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Conservationists make Cameroon islands a safe home for orphaned chimpanzees

Agence France-Presse
MARIENBERG.

Adolescent chimps are, in some respects, rather similar to their human counterparts.

They live with their mother until well into their teens, are sometimes a bit cheeky, and, being highly social animals, struggle to survive alone until they have been taught how to fend for themselves.

So when poachers kill mother chimps for food, keep the young chained in captivity for the exotic pet trade, or the family group is destroyed when its forest home is cleared for commercial palm oil plantations, the orphaned chimps need help.

In Cameroon, the NGO Papaye International runs a sanctuary for the endangered animals on three islands in the Douala-Edea national park.

Tragic past

"The chimpanzees in the sanctuary have had a tragic past due to poaching, deforestation, and groups that have been killed," said Marilyn Pons Riffet, the 57-year-old French head of the charity.

"We only take in orphaned chimpanzees, who are young and therefore need a helping hand after having had a gun pointed at them or their habitat destroyed," she said.

The charity helps the orphans become re-accus-

tomed to surviving in semi-wild conditions, but on islands away from their only predator – the humans with whom they share 98% of their DNA and a good degree of behaviour.

Populations of common chimpanzees, which used to roam across 26 countries in equatorial Africa, have plummeted since the 1980s, and they are at risk of extinction in the wild.

Fabrice Moudoungue, a 39-year-old carer, travels by boat every day to bring food to the three rainforest-covered islands on the Sanaga river where Papaye International's 34 chimps live.

"Here Water Lily! Here Star!" he calls. The chimps, who recognise his voice,



A volunteer prepares to feed a chimpanzee in the Douala-Edea National Park in Marienberg, Cameroon, on December 14. AFP

scamper excitedly along the bank of Yakonzo-Okokong Island towards the boat and hug him when he wades out to offer them bananas, coconut, tomatoes, and dates.

"They are not 'like' my

family. They 'are' my family because we spend all the time, every day, with them," he said with a smile.

Chimps are usually fearful of humans and can be aggressive when scared,

especially if they have been mistreated in captivity in the past. But through daily, gentle contact, Mr. Moudoungue and his colleagues at the sanctuary have earned their trust.

"These are young ones that we released about four to five years ago. We visit them all the time to keep contact, so that in case one of them gets sick they will still accept us," said manager Francois Elimbi.

Special bond

When he reaches Yatou Island, Honey wraps him in her long black arms. The mature female chimp was released there in 2019 after needing almost 10 years of care at the sanctuary.

"It is inexplicable, very

powerful. It even gives you goosebumps when a monkey hugs you. That means he still recognises you. You are his friend," Mr. Elimbi said.

Tchossa and Conso are still too young and inexperienced to be released onto the islands.

They have a big cage near the carers' lodgings on Yatou where they play on their swings and sleep in hammocks, awaiting their daily walk with the staff to rediscover the forest.

Alioum Sanda, 67, has a special bond with Conso.

"He has the marks of the shackles because after the poachers killed his mother, the little one did not trust them so they shackled

him," he said, pointing to the scars on the chimp's body.

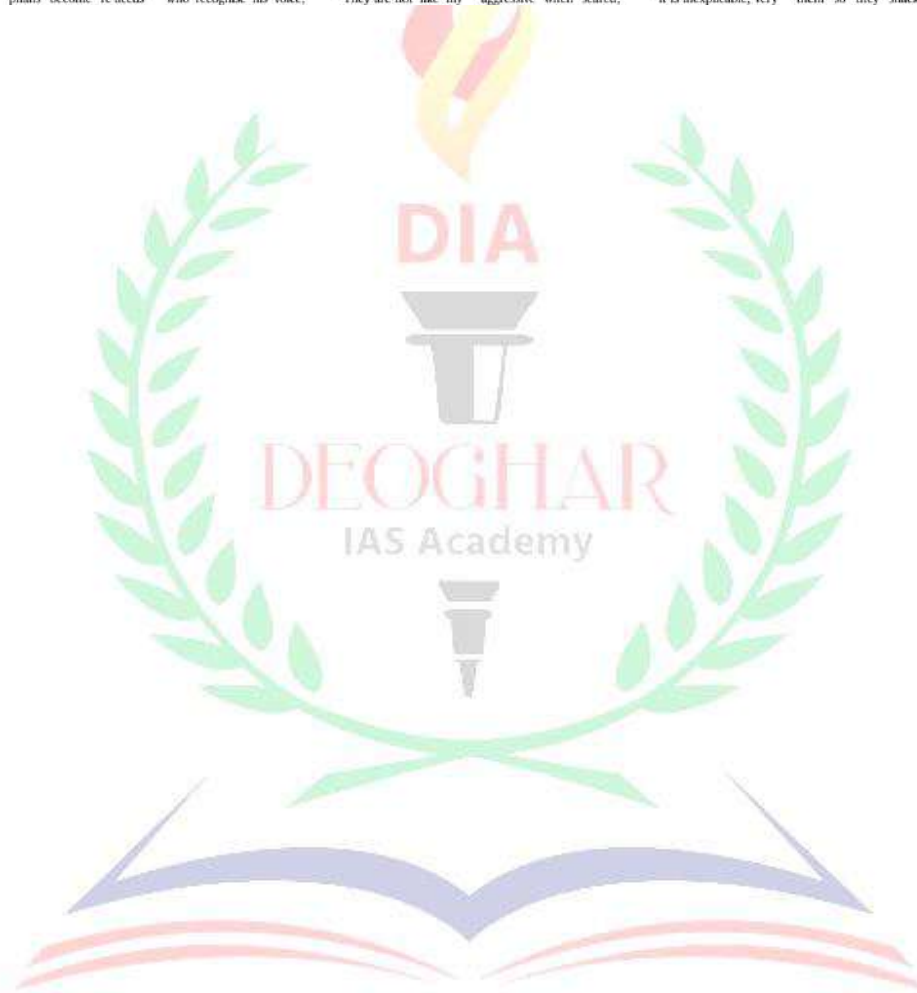
He recalled how Conso had changed since his arrival at the sanctuary.

"He was very aggressive considering the mistreatment he had received when he was in Douala. It took at least two months before he gave me his trust," Mr. Sanda recalled.

"I would put nappies on him. I would wipe his wounds."

Conso, now fully recovered, started dancing around, sensing it was nearly time for his daily outing. Mr. Sanda took his bony hand.

"If we do not do what we are doing, they will disappear," he said softly.





Cruising ahead: The extension is set to boost the canal's capacity by six to eight vessels a day. FILE PHOTO

Suez Canal's new 10-km extension witnesses trial run

Agence France-Presse

CAIRO

Egypt has tested a new 10-kilometre extension to the Suez Canal as it tries to minimise the impact of currents on shipping and increase the key waterway's capacity.

Two ships used the new extension on Saturday, a statement from the Suez Canal Authority said.

Authority chief Osama Rabie said the development in the canal's southern region will "enhance navigational safety and reduce the effects of water and air currents on passing ships".

Vessels navigating the waterway have at times run aground, mostly because of strong winds and sandstorms. In 2021, giant container ship *Ever Given* became wedged diagonally in the canal, blocking trade for nearly a week and resulting in delays that cost billions of dollars.

The new extension is set to boost the canal's capacity by six to eight vessels a day, Mr. Rabie said, and it will open after new navigational maps are issued.

In 2015, Egypt undertook an \$8-billion expansion to the waterway, followed by several smaller development projects.

