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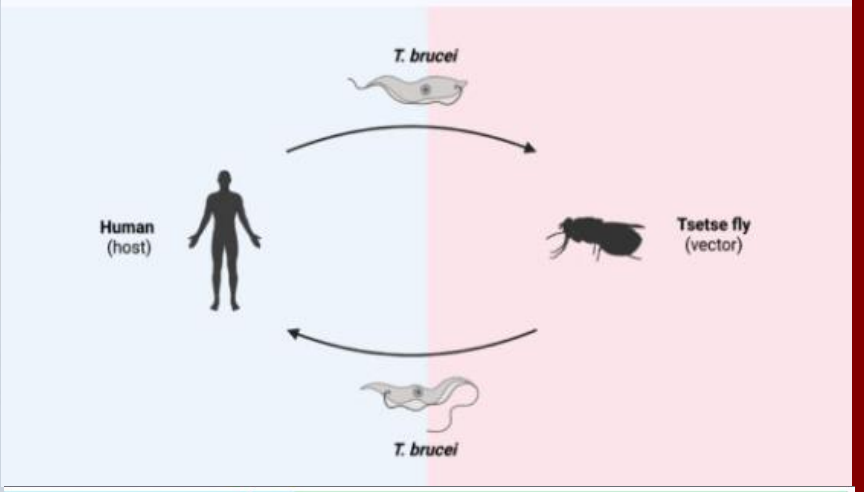
DTE June 21

HUMAN AFRICAN TRYPANOSOMIASIS

(Syllabus: GS Paper 3 – Sci and Tech)

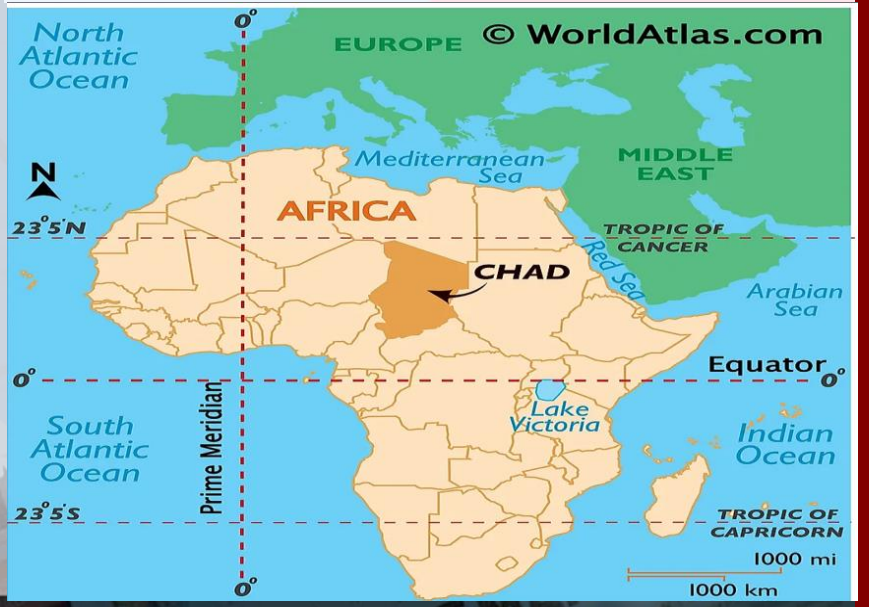
Chad eliminates sleeping sickness as a public health problem

Context: Chad has become the **first country** in 2024, and the 51st globally, to eliminate the gambiense form of human African trypanosomiasis (HAT), a neglected tropical disease.



Human African Trypanosomiasis (HAT)

- **About**: is a vector-borne parasitic disease.
- **Also known as**: Sleeping Sickness
- **Caused by:** Protozoan parasites transmitted by infected tsetse flies.
- **Forms of human African trypanosomiasis**:
  - **Trypanosoma brucei gambiense:** This causes over 90% of all trypanosomiasis cases. It is found in 24 countries of west and central Africa.
  - **Trypanosoma brucei rhodesiense:** This causes less than 10% of all trypanosomiasis cases. It is found in 13 countries of eastern and southern Africa.
- **Symptoms:** Early symptoms include swollen bumps around the bite, a fever, and muscle and joint pain.
- **Treatment**: Treatment depends on what type of protozoa caused the infection and whether the infection has spread to other areas of your body.



SECTION 45 AND TWIN TEST

(Syllabus GS Paper 3 – Economy/Internal Security)



Bail in money laundering cases, and the 'twin test' under PMLA

APURVA VISHWANATH
NEW DELHI, JUNE 21

A DAY after a trial court granted bail to Delhi Chief Minister Arvind Kejriwal who is in jail on charges under the Prevention of Money Laundering Act (PMLA), the Delhi High Court stayed the order.

A Bench headed by Justice Sudhir Kumar Jain on Friday heard an urgent plea by the Enforcement Directorate seeking a stay on the bail, and reserved its order until next week. The ED challenged the trial court's order on the ground that the court had failed to apply the 'twin test' for grantING bail under PMLA.

What is the twin test, and why is bail under PMLA so contentious?

Section 45 and twin test

Section 45 of the PMLA, which deals with bail, first states that no court can grant bail for offences under this law, and then proceeds to mention a few exceptions. The negative language in the provision itself shows that bail is not the rule but the exception under PMLA.

The provision makes it mandatory to hear the public prosecutor in all bail applications, and when the prosecutor opposes bail, the court is required to apply a twin test.

These two conditions are: (i) that there are "reasonable grounds for believing that [the accused] is not guilty of such offence"; and (ii) that "he is not likely to commit any offence while on bail".

