

Parties gear up for poll verdict in J&K, Haryana

POLITY AND GOVERNANCE

Counting day

Both the Haryana and J&K Assembly election results will be announced today. A lowdown:



Parties/alliances in the fray

- Congress + CPI(M)
- BJP ■ AAP
- JJP + Aazad Samaj Party (Kanshi Ram)
- Bahujan Samaj Party + Indian National Lok Dal

- J&K National Conference + Congress + CPI(M) + J&K National Panthers Party (India)
- J&K Peoples Democratic Party
- BJP

Exit polls have predicted a sweep for the Congress in Haryana and given an edge to its alliance with the National Conference (NC) in Jammu and Kashmir.

Jammu & Kashmir, made a Union Territory after the abrogation of Article 370, witnessed Assembly election after a gap of 10 years. Exit polls project the Congress-NC alliance to emerge as the single largest pre-poll alliance, the lower end of the seat projection points to the possibility of a hung Assembly in Jammu & Kashmir. According to Section 15 of the Jammu and Kashmir

Reorganisation Act, 2019, the L-G can nominate two women to the Assembly "if in his opinion, women are not adequately represented in the Legislative Assembly". The Act was amended in 2023 to insert sub-clauses 15A and 15B to nominate two members from the Kashmiri migrants and one member from displaced persons from Pakistan-occupied Jammu and Kashmir.

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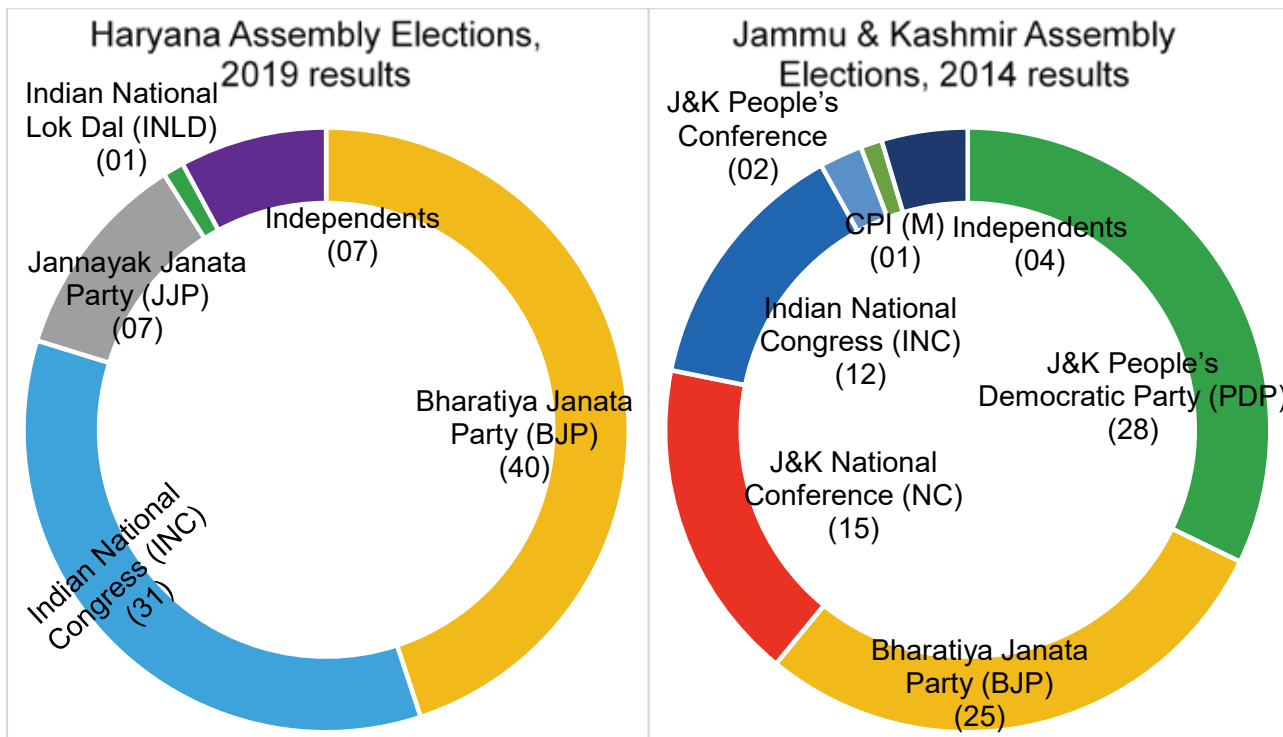


FIGURE: Pie chart representation of the seats won in Assembly elections.

