

# CURRENT AFFAIRS

## WEEKLY

WEEK: 4  
OCTOBER  
2021

### MAINS

GS-I

- Disclosure of Bucher papers in "national interest": CIC

GS-II

- PM Action Plan: Government Aims to be Better with 60-point Action Plan
- Why India's Bureaucracy Needs Urgent Reform
- Global Hunger Index
- Medical Termination of Pregnancy (Amendment) Act, 2021

GS-III

- Jurisdiction Enhancement of BSF
- China Makes Cryptocurrency Transactions Illegal: An explainer
- PM Gati Shakti National Master Plan

GS-IV

- E-Waste: Treasure or Threat?
- Kunming Declaration on biodiversity conservation
- Why empathy is a must-have business strategy

### PRELIMS

- GEOGRAPHY ■ Climate condition go in for 'double-dip': NOAA

- ART & CULTURE ■ Bhaskarabda: A Luni-Solar Calendar

- NATIONAL ■ APJ Abdul Kalam: Missile Man of India

- INTERNATIONAL RELATIONS ■ Indo-US Joint Military Exercise "Ex Yudh Abhyas 2021"

- PM's 60-Point Action Plan

- ECONOMY ■ Kushinagar International Airport to provide seamless connectivity

- ENVIRONMENT ■ Disappearing African Rare Glaciers

- SCIENCE & TECHNOLOGY ■ Hypersonic Technology
- Looking at the positive side of Viruses

- NITI Aayog launches GIS-based Geospatial Energy Map of India

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## — Disclaimer —

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 (OCTOBER, 2021)

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# **SECTION: A**

## **(MAINS)**

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**CURRENT AFFAIRS**

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# DISCLOSURE OF BUCHER PAPERS IN ‘NATIONAL INTEREST’: CIC

## CONTEXT:

2021 marks the 16th anniversary of the Right to Information Act (RTI) and in this 16th year something interesting happened:

The Central Information Commission (CIC), which was constituted under the RTI Act and whose jurisdiction extends over all central public authorities, agreed with an applicant that the Nehru Memorial Museum and Library (NMML) should make public certain documents related to events around Jammu and Kashmir's accession given by the Indian Army's second chief, Roy Bucher.

## ◎ BACKGROUND

- In Jammu & Kashmir, October 26 or the Accession Day, marks the signing of the Instrument of Accession by the last Dogra ruler of J&K, Maharaja Hari Singh, with the then Governor-General of India, Lord Mountbatten.
- As per the Indian Independence Act, 1947, British India was divided into India and Pakistan and the roughly 580 princely states that had signed subsidiary alliances with the British had their sovereignty restored to them.
- In essence, these princely states were given the option to remain independent or to join the Dominion of India or Pakistan.
- According to Section 6(a) of the Act, before joining India or Pakistan, these states had to sign an Instrument of Accession, in which they would specify the terms on which they were becoming part of the new dominions.
- This is what the Maharaja signed on October 26, 1947 — essentially, a treaty between the state of Jammu and Kashmir and India.
- Mountbatten accepted it on October 27, 1947.
- Initially, the Maharaja had decided to remain independent and sign standstill instruments with India and Pakistan, but after tribesmen and army men from Pakistan invaded, he sought India's help, which sought the accession of the state to the Dominion of India.

- An application filed under the Right to Information (RTI) Act, revealed that the actual official date of signing it is 26th and 27 October 1947, something which also had remained mired in controversy.
- Now, with the central information commission (CIC) terming disclosure of this issue as pertaining to 'national interest', there is hope that more information could tumble out.
- In the RTI application, information on J&K accession papers has been asked, based on the script of an audio interview of General Sir Roy Bucher, second chief of the army staff of India between 1947 and 1948, recorded by noted biographer BR Nanda.
- General Bucher had stated therein that he has handed over papers of J&K accession to the NMML.
- These documents, Mr Nayak feels could reveal a lot; hence he invoked the RTI Act.

### Right to Information (RTI)

- It is a Fundamental Right of Indian citizens to seek information from government offices, departments, ministries, and all the organizations run by the Government of India, or any other organization substantially aided by the, Government of India or any other state Government.

## ◎ ANALYSIS

### The Controversy Behind the Day

- The official details of the signing of the instrument of accession by Maharajah Hari Singh of Kashmir has not only been kept under secrecy for 75 years now, but has even led to several decades of allegations of motives and vested interests regarding the document.

### Accession Files

- India's second Army chief, Sir Roy Bucher had put together the information about the J&K's accession to the Indian Union between 1947-49.
- The transcript runs into 20-odd pages.
- They were handed over to Nehru Memorial Museum and Library, popularly known as Teen Murti Library.