The Suez Canal has long been a vital source of foreign currency for Egypt that has been undergoing its worst ever economic crisis.

According to the International Monetary Fund, revenue from the canal has been slashed by up to 70% since last year because of attacks by Yemen's Iran-backed Houthi rebels on shipping in the Red Sea.

Before the attacks pushed companies to change routes, the vital passage accounted for around 10% of global maritime trade.

Accelerated movement: logistics sector high on delivery, low on cost

Logistics whether road, rail, air, waterways or warehouses is now a booming sector, given its crucial role in supply chains; while experts remain bullish on the sector's future prospects, industry seeks policy support to cut costs further and focus on upgrading workforce skills

NEWS ANALYSIS

T.E. Raja Simhan

For the logistics sector, the year gone by was marked by efforts to move closer to the goals envisaged by the National Logistic Policy (NLP) in 2022. Following India's elevation to the 38th rank among 139 nations in the World Bank Index in 2023, the focus in 2024 was on reducing logistics cost from the prevailing 10-14%.

The Economic Survey 2023-24 states the Centre launched the NLP and the PM Gati Shakti National Master Plan (in 2021) to boost efficiency and lower logistics costs, alongside digital reforms like the Unified Logistics Interface Platform (ULIP) and the Logistics Data Bank.

The electrification of the short railway lines connecting railway yards to inland container depots and container freight stations has facilitated faster movement and release of wagons by the Land Ports Authority of India (LPAI); additionally, the NLP Marine policy was launched for port-related logistics.

Since the launch of the NLP, over 614 entities have registered on ULIP, with 106 private companies signing non-disclosure agreements (NDAs); 142 companies cumulatively



Cheaper to move: Logistics cost slid 0.8-0.9 percentage points of GDP between FY14- FY22. THE HINDU

submitted 382 use cases for ULIP, including data exchange, document digitisation and process automation; 57 applications have been made live, as of September 2023, to facilitate logistical requirements such as cross-border trade, last-mile delivery optimisation, and reverse logistics.

Crucial role

The Goods and Services Tax (GST) played a remarkable role in reducing logistics cost. The 'one nation, one tax' regime has cut the waiting time of trucks at State borders, thereby reducing travel time by nearly 30%. This, has reduced logistics cost and increased the average distance covered by trucks to 300-325 km from 225



The sector, valued at \$250 billion and contributing 14% to India GDP, demonstrated resilience as it transitioned from unorganised to a structured industry

km, the survey said.

A report by the National Council of Applied Economic Research in December 2023 shows logistics cost declined by 0.8-0.9 percentage points of GDP between FY14 and FY22. The improvement in logistics performance is reflected at the State-level too.

Logistics is now a booming sector, given its crucial

role in the global supply chain ecosystem has been reinforced.

"As we enter 2025, the logistics sector is poised for significant growth, supported by rising data transparency and advanced digitisation. Supportive policies in warehousing, including grant of infrastructure status and expanded foreign direct investment, are accelerating the development of multi-client warehousing facilities," he says.

As the logistics landscape evolves, the 11.1% rise in capital expenditure for infrastructure signals significant growth opportunities in the sector, driving India's ambition of becoming a \$5-trillion economy by 2027, he says.

Skilling needs

Maahesh Fogla, ED, Patel Integrated Logistics Ltd., the robust growth in the logistics sector in 2024 was driven by a 12% annual expansion rate, increasing domestic consumption, and government-backed initiatives like Gati Shakti and NLP. The sector, valued at \$250 billion and contributing 14% to India's GDP, demonstrated resilience as it transitioned from unorganised to a structured industry.

He calls for more efforts towards streamlining operations and enhancing workforce skills to fully unlock the sector's potential.

E-commerce growth, demand for faster delivery, and export expansion driven by the productivity-linked incentive scheme will amplify goods movement, positioning India to capitalise on global trade opportunities, he says. He also foresees that government initiatives such as UDAN (to promote regional air connectivity) and NLP, will cut logistics cost by 4-5%, enhancing competitiveness in global markets.

Multi-modal strength

Progress in rail and waterway freight movement, alongside extensive highway construction, heralded new era of multi-modal connectivity, strengthening India's position as a rising global economic powerhouse, says Ketan Kulkarni, Deputy MD, Gati Express and Supply Chain.,

What remains to be done, according to Rajesh Menon, a maritime expert, includes technology integration to further reduce logistics cost, measuring the ease of doing business on ground and bringing to fruition the maritime connectivity projects identified in the Union Budget at an outlay of ₹75,000 crore. The Indian Port Bill awaits implementation, while transition from land-based to coastal transportation needs to be hastened.

(The writer is with The Hindu businessline)



The challenge of holding judges accountable

The review mechanism for judges in India requires 'proved misbehaviour or incapacity' to be decided by a committee set up under the Judges (Inquiry) Act, 1968. This committee functions like a trial court, but is set in motion only after a successful attempt to impeach the judge is moved either in the Lok Sabha or the Rajya Sabha

LETTER & SPIRIT

Kunal Shankar

A speech delivered by Justice Shekhar Kumar Yadav of the Allahabad High Court, that made apparent his biases against the Muslim community, at an event organised by the legal cell of the Vishwa Hindu Parishad within the Court precincts on December 8, has once again spotlighted the difficulty in India's review mechanism to hold judges of the higher judiciary accountable.

The review mechanism requires "proved misbehaviour or incapacity" to be decided by a three-member committee set up under the Judges (Inquiry) Act, 1968. This committee functions like a trial court, but is set in motion only after a successful attempt to impeach the concerned judge is moved either in the Lok Sabha or the Rajya Sabha, which must be approved by the presiding officer of the House – the Speaker in the case of the Lok Sabha, or the Vice-President/Chairman in case of the Rajya Sabha. The provisions for this mechanism flows from Articles 124 (4), (5), 217, and 218 of the Constitution of India, and those of the Judges (Inquiry) Act, 1968.

Justice V. Ramaswami's trial

Only two judges out of seven so far, aside from Justice Yadav against whom impeachment has been attempted, have been found guilty for their

"misbehaviour" by the three-member committee, which must comprise of a Supreme Court Judge, a Chief Justice of a High Court and an eminent jurist.

The first was retired Supreme Court Justice V. Ramaswami, who was found guilty of extravagant spending on his official residence such as buying air conditioners, plush furniture and bedding, without following due process, much like the accusations made against Trinamooli Congress MP Mahua Moitra by the ruling BJP last year. While such misdemeanours by current accounts of corruption seem like an arcane quibble over propriety, they nevertheless animated public discourse on a judge's conduct in the late 80s and early 90s. Such discussions led to the foundation of the 'Restatement of Values of Judicial Life' adopted by the Supreme Court on May 7, 1997, as the code of conduct for those holding high offices judiciary.

Speaking to *The Hindu*, retired Madras High Court Justice K. Chandru, who played a pivotal role in the impeachment proceedings against Justice Ramaswami, recollected how the judge "bought 6+1 = 7 maces, one with a silver head to denote the Chief Justice's arrival and took it on a cargo plane in 1988, and not by rail," following his elevation as the Chief Justice of the Punjab and Haryana High Court. "There was no tendering process that was followed for the purchase of the maces," Justice Chandru added. He was referring to the colonial practice followed at the Madras HC where an order precedes a judge, to signal his arrival to ensure those in the hallway and the courtroom "maintain decorum". Justice Ramaswami deemed it fit to continue this practice at the Punjab and Haryana High Court, which did not have this practice as it was founded in independent India, much to the shock of his "brother judges". In his Tamil book, *I too became a judge*, Justice Chandru recalled a letter dated August 18, 1988, in which then Chief Justice V. Ramaswami's colleagues wrote "You will remember that most of us told you later



GETTY IMAGES

too that we are opposed to the introduction of maces. Maces are but a relic of the imperial past and out of tune with our socialistic pattern of society."

