

UPSC CURRENT AFFAIRS NOTES 15-11-2023

Mount Etna



Mount Etna which is one of the world's most active volcanoes, was causing public concern as well it started erupting recently.

It is Europe's most active volcano and one of the largest in the world.

Its recorded volcanic activity dates back to 1500 B.C.

It is on the eastern coast of Sicily.

It is the highest Mediterranean island mountain and the most active stratovolcano in the world.

It is about 3,326 meters high and is the highest peak in Italy South of the Alps.

What are volcanoes?

Volcanoes are openings, or vents where lava, tephra (small rocks), and steam erupt onto the Earth's surface.



These can be on land and in the ocean.

They are in part, a result of their own eruptions but also the general formation of our planet, as tectonic plates move.

What is a stratovolcano?

It is also called a composite volcano.

This volcanic landform is characterized by a conical shape formed by layers of volcanic material deposited during successive volcanic eruptions.

These volcanoes tend to slope gently at the base but rise quickly near the summit to form tall mountain peaks.

They are typically found above subduction zones, and they are often part of large volcanically active regions, such as the Ring of Fire that frames much of the Pacific Ocean.

Asian Development Bank (ADB)

Recently, India signed a \$400 million policy-based loan agreement with the Asian Development Bank (ADB) to create high-quality urban infrastructure, improve service delivery, and promote efficient governance systems.

It is a multilateral development bank established on 19th December 1966.

Mission: To foster economic growth and cooperation among countries in the Asia-Pacific Region.



Functions:

It assists members and partners by providing loans, technical assistance, grants, and equity investments to promote social and economic development.

It also provides financing to certain private sector projects as well as public-private partnerships.

It regularly facilitates policy dialogues and provides advisory services.

Members: It encompasses 68 member of which 49 are from within Asia and the Pacific and 19 outside.

It is run by a board of governors, which represents the member countries of the ADB.

It is modelled closely on the World Bank and has a similar weighted voting system where votes are distributed in proportion to members' capital subscriptions.

As of 2022, ADB's five largest shareholders are Japan and the United States (each with 15.6% of total shares), the People's Republic of China (6.4%), India (6.3%), and Australia (5.8%).

Source of Funding: It relies on member contributions, retained earnings from lending, and the repayment of loans for the funding of the organization.

Headquarters: Manila, Philippines.

Ministry of Power presents initiatives of power sector at IITF 2023, Union Power and NRE Minister inaugurates Power Pavilion

Ahead of COP28 meeting, Union Power & NRE Minister emphasizes upon the need for Developed countries to reduce their carbon dioxide emissions first.

The pavilion aims to present the key initiatives in the power sector before the domestic and international industry and to also improve public awareness and participation in the schemes and policies of the government. A brochure on the Pavilion can be found [here](#).



Policy initiatives and themes highlighted at the pavilion include National Green Hydrogen Mission, Carbon Capture Technology, One Sun-One World-One Grid,



Universal Energy Access through Renewable Energy, Electricity (Rights of Consumers) Rules, Smart Energy (Smart Grid, Smart Meter), Pumped Hydro Storage as a pathway to Grid Stability, Energy Transition, Charging Infrastructure and e-Mobility. The pavilion employs working models, interactive panels, game zones and uses latest technology for presenting to visitors the information about the power sector in a lively and engaging manner.

“It is the developed countries who need to cut down their emissions first”

Addressing the media after the inauguration, the Union Power and New & Renewable Energy Minister spoke about India’s position in the wake of the upcoming COP28, the 2023 United Nations Climate Change Conference. The developed countries who need to cut down their emissions first. “Around 85% of the carbon dioxide load in the atmosphere is due to the path of industrialization followed by developed countries.

India’s population is 17% of world population while our contribution to carbon dioxide load is only 3.5%. Even now, our per capita emissions are one third of world average, while that of developed countries is three times the world average. The Developed countries used fossil fuels for developing their economies but they want to tell us that we should not use coal. It is the Developed countries that need to cut down their emissions first,” the Union Minister said.

