

CURRENT AFFAIRS

WEEKLY

WEEK-4
JANUARY
2021

MAINS

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- GS-II** ● The Battle over Forestland
- GS-III** ● Central bank digital currencies (CBDCs)
 - Taxing Virtual Currencies
 - America rejoins Paris Agreement
- GS-IV** ● Army officers need ethics training for troops in conflict zones

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 - UK invites India to attend G7
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 - Infectious diseases bigger global threat than climate change: WEF
 - SEBI moots new ownership framework for setting up market infrastructure institutions
- ENVIRONMENT** ● Rare earth metals used in clean energy technologies. But how safe are they?
- SCIENCE & TECH** ● US warns India over S-400

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The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CURRENT AFFAIRS ANALYST

WEEK- 4 (JANUARY, 2021)

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SECTION: A
(MAINS)

CURRENT AFFAIRS

FOREST FIRES IN HIMACHAL PRADESH

CONTEXT

Himachal Pradesh frequently witnesses forest fires during dry weather conditions. Though the trend is common in the state, recent events and their frequent occurrence raises serious concerns.

◎ BACKGROUND

- Every year, forest fires-man-made or natural reduce acres of greenery to ashes and destroy natural habitat of animals and birds.
- They speed up the processes of global warming and climate change.

Incidents of forest fire incidents

- The year 2020 recorded most incidents of forest fire in the last 18 years. As many as 11,340 forest fire incidents occurred from January till May and they peaked in March.
- 2003 recorded 3143
- 2004 recorded 4083
- 2005 recorded 2872
- 2006 recorded 4106
- 2007 recorded 3342
- 2008 recorded 2755
- 2009 recorded 4305
- 2010 recorded 4144
- 2011 recorded 2734
- 2012 recorded 3878
- 2013 recorded 3128
- 2014 recorded 3922
- 2015 recorded 2863
- 2016 recorded 2088
- 2017 recorded the least forest fires-1641
- 2018 recorded 2259
- 2019 recorded 7932

◎ ANALYSIS

Forest cover of Himachal Pradesh

- Although two-thirds of the total geographical area of Himachal Pradesh is legally classified as forest area, much of this area is permanently under snow, glaciers, cold desert or alpine meadows and is above the tree line.

- This leaves an effective forest cover of around **28 percent** (27.72 percent) of the total area which amounts to **15,434 square kilometres**.

- **Total geographical area (State)-** 55,673 square kilometres
- **Forest area-** 66.52 per cent (37,033 sq km)
- **Forest cover-** 27.72 per cent (15,433.52 sq km)

- Forest zone: The state comprises four forest zones-sub-tropical, sub-temperate, wet temperate and dry temperate.
- Legal classification: Based on legal classification, the forests can be classified as reserved, demarcated, undemarcated, un-classified forests.

Legal definition

- Reserved forests: An area constituted under the Indian Forest or other state Forest Acts.
- Protected forests are of two kinds: demarcated protected forests and undemarcated protected forests, based on whether the limits of the forest have been specified by a formal notification.
- Protected Forests: A legal term for an area subject to limited degree of protection under the provisions of the Indian Forest Act or other state Forest Acts.
- Unclassified forests: Forest land owned by government but non-constituted into a reserved or protected forest.

- Chir Pine, Deodar, Oak, Kail, Fir and Spruce are some of the common trees found here.
- **Conifers (trees) found in Himachal Pradesh Forests:** Blue Pine/Himalayan Pine, Chir Pine, Chilghoza Pine, West Himalayan Spruce, Pindrow Fir, Himalayan cypress, Himalayan Cedar/Deodar, Himalayan Yew.

Forest cover of India

- India is among the top ten nations in the world in terms of the Forest area.

- ▶ The countries are: Russia, Brazil, Canada, US, China, Australia, Congo, Argentina, Indonesia, India.
- According to the 2019 report, the total forest cover of the country is 712,249 square kilometres (21.67 percent of India's total geographical area) slightly up from 708,273 sq. km (21.54 percent) in 2017.
- Top 5 states with highest forest cover area-wise: Madhya Pradesh, Arunachal Pradesh, Chhattisgarh, Odisha and Maharashtra.

What causes the fire?

- **Natural causes:** Natural causes such as lightning or rubbing of dry bamboos with each other can sometimes result in fires.
- **Human factors:** Forest officials maintain that almost all forest fires can be attributed to human factors.
 - ▶ When the grass is dry, even a small spark, such as someone dropping a burning matchstick, torchwood or a bidi/cigarette, can cause a massive fire. A spark can also be produced when dry pine needles or leaves fall on an electric pole.
 - ▶ People who frequently pass through a forest to gather minor produce, take their animals for grazing or for other purposes may set up a temporary hearth to cook food or warm themselves. If they leave behind a smouldering fire, it can develop into a forest fire.
 - ▶ Also, when people burn their fields to clear them of stubble, dry grass or undergrowth, the fire sometimes spreads to the adjoining forest.

How prone are these forests to fire?

- **Recurrent annual phenomenon:** Except for periods of precipitation in monsoon and winter, the forests remain vulnerable to wildfires.
 - ▶ Forest fires are a recurrent annual phenomenon in the state, and most commonly occur in Chir Pine forests.
 - ▶ In the summer season, forest fires occur frequently in the low and middle hills of the state, where forests of Chir Pine are common.
- **Shedding of highly-combustible needles by Chir Pine trees:** The dry summer season from March to June coincides with the shedding of highly-combustible needles by Chir Pine trees.
 - ▶ Once the fallen dry needles catch fire, it can spread quickly over the entire forest due to the action of the wind.

- ▶ However, due to their thick bark, the Chir Pine trees are themselves relatively unharmed by these fires, and can spring back to life during the monsoon season.
- During the post-monsoon season and in winters, forest fires are also reported in higher areas, including parts of Shimla, Kullu, Chamba, Kangra and Mandi districts, where they usually occur in grasslands.

Impacts of forest fire

- **Damage to regeneration:** Forest fires can cause a lot of damage to the regeneration in the forests and their productivity.
- **Adverse impacts:** Forests help maintain aquifers and continuous flow of streams and springs, and provide firewood, fodder and non-timber produce to the local communities – all these capacities may get adversely affected in case of a fire.
- **Harmful for organic matter:** Forest fires may destroy organic matter in the soil and expose the top layer to erosion.
- **Impact on wildlife:** They may also impact the wildlife by burning eggs, killing young animals and driving the adult animals away from their safe haven.
- **Threat to humans:** Sometimes, a forest fire may get out of control and extend to human settlements, thus posing danger to human life and property.
- **Economic loss:** According to the Himachal forest department, forest fires cause an estimated loss of several crore rupees each year. From 2016-17 to 2019-20, the annual loss to the state due to forest fires has ranged from Rs 1.7 crore to Rs 3.5 crore. Around 1,200 to 2,500 forest fires were reported each year during this period affecting thousands of hectares.

◎ CONCLUSION

Immediate action is required to prevent and control forest fires in the state. Forecasting fire-prone days using meteorological data, clearing camping sites of dried biomass, early burning of dry litter on the forest floor, growing strips of fire-hardy plant species within the forest, and creating fire lines in the forests are some of the methods to prevent fires. Once a fire starts, early detection and quick action by fire-fighting squads is crucial.

'THE BATTLE OVER FORESTLAND'

CONTEXT

- The forest land right claims by tribal or pastoral communities seeking community rights over forest land, they have inhabited for generations, end in rejection (mostly) in the country.
- The failure of the system raises concerns and calls for transparent recognition of forest dwellers' rights.

◎ BACKGROUND

- In India, tribal and other traditional forest dwelling communities had historically faced injustice at the hands of a colonial forest bureaucracy.
- Alienation of land, restriction of access, forced evictions and lack of decision making over managing these lands are only a few manifestations.
- Fabricated arrests on account of trespass, 'connivance' with poachers and timber mafia have been other areas of conflict.
- Even today, the situation has not changed much. Both tribal and other traditional forest dwelling communities living in the forests for years have to fight for their own land and it goes on for indefinite years.
- While forest bureaucracy has been trying to undermine reforms in forest governance in India, the need for community level forest governance is more urgent than ever.

The case of unsettled rights

- On a January night in 1967, Vanthala Ramanna became an encroacher on his own land.
- The Andhra Pradesh government snatched away his land when it decided to create a new reserve forest almost the size of Mumbai city.
- The news reached Panasalpadu village in Vishakhapatnam district almost two days later. By then, Ramanna and all others in the village had become de facto landless who had to prove their land ownership.
- The notification was issued under Section 4 of the Indian Forest Act, 1927.
- It is the first step in the process of declaring any piece of land as a reserve forest.
- The next steps involve settling the land rights before the transfer is made to the new owners — the forest department. But that never happened.
- This is not the first time the village residents had to prove their rights over their ancestral land.
- Cut to January 2021. Ramanna is dead, but the fear of being evicted from their own lands haunts his family.