India gives \$750-mn currency swap arrangement for Maldives

INTERNATIONAL RELATIONS



Prime Minister Narendra Modi met with Maldivian President Mohamed Muizzu in New Delhi on Monday.

The Reserve Bank of India and the Maldives Monetary Authority under the South Asian Association for Regional Cooperation (SAARC) Currency Swap Framework provided a swap arrangement till 2027 for \$ 400 million and an additional ₹ 3,000 Cr. (\$ 357 million). The currency swap agreement with the Maldives for \$ 750 million

to enable payments between the two countries in respective currencies.

India is set to launch of the RuPay card in the Maldives and handover of 700 houses built with assistance by India. Memorandums of understanding were inked between the Central Bureau of Investigation and the Anti-Corruption Commission of the Maldives and between policing institutes and judicial training institutes; and also for cooperation in sports and youth affairs.

India also agreed to step up cooperation on trade in national currencies, and to work on a Free Trade Agreement. India and Maldives released a “vision statement” for a “comprehensive economic and maritime security partnership” to be negotiated in the future; inaugurated a jointly constructed runway for an international airport at Hanimadhoo Island; and signed an agreement for India to support the Maldives on the refit of a Coast Guard ship Huravee at an Indian facility.

UGC to recognise 'outstanding' Ph.D. research with award

POLITY AND GOVERNANCE

The University Grants Commission (UGC) has instituted a Ph.D. excellence citation to recognise original research work by scholars in Indian universities every year.

The overall Ph.D. admission had grown at a rate of 10 % annually and the number of Ph.D. admissions doubled from 77,798 in 2010-11 to 1,61,412 in 2017-18. Science (30 %), engineering and technology (26 %) and social sciences (12 %) accounted for the largest pool of Ph.D.s awarded during the period.

All State, Central, private and deemed universities, recognised under Section 2(f) of the UGC Act and accredited by NAAC may nominate five Ph.D. theses, one each from five disciplines – sciences (including agricultural, medical sciences); engineering and technology; social sciences (including education and humanities), Indian languages, and commerce and management for the citation.

The criteria include uploading the thesis on Inflibnet and the award of the degree, in accordance with UGC regulations, between January 1 and December 31 of the year in which it is recommended for recognition. Two theses will be selected from each discipline for the award. The selection committee for the streams will be constituted by the UGC and each committee will select two candidates from their respective streams. The UGC will call for nominations from universities in January and the awards will be distributed on September 5.

Ultra-processed, fast food leading cause of diabetes in India

POLITY AND GOVERNANCE

A clinical trial finding published in the International Journal of Food Sciences and Nutrition noted a diet rich in "Advanced Glycation End Products (AGEs)", which includes ultra-processed and fast food, is among the leading cause of India being the world's diabetic capital. Earlier studies in the West have demonstrated an increased risk of chronic diseases due to the consumption of processed foods that are high in fat, sugar, salt, and AGEs. Prevalence of diabetes, pre-diabetes, and obesity is on the rise globally, and in Asian Indians, there are currently 101 million individuals with diabetes.

AGEs are harmful compounds that are formed when sugars react with fats or proteins during high-temperature cooking, such as frying and roasting. The consumption of AGE-rich foods leads to inflammation in the body. This is because glycation — a non-enzymatic chemical process in which a sugar molecule binds to a protein or lipid molecule — can result in harmful reactions in the body.

