



## Cyber Threat to Mobile Banking

**For Prelims:** Digital Payments, cybersecurity threat, Computer viruses, Data Breaches, Denial of Service (DoS) attacks, Trojans, Malware.

**For Mains:** Cyber-attacks & their impacts.

### Why in News?

According to a recent study, more people are inclining toward [digital payments](#) and there is a rise in the number of people's interactions with their bank or bank accounts happen through their smartphones.

- Further, this acceleration brings along with it a vulnerability: an increased threat of [cyberattacks](#) on mobile devices.

### What are Cyber Threats?

- **About:**
  - A cyber or **cybersecurity threat** is a **malicious act that seeks to damage data, steal data, or disrupt digital life in general. It includes computer viruses, data breaches, Denial of Service (DoS) attacks, and other attack vectors.**
- **Different Types:**
  - **Malware: Malware** short for malicious software refers to any kind of software that is designed to cause damage to a single computer, server, or computer network. **Ransomware, Spy ware, Worms, viruses, and Trojans are all varieties of malware.**
  - **Phishing:** It is a method of trying to gather personal information using deceptive e-mails and websites.
  - **Denial of Service attacks:** A Denial-of-Service (DoS) attack is an attack meant to shut down a machine or network, making it inaccessible to its intended users. DoS attacks accomplish this by flooding the target with traffic, or sending it information that triggers a crash.
  - **Man-in-the-middle (MitM) attacks,** also known as eavesdropping attacks, occur when attackers insert themselves into a two-party transaction. Once the attackers interrupt the traffic, they can filter and steal data.
  - **Social engineering** is an attack that relies on human interaction to trick users into breaking security procedures in order to gain sensitive information that is typically protected.

### What are the Issues of Cyber Threats on Mobile Banking?

- **Increasing Cyber Attacks:**
  - A study by cyber security firm Kaspersky warns of an **increase in cyberattacks on Android and iOS devices in the Asia Pacific (APAC)** as more people switch to mobile

banking in the region.

- **Use of Trojans & [Malware](#):**
  - As per Kaspersky, mobile banking **Trojans are dangerous malware that can steal money from mobile users' bank accounts by disguising the malicious application as a legitimate app** to lure unsuspecting people into installing the malware.
  - For e.g, mobile banking trojan, called **Anubis, has been targeting Android users since 2017.**
    - Further, its **worldwide campaigns have hit users in Russia, Turkey, India, China, Colombia, France, Germany, the U.S., Denmark, and Vietnam.**
- **Methodology:**
  - The perpetrators **infect the device through legitimate-looking and high-ranking malicious apps on Google Play, smishing (phishing messages sent through SMS), and BianLian malware**, another mobile banking Trojan,
    - Roaming Mantis is another prolific malware targeting mobile banking users.
      - The group attacks Android devices and spreads malicious code by hijacking domain name systems (DNS) through smishing exploits.
- **Interoperability issue:**
  - As various payment platforms like **Google Pay, PaytM, PhonePe, Square, PayPal, and Alipay have benefited from changes in consumer behaviour by adopting mobile banking.**
    - As a result, they have also permanently changed the payments game to their advantage.
  - **Closed Loop Payment System:**
    - These platforms are operating in a **closed-loop payment world where a Google Pay user can send money to another bank account via only the search giant's payment platform.**
      - It is similar to how Visa and Mastercard operate as they let payment transactions happen only within their own networks, not between each other.
  - **Change in Business Model:**
    - It's driven partly by **regulators that prefer open, standardized platforms that lower barriers to entry.**
    - Some countries are already making payment platform providers change their business models.
      - China, for instance, has ordered its **internet companies to offer their rival firms link and payment services on their platforms.**
      - In India, a **new law demands all licensed mobile payment platforms be capable of providing interoperability between wallets.**
    - The push from regulators to make payment platforms interoperable comes at a time when the demand for technical experts is a serious concern in the banking industry.
- **Shortage of Security Experts:**
  - The **shortage of technology, engineering, data and security experts needed by banks to realise their digital aspirations tends to hide a much wider problem:** banks' appeal as first-choice employers of all kinds of talent have faded.
- **Lack of Adequate Cybersecurity Policy:**
  - The lack of adequate cybersecurity and the dearth of talent in banking could potentially lead to a further rise in cyberattacks on user devices.
    - And until this mismatch is fixed, it helps to be careful and extremely cautious when using a mobile device to make payments.

## Way Forward

- **Usual practice of digital hygiene** like keeping the phone up-to-date and rebooting regularly can be done.
- Further, consumers can ensure that they use **their phones for banking only** when the device is connected to a secure VPN (**VPN** stands for "**Virtual Private Network**" and describes the

opportunity to establish a protected network connection when using public networks) and iOS 16 users can turn on Lockdown Mode as it limits the device's functionality and protects it from any potential malware.

