

DAILY PT POINTERS

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Reforms needed in the voting process

When were Electronic Voting Machines (EVMs) first introduced? What have been the concerns raised by activists about EVMs? What are the voting practices in other countries? How can the process of voting be made more robust?

EXPLAINER

Rangarajan, R

The story so far:

The Supreme Court has decided to hear petitions seeking 100% cross-verification of the Voter Verifiable Paper Audit Trail (VVPAT) slips with the vote count as per Electronic Voting Machines (EVMs).

What is the history of voting process?

In the first two general elections of 1952 and 1957, a separate box was placed for each candidate with their election symbol. Voters had to drop a blank ballot paper into the box of the candidate whom they wanted to vote for. Thereafter from the third election, the ballot paper with names of candidate and their symbols was introduced with voters putting a stamp on the candidate of their choice.

The EVM was introduced on a trial basis in 1982 in the Assembly constituency of Paravur in Kerala. They were deployed in all booths during the Assembly elections of Tamil Nadu, Kerala, Puducherry and West Bengal in 2001. The Supreme Court in various judgments has upheld the validity of using EVMs in elections. In the 2004 general elections to the Lok Sabha, EVMs were used in all 543 constituencies. In *Subramanian Swamy versus Election Commission of India* (2013), the Supreme Court ruled that a paper trail is an indispensable requirement for free and fair elections. The 2019 elections had EVMs backed with 100% VVPAT in all constituencies.

What are international practices?

Many western democracies continue to have paper ballots for their elections. Countries like England, France, The Netherlands and the U.S. have discontinued the use of EVMs, for national or federal elections, after trials in the last two decades. In Germany, the Supreme Court of the country declared the use of EVMs in elections as



Ensuring transparency: An official marks an EVM at a distribution centre in Coimbatore on April 11, 2019.

unconstitutional in 2009. Some countries like Brazil, however, use EVMs for their elections. Among our neighbours, Pakistan does not use EVMs. Bangladesh experimented in a few constituencies in 2018 but reverted to paper ballots for the general elections in 2024.

What are the features of EVMs?

EVMs bring significant benefits to the electoral process. First, the EVM has virtually eradicated booth capturing by limiting the rate of vote casting to four voters a minute and thus significantly increasing the time required for stuffing false votes. Second, invalid votes that were a bane of paper ballots and also a bone of contention during counting process have been eliminated through

doubts raised about the functioning of EVMs by various political parties and civil society activists from time to time. The most repeated allegation is that EVMs are susceptible to hacking as it is an electronic device. The ECI has time and again clarified that it is a standalone device like a calculator with no connectivity to any external device and hence free from any kind of external hack. The sample size for matching of the EVM count with VVPAT slips at present is five per assembly constituency/segment. This is not based on any scientific criteria and may fail to detect defective EVMs during counting. The present process also allows for booth-wise polling behaviour to be identified by various parties that can result in profiling and intimidation.

What can be the way forward?

In a transparent democracy, each citizen must be able to comprehend and verify the steps in the election process without any special technical knowledge. The 100% use of VVPAT has enabled the voters to verify that their votes are 'recorded as cast'. However, few additional steps need to be adopted to make the entire process more robust and ensure that the votes are 'counted as recorded'. 100% match of EVM count with VVPAT slips would be unscientific and cumbersome. The sample for matching of EVM count and VVPAT slips should be decided in a scientific manner by dividing each State into large regions as suggested by experts. In case of even a single error, the VVPAT slips should be counted fully for the concerned region and form the basis for results. This would instil a statistically significant confidence in the counting process. Further, in order to provide a degree of cover for voters at the booth level, 'tallies' machines can be introduced that would aggregate votes in 15-20 EVMs before revealing the candidate-wise count.

Rangarajan, R is a former IAS officer and author of 'Polity Simplified'. He trains civil service aspirants at 'Officers IAS Academy'. Views expressed are personal.

THE GIST

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Despite its advantages, there have been doubts raised about the functioning of EVMs by various political parties and civil society activists from time to time. The most repeated allegation is that EVMs are susceptible to hacking as it is an electronic device.

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the history of voting process

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Why has India allowed FIIs to invest in its green bonds?

What are Sovereign Green Bonds? How will investments by Foreign Institutional Investors in green government securities accelerate India's transition to a green economy?

Kunal Shankar

The story so far:

On April 5 the Reserve Bank of India (RBI) green lighted investments in the country's Sovereign Green Bonds (SGrBs) by Foreign Institutional Investors (FIIs) – investors such as insurance companies, pension funds and nation-states' sovereign wealth funds. SGrBs are a kind of government debt that specifically funds projects attempting to accelerate India's transition to a low carbon economy.