- ▶ It has been 50 years and the government has neither established the reserve forest nor returned our land," says Vanthala Chinnaya, Ramanna's son who was not even born when the notification was introduced.
- ▶ He is now a grandfather of two.
- Andhra Pradesh is not the only state where this legacy of unsettled rights over forestland haunts communities. Large swathes of forestland and their millions of inhabitants across India are in a similar limbo.

◎ ANALYSIS

How a forest is formed?

While the process is well defined under the Indian Forest Act, 1927, there is no time limit, which is the loophole behind the indefinite delays.

Step 1- Expressing the intent:

Under Section 4 of the Indian Forest Act, 1927, the state government first issues a notification in the official gazette which broadly specifies the limits of the proposed reserve or other intelligible boundaries.

It then appoints a forest settlement officer (FSO), who should not hold a forest office.

Under Section 5, all rights of cultivation or other activities are suspended in the area, unless granted by the state government

Step 2- Call for Claims:

Under Section 6, FSO informs the people, through the vernacular press, about the Section 4 notification and how it impacts their rights.

The FSO then fixes a period of not less than three months for the people to submit their claims.

| | |
|--------------------------------|---|
| | <p>If the claims are not submitted to FSO within the stipulated time, under Section 9, they stand extinguished.</p> <p>The FSO can received claims for individual and common land, including areas used for shifting cultivation</p> |
| Step 3: Inquiry: | <p>Under Section 7, the FSO inquires into the claims received for individual rights and any other rights that he/she may find in the government records.</p> <p>Once the inquiry is completed, the FSO, under Section 11, passes and order admitting or rejecting any individual rights.</p> <p>Under Section 12, the FSO adjudicates common lands used for pasture or forest produce collection and either admits or rejects the claim.</p> <p>Under Section 10, FSO records if there is shifting cultivation and any local rule or order permitting it.</p> <p>Only in the case of shifting cultivation, the FSO gives his opinion to the state government, which can take a call on whether to allow it, modify it or prohibit it.</p> |
| Step 4- Acquiring land: | <p>In case, the FSO admits these rights, the land in question is either excluded from the proposed reserve forest, the right holders could surrender the rights, or the land is acquired.</p> <p>Under Sections 15 and 16, if the rights are settled then an order is passed to that effect, otherwise payment for land acquisition is made.</p> |
| Step 5- Appeal: | <p>The claimants or the forest department can appeal against the FSO order to a revenue official not below the rank of a collector or to a forest court, if it has been established by the state government.</p> <p>The individual can do the same within three months of the order under Section 17.</p> |

| | |
|---|---|
| Step 6- Announcing a reserve forest: | <p>After all the rights are settled, appeals are disposed of and the land acquired, the state government publishes the exact boundary of the reserve forest and the date from which it was reserved in the official gazette under Section 20.</p> |
|---|---|

Disputed Forestland

- The **Indian Forest Act, 1927**, recognizes only three categories of forests:
 - ▶ Reserve
 - ▶ Protected
 - ▶ Village
- Still, the land records of almost all forest departments have “**Section 4 forest**” as a category, as if it is an unsaid rule.
- There is, however, no consolidated data on the extent of this **ad hoc forestland**.

Such government inaction means that even those forests whose protection triggered the entire process, are now left vulnerable.

- Under the Indian Forest Act, 1927, once the notification under Section 4 is issued, the state government has to appoint a **forest settlement officer (FSO)** to look into the land rights of people living within the identified boundaries of the proposed reserve forest.
 - ▶ The officer has the power to settle rights over both common and private lands.
- The claimants can also appeal against the decision of FSO in a forest court.
- Only when this process of land settlement is complete, including the verdicts on the appeals, can the state government issue a notification under **Section 20** of the Act to finally declare a piece of land as a reserve forest.
- Currently, 14 states have their own forest laws, but all follow a similar procedure.
- While the law says the FSO has to fix a period within which people can submit their claims, it has no time limit for the rest of the process.

Concerns over Section 4 lands

- Forest departments across the country treat the areas stuck under Section 4 as their own land, even without completing the process.
- The Indian State of Forest Report, 2019, released by the Forest Survey of India, offers a glimpse of this.

- ▶ It says while the total recorded forestland in the country stands at 76.74 million ha, only 51.38 million ha of it has forest cover.
- ▶ This means 25.37 million ha forestland is without a cover.
- This includes Section 4 lands, along with forestland diverted for activities like mining, hydropower projects which lack any forest cover now.

Forest encroachment

- Nearly 2%, or 13,000 sq km, of India's total forest area is occupied by encroachers, as per the environment ministry.
- Madhya Pradesh tops the list with 5,34,717.28 hectares of forest land under encroachment, followed by Assam at 3,17,215.39 hectares and Odisha with 78,505.08 hectares.
- Uttarakhand is not too far behind, with 10,649.11 hectares of forest land under encroachment.
- India's total forest cover is 708,273 sq km.

- Only 3% of community forest resource rights [**right of forest dwellers to protect, regenerate, conserve or manage any forest resource**]
- Only 10 to 13% of individual forest rights have been recognised so far.

What is the root cause of debates and conflicts?

- Forest issues in India are multilayered and complex and conventional perspectives from the point of view of environmental economics and common property resource theory are inadequate to address the challenges arising in managing forests in India.
- The roots of the current controversies can be traced to forest governance practised during the British rule, which continues to impact/influence how forests are governed in the present times.

- During the colonial rule, the British government took over India's forests and managed them under the Indian Forest Act (IFA) of 1878, which was revised in 1927.
- The Act created two main categories of forests, managed by the Imperial Forest Department(FD):
 - ▶ Reserved Forests (RF)
 - ▶ Protected Forests (PF)

- The main focus of the forest department in colonial times was to generate revenue through timber and softwood production.
- Forest dwellers were deprived of their livelihoods in the process as shifting cultivation and grazing were banned.

- The same understanding of forests continued after independence when the area under RFs and PFs was expanded and their ownership was nationalised among princely states and zamindari or other forms of ownership.
- The newly formed states also continued with the same IFA, and the imperial FD became state FDs, run by the Indian forest service.
- The **Wildlife Protection Act** was passed, and wildlife conservation replaced timber production, but the conservation policy continued to exclude local communities.
- Many local communities thus became encroachers on their own land and were forced to resort to theft, leading to punishments, exploitation and further alienation from the forests that they belonged to.
- While the situation changed to some extent after independence when local communities gained concessions to enter forests, access rights helped very little without management rights, thus leading to degradation of forests.
- Then came the the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006, also known as FRA.

India's recognition of tribal rights

- India is a signatory to:
 - ▶ the UN Declaration on Rights of Indigenous Peoples
 - ▶ the Universal Declaration on Human Rights
- India has ratified the **Indigenous and Tribal Populations Convention**
- The country is party to the Convention on Biological Diversity

Where did the FRA fail?

- The FRA has helped greatly in taking power away from state bureaucracies into the hands of the communities.
- It focuses on community forest management based on sustainability and conservation and ensures that communities will not be displaced from protected areas unless demonstrated through due process.
- The implementation of the FRA, however, has been mired with conflict and bureaucratic resistance

leading to the controversial interim **court orders of February 2019**.

The SC Order (2019)

- On February 13, 2019 the Supreme Court ordered the eviction of more than 10 lakh Adivasis and other forest dwellers from forestland across 17 States.
- While the SC has later made it clear that there will be no forcible eviction, what the order has succeeded in doing is resuscitating a sharp binary between the human rights- and wildlife rights-based groups that have for decades tried to swing public opinion in their favour.

Roadblocks

- Low priority for state machinery

- Lack of transparency
- Lack of awareness and misinformation
- Ineffective documentation
- Intra-society dynamics

◎ WAY FORWARD

There is urgent need for community level forest governance in the forest bureaucracy. The complex multi-stakeholder and multi-scale nature of the forest resource implies that community-level forest governance needs some form of regulation. But this regulation needs to be accompanied by checks and balances to safeguard against its abuse taking into consideration the colonial roots of India's forest bureaucracy. Thus newer and more democratically accountable structures need to be thought of.

CENTRAL BANK DIGITAL CURRENCIES (CBDCS)

CONTEXT

As the world increasingly digitalises, industries around the globe are integrating new and innovative technologies and digital products to capitalise on the transformation. One of the key developments is the possible introduction of central bank digital currencies (CBDCs) to offer more diversified formats of central bank money.

◎ BACKGROUND

- The landscape of payments is changing rapidly. In recent years, many proposals for digital money have appeared to facilitate the turn away from cash and a few systems are already in operation.
- Naturally, the ongoing pandemic has contributed to the surging use of digital currency as more shopping is done online. A technological revolution is underway.
- The rise of blockchain and the simultaneous development of cryptocurrencies and mobile payment systems have fuelled a new wave of both excitement and scepticism at the same time.
- Today, central banks are keen on designing their own network of digital payments by officially issuing what is called a Central Bank Digital Currency or CBDC.
- The novelty of such general-purpose CBDCs lies in its character of being legal tender. This transition can contribute to diversity and innovation in the payment market.

◎ ANALYSIS

What is CBDC?

