

● POLITY

● ECONOMICS

● TECHNOLOGY

● ECOLOGY

POLITY AND GOVERNANCE

Ministers discuss 100-day agenda for new govt.

CONTEXT: In a show of confidence for re-election, Prime Minister Modi's cabinet met last Sunday to discuss a 100-day action plan for the new government expected to be formed in May.



BACKGROUND: The Union Council of Ministers under Prime Minister Narendra Modi discussed a 100-day agenda and a vision document for a "Developed India 2047" in their last meeting before the upcoming elections. This indicates confidence in their preparation for the forthcoming election and forming the new government in May 2024.

MAJOR POINTS:

- **Confidence in Re-election:** The Union Council of Ministers under PM Modi discussed a 100-day agenda for the new government expected in May 2024, reflecting confidence in their re-election.
- **Vision for "Viksit Bharat 2047":** They also brainstormed a vision document for "Viksit Bharat 2047" (Developed India 2047), outlining a long-term development plan for the next 25 years.
- **Extensive Consultation:** This plan involved consultations with various stakeholders, including ministries, state governments, academia, industry, youth, etc. It involved over 2,700 meetings and incorporated suggestions from over 2 million young people.
- **Comprehensive goals:** The "Viksit Bharat" roadmap aims for economic growth, achieving Sustainable Development Goals, improving ease of living and doing business, and strengthening infrastructure and social welfare.
- **PM Modi's Vision:** He emphasised the "Amrit Kaal" period (next 25 years) as an opportunity for exponential development, urging

everyone to dedicate their efforts towards achieving a developed India. This aligns with the "Panch Pran" he presented in 2022, which includes the pledge for a developed India.

CONCLUSION: Prime Minister Modi's cabinet convened to discuss a 100-day action plan and a vision for "Developed India 2047," signalling confidence in their re-election prospects. This reflects meticulous preparation and a forward-thinking approach, with extensive consultations and incorporating millions of suggestions from diverse stakeholders. The government aims for sustainable development, economic growth, and societal advancement, emphasizing a commitment to long-term progress. Prime Minister Modi's vision for the next 25 years underscores an ambitious drive towards unprecedented growth and prosperity, urging collective dedication to achieving these goals.

POLITY AND GOVERNANCE

Seizure of cargo by India is unjustified, says Pakistan

CONTEXT: Tensions are rising between India and Pakistan after India seized cargo from China destined for Pakistan, with Pakistan calling the move "unjustified" and accusing India of violating international norms.



BACKGROUND: India seized equipment from China destined for Pakistan, claiming it had military uses. Pakistan denies this, calling it a "commercial lathe machine" and condemning India's actions.

Key Points:

- **India seized equipment:** Indian customs seized equipment shipped from China to Pakistan, claiming it could be used for military purposes.
- **Pakistan denies claim:** Pakistan denies this, stating the equipment is a commercial lathe machine for civilian use in the automobile industry.
- **Pakistan criticizes India:** Pakistan condemns India's actions, calling them "high-handed" and a violation of international norms.
- **Pakistan takes legal action:** Pakistani private entities are pursuing legal action against the seizure.
- **Shipment details:** The equipment was shipped on January 9th on a merchant vessel CMA CGM Attila.

CONCLUSION: With both sides entrenched in their positions and legal action underway, the fate of the seized cargo and the broader relationship between India and Pakistan remain uncertain. The potential for escalating tensions and international involvement underscores the need for a diplomatic resolution that addresses the concerns of all parties involved.

POLITY AND GOVERNANCE

The long road to reforming India's political party system

CONTEXT: With India's general election approaching, there have been numerous defections by politicians, raising questions about the effectiveness of the anti-defection law. Recent rulings in Maharashtra have disqualified some defectors while allowing others to remain in their new parties, creating inconsistencies and highlighting the need for potential reform of the law and political party systems.

BACKGROUND:

- **Anti-defection law:** Introduced in 1985 to curb frequent defections of MLAs from one party to another.
- **Recent defections:** As India approaches general elections, several MLAs have switched parties, raising concerns about the effectiveness of the law.
- **Maharashtra Assembly Speaker's decisions:** The Speaker ruled that defectors within NCP and Shiv Sena were not subject to disqualification despite seemingly violating the law.
- **Splits in NCP and Shiv Sena:** In 2023, both NCP and Shiv Sena witnessed internal conflicts leading to vertical splits within the parties.
- **Speaker's rulings:** The Maharashtra Assembly Speaker, in separate rulings for both parties, did not disqualify any MLAs from either faction. He recognized one faction as the "real" party based on their legislative strength.

KEY POINTS:

Defections on the rise: As elections approach, there have been increased instances of MLAs switching parties across India.

Maharashtra Speaker's rulings: In recent decisions regarding splits within the NCP and Shiv Sena parties, the Speaker:

- Did not disqualify any MLAs from either faction.
- Recognized one faction as the "real" party based on legislative strength.

Controversial aspects of the rulings: Critics argue that these decisions:

- Disregard the requirement to merge with another party to avoid disqualification.
- Contradict the purpose of the anti-defection law, which is to deter defections.

Need for reform: These developments highlight the need for potential reform in two areas:

- **Strengthening inner-party democracy:** Addressing the root causes of defections by ensuring democratic practices within political parties.
- **Revising the anti-defection law:** Potentially reviewing the law to address ambiguities and improve its effectiveness.

