Prelim Bits 18-10-2023 | UPSC Daily Current Affairs

Marine Cloud Brightening

Australia's Reef Restoration and Adaptation Program is exploring whether cloud brightening could reduce coral bleaching.

- Cloud brightening is a phenomenon that occurs when aerosols are injected into clouds by natural events such as volcanic eruptions.
- **Marine Cloud Brightening** – Also called as *cloud whitening or cloud brightening,* it was originally proposed by *John Latham* in 1990 to control global warming by altering Earth's energy balance.
- It is a solar geo-engineering technique that involves *spraying sea salt into low-lying clouds* to increase the reflectance of cloud cover that will reduce the amount of incoming solar radiation striking the surface.
- Spraying large quantities of microscopic seawater droplets will create extra droplets and make the cloud brighter.
- Sea salt scatters light directly and provides additional shade.
- **Significance** – It is a way to shield parts of ocean (absorbs approximately 93% of incident solar radiation) from extreme heat.
- Modelling studies suggest that it could delay the expected decline in coral cover.
- It will be *short-lived and reversible* as sprayed particles persist in the atmosphere for few days.

The Intergovernmental Panel on Climate Change (IPCC) estimates humanity's unintentional release of aerosols offsets around 30% of the warming effect due to greenhouse gases.

References

1. The Hindu| Marine Cloud Brightening

TV- D1 Mission

ISRO is set to launch its first-ever test flight, TV-D1, for the Gaganyaan mission, marking a pivotal moment in India's pursuit of human spaceflight.

- Test Vehicle Abort Mission-1 (TV-D1) is an abort test that will evaluate the crew module's readiness for the Gaganyaan mission.

- TV- D1 features a *single-stage rocket* powered by *liquid propellants* for this mission.
- It carries payloads including the
    - **Crew Module (CM)-** It will take the crew to the space which is under development and is being tested.
    - **Crew Escape System (CES)-** In case of any damage to the rocket, the crew will have to be taken away from the rocket and saved.
- This flight simulation replicates an abort condition during the ascent trajectory, corresponding to a *Mach number of 1.2*, mirroring conditions in the Gaganyaan mission.

Gaganyaan envisages demonstration of human spaceflight capability to an orbit of 400 km for a 3 days mission and bring them back safely to earth, by landing in Indian sea waters.

Other Modules of Gaganyaan Mission

- **ECLSS** - Environmental control and life support systems will be used for controlling the temperature, oxygen, wastage process, vibration, fire hazards and many other things.
- **IVHMS** - Integrated Vehicle Health Management System will sense an imminent failure and take abort action autonomously.

References

1. The Hindu| TV-D1 Mission

The National Programme on AI (NPAI)

7 working groups of Ministry of Electronics and Information Technology (MeitY) had submitted the 1st edition of IndiaAI report.

- Umbrella programme by the *Ministry of Electronics and Information Technology (MeitY)*
- **Aim** - For leveraging transformative technologies to foster inclusion, innovation, and adoption for social impact
- **Content repository for NPAI** - INDIAai (The National AI Portal of India)

- **Components**
    - **India Datasets Platform** - It will be one of the largest collections of anonymized datasets that will be used by Indian researchers to train their multi parameter models.
    - **India AI Compute Platform**- It is a public-private partnership project that will create substantial GPU (Graphics processing unit) capacity for our startups and researchers.

- India AI will also support the development of AI chips in partnership with the *Semicon India program*.

INDIAai portal is an initiative of MeitY, National e-Governance Division (NeGD) and National Association of Software and Service Companies (NASSCOM)

Reference

1. PIB| IndiaAI Report

Election Seizure Management System (ESMS)

The Election Commission of India (ECI) has developed Election Seizure Management System (ESMS) for real-time updates.

- A tech platform for real-time *updates on seizures* from the field by *state and central enforcement agencies*.
- **Objective** - To check the flow of illegal cash, drugs and freebies such as sarees, liquor etc. thereby ensuring free and fair elections
- **Features –**It ensures seamless coordination and intelligence sharing amongst enforcement agencies.
- It will be used for the 1st time during the State Assembly Elections that are scheduled for November 2023 in the *5 states of Mizoram, Chhattisgarh, Madhya Pradesh, Rajasthan and Telangana*.
- It will also monitor action taken by Central and State enforcement agencies against such offences.
- **Nodal agencies** – State nodal officers, District nodal officers and flying squad teams.