“India not to make any compromise on the electricity needs for a growing economy but we will develop responsibly.”

The Union Minister emphasized that India is not going to make any compromise on the electricity needs for a growing economy. “We need to develop. At the same time, we will do that responsibly. We were nine years ahead in achieving the Nationally Determined Contributions (NDC) target of having 40% of installed power capacity from non-fossil-fuel sources by 2030. We pledged at COP-21 in 2015, that we will reduce our emissions intensity by 33% by 2030; we did this by 2019. So, in Glasgow, **we have said that by 2030, we will have 50% of our capacity coming from renewables and that we will reduce our emission intensity by 45%.**



THE INDO-PACIFIC REGIONAL DIALOGUE 2023 (IPRD-2023)

The annual apex-level international conference of the Indian Navy – the Indo-Pacific Regional Dialogue (IPRD) – will be held in New Delhi from 15 to 17 November 2023.

The IPRD follows hard on the heels of the Goa Maritime Conclave 2023, which had been conducted by the Indian Navy from 29 to 31 Oct 2023 in Goa (<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1973395>). In terms of conceptual positioning, the Goa Maritime Conclave seeks to project the Indian Navy's cooperative engagement at the strategic-operational level, by providing a forum for the Chiefs-of-Navy and Heads of Maritime Agencies in the Indian Ocean Region. The IPRD, on the other hand, is the principal manifestation of the Navy's international engagement at the strategic-level, addressing 'holistic' maritime security issues across the Indo-Pacific.

The first two editions of IPRD were held in 2018 and 2019 respectively at New Delhi. IPRD 2020 was cancelled due to the Covid-19 outbreak. The third edition of IPRD was held in 2021 in online mode and the fourth edition was conducted, reverting to a physical format, at New Delhi in 2022.

The National Maritime Foundation (NMF) is the Indian Navy's knowledge partner and chief organiser of each edition of the IPRD, which aims to review various maritime trends within the Indo-Pacific region, the regional opportunities and challenges that arise therefrom, and foster the exchange of solution-oriented dialogue amongst key stakeholders.