Law Commission's recommendations: The Law Commission of India has proposed amendments to:

- Mandate democratic structures and processes within political parties.
- Grant the Election Commission power to enforce compliance.

Opportunity for change: The Speaker's involvement in reviewing the law presents a chance to create an anti-defection law that better suits India's needs.

CONCLUSION: Maharashtra Assembly Speaker's rulings on defections expose flaws in India's anti-defection law. Loopholes and lack of inner-party democracy fuel defections. Law Commission's suggestions for reform offer a chance to strengthen the law and promote democratic practices within political parties. This review process presents a crucial opportunity to improve India's political system.

POLITY AND GOVERNANCE

A women's urban employment guarantee act

CONTEXT: The proposal for a national Women's Urban Employment Guarantee Act (WUEGA) aims to address the glaring gender gap in urban employment rates, recognizing the untapped potential of women in the workforce and the need for targeted interventions to empower them economically, as outlined in a recent analysis.



BACKGROUND: Gender disparity in employment is a significant concern in India, particularly in urban areas. Despite efforts like the MGNREGA empowering rural women, urban women face challenges like social norms, safety concerns, and limited transportation options. This low female workforce participation not only hinders individual growth but also represents wasted potential for economic progress.

Studies reveal a high unmet demand for employment among urban women, who are often better educated than their rural counterparts.

GENDER GAP IN URBAN EMPLOYMENT: KEY POINTS

- **Low female workforce participation:** Despite high unmet demand for employment, urban women's employment rate is only 22.9%.
- **Barriers to entry:** Social norms, safety concerns, and limited transportation options hinder women's entry into the urban workforce.
- **Education gap:** Urban women have higher education levels (25% completed higher secondary education) compared to rural women (5%).
- **Existing programs:** MGNREGA empowers rural women, but urban employment programs are limited and not women-specific.

PROPOSED SOLUTION: WOMEN'S URBAN EMPLOYMENT GUARANTEE ACT (WUEGA)

- **Guarantee employment opportunities:** Provide 150 days of work per year with minimum wage.
- **Empower women and communities:** Include at least 50% women in program management and involve local communities.
- **Ensure accessibility:** Offer childcare facilities, ensure work within 5 km radius, and provide free public transportation for women.
- **Bridge skill gaps:** Offer apprenticeships, training programs, and information facilitation centers.
- **Promote long-term benefits:** Include automatic enrollment in welfare boards and create social audit units with women's participation.

POTENTIAL AND FEASIBILITY

- Similar initiatives like women-led waste management in Karnataka have been successful.
- Estimated cost is around 1.5-2% of GDP, potentially outweighed by long-term benefits.
- Phased rollout with periodic assessments is recommended.
- WUEGA can pave the way for a broader urban employment program for all.

CONCLUSION

- Addressing the gender gap in urban employment is crucial for economic growth and women's empowerment.
- WUEGA proposes a comprehensive approach to overcome existing barriers and unlock women's potential in urban India.

MAJOR POINTS:

- Newly-elected Prime Minister Shehbaz Sharif vows to revive Pakistan's debt-trapped economy and combat terrorism.
- He emphasizes maintaining cordial relations with neighbours based on principles of equality.
- Shehbaz expresses gratitude to his elder brother Nawaz Sharif and allies for their trust in him to lead a coalition government.
- Shehbaz secures 201 votes in the National Assembly, defeating his challenger Omar Ayub Khan of the PTI, who received 92 votes.
- Amidst criticism from members of Imran Khan's party, Shehbaz warns about Pakistan's alarming debt crisis.
- Shehbaz pledges to avoid becoming involved in any "great game" and aims to increase diplomatic relations with various nations.
- He highlights the importance of improving ties with neighbouring countries on equal footing.
- Shehbaz raises the Kashmir issue, advocating for a resolution in support of the freedom of Kashmiris and Palestinians.

INTERNATIONAL RELATIONS

U.S., Qatari, and Hamas envoys push for Gaza ceasefire from Cairo as war rages

CONTEXT: Mediators from the United States, Qatar, and Hamas convened in Cairo to renew efforts for a ceasefire in Gaza amid ongoing fighting and severe food shortages.



MAJOR POINTS

- Mediators in Cairo renew efforts for a Gaza ceasefire amidst ongoing fighting and desperate food shortages.
- Envoys from the U.S., Qatar, and Hamas travel to Cairo to negotiate a six-week truce, increased aid deliveries, and hostage exchanges.
- Key sticking points persist, including Hamas' demand for complete Israeli withdrawal from Gaza and Israel's request for a list of remaining captives.
- Despite attempts to halt the violence sparked by Hamas's attack on Israel, Gaza remains embroiled in conflict, with continued Israeli bombings and urban combat.

INTERNATIONAL RELATIONS

Shehbaz Sharif becomes Pakistan PM for second time

CONTEXT: Shehbaz Sharif, leader of the Pakistan Muslim League Nawaz (PML-N), secures victory in the National Assembly election, becoming Prime Minister for the second time, pledging to address economic challenges, prioritize anti-terrorism efforts, and maintain cordial relations with neighboring countries, while also raising the Kashmir issue in his victory speech.



- The death toll rises, with 90 Palestinians killed within 24 hours and an overall toll of 30,410, predominantly women and children.
- Twin babies are buried following an airstrike that killed 14 family members, highlighting civilian casualties amidst the violence.
- Gaza also faces a humanitarian crisis, with at least 16 children dying from malnutrition as famine spreads in the north, according to Gaza's Health Ministry spokesman Ashraf al-Qudra.