## UPSC Civil Services Examination Previous Year Question (PYQ)

### ***Prelims***

**Q. The terms 'WannaCry, Petya and EternalBlue' sometimes mentioned in the news recently are related to (2018)**

- (a) Exoplanets
- (b) Cryptocurrency
- (c) Cyber-attacks
- (d) Mini satellites

**Ans: (c)**

**Exp:**

- Ransomware is a form of malicious software (or malware). Once it takes over the computer, it threatens user to harm, usually by denying access to data. The attacker demands a ransom from the victim, promising to restore access to the data upon payment. WannaCry, Petya and EternalBlue are few of the ransom ware, which created havoc by demanding the victim ransom payment in bit coin (crypto currency).
- Cryptocurrency is a digital currency in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank. **Therefore, option (c) is the correct answer.**

### ***Mains***

**Q. Discuss the potential threats of Cyber-attack and the security framework to prevent it. (2017)**

[Source: TH](#)

## **Scheme for Economic Empowerment of DNTs**

**For Prelims:** De-notified, Nomadic and Semi-nomadic Tribes, Related commissions and committees, Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities (DWBDNC), Schemes for DNT

**For Mains:** Issues Related to SCs & STs, Government Policies & Interventions, State of De-notified, Nomadic and Semi-nomadic Tribes in India

### **Why in News?**

Recently, the Ministry of Social Justice and Empowerment has said that only 402 online applications are

received to avail benefits under SEED (Scheme for Economic Empowerment of Denotified, Nomadic and Semi-Nomadic Tribes).

- More than 10 crore Indians from 1,400 communities belong to these groups, as per the latest estimates available with the government.

## What is SEED?

- **About:**
  - The Scheme for Economic Empowerment of Denotified/Nomadic/SemiNomadic (SEED) communities was launched in February 2022 by **the Ministry of Social Justice & Empowerment**.
  - It aims to **provide free competitive exam coaching to these** students, to provide health insurance to families, to uplift clusters of these communities through livelihood initiatives, and to provide financial assistance for housing.
- **Components:**
  - Free coaching to students from these communities for Civil Services, entry to professional courses like medicine, engineering, MBA, etc.
  - **Health Insurance** through [PMJAY](#) of National Health Authority.
  - Livelihoods to support income generation
  - Housing (through PMAY/IAY).
- **Features:**
  - It ensures expenditure of **Rs.200 crore to be spent over five years** beginning 2021-22.
  - The [DWBDNCs \(Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities\)](#) has been tasked with the implementation of this scheme.
  - An online portal has been developed by the department which will ensure seamless registration and will also act as a repository of the data on these communities.

## Who are De-Notified, Nomadic and Semi-Nomadic Tribes?

- These are communities that are the **most vulnerable and deprived**.
- DNTs are communities that were **'notified' as being 'born criminals'** during the British regime under a series of laws starting with **the Criminal Tribes Act of 1871**.
  - These Acts were repealed by the Independent Indian Government in 1952, and these communities were **"De-Notified"**.
- A few of these communities which were listed as de-notified were also nomadic.
  - **Nomadic and semi-nomadic communities** are defined as those who move from one place to another rather than living in one place all the time.
- Historically, Nomadic Tribes and De-notified Tribes never had access to private land or home ownership.
- While most DNTs are spread across the [Scheduled Castes \(SC\)](#), [Scheduled Tribes \(ST\)](#) and [Other Backward Classes \(OBC\)](#) categories, some DNTs are not covered in any of the SC, ST or OBC categories.
- Many commissions and committees constituted since Independence have referred to the problems of these communities.
  - These include the Criminal Tribes Inquiry Committee, 1947 constituted in the United Provinces (now Uttar Pradesh),
  - **Ananthasayanam Ayyangar Committee in 1949** (it was based on the report of this committee the Criminal Tribes Act was repealed),
  - **Kaka Kalelkar Commission** (also called first OBC Commission) constituted in 1953.
  - The B P Mandal Commission constituted in 1980 also made some recommendations on the issue.
  - The National Commission to Review the Working of the Constitution (NCRWC), 2002 held that DNTs have been wrongly stigmatised as crime prone and subjected to high handed treatment as well as exploitation by the representatives of law and order and general society.
    - The NCRWC was established under the chairmanship of Justice M N Venkatachaliah.
- It has been **estimated that South Asia has the world's largest nomadic population**.
  - In India, roughly 10% of the population is Denotified and Nomadic.

- While the number of Denotified Tribes is about 150, the population of Nomadic Tribes consists of about 500 different communities.

## What are the Developmental Efforts Regarding DNT?

### ▪ Background:

- A **National Commission for De-notified, Nomadic and Semi-Nomadic Tribes (NCDNT)** was constituted in 2006 by the then government.
  - It was headed **by Balkrishna Sidram Renke** and submitted its report in 2008.
  - The commission held that “It is an irony that these tribes somehow escaped the attention of our Constitution makers.
  - They are deprived of Constitutional support unlike Scheduled Castes and Scheduled Tribes”.
  - The Renke commission estimated their population at around 10.74 crores based on [Census 2001](#).
- **Idate Commission:**
  - The National Commission was constituted in 2015 under the chairmanship of **Shri Bhiku Ramji Idate**.
  - This commission was tasked **to identify and properly list** DNT communities in different states, to evaluate the progress of development of these communities in the states.
  - Based on the recommendation of this commission, the Government of India set **up the Development and Welfare Board for DNTs, SNTs &NTs (DWBDNCs) in 2019**.

### ▪ Schemes for DNT:

- **Dr. Ambedkar Pre-Matric and Post-Matric Scholarship for DNTs:**
  - This Centrally Sponsored Scheme was launched w.e.f. 2014-15 for the welfare of those DNT students who are not covered under SC, ST or OBC.
- **Nanaji Deshmukh Scheme of Construction of Hostels for DNT Boys and Girls:**
  - This Centrally Sponsored Scheme launched w.e.f. 2014-15 is implemented through State Governments/ UT Administrations/ Central Universities.
- From the year 2017-18, the scheme "Assistance to Voluntary Organization working for the Welfare of OBCs " has been extended for DNT.

