DAILY PT POINTERS

27th April, 2024

HEADLINES OF THE DAY

The Hindu-Environment(GSIII)-Page 7

IUCN representative to be an observer in Tamil Nadu's Nilgiri Tahr survey

The three-day exercise is being done to estimate the population of the Tahrs, which once roamed the length and breadth of the Anamalai and Nilgiris landscape.

April 26, 2024 09:31 pm | Updated April 27, 2024 03:34 am IST - CHENNAI

GEETHA SRIMATHI

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- The animal is listed as an endangered species by the International Union for Conservation of Nature (IUCN) and protected under Schedule-I of the Wild Life (Protection) Act, 1972.
- There are around 3,000 Tahrs in the Western Ghats, according to a report released by the World Wildlife Fund India in 2015, and a sizeable number of them is concentrated in the Anamalai Tiger Reserve (ATR).
- There are multiple references to Nilgiri Tahr in the Sangam Tamil literature. Two epics — *Silappathikaram* and *Sivakasindamani* — mention descriptions of the Nilgiri Tahr and its habitat.

HEADLINES OF THE DAY

Indian Express-Polity and Governance(GSII)-Page 1

NO INDICATION OF ARTIFICE, DECEIT: BENCH

SC says no return to ballot papers, backs 'secure, user-friendly' EVMs

Rejects plea for 100% verification of votes polled in EVMs with slips from VVPATs

ANANTHAKRISHNAN G
NEW DELHI, APRIL 26

At a polling booth in Mathura on Friday. Gajendra Yadav

EXPLAINED

LAW
SYMBOL LOADING UNIT: FEEDING CANDIDATE INFORMATION TO EVM
PAGE 14

REAFFIRMING ITS faith in the working of Electronic Voting Machines (EVMs), the Supreme Court Friday rejected prayers for 100 per cent verification of the votes polled in them with slips printed by the Voter Verifiable Paper Audit Trail (VVPAT) machines or, in the alternate, a return to the system of ballot papers.

In separate but concurring judgements, the two-judge bench of Justices Sanjiv Khanna and Dipankar Datta, which "conducted an in-detail review of the administrative and technical safeguards of the EVM mechanism" said, "To us, it is apparent that a number of safeguards and protocols with stringent checks have been put in place."

It said "data and figures" placed before it "do not indicate artifice and deceit".

The bench gave candidates at No. 2 and No. 3 positions the option to get the burnt memory/microcontroller of 5 per cent of EVMs per Assembly segment "checked and verified by a team of engineers from EVM manufacturers post the announcement of results" on a written request for

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- An electronic voting machine (EVM) is a portable instrument for the purpose of conducting elections to the parliament, legislature and local bodies like panchayats and municipalities.
- EVM is a microcontroller-based instrument designed to modernise the election procedure and there is no scope for invalid votes and total secrecy of voting data is maintained and it also facilitates quick and accurate counting.
- EVMs were first used in 70-Parur Assembly Constituency of Kerala in the year 1982.
    - VVPATs with EVMs were used for first time in a bye-election from 51-Noksen (ST) Assembly Constituency of Nagaland
- EVMs do not require electricity. EVMs run on an ordinary battery

HEADLINES OF THE DAY

Indian Express-Polity and Governance(GSII)-Page 14

SLU, 'matchbox' that feeds EVM candidate info

Symbol Loading Units ensure EVMs can be used for voting. Underlining the sanctity of the election process, the SC has tightened norms for their use

DAMINI NATH & RITIKA CHOPRA
NEW DELHI, APRIL 26

WHILE REJECTING the plea for 100% verification of Voter Verifiable Paper Audit Trail (VVPAT) slips against the Electronic Voting Machine (EVM) count, the Supreme Court on Friday directed the Election Commission of India (ECI) to "seal and secure" the Symbol Loading Unit (SLU) for 45 days after the declaration of election results.

Currently, only the three components of the EVM – the ballot unit, control unit, and VVPAT – are stored for 45 days after the results. This is the first time that SLUs, used to load candidate symbols onto the VVPATs, will also be available for examination along with the EVMs if a candidate challenges the results by filing an election petition in court.

What is a Symbol Loading Unit (SLU) and how does it work?

Symbol Loading Units (SLUs) were introduced around the same time as VVPATs – a little over a decade ago. VVPATs help voters verify their votes – they see a slip with a printed image of the party symbol they voted for.

But for the VVPAT to print a symbol correctly, information pertaining to the list of candidates and their symbols must be loaded on to the VVPAT machine in the correct order. This is where the Symbol Loading Unit, or SLU, comes in. In fact, the introduction of VVPATs necessitated the use of SLUs.

The SLU is used to load the symbols of the candidates onto the VVPAT. It is a matchbox-sized device that is first connected to a laptop or personal computer, from where a symbol loading application is used to load a bitmap file containing the candidates' names, serial numbers, and symbols.

The SLU is then connected to the VVPAT to transfer that file on to the paper audit machine. This is done under the supervision of a district election officer.

At which point in the election process are SLUs used?

The SLUs come into the picture only a few days before polling in a particular seat, when the EVMs are being commissioned and the list/order of contesting candidates is decided and set on the ballot unit (the machine where you press the button to vote) and the VVPAT (which produces the paper audit trail of your vote).

Candidate-setting can happen at any time from five to two days before voting at a seat. Once the SLU is used to load symbols onto the VVPAT, the EVM is ready for use. After this, the SLU is of no relevance to the actual voting process.