CONCLUSION: The situation in Gaza underscores the urgent need for a ceasefire and humanitarian aid amid escalating violence and dire conditions.

ECONOMICS AND DEVELOPMENT

Facts and statistics

CONTEXT: The National Statistical Office (NSO) released the latest national income data estimated a robust 8.4 % year-on-year growth in real gross domestic product (GDP) in the October-December quarter. The first and second quarters of the current fiscal witnessed the growth of real GDP by 8.2 % and 8.1 %, respectively, 40 and 50 basis points quicker than estimated earlier.

Full-year real GDP growth too is now forecast at 7.6 %, 30 basis points faster than the 7.3 % growth it had estimated as recently as in January. The revisions to the estimates of National Statistical Office (NSO) for 2021-22 and 2022-23 has resulted in the upgrades in the current fiscal's income estimates is the NSO's. The revisions to a previous year's data automatically alter the year-on-year pace of growth. The real GDP growth was raised by 60 basis points to 9.7 %, a fallout of the consequent scaling down of 2022-23's GDP expansion to 7 %, from the earlier estimate of 7.2 %.

The contraction in output of the key rural agriculture, livestock, forestry and fishing sector by 0.8 % year-on-year slowed sequentially across five of the other seven sectors that contribute to the GVA is responsible for the slowdown in the third-quarter Gross Value Added (GVA) growth to 6.5 %, from an upwardly revised 7.7 % pace in the preceding July-September period.

The GVA growth rate, slower than the GDP's 8.4 % primarily because net indirect taxes are estimated to have surged 32 % year-on-year in the last quarter, largely as a result of subsidy pay-outs, including on fertilizers, being drastically lower. The private spending grew by a mere 3.5 % year-on-year, government consumption spending actually shrank 3.2 %.

ECOLOGY AND ENVIRONMENT

Mountains of plastic are choking the Himalayan States

CONTEXT: Microplastics are formed by the degradation and the fragmentation of improperly disposed large plastic pieces. Microplastic deposition and accumulation has been found in the Himalayan mountains, rivers, lakes and streams.

Rapid and unplanned urbanisation and changing production and consumption patterns are responsible for the plastic waste crisis in the Indian Himalayan Region. A quantum jump in tourist footfalls is another reason for exacerbation of the problem.

Recently, the National Green Tribunal issued notices to the Ministry of Environment, Forest and Climate Change, the Central Pollution Control Board (CPCB), the Himachal Pradesh State Pollution Control Board, the Deputy Commissioner Lahaul and Spiti and the Panchayat of Koksar in Himachal Pradesh on waste dumping in eco-sensitive areas by tourists and commercial establishments. In Assam, at the Ramsar site of Deepor Beel, Greater adjutant storks have been feasting on the plastic waste in the landfill instead of fish from the wetland. In Manipur, growing pollution in rivers, that include the Nambul, has been widely reported. The Himalayan Clean-up (2018-21) that was conducted by the Integrated Mountain Initiative with Zero Waste Himalayas and the National Productivity Council of India's waste and brand audit show increasing plastic waste, especially non-recyclables, in the Indian Himalayan Region. The Himalayan Clean-up (2022) waste audit results showed that 92.7% of trash was plastic, with 72 % of waste being non-recyclable plastic.

States across the Indian Himalayan Region have also been taking various initiatives including enacting laws to curb this menace. Himachal Pradesh and Sikkim have special State laws banning the use of plastics. Himachal Pradesh has a buy back policy for non-recyclable and single-use plastic waste since 2019, but there is still widespread littering of plastic waste. Sikkim banned packaged mineral water use from January 2022 and has a fairly robust regulatory system, but in the absence of proper infrastructure to handle plastic waste, the State is still grappling with the issue. Mizoram has been proactive on the regulatory front — the Aizawal Municipal Corporation made by-laws under the PWM in 2019. Tripura has made policy changes, enacted municipal by-laws and has a State-level task force to eliminate Single Use Plastic though the results are not visible.

The Indian Himalayan Region is a critical source of water in the subcontinent, feeding a number of major rivers of India that include the Indus, Ganges and Brahmaputra River systems. These microplastics can be trapped in glaciers for a long time and released into rivers during snow melting. Unscientific plastic disposal is causing soil and water pollution in the Indian Himalayan Region and impacting its biodiversity.

Plastic waste versus management capacities

Environment Action, a Swiss-based organisation organise Plastic Overshoot Day, a day when the amount of plastic waste surpasses the capability of waste management system. In 2023, India reached its plastic overshoot day on January 6. India has one of the highest Mismatched Waste Index (MWI), at 98.55 %, in the world (after Kenya, Nigeria and Mozambique) which is the gap in waste management capacity and plastic consumption. The Government of India claims that it recycles 60 % of plastic waste.

The
More
You Learn,
The
More
You Earn



According to the Centre for Science and Environment (CSE) using CPCB data, India is merely recycling (through mechanical recycling) 12 % of its plastic waste. Approximately, 20 % of plastic waste is channelised for end-of-life solutions such as co-incineration, plastic-to-fuel and road making.