Low-AGE diets exhibited improvement in the insulin-sensitivity and reduction in the inflammatory levels compared to high-AGE diets, a potential strategy to reduce diabetes risk. A low-AGE diet (fruits, vegetables, whole grains, and low-fat milk), overweight and obese individuals can reduce oxidative stress in their bodies, which refers to the imbalance of free radicals and antioxidants that results in inflammation and cell damage.

As part of the clinical trial, adults who are either overweight or obese but non-diabetic were divided into two groups. While one group was given a low-AGE diet for 12 weeks, the other was put on a high-AGE diet. At the end of 12 weeks, the researchers found that insulin sensitivity was significantly increased in the low-AGE diet group, compared with the high-AGE diet group. The low-AGE diet group

also showed lowered risk of future type 2 diabetes.

The study found adopting healthier diets such as green leafy non-starchy vegetables, fruits, boiled foods rather than fried ones and cutting down on bakery foods and sugary foods, one can have diets which are low in dietary AGEs and thus lower the risk of type 2 diabetes.

Left-wing extremism contained - Amit Shah

INTERNAL SECURITY

Union Home Minister Amit Shah chairing a review meeting with the Chief Ministers of LWE-affected States noted significant progress achieved in containing the Left-Wing Extremism (LWE), citing killing of 14 top Naxal leaders. The meeting was attended by the Chief Ministers of Chhattisgarh, Madhya Pradesh, Maharashtra, Odisha, and Telangana, while Bihar and Andhra Pradesh were represented by their Deputy Chief Minister and Home Minister, respectively.

The Union Home Minister noted said that LWE violence was restricted to 16 districts now, compared with 96 districts earlier. The number of police stations reporting violence had also come down to 171 from 465.

Mr. Shah expressed confidence of wiping out Left-Wing Extremism (LWE) by 2026. Eighty-five per cent of the LWE cadre strength in Chhattisgarh has been eliminated. Since January 2024, a total of 237 Naxalites have been killed, 812 arrested, and 723 have surrendered in Chhattisgarh.

Head of Ladakh Buddhist Association says protest will go on till demands are met

POLITY AND GOVERNANCE

The Ladakh Buddhist Association (LBA), an influential religious body in Ladakh is readying to protest for another 15 years, if necessary demanding constitutional safeguards.

Mr. Lakrook is also the co-convener of the Leh Apex Body (LAB), a civil society organisation, which along with the Kargil Democratic Alliance (KDA), has been protesting for the past four years seeking Statehood, inclusion in the Sixth Schedule of the Constitution (tribal status for Ladakh), employment opportunities for the local people, and a Rajya Sabha seat and a Lok Sabha seat each for the two regions. LBA President Chering Dorjay Lakrook cautioned that any adverse action against climate activist Sonam Wangchuk had consequences in Ladakh. After his detention by the Delhi Police on September 30, people had resorted to stone-pelting and stopped traffic in Ladakh, causing inconvenience to tourists. Mr. Wangchuk and 20 volunteers have been sitting on an indefinite hunger strike, surviving on salt and water at the Ladakh Bhavan in Delhi since Sunday after he failed to get an audience with the Prime Minister, Home Minister, or the President of India.

Mr. Wangchuk, who along with 150 people from Ladakh had set out on a foot march from Leh on September 1, was detained by the police as the contingent reached the Delhi boundary on September 30. After remaining in detention for five days, Mr. Wangchuk was released on October 6.



"If you invest more in your education, then you are likely to get more interest in it."