### Who was Francis Robert Roy Bucher?

- Born on 31 August 1895, Francis Robert Roy Bucher attended the Edinburgh Academy.
- During the First World War, on 15 August 1914, Bucher was commissioned into the British Indian Army and confirmed as a second lieutenant on 5 September the following year.
- He returned to Britain in 1926 to attend Staff College, a military training institution run by the British Army, for two years.
- Following his graduation, he was stationed with the British Indian Army in the Deccan region, and, by 1932, was promoted to the ranks of Major and Lieutenant-Colonel in 1932 and 1939, respectively.
- As the Second World War broke out, Bucher continued his services to the Army in India but was also briefly stationed in Iraq in 1941.
- After the War ended, Bucher was appointed as General Officer Commanding Bengal and Assam Area and, in 1946, became the Eastern Command's General Officer Commander-in-Chief.
- Bucher's ascension to the post of post-Independence India's second Army chief took place in 1948. He served the position until his retirement in 1949.
- He was the last British chief of the Army, as K.M. Cariappa succeeded him.
- On 5 January 1980, Roy Bucher passed away at the age of 84 in the village of Normanby in North Yorkshire.

### Accession Files

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- ▶ They were handed over to Nehru Memorial Museum and Library, popularly known as **Teen Murti Library**.

### Why the Papers are Important?

- The disclosure of papers handed over by **General Bucher** to NMML are essential in order to put an end to the baseless and needless controversies created by some foreign scholars and authors about the 'circumstances surrounding the accession' of the erstwhile princely state of J&K to the Dominion of India, in 1947.
- These controversies have ranged from
  - ▶ questioning the very existence of the instrument of accession as a physical document
  - ▶ doubting the dates of the signing of this document by the then Maharaja of Jammu and Kashmir, Hari Singh
  - ▶ its acceptance by the then governor general of India, Lord Mountbatten

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# WHY INDIA'S BUREAUCRACY NEEDS URGENT REFORM

## CONTEXT:

The bureaucracy that helped India to sail through the last 75 years can't be the one to take it through the next 75 years. Indian bureaucracy comprises some of the brightest as also some of the worst, just like in any collection of people.

## ◎ BACKGROUND:

- The ability of the bureaucracy to get things done is the need of the hour and given the pace at which times are changing, urgent reforms are required to realise them.
- Our bureaucracy is heterogeneous as any other organisation, with a mix of officials possessing a varying level of expertise, motivation, personal integrity and motivation.
- Obsession of our bureaucracy with accountability instead of the result often gets highlighted in the form of inaction and delayed decision making.

## ◎ ANALYSIS:

The **rules-obsessed**, **obdurate** and **unionised** bureaucracy often portray a bad and ugly picture of Indian bureaucracy. There is a socio-economic cost that a rules-focused bureaucracy imposes on the country. It is essential to make the bureaucracy more **responsive, efficacious** and **better equipped** to meet the new challenges. Several reforms initiatives and suggestions have been taken since independence and the latest is being the **Second Administrative Reform Commission**. A few of the important observations are:

- Indian bureaucracy is **more process-driven** rather **result-oriented**.
- **Over-centralization** and **systemic rigidities** are deeply rooted which makes service delivery a complex and constraining process.
- **A large number of veto points** in the hierarchies results in delayed decision making.
- **Rapid changes** are taking place in the country and the **response time** to adapt to these changes is much shorter than it used to be.

**An Ideal Bureaucracy is governed by the given characteristics:**

- Public-minded body
- Neutrality

- Rationality
- Technically sound
- Rule-based

## Challenges faced by Bureaucracy:

- Corruption
- Nepotism
- Political patronage
- Lackadaisical decision making

## Recommendations from other committees and commissions:

- **On recruitment:** By Yoginder K. Alagh Committee (2001), Hota committee (2004) and D.S. Kothari Report (1976)
- **On Training:** By Yugandhar committee (2003)
- **On domain expertise:** (First ARC)
- **On efficiency:** Fifth Central Pay Commission (2000), Expenditure Reforms Commission (2001) and Hota committee (2004).
- **On Accountability:** Santhanam Committee, Hota committee (2004) and Surinder Nath Committee (2003).