There are similar provisions in several other laws that deal with serious offences — for example, Section 36AC of The Drugs and Cosmetics Act, 1940, Section 37 of The Narcotic Drugs and Psychotropic Substances Act, 1985, and Section 43D(5) of the Unlawful Activities Prevention Act, 1967.

The provision in the UAPA, for example, states that "no person accused of an offence punishable under Chapters IV (Punishment for Terrorist Activities) and VI (Terrorist Organisations) of this Act shall...be released on bail or on his own bond unless the Public Prosecutor has been given an opportunity of being heard", or if the court "is of the opinion that there are reasonable grounds for believing that the accusation...is *prima facie* true".

Legal challenges to twin test

The first blow to the constitutional validity of the twin test came in a 2017 ruling, *Nikesh Tarachand Shah v Union of India*.

A two-judge Bench comprising Justices Rohinton Nariman and Sanjay Kishan Kaul struck down the bail provision as unconstitutional on the ground that the onerous conditions were not a reasonable classification. "Reasonable classification' is a feature of the right to equality, which is a fundamental right.

However, by a subsequent amendment, Parliament put these provisions back in the law through the Finance Act, 2018. This re-insertion was challenged before various High Courts and eventually before the Supreme Court, culminating in a batch of petitions that were heard in 2022 as *Vijay Madanlal Choudhary v Union of India*.

EXPLAINED LAW

The petitioners argued that the underlying reasoning in *Nikesh Tarachand Shah* was valid even if Parliament brought back the law. However, a three-judge Bench headed by Justice A M Khanwilkar (now retired) refused to accept the previous ruling.

"We are unable to agree with the observations in *Nikesh Tarachand Shah* distinguishing the enunciation of the Constitution Bench decision in *Kartar Singh*; and other observations suggestive of doubting the perception of Parliament in regard to the seriousness of the offence of money-laundering, including about it posing serious threat to the sovereignty and integrity of the country," the court said.

Legal experts have questioned the logic of equating money laundering with stringent anti-terror and narcotics laws when the offence of money laundering, however serious, carries a maximum sentence of only seven years. Only in money laundering cases where the scheduled offence involves narcotics, is the maximum sentence extended to 10 years.

In response, the government had argued in court that persons who are involved in money laundering are "influential, intelligent, and resourceful, and the crime is committed with full pre-meditation, which ensures that offence is not detected and even if it is detected, investigation agency cannot trace the evidence".

The government has defended the onerous bail conditions on the ground that the offence is committed "with the help of advanced technology so as to conceal the transaction".

Current position in law

One key aspect of the challenge to the amendment on bail conditions still remains open even after the *Vijay Madanlal Choudhary* ruling: the passing of these amendments through the Money Bill route.

A separate larger Bench challenge is pending before the SC on whether certain laws, such as the Aadhaar Act, service conditions of Tribunal members, etc. can be passed as a Money Bill. A Bench is yet to be constituted on that issue.

Although the Supreme Court has agreed to review its *Vijay Madanlal Choudhary* ruling itself, it is still valid law since no stay is operating on the judgment.

As per the ruling, the twin test has to be rigorously applied by all courts — special courts trying money laundering offences as well as constitutional courts. It would also apply in the same way for both regular bail and anticipatory bail.

However, an accused can still get the benefit available under Section 436A of the Code of Criminal Procedure (CrPC), under which he is entitled to bail after serving half of the maximum sentence as an undertrial.

This means that in most money laundering cases, if the Enforcement Directorate is not able to finish the trial within three and a half years, the accused is entitled to bail, irrespective of the twin test.

Context: The Delhi High Court has stayed a trial court's decision to grant bail to the Delhi Chief Minister, who faces charges under the Prevention of Money Laundering Act (PMLA), following a challenge by the Enforcement Directorate (ED) citing the court's failure to apply the required **'twin test' for bail under PMLA.**

Section 45 and Twin Test

- **Section 45 of the PMLA**: It lays down stringent conditions for granting bail, emphasizing that bail is the exception rather than the norm for offences under this law.
- **The Twin Test Requirement:** In bail applications under the PMLA, courts must apply a "twin test" when the public prosecutor opposes bail. This test necessitates two key considerations:
  - **Reasonable Grounds for Innocence**: The court must assess whether there are reasonable grounds to believe that the accused is not guilty of the offence.
  - **Likelihood of Reoffending**: It must also determine whether the accused is unlikely to commit any offence while on bail.
- **Comparative Legislation:** Similar provisions are found in other laws dealing with serious crimes, such as drug trafficking and terrorism, illustrating a broader legal approach to restrict bail in cases deemed highly detrimental to public interest.
- **UAPA Example**: The Unlawful Activities Prevention Act (UAPA) imposes strict bail conditions akin to the PMLA, ensuring that bail is not granted unless the court finds the accusations prima facie true or determines exceptional circumstances warranting release.

Legal challenges to twin test

- **Nikesh Tarachand Shah v Union of India (2017)**: The court ruled the bail provision unconstitutional due to unreasonable conditions, citing violations of the right to equality.
- **Parliamentary Response: Finance Act, 2018:** Parliament reintroduced the provisions through an amendment, prompting fresh legal challenges across various High Courts and eventually the Supreme Court.
- **Vijay Madanlal Choudhary v Union of India (2022)**: A three-judge Bench of supreme court disagreed with the earlier ruling, emphasizing the seriousness of money laundering and its implications for national security.

ECONOMIC TIMES

June 21

CHENAB RAIL BRIDGE

(Syllabus: GS Paper 3 – Infrastucture)

Railways successfully conducts full train run on Chenab Rail Bridge, World's highest; Services to start soon

Context: The Indian Railway conducted a successful trial run on the newly-constructed world's highest railway bridge, Chenab Rail Bridge, in Jammu and Kashmir.