—Benjamin Franklin

Israel marks a year of attack as war rages on two fronts

INTERNATIONAL RELATIONS

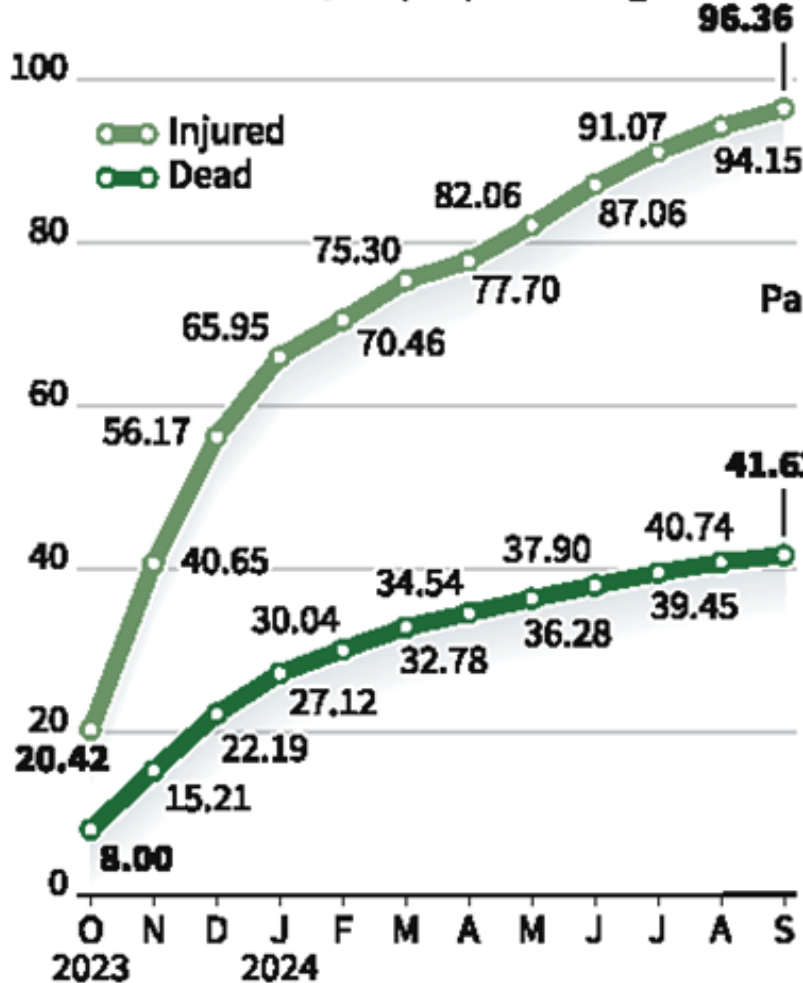
Israel-Hamas war in numbers

At least 1,200 people were killed in the Oct. 7 Hamas attack in Israel; ever since, over 41,000 people were killed in Gaza in Israel's attacks



A YEAR OF PALESTINIAN CASUALTIES IN GAZA (000s, cumulative, data at month end)

Note: Additional 10,000 people missing



TOTAL PALESTINIAN AND ISRAELI CASUALTIES (as of Oct. 2, 2024)



70,000+
Housing units
destroyed
in Gaza

1.9 million
Internally displaced
people (90% of
Gaza's population)