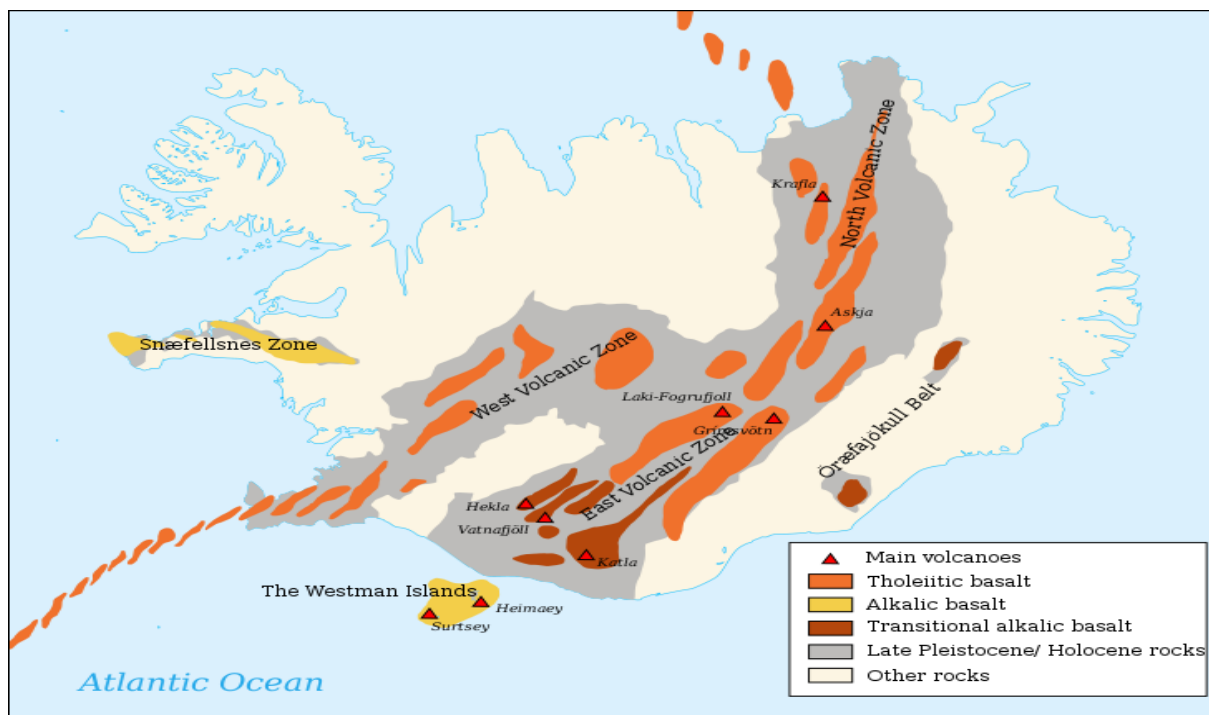
Theme of IPRD-2023

The overarching theme of IPRD-2023 is "Geopolitical Impacts upon Indo-Pacific Maritime Trade and Connectivity". This year's edition of the IPRD builds upon the previous one, which focussed upon 'Operationalising the Indo-Pacific Oceans Initiative (IPOI)', by specifically addressing the 'Trade, Connectivity and Maritime Transport' pillar of the IPOI. Both 'Trade' and 'Maritime Transport' are, of course, segments of maritime connectivity.

FREQUENT EARTHQUAKE IN ICELAND

The Iceland Met Office has said that there is a “considerable” likelihood of a volcanic eruption occurring over the next few days.

A state of emergency has been declared in Iceland, after a swarm of 800 earthquakes rocked the island country’s southwestern Reykjanes peninsula in under 14 hours on Friday (November 10).



Around 1,400 earthquakes were measured in the previous 24 hours, and over 24,000 have been recorded in the peninsula since late October. The most powerful of these quakes had a magnitude of 5.2, and hit about 40 km from Reykjavík, Iceland’s capital, on Friday.

Details

The most violent of these quakes had a magnitude of 5.2 and struck around 40 kilometers from Iceland's capital,

Perlan is a natural history museum in Reykjavik.



What is going on in Iceland?

Iceland is positioned on the Mid-Atlantic Ridge, the world's longest mountain range, but on the ocean floor.

The ridge is a hotspot of seismic activity because it separates the Eurasian and North American tectonic plates.

Iceland suffers approximately 26000 earthquakes each year on average.

A swarm of earthquakes, a series of primarily minor earthquakes with no discernible mainshock can be a concerning precursor to a volcanic eruption.

How might earthquake swarms indicate volcanic activity?

Intense heat deep beneath the Earth's surface melts rocks to generate lava, a viscous flowing fluid lighter than solid rock.

This causes it to rise, and the majority of it becomes trapped in magma chambers deep down.

This thick liquid cool and solidifies again over time. However, a small portion explodes through surface vents and fissures, resulting in volcanic eruptions.

The flow of magma near the Earth's surface exerts stress on the surrounding rock, causing earthquake swarms.

Magma flow underground may not always result in an explosion. However, the closer it gets to the surface, the more likely an eruption and symptomatic seismic swarms become.

Fagradalsfjall volcanic system:

Fagradalsfjall lies about 40 km to the southwest of Reykjavík and is the “world’s newest baby volcano.”

It had been dormant for eight centuries before erupting in 2021, 2022 and 2023.

How many active volcanos does Iceland currently have?

Iceland has 33 active volcanoes, with over 180 eruptions in the last 1,000 years.



Active volcanoes are those that have erupted or have the capacity to erupt during the Holocene (the current geologic epoch, which began at the end of the most recent ice age around 11,650 years ago).

Eyjafjallajökull is a well-known volcano in Iceland. Hekla, Grmsvötn, Hóluhraun, and Litli-Hrtur (part of the Fagradalsfjall system) are also well-known volcanoes.