The adverse verdict by the three-member panel constituted under the Judges Inquiry Act against V. Ramaswami set the precedent of then CJI Sabyasachi Mukherjee deciding not to allocate any work to him in 1993. The failure of the impeachment motion in the Lok Sabha that year, did not lead to a reversal of the CJI's decision. No cases were listed for hearing before Justice Ramaswami's Bench until his retirement three years later.

Article 124 (4) of the Constitution stipulates that the panel's finding must be voted upon by Parliament. The motion requires either a two-thirds majority of the motion or an absolute majority in each House, for the judge to be removed. On May 10, 1993, of the 401 members present in the Lok Sabha, 196 voted for Ramaswami's removal. While no one voted against the motion, 205 abstentions by the ruling Congress ensured the defeat of the impeachment.

Resignation before accountability

The second judge to face an impeachment motion was Justice Soumitra Sen of the Calcutta High Court. Justice Sen became the first judge of India's higher judiciary who was voted to be removed by the Rajya Sabha by an

overwhelming majority, but he resigned in September 2011, days before the motion was to be tabled in the Lok Sabha. Justice Sen was found guilty of misappropriating 333.23 lakhs in a case in 1983, as a court-appointed receiver in his capacity as a lawyer, and misrepresenting facts before a Calcutta court.

Similarly, Chief Justice of the Sikkim High Court, P.D. Dinakaran resigned on July 29, 2011, the day of the first sitting of the three-member panel constituted under the Judges Inquiry Act, to look into 16 charges, some of them as grave as appropriating more than 300 acres of lands from farmers in Tamil Nadu's Tiruvallur district, after he became a judge of the Madras High Court.

Such instances highlight that members of India's higher judiciary enjoy a disproportionately greater level of immunity when compared with even elected officials as they "continue to enjoy the perks of being a retired judge, like pension" and other benefits, said jurist Mohan Gopal, who was part of the three-member committee in the Dinakaran case. Such resignations abort the trial and subsequent impeachment, something not afforded to even sitting or former Chief Ministers, like in the case of Jayalalithaa in the disproportionate assets petition decided in 2014.

The Forum for Judicial Accountability (FJA) that led the campaign against judicial corruption in the Dinakaran case, wrote to the three-member committee on

August 6 that year, seeking a continuation of the committee's investigations arguing that "the jurisdiction of the Committee is untouched by the factum of removal...".

The FJA's contention was that there were two separate parts to the removal process of a justice – one that concerns finding guilt, which is governed by Article 124 (5) and the second, which is impeachment, which is governed by article 124 (4) and is within the jurisdiction of Parliament.

"The purpose of impeachment is not merely removal from office, but a more substantial one about accountability to the people whose trust is alleged to be breached and whose confidence in judiciary needs to be reinforced," the FJA argued.

"Though Article 124(5) of the Constitution uses the words "removed from office" and is silent on the issue of disqualification from holding future office, the finding of guilt by the Committee and the subsequent proceedings in Parliament will have the effect of disqualifying the person from holding public office in future. It may be noted that Justice V. Ramaswami having been found guilty by the Committee, continued to hold office as a judge of the Supreme Court and retired with all the benefits, taking advantage of the defeat of the impeachment motion. Post retirement he was appointed as Chairperson of the Tamil Nadu Law Commission," said FJA.

The need to complete proceedings

RTI petitions by former *Frontline* legal affairs editor, V. Venkatesan revealed that both jurist Mohan Gopal and the Chairman of the three-member panel retired Justice Aftab Alam believed the work of the committee must continue. The RTI replies made public a set of correspondence between Mohan Gopal and the two members of the committee, and of the committee with the Rajya Sabha Chairperson Hamid Ansari. Mr. Venkatesan has included these letters as annexures to his 2014 book *Constitutional Conundrums: Challenges to India's Democratic Process*. In his August 15, 2011 letter to Justice Aftab Alam and J. S. Kehar, the then Chief Justice of the Karnataka HC, Mr. Gopal writes, "the resignation of Justice P.D. Dinakaran presents our Committee with an unprecedented situation. Any decision we take will have a profound and far-reaching impact on the framework for judicial accountability in our country – both in terms [of the] future implementation of the Judges Inquiry Act, 1968, and in terms of the manner in which the current Constitutional and legal framework for judicial accountability is reformed...While undoubtedly the investigation and proof stage arises only when there is a prayer for removal from office and is the essential first step or that purpose, it would be an error to ignore the independent role and value of the investigation and proof part of the process in and by itself... A view that the resignation would result in the hands of the judge who is the object of the investigation the power to end the investigation against him by resigning – an absurd situation that the legislature could not have intended. In such circumstances, there would be no incentive arising from this process for any judge to avoid misbehaviour as any judge can end investigation into charges against him at any point by resigning from office."

While the Chair Justice Aftab Alam concurred and sought the continuation of the Committee, the request was rejected by Rajya Sabha Chairman Hamid Ansari.

THE GIST

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Restoring constitutional order in Manipur

An editorial titled 'Welcome spotlight: On the Supreme Court directive to Manipur government' published in *The Hindu* on December 14, 2024, rightly mentions that the executive's reticence and lack of accountability, both at the federal and State levels, for the unrelenting ethnic violence in Manipur has again forced the higher judiciary to intervene. However, we must be circumspect in projecting the Supreme Court as a benevolent institutional actor that has dutifully responded with alacrity matched by requisite conviction, and concern to consistently hold the executive to account.

A thorough assessment of the Supreme Court's interventions in Manipur over the last 18 months and the incremental steps it can take to rebuild trust in the rule of law is at least merited. In general, we can witness a gradual slide towards institutional dereliction, complacency, and apathy that is unbecoming of a Constitutional Court meant for all Indians. This is evident from the fact that, except for the last hearing on December 9, where it sought details of destroyed and encroached properties, the court did not hold any effective hearings or pass corresponding orders in 2024.

Throughout this year, the main batch of petitions on Manipur was heard only six times. In other words, the court functioned as if its writ jurisdiction had ceased to extend to Manipur, even as 2024 saw some of the bloodiest phases of violence and gruesome killing of innocent victims belonging to both warring ethnic communities. Adding to this are the continuation of various events that emerged on or after May 3, 2023, and are unprecedented in the life of our republic. The list of illustrations is lengthy and extensive – the demographic and geographical separation of the State and its enforcement through a militarised buffer zone, the State's complete surrender over the monopoly of



John Simte

Lawyer and researcher

The SITs should be directed to fill the existing informational vacuum and provide timely updates to petitioners and the families of deceased victims about the progress of the investigations and trials

violence and law and order to armed militant groups, and the administration of an illegal, hateful ethno-cultural oath to legislators by the Arambai Tenggol.