## Reforms Required:

- **Train the recruits more frequently:**
  - Revised periodic training is important to keep up with the pace of changing times.
- **Sectoral specialisations:**
  - **Inadequate understanding** of the nuances and implications of the available choices restricts the capacity of the bureaucracy to take an **informed view**. This often results in clumsy and delayed decision making.
  - There is an **urgent need for specialisation** in sectors such as finance, infrastructure, social and regulatory ones.
- **Measuring governance quality:**



- ▶ Attempts should be made to **identify indices and parameters** for the measurement of rankings states based on governance.
- ▶ Appropriate methods need to be put in place to measure the performance of states that would reflect on the performance appraisal of the bureaucratic leaders.
- ▶ **Non-application of mind and refusal to take decisions** sometimes **do more harm** than even corruption so while encouraging the good performers, the periodic cleansing of incorrigible deadwood is also important.
- **Discouraging the appointment of retired/retiring officers:**
  - ▶ Clever bureaucrats are aware of the rewards for being on the right side of the power. Most quasi-judicial posts may perhaps be offered to officers well before their retirement.
  - ▶ So, discouraging services beyond their normal age of superannuation should be done, while the scope of advisory position must be kept open for outstanding retired officers.

#### Reasons for the Inaction by the Bureaucracy:

- Reporting to short-sighted executives
- Extensive judicial overreach
- Role of judge, jury and executioner played by the media
- Understaffing

If these are the incentives, **the bureaucracy is bound to turn inactive** and resort to **audit-proof work** which yields nothing.

Indian bureaucracy is **understaffed** if one goes by the estimates compiled by the Institute of Conflict Management. It says that about 90 percent of the workforce get absorbed in **Group C and D services. Only 7 percent of its bureaucracy is available to man critical positions.**

#### Steps that can be taken to bring reforms in the bureaucracy:

- **Prevent punitive actions:** To prevent enforcement agencies from taking punitive actions without any pieces of evidence of misappropriation of funds. Instead, an expert committee can be constituted

with experts from commercial backgrounds to find out whether it's a case of corruption or just a decision that was taken in the right spirit but has not yielded.

- **Result-oriented:** Doing away with the idea of bureaucracy obsessed with process and not to results. Changing inactive bureaucracy to the one that feels safe while taking genuine risks.
- **Get out of the business:** Privatisation of areas where the government should not be in and allowing the bureaucracy to focus on the areas where problem-solving professionals are required. It need not be in many sectors and politicians must get the bureaucracy out of sectors that can be left to the markets.
- **Use of technology:** It is not hidden that every modern bureaucracy works on technology tools. Automating every major touchpoint between the citizens, government and the businesses.
- **Recruitment process:** Bringing changes in the recruitment procedures and giving weightage to psychometric tests in addition to interviewing to improve the incoming pool of civil servants.
- **Evaluation:** All officers must undergo an evaluation after serving for 15 years to get a promotion and those who could not make it to the other side must only be given important departments.
- **Lateral entry:** Increasing the intake through lateral entry at key positions that require expertise. It has already has been done at the joint secretary but this needs to be encouraged at the secretary or additional secretary level as a laggard top official often ensure that the lateral entrant has no work to do.
- **Doing away with obsolete rules:** It is often forgotten that Indian bureaucracy is a creature of the Constitution and is governed by laid multiple rules, laws and procedures. Luckily the present regime has done a commendable job in doing away with over 1500 of them.

#### ◎ CONCLUSION:

It is important that the honest and result-oriented bureaucracy must be rewarded by moving them up in the hierarchy and those who are dishonest and are non-performers must be sent back home. India needs an enabling bureaucracy that is proactive, imaginative and technology-savvy that can play a decisive role in India's transformation.

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# MEDICAL TERMINATION OF PREGNANCY (AMENDMENT) ACT, 2021

## CONTEXT:

The government has notified new rules (Medical Termination of Pregnancy (Amendment) Rules, 2021) under which the upper limit for termination of a pregnancy has been increased from 20 to 24 weeks for certain categories of women.

## ◎ BACKGROUND

- The new rules are under the **Medical Termination of Pregnancy (Amendment) Act, 2021** passed by the Parliament in March.
- It replaces **Medical Termination of Pregnancy Act, 1971**.
- The Medical Termination of Pregnancy (Amendment) Act, 2021, had come into force with effect from 24th September 2021.
- It comes in the 50th year since the MTP Act was first passed and in the backdrop of developments in the US, where reproductive rights of women are being actively eroded after a Texas law found a way around the **landmark Roe V Wade case** that guaranteed **abortion access to women**.

- ▶ or mental abnormalities to be seriously handicapped
- women with pregnancy in humanitarian settings or disaster or emergency situations as may be declared by the government

### Termination of Pregnancy

- The amended law defines "termination of pregnancy" as a procedure used to terminate a pregnancy by utilizing "medical" or "surgical" methods.

## ◎ ANALYSIS

### What was the earlier process?

- Earlier, abortion required the opinion of one doctor if it is done within 12 weeks of conception and two doctors if it is done between 12 and 20 weeks.