[Source: TH](#)

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## Peer Pressure

**For Mains:** Effect of Peer Pressure on Different Sections of Society

### Why in News

There is still much disagreement over whether peer pressure is a genuine phenomenon.

### What do we understand by Peer Pressure?

#### ▪ About:

- Peer pressure is the process in which individuals within the same group influence others in the group to engage in a behavior or activity that they may not otherwise engage in.
  - A peer can be any individual who belongs to the same social groups or circles as

you and has some type of influence over you.

- Peer pressure or influence is **when you do something because you want to feel accepted** and valued by your friends.
- Peer influence can be **positive or negative**.
- **Coping well with peer influence is about getting the right balance** between being yourself and fitting in with your group.
- **Effects:**
  - **Positives:**
    - Positive peer influences **might refer to peers who inspire constructive outcomes**, offer moral support, motivate us to do well in life, stimulate interest in reading or extracurricular activities, always teach us something new, speak against bullies, and, above all, respect our boundaries.
  - **Negatives:**
    - This form of **peer pressure can include ridiculing someone's choices or values, forcing them to do things against their principles**, leading to bad habits or even disagreeable acts like stealing, cheating, indulging in alcohol and drugs, skipping classes, using the internet for inappropriate activities, or other risky behaviours.
- **Reasons:**
  - Desire to Fit in
  - To Avoid Rejection and Gain Social Acceptance
  - Hormonal Inconsistencies
  - Personal/social Confusion and/or Anxiety
  - A Lack of Structure at Home

## How does Peer Pressure affect Young People?

- **A young person's academic performance, educational choices and career (one may quit one's dream career** and go after what their friends are doing), concentration levels, and overall personality and behaviour might alter due to peer pressure.
- These are all but a cumulative effect of negative peer influences.
- According to developmental theorist Erik Erikson, "When there is a similarity among peers, it provides us with a sense of security," which causes the **crisis of identity vs identity confusion**.
- Adolescents modify their thinking patterns, speech, dressing, behaviour, and other choices to those of their friends. Instead of cherishing their individuality, they try to be someone else.
- They fail to understand that each person is unique and trying to emulate someone else can reveal low self-esteem.

## Way Forward

- **Accepting the fact that Every Child is Unique:**
  - First, we need to understand the fact that peer pressure is not an external factor.
  - It is a fear conjured up by our brain due to our lack of self-esteem, which if realised will never allow us to think what others will think of us.
  - Parents need to **accept the fact that each child is unique and not here to fulfil their expectations**.
    - They need to nurture the child's individuality. Then, coming generations will be free of peer pressure.
- **It's okay to Make an Excuse:**
  - It's best to **stay away from peers who encourage dangerous behaviour**. Instead, it is wiser to spend time with kids who resist peer pressure or refuse indulgence in unwelcome activities.
- **Avoid the Situation:**
  - Find friends who respect each other's boundaries and it's good to stay away from friends who are a bad influence.
- **Be firm:**
  - One must know **how to say 'no' when anything is inappropriate**, or when it feels uncomfortable or unsafe.
  - Talking it out with a grown-up that one can trust – like a parent, teacher, or school

- counsellor can be helpful.
- **Encouraging open and honest communication** is therefore imperative.
    - That way kids will be comfortable discussing and telling how they feel before things have gone too far.
  - At the same time, parents must teach their children to be assertive and resist any inappropriate situations.

## UPSC Civil Services Examination, Previous Year Question

**Q.** Our attitudes towards life, work, other people and society are generally shaped unconsciously by the family and the social surroundings in which we grow up. Some of these unconsciously acquired attitudes and values are often undesirable in the citizens of a modern democratic and egalitarian society. **(2016)**

**(a)** Discuss such undesirable values prevalent in today's educated Indians.

**(b)** How can such undesirable attitudes be changed and socio-ethical values considered necessary in public services be cultivated in the aspiring and serving civil servants?

[Source: TH](#)

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## Vishnugad Pipalkoti Hydro Electric Project

**For Prelims:** Vishnugad Pipalkoti Hydro Electric Project, Alaknanda River, Ganga, Hydropower Projects in Uttarakhand, Climate Change.

**For Mains:** Challenges to Hydropower Projects in Himalayas.

### Why in News?

Recently, the World Bank has agreed to look into environmental damage from the under-construction **Vishnugad Pipalkoti Hydro Electric Project (VPHEP)** on the Alaknanda River in Uttarakhand.

- The panel has considered the request for an enquiry after accepting the Complaints from 83 Local Communities.

### What is the Geography of Alaknanda River?

- It is one of the **headstreams of the Ganga**.
- It rises at the confluence and feet of the **Satopanth and Bhagirath glaciers** in Uttarakhand.
- It meets the Bhagirathi River at Devprayag after which it is called the Ganga.
- Its main tributaries are the **Mandakini, Nandakini, and Pindar rivers**.
- The Alaknanda system drains parts of Chamoli, Tehri, and Pauri districts
- The Hindu pilgrimage center of Badrinath and the natural spring Tapt Kund lie along the banks of the Alaknanda River
- At Its origin, **Lake Satopanth** is a triangular lake located at a height of 4402 m and named after the Hindu trinity Lord Brahma, Lord Vishnu, and Lord Shiva.
- **Panch Prayag:** Five sites in Uttarakhand where **five rivers merge into River Alaknanda to**

ultimately form the holy River Ganga is called **Panch Prayag** (in Hindi, 'panch' means five and 'prayag' means confluence).