Legal mandate for waste management

Solid Waste Management Rules (SWM) 2016, Plastic Waste Management (PWM) Rules 2016 and Extended Producer Responsibility (EPR) 2022 constitute the regulatory framework for plastic waste management for India. Special needs of hill areas are recognised by the SWM but are not factored in while creating a mandate for both local bodies and producers, importers and brand owners (PIBOs), while PWM and EPR have not even recognised the special needs of the hills.

The collective mandate of SWM/PWM/EPR requires waste segregation at source. Segregation of not only plastic from other waste but also different types of plastics is a prerequisite for any strategy to dispose of plastic waste in a scientific and sustainable manner. Waste segregation exists on paper, but a closer look shows landfills overflowing with mixed waste. The leachate from the mixed waste causes soil and groundwater pollution while fumes from such mixed waste cause air pollution. A huge amount of plastic waste which can be recycled still remains in landfills.

Under the SWM, PWM and EPR, the task of waste management from collection to its scientific disposal is the duty of local bodies. They can take help from PIBOs for the setting up and operationalisation of the plastic waste management system, as mandated under the EPR. Though local bodies are the pivot of the waste management system in the country, a commensurate devolution of power to them is still work in progress. Very few States have enacted model by-laws and very few local bodies themselves have made by-laws to operationalise the mandate. There is no clarity regarding the mandate to ensure collaboration between local bodies and PIBOs. There is a need to include traditional institutions within the definition of local bodies when it comes to the Indian Himalayan Region (prevalent in many States in the northeast). Under Swachh Bharat Mission (SBM) and the Fifteenth Finance Commission, money was allocated to these traditional institutions.

Plugging data gaps is one step

There is a need for appropriate resource allocation and support that is considerate of and reflective of the rich biodiversity, ecological sensitivity and fragility of the Indian Himalayan Region, besides taking into account the specific geographical challenges of mountain waste management. Empowering local bodies and creating the necessary infrastructure for waste management need immediate attention. Segregation of waste and the participation of the people in this endeavour with the help of sustained public education campaigns are a sine qua non. Geographical neutrality of targets under the EPR could be countered if the higher cost of EPR operationalisation in the mountain region is given its due consideration. The value of the EPR certificate which is earned by a PIBO in the Indian Himalayan Region could be higher than one earned in the rest of the country for every ton of plastic waste processed.

Convergence in existing schemes such as SBM, the Mahatma Gandhi National Rural Employment Guarantee Act and the Finance Commission's grants could be used to create the infrastructure, maintain and run operations. The Swachh Bharat

Kosh Trust was set up to facilitate the channelisation of philanthropic contributions and corporate social responsibility funds towards plastic waste management. The Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Smart Cities Scheme under which many cities in the Indian Himalayan Region are selected, could also work in convergence on the issue of scientific waste management and making cities in the Indian Himalayan Region free of plastic.

ECONOMICS AND DEVELOPMENT

Plans for non-lapsable defence modernisation fund put on hold

CONTEXT: The Union Ministry of Defence ruled out constitution of all non-lapsable pool as it affects parliamentary scrutiny and accountability.



The Centre in its terms of reference to the 15th Finance Commission included the examination of creation of a dedicated non-lapsable Modernisation Fund for Defence and Internal Security (MFDIS). The 15th Finance Commission recommended the constitution of a dedicated non-lapsable Modernisation Fund for Defence and Internal Security (MFDIS).

Among Central Ministries, defence spending accounts for the largest outlays. The Ministry of Defence (MoD) had informed Parliament as recently as December 2023 that a "separate mechanism is being worked out" to explore a special dispensation to operationalise a "Non-lapsable Defence Modernisation Fund". The only funds that are non-lapsable traditionally are those funded through cesses levied for a specific purpose.

Assurance of funding

Asserting that all necessary defence capital spending has been provided for by the Interim Budget 2024-25, the official emphasised that the consolidation of capex demands of the Services under one head instead of three heads for each Service in the Budget provides more space for the Defence Ministry.

'Dovetailing the Services' capex budgets together under one head is aimed at creating a more unified approach to procurements. It is a push towards jointness so the three Services can sit together and optimise their capital expenditure and if one is not able to spend, another can take more money.

In 2021, placing an action-taken report in Parliament along with the Commission's report, the government had said it has "in-principle" accepted the creation of such a fund in the Public Account of India.