### What is in the new Rules?

#### Relaxation

- According to the **Medical Termination of Pregnancy (Amendment) Rules, 2021**, these categories include
  - ▶ survivors of sexual assault or rape or incest
  - ▶ minors and women whose marital status changes during an ongoing pregnancy (widowhood and divorce)
  - ▶ women with physical disabilities
- The new rules also cover
  - ▶ mentally ill women
  - ▶ cases of foetal malformation that has
    - a substantial risk of being incompatible with life
    - or if the child is born it may suffer from such physical

### Who can abort?

- One of the serious issues with the Medical Termination of Pregnancy Act 1971 was that only a 'married women' was eligible to abort pregnancy (up to 20 weeks).
- Now, in the latest act, married as well as unmarried women are allowed to terminate their pregnancy.
- The move from "married woman" and "her husband" to "woman" and "her partner" is appreciable.

### Who will decide on termination of pregnancy?

- According to the new rules, a **state-level medical board** will be set up to decide if a pregnancy may be terminated after 24 weeks in cases of foetal malformation and if the foetal malformation has a substantial risk of it being incompatible with life or if the child is born it may suffer from such physical or mental abnormalities to be seriously handicapped.
- **Functions:** The function of the **Medical Board** shall be
  - ▶ to examine the woman and her reports if she approaches for medical termination of pregnancy
  - ▶ to provide the opinion with regard to the termination of pregnancy
  - ▶ rejection of a request for termination within three days of receiving the request

- The Board has also been tasked to ensure that the **termination procedure**, when advised by it, is carried out with all safety precautions along with appropriate counselling within five days of the receipt of the request for medical termination of pregnancy.

### What issues remain unresolved?

- The law is not inclusive of non-binary or trans persons who may be pregnant and seek an abortion.
- Significantly, the decision to terminate a pregnancy still does not rest with the woman alone.
  - This is of grave concern as doctors have been known to charge exorbitant fees for the procedure (as per the **National Family Health Survey 2015-16, 52 per cent of abortions were done in private hospitals**), deny access to the service on moral grounds or send the woman or child to the courts even if the service can be legally provided.

### What are women's reproductive rights?

- Based on the multiple definitions of reproductive rights, it can be said that they include some or all of the following rights –
  - right to safe and legal abortion
  - right to control one's reproductive functions
  - right to access in order to make reproductive choices free of coercion, discrimination and violence
  - right to access education about contraception and sexually transmitted diseases and freedom from coerced sterilization and contraception
  - right to protection from gender-based practices such as female genital cutting and male genital mutilation

#### SC on women's right to make reproductive choice

- In the landmark judgment in *KS Puttaswamy v Union of India*, the Supreme Court recognised women's constitutional right to make reproductive choices and the right to "abstain from procreating" was read into the **right to privacy, dignity and bodily autonomy**.

### What is the actual situation of women's right to make reproductive choice?

- The issue of 'right to reproductive health' especially abortion, takes on special significance in the Indian

context as various national and international stakeholders struggle to bring meaning to the important concepts of 'women empowerment, rights and choice'.

- Historically, reproductive health-related laws and policies in India have failed to take a women's rights-based approach.
- The Indian setting is heavily guided by the social context that defines the pressures, constraints, and options for women's reproductive behaviour.
- Women's enjoyment of their reproductive rights is heavily undermined by gender-biased norms and practices that govern family matters.

### Issues and challenges in the Indian setting

- **Lack of healthcare:** In India, one woman dies every 15 minutes due to lack of healthcare during pregnancy and childbirth.
- **Unsafe abortion:** Although the country legalized abortion almost five decades ago, access is extremely limited, and it is estimated that one woman in India dies every three hours due to an unsafe abortion.
- **Child marriages:** Despite a national law penalizing marriage of girls below 18 years of age, in practice India continues to account for the highest number of child marriages.
- **High rate of maternal deaths:** Despite policies and schemes guaranteeing women maternal healthcare, India accounts for 20% of all maternal deaths globally.
- **Undermining reproductive health:** Further, Indian women face among the **world's highest risk of HIV/AIDS** and discriminatory treatment if infected, forced abortions of female fetuses, trafficking for forced prostitution, custodial rape in government institutions, sexual harassment in the workplace; and harmful customs that seriously undermine reproductive health.

### ◎ CONCLUSION

- Although India was among the first countries in the world to develop legal and policy frameworks guaranteeing access to abortion and contraception, women and girls continue to experience significant barriers to full enjoyment of their reproductive rights – it is time to change this.
- As a country, it is essential to support and steer reproductive rights, not only because we want healthier women, but because we want empowered women and girls. In this regard, these changes in the MTP Act is a welcome step.

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# PM ACTION PLAN: GOVERNMENT AIMS TO BE BETTER WITH 60-POINT ACTION PLAN

## CONTEXT:

The centre has prepared a comprehensive 60-point action plan following the Prime Minister's meeting with secretaries of all departments and ministries.