86%
Area of Gaza under
Israeli-issued
evacuation orders

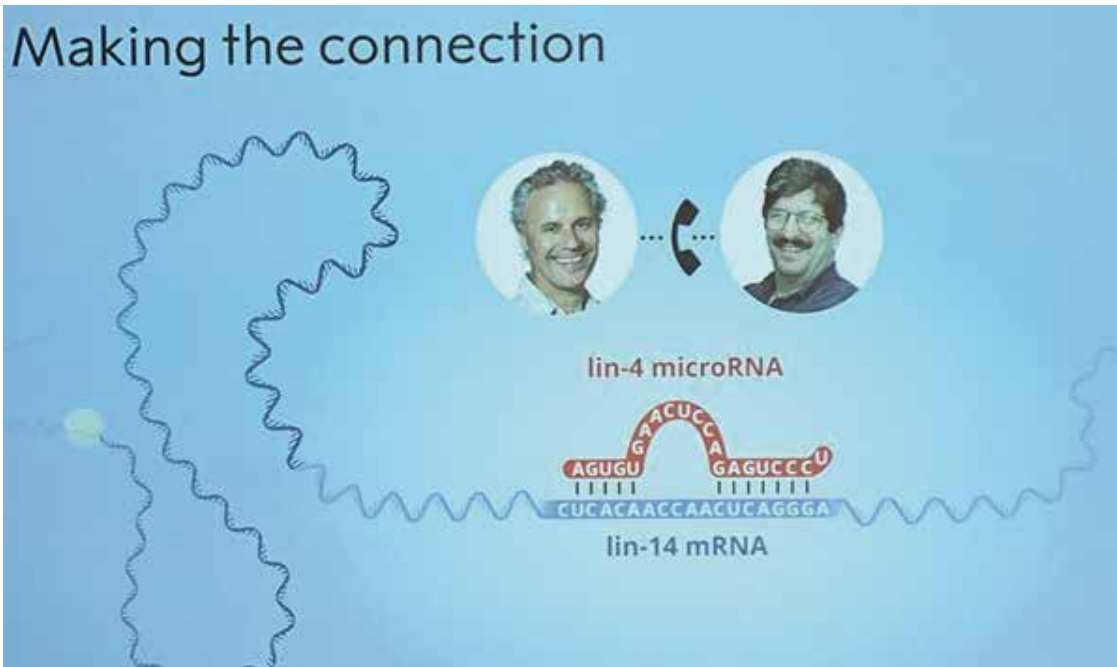
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Israelis held sombre ceremonies on Monday to mark a year since the deadliest attack in the country's history, a Hamas-led raid that shattered its sense of security and has since spiralled into wars on two fronts with no end in sight. The militants killed some 1,200 people, mostly civilians, and abducted another 250. Around 100 hostages have not been returned, a third of whom are believed to be dead, and cease-fire efforts have ground to a halt.

Hamas marked the anniversary of its October 7, 2023, attack by firing a barrage of rockets at Tel Aviv, underscoring its resilience after a year of war and devastation in Gaza. Lebanon's Hezbollah, which began firing rockets at Israel on October 8 in support of Hamas, fired new barrages despite its recent losses.

Nobel Peace Prize of Physiology announced

SCIENCE AND TECHNOLOGY



Victor Ambros and Gary Ruvkun won the 2024 Nobel Prize in Physiology for discovering microRNA (miRNA), which regulates gene expression in eukaryotes. miRNA controls gene activity between transcription (making an RNA copy of a gene's DNA) and before protein production, ensuring correct gene activity in specific cell types, like muscle or nerve cells, to perform specialized functions.

Before the discovery of microRNAs, gene regulation was

thought to be controlled solely by transcription factors. In 1993, experiments with *C. elegans* showed that microRNAs also regulate genes post-transcription. Initially believed to be unique to roundworms, further discoveries revealed microRNAs in all organisms, indicating their broader role in gene regulation. By 2001, microRNAs were found in both invertebrates and vertebrates, suggesting a universal regulatory function. The human genome codes for over 1,000 microRNAs.

Some dysfunctional miRNAs can cause diseases like cancer and autoimmunity. Defective miRNA-related genes are linked to sight, hearing, and skeletal disorders. Ambros and Ruvkun's work unveiled a new gene regulation layer, revealing previously unclear conditions. Scientists are exploring treatments and preventive measures targeting miRNAs.

Dysregulated microRNA expression is linked to diseases like cancer, diabetes, and autoimmune disorders. In cancer, this dysregulation includes changes in microRNA genes and their control, impacting cancer cell functions like growth and spread. Some microRNAs are potential cancer biomarkers for diagnosis and treatment. Additionally, microRNA dysfunction can lead to autoimmune diseases by disrupting immune responses. Although some microRNA-based diagnostic tools exist clinically, they're not yet commercialized, and candidate drugs are still in trials.