- Central Bank Digital Currency is a digital version of so-called "fiat money," or the regular currency a country uses, as established and regulated by its government.
- In simpler terms, it is a digital payment instrument that is denominated in a national currency and issued by a central bank.
- Unlike private virtual currencies whose value is based on its ownership, distribution and trading on exchanges, a CBDC's intrinsic value is equivalent to any other form of money issued by the central bank.
- According to a report (2019) by the **Bank for International Settlements (BIS)**, central bankers around the world are growing more optimistic about the eventual efficacy of CBDCs.

Features of CBDC

The BIS report also lays down core features of a CBDC, prime among which is the ability to use a CBDC as easily as cash.

- A CBDC should exchange at par with cash and private money.
- Payments should be as easy as cash, tapping a card or using a mobile phone to transact.
- A CBDC should be usable across as many transactions as cash. This should include the ability to make offline payments.
- CBDCs should come at no cost or low cost to users and the investment in technology to use these units should be minimal.
- The CBDC system should be available round the clock, be resilient to operational failure, cyber attacks and other threats.
- The system should be able to expand to accommodate increased volumes in the future.

How is it similar and different to cryptocurrency?

- Central Bank Digital Currency is similar to cryptocurrencies because it uses blockchain technology as its core means of representation. Also, it's digital.
- Central Bank Digital Currency differs from cryptocurrency because unlike the latter, the former is issued, centralized and regulated by the monetary authority (in most cases governments) of the issuing country.

The following table provides an idea of how CBDC compares with existing form of fiat money and cryptocurrency.

(See table 3.1 on next page)

Where does India stand?

- In India, the idea of a digital rupee has been explored but has not gained much traction.
- In its 2017-18 annual report, the Reserve Bank of India said that "**an inter-departmental group has been constituted by the Reserve Bank to study and provide guidance on the desirability and feasibility to introduce a central bank digital currency.**"
- In 2019, a panel headed by then Finance Secretary **Subhash Chandra Garg** had recommended a

TABLE 3.1

| Characteristics | Fiat currency | Cryptocurrency | CBDC |
|--|--------------------------------------|------------------------------|--|
| Issued by | Central Bank | Private entities | Central Bank |
| Backed by | Assets such as government securities | NA | Assets such as government securities |
| Legal medium of exchange | Yes | No | Yes |
| A store of value | Yes | Yes | Yes |
| Determination and fluctuation of value | Monetary policy, trade and market | Only market | Monetary policy, trade and market |
| Intermediary institutions | Required | Not required | Not required |
| Cost of money | High — printing and distribution | Mining cost — very high | Low |
| Security and maintenance | High | Low | Low |
| Traceability | Low | High | High |
| Payments and settlement system | Limited acceptability | Near universal acceptability | Universal acceptability |
| Monetary policy | Slower transmission | NA | Possibility of near-real time transmission |
| Financial stability | Stable — rush to cash | Very unstable | Difficult to answer with existing empirical evidence |
| Scalability | Low | High | High |
| Privacy | Not a concern | Not a major concern | Normative, but can be a major concern |

digital rupee, while simultaneously suggesting a crackdown on private cryptocurrencies.

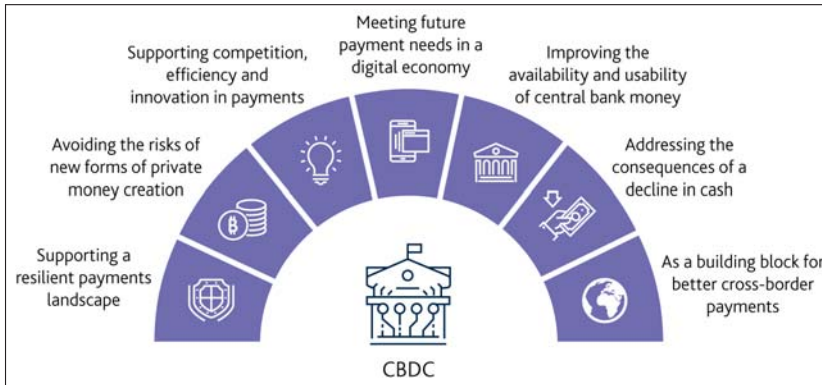
CBDCs On The Drawing Board

- China: China has been at work on its own digital currency since 2014, Digital Currency Electronic Payment (DCEP), and has already tested it out in several cities throughout 2020.
- Japan: The Bank of Japan will start testing its CBDC next year and the ECB is working on a digital euro which could be launched by mid-2021.
- Lithuania: Lithuania launched its CBDC for limited purposes in July.
- Sweden: Sweden is in the midst of a one-year long testing for a digital currency.

- Brazil: Brazil may see a CBDC developed by 2022.
- The Bank of Korea will begin its CBDC pilot scheme next year. The Central Bank of the Bahamas plans to launch its CBDC sometime this year.
- The Bank of Thailand is testing its digital baht, Jamaica's central bank has begun developing its CBDC.
- Cambodia's CBDC could become operational in the coming months.

What are the benefits of CBDC?

- A Central Bank Digital Currency presents myriad benefits that could help a bank achieve stronger



monetary and financial stability, including the creation of a more robust payment landscape

- ▶ helping to reduce the formation of new (and potentially risky) cryptocurrencies
- ▶ facilitating more innovative and efficient modes of payment
- ▶ adapting better to the payment needs of tomorrow's digital economy
- ▶ enhancing the availability of a central bank's issued money, improving ways a central bank can respond to cash declines
- ▶ helping to bring about more efficient cross-border payments
- Like fiats, CBDC can be used for a variety of functions, from making payments to acting as a store of value to official units of account.
- There could be other economic benefits too. Globally, 1.7 billion people remain unbanked; CBDC accounts could be incorporated into mobile-phone wallets, boosting financial inclusion in emerging markets.

Challenges and Issues

- **Conflict due to trans-nationality nature:** As far as the trans-nationality of electronic money is considered, national jurisdictions and the broader cyberspace could conflict over monetary control soon.
- **Instability at international level:** At its extreme, its ability to flow too freely across borders compared to traditional currencies could create instability internationally.
 - **Threat to cyber security:** The broader cyberspace that hosts such platforms is notorious for its lack of transparency, security threats, and potential for malevolent activities.
- **Technology failure:** Technology failures are commonplace, especially in the government.
- **Depletion of demand:** There is an additional concern that if the public is allowed to convert their deposits into their CBDC accounts, commercial banks may be robbed of their primary funding source.

CONCLUSION

What happens with CBDCs will have far-reaching implications on the future of digital finance, including cryptocurrency and digital securities. Whoever leads this race and determines the outcome of its infrastructure and operation, will most certainly gain a significant advantage and may have the possibility to spearhead many of the other innovations that come from this technology.

TAXING VIRTUAL CURRENCIES

CONTEXT

The Finance Ministry recently proposed instituting an 18% goods and services tax (GST) on crypto trading. Though it's not clear whether such a proposal will become law, but the government appears serious about pushing it.

◎ BACKGROUND

- Nearly twenty-five years ago, the internet disrupted the world and started a new era of technological supremacy.
- Today, with the rise of cryptocurrencies and its underlying technology, the world stands at the helm of another such revolution.
- Cryptocurrencies like bitcoin are decentralised, digital currencies relying on a peer-to-peer network which operates without the need for a third-party intermediary like the Reserve Bank of India.
- Coupled with lack of regulatory guidance, its unique technical aspects create huge complications in its taxation.
- The Indian government has been skeptical of cryptocurrency, vacillating between wanting to regulate cryptocurrencies and banning.

While the government wishes to actively encourage blockchain technology, it has been resisting popular usage of cryptocurrency because once the unit of account of one of these transactions changes from rupees to any cryptocurrencies, then the possibility of recovery of tax would become farcical.

So, if the government wishes to reap the revenues from blockchain transactions, it will have to recognize cryptocurrency, and not just INR, as a unit of account.

◎ ANALYSIS

What are Virtual Currencies and Cryptocurrencies?

- A virtual currency is a digital representation of value that can be digitally traded and functions as:
 - ▶ a medium of exchange, and/ or
 - ▶ a unit of account and/or
 - ▶ a store of value, but does not have a legal tender status
- It fulfils the above functions only by agreement within the community of users of the virtual currency.

- It is not issued nor guaranteed by any jurisdiction.
- Cryptocurrency is a type of virtual currency that uses cryptography to secure transactions that are digitally recorded on a distributed ledger, such as a blockchain.
- A transaction involving cryptocurrency that is recorded on a distributed ledger is referred to as an "on-chain" transaction; a transaction that is not recorded on the distributed ledger is referred to as an "off-chain" transaction.

Financial Action Task Force (FATF) on Cryptocurrencies

- Another vital definition given legal sanction in Indian laws by virtue of this judgment is that of Cryptocurrencies as defined by the FATF.
- Cryptocurrency, according to FATF, is a math-based, decentralized convertible virtual currency protected by cryptography by relying on public and private keys to transfer value from one person to another and signed cryptographically each time it is transferred.

How is virtually currency regulated in India?

