

DAILY CURRENT AFFAIRS

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Mount Etna

Syllabus: GS1/Physical Geography

In News

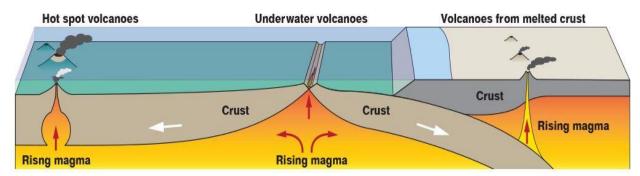
• **Mount Etna**, one of the world's most active volcanoes, belched smoke and ashes in a new eruption.

About Mount Etna

- Mount Etna is Europe's most active volcano and one of the largest in the world.
- Its recorded volcanic activity dates back to 1500 B.C. Since then, it has erupted more than 200 times.
- The current eruptions at Etna have led to flight cancellations at nearby airport.

What is a volcano?

- Volcanoes are **openings**, **or vents** where lava, tephra (small rocks), and steam erupt onto the Earth's surface. Volcanoes can be on land and in the ocean.
- These volcanic areas usually form mountains built from the many layers of rock, ash or other material that collect around them.
- Volcanoes can be active, dormant, or extinct.
 - Active volcanoes are volcanoes that have had **recent eruptions** or are expected to have eruptions in the near future.
 - Dormant volcanoes no longer produce eruptions, but might again sometime in the future.
 - Extinct volcanoes will likely never erupt again.
- There are four main types of volcanoes: cinder cones, composite or stratovolcanoes, shield volcanoes and lava domes.
 - Their type is determined by how the lava from an eruption flows and how that flow affects the volcano, and, as a result, how it affects its surrounding environment.



How do volcanoes erupt?

- The way a volcano erupts depends on the **amount of gas and silica** (a molecule of silicon oxygen) in the magma.
- Magma with lots of silica is thick and gooey, while magma low in silica is thin and runny. And in magma with lots of gas, bubbles form as it rises. The **more bubbles that form, the more explosive the eruption.**

- It allows **material warmer than its surroundings** to escape from its interior. When this material escapes, it causes an eruption.
- When magma erupts from a volcano, it is called **lava**.

Volcanoes particularly active in Pacific Ring of Fire

• Some of the most active volcanoes are located in the Pacific Ring of Fire, which includes **New Zealand**, **Southeast Asia**, **Japan and the western coast of the Americas**. About 90% of all earthquakes worldwide strike within this region.



Effects of volcanism

- **On Environment:** Creation of volcanic landforms and impact on climate and weather patterns, destruction of vegetation and habitats, introduction of new species, formation of new ecosystems etc.
- **Health Threats:** Suffocation, infectious diseases such as conjunctivitis, acute and chronic respiratory diseases from falling ash and breathing gases and fumes burns and traumatic injuries, and skin irritations from acid rain.
- Ash and chemicals from the eruption can also generate risk of food and water contamination, and compromise basic services, like water, transportation, communications and health services.

Can scientists predict volcanic eruptions?

• Scientists are capable of predicting volcanic eruptions hours, or sometimes several days, in advance. Scientists use seismographic data from earthquakes and other tremors, because those can be a precursor to volcanic eruptions.

Source: IE

Parliamentary Committee Suggested for Re-institution of Adultery

Syllabus:GS1/ Society News

• The Parliamentary Committee on Home Affairs has suggested that adultery should be re-instituted as a crime in the Bharatiya Nyaya Sanhita (BNS), 2023, the proposed law to replace the Indian Penal Code (IPC), 1860.

What is adultery?

- Adultery is a **voluntary sexual relationship** between a married person and someone who is not their spouse.
- **The Indian Penal Code**, **1860** contained Section 497, defined adultery as a criminal offense. This law made it a crime for a man to have sexual intercourse with the wife of another man without that man's consent.
- The law treated women as the property of their husbands and did not provide for any punishment for women who committed adultery.

Supreme court Judgment

- **In Joseph Shine vs Union Of India**, **2018**, the Supreme Court struck down Section 497 of the IPC on grounds that included discrimination.
- The Supreme Court said that the law was **archaic**, **arbitrary**, **and paternalistic** and that it infringed upon a woman's autonomy, dignity, and privacy, and that it reduced the married woman to being her husband's property.
- According to the judgment Section 497 was violative of Articles 14, 15, and 21
 of the Constitution, which protect the fundamental Right to equality, Right to
 non-discrimination, and Right to life respectively.
- The Supreme court said that if it is treated as a crime, there would be immense **intrusion into the extreme privacy** of the matrimonial sphere. It is better to be left as a ground for divorce.