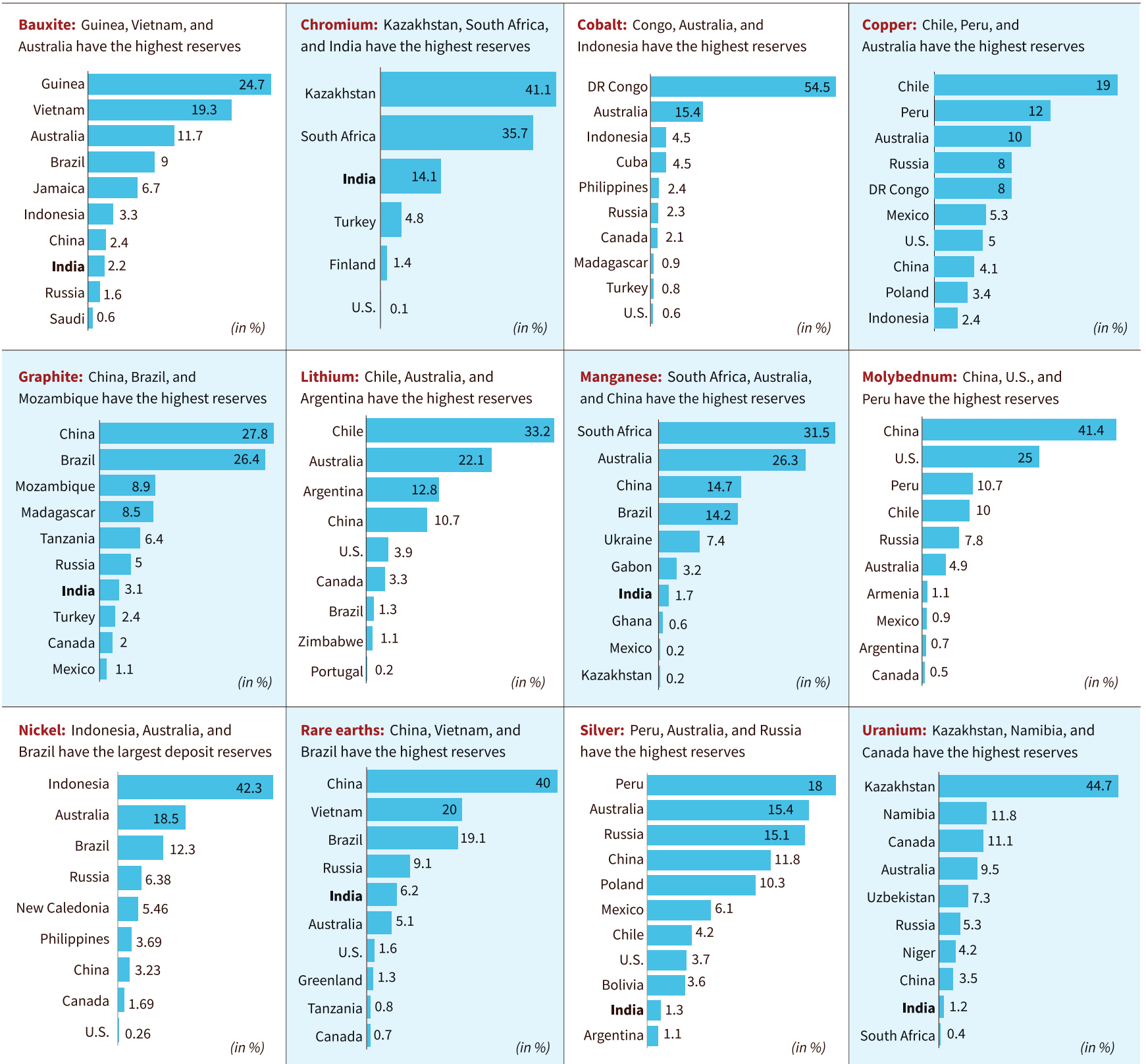
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Nations with mineral reserves needed for energy transition

SCIENCE AND TECHNOLOGY

Minerals for a clean and green future

The data for the charts were sourced from Our World in Data. The data shows the reserves as a share of the global total as of 2023



The world's energy system is mainly powered by fossil fuels. The transition to a low carbon one will shift its underpinnings away from coal, oil, and gas to the minerals needed for solar, wind, nuclear, and other technologies.

