30 MARCH 2019

Increase in VVPAT numbers will delay counting

In news:

Over 20 opposition party leaders had moved the Supreme Court, seeking physical verification of at least 50% of the votes cast on EVMs to ensure the purity of the process.

The petition has challenged the decision of the Commission to check VVPATs of only one randomly selected booth of a constituency. The petitioners have said that this will account only for 0.44 per cent of the votes polled.

Reply of ECI:

- The current confidence level in the Electronic Voting Machine (EVM)-VVPAT accuracy was 99.9936%. Any increase in the sample size of verification of VVPAT slips would only lead to a "very negligible gain in the confidence level.
- The 50% Voter Verified Paper Audit Trail slip verification in each Assembly segment of a Parliamentary Constituency or Assembly Constituency on an average shall enlarge the time required for counting to about six days.

About VVPAT:

The Voter Verified Paper Audit Trail is a method that provides feedback to voters. It is an independent verification printer machine and is attached to electronic voting machines. It allows voters to verify if their vote has gone to the intended candidate.

This second line of verification process was introduced after allegations around Electronic Voting Machines' tampering cropped up.

How does VVPAT functions?

When a voter presses the button on the Voter Verifiable Paper Audit Trail machine against the chosen candidate, a printed VVPAT slip is displayed for 7 seconds before it's automatically cut and delivered to a sealed ballot compartment.

VVPAT machines can be accessed by polling officers only.

The VVPAT slip contains the following details:

- A candidate's serial number
- Name of the candidate
- Corresponding symbol

Note

Centre to borrow rupee 7.1 lakh crore in FY20

In news:

Borrowing calendar for the next financial year was announced and the government said that it will raise Rs 4.42 lakh crore through gilts in the first half of FY20.

In brief:

Gilts are bonds that are issued by the British government, and they are

generally considered low-risk investments. Gilts are the U.K. equivalent of U.S. Treasury securities.

The gross borrowing of Rs.7.10 lakh crore for the entire year is significantly higher than the Rs.5.35 lakh crore borrowing programme for financial year 2018-19 which is 62.30% of total borrowings.

Gross borrowing, is the total public debt that the government is liable to pay.

The net borrowing, which does not include repayments of past loans, has been projected at Rs 3.4 lakh crore for the April-September 2019 period.

Fiscal deficit target set in the Union Budget is 3.4% of the Gross Domestic Product

The government is also planning to introduce new seven-year benchmark government security and may extended 15-19 years gilt maturity bracket to 15-24 years.

Blockchain enabled marketplace app for coffee

In news:

The commerce ministry Thursday launched a Blockchain based coffee e-marketplace to help farmers integrate with markets so that they can realise fair prices for the commodity.

In brief:

The app is intended to bring in transparency in coffee trade and maintain the traceability of Indian coffee from bean to cup so as the consumer tastes real Indian coffee and the grower is paid fairly for his produce

The blockchain will also reduce the number of layers between coffee growers and buyers and help farmers increase their income

Anyone willing to participate in the marketplace will have to register on the app and will get a smart contract number. But, the pilot project has about 20 participants, including 14 coffee growers, and will run for four-to-six months.

India is the only country in the world where entire coffee is grown under shade, handpicked and sun dried.

About Blockchain:

A blockchain is a database (is a growing list of records) that is shared across a network of computers. Once a record has been added to the chain it is very difficult to change. To ensure all the copies of the database are the same, the network makes constant checks.

The idea was described in 1991 by Stuart Haber and W. Scott Stornetta.

- When information is to be stored, the record lists the details, including a digital signature from each party.
- The accepted records are added to a block. Each block contains a unique code called a hash. It also contains the hash of the previous block in the chain.
- The block is added to the blockchain. The hash codes connect the blocks together in a specific order.
- Any change to the original input will generate a new hash. The changed hash breaks the chain.

Unlike traditional ledgers, a blockchain database is decentralized and has no “master.”

Note

There is a lot of hype about blockchain, but some promising uses are under development.

- Cryptocurrency: Blockchains are the basis of bitcoin and other cryptocurrencies.
- Banking: Financial institutions have been investing in blockchains to simplify their record-keeping for payments.
- Supply chain: Recording trades on a blockchain offers a way to check the history of a product.
- Property records: Storing land records on a blockchain could cut down on costly title research and increase transparency
- Voting: Blockchain records could create tamper-proof election returns.
- Healthcare: With blockchain, medical history could be securely stored and controlled by patients.

GI tag for Coorg Arabica Coffee, four others

Why In News:

The Geographical Indications Registry has granted the Geographical Indication (GI) tag to

- Coorg Arabica Coffee,
- Wayanad Robusta Coffee,
- Chikmagalur Arabica Coffee,
- Araku Valley Arabica Coffee and
- Bababudangiris Arabica Coffee.

In Brief:

The GI was granted

According to the GI application, Coorg Arabica Coffee is grown specifically in Kodagu district in Karnataka.

As per the GI application for Wayanad Robusta Coffee, the flora of Wayanad is characteristic of the Western Ghats and the plantation crops grown in the cool climate.

Coffee based farming system is a notable feature of Wayanad. Coffee is grown both as pure crop and as mixed crop along with pepper. Wayanad produces almost around 90% of the state's Coffee produce which literally concludes that the coffee economy of Kerala is highly correlated with the coffee economy existing in Wayanad. Robusta coffee produce is more than 95% of the total coffee cultivation done in Wayanad.

Chikmagalur Arabica Coffee and Bababudangiris Arabica Coffee are both grown in Chikmagalur district, Karnataka which is also known as the birthplace of coffee in the country, as per the application petitions.