### ◎ BACKGROUND:

- Prime minister in consultation with secretaries of all the union ministries and departments has identified 60 ideas and suggestions across the sectors.
- Accordingly, the cabinet secretariat has identified the lead ministries to take these suggestions forward and work for their implementation.

### ◎ ANALYSIS:

A closer analysis suggests that the 60-point action is targeted at specific ministries and departments which fall under three broad categories:

- Leveraging IT and technology for governance
- Improving business climate, and
- Upgrading the civil services

Let us look at them closely.

#### Leveraging IT and Technology for Governance:

- Streamlining disbursement of scholarships-** It will bridge the digital divide for underprivileged students by developing **indigenous tablets and laptops**.
- Digitisation of land records:** It aims at digitising all land records by 2023 under the '**Matribhumi**' central database. This will result in the creation of an accurate and comprehensive record with appropriate database linkages, that can be updated in real-time.
- All schemes and programmes** of the government of India **should have a digital component**.
- Linking of Birth certificates to citizenship:** As there is no proof of citizenship in India, a plausible solution came from the action plan, which talks about linking citizenship with birth certificates through the use of technology.

#### Improving Business Climate:

- It talks about **doing away with certain permissions, reducing the cost of starting a business in 10 sectors** and bringing India to par with **Vietnam and Indonesia**.

- Comprehensive "**Environment Management Act**" (subsuming various laws in the sector): As there is considerable overlap among various laws, it suggests a new "umbrella" law to simplify the process of environment clearances for the development of infrastructure projects in India.
- Minimise the number of clearances required:** The DPIIT, and Ministry of Environment and forests have been tasked to chalk out an action plan to minimise the number of clearances required and provide for automatic notification of the clearances required when a unit registers.
- Provision for **incentives to states for timely land acquisition and forests clearances** by incorporating a "**ranking framework for states in giving clearances**".
- Establishment of National Mentorship platforms for start-ups:** This will provide mentors with a single point of contact for entrepreneurs and start-ups, where they could be assisted by **securing early finance**.
- Skilling programmes for emerging sectors:** Department of Promotion of Industry and Internal Trade (DPIIT) and the Ministry of Skill Development and Entrepreneurship (MSDE) has been tasked to work towards skilling programmes for the emerging sectors.
- The action plan includes the appointment of more **Chief Information Officers (CIOs)** and **Chief Technology Officers (CTOs)** in order to ensure the **effective use of data**.
- Use of **Geographic Information System (GIS)** mapping for decision-making to boost the country's GDP.
- Pushing for jobs** while negotiating **trade pacts**.

#### Upgrading the Civil Service

- Capacity Building (Mission Karmayogi):** While imparting training to the officers, stress must be given on various aspects of infrastructure in both the Centre and states. It can be further improved with the **infusion of expertise** and **exposure to the latest technologies** to higher civil services.
- Performance-Based Working:** Clear and **specific targets** for ministries and departments, the ways it works in public sector undertakings. Well-placed **Institutional mechanisms** for addressing issues of states given their limited capacities.

- **Restructuring of departments** through re-engineering the government processes every 10 years.

Re-engineering forces bureaucrats and the government to completely rethink the way business is conducted and react to the demands made by their constituents. For example, modified methods of metre reading, billing (process) can increase the accuracy of generated bills, less power-cuts and reliable and uninterrupted power. This can help to improve the distribution network resulting in operational efficiency.

The action plan also asks the concerned ministries to **borrow from the successes achieved by others**. For example:

- The **Department of Sports** has been asked to adopt the **Odisha model for the promotion of sports at a national level**.
- The **Department of Administrative Reforms and Public Grievances** has been asked to organise all government circulars like the **Reserve Bank of India's Master Circulars**.

#### Other points in the Action Plan:

- **Eradication of poverty:** NITI Aayog must target the eradication of poverty in the next five years.
- **Prevent formation of slums:** Ministry of Housing and Urban Affairs must plan for the residential facilities for people engaged in construction to prevent the formation of slums.
- **Use of Aadhaar for bringing together beneficiary oriented schemes:** It will not only help in scrutinising the penetration of the concerned welfare scheme but will also save government efforts from getting duplicated.
- **Promotion of "Family database design":** It has been developed by the ministry of social justice and empowerment that **"maybe promoted like Aadhaar."**
- The action plan for the Ministry of External Affairs talks about **Institutionalising inter-ministerial groups** on the **"Neighbourhood First Policy"**.

**Inter-Ministerial Group** is a committee consisting of members from different ministries. Such committees can be set up by Prime Minister to look into specific issues pertaining to the ministries.