On some occasions, the Supreme Court did respond, especially when it took suo moto cognisance after a video depicting tribal women being sexually assaulted and paraded naked by a mob went viral on social media. But its responses were episodic across several months in 2023, only to remain largely absent in 2024. This is evident as magisterial courts in Assam, to whom the Supreme Court had given charge of pre-trial procedures, await its directions to take cognisance of the chargesheets filed and begin the trial. For instance, the trial is yet to begin in the case of the sexual assault and naked parade of two tribal women, even though the Central Bureau of Investigation (CBI) had filed chargesheets against six accused persons, including a juvenile, in October 2023.

In an order dated August 7, 2023, the Supreme Court had directed: the formation of a committee of three retired judges, led by Justice Gita Mittal, to look into all matters of relief and rehabilitation; the constitution of 42 Special Investigation Teams (SITs) in six groups based on the crimes, comprising CBI officers drawn from cadres/States and headed by a retired Director-General of Police. By all accounts, the functioning of the former has been reduced to a mechanical, bureaucratic ritual of filing occasional reports. Several tribal student organisations have since also filed separate pleas before the Supreme Court for relocating displaced students to other universities and professional institutes. Simultaneously, a report in *The Hindu* (December 18, 2024) stated that chargesheets for only 6% (192 cases) out of 3,023 registered cases have been filed by the SIT till November 20, 2024. It remains unclear how much of the

structure envisioned for the SITs by the Supreme Court is still intact, as publicly available information suggests that multiple IPS officers on deputation to the SITs from Haryana, Punjab, Madhya Pradesh, and Delhi have either sought repatriation or have already been repatriated back to their home cadres.

Crucial measures

These directions, initially viewed with a high degree of optimism, have overwhelmingly failed to instill any sense of justice among the people of Manipur or arrest their feelings of institutional neglect and the complete erosion of the rule of law. Now that the Supreme Court appears to have turned its attention back to Manipur, it must undertake the following measures to provide the State with a much-needed healing touch.

First, given the volatile situation in Manipur, inimical to a fair criminal justice system, the trials of cases investigated by the SITs should be transferred forthwith outside Manipur, and the appropriate trial courts should be allowed to take cognisance of chargesheets already filed. Second, the SITs should be directed to fill the existing informational vacuum and provide timely updates to petitioners and the families of deceased victims about the progress of the investigations and trials.

Thirdly, considering the enormity of multi-faceted issues arising from the conflict in Manipur that persist and are likely to continue due to the sharp governance deficit, a bipartisan High Powered Commission comprising eminent persons, including members from both conflicting communities, should be constituted. This commission, in turn, be directed to report its findings directly to a Special Bench of the Supreme Court, which should be given the task of exclusively hearing cases related to the ethnic violence in Manipur.

One Nation One Election and representative democracy

The Constitution (One Hundred and Twenty-Ninth Amendment) Bill, 2024, that was tabled in the Lok Sabha, proposes simultaneous elections for the Lok Sabha and State/Union Territory Legislative Assemblies with the insertion of Article 82(A). This ambitious reform seeks to synchronise elections, fix the tenure of the Lok Sabha, and simultaneously align elections to the State Assemblies. If the Lok Sabha or a State Assembly is dissolved before its five-year term, mid-term elections will only cover the remainder of the original tenure.

The Bill also amends Articles 83, 172, and 327, with changes effective from an 'appointed date', post-2029 general elections, thereby initiating simultaneous elections in 2034. A second Bill, the Union Territories Laws (Amendment) Bill, 2024, aligns the tenure of Union Territories' legislative Assemblies with the Lok Sabha and State Assemblies.

While the proposal seeks administrative efficiency and reduced election fatigue, critical questions arise: has the 'One Nation, One Election (ONOE)' process been truly inclusive and representative? Are there limits to our understanding of the representative spirit of Indian democracy?

Understanding representative democracy

Representative democracy is a system wherein citizens elect representatives to make decisions on their behalf. Rooted in the principles of free and fair elections, political accountability, and the protection of individual rights, it balances majority rule with the protection of minority interests. This form of governance becomes especially critical in diverse and populous countries such as India.

The theoretical underpinnings emphasise that elected representatives act as intermediaries, ensuring stable governance while accommodating competing interests. Citizens, being too numerous and diverse to participate directly in governance, delegate authority to their elected representatives. The system thrives on periodic elections, informed citizen participation, and institutional checks and balances.

Despite its theoretical merits, representative democracy faces growing challenges in practice. A 2024 Pew Research Center study across 24 nations, including Brazil, India, Nigeria, South Africa, the United Kingdom, and the United States, revealed widespread disillusionment with



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The process adopted for the One Nation One Election Bill had lapses that affect India's democratic fabric

the system. Citizens increasingly questioned its effectiveness, with some exploring alternatives such as direct democracy, expert rule, or even authoritarian regimes.

In 13 countries, significant segments supported strong leaders bypassing parliamentary checks, reflecting frustration with institutional inefficiencies. Alarmingly, military rule garnered between 15% to 17% support in nations such as Greece, Japan, the U.K., and the U.S. Such trends underscore growing distrust in representative systems, driven by perceived inefficiencies, corruption, and unfulfilled promises.

Jayaprakash Narayan's critique

In India, debates about representative democracy are not new. Jayaprakash Narayan, in his seminal work, *A Plea for Reconstruction of Indian Polity* (1959), offered a deep critique of parliamentary democracy. JP argued that the reliance on individual voting created an 'atomized society', where fragmented, partisan politics overshadowed the collective national interest.

JP highlighted the following defects – risks of minority governments: In a multi-party system like India, he warned that parliamentary democracy risks unstable and unrepresentative governments.

First, demagoguery and populism: JP highlighted how political parties manipulate public opinion through half-truths, empty promises, and divisive rhetoric.

Second, centralisation of power: Parliamentary democracy, according to JP, concentrates power in the state, weakening intermediary institutions between citizens and the national government.

Third, financial costs of elections: JP critiqued the exorbitant cost of elections, tethering democracy to moneyed interests and large organisations.

While critical, JP's analysis aimed to reform and strengthen democracy. His concerns resonate today as India debates ONOE and its implications for democratic representation.

For a reform as significant as ONOE, an inclusive and representative process is crucial. In representative democracies, public opinion shapes policy, holding governments accountable to citizens' aspirations and concerns. To achieve this, pre-legislative consultation becomes indispensable, enabling policymakers to gather diverse views, address challenges, and enhance transparency.

The Pre-Legislative Consultation Policy, 2014,

mandates a minimum 30-day period for public feedback on proposed legislation. It requires draft Bills to be accompanied by explanatory notes that clarify key provisions in accessible terms.

However, the process adopted for ONOE fell short. First, inadequate consultation period: The high-level committee issued a public notice on January 5, 2024, inviting suggestions on ONOE. Citizens were given just 10 days – until January 15 – to respond, undermining the spirit of the 2014 policy. Second, lack of explanatory material: Despite the high-level committee being established in September 2023, no explanatory notes or background papers were provided, limiting citizens' understanding of the proposal's scope and challenges. Third, framing of questions: The high-level committee's approach, seeking 'yes/no' responses on supporting ONOE, appeared perfunctory, giving the impression the matter was already settled.

Such procedural lapses risk alienating citizens and stakeholders, undermining trust in the reform process. In a diverse democracy like India, meaningful public engagement is vital to ensure that policy reflects varied perspectives and fosters consensus.

Implications for representative democracy

The ONOE Bill raises critical questions about the representative nature of Indian democracy. First, centralisation versus federalism: synchronising elections risks a further centralising of power, potentially undermining the federal spirit of the Constitution. State-specific issues may be overshadowed by national narratives. Second, inclusivity and participation: by curtailing consultation and rushing reforms, the government risks sidelining citizens' voices, weakening democratic inclusivity. Third, electoral accountability: frequent elections, while resource-intensive, enhance accountability by enabling voters to evaluate governments regularly. Simultaneous elections could dilute this accountability.