- Currently, the regulatory mechanisms to govern virtual currencies are almost non-existent in India.
- Although bitcoins are not legal as yet, they have not been outrightly declared illegal either.
- Being a relatively unregulated form of currency, there is not much jurisprudence available which discusses the ability of the citizens in India to transact through bitcoins.

Reserve Bank of India, Government of India & Bitcoins: the trio

- Originally, RBI had issued a Press Release in 2017 cautioning the users, holders of Virtual Currencies that they are not recognised as legal tender. The Press Release also stated that the investors should avoid participating in them.
- RBI Circular prohibited entities regulated by RBI from dealing in Virtual Currencies (VCs) or provide services for facilitating any person or entity in dealing with dealing with or settling VCs.

- The Circular also instructed the entities which already provide such services to exit the relationship within three months from the date of the Circular.
- After a series of Writ Petitions being filed in various High Courts and the Petition finally reaching the Supreme Court through transfer petitions, the matter was kept in abeyance as an Inter-Ministerial Committee was constituted and was deliberating on the issue.
 - ▶ The Inter-Ministerial Committee, on 28.02.2019 submitted a report along with a draft bill, namely, 'Banning of Cryptocurrency and Regulation of Official Digital Currency Bill, 2019'.
- The Finance Minister in his budget speech on 01.02.2018 had also stated that the **Government did not consider crypto-currencies as legal tender** or coin and all measures to eliminate the use of these currencies in financing illegitimate activities or as a part of payment system will be taken by the Government.
- In April 2018, the RBI issued a circular banning regulated financial institutions from providing services to businesses dealing in exchange/trading of cryptocurrencies, which put the entire Indian cryptocurrency trading industry in turmoil.

What is Supreme Court's view on virtual currencies?

- The Supreme Court in the case Internet and Mobile Association of India v. Reserve Bank of India, deliberated on cryptocurrency and struck down the 2018 circular.
- The Supreme Court analyzed the role of RBI in the economy as a central bank to manage currency, money supply and interest rates and recognized that the maintenance of price stability as an objective of RBI.
- The Supreme Court noted that cryptocurrency is capable of being accepted as valid payment for the purchase of goods and services, and payment systems can be regulated by the RBI.
- This verdict gave a thumbs-up to the crypto exchanges and crypto as an asset class, as indirectly they have not been found violating any other law of the land.

Taxation of cryptocurrencies

- The power to levy taxes is prescribed under **Article 246** which grants power to the Parliament as well as state legislatures to impose taxes.
- **Article 265** provides that no tax can be imposed or collected without the authority of law.
- By virtue of **Constitution (One Hundred and First Amendment) Act, 2016**, the Parliament made several amendments with respect to the imposition of **Goods and Services Tax ('GST')**

including **Article 246A**, wherein exclusive power was given to the Parliament to make laws with regard to interstate trade and commerce.

- Furthermore, **Schedule VII** lists the subject matters where Parliament and state legislatures can impose taxes.
- Broadly speaking, any transaction involving virtual currency could be analysed from two viewpoints – income and expenditure.
- Depending upon the nature and parties to the transaction, it may be taxable under
 - ▶ the Income Tax Act, 1961 ('ITA') (in case of income), or
 - ▶ Central Goods and Services Tax Act, 2017 ('Act') and
 - ▶ other laws (in case of expenditure)
- Since the regulatory framework regarding cryptocurrencies is uncertain, the taxation (or non-taxation) can be analyzed by considering them as both goods and currency.
- With this, two major approaches currently prevalent across the world.
- **Treatment under Indirect Tax:**
 - ▶ GST was implemented with effect from July 1, 2017, across India. GST subsumes most of the indirect taxes, barring few.
 - ▶ Treatment of cryptocurrencies as goods/property would mean that supply of bitcoins is a 'taxable supply' and hence subject to GST.
- **Treatment under Direct Tax:**
 - ▶ The treatment of cryptocurrencies under direct tax regime is mainly governed by the ITA in India.
 - ▶ Till date, the Income Tax Department ('ITD') has neither issued any guidance regarding taxation of digital currencies nor do any disclosure requirements exist in relation to such income earned.
 - ▶ bitcoins are considered as 'currency', they would not be susceptible to tax under ITA.

The European Court of Justice ruled in 2015 that trades involving cryptoassets should be exempt from GST (also known as VAT in certain jurisdictions), while nations like Singapore have in fact reversed previous laws where exchanges involving crypto were subject to GST/VAT.

International Practices

- United States: The USA FinCEN (Financial Crimes Enforcement Network), being at the forefront of

regulation of cryptocurrencies, issued a guidance on regulating decentralised virtual currencies bringing them within the ambit of the Bank Secrecy Act, 1970.

- ▶ As per the US Internal Revenue Service ('IRS'), cryptocurrencies are treated as property for the purpose of federal tax.
- **Germany:** Germany formally recognised bitcoins as units of account allowing them to be used for tax and private trading purposes throughout the country.
- **United Kingdom:** In the United Kingdom (UK), they are classified as an asset or private money, on which capital gains tax is applicable, but VAT is exempted.
- **Australia:** In Australia, digital currencies were previously considered 'intangible property' and were therefore subject to GST.
- **China:** Although no regulation governs cryptocurrency in China, the Government has taken

an aggressive stance towards digital currencies. Recently, the People's Bank of China conducted on-site inspections of bitcoin exchanges and plans to impose penalties on these exchanges for violating upgraded norms related to anti-money laundering.

◎ WRAPPING UP

Given the monumental rise in digital currency and its significant role in financial technology in the coming years, the question is not whether India should adopt a regulatory framework or not; the relevant question is which regulatory framework would be best suited to India and its underlying need for economic growth and financial inclusion. The country should regulate these transactions in a manner that permits a reasonable balance between consumer security and legitimacy. This sandbox approach will ensure financial innovation and transparency and give a boost to economic growth, all of which are primary objectives of the Government.

AMERICA REJOINS PARIS AGREEMENT

CONTEXT

Joe Biden has pledged to combat the climate crisis on his first day as US president by immediately rejoining the Paris climate agreement.

◎ BACKGROUND

- Hammered out over two weeks in Paris during the United Nations Framework Convention on Climate Change's (UNFCCC) 21st Conference of Parties (COP 21) and adopted on December 12, 2015, the Paris Agreement marked a historic turning point for global climate action, as world leaders came to a consensus on an accord comprised of commitments by 195 nations to combat climate change and adapt to its impacts.
- President Obama was able to formally enter the United States into the agreement under international law through executive authority, since it imposed no new legal obligations on the country.
- The United States has a number of tools already on the books, under laws already passed by Congress, to cut carbon pollution.
- The country formally joined the agreement in September 2016 after submitting its proposal for participation.
- The Paris Agreement could not take effect until at least 55 nations representing at least 55 percent of global emissions had formally joined.
- This happened on October 5, 2016, and the agreement went into force 30 days later on November 4, 2016.
- President Trump announced his move to exit the agreement in June 2017, but his decision took effect in November 2020.

◎ ANALYSIS

What is the Paris Agreement?

- The Paris Agreement is a landmark international accord that was adopted by nearly every nation in 2015 to address climate change and its negative impacts.

Aim:

- Limit global temperature rise by reducing greenhouse gas emissions.
- To substantially reduce global greenhouse gas emissions in an effort to limit the global temperature increase in this century to 2 degrees Celsius above preindustrial levels, while pursuing means to limit the increase to 1.5 degrees.

- Provide a framework for transparency, accountability, and the achievement of more ambitious targets.
- Mobilize support for climate change mitigation and adaptation in developing nations.

Important International Agreements on Climate Change

- Montreal Protocol, 1987
- UN Framework Convention on Climate Change (UNFCCC), 1992
- Kyoto Protocol, 2005

How many Countries are currently in the Agreement?

- Since 2015, 197 countries, nearly every nation on earth, with the last signatory being war-torn **Syria**, have endorsed the Paris Agreement.
- Of those, 189 have solidified their support with formal approval—not counting the imminent re-entry of the United States under the Biden administration.
- The other major emitting countries that have yet to formally join the agreement are **Iran, Turkey, and Iraq**.

Why are countries aiming to keep global temperature rise below 1.5°C?

- Heat waves: Many regions would suffer more hot days, with about 14 percent of people worldwide being exposed to periods of severe heat at least once every five years.
- Droughts and floods: Regions would be more susceptible to droughts and floods, making farming more difficult, lowering crop yields, and causing food shortages.
- Rising seas: Tens of millions of people live in coastal regions that would be submerged in the coming decades. Small island nations are particularly vulnerable.
- Ocean changes: Up to 90 percent of coral reefs would be wiped out, and oceans would become more acidic. The world's fisheries would become far less productive.

- Arctic ice thaws: At least once a century, the Arctic would experience a summer with no sea ice, which has not happened in at least two thousand years. Forty percent of the Arctic's permafrost would thaw by the end of the century.
- Species loss: More insects, plants, and vertebrates would be at risk of extinction.

Why did US leave the agreement?