POLITY AND GOVERNANCE

A majority of Indians support authoritarianism: Pew survey

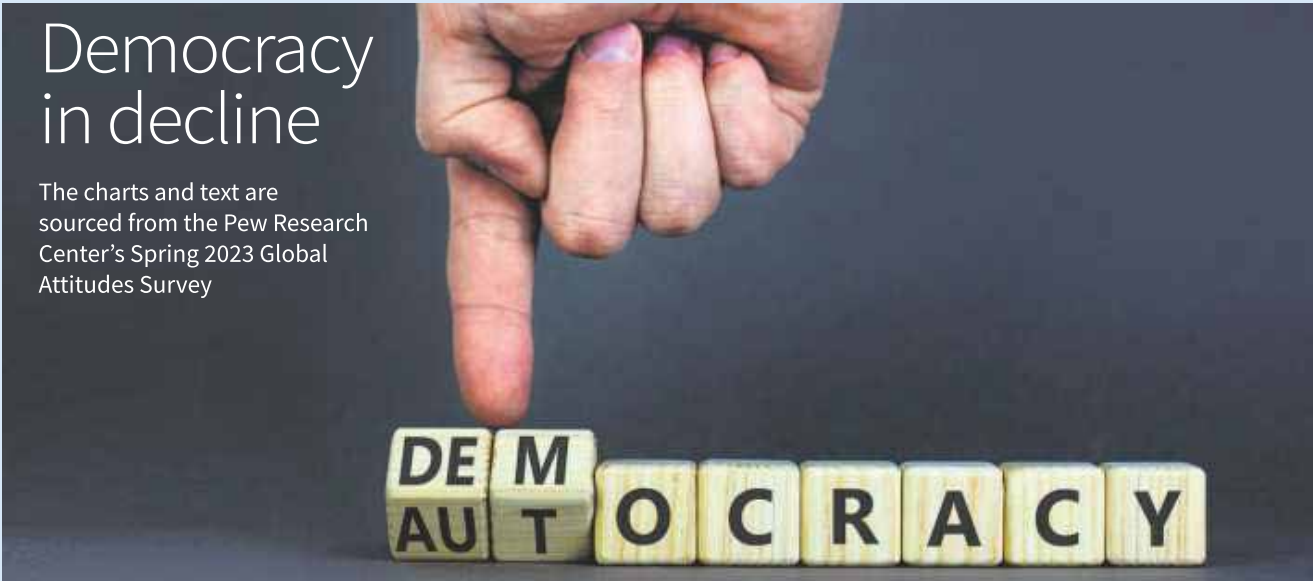


Chart 1 | % who believed that governance by a strong leader or military rule would be beneficial

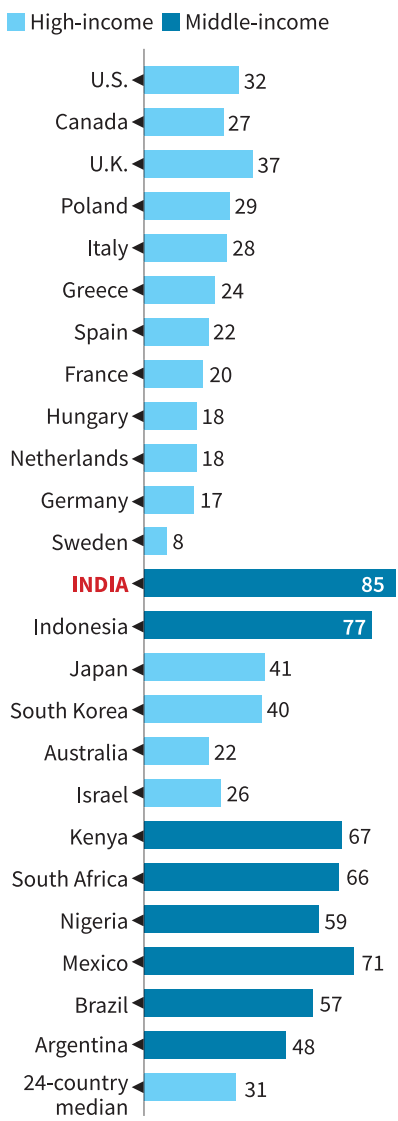


Chart 2 | % who support authoritarian rule against % who said that freedom of opposition parties is not important

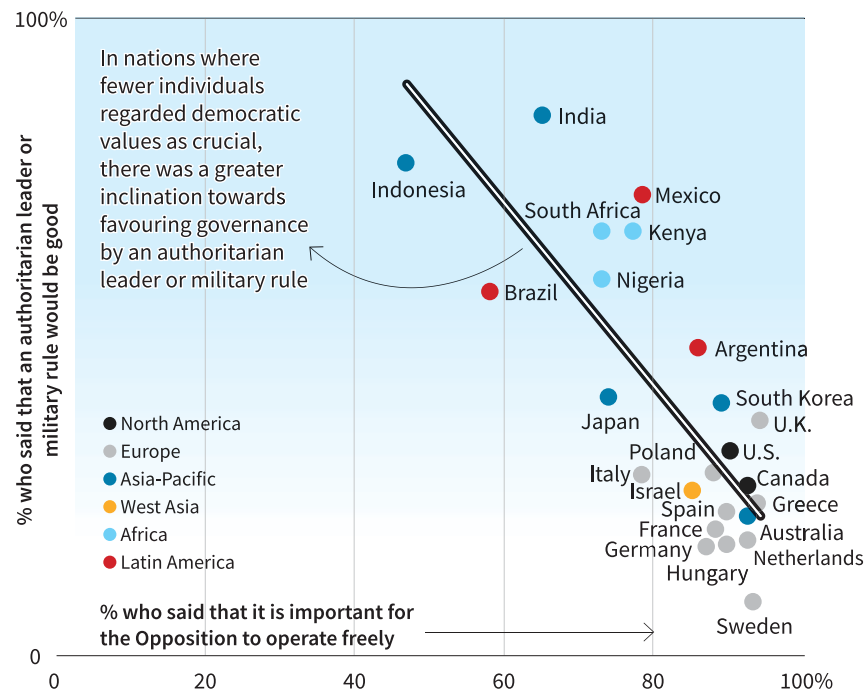


Chart 3 | % population that viewed representative democracy as a highly effective method of governance