India's democratic fabric thrives on citizen participation, inclusivity, and accountability. Reforms such as ONOE, while aimed at efficiency, must not compromise these principles. A rushed process undermines trust and risks centralisation. Only by adhering to the principles above can our democracy remain truly representative in letter and spirit.

The views expressed are personal





A pumpjack at an oil field in Emlichthem, Germany. AP

Oil companies backtrack on renewables

Reuters

Major European energy companies doubled down on oil and gas in 2024 to focus on near-term profits, slowing down – and at times reversing – climate commitments in a shift that they are likely to stick with in 2025.

The retrenchment by oil majors comes after governments around the world slowed the rollout of clean energy policies and delayed targets as energy costs soared following Russia's full-scale invasion of Ukraine in 2022.

Big European energy companies that had invested heavily in the clean energy transition found their share performance lagging U.S. rivals Exxon and Chevron, which had kept their focus on oil and gas.

Against this backdrop, the likes of BP and Shell this year sharply slowed their plans to spend billions on wind and solar power projects and shifted spending to higher-margin oil and gas projects.

BP, which had aimed for a 20-fold growth in renewable power this decade to 50 gigawatts, announced in December it would spin off almost all its offshore wind projects into a joint venture with Japanese power generator JERA.

Shell, which once pledged to become the world's largest electricity company, largely stopped investments in new offshore wind projects, exited power markets in Europe, and China and weakened carbon reduction targets.

"Geopolitical disruptions like the invasion of Ukraine have weakened CEO incentives to prioritise the low-carbon transition amid high oil prices and evolving investor expectations," Rohan Bowater, analyst at Accela Research, told Reuters. He said BP, Shell, and Equinor reduced low-carbon spending by 8% in 2024.

Shell said it remained committed to becoming a net zero emissions energy business by 2050 and continues to invest in the energy transition.

Equinor said: "The offshore wind

European energy companies that had invested heavily in the clean energy transition found their share performance lagging U.S. rivals Exxon and Chevron, which stayed focused on oil and gas

segment has been through demanding times in the last couple of years due to inflation, cost increase, bottlenecks in the supply chain, and Equinor will continue to be selective and disciplined in our approach."

BP did not respond to a request for comment.

The oil companies' retrenchment is bad news for efforts to mitigate climate change. Global heat-trapping carbon emissions are forecast to climb to a new high in 2024, which will be the warmest year on record.

And 2025 is shaping up to be another tumultuous year for the \$3 trillion energy sector, with climate-sceptic Donald Trump returning to the White House. China, the world's biggest crude oil importer, is trying to revive its faltering economy, potentially boosting oil demand.

Europe faces continued uncertainty over the war in Ukraine and political turmoil in Germany and France.

All those tensions were laid bare at the annual United Nations climate conference in Azerbaijan in November, when the host country's President Ilham Aliyev hailed oil and gas as "a gift from god."

That summit yielded a global climate finance deal but disappointed climate advocates who had hoped governments would coalesce around a phase-out of oil, gas, and coal.



The PSLV-C60 rocket ahead of its launch on December 30, 2024. ISRO

All eyes on PSLV-C60 mission as ISRO looks to end 2024 on a high

The PSLV-C60 flight is scheduled for 9.58 pm on December 30, 2024. The rocket will carry two satellites called SIKOXI, dubbed 'Chaser' and SIKOX2, dubbed 'Target'. Each weighs 220 kg. After launch and orbit insertion, the two satellites will rendezvous in low earth orbit, dock, and then undock.

INDIA IN SPACE

Pradeep Mohandas

The Indian Space Research Organisation (ISRO) hopes to end 2024 on a high with an exciting mission on the launch pad to test technologies that will one day be used for interplanetary and human spaceflight. It also hopes to kickstart preparations for human spaceflight missions that have already been delayed for years.

Mission updates

PSLV-C59: The PSLV-C59 mission dedicated to NewSpace India Ltd. (NSIL) placed the European Space Agency's (ESA) Proba-3 spacecraft – short for 'Project for Onboard Autonomy' – into a highly elliptical orbit of 600 km x 60,500 km as planned 18 minutes after liftoff. The liftoff was from the Satish Dhawan Space Centre's first launch pad at 4:04 pm IST on December 5. This mission demonstrated the ability of ISRO's Polar Satellite Launch Vehicle (PSLV) to launch a spacecraft into such orbits.

After the launch, the ESA said the Yatharagga station in Australia began receiving telemetry from the satellite "almost immediately after separation." The telemetry will be passed on to the ESA's mission control centre in Belgium.

Gaganyaan: Ahead of its experimental flight Launch Vehicle Mark 3 (LVM-3) X in 2014, ISRO had wanted to test the vehicle's ability to fly through the thickest part of the earth's atmosphere. The organisation designed a suborbital flight for this with an altitude of 126 km and a range of 1,600 km from Satish Dhawan Space Centre. The vehicle didn't carry a cryogenic engine in its third stage and didn't reach earth orbit by design.

The LVM-3 X test flight also tested the reentry characteristics of the crew module using the Crew module Atmospheric Re-entry Experiment (CARE). On December 18, 2024, the CARE module re-entered the earth's atmosphere after separating from the rocket and performed a controlled landing in the Bay of Bengal using its thrusters and parachutes. This successful mission was an important precursor to India's human spaceflight mission.

Ten years later, on the same day, December 18, 2024, ISRO began assembling the human-rated LVM-3 (HLVM-3) for its first uncrewed mission. This was done by stacking the nozzle end segment of the S-200 solid rocket motor with the full flex seal nozzle at 8:45 am on December 18. This marked the official launch campaign for the HLVM-3/GI/OM-1 mission. 'GI' stands for the first Gaganyaan mission, and 'OM-1' for the first orbital module mission. The orbital module consists of the crew module and a service module.

PSLV-C60 SpadEX

Just like the CARE mission preceded the human spaceflight mission, the SpadEX – short for 'Space Docking Experiment' – is a predecessor to ISRO's Bharatya Antariksh Station (BAS) and the

Chandrayaan-4 missions. SpadEX will demonstrate in-orbit docking.

The year 2024 began with a PSLV flight and looks like it will end with one as well. The PSLV-C60 flight is currently scheduled for 9.58 pm on December 30, 2024. The rocket will carry two satellites called SIKOXI, dubbed 'Chaser', and SIKOX2, dubbed 'Target'. Each weighs 220 kg. After launch and orbit insertion, the two satellites will rendezvous in low earth orbit, dock, and then undock.

In addition, the fourth stage of the PSLV-C60 rocket will carry 20-plus payloads of its own, designed by various ISRO centres, academic institutions, and Indian private companies. After inserting the satellites in orbit, the fourth stage will enter an orbit of its own, where its payloads will perform various tests.

The PSLV-C60 mission will fly the rocket in its core alone configuration (called CA). I.e., its first stage will fly without its strap-on boosters.

The 'Chaser' and 'Target' satellites will be placed in a 470-km-wide circular orbit with an inclination of 55°. The duo will also have different velocities such that the gap between them increases to 10-20 km after a day.