Minerals	Uses
BAUXITE	Wind turbines, solar panels, batteries, electrolyzers, and transmission cables.
CHROMIUM	Geothermal and concentrated solar power, wind turbines, radiation shielding in nuclear power plants.
COBALT	Consumer electronics, catalysts in the oil industry, resistant metal alloys, critical components in many lithium-ion battery technologies.
COPPER	Solar photovoltaics, wind power, battery storage, and electricity grids.
GRAPHITE	Battery anodes, stationary batteries for balancing electricity grids.
LITHIUM	Lithium-ion batteries.
MOLYBDENUM	
NICKEL	Lithium-ion battery cathodes
RARE EARTHS	Permanent magnets
SILVER	Solar photovoltaics and electric vehicles
URANIUM	Primary fuel for nuclear energy production
MANGANESE	Solar and wind power, and in lithium-ion batteries for electric cars

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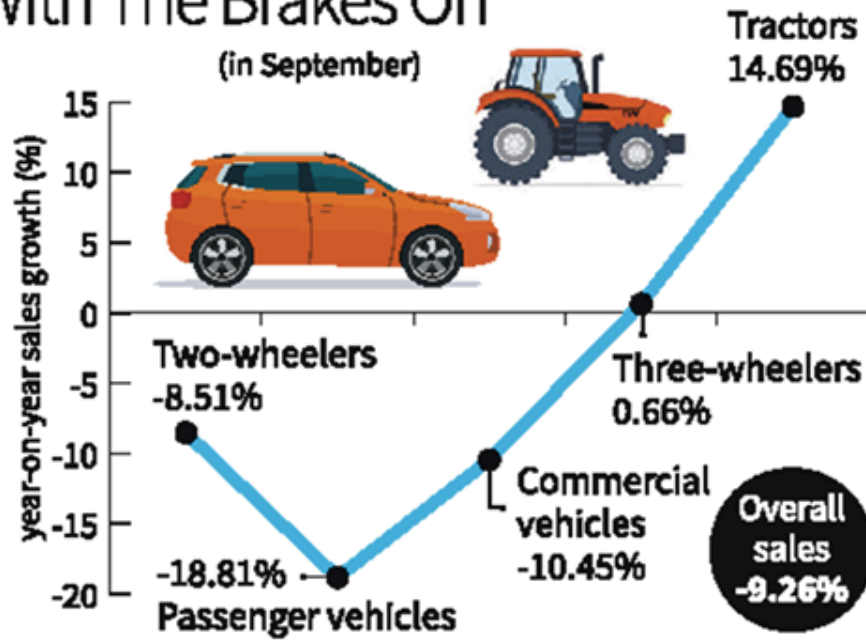
Auto retail sales slumped 9% in Sept.

ECONOMICS AND DEVELOPMENT

Overall automobile retail sales in September witnessed a decline of 9.26 % year-on-year (YoY). Sales of two-wheelers, passenger vehicles (PVs) and commercial vehicles (CVs) slid by a sharp 8.51 %, 18.81 % (YoY) and 10.45 %, respectively, while sales of three-wheelers and tractors whose sales rose 0.66 % and 14.69 % YoY, respectively.

Driving With The Brakes On

Amid a deepening sales slump, passenger vehicle dealers are stuck with an all-time high inventory worth ₹79,000 crore



Source: Federation of Automobile Dealers Associations, India

In the PVs category, sales plummeted by 10.8 % MoM, the fourth consecutive month and 18.81 % YoY, signalling an alarming trend of declining consumer demand and deteriorating market sentiment. PV dealers face all-time high inventory levels of 80-85 days, equivalent to 7.9 lakh vehicles worth ₹ 79,000 Cr.

Despite the onset of festivals such as Ganesh Chaturthi and Onam, automobile dealers reported largely stagnant sales,

suggesting an underwhelming overall market sentiment during the festive periods. Discounts and offers have been introduced across segments to spur demand, but are yet to translate into a significant uptick in sales. The growth of fast-moving consumer goods sales in urban areas slowed in Q1FY25. While it may turn out to be transient with onset of the festival season, they warrant monitoring.

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