Recommendation of Parliamentary Committee

- The committee is of the view that the institution of marriage is considered sacred in Indian society and there is a need to safeguard its sanctity.
- Hence adultery should be reinstated as a criminal offense, but it should be made gender-neutral that is, both men and women should be punished for it.

Source: IE

PM Janjati Adivasi Nyaya Maha Abhiyan

Syllabus: GS2/Government Policies and interventions In News

The Prime Minister has launched The PM Janjati Adivasi Nyaya Maha
 Abhiyan for vulnerable tribal groups on the occasion of <u>Janjatiya Gaurav</u> <u>Divas</u>.

About

- The **PM Janjati Adivasi Nyaya Maha Abhiyan** is meant to ensure last-mile welfare scheme delivery and protection for **Particularly Vulnerable Tribal Groups (PVTGs).**
- The PM also launched the Visksit Bharat Sankalp Yatra, a nationwide programme to reach out to all villages and include those eligible for various central schemes.

Who are Particularly Vulnerable Tribal Groups (PVTGs)?

- In 1973, the **Dhebar Commission** set up a separate category for **Primitive Tribal Groups (PTGs)**.
 - In 1975, the Union identified 52 tribal groups as PTGs.
 - In 1993, 23 more groups were added to the list. Later, in 2006, these groups were named PVTGs.
- PVTGs are a **more vulnerable group** among tribal groups in India.

- These groups have primitive traits, geographical isolation, low literacy, zero to negative population growth rate and backwardness.
- Moreover, they are largely dependent upon hunting for food and a pre-agriculture level of technology.
- It is said that more developed tribal groups take advantage of the development funds, and thus, there is a **need to direct more funds towards PVTGs.**
- According to the 2011 Census, **Odisha** has the largest population of PVTGs followed by Madhya Pradesh.

PM PVTG Development Mission?

- As part of the mission, basic facilities such as road and telecom connectivity, electricity, safe housing, clean drinking water and sanitation, improved access to education, health and nutrition and sustainable livelihood opportunities will be provided to areas where these tribal groups live.
- Several ministries will work in tandem to implement development projects.
 - The schemes include Pradhan Mantri Gram Sadak Yojana, Pradhan Mantri Gramin Awas Yojana, and Jal Jeevan Mission, among others.

Janjatiya Gaurav Divas

- In 2021, Government of India declared **15th November** as Janjatiya Gaurav Divas dedicated to the memory of brave tribal freedom fighters.
- The date is the **birth anniversary of <u>Sri Birsa Munda</u>** who is revered as Bhagwan by tribal communities across the country.
- Birsa Munda fought bravely against the exploitative system of the British colonial system and spearheaded movement against British oppression giving a call for 'Ulgulan' (Revolution).

Source: IE

Seeking Access to Anonymised Data

Syllabus: GS2/ Government Policies & Interventions In News

• The Centre is considering **issuing a directive to big tech** companies like Facebook, Google and Amazon to share **anonymised personal data in their possession** with a government-backed database.

<u>About</u>

• Digital India Bill:

- The upcoming Digital India Bill will mandate big tech companies to deposit all the non-personal data they hold to the India datasets platform.
- The Digital India Bill is a key part of a comprehensive legal framework which encompasses various legislative measures such as
 - The Digital Personal Data Protection Act, 2023,
 - The draft Indian Telecommunication Bill, 2022, and
- A policy addressing the governance of non-personal data.

Sharing & monetization of Non-personal data:

- Non-personal data held by the Indian datasets platform could also be monetised.
- The platform will play a crucial role in boosting the artificial intelligence ecosystem in India by providing a "robust foundation" for data-driven innovation and development.

 The IT Ministry had released the draft National Data Governance Framework Policy under which it merely "encouraged" private companies to share non-personal data with startups and Indian researchers.

Anonymised personal data/non-personal data

- Anonymised personal data, or non-personal data, is any data set that does not contain personally identifiable information.
- It could include aggregated information, such as the overall health data of a particular demography, weather and climate data of an area, and traffic data, among others.

Significance

- Mandatory sharing of information: A contract is usually signed with the big tech companies when a user joins their platform, which includes their terms of service and privacy policy.
 - The Digital India Bill will propose that under the terms of service when a user agrees that a company can use their anonymised personal data, that particular information will mandatorily have to be deposited to the India datasets platform.
 - The move, if finalised, could see these companies claim intellectual property rights over such data, and initiate discussions around the ownership of such data.
- **No exclusive ownership of data:** The government has long been interested in this issue since such datasets form the bedrock of artificial intelligence (AI) models.
 - The Centre's idea is that big tech companies have reaped dividends by building algorithms on the basis of Indians' non-personal data and that they cannot claim exclusive ownership over it.