Note

Coffee production in India

It is dominated in the hill tracts of South Indian states, with Karnataka accounting for 71%, followed by Kerala with 21% and Tamil Nadu (5% of overall production with 8,200 tonnes).

Indian coffee is said to be the finest coffee grown in the shade rather than direct sunlight anywhere in the world.

As of 2018, Indian coffee made up just 4.5% of the global production. Almost 80% of Indian coffee is exported; 70% is bound for Germany, Russia, Spain, Belgium, Slovenia, United States, Japan, Greece, Netherlands and France. Italy accounts for 29% of the exports. Most of the export is shipped through the Suez Canal.

Coffee is grown in three regions of India with Karnataka, Kerala and Tamil Nadu forming the traditional coffee growing region, followed by the new areas developed in the non-traditional areas of Andhra Pradesh and Orissa in the eastern coast of the country and with a third region comprising the states of Assam, Manipur, Meghalaya, Mizoram, Tripura, Nagaland and Arunachal Pradesh of Northeastern India, popularly known as "Seven Sister States of India.

GI Tag:

- Geographical Indication is a genre of Intellectual Property.
- GI tag is an insignia on products having a unique geographical origin and evolution over centuries with regards to its special quality or reputation attributes.
- The status to the products marks its authenticity and ensures that registered authorised users are allowed to use the popular product name.
- These could be naturally grown crops like Assam Chilies or manufactured products like Jaipur Pottery.
- GI tags are given on the basis of the Geographical Indications of Goods (Registration and Protection) Act, 1999.
- The registration of GI is valid for 10 years after which it needs to be renewed.
- Violation of GI tags is punishable offence under law.

Debris from anti-satellite test to disintegrate in 45 days: official

Why In News:

The satellite targeted with an Anti-Satellite (ASAT) missile under Mission Shakti has broken up into at least 270 pieces, most of which are expected to disintegrate within 45 days.

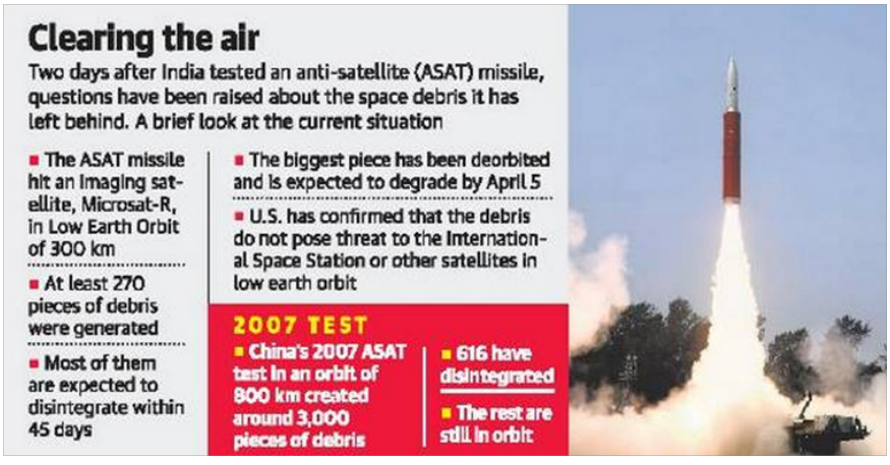
In Brief:

The satellite has disintegrated into at least 270 pieces which has also been confirmed by the North American Aerospace Defence Command (NORAD). One of them is a large piece that has been deorbited and is estimated to be completely degraded by April 5. The rest of the pieces are estimated to disintegrate in less than 45 days.

Being in the Low Earth Orbit, the debris would fall towards earth and burn up as soon as they enter the atmosphere.

Imaging satellite

The targeted satellite was Microsat-R, an imaging satellite that was



Note

launched by the Indian Space Research Organisation (ISRO) on January 24 using a Polar Satellite Launch Vehicle.

The satellite, weighing 740 kg, was placed in an orbit of 274 km above earth.

Defence Research and Development Organisation (DRDO) shot down Microsat-R with a modified exo-atmospheric missile of the ballistic missile defence at an altitude of 300 km.

Being monitored

The ASAT test was tracked by sensors of various agencies. Upon impact, data transmission from the satellite stopped and electro-optic systems confirmed an explosion.

Debris pose significant risk to satellites and other systems launched into orbit as they last for a long time especially in higher orbits. For instance, China's 2007 ASAT test in an orbit of around 800 km created around 3,000 pieces of debris, of which 616 have decayed. The rest are still in orbit.

International energy agency report:

Why In News

- India's carbon emission grew by 4.8% during 2018.
- But India's per capita carbon emission is less than 40% of the global average.
- At the global level, renewable sources of energy grew by 7% during 2018.
- China and Europe contributed to bulk of global carbon savings.
- India is far away from fulfilling its target under the Paris agreement (to cut energy intensity of GDP by 33-35% by 2030, over 2005 levels.

In Brief:

About International Energy Agency:

- IEA is an inter-governmental organization established in 1974 as per framework of the Organisation for Economic Co-operation and Development (OECD).
- It was established in the wake of the 1973 oil crisis after the OPEC cartel had shocked the world with a steep increase in oil prices.
- Members: Presently it has 29 member countries. India is lone associate member of IAE. Headquarters (Secretariat): Paris, France.
- Mandate: Its prime focus is on the "3Es" of effectual energy policy: energy security, economic development and environmental protection. It also seeks to promote alternate energy sources (including renewable energy), rational energy policies and multinational energy technology co-operation.
- It publish World Energy Outlook Report.

Note

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