What happens to an SLU after symbols are loaded?

Typically, a small number of SLUs are enough to load symbols onto all VVPATs for a seat. According to EC officials, it takes an SLU two to three minutes to load each VVPAT.

Once the symbol-loading is complete, the SLUs are handed over to the concerned district election officer for safekeeping. They remain in the officer's custody until the day after voting. Afterward, the SLUs are released to the engineers of the two EVM manufacturers, Bharat Electronics Ltd (BEL) or Electronics Corporation of India Ltd (ECIL), so they can be used to load symbols onto VVPATs for other seats in subsequent phases.

Thus, in a multi-phase election like the ongoing one for the 18th Lok Sabha, an SLU is typically reused after one phase of polling to load symbols onto VVPATs meant for other seats in subsequent phases.

What has the SC said about the SLUs?

The court has said that the SLUs should be sealed and stored immediately after the symbol-loading process for a seat is complete. It must be stored for a period of 45 days after the declaration of results, so that it can be opened and examined like EVMs in case of an election petition.

This effectively means that an SLU used for loading symbols onto VVPATs for one seat can no longer be reused for other seats. Consequently, the EC will need more SLUs. Sources said the Commission currently has about 5,000 SLUs, and will need an additional 2,000 to implement the SC's direction.

And what has the top court said about microcontrollers?

In an unprecedented move, the court has allowed candidates to seek verification of EVM software. This effectively means that a candidate can ask ECI officials to check the one-time programmable software in the BU (Ballot Unit), CU (Control Unit), and VVPAT for tampering, in case of any doubts regarding the result.

This verification involves inspecting the burnt memory/ microcontrollers of these three components. The court has proposed a formula for doing this: engineers from the EVM manufacturers will conduct checks on 5% of the EVMs per Assembly constituency or Assembly segment of a parliamentary constituency. Candidates must submit a written request within seven days of the announcement of results, and will have to bear the expense of the process. This right to seek verification, however, is limited to those candidates who come in second or third. Engineers from the manufacturing companies will certify the authenticity and intactness of the memory/ microcontroller.

What happens if the microcontrollers, upon verification, are found tampered?

The court has only said that if any tampering is found, the candidate will be refunded the cost of verification. It has not said how the election result will be impacted.

What changes on the ground?

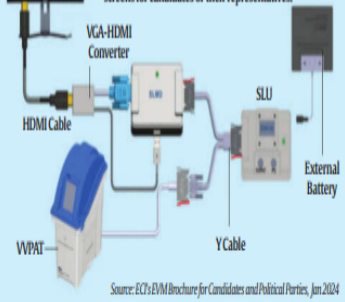
Nothing changes for the voter. However, a lot changes in the way the ECI organises polling.

The ECI will now have to store SLUs for 45 days after voting. To reserve one SLU exclusively for one seat, it will need to order more SLUs. It will also have to ensure the verification of EVMs upon request from candidates who finish second or third, which may require additional manpower.

Also, the ECI will have to examine whether the Representation of the People Act of 1951 has to be amended. The election law currently states that an election petition challenging a result can be filed in court by a candidate within 45 days of the declaration of results. During this period, the EC machinery does not touch the EVMs. If these machines now need to be unsealed for verification purposes, the poll panel will have to determine how this can be accomplished.

LOADING CANDIDATES' INFORMATION ONTO EVMS

A few days before voting, candidates' symbols are loaded onto the VVPAT using SLUs. A computer with a symbol loading application is used to create a bitmap file that has the serial number, name, and symbol of candidates. The file is loaded on to the flash memory of the VVPAT using the SLU. The process is shown on screens for candidates or their representatives.



Source: ECI's EVM Brochure for Candidates and Political Parties, Jan 2024

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HEADLINES OF THE DAY

Indian Express-Geography(GSI)/Environment(GSIII)-Page 14

How ISRO used satellite remote-sensing to analyse glacial lakes in Himalayas

This is the latest among a clutch of studies on glacial lakes that have highlighted the risks of glacial lake outburst floods (GLOFs), and their impact on infrastructure and settlements downstream of such lakes.

- the Indian Space Research Organisation (ISRO) released satellite-data-based analysis on expansion of glacial lakes in the catchments of Indian Himalayan river basins. This is the latest among a clutch of studies on glacial lakes that have highlighted the risks of glacial lake outburst floods (GLOFs), and their impact on infrastructure and settlements downstream of such lakes.
- The movement of glaciers causes erosion and creates depressions in the surrounding topography. When they retreat, meltwater starts to accumulate in such depressions, giving birth to glacier lakes.
- ISRO categorised glacial lakes into four broad categories based on how they were formed — moraine-dammed, ice-dammed, erosion-based, and ‘others’. Moraine and ice-dammed lakes are formed when water is dammed by moraine — debris such as rocks and soil left during the movement of glaciers — and ice respectively. Erosion-based lakes are formed when water is dammed by erosion-created depressions.

HEADLINES OF THE DAY

News on air –IR(GSII)

- Top officials of India and South Korea on Friday discussed developments in the areas of disarmament and non-proliferation relating to nuclear, chemical and biological domains.
- The two sides discussed developments in the field of disarmament and non-proliferation relating to nuclear, chemical and biological domains, as well as regional non-proliferation issues, outer space security-related matters, conventional weapons, including AI in the military domain and multilateral export control regimes,