- First, Alaknanda meets **Dhauliganga** river at **Vishnuprayag**, move on to **Nandaprayag** to meet **Nandakini** river then travels to Karnaprayag to join Pindar river. It unites with Nandakini river at **Rudraprayag** and joins the last and the final Bhagirathi river at **Devprayag**.



## What are the Complaints?

- The project would **destroy the ancient Laxmi Narayan Temple** in Haat village.
  - The temple is a **cultural resource for the locals** and is the source of their livelihood.
- Muck-dumping from the dam **threatens the architecture of the temple walls**, which is an ancient heritage site, the villagers claimed.
  - The locals claimed to have a **sacred bond with Laxmi Narayan Temple**, which was allegedly established by **Adi Shankaracharya** in the 19<sup>th</sup> century.
- The residents are being **forcefully relocated from their village**.
  - Some locals who refused to accept compensation and move to another place were removed from their homes while **some were locked up by the police**.
- The project has also **not taken disasters caused by climate change and extreme weather events** into account.
- A mid-day **cloudburst** in Kedarnath in 2013 and the Chamoli disaster of 2021 were also ignored.

## What is VPHEP?

- The 444-MW VPHEP is being built by the **Tehri Hydropower Development Corporation**, a partially Centre-owned enterprise.
- The project is primarily funded by the **World Bank and was sanctioned in 2011**
- The hydropower project has been targeted to be completed by 30th June, 2023 at the cost of USD 922 million.
- The project will build a 65-meter diversion dam near Helang village in Chamoli district of Uttarakhand to create a small reservoir in the **Alaknanda River**.

## What are the Hydro Power Projects in Uttarakhand?

- **Tehri Stage 2:** 1000 MW on Bhagirathi river
- **Tapovan Vishnugadh:** 520 MW on Dhauliganga river
- **Vishnugadh Pipalkoti:** 444 MW on Alaknanda river



- **Singoli Bhatwari:** 99 MW on Mandakini river
- **Phata Bhuyang:** 76 MW on Mandakini river
- **Madhyamaheshwar:** 15 MW on Madhyamaheshwar Ganga
- **Kaliganga 2:** 6 MW on Kaliganga river.

## What are the Challenges to Hydropower Projects in Himalayas?

- **Decreasing Stability:**
  - Glacier retreat and **Permafrost Thaw** are projected to decrease the stability of mountain slopes and increase the number and area of glacier lakes.
    - Permafrost Thawing is the release of the powerful greenhouse gas methane into the atmosphere, which contributes to further warming in a reinforcing feedback loop.
- **Climate Change:**
  - Climate change has driven erratic weather patterns like increased snowfall and rainfall.
  - The thermal profile of ice is increasing, which means that the temperature of ice that used to range from -6 to -20 degree C, is now -2 degree C, making it more susceptible to melting.
- **Increase in Calamitic Instances:**
  - With increased instances of **cloudbursts, and intense spells of rainfall and avalanches**, residents of the region are also placed at increased risk of loss of lives and livelihood.

## Way Forward

- It is recommended that there should be no hydropower development beyond an elevation of 2,200 metre in the Himalayan region.
- Considering population growth and required industrial and infrastructure growth, the government should be serious in the development of hydro power which is essential for the sustainable growth of the economy, but in a more ecological manner.

## UPSC Civil Services Examination Previous Year Question (PYQ)

**Q. On which one of the following rivers is the Tehri Hydropower Complex located? (2008)**

- (a) Alaknanda
- (b) Bhagirathi
- (c) Dhauliganga
- (d) Mandakini

**Ans: (b)**

**Q. Where are Tapovan and Vishnugarh Hydroelectric Projects located? (2008)**

- (a) Madhya Pradesh
- (b) Uttar Pradesh
- (c) Uttarakhand
- (d) Rajasthan

**Ans: (c)**

**Source: DTE**

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# Community Forest Resource Rights

**For Prelims:** Community Forest Resource, Reserve Forest, Protected Forest, Sanctuary and National Parks

**For Mains:** Community Forest Resource Rights and significance of the Recognition

## Why in News?

Residents of the four villages in Chhattisgarh's Mungeli district have received [Community Forest Resource Rights \(CFRR\)](#).

- Achanakmar became the second [tiger reserve](#) in Chhattisgarh to get CFRR, following Udanti Sitanadi Tiger Reserve in Dhamtari district.

## What is a Community Forest Resource?

- The Community Forest Resource (CFR) area is common **forest land that has been traditionally protected and conserved for sustainable use** by a particular community.
- The community uses it to **access resources available within the traditional and customary boundary** of the village, and for seasonal use of landscape in the case of pastoralist communities.
- Each CFR area has **a customary boundary with identifiable landmarks recognised by the community** and its neighbouring villages.
- It may include forest of any category – **revenue forest, classified & unclassified forest, deemed forest**, DLC (District Level Committee) land, reserve forest, [protected forest](#), sanctuary and national parks etc.

