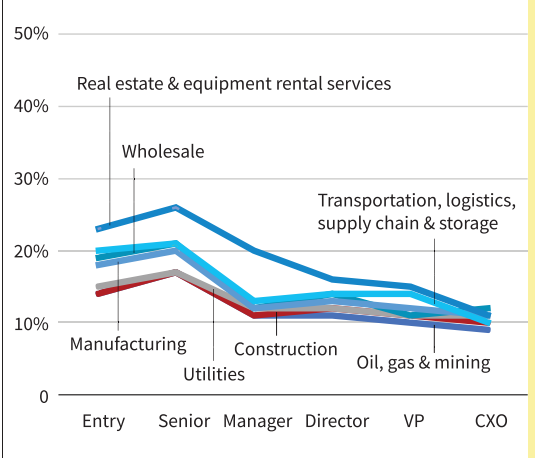
Graphs were sourced from LinkedIn's report titled 'Women in leadership in corporate India'



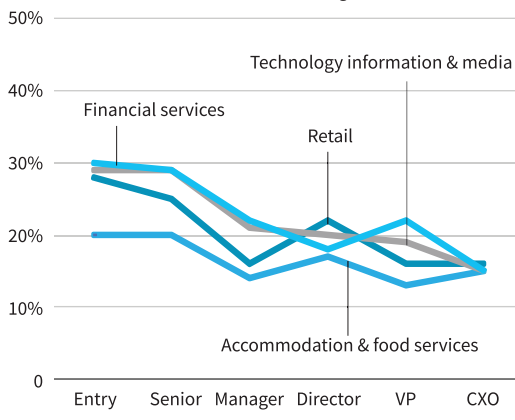
**Chart 1:** Representation of women in the overall workforce and in senior leadership positions across the years



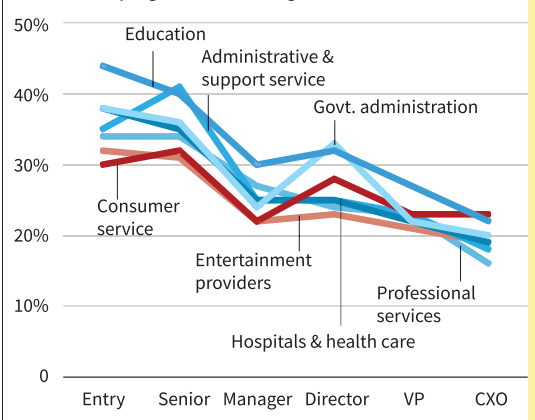
**Chart 2:** The chart shows that women's entry and career progression were the lowest in the following sectors



**Chart 3:** The chart shows that the representation of women in senior roles was moderate in the following sectors



**Chart 4:** The chart shows that the representation of women was relatively high in the following sectors



services, healthcare, hospitals, consumer services, government administration, and education, where women hold between 22% and 30% of senior roles, with education having the highest share at 30%. Despite legislation like the Companies Act, 2013, mandating women directors on company boards, enforcement has been lax, with 90% of fined companies for non-compliance being listed entities between April 2018 and December 2023.

## ECONOMICS AND DEVELOPMENT

## Can domestic MFs invest in their overseas counterparts?

**CONTEXT:** The Securities and Exchange Board of India (SEBI) on May 17 floated a consultation paper proposing a framework for facilitating investments by domestic Mutual Funds (MFs) in their overseas counterparts, or Unit Trusts (UTs) that invest a certain portion of their assets in Indian securities. Comments about the framework are solicited until June 7.

### What is the framework's purpose?

SEBI highlights India's promising economic growth, attracting foreign funds to invest in Indian securities. International indices, ETFs, MFs, and UTs are allocating assets to Indian securities, with the MSCI Emerging Markets Index holding 18.08% exposure to Indian securities. Conversely, Indian mutual funds are diversifying portfolios by launching feeder funds investing in overseas instruments, easing global investments. However, ambiguity persists regarding investments with Indian exposures, hindering domestic MFs from investing. SEBI considers allowing investments with limited exposure to Indian securities while ensuring essential safeguards to maintain the integrity of the label and enable desired exposure to overseas securities, avoiding the defeat of the purpose of overseas investments with significant Indian exposure.