- Having previously falsely claimed climate change is a hoax, leaving the agreement was one of the key promises that Trump made on the 2016 campaign trail.
- In 2017, Trump argued:
 - ▶ **Negative impact on economy:** The agreement would negatively affect the U.S. economy and jobs market.
 - ▶ **Not beneficial for climate change:** It would not mitigate climate change
 - ▶ **Unfair favours for others:** It unfairly favored other countries such as China and India.
- In 2019, Trump described it as "terrible, one-sided" and "a total disaster for our country."
 - ▶ In response, over 200 city mayors promised to continue working towards the aims of the agreement, by signing up to the **American Climate Alliance**.

The Paris Agreement and Biden

- This new era of U.S. climate leadership represents the last, best chance to course-correct in the global

race to tackle climate change.

- In fact, the Biden campaign's climate plan is the most comprehensive ever undertaken by a major candidate for U.S. president—and Biden intends to rally international leaders to cut emissions even more aggressively than under the goals of the Paris Agreement.
- And as Biden and Vice President–Kamala Harris fight to pull the nation out of the grip of the COVID-19 pandemic, they can do so in ways that support climate justice and a clean energy economy.

China which has pledged to become carbon neutral by 2060 but has not yet put forward its national plan – will be watching closely to see what action Mr Biden drives forward in the coming months.

The Road ahead

- Rarely is there consensus among nearly all nations on a single topic. But with the Paris Agreement, leaders from around the world collectively agreed that climate change is driven by human behavior, that it's a threat to the environment and all of humanity, and that global action is needed to stop it.
- Now, the next Conference of the Parties is scheduled for November 2021 in Glasgow. The aims of COP 26 will be to assess the progress made under the Paris Agreement and to encourage countries to enhance their original Nationally Determined Contributions (NDCs) into greater alignment with current climate science.

ARMY OFFICERS NEED ETHICS TRAINING FOR TROOPS IN CONFLICT ZONES

CONTEXT

The chargesheet against an Army Captain for killing three innocent Kashmiri youth in Shopian's Amshipora village in July 2020 has again opened up the debate on moral dilemmas in counter-insurgency operations, and ethics around armed forces deployed in active conflict zones.

◎ BACKGROUND

- In July last year, three youths were gunned down in a fake encounter in Shopian district of Jammu and Kashmir (J&K).
- In the last three decades of proxy war in Jammu and Kashmir, the Army has faltered only a few times.
- In the Shopian case, the Indian Army has openly admitted to their mistake in the fake encounter and is working towards bringing the guilty to justice.
- However, a case like this does call to question the moral and ethical values of the most respected organisation of the country.
- The details of the entire episode are very disturbing, and the culpability of a very small rogue element within the Army is discerned quite clearly.

"dos and don'ts of the Chief of the Army Staff [COAS] as approved by the Supreme Court have been contravened".

◎ ANALYSIS

Ethical dilemma faced by Indian Army

- **Insurgency:** An enemy soldier is easy to fight across the identified border, but fighting in the hinterland against an insurgent/terrorist is not easy.
- **Identifying actual culprit:** Another huge dilemma is to identify actual terrorists, their sympathisers and over ground workers (OGWs).
- **Difficult decisions:** In most cases, when the terrorist fires shots, the chances of the Army suffering casualties are very high. Now the biggest dilemma in the heat of the moment is how much fire power to use?
 - ▶ In many cases, there are men, women, and children in proximity. The leader, in such moments, has a huge burden of ensuring safety not only of his own troops but also of civilians.
 - ▶ The shame of losing a soldier and not being able to hunt down the terrorist is huge. It hangs over the mind and psyche of an officer leading the operation for very long.
- **Communal hatred:** One major fear is always there that things can get out of control and radical elements could use it to fan communal hatred.
- **Moral dilemmas:** Moral dilemmas sometimes overpower the thinking and decision-making ability of military leaders. While the motivation for young leaders may be recognition and awards, much more may be at stake for seniors.
- **Performance pressure:** Add to this, the pressure to perform from higher headquarters.
- **Number game:** Peer pressure and the desire to prove your worth also puts an additional burden. Directly or indirectly, almost all cases of fake or staged encounters are a result of the numbers game.

The Shopian case

- The case relates to the July 18, 2020 encounter at Amshipura in which three youths of Rajouri district were killed and branded as terrorists.
- In the case, Indian police indicted an Indian army officer, accusing him of killing three civilians and staging their deaths as a fake gunfight.

Points made in the police investigation

- The rare independent police inquiry into extrajudicial killings in the troubled region found:
- The Indian military officer Capt Bhoopendra Singh, who used the alias Maj Basheer Khan, had conspired with two of his informers to abduct three local labourers.
- They killed the men, planted illegal weapons on the bodies and branded them "hardcore terrorists".
- They deliberately and purposefully chose not to follow SOPs [standard operating procedures].

The Amshipora fake encounter case is the first time that the army has acknowledged at the preliminary stage that "powers vested under the AFSPA 1990 were exceeded" and that the

Centrality of Ethics in Indian Army

- **UNHR (1948):** As a signatory to the Universal Declaration of Human Rights (UDHR), 1948, India accepts that 'recognition of the inherent dignity and the equal and inalienable rights to all members of the human family is the foundation of freedom, justice and peace in the world.
- **Doctrine for Sub Conventional Operations 2006:** "Remember that the people you are dealing with are your own countrymen; your behaviour must be dictated by this single most consideration. The violation of Human Rights, therefore, must be avoided under all circumstances even at the cost of operational success. The operations must be people-friendly, and it must be ensured that minimum force is used and there are no collateral damages".
- **Special Order of the Day issued by the Chief of the Army Staff (COAS) in 1955:** You are not there to fight the people in the area, but to protect them. You are fighting only those who threaten the people and who are a danger to the lives and properties of the people".

Honour Code of the Army: The honour Code of the Army, combined with the Ten Commandments of the Army Chief, are loud and clear. These guidelines are explicit in regards to what ethical conduct should be, and in times of dilemma can help guide a vacillating mind.

Where does the ethical value fail?

- **Choosing individual goals:** In the garb of organisational goals, sometimes there's a tendency to further own goals. Many times, excesses take place when an individual officer is very keen to demonstrate his professional achievement.
- **Using undue force:** Sometimes the lines blur between saving lives and using undue force.

- **Failed 'one-size fit-all' policy:** The Standard Operating Procedure (SOP) cannot be made for each situation, because circumstances are fluid and very confusing during live firing.
- **Risk to peace and communal harmony:** While operational situations may demand taking bold and aggressive decisions, at no stage should human values be subverted during counter-insurgency. The risks of going wrong are too high, a mistake by a young officer or a soldier may turn back the clock of peace and communal harmony.

What needs to be done?

- **Cordial relations with locals:** Maintaining cordial relations with locals is equally important — this is part of **WHAM (Winning Hearts and Minds) campaign** in Kashmir. During times of crisis, the same people turn out to be moral shields, since they are good judges of the character of the local commander.
- **Reason identifications:** The Army needs to take a closer look at such cases and also conduct a fact-finding study to identify reasons for including ethics training at its Corps Battle Schools.
- **Utilization of effective leadership role:** The Indian Army can be proud of its track record in upholding human rights in the Valley, in spite of the very violent situations they sometimes have to encounter. But when an aberration does take place, the role of the leader becomes very important.

CONCLUSION

Mistakes happen but they need to be accepted upfront. In spite of best efforts, sometimes innocent lives are lost due to cross fire and people get caught in this vortex of violence. In such situations, people do understand and cooperate with local police and the Army, however, what becomes unethical is staging an operation with ulterior motives. Honest mistakes are always condoned. The virtues of honesty, ethical behaviour, moral courage, and thus, good military conduct need to be emphasised.

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ANUBHAVA MANDAPA AT BASAVAKALYAN

© **CONTEXT:** Karnataka CM laid the foundation stone of Anubhava Mandapa at Basavakalyan, which is considered to be the birthplace of 12th century poet and social reformer Basaveshwara.

© **ABOUT:**

The project

- The **₹500-crore project** is said to be completed within two years on a 7.5-acre area.
- The **New Anubhava Mantapa**, as envisaged now, will be a six-floor structure in the midst of the 7.5-acre plot and represent various principles of Basaveshwara's philosophy.
- It will showcase the **12th Century Anubhava Mantapa** (often referred to as the "**first Parliament of the world**") established by him in **Basavakalyan** where philosophers and social reformers held debates.

Anubhava Mantapa

- Basavanna built Anubhava Mantapa. It was the first religious Parliament in the world.
- It was in Basavakalyan of present-day Bidar district. Today, physically it is not available. But the seed planted by Basaveshwara has grown as a huge and dense forest.

- The building will adopt the **Kalyana Chalukya style of architecture**.

Kalyan Chalukya Architecture: Basic Details

- The Chalukya temples show a transition from the Nagara to Dravida style and are built in an altogether new style called Karnatadravida.
- The pillars or ornated columns are considered to be amongst the most important features of these temples and even temples like "Mahadeva Temple" have the finest design and structure in Karnataka after Halebid.
- The Temple plan is generally star-shaped. Most temples have deities like Shiva and Nandi at the entrance of the shrine.
- Examples: Truketshwara Temple, Gadag, Temples of Lakkundi, Kasivisvesvara Temple, Mahadeva Temple, Itagi, Doddabasappa Temple, Dambal etc.