Data Governance

- Meaning: Data governance is the process of managing the availability, usability, integrity and security of the data in enterprise systems, based on internal data standards and policies that also control data usage.
 - **Effective data governance** ensures that data is consistent and trustworthy and doesn't get misused.
- Significance of data governance in India:
 - India has **embraced technology and digitalisation** to drive economic growth and to improve the lives of its citizens.
 - Significant progress has been made in the use of digital technologies to provide access to bank accounts and in the promotion of digital transactions through the Unified Payments Interface (UPI) and other options.
 - However, as the country continues to evolve, it must also ensure that its
 digital strategies and data governance are inclusive,
 transparent, secure, and conducive to sustainable development.

Digital India Act, 2023

- Remodelling of the IT Act:
 - The **Digital India Act**, **2023** is a broad overhaul of the **Information Technology Act**, **2000**.
- Covering new and complex issues:
 - The Digital India Act would cover provisions such as Artificial Intelligence (AI), deepfakes, cybercrime, competition issues among internet platforms, and data protection.
 - The new law would seek to address "new complex forms of user harms" that have emerged in the years since the IT Act's enactment, such as catfishing, doxxing, trolling, and phishing.
- Reconsideration of the 'safe harbour' provision:

- The government is reconsidering a key aspect of cyberspace 'safe harbour', which is the principle that 'intermediaries' on the internet are not responsible for what third parties post on their website.
 - This is the principle that allows social media platforms to avoid liability for posts made by users.
- Changes in the new Act:
 - Platforms for which safe harbour was applied as a concept "have now **morphed into multiple types of participants** and **platforms** on the internet, functionally very different from each other, and **requiring different types of guardrails and regulatory requirements**."
 - Social media platforms' own moderation policies may now take a backseat to constitutional protections for freedom of expression.
- Subsumption of other digital legislations:
 - **Amendment to the IT Rules, 2021** says that platforms must respect users' free speech rights. Three Grievance Appellate Committees have been established to take up content complaints by social media users.
 - A slew of such digital legislation is now likely to be subsumed into the Digital India Act.

Additional mechanisms:

- It would be one of the prongs of the Digital India Act, with the National Data Governance Policy and amendments to the Indian Penal Code, are part of the rules formulated under the Digital India Act.
- A new "adjudicatory mechanism" for criminal and civil offences committed online would come into place.

Source: TH

Forces in Nature

Syllabus: GS 3/S&T

In Context

• Scientists have sought to describe the forces that dictate interactions on the largest and smallest scales, from planets to particles.

About

• They understand that there are **four fundamental forces** — gravity, electromagnetism, and the strong and weak nuclear forces — that are responsible for shaping the universe .

The Four Fundamental Forces

- **Gravity:** In Newtonian physics, gravity is the attraction between any two objects in the universe. The force's strength increases with the objects' mass and diminishes with the distance separating them.
 - Gravity keeps you from floating away, and brings galaxies together.
 - It is the weakest of the fundamental forces.
 - The net effect of gravity is powerful only because it has a very long reach without causing any repulsion.
 - The feeble gravitational forces exerted by every small piece in a body all add up.
 - **Gravity** draws objects together, and can be understood as bends and curves in the fabric of space-time. Anything with mass makes these dents, from the Earth and Moon to turtles and cats.
- **The Electromagnetic force:** The electromagnetic force, like gravity, has infinite range but is a lot stronger.
 - However, its net effects are often not felt because it can be both attractive and repulsive, which tend to cancel. This is the force, through interaction between electric charges, that makes television work and magnets stick, causes friction between bodies and tension in strings, and all of chemistry.
 - The **electromagnetic** force holds together objects with opposite electrical charges, like the proton and electron that make up one hydrogen atom.
- **The weak force:** It operates only up to distances of 10-18 m about one-thousandth the size of a proton.
 - For reasons we don't understand, it acts only on particles that, if they are moving near the speed of light, spin counter-clockwise with respect to the direction of their momentum.
 - As a result, this force would vanish in a universe in the mirror dimension: there, the same particles would spin clockwise relative to their momentum.
 - The weak interaction is responsible for producing the radiation used in nuclear medicine.
 - The weak force can change a quark from one type to another: from up to down. That change could turn a proton into a neutron or vice versa. This process would also produce a neutrino and an electron or anti-electron through a process called beta decay.
- The strong force: It ranges over somewhat longer distances, around 10-15 m. It keeps the nucleus of an atom bound together, rather than flying apart, and sustains the nuclear fusion that powers the sun.
 - The strong force holds together things that have the same charge.
 - It's stronger than the electromagnetic force, so that's why atoms with multiple protons and neutrons don't fly apart.
 - But most importantly, it holds together the quarks that make up protons and neutrons themselves. Each proton contains two up quarks and one down. Each neutron contains two down quarks and one up.