The propulsion system on board the 'Target' satellite will be used to slow it down to the same speed as the 'Chaser' over time. They will eventually maintain a distance of 20 km in the same orbit heading up to the SpadEX mission's first milestone, called far rendezvous. Then they will move closer such that the gap drops to 5 km, 1.5 km, 500 m, 225 m, 15 m, and finally 3 m. Then 'Chaser' and 'Target' will dock.

After a rigid mechanical connection is realised between the two satellites, electrical power transfer between 'Target' and 'Chaser' will be demonstrated before they undock and drift apart.

They will then operate their on-board payloads with a mission life of two years. The 'Chaser' has a high-resolution camera. The 'Target' has a miniature multispectral payload and a radiation monitor. Earlier, an Indian private space company named Ananth Technologies

became the first of its kind to integrate and test the two satellites.

became the first of its kind to integrate and test the two satellites.

POEM's two dozen payloads
PSLV-C60's fourth stage, called the PSLV Orbital Experimental Module (POEM-4), carries 24 payloads: 14 contributed by various ISRO centres and 10 by academia and private industry. POEM-4 will begin operations after satellite separation.

Of these, the Reconfigurable Robotic Manipulator Technology Demonstrator, a.k.a. the 'Walking Robotic Arm,' developed by ISRO Inertial Systems Unit (ISU), is expected to demonstrate a robotic arm that can move to defined targets on the POEM using an inchworm walking technique.

The Vikram Sarabhai Space Centre (VSSC) developed the Debris Capture Robotic Manipulator. In a proof of concept, it will attempt to capture tethered space debris with a robotic manipulator. The VSSC also built the Compact Research module for Orbital Plant Studies to study the germination and growth of eight cowpea seeds in a five- to seven-day experiment in a controlled environment.

The other experiments from ISRO centres include – to quote from a press release – the Gradient Control Reaction Wheel Assembly (GRCA), the Multi-Sensor Inertial Reference System with in-house gyroscopes (ISU), the MEMS-based High Angular Rate Sensor (VSSC), the Lead Escept Experiment System (VSSC), the Highly Configurable Orbward Command Controller (Space Physics Laboratory), and the PILOT-G2 payload (Indian Institute of Space Science and Technology) "that hopes to qualify in-house equipment for small satellites."

One experiment of note is the Amity Plant Experimental Module in Space (APEMS) payload developed by Amity University, Mumbai. It will compare growth-related changes in plant callus cells using spinach plants (*Spinacia oleracea*) in microgravity and earth gravity. For this, two parallel experiments will be carried out – one on POEM 4 and the other at Amity University.

Another biological payload of note is the RVSat-1 developed by R.V. College of Engineering, Bengaluru. It will measure the growth of the gut bacterium *Escherichia coli* in space. The experiment is expected to provide data to understand human physiology in space and astronaut health during crewed missions.

There are two notable communications payloads called the ICS Amateur Radio Payload for Information Transmission (ARPT) and Swetchast. ICS ARPT was developed by the S.J.C. Institute of Technology, Karnataka, and the Upagraha Amateur Radio Club at the U.R. Rao Satellite Centre. It can transmit audio, text, and images from a satellite to the ground with frequency modulation in the VHF band. It is designed to provide amateur radio satellite services worldwide.

The Swetchast payload, developed by Nspace Tech, a private entity in Andhra Pradesh, plans to demonstrate an onboard UHF transmitter's capability to store data and establish a communication link and transmit data and telemetry with the ISRO Telemetry and Tracking

On December 18 ISRO began assembling the LVM-3 for its first uncrewed mission. This was done by stacking the nozzle end segment of the S-200 solid rocket motor with the full flex seal nozzle at 8:45 am. This marked the official launch campaign for HLVM-3/GI/OM-1

Command ground station.

There are two propulsion payloads developed by private industry. RUDRA 1.0 HPGF, developed by Bellatrix Aerospace, will test a green propulsion system with a thrust of 1 newton and a specific impulse of 220 seconds. Likewise, the VYOM 2U developed by Manastu Space will test a monopropellant the company has said is a safer and better performing alternative to hydrazine, which is the most widely used propellant in the Indian space programme at present. VYOM has a thrust of 1.1 N and a specific impulse greater than 250 seconds.

Two payloads will also be hoping to demonstrate synthetic aperture radar (SAR) capabilities. SAR creates high-resolution images of objects on the ground by moving a radio-emitting antenna over the objects of interest. The SAR Imaging Demonstration Payload (GLXS) from GalaxEye Space will test the generation, capture, and processing of SAR images in a space environment. The Varuna payload, from Piersight Space, will demonstrate SAR in a cubesat form factor and test the performance of seven advanced subsystems – including a deployable reflectarray antenna – that can help monitor all human and industrial activities at sea.

Finally, the MEMS-based Inertial Measurement Unit (STERG-PLO) was developed at the MIT World Peace University, Pune, and the MOI-TD by the private company TalaMc2Space. STERG-PLO will perform attitude determination and higher efficiency data processing. The MOI-TD payload is a technology demonstrator planning to perform real-time data processing for earth observation. It will attempt to receive three machine learning models through an uplink from ground to orbit, conduct in-orbit computation, and downlink the models' inferences.

Onward to 2025

The year 2025 will be a pivotal year in Indian spaceflight with the launch of the first uncrewed HLVM-3 missions to orbit. Indians will potentially get to see the sight of the first Indian in space since Rakesh Sharma in 1984 when Shubanshu Shukla files – schedule permitting – to the International Space Station on board a Falcon 9 rocket as part of the Axiom 4 mission in 2025.

We will also have the launch of the innovative NASA-ISRO SAR mission.

In all, 2025 promises to be an action-packed and, by all means, a defining year for space for India.

(Pradeep Mohandas is a technical writer and space enthusiast in Pune. pradeep.mohandas@gmail.com)

(India In Space is a monthly column collecting and analysing developments in the country's space, spaceflight, and allied sectors.)

The PSLV-C60 launch vehicle after integration with Chaser and Target ahead of its launch on December 30. ISRO

ISRO to sign off 2024 with space docking experiment mission today

The Polar Satellite Launch Vehicle will place two satellites, Chaser and Target, into orbit; the two spacecraft will attempt docking in the first week of January; the exercise is expected to serve as a stepping stone to India's future space missions

The Hindu Bureau
BENGALURU

The Indian Space Research Organisation is set to end the year with the launch of the PSLV C60/SpaDeX mission on Monday. The Polar Satellite Launch Vehicle is scheduled to lift off at 9.58 p.m. from the Satish Dhawan Space Centre in Sriharikota.

The space agency, for the first time, will be attempting the Space Docking Experiment (SpaDeX), which will demonstrate in-space docking using two small spacecraft.

SpaDeX is designed to demonstrate the technology needed for spacecraft rendezvous, docking, and undocking using two small satellites. "SpaDeX will serve as a milestone in advancing India's capabilities in space docking, a critical technology for future space missions, including satellite servicing, space station operations, and interplanetary missions," IS-

RO said. The demonstration of this technology is essential for futuristic missions such as sending an Indian astronaut on the moon, the building and operation of an Indian space station.

The PSLV-C60 will launch the two small spacecraft, Chaser and Target, also named SDX01 and SDX02, weighing about 220 kg each, into a 470-km circular orbit at a 55-degree inclination separately. The SDX02 spacecraft will be the first to separate 15 minutes after the launch followed by the SDX01 a few seconds later.