- The **culture and tourism ministries** have been tasked with identifying and developing 100-200 famous structures and locations.
- **Centres of excellence** can be established in rural regions through public-private partnerships (PPP), considering Singapore as an example.
- **Opening of beach sand minerals** (only Department of Atomic Energy-DEA can do this kind of mining) and **offshore mining** (currently only through PSUs) for exploration and production by the private sector.

**Additional Information:** Monazite (**Monazite is the mineral from which Thorium is extracted**) and other minerals such as garnet, ilmenite and zircon are commonly known as **beach sand minerals** as they are found along the coastal regions of peninsular India are refined and used in stages of the country's nuclear power programme and hi-tech defence electronics applications. Thorium is an important ingredient of India's three-stage nuclear programme that can be turned into nuclear fuel after being combined with a fissile material such as plutonium.

#### ◎ CONCLUSION:

After passing a tumultuous year, India's next growth story would hinge on righteous planning and direction. The 60-point action plan holds the roadmap for India to achieve new heights in the area of ease of doing business and will push India in the direction of good governance. The implementation of the mentioned **"actionable inputs"** requires an **"immediate action"** in a **"time-bound manner"** to ensure its success.

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# GLOBAL HUNGER INDEX

## CONTEXT:

India has slipped to 101st position in the Global Hunger Index (GHI) 2021 of 116 countries, from its 2020 position of 94th.

### What is the Global Hunger Index?

- **Annual Report:** It is an annual report (peer-reviewed) published by Concern Worldwide of Ireland and Welthungerhilfe (a German non-profit organization).
  - ▶ It was first produced in 2006. It is published every October.
  - ▶ The 2021 edition marks the 16th edition of the GHI.
- **Aim:** To comprehensively measure and track hunger at the global, regional, and country levels.
- **Scoring:** Based on the values of the four indicators, the GHI determines hunger on a 100-point scale where 0 is the best possible score (no hunger) and 100 is the worst.
  - ▶ Each country's GHI score is classified by severity, from low to extremely alarming.
- **Data Collection:** Undernourishment data are provided by the Food and Agriculture Organisation and child mortality data are sourced from the UN Inter-agency Group for Child Mortality Estimation (UN IGME).
  - ▶ Child wasting and stunting data are drawn from the joint database of UNICEF, the World Health Organization (WHO) and the World Bank, among others.

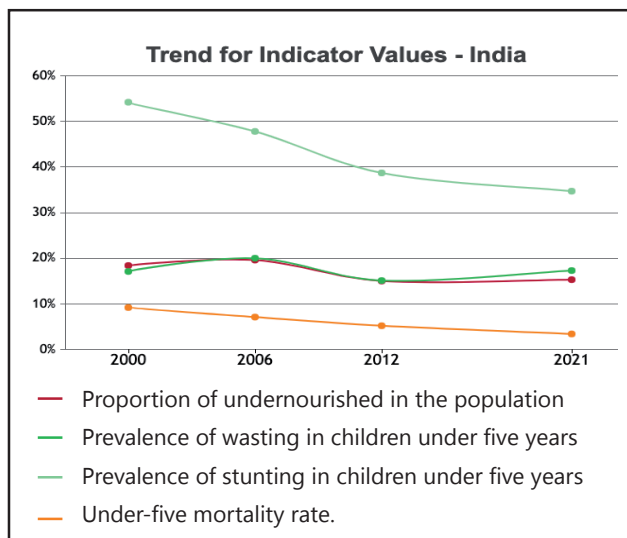
#### GHI indicators:

The GHI score is based on four indicators:

- **Undernourishment:** Share of the population with insufficient caloric intake.
- **Child Wasting:** Share of children under age five who have low weight for their height, reflecting acute under nutrition.
- **Child Stunting:** Share of children under age five who have low height for their age, reflecting chronic under nutrition.
- **Child Mortality:** The mortality rate of children under the age of five.

### How did India score in Global Hunger Index 2021?

- India ranks 101st out of 116 countries in the GHI 2021 rankings. With a score of 27.5, India has a level of hunger that is 'serious'.



- India has slipped 7 positions from its 2020 rank of 94.
- India is ranked behind most of its neighbouring countries. Their ranks are given below:
  - ▶ Pakistan – 92
  - ▶ Sri Lanka – 65
  - ▶ Nepal – 76
  - ▶ Bangladesh – 76
- There are only 15 countries that are ranked below India in the 2021 index.
- In the index, eighteen countries such as China, Brazil and Kuwait shared the top rank. They got a GHI score of less than five.
- According to the latest data, India has the highest rate of child wasting among all the countries in the index.
- However, India has shown improvement in other indicators such as the under-5 mortality rate, prevalence of stunting among children and prevalence of undernourishment owing to inadequate food.