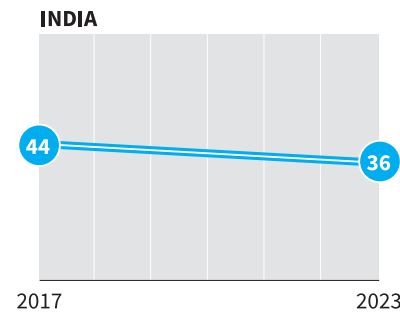
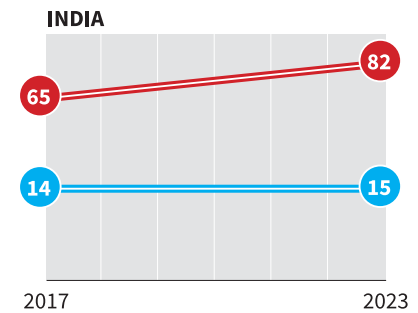


Chart 4 | % who said that experts, rather than elected leaders, in charge of making crucial decisions is good /bad



SCIENCE AND TECHNOLOGY

How does Apple's PQ3 protocol enhance data security for users?

CONTEXT: On February 21, Apple announced PQ3, a post-quantum cryptographic protocol, to encrypt conversations in iMessage, calling it the "first messaging protocol to reach Level 3 security" and claimed to defend "highly sophisticated quantum attacks." The protocol security layer will surpass those available in all widely used messaging apps.

What is the PQ3 protocol, and how does it work?

Currently, most messaging apps have standard encryption methods which use public and private keys to securely deliver messages. In the public key encryption method, a user's message is encrypted by the public key before transmission and then the private key is used to decrypt messages. In the private key method, while both keys are required, they are basically the same, and both the sender and the recipient are allowed to encrypt or decrypt the message.

Apple's PQ3 protocol uses a hybrid design combining traditional encryption methods with post-quantum encryption both during the initial key establishment between devices and during rekeying, which essentially rechecks the cryptographic keys between devices to ensure continued protection.

Under the PQ3 protocol each device generates public keys locally and then transmits them to Apple servers as part of the iMessage registration process using the Module Lattice-based Key Encapsulation Mechanism or ML-KEM. This enables the sender device to get the receiver device's public keys and generate post-quantum encryption keys for the first message. Apple has also included a periodic post-quantum rekeying mechanism within the conversation which is capable of self-healing from key compromise and safeguarding future messages.

Why is Apple shifting to PQ3 protocol?

Currently, Apple's iMessage supports end-to-end encryption by default. This mode of protection relies on mathematical problems that could potentially be solved by powerful quantum computers. Apple has made improvements over the years to encryption, enhancing its platform's overall protection against hackers. However, current cryptographic problems can be solved by quantum computers, though such computers are still in the works. The extremely well-resourced attackers can mount attacks by taking advantage of the drop in data storage costs. Essentially, attackers can store large amounts of today's encrypted data and file it for future reference. And though attackers may not be able to decrypt this data today, they can retain it until it can be decrypted at a later date by making use of a quantum computer.

What are PQ3's strengths and limitations?

The PQ3 protocol protects communications on iMessage against current and future decryptions. It also limits how many past and future messages can be decrypted with a single compromised key, reducing the impact of key compromises.

But, despite its enhanced protection, the PQ3 protocol, because of its intended application scenario, does not address group messaging, authentication against quantum adversaries, or cryptographic deniability. Also, messages stored in iCloud may not be protected by this protocol.

Will the PQ3 protocol impact Apple users?

The new protocol offers protection against adversaries capable of compromising the transport layer between devices. However, the protocol does protect against attacks mounted on messages delivered to a device, which remains the same and can be extracted after unlocking a device or by using advanced attackers such as Pegasus, TirangleDB, and other spyware.

Additionally, since PQ3 relies on traditional signature algorithms for message authentication, a man-in-middle attacker with a powerful quantum computer may still have a chance of hacking it, Kaspersky said in a blog post.

Therefore, while the new protocol from Apple enhances security on iMessage and provides protection against future attacks using quantum computers, it is not a one-stop solution. And users concerned about the protection of their data should not rely only on post-quantum cryptographic protocols.

Are other messaging services also using methods like PQ3?

Currently in beta, PQ3 will start to roll out with the public release of iOS 17.4, iPadOS 17.4, macOS 14.4, and watchOS 10.4. However, this is not the first time a tech company has announced post-quantum encryption protocols. Earlier in September 2023, Signal announced advancements in quantum resistance for the Signal Protocol.

The upgrade called PQXDH added a layer of protection against the threat of quantum computers being built for the future. The upgrade used a new post-quantum cryptosystem that implemented one-way functions that cannot be advantageously reversed by a quantum computer.