EASING WHEAT PRICES, RISING RICE PRICES

Wheat prices peaked at \$13.64 a bushel in March 2022 post-Russia-Ukraine conflict, sharply dropping to \$5.75, while rice prices surged, causing the UN Food and Agriculture Organization's Food Price Index to decline from its peak of 159.7 points in March 2022 to 120.6 points in October 2023.

Wheat Prices

Russia has flooded the global market with cheap wheat, contributing to a significant drop in wheat prices.

The decline in wheat prices is reflected in international indices, with the cereals and vegetable oils price indices falling sharply between March 2022 and October 2023.

Russia's aggressive wheat exports have played a key role in reducing international wheat prices. The US, EU, Canada, and Kazakhstan have also increased their wheat exports, contributing to improved global availability.



Wheat from Russia is being imported to India at a cost that is economically viable, leading to a decline in domestic wheat prices.

The Indian government has managed wheat stocks well, adjusting public distribution system (PDS) quotas and engaging in open market sales to stabilize prices.

Rice Prices

India, as the world's leading exporter of rice, holds a significant position in the global rice market, with a share ranging from 36.6% to 40.7% in the last three years.

India has imposed restrictions on rice exports, banning white non-basmati rice exports and setting minimum export prices and duties on basmati and parboiled non-basmati rice.

These export restrictions have led to higher global rice prices, benefiting competitors like Pakistan, which is expected to increase its rice exports.

Similar to other large exporters in different commodities, disruptions in rice exports from India can lead to a domino effect, affecting global prices.

Inflation Implications

In India, cereal inflation, including rice and wheat, has been affected by domestic production levels. The article notes that cereal inflation was higher than general retail inflation in October.

Importing wheat to mitigate rising prices may face opposition due to electoral considerations in India, with national elections scheduled in April-May 2024.

Unlike cereals, edible oils, which India imports substantially, experienced a decline in prices due to the normalization of supplies from key exporters.

The trajectory of cereal inflation in India will depend on the size of crops harvested by Indian farmers.

ACTIVE AND PASSIVE EQUITY FUNDS

During the July-September quarter (Q2), active equity funds attracted net inflows of approximately Rs 74,000 crore, outperforming passive equity funds (Rs 9,000 crore) and surpassing arbitrage funds (Rs 29,000 crore), as indicated by a recent study from Motilal Oswal AMC.



Details

Active funds and passive funds represent two different approaches to mutual fund investing, each with its own set of characteristics and advantages.

Active Funds

In active funds, fund managers play an active role in deciding when to buy, hold, or sell securities. They use their expertise to make strategic decisions based on market conditions and economic trends.

They rely on professional fund managers who actively manage the portfolio. These managers use various strategies and styles to create and manage the fund's holdings.



They aim to generate better returns (alpha) than the benchmark index. The risk and return in an active fund depend on the strategy adopted by the fund manager.

Active Funds are suited for investors seeking to take advantage of fund managers' alpha generation potential. Requires active management and analysis by the fund manager.

Passive Funds

Passive funds, including index funds and exchange-traded funds (ETFs), replicate a stated index or benchmark. Fund managers have a passive role in stock selection, and decisions are driven by the benchmark index.

They are suitable for investors who want to allocate their investments exactly according to the market index.

Passive Funds are appropriate for investors who want to mirror the performance of a specific market index. Involves minimal tracking error, and decisions are based on the movements of the benchmark index.

GPS TRACKER



A prisoner (Bhat) in Jammu and Kashmir was released on bail after he was tagged with a Global Positioning System (GPS) tracking device to monitor his movements.

This is the first time in the country that a GPS tracker has been put to such use.

Details

GPS (Global Positioning System) trackers are devices that use satellite signals to determine and record the precise location of an object or person.

These trackers leverage a network of satellites orbiting the Earth to provide accurate positioning information in real-time.



Use of GPS Trackers in Bail Conditions

Global Prevalence: GPS trackers as a bail condition in multiple countries like the US, UK, and Malaysia.