Incremental velocity

"The demonstrated precision of the PSLV vehicle will be utilised to give a small relative velocity between the Target and Chaser spacecraft at the time of separation from the launch vehicle. This incremental velocity will allow the Target spacecraft to build a 10-20 km inter-satellite separation with respect to the

Chaser within a day. At this point, the relative velocity between the Target will be compensated using the propulsion system of the Target spacecraft," the ISRO said.

It added that at the end of this drift arrest manoeuvre, Target and Chaser will be in the same orbit with identical velocity but separated by about 20 km, known as Far Rendezvous. "With a similar strategy of introducing and then compensating for a small relative velocity between the two spacecraft, the Chaser will approach the Target with progressively reduced inter-satellite distances, ultimately leading to the docking of the two spacecraft," it added. The docking is expected to take place in the first week of January. Twenty-four PS4-Orbital Experiment Module payloads will be also be flown onboard the PSLV-C60 SpaDeX mission.

RELATED REPORT
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Countdown begins: The launch vehicle being moved to the first launch pad of the Satish Dhawan Space Centre. PTI



Turnout of overseas Indians in Lok Sabha election low, says EC

Press Trust of India
NEW DELHI

Overseas Indians showed great enthusiasm in registering as electors, with nearly 1.2 lakh enrolling on the voter list, but a minuscule number turned up to exercise their franchise in the Lok Sabha election this year.

Data released by the Election Commission show that as many as 1,19,374 registered as overseas electors in 2024, with the highest registrations of 89,839 in Kerala. In 2019, as many as 99,844 registered as overseas electors.

The commission said only 2,958 overseas electors flew down to India to participate in the largest democratic exercise in the world in 2024. Of these, an overwhelming 2,670 were from Kerala.

Several large States such as Karnataka, Uttar Pradesh, and Tamil Nadu saw zero turnout of overseas electors.

Gujarat, Prime Minister Narendra Modi's home State, saw only two out of 885 overseas electors cast-

The missing diaspora voter

Despite a 19.6% increase in registered NRI electors since the 2019 LS polls, their participation in the 2024 election was poor

■ Registered overseas electors

1,19,374

■ Overseas electors who voted

2,958

■ Highest NRI voter turnout: Kerala

(2,670 voters)



■ Some States with zero NRI voter turnout: Karnataka, Uttar Pradesh, Tamil Nadu, Assam, Bihar and Goa

SOURCE: ELECTION COMMISSION OF INDIA

ing their votes. Similar was the story in Maharashtra, where only 17 of the 5,097 NRI electors voted.

While there were 7,927 registered NRI electors in Andhra Pradesh, only 195 flew down to vote. In Assam, none of the 19 registered electors voted. Similarly, in Bihar none of the 89 registered NRI electors exercised their franchise. In Goa, none of its 84 voters cast their ballots.

While NRI voters is a generic term, the EC describes them as overseas electors.

Despite an increase of a little over 19,500 registered overseas electors since the 2019 election, their participation in the latest polls was poor.

Under the existing electoral law, registered NRI voters have to come to their respective Lok Sabha and Assembly constituencies to vote. They have to show their passport as proof of their identity.

The commission says that while eligible Indian citizens who enrol in electoral rolls are called electors, those who actually ex-

ercise their franchise are described as voters.

In August 2018, the 16th Lok Sabha passed a Bill to allow proxy voting rights to eligible overseas Indians. The Bill, however, could not be brought to the Rajya Sabha.

Remote vote proposal

In 2020, the EC proposed to the Union Law Ministry to extend the Electronically Transmitted Postal Ballot System (ETPBS) facility, so far available only to service voters, to eligible overseas Indian voters as well. It would require changes in the election rules. But the government has so far not taken a call on the issue.

The EC had then told the government that it had been receiving several representations from the Indian diaspora to facilitate voting through postal ballots.

The electors cited travel costs, compulsions of employment overseas, and education, among other things, as reasons for their inability to cast their votes in person, the commission said.

'U.S.-India ties will be strengthened, but expect tariff hikes'

Former Trump envoy to India says the new administration will push hard on Iran sanctions, China challenge; he says Trump appointees by and large will be furthering the strength of U.S.-India ties; the President-elect has indicated that he will impose tariffs of 10% to 20% on most countries, and this probably will include India; Juster emphasises that the two leaders have a good relationship

INTERVIEW

Kenneth Juster

Subasini Haidar

With the inauguration of Donald Trump as the President of the United States for the second time just weeks away, New Delhi stepped up its outreach to the incoming administration with External Affairs Minister S. Jaishankar and Foreign Secretary Vikram Mirra both spending the year-end week in Washington. In an exclusive interview, Mr. Trump's last envoy to India (2017-2020), Kenneth Juster, spoke about what to expect from his next tenure in office. Excerpts:

Broadly, how do you think President Trump

will approach India, given your experience of the ties during his previous tenure?

I think there is going to be a very strong U.S.-Indian relationship during the second term of the Trump presidency, and I base that on what happened during the first term. President Trump was the first U.S. President to label China as a strategic challenge... we also revived the Quad, which has continued to thrive under the Biden administration. We enhanced our defence cooperation significantly, signing three major foundational agreements, increasing the number of military exercises and having the first ever tri-services exercise. We increased energy exports to India... There's a very strong relationship between the President and the

Prime Minister, and the U.S. really provided very critical and important assistance to India when China came across the Line of Actual control into disputed territory in 2020.

What should one make of Trump nominees thus far?

I think the appointees by and large will be furthering the strength of the U.S.-India relationship... In addition, these advisers see China as the major strategic challenge that the United States faces. And in that sense, I think there is a certain strategic clarity between the United States and India as to what some of the challenges will be in the Indo-Pacific region.

Given Mr. Trump's threats of the past on India being a "tariff



abuser" and how India lost its GSP status for exporters, should India expect more of such shock therapy?

Look, the President has been clear that he believes India should lower tariffs and is too protectionist. I don't think it's correct to say that the GSP issue was a shock therapy. The President-elect has indicated that he will slap tariffs of 10% to 20% on most countries, and I think that would probably include India. But I also think that could be the beginning of a negotiation to open markets a bit and, from India's perspective, to try to lock down the benefits of its largest trade partner, the United States, in both goods and services. And one should think expansively in terms of what other issues of concern, whether it be in technology, in energy, or elsewhere, where

the two sides could do some horse trading and reach a broader trade and economic agreement.

The Trump administration strong-armed India on stopping all Iran oil imports. What would be the expectations from India in the next four years?

On Iran, the Trump administration had a maximum pressure campaign, which I think may well get reinstated in this next term. India was treated like every other country, which meant [India] needed to zero out oil imports from Iran. And India complied with that.

Do you think a Trump administration will approach these DOJ investigations and

indictments in the Adani case, now the Panam case, and will it affect India-U.S. ties?

I would not expect that the Trump administration would seek to inject itself in these cases. I can't foresee what the legal people at the Department of Justice will do.

But beyond that, I don't see these cases having any substantial effect on the broader U.S.-India relationship.

What are the skills that you think Mr. Trump should be looking for in the next envoy to India?

The choice should be one that understands President Trump and how he operates, so that he or she can help deal with any statements that come out of Washington in terms of

translating them effectively to the Indian government.

There is also some commentary on whether PM Modi will get an invitation to the Trump inaugural on January 20, as Chinese President Xi Jinping has. Your thoughts?

It's not normally been the tradition to have foreign leaders come to an inauguration. Instead, it's been representatives and ambassadors in Washington who attend. I don't know what the thinking is within the administration, and I have not yet heard anything one way or the other in terms of an invitation to Prime Minister Modi. I would emphasise that the two leaders have a very good relationship.