### What proposals has SEBI tabled?

SEBI has imposed an upper limit of 20% of net assets for overseas instruments investing in Indian securities, aiming to balance investment facilitation with preventing excessive exposure. It mandates that contributions from all investors of the overseas instrument be pooled into a single investment vehicle by Indian mutual funds. Additionally, gains should be distributed proportionately among all investors, without preference, and investments must be made autonomously by the manager, free from influence. SEBI emphasizes periodic public disclosures of portfolios for transparency and prohibits advisory agreements between Indian mutual funds and overseas instruments to prevent conflicts of interest.

### What happens when overseas instruments breach the limit?

SEBI stipulates that if an overseas instrument exceeds the 20% limit in Indian securities, the Indian mutual fund scheme investing in it enters a six-month observation period. During this time, the overseas fund must rebalance its portfolio to adhere to the cap. Further investment is permitted only once exposure drops below the limit. Failure to rebalance within this period necessitates liquidation of the investment within six months by the mutual fund.

## GEOGRAPHY

## M.P. reported over 5,000 heatstroke cases in May

**CONTEXT:** The Health Ministry data on heat-related illnesses and deaths reported at least 80 deaths due to heatstrokes across the country in May, including both confirmed and suspected cases, as well as 605 deaths reported due to various cardiovascular diseases, show. There have been 56 confirmed deaths due to heatstrokes between March and May, of which 46 occurred in May alone.



In May, Health Ministry data reveal at least 80 deaths from heatstrokes and 605 deaths from various cardiovascular diseases. Madhya Pradesh reported the highest number of suspected heatstroke cases, followed by Rajasthan, Andhra Pradesh, and Chhattisgarh. Older individuals, pregnant women, and those with chronic health conditions, especially cardiovascular issues, face heightened risks from extreme heat. Madhya Pradesh had the most confirmed heatstroke deaths, followed by Maharashtra, Rajasthan, and Andhra Pradesh. The National Centre for Disease Control issued an advisory warning of above-normal seasonal temperatures and urged states to ensure preparedness and timely responses. States were directed to submit daily data on heatstroke cases and deaths, maintain digital records, and implement cooling strategies at healthcare facilities. Rapid assessment and cooling of suspected heatstroke cases were emphasized, along with ensuring access to water and cooling appliances.

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## SCIENCE AND TECHNOLOGY

## In fight against Nipah, scientists find new way to generate virus-like particles in lab

**CONTEXT:** Scientists at the Institute of Advanced Virology (IAV) at Thonakkal here have developed a novel way of generating non-infectious Nipah virus-like particles (VLPs) in the laboratory, which mimic the wild-type Nipah Virus (NiV).



The IAV team has developed a method for producing neutralizing antibodies against the highly pathogenic Nipah virus (NiV) in a biosafety level-2 (BSL-2) laboratory, marking a significant advancement in research. Traditionally, handling NiV required BSL-4 facilities due to its extreme pathogenicity. However, this new approach allows for safe and effective testing and development of monoclonal antibodies and antivirals against NiV and similar pathogens. The method utilizes virus-like particles (VLPs) of NiV, enabling virus neutralization assays to be conducted in BSL-2 labs, thereby facilitating vaccine and immunotherapeutic development and basic research into NiV immune responses and pathogenesis. The research findings were published in the international journal *Heliyon* by Cell Press, showcasing the team's innovative approach to combating NiV.

### More sophisticated

The VLPs are molecules that closely resemble viruses, but are non-infectious. They have long been recognised as effective quantitative platforms for studying viral binding and entry kinetics of the virus. But the advent of NanoBiT technology and "HiBiT-tagged" VLP (HiBiT is an 11 amino acid peptide) makes it far more sophisticated. The genome of the NiV encodes six major proteins: glycoprotein (G), fusion protein (F), matrix (M), nucleocapsid (N), long polymerase (L) and phosphoprotein (P). IAV scientists generated "HiBiT-tagged" Nipah virus-like particles (NiV-VLPs) using plasmid-based expression systems, encoding the NiV structural proteins G, F, and M.