How does it help in green transition?

Allowing FIIs to invest in India's green projects widens the pool of capital available to fund the country's ambitious 2070 net zero goals, ensuring 50% of India's energy comes from non-fossil fuel based sources and to reduce the carbon intensity of the nation's economy by 45%, as pledged by Prime Minister Narendra

Modi at COP26 in Glasgow 2021.

The RBI had issued SGrBs worth ₹16,000 crore in two tranches in January and February last year with maturities in 2028 and 2033. While in both instances the bonds were oversubscribed, the main participants were domestic financial institutions and banks, narrowing the avenues from where the government could borrow. Moreover, these green Government-Securities (G-Secs) were classified under the Statutory Liquidity Ratio (SLR), a liquidity rate fixed by the RBI that financial institutions must maintain with themselves before they lend to their customers.

SGrBs yield lower interest than conventional G-Secs, and the amount foregone by a bank by investing in them is called a greenium. But central banks and governments the world over are encouraging financial institutions to embrace greeniums to hasten the transition to a greener future. Climate finance experts believe India would gain

from allowing FIIs in green G-Secs. They say FIIs are also looking to diversify their pool of green investments, as there is considerable regulatory support particularly in developed countries. And so this is an opportunity for them to invest in India's green g-secs. Ashim Roy, Energy Finance lead at World Resources Institute, India said FIIs might also be looking to gain green credentials when such investments may not be available in their home markets, and because India has successfully addressed greenwashing fears with the Sovereign Green Bonds Framework in late 2022.

What is the green taxonomy gap?

In the 2022-23 Union Budget, Finance Minister Nirmala Sitharaman announced the government's decision to issue SGrBs to accelerate funding government projects such as harnessing offshore wind, grid-scale solar power production, or encouraging the transition to battery operated Electric Vehicles (EVs). But the

RBI had not created a green taxonomy, or a way to assess an investment's environmental, or emissions credentials to ensure the project is not an attempt at greenwashing, that is, faking green credentials to secure funding.

To address this gap, the Finance Ministry released India's first SGrB Framework on November 9, 2022 detailing the kind of projects that would receive funding through this class of G-Secs. These included "investments in solar/wind/biomass/hydropower energy projects (under 25 MW) that integrate energy generation and storage; supporting public lighting improvements (e.g. replacement with LEDs); supporting construction of new low-carbon buildings as well as energy-efficiency retrofits to existing buildings; projects to reduce electricity grid losses." The list goes on to include promoting public transport, subsidies to adopt EVs and building charging infrastructure. The government also sought Norway-based validator Cicero's opinion comparing India's SGrB Framework with International Capital Market Association's (ICMA's) green principles. Cicero rated India's framework as "green medium" with a score of "good governance". WRI's Ashim Roy said, "it would be crucial to identify new green projects with credible audit trails and high impact to optimally deploy the proceeds, especially ones that has received limited private capital like Distributed Renewable Energy and clean energy transition finance for MSMEs."

THE GIST

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The Reserve Bank of India (RBI) has decided to facilitate wider non-resident participation in the Sovereign Green Bonds by permitting eligible foreign investors in the International Financial Services Centre (IFSC) to invest in such bonds.

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Do you know ?

- SGrBs are a kind of government debt that specifically funds projects attempting to accelerate India's transition to a low carbon economy.
- SGrBs yield lower interest than conventional G-Secs, and the amount foregone by a bank by investing in them is called a greenium.

The Hindu-Economy(GSIII)-Page 15

IMF forecasts India's economy to grow 6.8% this fiscal year

World economy is 'remarkably resilient' but challenges remain, multilateral lender says in its 'World Economic Outlook April 2024'

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SRIRAM LAKSHMAN 10575



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London

The International Monetary Fund (IMF) on Tuesday raised its growth projection for India's GDP in the current fiscal year 2024/25 to 6.8%, and forecast a 6.5% expansion next year. The latest FY25 forecast is a 0.3 percentage point upward revision from January's projection, the IMF said in its World Economic Outlook April 2024, released on Tuesday to kick off the World Bank IMF Spring Meetings.

The global economy had remained "remarkably resilient" with steady growth and inflation returning to target and had "defied expectations of stagflation and global recession" in the wake of the post-pandemic supply disruptions, Russia's invasion of Ukraine and subsequent global energy and food crises as well as the monetary tightening across economies, the IMF observed.

It projected global output growth in 2024 and 2025 at 3.2%, after bottoming out at at 2.3% at the end of 2022.