- **Structure:** The grand structure supported by 770 pillars will have an auditorium with a seating capacity of 770 people. It is believed that **770 Sharanas (followers of Basaveshwara)** led the Vachana reformist movement in the 12th Century.
- **Basement:** The basement is designed for a **Dasoha Bhavana (dining hall)** where around 1,500 people eat together.
- **Top:** its top, the structure would have a Linga placed on a large pedestal.
- The project also envisages state-of-the-art robotic system, open-air theatre, modern water conservation system, terrace garden, library, research centre, prayer hall, yoga centre and so on.

Who was Basaveshwara?

- Lord Basavanna or Lord Basaveshwara is known as the founder of the Lingayat parampara (tradition).
- **Lingayats** (from the word '*linga*', which is the mark of the formless Shiva) are a group who follow **Shaivism** as a parampara (tradition).

- He was a philosopher and statesman. He lived in the 12th century CE.
- **Beliefs:** Basaveshwara believed in caste, creed, class, gender equality
- **Principles:** He popularized principles of 'Kayakave Kailasa' and 'Dasoha'
- Besides serving the people as a great reformer and a great mystic, he also served as the **Prime Minister of the Southern Kalachuri Empire** in South India.
- He originated a literary revolution by introducing **Vachana Sahitya** (Lit. vachana = sayings, prose).

Basaveshwara statue in London

- In 2015, Prime Minister Narendra Modi inaugurated a Basaveshwara statue on the bank of river Thames in London, United Kingdom.

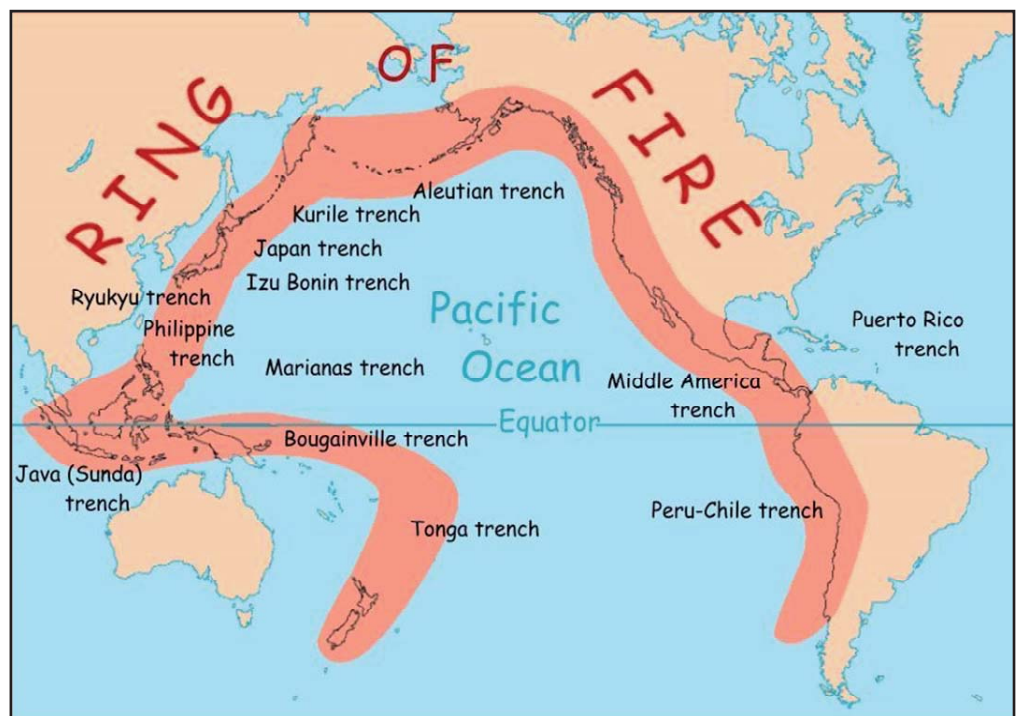
SEMERU, THE HIGHEST VOLCANO IN JAVA

◎ **CONTEXT:** Indonesia's Mount Semeru has erupted, pouring ash an estimated 5.6km (3.4 miles) into the sky above Java, the country's most densely populated island.

- ◎ **ABOUT:**
- Semeru, also known as "The Great Mountain", is the highest volcano in Java and one of the most active.
 - It is also one of Indonesia's most popular tourist hiking destinations.
 - The volcano previously erupted in December, when about 550 people were evacuated.

Home to 130 active volcanoes

- Indonesia sits on the Pacific "Ring of Fire" where tectonic plates collide, causing frequent volcanic activity as well as earthquakes.



- With a population of over 27 crores, Indonesia is reportedly home to at least 130 active volcanoes.
- The Ring of Fire is a belt of tectonic plate boundaries that circle the Pacific Ocean and are prone to frequent seismic activities.
- It is also known as Circum-Pacific Belt or Pacific Ring of Fire.
- This ring is said to be dotted with 75% of Earth's all active volcanoes.
- The ring stretching nearly 25,000 miles apparently includes more than 450 volcanoes. According to seismologists, this belt stretches from the southern tip of South America, along the North America coast, across the Bering Strait, down through Japan, and into New Zealand.

INDIA AMONG DIFFICULT FOUR

◎ **CONTEXT:** Along with Russia, Turkey and Saudi Arabia, India is classed as one of the "difficult four" countries, destined to count among the UK's "rivals" or "awkward counterparts" as it pursues its global goals.

◎ **ABOUT:**

The Report

- **Title of the Report:** "Global Britain, Global Broker".
- **Published by: Chatham House**, the century-old UK-based policy institute also known as the **Royal Institute of International Affairs**.
- The report sketches a bold path ahead for the UK. It proposed a **blueprint for Britain's future foreign policy after Brexit**.

What's in the Report?

- The report groups India on the other side of a "**new divide in international affairs — between open societies where citizens have the capacity to fight for their rights and those where these rights are denied**".
- Developing the relationship with India, a pivotal regional democracy, as part of this shift in British strategic focus, will prove a complex task.
- India will very soon become the largest country in terms of population and will have the third-largest economy and defence budget in a decade's time.
- As a result, India is always on the list of countries with which a new UK government commits to engage.
- But it should be obvious by now that the idea of a deeper relationship with India always promises more than it can deliver.
- India's importance to the UK is inescapable.

India's complex, fragmented domestic politics a hindrance

- The report also took into consideration India's domestic politics, while advising the British government. It stated.
- India's complex, fragmented domestic politics have made it one of the countries most resistant to open trade and foreign investment.
- India does not have "a proactive foreign policy on the global issues" and would probably not join Britain in supporting liberal democracy beyond its shores.

The Report added:

- To the contrary, the overt Hindu nationalism of the ruling Bharatiya Janata Party is weakening the rights of Muslims and other minority religious groups, leading to a chorus of concern that intolerant majoritarianism is replacing the vision of a secular, democratic India bequeathed by Nehru.
- And the government's broader crackdown on human rights activists and civil society groups is no longer being actively challenged by the judiciary, leading to growing complaints about erosion of the rule of law, not only from domestic groups but also the UN and other democracy-watchers.

RUSSIA WITHDRAWS FROM THE OPEN SKIES TREATY

◎ **CONTEXT:** In a latest development, Russia announced that it was leaving the Open Skies Treaty (OST).

◎ **ABOUT:** **The Treaty**

- The Open Skies Treaty, which entered into force in 2002, permits countries to fly unarmed aircraft with cameras and other sensors over the territory of the treaty's other member states.
- Based on an idea **advanced by Dwight Eisenhower** in the 1950s, Open Skies provides for the collection of imagery of military installations and activities in order to foster transparency.
- Each party to the treaty has two annual quotas:
 - the number of flights it may conduct over other treaty-parties (active quota)
 - the number of overflights that it must accept (passive quota)
- Aircraft are inspected before conducting an Open Skies flight, and personnel from the country to be overflown are on board during the flight.
- Under the treaty, a member state can "spy" on any part of the host nation, with the latter's consent.
- A country can undertake aerial imaging over the host state after giving notice 72 hours before, and sharing its exact flight path 24 hours before.

Reasons given by Russia

- Lack of progress in removing the obstacles for the treaty's functioning in the new conditions.
- Russia has argued that the limits on flights over **Kaliningrad**, which hosts sizable military forces, are permissible under the treaty's terms, noting that the US has imposed more sweeping restrictions on observation flights over Alaska.
- As a condition for staying in the pact after the US pullout, Moscow unsuccessfully sought guarantees from NATO allies that they wouldn't transfer the data collected during their observation flights over Russia to the United States.

The US exit

- In November, the United States left the OST first after accusing Russia of violating the pact—allegations that Russia denied.
- Moscow has now blamed Washington for its own decision of leaving the treaty.

UK INVITES INDIA TO ATTEND G7

◎ **CONTEXT:** The United Kingdom has invited India to attend G7 Summit to be held in Cornwall in June 2021.