## What are Community Forest Resource Rights?

- The Community Forest Resource rights under Section 3(1)(i) of the [Scheduled Tribes and Other Traditional Forest Dwellers \(Recognition of Forest Rights\) Act, 2006](#) (commonly referred to as the Forest Rights Act) provides for **recognition of the right to “protect, regenerate or conserve or manage”** the community forest resource.
- These rights allow the **community to formulate rules for forest** use by itself and others and thereby discharge its responsibilities under **Section 5 of the FRA**.
- CFR rights, along with Community Rights (CRs) under Sections 3(1)(b) and 3(1)(c), which include nistar rights and rights over non-timber forest products, **ensure sustainable livelihoods of the community**.
- **Once CFRR is recognised for a community, the ownership of the forest passes into the hands of the Gram Sabha instead of the forest department.**
- Effectively, the Gram Sabha becomes the nodal body for management of the forests.
- These rights give authority **to the Gram Sabha adopt local traditional practices of forest conservation and management** within the community forest resource boundary.
- Chhattisgarh is only the second state to have recognised CFR rights inside a national park i.e., [Kanger Ghati National Park](#).
- In 2016, the Odisha government was the first to recognise Community Forest Resources (CFRs) inside the [Simlipal National Park](#).

## What is the Significance of CFR?

- Aimed at undoing the “historic injustice” meted out to forest-dependent communities due to curtailment of their customary rights over forests, the **FRA came into force in 2008**.
- It is important as **it recognises the community's right to use, manage and conserve** forest resources, and to legally hold forest land that these communities have used for cultivation and

residence.

- It also underlines the **integral role that forest dwellers play in sustainability** of forests and in conservation of biodiversity.
- It is of greater significance inside **protected forests like national parks, sanctuaries and tiger reserves** as traditional dwellers then become a part of management of the protected forests using their traditional wisdom.

## UPSC Civil Services Examination, Previous Year Questions (PYQs)

**Q. At the national level, which ministry is the nodal agency to ensure effective implementation of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006? (2021)**

- (a) Ministry of Environment, Forest and Climate Change
- (b) Ministry of Panchayati Raj
- (c) Ministry of Rural Development
- (d) Ministry of Tribal Affairs

**Ans: (d)**

**Exp:**

- The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, also referred to as the Forest Rights Act (FRA), 2006, recognizes the rights of the forest-dwelling tribal communities and other traditional forest dwellers to forest resources.
- The Act encompasses Rights of self-cultivation and habitation which are usually as individual rights, and community rights as grazing, fishing and access to Water bodies in forests, habitat rights for PVTGs, etc.
- In conjunction with the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Settlement Act, 2013, FRA protects the tribal population from eviction without rehabilitation and settlement.
- As per the provisions of the Act and the rules framed thereunder, various schemes and projects are implemented **under the Ministry of Tribal Affairs.**
- **Therefore, option (d) is the correct answer.**

[Source: DTE](#)

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## Greening Initiatives of India's Coal Sector

**For Prelims:** Net Zero Emissions, Nationally Determined Contribution (NDC), Paris Agreement, Greenhouse Gas Emissions, (Hybrid &) Electric Vehicles Scheme, Vehicle Scrapping Policy, Global EV30@30 Campaign, UNFCCC COP26, Pradhan Mantri Ujjwala Yojana, Hydrogen Energy Mission, Perform, Achieve and Trade (PAT).

**For Mains:** Greening Initiatives of India's Coal Sector, Essential Steps taken by India to Achieve India's Nationally Determined Contribution (NDC).

**Why in News?**

Ministry of Coal seeks to bring more than **2400 hectare of area in and around [coalfields](#) under green cover.**

- It has been aimed to plant more than **50 lakh saplings for the year 2022-23.**

## Why are the Key Highlights of the Greening Initiatives?

- **Identified Areas:**
  - The identified areas include reclaimed **mined out areas of coal companies and areas outside of leasehold** - amenable for plantation and made available by State Government agencies.
- **Achievement:**
  - As of now, greening drive is in full swing in coal mining areas and **about 1000 hectares of land has already been covered** through block plantation, avenue plantation, grassland creation, bamboo plantation and high-tech cultivation by 15<sup>th</sup> August, 2022.
  - Example: **paddy field and coconut plantation in Mine -I reclamation area of NLCIL in Tamil Nadu and Bio-reclamation at Nigahi Area of NCL in Singrauli, Madhya Pradesh.**
- **Significance:**
  - **Afforestation is a proven way of restoration of lands damaged** by anthropogenic activities and must for **achieving satisfactory rehabilitation** of a mined landscape.
  - The greening initiatives of the coal sector **support India's Nationally Determined Contribution (NDC) commitment to create additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub> equivalent** through additional forest and tree cover by 2030.
    - **India has recently [revised its NDCs.](#)**
  - Greening initiatives help in **minimizing the footprints of coal mining, prevents soil erosion, stabilises the climate**, preserves wild life and enhances quality of air & watersheds.
    - On a global scale, these **mitigate [climate change](#) through carbon sequestration** and also results in economic growth of the region.
  - Through **[greening initiatives](#)**, the Indian coal industry seeks to **secure availability of coal to meet the demand of various sectors of the economy while minimising the impact of mining on the environment** and to improve the quality of life for local residents.

## What is India's Revised NDCs?

- **About:**
  - **Emission Intensity:**
    - India is now committing itself to at least **45% reduction in [emissions intensity](#) of [GDP](#) (emissions per unit of GDP)** from 2005 levels.
      - The existing target was a **33% - 35% reduction.**
  - **Electricity Generation:**
    - India is also promising to ensure that at least **50% of installed electricity generation capacity in 2030 would be based on non-fossil fuel-based sources.**
      - This is an increase from the **existing 40% target.**
- **Other NDCs:**
  - Increase **non-fossil energy capacity** to 500 GW (gigawatts) by 2030.
  - Reduce the **total projected carbon emissions** by 1 billion tonnes (BT) by 2030.
  - Achieve **net zero carbon** by 2070.