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The Hindu-Environment(GSIII)-Page 20

Three new fish species spotted using tools in the Laccadive Sea

Reports of animals like chimpanzees using straws to draw water and crows fashioning leaves to extract insects from crevices are well known whereas reports of aquatic animals using tools have been less common. This is partly because they are more difficult to observe and a perception that fish are less intelligent

Siddhi Subhakar Bohan Arthar

Three fish species that live in the Laccadive Sea, off the southwest corner of the Indian coast, are capable of using tools, we recently found. All three species used live or dead coral structures as anvils to break the hard shells of sea urchins so they could get to the edible bits inside. The Javan's wrasse (*Thalassoma javanica*) and the checkered wrasse (*Thalassoma lineatum*) have never been reported using tools before, and this is the first documented instance of the moor wrasse (*Thalassoma amoenum*) using tools in the wild.

Our study was published in the journal *Conservation Biology* in February. In addition to the growing number of reports of tool use in animals, while the sophistication of human tool use, from hammers to computers, distinguishes us from other animals, the use of tools itself is now common than sometimes first imagined.

Reports of animals like chimpanzees using straws to draw water and crows fashioning leaves to extract insects from crevices are well known whereas reports of aquatic animals using tools have been

THE GIST

Three fish species in the Laccadive Sea have been found to be capable of using tools. They used live or dead coral structures as anvils to break the hard shells of sea urchins so they could get to the edible bits inside.

Unlike primates, birds, omms, octopuses, and many other animals that scientists know are capable of making tools, fish have no hands, claws, or pincers. Being able to grasp and manipulate objects are key requirements for using tools.

As scientists spend more time in the water, they are discovering more tool use. In fact, becoming more critical so we can ask larger questions about habitat use by fish, the development of animal intelligence, and predator-prey interactions.

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- Three fish species in the Laccadive Sea have been found to be capable of using tools. They used live or dead coral structures as anvils to break the hard shells of sea urchins so they could get to the edible bits inside
- The Laccadive Sea is a body of water near the southwestern coast of **India**.
- It is part of the immense **Indian Ocean**,



Indian Express-Space (GSIII)-Page 14

INDIA-ORIGIN GOPI THOTAKURA HEADS TO SPACE: WHAT IS SPACE TOURISM?

GOPI THOTAKURA, an entrepreneur and a pilot, is set to become the first person of Indian origin to go to space as a tourist on the NS-25 mission of Blue Origin — a company founded by Jeff Bezos, who is also the founder of Amazon. Thotakura has been selected as one of the six crew members for the mission. The launch date of the mission is yet to be announced.

In recent years, space tourism has grown in popularity. In 2023, the space tourism market was estimated to be worth \$848.28 million. It is expected to grow to \$27,861.99 million by 2032. However, there are several challenges that may limit the industry's growth.

What is space tourism?

Space tourism is a form of space travel, which is done for recreational or business purposes. There are two main types of space tourism, sub-orbital and orbital.

The sub-orbital spacecraft takes passengers just beyond the Kármán line — it lies nearly 100 kilometres above our heads and is considered to be the boundary between Earth's atmosphere and outer space. The passengers get to spend a few minutes in outer space and then come back to Earth. The NS-25 mission, which Thotakura is a part of, is a sub-orbital mission.

Orbital spacecraft take passengers much farther than the Kármán line. Usually, passengers can spend from a couple of days to more than a week at an altitude of up to 400 km.

In 2021, Space X's Falcon 9 took four



Gopi Thotakura. LinkedIn

they spent three days orbiting the Earth.

What are the challenges?

Currently, space tourism is expensive. A passenger generally has to pay at least a million dollars to reach outer space. This is mainly because of high manufacturing costs and the cost of fuel.

Studies have found that space tourism may cause environmental damage as rockets emit gaseous and solid chemicals directly into the upper atmosphere.

A 2022 study published in the journal *Earth's Future* found that soot emissions from rocket launches are far more effective at warming the atmosphere compared to other sources.

Safety is also a concern. A total of 676 people have flown into space and 19 of them have died as of November 2023, according to a report by *Astronomy Magazine*. This means that approximately 3% of astronauts died during their space

Jeff Bezos-led space startup Blue Origin this month revealed the six-person crew that will be flying on its NS-25 mission.

- NS-25 mission also includes Gopi Thotakura, who could become the first Indian space tourist in history.
- This mission will be the seventh human flight for the New Shepard programme and the 25th in its history. To date, the programme has flown 31 humans above the Karman line, the proposed conventional boundary between Earth's atmosphere and outer space.
- New Shepard is a fully reusable sub-orbital launch vehicle developed for space tourism by Blue Origin.
- New Shepard's engine is fuelled by highly efficient liquid oxygen and hydrogen