Chenab Rail Bridge

- **Location**: It is located between Bakkal and Kauri in the Reasi district of Jammu and Kashmir (J&K).
- **Height**: The bridge is situated 359 metres above the Chenab riverbed and has a length of 1315 m.
- **World Record:** It is the highest single-arch railway bridge in the world.
- **Rail Link Project**: The bridge is part of the Udhampur-Srinagar-Baramulla Rail Link project.
- **Collaboration**: IITs, DRDO, and the Geological Survey of India.
- **Lifespan**: 120 years

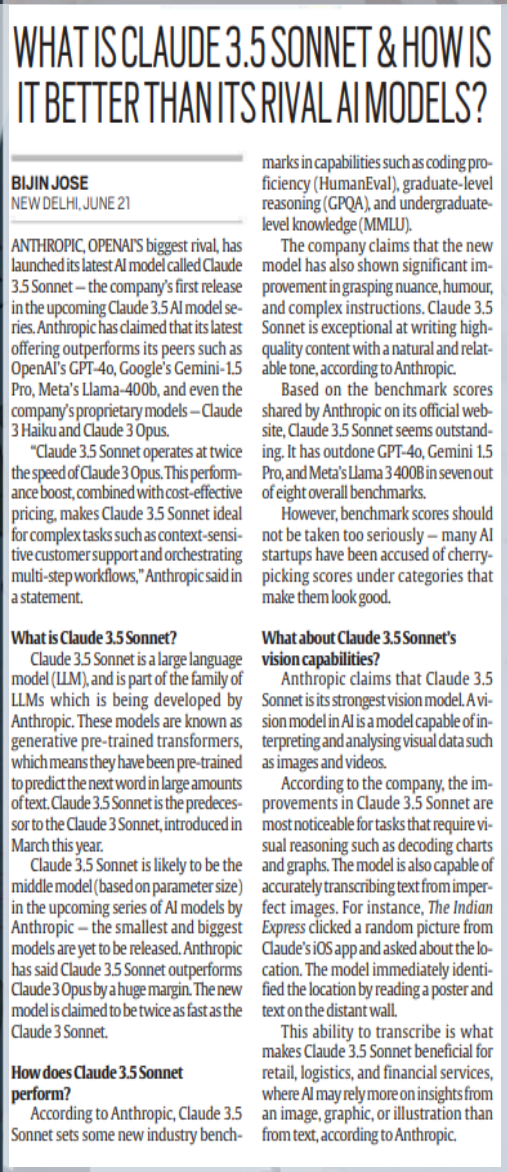
Chenab River

- **About:** The Chenab River is a major river in India and Pakistan.
- **Tributary**: It is a tributary of the Indus River.
- **Origin**: The river is formed by the confluence of two streams, Chandra and Bhaga, at Tandi in the upper Himalayas in the Lahaul and Spiti Districts of Himachal Pradesh.
- **Known as the:** Chandrabhaga in its upper reaches.
- **Flow Through J&K:** It flows west through the Jammu and Kashmir union territory, between the Siwalik Range (south) and the Lesser Himalayas (north).
- **Confluence and Length**: After receiving the Jhelum River near Trimmu, the Chenab empties into the Sutlej River. Its total length is about 605 miles (974 km).
- **Tributaries of the Chenab River**: The tributaries include Miyar Nalla, Sohal, Thirot, Bhut Nalla, Marusudar, and Lidrari.



CLAUDE 3.5 SONNET

(Syllabus: GS Paper 3 – Sci and Tech)



WHAT IS CLAUDE 3.5 SONNET & HOW IS IT BETTER THAN ITS RIVAL AI MODELS?

BIJIN JOSE
NEW DELHI, JUNE 21

ANTHROPIC, OPENAI'S biggest rival, has launched its latest AI model called Claude 3.5 Sonnet – the company's first release in the upcoming Claude 3.5 AI model series. Anthropic has claimed that its latest offering outperforms its peers such as OpenAI's GPT-4o, Google's Gemini-1.5 Pro, Meta's Llama-400b, and even the company's proprietary models – Claude 3 Haiku and Claude 3 Opus.

"Claude 3.5 Sonnet operates at twice the speed of Claude 3 Opus. This performance boost, combined with cost-effective pricing, makes Claude 3.5 Sonnet ideal for complex tasks such as context-sensitive customer support and orchestrating multi-step workflows," Anthropic said in a statement.

What is Claude 3.5 Sonnet?

Claude 3.5 Sonnet is a large language model (LLM), and is part of the family of LLMs which is being developed by Anthropic. These models are known as generative pre-trained transformers, which means they have been pre-trained to predict the next word in large amounts of text. Claude 3.5 Sonnet is the predecessor to the Claude 3 Sonnet, introduced in March this year.

Claude 3.5 Sonnet is likely to be the middle model (based on parameter size) in the upcoming series of AI models by Anthropic – the smallest and biggest models are yet to be released. Anthropic has said Claude 3.5 Sonnet outperforms Claude 3 Opus by a huge margin. The new model is claimed to be twice as fast as the Claude 3 Sonnet.

How does Claude 3.5 Sonnet perform?

According to Anthropic, Claude 3.5 Sonnet sets some new industry benchmarks in capabilities such as coding proficiency (HumanEval), graduate-level reasoning (GPQA), and undergraduate-level knowledge (MMLU).

The company claims that the new model has also shown significant improvement in grasping nuance, humour, and complex instructions. Claude 3.5 Sonnet is exceptional at writing high-quality content with a natural and relatable tone, according to Anthropic.

Based on the benchmark scores shared by Anthropic on its official website, Claude 3.5 Sonnet seems outstanding. It has outdone GPT-4o, Gemini 1.5 Pro, and Meta's Llama 3 400B in seven out of eight overall benchmarks.