◎ **ABOUT:** What is the G7?

- The G7 (or Group of Seven) is an organisation made up of the world's seven largest so-called advanced economies: **Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.**
- It was for a while, known as the G8 as it also included Russia, but after their 2014 annexation of Crimea, they were booted out of the summit, reducing it to the G7.
- The group regards itself as "a community of values", with freedom and human rights, democracy and the rule of law, and prosperity and sustainable development as its key principles.

Background

- The concept of a yearly forum for the world's major industrialised countries emerged before 1973.
- However, its progress accelerated after the 1973 oil crisis, where the US convened an informal gathering of finance ministers from West Germany, France and the United Kingdom ahead of a proper gathering.
 - ▶ G5: It later expanded to involve Japan to become the G5.
 - ▶ G6: Two years later in 1975, it included Italy, becoming the G6
 - ▶ G7: Canada joined in 1976 to create the G7.
 - ▶ G8: In 1998, years after the end of the Cold War, Russia was invited for the first time, marking a major turning point in world relations.
- This ended in 2014 after Russia annexed Crimea with the group returning to its previous G7 lineup.

The upcoming summit

- Britain holds the G-7's rotating presidency this year. It last hosted the group's annual meeting in 2013 at the Lough Erne Resort in Northern Ireland.
- The proposed summit will be the first in-person G-7 summit in almost two years, as it will be held in the English region of Cornwall from June 11 to 13.
- Mr. Modi participated in the Biarritz G7 summit in 2019 when French President Emmanuel Macron had invited India.
- Besides India, Australia and South Korea have also been invited.

Increasing cooperation between UK and India

- Cooperation between the U.K. and India is significant this year as India is a **non-permanent member** at the **UN Security Council**, where the United Kingdom will take over the presidency in February.
- UK Prime Minister Boris Johnson is likely to visit India ahead of the G7 Summit.

Focus areas

- The upcoming G-7 summit will focus on promote a green recovery from the Covid-19 pandemic.

- The other priority is the **climate**, as the UK will organize itself in Glasgow, November, the 26th **Conference of the Parties (COP26)** to the **United Nations Framework Convention on Climate Change (UNFCCC, in the acronym)**.

GI TAG SOUGHT FOR INDIA'S COSTLIEST MUSHROOM

◎ **CONTEXT:** A geographical indication (GI) tag has been sought for one of the costliest mushrooms in the world that grows in Jammu and Kashmir's Doda district.

- ◎ **ABOUT:**
- Also known as Morel Mushrooms or Morchella Esculenta scientifically, these mushrooms command a huge demand despite their high price tag. It is a forest produce collected by local farmers and tribals.
 - Locally called Guchi, the mushroom is priced at over ₹20,000 a kg.
 - **Family:** Guchi mushroom is a species of fungus belonging to the **family Morchellaceae**.
 - They are pale yellow in color with large ridges and pits on their cap. They are raised on a large white stem.
 - **Region:** The mushroom grows in conifer forests across temperate regions, and the cool foothills of the **Himalayas**, in **Himachal, Uttarakhand** and **Jammu & Kashmir** are ideal territory for them.
 - **Soil type:** The Guchi mushrooms prefer soil with limestone base. They also grow in acid soils.
 - **Cultivation:** The Guchi mushrooms cannot be cultivated commercially for their nature of germination.
 - They germinate and grow in low temperature soil. They usually appear after fires.
 - The fruiting of Guchi mushrooms require alkaline conditions produced by wood ash mixed with water.

- Last June, saffron from the State (Kashmiri saffron, also known as 'Zafran' in Urdu,) had been granted a GI tag.

Properties

- The spongy, edible fungus is said to have medicinal and anti-inflammatory properties.
- The mushrooms are cherished for their **antioxidant and antimicrobial properties**. They are also considered a rich source of **protein, carbohydrates and Vitamin B**.

INFECTIOUS DISEASES BIGGER GLOBAL THREAT THAN CLIMATE CHANGE: WEF

◎ **CONTEXT:** Infectious diseases topped the global risks chart, displacing climate change, according to the Global Risks Report, 2021.

© ABOUT:

What are Infectious diseases?

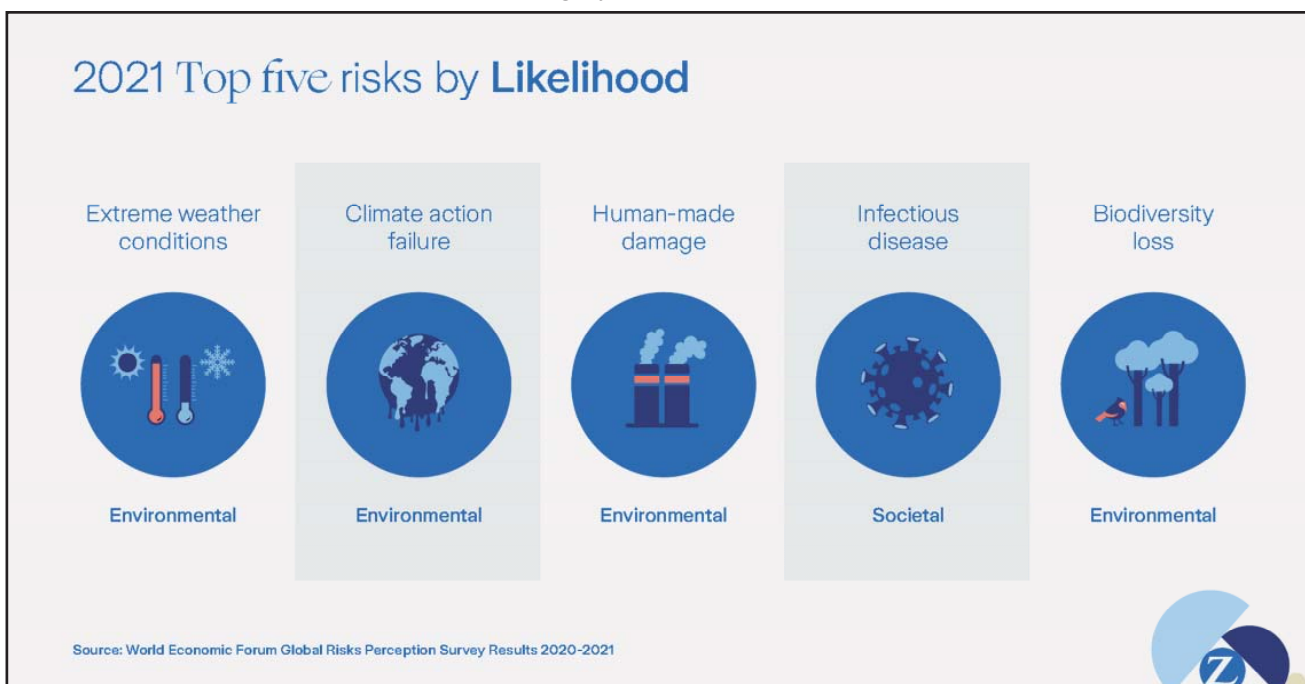
- Infectious diseases are caused by microorganisms such as viruses, bacteria, fungi and parasites.
 - Microorganisms that cause disease are collectively called pathogens.
- Infectious diseases can be spread from one person to another, for example through contact with bodily fluids, by aerosols (through coughing and sneezing), or via a vector, for example a mosquito

What causes an infectious disease?

- **Viruses:** Viruses are tiny infectious agents that replicate only in the living cells of other organisms.
- Viruses have a very simple structure consisting of genetic material in the form of DNA or RNA within a protein capsule.
- They can infect all types of life forms, from animals to plants and bacteria to amoebae.
- **Bacteria:** Bacteria are single-celled microorganisms. They come in many shapes including ball-, rod- and spiral-shaped.
 - Most bacteria are not harmful and some are actually beneficial. Less than one per cent of bacteria will actually make person ill.
- **Fungi:** Fungi are microorganisms characterised by cell walls made from a substance called chitin.
 - Fungi reproduce by releasing spores that can be picked up by direct contact or even inhaled.
- **Parasites:** Parasites are organisms that live in or on another organism and benefit by getting nutrients at the expense of their host.
 - Parasites can be found in many different body sites, for example in the blood, liver, digestive system, brain and even the eyes.

Key-highlights of the Report

- Five of the top 10 global risks in terms of impact and likelihood remain from the environmental category.



- Extreme weather is the top-most climate-related risk because of the failure of climate change mitigation and adaptation.
- For the first time, the report rates risks according to when respondents perceive they will pose a critical threat to the world.
- Infectious diseases pose the biggest livelihood and economic threat as witnessed during the novel coronavirus disease (COVID-19) pandemic.



- The category was ranked tenth in the previous report, which said extreme weather and failure of climate change mitigation and adaptation would be the most damaging for the planet over the next 10 years.