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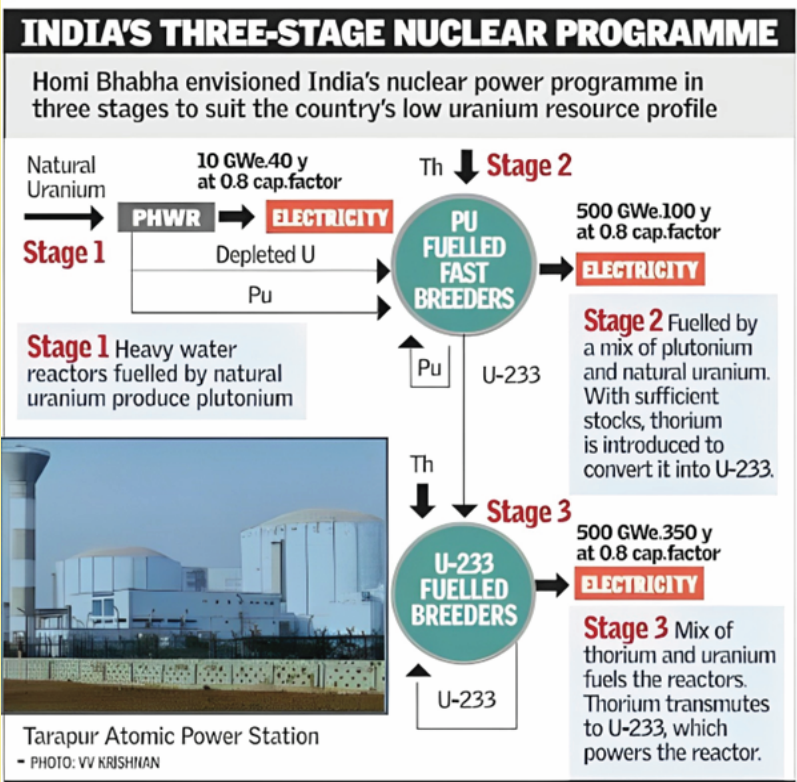
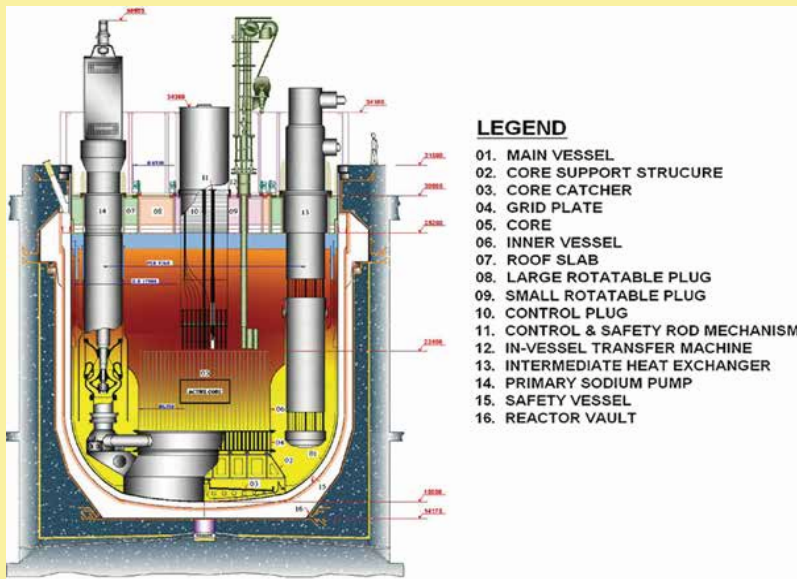
"If you invest more in your education, then you are likely to get more interest in it."
 —Benjamin Franklin

SCIENCE AND TECHNOLOGY

PM to witness launch of core loading of reactor in T.N. today

CONTEXT: The core loading of India's indigenous 500 Mwe Prototype Fast Breeder Reactor (PFBR) will be initiated in the nuclear complex at Kalpakkam, about 70 km south of Chennai.

The core consists of control sub-assemblies, blanket sub-assemblies and fuel sub-assemblies is developed by BHAVINI (Bharatiya Nabhikiya Vidyut Nigam Limited). The core loading activity would include the loading of the reactor control sub-assemblies, blanket sub-assemblies and fuel sub-assemblies that would generate power.



The Prototype Fast Breeder Reactor (PFBR) marks the second stage of the three-stage nuclear power programme of the country with a "closed fuel cycle", and the spent fuel from the first stage would be "reprocessed and used as fuel" in FBR. A unique feature of this sodium cooled PFBR is that it can produce more fuel than it consumes, thus helping in achieving self-reliance in fuel supply for future fast reactors. The FBRs would provide a safe, efficient and clean source of energy and contribute to the goal of net zero with "minimised nuclear waste" generated from the reactor and advanced safety features.

ART AND CULTURE

Odisha's famed Rupa Tarakasi, Banglar Muslin earn GI tag

CONTEXT: The application for this was filed by The Odisha State Cooperative Handicrafts Corporation Limited was granted by the Geographical Indication (GI) tag by the Geographical Indications Registry in Chennai.



CUTTACK RUPA TARAKASI, silver filigree traditionally associated with fine craftsmanship and luxurious design in classical jewellery reached Cuttack from Persia through Indonesia some 500 years ago by sea trade. Archaeological evidence suggests that filigree was incorporated into jewellery as early as 3,500 BCE in Mesopotamia where it is practised even today as Telkari work.

BANGLAR MUSLIN, one of the popular traditional handloom crafts of Bengal is a lightweight, soft, plain-weave cotton fabric that is believed to have originated in the region of Bangladesh, formerly known as Bengal. Muslin has been hand-woven in the areas of Dhaka and Sonargaon in Bangladesh for many centuries and has been exported worldwide.



NARASAPUR CROCHET LACE PRODUCTS: Narasapur, a town in Andhra Pradesh, India, is famous for its intricate crochet lace products. The town has a long history of producing high-quality crochet lace items, including garments, tablecloths, doilies, and

more. Narasapur lace is known for its fine craftsmanship, intricate designs, and durability. It is often used to embellish garments and home decor items, adding a touch of elegance and beauty. The artisans of Narasapur use traditional crochet techniques passed down through generations to create these exquisite lace products, making them highly valued both in India and abroad.