However, benchmark scores should not be taken too seriously – many AI startups have been accused of cherry-picking scores under categories that make them look good.

What about Claude 3.5 Sonnet's vision capabilities?

Anthropic claims that Claude 3.5 Sonnet is its strongest vision model. A vision model in AI is a model capable of interpreting and analysing visual data such as images and videos.

According to the company, the improvements in Claude 3.5 Sonnet are most noticeable for tasks that require visual reasoning such as decoding charts and graphs. The model is also capable of accurately transcribing text from imperfect images. For instance, *The Indian Express* clicked a random picture from Claude's iOS app and asked about the location. The model immediately identified the location by reading a poster and text on the distant wall.

This ability to transcribe is what makes Claude 3.5 Sonnet beneficial for retail, logistics, and financial services, where AI may rely more on insights from an image, graphic, or illustration than from text, according to Anthropic.

Context: Anthropic, the main competitor of OpenAI, has unveiled Claude 3.5 Sonnet, marking the debut of its new AI model series, Claude 3.5.

Claude 3.5 Sonnet

- **About:** Claude 3.5 Sonnet is a large language model (LLM) developed by Anthropic, belonging to the family of generative pre-trained transformers (GPTs).
- **Predecessor:** Claude 3.5 Sonnet precedes the Claude 3 Sonnet introduced by Anthropic in March of a recent year, showcasing iterative advancements in AI model development.
- **Anthropic's Model Series**: Positioned as the middle model in size within Anthropic's upcoming series of AI models, Claude 3.5 Sonnet serves as an intermediate between smaller and larger variants.
- **Performance Comparisons**: Anthropic claims Claude 3.5 Sonnet significantly outperforms its predecessor, Claude 3 Opus, demonstrating marked improvements in performance metrics.
    - **Speed**: Anthropic has highlighted that Claude 3.5 Sonnet operates twice as fast as its immediate predecessor, Claude 3 Sonnet, enhancing efficiency in processing capabilities.

Performance of Claude 3.5 Sonnet

- **Coding Proficiency**: Claude 3.5 Sonnet sets a new industry benchmark in coding proficiency, as evaluated by HumanEval.
- **Graduate-Level Reasoning (GPQA)**: According to Anthropic, Claude 3.5 Sonnet excels in graduate-level reasoning tasks, demonstrating advanced capabilities in understanding and processing complex questions.
- **Undergraduate-Level Knowledge (MMLU)**: In terms of undergraduate-level knowledge tasks, Claude 3.5 Sonnet performs exceptionally well, surpassing expectations with its depth of understanding and accuracy.
- **Writing Quality and Tone**: Anthropic reports that Claude 3.5 Sonnet excels at producing high-quality content with a natural and relatable tone, demonstrating its capability to generate engaging and coherent text.

PIB June 21

GOMPHONEMOID DIATOM

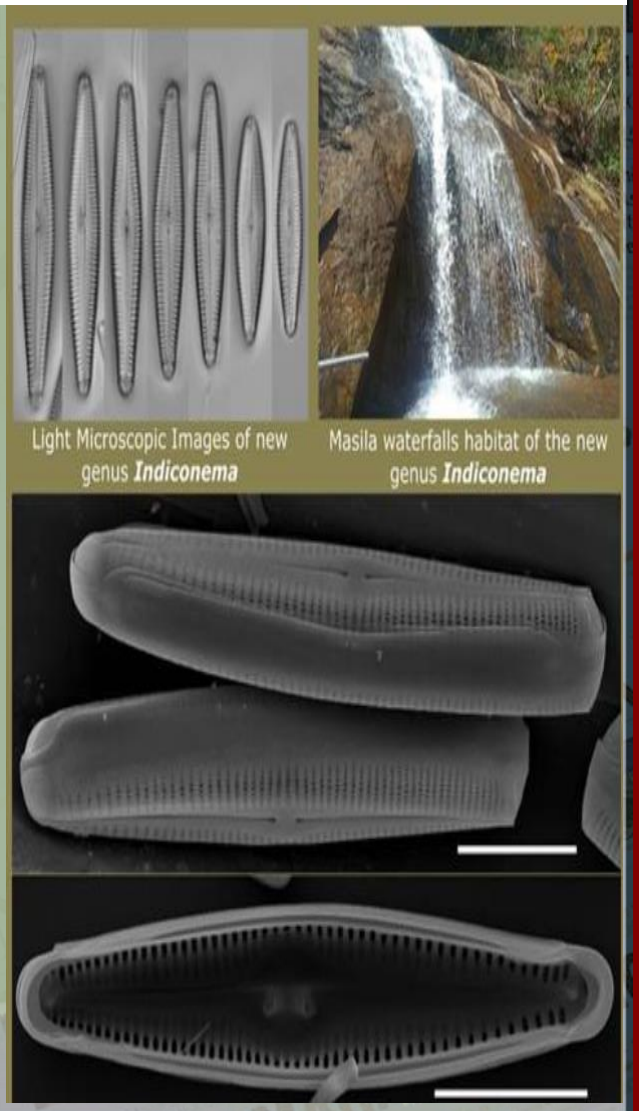
(Syllabus: GS Paper 3 – Env and Eco)

A new freshwater diatom genus discovered from the Eastern and Western Ghats

Context: Researchers have discovered a new genus of the Gomphonemoid diatom found in the clean water river of the Eastern Ghats.