# INDIA'S CLIMATE TARGETS: EXISTING AND NEW

| Target (for 2030)   | Existing: First NDC (2015)   | New: Updated NDC (2022)      | Progress   |
|---|--|------------------------------|--|
| Emission intensity reduction                                | 33-35 per cent from 2005 levels  | 45 per cent from 2005 levels | 24 per cent reduction achieved in 2016 itself. Estimated to have reached 30 per cent |
| Share of non-fossil fuels in installed electricity capacity | 40 per cent  | 50 per cent                  | 41.5 per cent achieved by the end of June this year                                  |
| Carbon sink   | Creation of 2.5 to 3 billion tonnes of additional sink through afforestation | Same as earlier              | Not clear.   |

## What are India's Initiatives towards Climate Change?

### ▪ Reforms in Transport Sector:

- India is accelerating its **e-mobility transition** with the Faster Adoption and Manufacturing of **(Hybrid &) Electric Vehicles Scheme**.
- A voluntary **vehicle scrapping policy** to phase out old and unfit vehicles complements the existing schemes.

### ▪ India's Support to EVs:

- India is among a handful of countries that support the **global EV30@30 campaign**, which aims for at least 30% new vehicle sales to be electric by 2030.
- India's advocacy of five elements for climate change "**Panchamrit**", at the **United Nations Climate Change Framework Convention (UNFCCC) COP26 in Glasgow** is a commitment to the same.

### ▪ Role of Government Schemes:

- **The Pradhan Mantri Ujjwala Yojana** has helped 88 million households to **shift from coal-based cooking fuels to LPG connections**.

### ▪ Role of Industries in Low-Carbon Transition:

- **The public and private sectors** in India are already playing a key role in **meeting the climate challenge**, helped by growing customer and investor awareness, as well as increasing regulatory and disclosure requirements.

### ▪ Hydrogen Energy Mission:

- Focus on generation of hydrogen from green power resources.

### ▪ Perform, Achieve and Trade (PAT):

- It is a **market-based mechanism** to further accelerate as well as incentivize **energy efficiency in the large energy-intensive industries**.

## UPSC Civil Services Examination, Previous Year Question (PYQ)

**Q. With reference to the Agreement at the UNFCCC Meeting in Paris in 2015, which of the following statements is/are correct? (2016)**

1. The Agreement was signed by all the member countries of the UN and it will go into effect in 2017.
2. The Agreement aims to limit the greenhouse gas emissions so that the rise in average global temperature by the end of this century does not exceed 2°C or even 1.5°C above pre-industrial levels.
3. Developed countries acknowledged their historical responsibility in global warming and committed to donate \$ 1000 billion a year from 2020 to help developing countries to cope with climate change.

Select the correct answer using the code given below:

- (a) 1 and 3 only
- (b) 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Ans: (b)

Exp:

- The Paris Agreement was adopted in December 2015 at COP21 in Paris, France by the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC).
- The Agreement aims to limit the greenhouse gas emissions so that the rise in average global temperature by the end of this century does not exceed 2°C or even 1.5°C above pre-industrial levels. **Hence, statement 2 is correct.**
- The Paris Agreement entered into force on 4 November 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions had deposited their instruments of ratification, acceptance, approval or accession with the depositary. **Hence, statement 1 is not correct.**
- Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change, in line with their own national objectives.
- The Paris Agreement requires all Parties to put forward their best efforts through Nationally Determined Contributions (NDCs) and to strengthen these efforts in the years ahead. This includes requirement that all Parties report regularly on their emissions and on their implementation efforts.
- There will also be a global stocktake every 5 years to assess the collective progress towards achieving the purpose of the Agreement and to inform further individual actions by the Parties.
- Through the Cancun Agreements in 2010 developed country Parties committed to a goal of mobilizing jointly USD 100 billion per year by 2020 to address the needs of developing countries.
- Further, they also agreed that prior to 2025 the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall set a new collective quantified goal from a floor of USD 100 billion per year. **Hence, statement 3 is not correct.**

[Source: PIB](#)

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## Special Marriage Act, 1954

**For Prelims:** Special Marriage Act (SMA), 1954, Fundamental Rights, Article 21, Supreme Court.

**For Mains:** Special Marriage Act (SMA), 1954, Right to Privacy, Personal Liberties.

### Why in News?

Recently, the [Supreme Court \(SC\)](#) dismissed a writ petition challenging **provisions of the [Special Marriage Act \(SMA\), 1954](#)** requiring couples to give a notice declaring their intent to marry 30 days before their marriage.

- The SC Rejected the petition on the grounds that the petitioner was **no longer an aggrieved**

**party** as she had **already solemnised her marriage under SMA.**

## **What does the Petition Seek?**

- The petition challenged the **Constitutional validity of certain provisions of the SMA**, calling it **violative of the right to privacy guaranteed under [Article 21](#)** of the Constitution.
  - It is because these provisions **require couples to give notice 30 days before the date of marriage inviting objections** from the public.
- These provisions contravene Article 14 on right to equality as well as Article 15 on prohibition of discrimination on grounds of religion, race, caste and sex as these requirements are absent in personal laws..