(Full interview at <https://newsthlive.com/kennethjuster>)



Siang project to help mitigate flood risks posed by China: Arunachal CM

Press Trust of India
ITANAGAR

Arunachal Pradesh Chief Minister Pema Khandu said the Siang Upper Multipurpose Project (SUMP), estimated to cost ₹1.13 lakh crore, was being planned by the Centre not just for generating electricity but to maintain the natural flow of the river all year round and mitigate risks of flooding if China released excess water.

Mr. Khandu's remarks came in the wake of China approving the construction of the world's largest dam, at a cost of \$137 billion, on the Brahmaputra river in Tibet close to the Indian border. The dam is to be built at a huge gorge in the Himalayan reaches where the Brahmaputra river makes a huge U-turn to flow into Arunachal Pradesh and then to Bangladesh.

"The SUMP, with an estimated installed capacity of 11,000 mw, is not just about generating power, but also about maintaining the natural flow of the Siang river and mitigating potential flood risks from water releases by China," Mr. Khandu told PTI in an interview.

Describing SUMP as a project of national impor-



Pema Khandu during the book launch on tribal heritage in Arunachal Pradesh on Saturday. X/@PEMAKHANDUJP

tance, he said hydropower generation is only the secondary goal of it.

Objective of project

"The real objective of the project is to save the Siang river and the communities that have depended on it for generations," he said.

The survey for preparing the pre-feasibility report of the projects is yet to be done amid stiff opposition from locals who are concerned about displacement, loss of livelihoods, and environmental impact of the mega dam.

Warning of severe consequences if China's project moves ahead "without safeguards", Mr. Khandu said the neighbouring country's plans to divert water from the Brahmaputra into its arid regions could drastically reduce

the flow of the Siang river during winters.

"In such a scenario, the volume of water could decrease so much that one might be able to cross the mighty river on foot," he claimed. "The proposed Siang project would create a reservoir capable of storing 9 billion cubic meters of water. This would ensure the river maintains a consistent flow, even during dry seasons. Additionally, the reservoir would act as a buffer in case of sudden water releases from upstream Chinese dams, potentially averting catastrophic flooding in Arunachal Pradesh, Assam and Bangladesh," he said.

Acknowledging the ongoing bilateral discussions between India and China, the CM cautioned against "complacency".

"China is unpredictable and can do anything," Khandu said, underscoring the need for India to remain vigilant.

"We cannot take chances when it comes to national security and the welfare of our people," he said.

The Chinese government approved the construction of the hydropower project in the lower reaches of the Yarlung Zangbo river, the Tibetan name for the Brahmaputra. It is expected to generate more than 300 billion kWh of electricity each year - enough to meet the annual needs of over 300 million people.

The total investment in the dam could exceed one trillion yuan (\$137 billion), which would dwarf any other single infrastructure project on the planet, including China's own Three Gorges Dam, regarded as the largest in the world.

On the concerns of the locals, Khandu said the government would conduct extensive surveys before finalising the plans.

"Only after these studies, we will know the exact location of the dam, its height, and the submergence area," he said, adding that a public hearing will be held to listen to people's concerns.

150-year-old coffee tree at Idukki church a window to district's early plantation history

Sandeep Vellaram
IDUKKI

Those who visit the premises of the British-built church at Pallikkunnu near Kuttikkanam in Kerala's Idukki district can see a coffee plantation on the church grounds. It is believed that the British planted coffee on the land owned by the church, which is over 150 years old, during the early period of the plantation industry in Peerumade. The Church Missionary Society (CMS) constructed the cross-shaped church in 1869 on a 15-acre plot of land gifted by the then-ruler of erstwhile Travancore. According to church authorities,



Roots to history: The 150-year-old coffee tree on the church grounds of Pallikkunnu CSI church in Idukki. JOMON PAMPAVALLEY

the church plans to preserve the historically valued coffee tree at Pallikkunnu.

Pallikkunnu St. George CSI Church Vicar Fr. Liju

Abraham said that the tree is situated among a group of coffee trees on the church property. "Earlier, the church authorities contacted the Coffee Board of

officials to ensure the protection of the tree. Two years ago, the Coffee Board officials visited the church, inspected the tree, and assured support for its preservation. But the initiative came to a standstill after we failed to get a certificate from the church. The church aims to secure government support for the initiative," Fr. Abraham said.

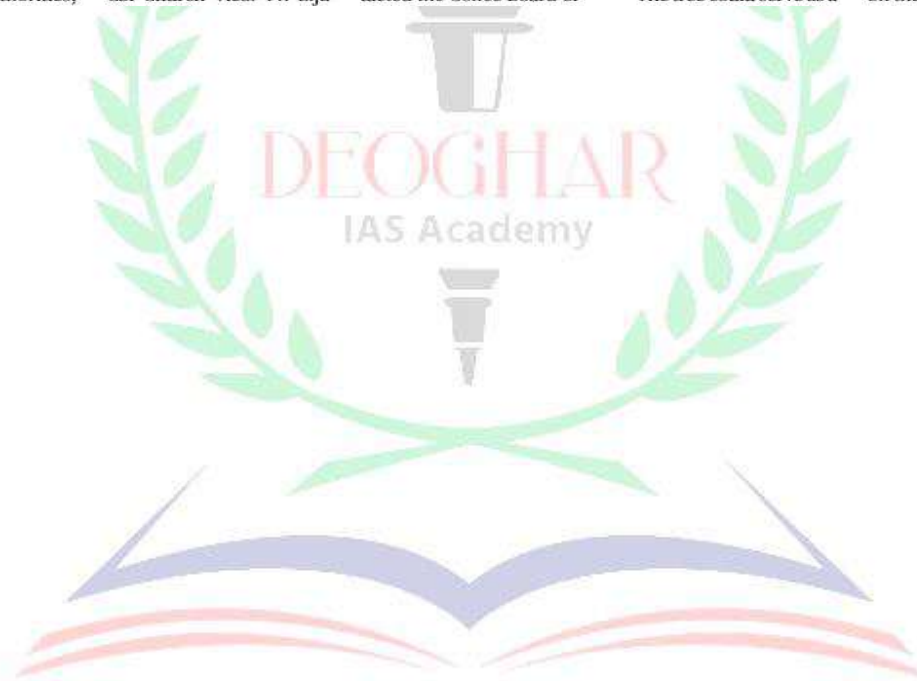
CSI East Kerala Diocese public relations officer Viju P. Chacko said, "The church needs to separate the 150-year-old tree from the group of coffee plants and create a special passage for visitors to view the rare tree.

The tree could serve as a

window for visitors into the plantation culture of Peerumade," Mr. Chacko noted.

Kerala State Biodiversity Board (KSBB) district coordinator Ashwathi V.S. said that the KSBB can ensure the preservation of biodiversity-rich trees or plants through the Biodiversity Management Committee (BMC) in any area.

Interestingly, during the initial period of the plantation industry in Idukki, coffee plants were the crop of choice. The book *Above Heron's Pool* by Heather Lovatt and Peter de Jong, describing the plantation history in Peerumade and Vandiperiyar, sheds light on the change.



Maximum Kuchipudi



In step: Nearly 1,500 Kuchipudi dancers from various parts of the country take part in the finals, Brahmanjali, of the International Traditional Dance Congress at MGM Park in Visakhapatnam on Sunday. v. RAJU