Gomphonemoid diatom

- **About:** Diatoms are microscopic algae that produce 25% of global oxygen, contributing to approximately every fourth breath we inhale.
- **Aquatic Food Chain**: Diatoms serve as the base of the aquatic food chain, supporting marine ecosystems.
- **Indicators**: Due to their sensitivity to water chemistry changes, diatoms are excellent indicators of aquatic health.
- **Habitat**: They are found in almost every aquatic environment including fresh and marine waters.
- **In India**: Diatoms are the first recorded microorganisms in India, with Ehrenberg's first report dating back to 1845 in his publication Mikrogeologie.
    - India hosts nearly 6,500 diatom taxa, with 30% being endemic, reflecting the country's unique biodiversity.
- **Discovery of Indiconema**: Scientists from the Agharkar Research Institute discovered Indiconema, a diatom differing in having a pore field at both the head and foot pole.
    - Indiconema species from the Eastern and Western Ghats, highlighting patterns of endemic species distribution.
- **Biogeographic Connections**: Indiconema is suggested to be sister to Afrocymbella, an East African genus, with historical studies supporting similarities between diatom species from India, East Africa, and Madagascar.



TIMES OF INDIA

Page 13

STATISTICAL REPORT ON AGRICULTURE

(Syllabus: GS Paper 3 – Economy)

Fruits & vegetables top list of all crops in value terms, reveals NSO report

Vishwa.Mohan
@timesgroup.com

New Delhi: In what could be a sign of growing preference of Indian consumers, 'fruits and vegetables' with 28% share occupied the top position in the group of all crops in value terms in 2022-23, higher than the share of cereals (27%), shows a new statistical report, released Friday.

The report on the value of output from agriculture and allied sectors shows the output of 'fruits and vegetables' has increased from Rs 2,87,000 crore in 2011-12 to Rs 4,34,000 crore in 2022-23 at constant (2011-12) prices, about Rs 15,000 crore higher than that of cereals even as they constantly occupy much more acreage than the horticultural produce.



The value of output of 'fruits and vegetables' has increased from Rs 2,87,000 crore in 2011-12 to Rs 4,34,000 crore in 2022-23

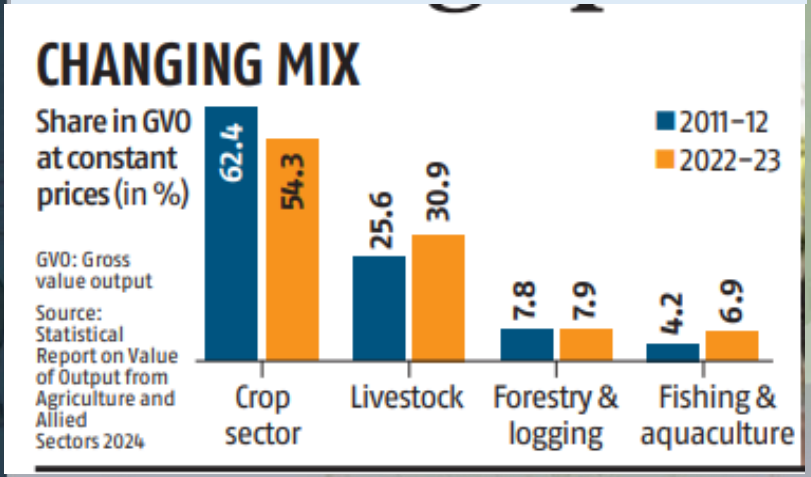
Besides 'cereals' and 'fruits & vegetables', the other segments of the crop-group include pulses, oilseeds, sugarcane, spices and medicinal plants among others occupying the remaining 45% share in terms of value.

Among the overall agriculture and allied sector, the crop-group occupies 54% share followed by livestock (31%), forestry (8%) and fishing (7%) in value of output in 2022-23. Though the crop sub-sector remains the largest contributor of gross value of output (GVO) of the agriculture and allied sectors, its contribution has gradually declined from 62% in 2011-12 to 54% in 2022-23.

According to the report, brought out by National Statistical Office (NSO), Uttar Pradesh reported the highest value of output of cereals whereas highest value of output of fruits and vegetables was in West Bengal in 2022-23.

The report also shows that Gram and Arhar (lentil) together accounted for nearly 59% of the output of 'pulses' group of crops.

Context: A new statistical report released indicates a shifting consumer preference in India, with fruits and vegetables capturing the top position among all crops in value terms for 2022-23, surpassing cereals with a 28% share.



Statistical Report on Value of Output from Agriculture and Allied Sectors 2024

- **About:** The report is a comprehensive and insightful document which provides detailed tables and analysis of values of output of Agriculture, Livestock, Forestry and Fishing sectors from 2011-12 to 2022-23.
- **Released by**: National Statistical Office (NSO),
- **Nodal Agency:** Ministry of Statistics and Programme Implementation (MoSPI).
- **Key findings of Report**:
  - **Comparison with Cereals**: In 2022-23, the value of output for 'fruits and vegetables' surpassed that of cereals by about Rs 15,000 crore, despite cereals occupying more acreage.
  - **Composition of Crop Group**: Apart from 'cereals' and 'fruits & vegetables', other segments like pulses, oilseeds, sugarcane, spices, and medicinal plants make up the remaining 45% share in terms of value.
  - **Sectoral Distribution in Agriculture**: The crop group holds a dominant 54% share in the overall agriculture and allied sector's value of output in 2022-23, followed by livestock (31%), forestry (8%), and fishing (7%).
  - **Declining Contribution of Crop Sector**: While still the largest contributor, the crop sub-sector's share of gross value of output (GVO) in agriculture and allied sectors has decreased from 62% in 2011-12 to 54% in 2022-23.
  - **Regional Variations**: Uttar Pradesh reported the highest value of output of cereals, whereas West Bengal led in the output value of fruits and vegetables in 2022-23.
  - **Dominance of Gram and Arhar in Pulses**: Gram and Arhar (lentil) collectively accounted for nearly 59% of the output in the 'pulses' group of crops, as per the report by the National Statistical Office (NSO).