12 new risks

- In the wake of COVID-19, the 16th edition of the WEF annual report added 12 new risks to the previous list.
- They include the:
 - collapse of systemically important industries
 - social security systems or multilateral institutions
 - deteriorating mental health
 - mass youth disillusion
 - prolonged economic stagnation
 - fracturing international relations
 - a 'pervasive backlash' against science
 - digital inequality
 - the failure of technology governance

SEBI MOOTS NEW OWNERSHIP FRAMEWORK FOR SETTING UP MARKET INFRASTRUCTURE INSTITUTIONS

◎ **CONTEXT:** In a latest move, SEBI proposed a new framework for ownership of Market Infrastructure Institutions (MIIs) to facilitate new entrants to set up stock exchanges and depositories.

◎ **ABOUT:** What are MIIs?

- Intermediaries / Market Infrastructure Institutions:
 - Recognised Intermediaries
 - Processing Application Status
 - Stock Exchanges
 - Application Formats and Fees
 - Clearing Corporations
 - Depositories
 - Entities Permitted to Send Stock Tips using Bulk SMS
- These institutions are systemically important institutions whose failure could lead to "bigger cataclysmic collapses" bringing down the economy.

Key-highlights of the Suggestions

- **Liberalised framework:** The regulator has suggested a liberalised framework in the landscape of MIIs (Market Infrastructure Institutions) by allowing higher shareholding at the inception stage and prescribing a dilution in the ownership over a period of time.
 - The regulator said there is a need to incentivise fintech players through suitable relaxations in the ownership framework to enter the Indian MII space.
- **Public Limited Company:** MII should also be a public limited company.
- **Tenure (MD & CEO):** New norms pertaining to tenure of MD and CEO of MIIs, stock exchanges, depositories and clearing corporations have also been proposed.
- **Statutory committees:** Besides, Sebi has recommended a more diversified composition of statutory committees at MIIs to boost corporate governance norms.
- **Shareholding:** It has been proposed that promoters -- resident individuals, domestic institutions (resident owned and controlled) -- setting up the MII may, directly or indirectly, either individually or together with persons acting in concert, can hold up to 100 per cent shareholding.
 - In case of foreign entities, such limit has been proposed up to 49 per cent.
 - The shareholding of such resident individuals and domestic institutions should be brought down to not more than 51 per cent or 26 per cent in 10 years from the date of commencement of business.
 - In the case of foreign entities, their shareholdings should be reduced to 26 per cent or 15 per cent during the period.

Present framework

- The present framework caps the ownership of MIIs at a lower shareholding limit, which is not more than 5 percent for individuals and institutions (domestic or foreign) in general and permits only up to 15 percent ownership stake by select category of institutions.

RARE EARTH METALS USED IN CLEAN ENERGY TECHNOLOGIES. BUT HOW SAFE ARE THEY

◎ **CONTEXT:** Naturally abundant wind, geothermal, solar, tidal and electric energy are being hastened as the future of the planet's energy needs. And rare earth elements are used in a bevy of technologies to generate this cleaner, renewable energy.

◎ **ABOUT:** **What are rare earth elements?**

- Rare earth elements include wind turbine magnets, solar cells, smart phone components, cells used in electric vehicles, among others.
- The 17 Rare Earths are **cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium (Tm), ytterbium (Yb), and yttrium (Y).**

Are they really 'rare'?

- Despite their classification, most of these elements are not really "rare", they are found abundantly in the Earth's crust.
- They are widely dispersed and found in low concentrations that are not economically exploitable.
- One of the Rare Earths, promethium, is radioactive.

Primary producers

- Until 1948, India and Brazil were the world's primary producers of rare earth metals.
- The countries with the most rare earth metals currently are China (the largest reserves in the world), the United States, Brazil, India, Vietnam, Australia, Russia, Myanmar, Indonesia.

Usage

- **Electronic technologies:** These elements are important in technologies of consumer electronics, computers and networks, communications, clean energy, advanced transportation, healthcare, environmental mitigation, and national defence, among others.
- Scandium is used in televisions and fluorescent lamps, and yttrium is used in drugs to treat rheumatoid arthritis and cancer.
- **Defence equipments:** While Rare Earth elements are used in building consumer electronics, in healthcare and transportation, they are especially important for governments because of their use in manufacturing defence equipment.
- **Space:** Rare Earth elements are used in space shuttle components, jet engine turbines, and drones.

- Cerium, the most abundant Rare Earth element, is essential to NASA's Space Shuttle Programme.

The concern

- **Equal exploitation as mining:** Extraction and mining of rare earth metals involves similar land-use exploitation, environmental damage and ecological burden as any other mining operation. They are mined using extremely energy-intensive processes, spewing carbon emissions into the atmosphere and toxins into the ground.
- **Damaging ecosystem:** Many of these metals, which include mercury, barium, lead, chromium and cadmium, are extremely damaging to the health of several ecosystems, including humans.
- Like the cartelisation of oil and gas and the chances of oil embargoes, there are high possibilities of this happening to global rare earth metal reserves and supply chains. They are driven by changes in development models, innovation and discovery of resource availability.

What about recycling?

- Recycling of these rare earth metals for continuous usage for various technologies is a good option that can be considered.
- It is a lengthy process which involves **demagnetisation (by heating), crushing and roasting**, followed by a **leaching process and a separation method** before a final roasting to produce a mixed rare earth oxide.
- Hundreds of thousands of tons of rare earth compounds are being produced and manufactured into products each year.
- Recycling rare earth materials is challenging because once embedded in devices, they're difficult to take out.
- Instead of discarding phones or IT equipment after a couple of years, enterprises should aim to get the most out of the technology they have invested in through repairing or refurbishing.
- Having suitable recycling methods is a valuable contribution towards keeping the costs of the materials low and maximising the use of the rare earth elements.

US WARNS INDIA OVER S-400

◎ **CONTEXT:** The US has yet again warned India that it could face sanctions over it acquiring five Russian Almaz-Antei S-400 Triumf self-propelled surface-to-air (SAM) systems for \$5.5 billion.

◎ **ABOUT:** What is S-400?

- The S-400 is a mobile, surface-to-air missile system (SAM) designed by Russia.
- It is a successor to the S-200 and S-300 air defence systems.
- It integrates the **91N6E multi-function panoramic radar** with a 600 km range, autonomous detection and targeting systems and launchers.
- It can fire four missile types with strike ranges of between 400 km and 40 km to provide multi-layered defence against incoming fixed wing and rotary aircraft, unmanned aerial vehicles (UAVs) and ballistic missiles at altitudes of up to 30 km.
- The S-400 is organised around the **30K6E administration system**, with protection against jamming.
- It can simultaneously locate 72 targets and track another 160 alongside, compared with PAC-3s 36 and 125 respectively.

Which countries have CAATSA imposed on them?

- So far, the US has imposed CAATSA on Turkey and China for taking delivery of two S-400 systems each.
- As part of the sanctions, the US removed Turkey, a NATO ally, from the **F-35 joint strike fighter (JSF)** programme.
 - A White House statement declared that the **F-35 cannot coexist with a Russian intelligence collection platform**, as that can be used to learn about its advanced capabilities.

Why India chose the S-400?

- **Better option:** India opted for the Russian S-400, believing it to be more efficient, cheaper and above all, acquirable from a long-standing materiel supplier, that entail no political strings or strategic obligations.
- **Much ahead of THAAD:** It is the most dangerous operationally deployed modern long-range SAM (MLR SAM) in the world, considered much ahead of the US-developed Terminal High Altitude Area Defense system (THAAD).
- **Multi-faceted:** The S-400 system is operationally more versatile, accurate and multi-faceted in all aspects compared to its US rivals.
- **Inflexible protocols with US:** Conversely, all defence purchases from the US are governed by a slew of inflexible protocols signed by Delhi and Washington over the past decade.

GS SCORE

An Institute for Civil Services



CSE RESULTS

TOP 100
ALL INDIA RANKING
CSE 2019

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|----|----|----|----|----|----|----|----|----|----|----|----|
| 3 | 6 | 10 | 11 | 16 | 17 | 21 | 22 | 28 | | | |
| 30 | 33 | 38 | 39 | 42 | 44 | 46 | 53 | 54 | 59 | 66 | 69 |
| 70 | 72 | 77 | 78 | 80 | 82 | 84 | 86 | 87 | 94 | 97 | 98 |

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TOP 100
ALL INDIA RANKING
CSE 2018

| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|-----|
| 2 | 3 | 5 | 7 | 27 | 36 | 37 | 40 | 44 | 49 | | |
| 51 | 52 | 56 | 58 | 62 | 74 | 81 | 89 | 92 | 94 | 98 | 100 |

TOP 100
ALL INDIA RANKING
CSE 2017

| | | | | | | | | | | | | |
|----|-----|----|----|----|----|----|----|----|----|----|----|----|
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| 97 | 100 | 54 | 57 | 63 | 64 | 68 | 71 | 75 | 77 | 80 | 83 | 93 |

TOP 100
ALL INDIA RANKING
CSE 2016

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|---|---|---|----|----|----|----|----|----|----|----|
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TOP 100
ALL INDIA RANKING
CSE 2015

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|---|----|----|----|----|----|----|----|----|----|
| 9 | 13 | 26 | 34 | 39 | 75 | 77 | 78 | 89 | 91 |
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