KUTCH ROGAN CRAFT: Rogan painting is a traditional craft that involves the use of castor oil and natural pigments to create intricate designs on fabric. The art form is believed to have originated in Persia and was brought to India by the Khatri community, who settled in the Kutch region. Rogan art is characterized by its bold designs and bright colours, often depicting motifs inspired by nature, such as flowers, birds, and animals. The process of creating Rogan art is labour-intensive and requires great skill. The artist first heats castor oil until it reaches a thick, sticky consistency. Then, using a metal stylus, the artist transfers the design onto the fabric by carefully spreading the coloured oil. The unique quality of Rogan painting is that the design is applied on one side of the fabric, and the pattern is visible on the reverse side as well. This art form is used to create beautiful textiles, including sarees, wall hangings, and decorative pieces, which are highly valued for their intricate designs and cultural significance.

RATLAM RIYAWAN LAHSUN: Ratlam Riyawan Lahsun, or Ratlami garlic, is a unique variety of garlic known for its strong flavour and aroma. It is named after the city of Ratlam in the state of Madhya Pradesh, India, where it is predominantly cultivated. Ratlami garlic is smaller in size compared to other varieties and has a reddish-brown colour with a slightly purplish hue. The distinct flavour of Ratlami garlic is attributed to the soil and climatic conditions of the region, as well as the traditional farming practices used by local farmers. It is widely used in Indian cuisine, especially in the state of Madhya Pradesh, to add a pungent and spicy flavour to dishes. Ratlami garlic is also known for its medicinal properties and is believed to have various health benefits, including boosting immunity and aiding digestion. Ratlami garlic is often used to make garlic chutney, which is a popular condiment in the region. It is also used in pickles, curries, and other savoury dishes to enhance the flavour.

TRIPURA RISA TEXTILE: The Tripura Risa textile is a traditional handloom textile from the state of Tripura in north-eastern India. Risa refers to the traditional attire worn by Tripuri women, and the textile used to make these garments is known as Risa fabric. Tripura Risa textiles are known for their intricate designs, vibrant colours, and high-quality craftsmanship. The fabrics are usually made from cotton or silk and are woven using traditional handloom techniques. The most common motifs used in Tripura Risa textiles are inspired by nature, such as flowers, birds, and animals. The Risa textile holds cultural and historical significance for the Tripuri community and is an integral part of their identity. The art of weaving Risa fabric has been passed down through generations, with many families preserving and continuing this traditional craft. Tripura Risa textiles are not only used for making traditional attire but also for various other purposes, such as home furnishings, bags, and accessories. The intricate designs and vibrant colours of Tripura Risa textiles make them highly sought after, both locally and internationally.

HYDERABAD LAC BANGLES: Hyderabad lac bangles are a traditional form of bangles made in Hyderabad, India. These bangles are crafted using lac, a natural resin obtained from the secretions of insects. The process involves moulding the lac into

the desired shape and then decorating it with various materials such as glass, mirrors, beads, and stones. Hyderabad lac bangles are known for their vibrant colours, intricate designs, and ornate embellishments. They are often worn as part of traditional attire for weddings, festivals, and other special occasions. These bangles are believed to bring good luck and prosperity to the wearer and are considered auspicious in Indian culture. The art of making lac bangles has been passed down through generations in Hyderabad, with artisans using traditional techniques and tools to create these beautiful pieces. Hyderabad lac bangles are not only popular in India but also have a significant market internationally, where they are valued for their craftsmanship and unique beauty.

MAJULI MASK OF ASSAM: Majuli, located in the northeastern state of Assam, is famous for its traditional mask-making art form known as "Majuli mask-making." These masks are an integral part of the cultural and religious practices of the Assamese people, particularly the Satras, which are Vaishnavite monasteries in Assam. Majuli masks are typically made from clay and bamboo and are used in various traditional dance forms and performances, especially during religious festivals like Raas Leela. The masks are painted in vibrant colors and often depict characters from Hindu mythology, such as gods, goddesses, demons, and animals. The art of Majuli mask-making is a highly skilled craft that has been passed down through generations. The masks are not only valued for their aesthetic appeal but also for their cultural and religious significance. They are believed to ward off evil spirits and bring blessings and prosperity to the wearer. Majuli masks are popular among tourists and art enthusiasts for their intricate designs and cultural heritage. The artisans of Majuli continue to preserve and promote this traditional art form, ensuring that it remains an integral part of Assamese culture.



ASSAM MAJULI MANUSCRIPT PAINTING: These paintings are typically found in ancient manuscripts, especially those related to religious texts and literature. The Assam Majuli manuscript paintings are known for their intricate designs, vibrant colours, and depiction of mythological and religious themes. The paintings often feature scenes from Hindu epics like the Ramayana and the Mahabharata, as well as images of gods, goddesses, and mythical creatures. The artists who create these paintings are known for their skill and attention to detail. They use natural materials like handmade paper, natural dyes, and brushes made from local materials to create these exquisite artworks. The paintings are often characterized by their fine lines, intricate patterns, and use of bright colours. The Assam Majuli manuscript paintings are not only valued for their artistic beauty but also for their cultural and historical significance. They provide a glimpse into the rich cultural heritage of Assam and the skill and craftsmanship of its artists.

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