## **Which Provisions are Challenged and How do they Make Couples Vulnerable?**

- Section 5 of the SMA requires **couples getting married under it to give a notice to the Marriage Officer 30 days before** the date of marriage.
- The Petition seeks striking down of provisions that follow in **Section 6 to Section 10.**
  - **Section 6** requires such a notice to be then entered into the Marriage Notice Book maintained by the Marriage Officer, which can be inspected by “any person desirous of inspecting the same.
  - **Section 7** provides the process for making an objection.
  - **Section 8** specifies the inquiry procedure to be followed after an objection has been submitted.
- The petition contends that these provisions **make the personal information** of the individuals **open to public scrutiny.**
- Hence, these provisions **seriously damage one’s right to have control over her/his personal information** and its accessibility.
- By making the personal details of the couple accessible to everyone, the very right of the couple to be the decision makers of their marriage is **being hampered by the state.**
- These public notices have been used by **anti-social elements to harass couples getting married.**
- There have been instances where **marriage officers have gone over and beyond the law and sent such notices to the parents** of the couple leading to the girl being confined to her house by her parents.

## **What is the Special Marriage Act (SMA), 1954?**

- **About:**
  - Marriages in India can be registered under the respective personal laws **Hindu Marriage Act, 1955, Muslim Marriage Act, 1954**, or under the **Special Marriage Act, 1954.**
  - **It is the duty of the Judiciary to ensure that the rights** of both the husband and wife are protected.
  - The **Special Marriage Act, 1954** is an Act of the Parliament of India with **provision for civil marriage for people of India** and all Indian nationals in foreign countries, **irrespective of religion or faith followed by either party.**
  - When a person solemnises marriage under this law, then the marriage is **not governed by personal laws but by the Special Marriage Act.**
- **Features:**
  - Allows people from two different religious backgrounds **to come together in the bond of marriage.**
  - Lays down the **procedure for both solemnization and registration of marriage**, where either of the husband or wife or both are not Hindus, Buddhists, Jains, or Sikhs.
  - Being a secular Act, it plays a key role in **liberating individuals from traditional requirements of marriage.**
- **Provisions:**
  - **Prior notice:**
    - As per **Section 5 of the Act** Couples have to serve **a notice with the relevant documents to the Marriage Officer 30 days** before the intended date of

- marriage.
- **Registration:**
  - Both parties are required to be present **after the submission of documents for issuance of public notice** inviting objections.
  - Registration is done 30 days after the date of notice after deciding any objection that may have been received during that period by the SDM.
  - Both parties along with **three witnesses are required** to be present on the date of registration.

[Source: TH](#)

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## Regulator for Uniform Board Exams

**For Prelims:** PAREKH(Performance Assessment, Review and Analysis of Knowledge for Holistic Development), NCERT, National Achievement Survey (NAS), National Education Policy (NEP) 2020.

**For Mains:** Significance of Single Regulator PAREKH.

### Why in News?

Union government is planning to set up a national regulator **PAREKH (Performance Assessment, Review and Analysis of Knowledge for Holistic Development)** for achieving a benchmark framework **to assess students at the secondary and higher secondary level.**

- PARAKH, is also part of the [National Education Policy \(NEP\) 2020.](#)

### What is PAREKH?

- **About:**
  - It's a proposed regulator, which will **act as a constituent unit of the NCERT**, and will also be tasked with holding periodic learning outcome tests like the [National Achievement Survey \(NAS\)](#) and State Achievement Surveys.
  - Its team will **consist of leading assessment experts with a deep understanding of the education system in India and internationally.**
  - It will eventually become the **national single-window source for all assessment-related information and expertise**, with a mandate to support learning assessment in all forms, both nationally and where applicable, internationally
- **Objectives:**
  - **Uniform Norms & Guidelines:**
    - **Setting norms, standards and guidelines for student assessment and evaluation for all recognized school boards of India,**
  - **Enhance Assessment Pattern:**
    - It will encourage and help school boards to shift their assessment patterns towards meeting the **skill requirements of the 21<sup>st</sup> century**
  - **Reduce Disparity in Evaluation:**
    - It will **bring uniformity across the state and central boards which currently follow different standards of evaluation,** leading to wide disparities in scores.
  - **Benchmark Assessment:**
    - The benchmark assessment framework will **seek to put an end to the emphasis on rote learning,** as envisaged by the [National Education Policy \(NEP\) 2020.](#)
  - **Suggestions:**



- **Hold Board Exams Twice:**
  - Various states have endorsed the NEP's **proposal to hold board exams twice a year, including one for helping students improve their scores.**
- **Two types of Exams for Math:**
  - States are also on board regarding a proposal to offer **two types of papers on mathematics — a standard exam, and another to test higher-level competency.**
- **Significance:**
  - **Reduce Fear:**
    - It will help reduce the fear of maths among students and encourage learning.
  - **Removes Disparity in college Admission:**
    - It will help tackle the problem of students of some state boards being at a **disadvantage during college admissions as compared to their peers in CBSE schools.**
  - **Innovative Evaluation:**
    - It will develop and implement the technical standards for the design, conduct, analysis and reporting of tests at all levels of school education.

## Way Forward

- PAREKH creates a **level playing field and reduces the disparity among various state boards** and further aims to facilitate an inclusive, participatory and holistic approach to education, which takes into **consideration field experiences, empirical research, stakeholder feedback, as well as lessons learned from best practices.**
- It is a progressive shift towards a more **scientific approach to education.**
  - The prescribed structure will help to **cater to the ability of the child - stages of cognitive development as well as social and physical awareness.**

## UPSC Civil Services Examination Previous Year Question (PYQ)

### Prelims

#### Q. Consider the following statements: (2018)

1. As per the Right to Education (RTE) Act, to be eligible for appointment as a teacher in a State, a person would be required to possess the minimum qualification laid down by the concerned State Council of Teacher Education.
2. As per the RTE Act, for teaching primary classes, a candidate is required to pass a Teacher Eligibility Test conducted in accordance with the National Council of Teacher Education guidelines.
3. In India, more than 90% of teacher education institutions are directly under the State Governments.

#### Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 only
- (c) 1 and 3
- (d) 3 only

#### Ans: (b)

- The academic authority notified by the Central Government, under the Right of Children to Free and Compulsory Education (RTE), Act 2009, has laid down the minimum educational and professional qualifications for a person to be eligible for an appointment as a teacher for classes I-VIII, which are applicable to all schools imparting elementary education, including the schools under the State Governments. They have to clear a Teacher Eligibility Test (TET) in order to be eligible for being appointed as a teacher. **Hence, statement 1 is not correct.**
- **Teacher Eligibility Test (TET) is conducted by the appropriate Government in**

accordance with the guidelines framed by the National Council of Teacher Education. Hence, statement 2 is correct.

- The 2012 Verma Commission on Teacher education in its report pointed out that 90% of teacher education bodies were private. Hence, statement 3 is not correct. Therefore, option (b) is the correct answer.

## **Mains**

**Q.** Education is not an injunction, it is an effective and pervasive tool for all-round development of an individual and social transformation". Examine the New Education Policy, 2020 (NEP, 2020) in light of the above statement. **(2020)**

**Source: IE**

## **Electronic Production in India**

### **Why in News?**

Recently, the Minister of State for Electronics & Information Technology launched a report titled '**Globalise to Localise: Exporting at Scale and Deepening the Ecosystem are Vital to Higher Domestic Value Addition**'.

- Further, the government is focused on achieving the target of USD 300 billion in electronic production by 2026.

### **What are the Key Highlights of the Report?**

#### **▪ About:**

- The report was prepared by the **India Council for Research on International Economic Relations (ICRIER)**, in collaboration with the [India Cellular and Electronics Association \(ICEA\)](#) explores how **India can achieve an electronics production target of USD 300 billion and exports of USD 120 by 2025-26.**
  - It examines the **empirical relationship between exports and the share of domestic value addition in successful exporting nations.**
  - It emphasizes **strengthening the domestic manufacturing ecosystem** to make India more **resilient to supply chain disruptions and the aim is to emerge as a reliable and trusted partner in Global value chains.**

#### **▪ Present Status:**

- India's electronics exports crossed USD 16 billion in Financial Year 2021-22.
  - Electronics as a sector has jumped to **the 6<sup>th</sup> largest export from India in 2022.**
    - **Mobile phones constitute the single largest component of electronics exports from India.**
    - They are expected to contribute nearly 50% of the total electronics exports by next year.

#### **▪ Issue:**

- **Shift in Global value Chain:**
  - Post [Covid-19](#) world is undergoing **deep tectonic irreversible changes in the value chains of electronics.**
    - As major manufacturing firms are venturing out of China due to uncertain Chinese government policies and US-China rivalry.

- **Opportunities:**
  - India should **grab the opportunity of shifting [supply chains](#) out of China and export aggressively to reach the scale in electronics manufacturing.**
    - Rising exports will **create a network effect of creating the supply chain interests**, and supply chain investments that in turn will increase the value added in the Indian electronics segment.
- **Recommendations:**
  - **Adopt Policies of Other Countries:**
    - The study finds that **China and Vietnam have adopted the mantra of ‘first globalize, then localize’**, which means in the initial years they were determined **to achieve global scale in exports, and then shifted their emphasis to greater use of local contents.**
    - The report, therefore, recommends a sequential approach that can put **India’s exports in the same trajectory as China and Vietnam.**
  - **Indian Policy Measures:**
    - It suggests **several steps and policies needed for deepening the broader electronics ecosystem within India.**
      - Additionally, policies such as [Gati Shakti](#), and [Production Linked Incentives \(PLI\)](#) will also help increase India’s competitiveness.
  - **Competitive Domestic Ecosystem:**
    - It points to an urgent **need for India to create a competitive domestic ecosystem of ancillary suppliers through technology upgradation programmes**, holding sourcing fairs and introducing supporting industry development programmes.

## What are the Other Related Schemes for Manufacturing?

- **Related Initiatives:**
  - [Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors \(SPECs\).](#)
  - [Modified Electronics Manufacturing Clusters \(EMC 2.0\) Scheme.](#)
  - [Design Linked Incentive \(DLI\) Scheme.](#)

## What is India Council for Research on International Economic Relations ICRIER?

- **About:**
  - It is an **autonomous economic policy think tank**, in operation since 1981.
- **Goal:**
  - To help Indian policymakers make **informed decisions, facilitated through rigorous analytical research, objective policy advice and extensive networking events.**

## What is India Cellular and Electronics Association ICEA?

- **About:**
  - It is the **apex industry body for the mobile and electronics industry** comprising manufacturers, brand owners, technology providers, VAS application & solution providers, distributors, and retail chains of mobile handsets and electronics.
- **Vision:**
  - It is committed to carrying forward its vision of building Indian manufacturing and design in verticals other than mobile handsets while consolidating the gains made in the mobile handset and components industry.
  - ICEA is entirely devoted to improving the competitiveness and growth of the industry by closely working with the Government's ministries to create a robust, legal, and ethical electronics industry, thereby creating an innovative market environment in the country.

**Source: PIB**

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