Do you know?

- A key concept that describes all these interactions is the **force-carrier**.
- A **force-carrier** is any species of particle that mediates the interactions between particles that experience that force.
 - We can call these particles force-feelers.
- There is no shortage of force-carriers in nature.
 - Sometimes, two or more force-feelers can unite to become a force-carrier.
- The force-carrier of gravity is the graviton, and that of electromagnetism is the photon.
- The fundamental force-carriers exist purely due to mathematical regularities in the equations describing the interactions. That is, at a fundamental level, these forces are nature's symmetries.
- The weak force is carried by W bosons and the Z boson. The strong force is carried by gluons.

Facts In News

Constantine Joseph Beschi

Syllabus: GS1/ Personalities

In Context

• It has been found that **Constantine Joseph Beschi** maintained a close friendship with **Chanda Sahib**, **Nawab of the Carnatic**.

About Constantine Joseph Beschi

- He was the Italian Jesuit missionary and Tamil scholar
- He was known as **Veeramamunivar**.
- He dressed like a Hindu sanyasi and travelled in a palanquin with a tiger skin to sit upon.
- He arrived in **Goa in 1700** and abstained from the "use of flesh and fish" and employed two Tamil youths to dress his food according to the Hindu custom.
- Roles and responsibilities: He had acted as **Dewan of Chanda Sahib** and he retained the habit of a religious devotee.
 - Chanda Sahib also gifted him four villages Bokalur, Malwav, Arasur and Nullur north of the Kollidam in Tiruchi district, yielding a net revenue of ₹12,000 a year.
 - He also studied Sanskrit, Telugu, and Tamil assiduously and became a master of these languages, especially Tamil.
 - He was known as Thairiyanathaswamy and its translation reads as Veeramamunivar.
 - He considered **Chanda Sahib as the ruler of the banks of the Cauvery**.
 - As per the guidelines of the missionary works of the Society of Jesus (Jesuits), he found Chanda Sahib a good source for his work.
 - His principal efforts were directed towards the conversion of the Idolaters.
 - He delved deep into Tirukkural, Naladiyar, Civaka Cintamani, and other celebrated Hindu works.
 - He held the office of Dewan in Tiruchi till 1740.
 - When Chanda Sahib was arrested and made a prisoner after Tiruchi was besieged by the Maratha army under Nather Singh,
 Veeramamunivar went to Manapadu and remained there in the service of the church and died in 1742.
- Biography: The first biography of Veeramamunivar in Tamil written by A.
 Muttusami Pillei, manager of the College of Fort Saint George and Moonshee
 (secretary) to the Tamil Translator to Government

Source: TH

Financial Action Task Force (FATF)

Syllabus: GS2/International Organisations

News

 A Financial Action Task Force (FATF) team has arrived in India to evaluate the implementation of the required legal framework against money-laundering and terrorist financing.

Financial Action Task Force (FATF)

- The Financial Action Task Force (FATF) is an intergovernmental organization which leads global action to tackle money laundering, terrorist and proliferation financing.
- **History:** FATF was established in **1989** by the G7 to examine and develop measures to combat money laundering. It originally included the G7 countries, the European Commission and eight other countries. In 2001, the FATF expanded its mandate to also combat terrorist financing.
- **Members:** FATF has **40** members including **India.** Indonesia has become a recent member of FATF.
- **Mandate:** FATF has the authority to issue warnings and sanctions against countries that fail to comply with its standards, such as suspension of membership and blacklisting.

FATF 'Grey list' and 'Blacklist'

- **Black List:** Countries known as Non-Cooperative Countries or Territories (NCCTs) are put on the Blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries.
 - As of October **2023 North Korea,Iran and Myanmar** are in the Blacklist.
- **Grey List:** Countries that are considered a safe haven for supporting terror funding and money laundering are put in the FATF Grey list. This inclusion serves as a warning to the country that it may enter the blacklist.
 - As of October 2023 there are 23 countries in the list including Türkiye, United Arab Emirates and South Africa.