INDIAN EXPRESS Page 15

PROCESS FOR VERIFICATION OF EVM/VVPATS

(Syllabus: GS Paper 2 – Polity)

11 candidates apply to verify EVM burnt memory: what is this process?

DAMINI NATH
NEW DELHI, JUNE 21

IN A first, 11 candidates in the 2024 Lok Sabha and state Assembly elections have asked for verification of the burnt memory of the Ballot Units (BUs) and Control Units (CUs) of electronic voting machines (EVMs), and of Voter Verified Paper Audit Trail (VVPAT) units.

Eight of the applicants contested the Lok Sabha election, the other three were candidates in Assembly elections in Andhra Pradesh and Odisha.

The remedy of verification was made available to losing candidates by the Supreme Court this April.

The Supreme Court order

On April 26, while upholding the EVM-VVPAT system and rejecting the plea for a return to ballot papers and for 100% counting of VVPAT slips, the court directed the Election Commission of India (ECI) to allow second- and third-placed candidates to seek verification of burnt memories of EVMs and VVPATs of up to 5% of machines in an Assembly constituency or Assembly segment of a Lok Sabha constituency.

The two-judge Bench of Justices Sanjiv Khanna and Dipankar Datta said:

"The burnt memory/ microcontroller in 5% of the EVMs, that is, the control unit, ballot unit and the VVPAT, per assembly constituency/ assembly segment of a parliamentary constituency shall be checked and verified by the team of engineers from the manufacturers of the EVMs, post the announcement of the results, for any tampering or modification, on a written request made by candidates who are at Sl. No. 2 or Sl. No. 3, behind the highest polled candidate."

The court said that candidates or their representatives "shall identify the EVMs [to be verified] by the polling station or serial number", and "shall have an option to remain present at the time of verification". Requests for verification have to be made within seven days of the declaration of the result, the court said.

"The actual cost or expenses for the said verification will be notified by the ECI, and the candidate making the said request will pay for such expenses. The expenses will be refunded, in case the EVM is found to be tampered," the court said. (*Association for Democratic Reforms vs Election Commission of India*, April 26, 2024)

The process of verification

EXPLAINED POLICY

The ECI is yet to finalise the technical standard operating procedure (SOP). The technical SOP, including the methodology, will be released in time for the first set of verifications that are likely in August. However on June 1, the ECI released the administrative SOP for checking and verification of the burnt memory of EVMs and VVPATs.

■ The District Election Officer (DEO) will be responsible for the process.

■ Both the second and third candidates can request that up to 5% of the EVMs and VVPATs per Assembly constituency/ Assembly segment of a Lok Sabha constituency be checked. If both these candidates make the request, each of them would be allowed to have 2.5% of the EVMs verified.

■ The candidates can choose the units to be verified either by giving the polling station number or the unique serial number of the BU, CU, and VVPAT that is made available to candidates before polling.

■ The candidates have to make the request in writing to the DEO concerned, and deposit Rs 40,000 (plus 18% GST) per set of EVMs (the BU, CU, and VVPAT) to the manufacturer concerned.

■ The DEOs will send a list of all such applications to the state Chief Electoral Officer, who will notify the manufacturers of the EVMs, public sector companies Bharat Electronics Ltd (BEL) and Electronics Corporation of India Ltd (ECIL), within 30 days of declaration of results.

■ The checking will commence at the end of the 45-day period after declaration of results, during which Election Petitions against the outcome can be filed by any candidate or elector. Since the results were announced on June 4, Election Petitions can be filed until July 19.

■ The checking will start only if no Election Petitions have been filed. In case a petition has been filed, the checking will start only after a court issues an order specifically allowing the checking to commence.

■ The process is to be started within 30 days of the manufacturers being told if any Election Petitions have been filed. Thus, mid-August is the earliest that the results of the checks can be known.

■ The checking will be done at designated halls within the manufacturers' facilities, with the requisite strong rooms and CCTV cameras in place.

■ Electronic devices, including cell phones and cameras, will not be allowed inside the halls. The hall will have a single entry and exit, with at least one section of armed police force will be deployed there.

Candidates who have applied

The 11 applications together cover 118 polling stations or sets of EVMs and VVPATs. For Lok Sabha constituencies, three candidates each from the BJP and Congress have applied, plus a DMDK and a YSRCP candidate.

Not all these candidates have lost by narrow margins — while the Congress candidate from Kanker in Chhattisgarh was defeated by just 1,884 votes, the Congress candidate at Karnal in Haryana was defeated by more than 2.32 lakh votes.

EC officials argued that the fact that doubts have been raised over only 118 polling stations out of the lakhs in the country, shows the trust in the system of EVMs. However, Jagdeep Chhokar, a founder of ADR, the nonprofit working on electoral reforms that had moved the SC, said the exercise has no real meaning.

"The verification will be done after 45 days, by the same entities [BEL and ECIL] who have programmed the EVMs in the first place, with a cost imposed on the candidates. All this is in the direction of discouraging anybody who wants to apply for verification," Chhokar said.

Context: Following the 2024 Lok Sabha and State Assembly elections, 11 candidates have requested verification of the burnt memory of EVM Ballot Units, Control Units, and VVPAT units for transparency and assurance.