#### Global Hunger Index – India's rank

- In year 2021 GHI-101 out of 116
- In year 2020 GHI-94 out of 107
- In year 2019 GHI-102 out of 117
- In year 2018 GHI-103 out of 119

### What is actually meant by Hunger?

- Hunger defines a **short-term physical discomfort** as a result of **chronic food shortage**, or in severe cases, a life-threatening lack of food.
- **World hunger** refers to hunger aggregated to the global level. Related terms include food insecurity and malnutrition.
  - ▶ **Food insecurity** refers to limited or unreliable access to foods that are safe and nutritionally adequate.
  - ▶ **Malnutrition** is a condition resulting from insufficient intake of biologically necessary nutrients. Although malnutrition includes both over nutrition and under nutrition, the focus for global hunger is under nutrition.

### Constitutional Provisions and Food Security

- The 'right to food' or in general the economic, social, and cultural rights are defined in **Part IV** of the Constitution as **Directive Principles of State Policy**.
- The Right to Food in Indian Constitution is **not recognized as a "Fundamental Right"**
- **Article 21** and **47** of the constitution obliges the Government of India to take appropriate measures to ensure a dignified life with adequate food for all citizens.
- **Article 47:** Article 47 of the Indian Constitution provides that it is the "duty of the State to raise the level of nutrition and the standard of living and to improve public health".
- **Article 21:** Protection of life and personal liberty – No person shall be deprived of his life or personal liberty.

### What are the reasons for Prevailing Hunger in India?

- **Small and marginal land holding:** The agriculture output from small and marginal holdings are either stagnant or declining due to reasons such as reduced soil fertility, fragmented lands or fluctuating market price of farm produce. Almost 50 million households in India are dependent on these small and marginal holdings.
- **Lesser production for self-consumption:** Though the country has surplus food, most small and marginal farming households do not produce enough food grains for their year-round consumption.
- **Income on decline:** Relative income of one section of people has been on the decline. This has adverse effects on their capacity to buy adequate food, especially when food prices have been on the rise.

- **Less remunerative work:** The kind of work a section of people have been doing are less remunerative or there is less opportunity to get remunerative works.
- **Poor functioning of PDS:** The public distribution system (PDS) of the state is not functioning well or is not accessible to everyone.
- **Other reasons include:**
  - ▶ Poverty: Poverty and hunger exist in a vicious cycle.
  - ▶ Food shortages
  - ▶ Climate change
  - ▶ Poor nutrition
  - ▶ Poor infrastructure
  - ▶ Gender inequality

### What needs to be done?

- **Multi-pronged strategy:** A multi-pronged approach is needed to deal with the crisis.
- **Renewed focus on small and marginal holdings:** More crops have to be grown, especially by small and marginal farmers with support from the Union government.
- **Focus on food security of the vulnerable section:** The government may create provisions to supply cooked nutritious food to the vulnerable section of the society.
- **Boost to employment schemes:** Rural employment schemes such as MGNREGA should be given a boost to increase employment and wages.
- **Streamlining and universalizing PDS:** Access to food grains under the PDS needs to be streamlined by simplifying technical processes and reducing Aadhaar-related glitches.
- **One Nation One Ration card scheme:** The Union government must also ensure that the 'One Nation One Ration card' scheme, if brought into effect, is operationalised through proper preparations.

### Government initiative to tackle hunger

- Eat Right India Movement
- POSHAN Abhiyan
- POSHAN 2.0
- Pradhan Mantri Matru Vandana Yojana
- National Food Security Act, 2013
- Mission Indradhanush
- Integrated Child Development Services (ICDS) Scheme

- **Food Fortification:** Food Fortification or Food Enrichment is the addition of key vitamins and minerals such as iron, iodine, zinc, Vitamin A & D to staple foods such as rice, milk and salt to improve their nutritional content.

## ◎ CONCLUSION

Though India has not reached the WHO goals, progress towards food security continues to spread across the country. Each year, the country is reducing the number of people who are malnourished.

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## JURISDICTION ENHANCEMENT OF BSF

### CONTEXT:

Recently, the Ministry of Home Affairs has issued a notification to widen the jurisdiction of **Border Security Force (BSF)** for seizure, search and arrest up to **50km** from the international border in **Assam, West Bengal and Punjab**.