Debut in India: Bhat's case marking the first instance of GPS tracker usage for bail.

Future Indications: J&K Police considering similar measures in upcoming cases.

Legal Standpoint and Lack of Specific Provisions

Court Sanction: Court approval for employing a GPS anklet on Bhat without explicit legal provisions.

Human Rights Activists' Concerns: Absence of specific legal frameworks allowing such tracking highlighted by activists.

International Legal Frameworks and Examples

UK & Malaysia: Legal frameworks in these countries governing electronic monitoring.

In the UK: Monitoring under the Terrorism Prevention and Investigation Measures Act, 2011.

In Malaysia: Laws like the Prevention of Crime Act, Security Offences Act, etc., regulating electronic monitoring.

Debate: Advocates vs. Rights Activists

Supporters' Perspective: Argument favoring GPS trackers making bail easier under strict laws like UAPA.

Rights Activists' Stand: Assertion that human tracking infringes upon the fundamental right to privacy.

Human Rights Perspective: Emphasizing the preservation of fundamental rights, citing 'Maneka Gandhi vs Union of India' (1978) where the right to life encompassed human dignity.



Need for Ethical Standards and Consent Mechanisms

Importance of Standards: Call for ethical guidelines in electronic monitoring by security establishments.

Informed Consent: Advocacy for a system ensuring informed consent and addressing unethical surveillance practices.

How GPS Trackers Work

Satellite Network: The GPS system comprises a constellation of at least 24 satellites orbiting the Earth. These satellites continuously transmit signals that GPS devices receive.

Trilateration: When a GPS tracker receives signals from multiple satellites, it uses trilateration—a geometric principle—to determine its exact location. By calculating the time it takes for signals from different satellites to reach the device, the tracker can pinpoint its position.

Data Processing: Once the GPS device collects signals from at least three satellites, it calculates its latitude, longitude, and often altitude. This data is then interpreted and displayed using mapping software on a device interface.

Components of GPS Trackers

GPS Receiver: This component picks up signals from satellites, decodes them, and calculates the device's location.

Cellular or Satellite Communication: Many GPS trackers include cellular or satellite communication capabilities to transmit location data to a central server or user's device.

Power Source: GPS trackers can be powered by internal batteries, vehicle power sources, or solar panels, depending on their design and application.

Memory and Storage: Some trackers store location data internally, while others transmit it in real-time to a server for storage and analysis.



Types of GPS Trackers

Personal Trackers: Used for individuals, pets, or assets, often in the form of wearable devices or small tags.

Vehicle Trackers: Installed in cars, trucks, or fleets for tracking their movements and ensuring security.

Asset Trackers: Employed to monitor valuable assets like containers, packages, or high-value equipment.

Fitness Trackers: Combine GPS technology with other sensors to track exercise routines, distance traveled, and more.

Applications and Use Cases

Fleet Management: Tracking vehicles for logistics, route optimization, and maintenance scheduling.

Personal Safety: Ensuring the safety of children, elderly family members, or individuals with special needs.

Asset Tracking: Monitoring the location and condition of valuable goods during shipping or storage.

Outdoor Activities: Supporting hikers, campers, and adventurers with accurate navigation and location sharing.

Benefits

Real-time tracking and monitoring.

Enhanced security and theft prevention.

Improved efficiency in logistics and transportation.

Safety and peace of mind for individuals and assets.

Challenges

Battery life limitations in some devices.



Signal loss in areas with poor satellite visibility (dense urban areas, tunnels, etc.).

Initial setup and ongoing subscription costs for cellular or satellite connectivity.

Future Trends

Integration with Internet of Things (IoT) for seamless connectivity.

Smaller and more efficient devices.

Enhanced accuracy and reliability through advancements in satellite technology.

Privacy and Ethical Considerations

GPS tracking raises concerns about privacy invasion when used without consent.

Regulations exist regarding the use of GPS tracking, especially in sensitive areas like employee monitoring and data privacy.