Process for the Verification of EVM/VVPATs

- **Responsibility of District Election Officer**: The DEO is tasked with overseeing the entire verification process as outlined in the SOP.
- **Request for Verification**: Candidates ranked second and third in an election can request verification of up to 5% of EVMs and VVPATs per constituency. If both request, each can verify 2.5%.
    - EVMs facilitate candidate selection through button presses.
    - When a vote is cast, the VVPAT machine, attached to the Electronic Voting Machine (EVM), prints a slip displaying the voter's choice.
- **Selection of Units for Verification**: Candidates can specify units for verification by providing either polling station numbers or unique serial numbers of EVMs and VVPATs.
- **Notification and Processing**: DEOs compile all applications and forward them to the state Chief Electoral Officer, who notifies the manufacturers within 30 days post-results declaration.
- **Timeline for Verification**: It begins after the 45-day Election Petition period, unless a court order mandates otherwise, likely starting in mid-August for the current cycle.

Supreme Court Order on EVMs

- **Upholding EVM-VVPAT System:** The Supreme Court upheld the use of the EVM-VVPAT system for elections, rejecting the plea to revert to ballot papers.
- **Verification of Burnt Memories**: The court directed the Election Commission to allow candidates who secured second or third place to request verification of burnt memories of EVMs and VVPATs from up to 5% of machines per constituency.
- **Process of Verification**: Candidates or their representatives must identify specific EVMs for verification by polling station or serial number. They have the right to be present during the verification process.
- **Cost of Verification**: The Election Commission will notify the expenses for verification, which candidates requesting the process must bear. If tampering is found, these expenses will be refunded.

TIMES OF INDIA Page 5

SURVEY OF ARAVALI

(Syllabus: GS Paper 3 – Env and Eco)



Haryana's baseline survey of Aravalis to map degradation

Ipsita.Pati@timesgroup.com

Gurgaon: The forest and mining departments will carry out the first baseline study of the Aravalis in seven districts of Haryana before putting into action a 6-month plan to protect and revive the ancient hills.

The move was prompted by NGT's directions to Haryana govt for drawing up a plan to restore the Aravalis that have been degraded by mining and concretisation over the decades.

"The first step in the process of restoring Aravalis involves a comprehensive baseline survey across Gurgaon, Nuh, Faridabad, Rewari, Mahendergarh, Charkhi Dadri and Bhiwani," a forest official said on Friday.

The baseline survey will involve gathering information on the ground to eventually use it as the foundation for the Aravali action plan.

The forest and mining department teams will carry out the survey on foot, employ drones and refer to GIS mapping data for areas where the Aravalis lie. They will document information such as geographical contours of the hills, existing vegetation and wildlife, encroachments, mining, and open waste dumping, among other details.

The teams will also refer to revenue records to check ownership of Aravali land parcels. Since Haryana never mapped out the state's forest land, most of the Aravalis are under the revenue department, or panchayat and privately owned land.

The Aravali Rejuvenation Board that the forest department will submit details of funds required for the baseline survey to HSPCB within 10 days.

Last year, Haryana govt formed the 7-member Aravali Rejuvenation Board to deal with complaints on illegal mining and protecting the hills.

HSPCB officials told **TOI** on Friday that after funding is approved, the survey will take another three months to complete, and based on its findings, the six-month action plan will be implemented.

The plan involves planting of indigenous grass and shrubs in the Aravalis during the monsoon. Another focus area is to recharge groundwater zones, for which the board may seek the help of Central Ground Water Authority (CGWA) to monitor the process every year.

In areas damaged from quarrying of stones, measures will be taken to restore soil composition with plantation drives and/or adding chemicals and organic matter. Surveillance to keep encroachments, illegal construction and mining in check is another problem area that the plan intends to enforce by deploying 600 home guards across Aravali districts.

Environmentalist SS Oberoi, who is a member of the Aravali Rejuvenation Board, told **TOI** on Friday that implementation of the action plan "renews hope" for preserving the region's ecosystem.

"The forest department will get Rs 1 crore from HSPCB to carry out the baseline survey. The amount will be released once forest ACS (additional chief secretary) sends out a request to the pollution control board for the same. The process will start soon," he said.

Despite a blanket ban in three south Haryana districts (Gurgaon, Nuh and Faridabad), quarrying of stones and sand remains a means of livelihood for local miners who supply to the construction industry.

Apart from mining, Aravali hills have been flattened over the years to make way for roads, farmhouses and other construction as cities expand rapidly.

The NGT, while hearing a petition by Aravalli Bachao Citizens Movement in 2022, directed Haryana govt to take immediate action to protect the hills. But over a year later, in Nov 2023, NGT said the state wasn't taking its orders "seriously" to crack down on mining.

SURVEY TO TAKE 3 MONTHS

WHAT IS A BASELINE SURVEY?
It is a comprehensive study of the hills in 7 districts of Haryana - Gurgaon, Nuh, Faridabad, Rewari, Mahendergarh, Charkhi Dadri and Bhiwani. It will become the foundation of a plan to protect the Aravalis and restore degraded forest land

WHAT WILL IT INVOLVE?
Forest and mining departments will carry out physical surveys of Aravali regions and use drone and GIS mapping data to gather information about the existing condition of the ancient hills

FUNDING AND TIMELINE | HSPCB will provide ₹1 crore to forest and mining departments to carry out the survey after documentation is completed. Survey is likely to take three months to complete after funds are released

What will the survey study?
- Extent of illegal mining and its damage to ecosystem
- State of vegetation and wildlife population in the hills
- Areas degraded by illegal construction of roads, farmhouses, etc.
- Legal status and ownership details of Aravali land

What happens after the survey?
A 6-month action plan will be implemented based on the survey's findings. For example, if a hill has been flattened due to mining, a plantation drive will be carried out at the spot. If illegal construction is found, it will be demolished before plantation is carried out

SOME PLANNED MEASURES ARE
- Planting of indigenous grass, shrubs and trees to revive ecosystem
- Restoring groundwater recharging zones
- Deploying 600 home guards for surveillance

WHAT PROMPTED THIS SURVEY?