Source: TH

<u>Digital India Land Records Modernization Programme (DILRMP)</u> Syllabus: GS 2/Polity and Governance In News

• The government presented felicitation certificates to several gram panchayats in tribal districts for their achievements in the digitisation of land records

About DILRMP

- It is a **Central Sector Scheme** being implemented by the Department of Land Resources (DoLR) with **100% funding by Government of India.**
- It has 3 major components (a) Computerization of land record (b) Survey/re-survey (c) Computerization of Registration.
- It aims to accelerate digitisation of land records, both textual and spatial to facilitate land related information to the citizens.
- It aims to develop a modern, comprehensive and transparent land record management system.
 - Substantial progress has been made in respect of land related matters through DILRMP.

Source: PIB

Mutual Legal Assistance Treaty (MLAT)

Syllabus: GS2/ Agreements Involving India &/or Affecting India's Interests Context

• India has requested evidence from the US authorities under the **Mutual Legal Assistance Treaty (MLAT)** in connection with a recent attack on the Indian Consulate in San Francisco.

Mutual Legal Assistance Treaty (MLAT)

- **About:** Mutual Legal Assistance Treaty (MLAT) is an agreement between two or more countries for the purpose of gathering and exchanging information in an effort to enforce public or criminal laws.
 - As on date, the Central Government has entered into bilateral Mutual Legal Assistance Treaties (MLATs)/Agreements in criminal matters with around 40 countries.
- **Significance:** MLATs are used to send a formal request for investigation in foreign countries for
 - o collection of evidence,
 - examination of witnesses and
 - o execution of orders of attachment and confiscation of assets.
 - Through MLAT countries cooperate with one another in order to provide and obtain formal assistance in the prevention, suppression, investigation and prosecution of crime to ensure that the criminals do not escape or sabotage the due process of law for want of evidence available in different countries.

• NIC portal:

- In India, the National Informatics Centre (NIC) has developed an online portal for 'Mutual Legal Assistance In Criminal Matters With Foreign Countries' (MLAT), under Ministry of Home Affairs, Government of India
- The core service of this portal is **to handle & smoothen request** handling process of Mutual Legal Assistance & Letter Rogatory.

Source: TOI

Asia-Pacific Economic Cooperation (APEC)

Syllabus: GS2/ Agreements Involving India &/or Affecting India's Interests Context

• The Asia-Pacific Economic Cooperation meeting was recently held in the United States.

About the Asia-Pacific Economic Cooperation (APEC)

- **About:** Formed in 1989, the Asia-Pacific Economic Cooperation grouping has 21 members.
 - APEC accounts for about 62% of global GDP and almost half of global trade.
 - It operates on the basis of non-binding commitments with decisions reached by consensus and commitments undertaken on a voluntary basis.
- **Focus:** The grouping's focus is on economies, rather than countries, which is why Hong Kong and Taiwan, which China claims as its own, participate separately.

- Theme (2023): "Creating a Resilient and Sustainable Future for All" for APEC 2023.
- **Members:** The current members of the grouping are Australia, Brunei, Hong Kong (which the APEC website refers to as Hong Kong, China), New Zealand, Papua New Guinea, the Philippines, Indonesia, China, Japan, South Korea, Russia, Canada, the United States, Mexico, Peru, Chile, Malaysia, Vietnam, Singapore, Thailand and Chinese Taipei (Taiwan).
- India's position: India is not a member of APEC.
 - India had made a request to join the grouping in 1991.
 - While a majority of members are in favour of India's inclusion, some have opposed it, citing the country's record on economic reforms and claiming that it has' protectionist instincts'.
 - Another reason for India not being included in the grouping was a membership freeze, which was in force since 1997 but was not extended in 2012.

Source: FE

Amal Kumar Raychaudhuri

Syllabus: GS3/Achievements of Indians in Science and Technology In News

• 2023 is Amal Kumar Raychaudhuri's birth centenary.

Who was Amal Kumar Raychaudhuri?

- Amal Kumar Raychaudhuri was an Indian physicist, known for his pioneering work in general relativity and cosmology.
- His most significant contribution is the eponymous **Raychaudhuri equation**, which demonstrates that singularities arise inevitably in general relativity.
- Raychaudhuri's equation played a pivotal role in the work of **Stephen Hawking** and **Roger Penrose.**
- **Hawking's area theorem**, demonstrating that the surface area of black holes never decreases, **relied on the Raychaudhuri equation.**

Source: TH