Formed on 25th January 1950, ECI is a 3-member constitutional autonomous body to conduct and regulate elections to the offices of the President and Vice-President of India, Parliament, State Legislative Assemblies and Legislative Councils.

Use of technology in Indian elections

- **cVIGIL Application** – For filing Model Code of Conduct Violation)
- **Suvidha Portal** – For online nomination, permission etc for political parties and candidates.
- **GARUDA** – Geographical Asset Reconnaissance Unified Digital App helps in coordination between Booth Level officers (BLOs).
- Linking of Aadhaar with voter ID
- **ETPBS** – Electronically Transmitted Postal Ballot System enables the entitled service voters to cast their vote.

- A **voter verification system** that uses biometric software, such as facial recognition.

Reference

1. Financial Express| ESMS

Ethics Committee in Parliament

Recently, Lok Sabha speaker has referred a complaint against sitting Member of Parliament (MP) to the House Ethics Committee.

- Each house of the parliament have their own ethics committee.

	Rajya Sabha	Lok Sabha
Constitution	1997	2000
Composition	10 members including chairman	15 members including chairman
Appointment	Nominated by Rajya Sabha Chairman	Nominated by Lok Sabha Speaker
Term	Not exceeding 1 year	Not exceeding 1 year

- **Functions of Ethics Committee**
  - To *oversee the moral and ethical conduct* of the Members of Parliament.
  - To *examine the cases referred* to it (by Speaker in LS and by Chairman in RS) with reference to ethical and other misconduct of Members.
  - To *formulate a code of conduct for members* and suggest amendments to the code of conduct from time to time.
  - To *tender advice to members* on questions involving ethical standards either suo motu or on receiving specific requests
- **Complaints of ethics** – *Any person* can make a complaint or the committee may also take up matters *suo motu*.
- It may be for alleged unethical behaviour or breach of Code of Conduct by a member or alleged incorrect information.
- **Punishment for malpractice** – Committee can recommend imposition of one or more of the *sanctions like censure, reprimand, and suspension* for a specific period.

In the case of the Ethics Committee, only an MP can be examined for misconduct whereas both MPs and non- MPs can be accused of breach of privilege by the Privileges Committee.

References

1. Indian Express| Referral of complaint to Ethics Committee
2. Lok Sabha| Ethics Committee in Parliament

Other Important News

Ayurveda Day

• Celebrated on *November 10* since 2016 as a mark of respect to Lord Dhanvantari, God of Ayurveda.
• **2023 Theme –** *"Ayurveda for One Health"* with tag line 'Ayurveda for everyone on every day'

Yashasvini

• Central Reserve Police Force (CRPF's) *all women* motorcycle cross-country expedition.
• Starts from Srinagar, Shillong, and Kanyakumari and will converge at the Statue of Unity in Kevadia, Gujarat.
• **Organised by** - CRPF with the Ministry of Women and Child Development.
• **Objective** - To spread the message of Nari Shakti, Beti Bachao Beti Padhao, unity, integrity and women empowerment.

WHO's Southeast Asia Regional Office (SEARO)

• SEARO is one of the 6 WHO Regions and its establishment was approved at the 1st World Health Assembly in *1948.*
• It has *11 Member States* - Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste.
• It is based in *New Delhi* and has 8 flagship priorities.

Apna Chandrayaan

• It is a webportal launched by the Ministry of Education.
• It has activity-based support material such as quiz , puzzles, etc for school students on Mission Chandrayaan-3.
• It was developed by NCERT under the aegis of the Department of School Education & Literacy (DoSEL), Ministry of Education.

Balfour Declaration

• The Declaration was a public statement issued in 1917 by British Foreign Secretary Arthur Balfour to Lord Rothschild, a leader of the British Jewish community.
• The statement, for the first time, promised British support for a "Jewish national home" in Palestine, at the time a British Mandate.
• It went on to be the basis of the creation of Israel, 30 years later.

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