Researchers have successfully produced virus-like particles (VLPs) that closely mimic the native Nipah virus (NiV), enhancing their utility in antiviral drug screening and vaccine development. These VLPs, tagged with a highly sensitive HiBiT tag, offer advantages in virus-based assays and mitigate potential risks associated with using native viruses. This pioneering study represents the first application of HiBiT tagged NiV-VLPs in neutralization assays. However, further research utilizing multiple neutralizing antibodies and antivirals is required to validate the efficacy of these VLPs in blocking virus entry.

## INTERNATIONAL RELATIONS

## 'China ready to forcefully stop Taiwan independence'

**CONTEXT:** Chinese Defence Minister Dong Jun warned on Sunday his military is ready to "forcefully" stop Taiwan independence but called for greater exchanges with the United States.



Chinese Defence Minister Dong Jun issued a warning at the Shangri-La Dialogue in Singapore, stating that China is prepared to forcefully prevent Taiwan's independence. However, he also called for increased exchanges with the United States, emphasizing the need for mutual understanding despite military differences. Dong highlighted the Chinese military's commitment to defending the unity of the motherland and its readiness to oppose any attempts at Taiwan independence. In response, Taiwan criticized the remarks as irrational and reiterated its dedication to peace and stability in the Taiwan Strait. Additionally, Dong warned of limits to China's restraint in the South China Sea, where Beijing has been involved in disputes with Philippine vessels.

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## SCIENCE AND TECHNOLOGY

## China probe successfully lands on far side of moon to collect samples

**CONTEXT:** China's Chang'e-6 lunar probe successfully landed on Sunday on the far side of the moon to collect samples, state media reported — the latest leap for Beijing's decades-old space programme. The Chang'e-6 set down in the immense South Pole-Aitken Basin, one of the largest known impact craters in the solar system.



## GEOGRAPHY

## Tonga volcano could cause unusual weather for rest of decade: study



The eruption of Hunga Tonga-Hunga Ha'apai in January 2022 in Tonga generated a tsunami and triggered warnings across the Pacific basin. A recent study published in the *Journal of Climate* investigates the climate impacts of this eruption. The findings suggest that the volcano contributed to the unusually large ozone hole observed last year and the wetter than expected summer of 2024. Moreover, the eruption's effects may persist and influence winter weather patterns for years to come.

### A cooling smoke cloud

The eruption of Hunga Tonga-Hunga Ha'apai, being an underwater volcano, produced significant amounts of water vapor

rather than smoke and sulfur dioxide. This vapor, estimated at 100-150 million tonnes, ascended into the stratosphere, a layer of the atmosphere where it has two main effects: contributing to the destruction of the ozone layer and acting as a potent greenhouse gas. Unlike traditional volcanic eruptions, which typically lead to a short-term cooling due to sulfate aerosols, the impact of this eruption on climate dynamics is unprecedented. The lack of historical precedent and the challenge of measuring water vapor in the stratosphere complicate predictions about its long-term effects on the climate.

### What did we find out?

The large ozone hole from August to December 2023 was at least in part due to Hunga Tonga. Our simulations predicted that ozone hole almost two years in advance.

Notably, this was the only year we would expect any influence from the volcanic eruption on the ozone hole. By then, the water vapour had just enough time to reach the polar stratosphere over Antarctica, and during any later years, there would not be enough water vapour left to enlarge the ozone hole.

As the ozone hole lasted until late December, with it came a positive phase of the Southern Annular Mode during the summer of 2024. For Australia, this meant a higher chance of a wet summer, which was exactly opposite what most people expected with the declared El Niño. Again, our model predicted these two years ahead.

In terms of global mean temperatures, which are a measure of how much climate change we are experiencing, the impact of Hunga Tonga is very small, only about 0.015 degrees Celsius. (This was independently confirmed by another study.) This means that the incredibly high temperatures we have measured for about a year now cannot be attributed to the Hunga Tonga eruption.

### Disruption for the rest of the decade

For the northern half of Australia, our model predicts colder and wetter than usual winters up to about 2029. For North America, it predicts warmer than usual winters, while for Scandinavia, it again predicts colder than usual winters. The volcano seems to change the way some waves travel through the atmosphere. And atmospheric waves are responsible for highs and lows, which directly influence our weather.



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