2022: NGT was hearing a petition by Aravalli Bachao Citizens Movement on rampant illegal mining in the Aravalis when the tribunal ordered Haryana govt to make an action plan for protecting the Aravalis.

2023: Haryana govt tells NGT it has formed a 7-member Aravali Rejuvenation Board to assess and crack down on mining and take steps to protect the hills

> It is the Board's plan to initiate the baseline survey and steps thereafter

Context: The forest and mining departments will carry out the **first baseline study of the Aravalli** in seven districts of Haryana before put ting into action a 6-month plan to protect and revive the ancient hills.

Baseline Survey

- It is a comprehensive study of the hills in 7 districts of Haryana - Gurgaon, Nuh, Faridabad, Rewari, Mahendergarh, Charkhi Dadri and Bhiwani. It will become the foundation of a plan to protect the Aravalli and restore degraded forest land.

Aravalli Range

- **Location:** North-western of India, stretching from Delhi to Gujarat through Haryana and Rajasthan
- **Historical Significance**: It stands as one of the oldest fold mountains globally, bearing witness to millions of years of Earth's history.
- **Length:** 670 km
- **Formation**: Its formation is deeply rooted in the collision of tectonic plates during the Proterozoic era, shaping the landscape we see today.
- **Geological Context**: As part of the Indian Shield, it represents a significant geological formation formed through ancient cratonic collisions.
- **Highest Peak**: Guru Shikhar Peak (1722m) on Mount Abu.
- **Rivers**: Major rivers like Banas, Sahibi, and Luni originate from the Aravalli, contributing to the rich hydrology of the region and its surrounding areas.
- **Erosional History**: Despite once towering to great heights, the Aravalli has weathered over millions of years, attesting to the relentless forces of erosion.
- **Minerals**: The range boasts abundant mineral resources like copper, zinc, lead, and marble, contributing to economic activities and historical significance.
- **Division**: It can be classified into two main sections: the Sambhar-Sirohi ranges, featuring notable peaks like Guru Shikhar, and the Sambhar-Khetri ranges, characterized by discontinuous ridges.

DTE June 21

WORLD INVESTMENT REPORT 2024

(Syllabus: GS Paper 3 – Economy)

Green signal: Significant foreign investment in Africa's clean energy sector in 2023 encouraging, says UNCTAD

Context: According to the World Investment Report 2024, foreign investment in Africa saw a slight decline in 2023, but the clean energy sector emerged as a significant positive highlight.

World Investment Report 2024

- **About:** It focuses on trends in foreign direct investment (FDI) worldwide, at the regional and country levels, and emerging measures to improve its contribution to development.
- It also provides analysis on global value chains and the operations of multinational enterprises, with special attention to their development implications.
- **Released by:** UNCTAD

Key findings

- The Report indicates that the value of international project finance deals in African nations plummeted by 50 per cent to $64 billion in 2023, following a 20% decrease in 2022.
- The largest greenfield announcement in 2023 was a green hydrogen project in Mauritania, anticipated to bring in $34 billion in investment.
- Africa has accounted for about 30% of all investment values relevant to the Sustainable Development Goals (SDG) in developing countries, with the figure slightly lower at 27% in 2023.
- Global foreign direct investment (FDI) fell by 2% to $1.3 trillion in 2023 amid an economic slowdown and rising geopolitical tensions.

United Nations Conference on Trade and Development (UNCTAD)

- **About**: UNCTAD is a permanent intergovernmental body established by the United Nations General Assembly.
- **Objective:** Its objective is to assist developing countries, especially the least developed countries, and countries with economies in transition, to integrate beneficially into the global economy.
- **Focus**: on four main areas: trade and development, investment and enterprise, technology and innovation, and macroeconomics and development policies.
- **Founded in**: 1964.
- **Headquarter**: Located in Geneva, Switzerland.

BUSINESS STANDARD

June 21

CO-OPERATIVE BANKS

(Syllabus: GS Paper 3 – Economy)

RBI cancels licence of The City Co-operative Bank over inadequate capital

Context: The Reserve Bank of India canceled the licence of the City Co-operative Bank, Maharashtra for lacking adequate capital and earning prospects.

Co-operative Banks

- **About:** It refer to those financial institutions under the Banking System in India that operate on the principles of cooperation and mutual benefit for their members.
  - They belong to their members who are both the owners and customers of the bank.
- **Basis of establishment**: Co-operative banks are financial entities established on a co-operative basis and belonging to their members.
  - The customers of a co-operative bank are also its owners.
  - Like other banks, the cooperative banks are founded by collecting funds through shares, accept deposits and grant loans.
- **Regulation**: In India, they are registered under the Co-operative Societies Act of the State concerned or under the Multi-State Co-operative Societies Act, 2002.
  - They are regulated by the Reserve Bank of India (RBI).
  - They are governed as per the Banking Regulations Act 1949 and Banking Laws (Co-operative Societies) Act, 1955.
- **Classification Of Co-operative Banks:** Divided into two categories which can further be subdivided:
  - **Urban Co-operative Banks:** Operate in urban and semi-urban areas, catering mainly to small borrowers and businesses.
    - ✓ Categorized into Scheduled Banks and Non-Scheduled Banks based on their regulatory status.
  - **Rural Co-operative Banks**: Focus on serving the financial needs of rural areas.
    - ✓ Divided into two main categories:
    - ✓ **Short-Term Structures**: Include State Cooperative Banks, District Cooperative Central Banks (DCCBs), and Primary Agricultural Credit Societies (PACS).
    - ✓ **Long-Term Structures:** Include State Cooperative Agricultural and Rural Development Banks (SCARDBs) and Primary Cooperative Agricultural and Rural Development Banks (PCARDBs).

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