#### About Border Security Force (BSF)

- The **Border Security Force (BSF)** was raised in the wake of the **1965 War** on **1 December 1965** for ensuring the security of the borders of India and for matters connected therewith.
- The **BSF is India's border guarding organization** on its border with Pakistan and Bangladesh.
- It is one of the seven Central Armed Police Forces of the Union of India under the administrative control of the **Ministry of Home Affairs (MHA)**.
  - Other Central Armed Police Forces are:
    - Assam Rifles (AR)
    - Indo-Tibetan Border Police (ITBP)
    - Central Industrial Security Force (CISF)
    - Central Reserve Police Force (CRPF)
    - National Security Guards (NSG)
    - Sashastra Seema Bal (SSB)
- **Deployment:** The **2.65-lakh force** is deployed along the Pakistan and Bangladesh borders.
  - It is deployed on **Indo-Pakistan International Border, Indo-Bangladesh International Border, Line of Control (LoC) along with Indian Army and in Anti-Naxal Operations**.
- **Units:** It has an **air wing, marine wing, an artillery regiment, and commando units**.
  - BSF has been defending **Sir Creek in Arabian Sea** and **Sundarban delta in the Bay of Bengal** with its state of art fleet of Water Crafts.
  - BSF has an instrumental role in helping state administration in **maintaining Law and Order and conducting peaceful elections**.
  - BSF has been crusading against natural calamity to **save precious human lives** as and when warranted.
- It contributes dedicated services to the **UN peacekeeping Mission** by sending a large contingent of its trained manpower every year.
- It has been termed as the **First Line of Defence of Indian Territories**.
- The BSF has its own cadre of officers but its head, designated as a **Director-General (DG)**, since its raising has been an officer from the **Indian Police Service (IPS)**.

#### Jurisdictional Limitation under the Border Security Force Act, 1968

- A notification issued in 2014 had outlined BSF's jurisdiction as the whole of the area comprised in the States of Manipur, Mizoram, Tripura, Nagaland and Meghalaya and so much of the area comprised within a belt of:
  - 80 kilometres in the State of Gujarat
  - 50 kilometres in the State of Rajasthan
  - 15 kilometres in the States of Punjab, West Bengal and Assam, running along the borders of India

#### What is in the latest order?

- This notification replaces a 2014 order under the **Border Security Force Act of 1968**, which also covered the States of **Manipur, Mizoram, Tripura, Nagaland and Meghalaya**.
  - It also specifically mentions the two newly created Union Territories- **J&K and Ladakh**.
- The 2021 notification amends the 2014 notification and extends the jurisdiction of the BSF up to 50 km inside the international borders in Punjab, West Bengal and Assam. Earlier, the BSF's powers were limited to up to 15 km in these states.
- The jurisdictional limit with respect to the state of Gujarat has been reduced from 80kms to 50 kms.
- The violations for which the BSF carries out **search and seizure** include smuggling of narcotics, other prohibited items, illegal entry of foreigners and offences punishable under any other Central Act among others.
- After a suspect has been detained or a consignment seized within the specified area, the BSF can only conduct **"preliminary questioning"** and has to hand over the suspect to the local police within 24 hours.
  - The BSF does not have the powers to prosecute crime suspects.

#### What is actually means?

- As per the new notification, BSF officers will be able to conduct arrests and searches in **West Bengal, Punjab, and Assam**.
  - BSF has got the right to take this action under:

- The Code of Criminal Procedure (CrPC),
- The Passport Act 1967, and
- The Passport (Entry to India) Act 1920.
- The BSF will have the powers of search, seizure, and arrest under Acts like **Passport Act, NDPS Act, and Customs Act.**
  - Its jurisdiction under these laws has not been changed, meaning its powers under these will continue to be only up to **15 km inside the border in Punjab, Assam and West Bengal**, and will remain as far as **80 km in Gujarat.**
- The new notification also empowers an officer of the rank corresponding to that of the lowest ranking member of the BSF, under the CrPC, to exercise and discharge the powers and duties without an order from a Magistrate, and without a warrant.
- The officer is now empowered to arrest any person who has been concerned in any cognisable offense, or against whom a reasonable complaint has been made, or credible information has been received.
- A BSF officer has now been given the power to conduct a search of a place entered by a person sought to be arrested in its new area of jurisdiction.

#### Powers exercised by BSF in its jurisdiction

- **Section 139 (BSF Act, 1968):** It empowers the Center to notify from time to time the area and extent of operation of the Border Security Force.
  - Under the BSF Act, Section 139 (ii) gives sweeping powers of arrest to BSF.
  - It has powers of preventive arrest under Section 139 (1) & post offence arrest under section 139 (ii).
  - No mention of consultation with local police.

#### Issues Involved

- **Public Order vs Security of State:** Public order, which connotes **public peace, safety and tranquility**, is primarily the responsibility of a **State Government (Entry 1, State list).**
  - However, when there is a serious public disorder which **threatens the security or defence of the State or of the country itself (entry 1 of Union list)**, the situation becomes a matter of concern for the Union Government also.
- **Weakening Spirit of Federalism:** Without obtaining the concurrence of the state government, the notification amounts to encroachment on the powers of the states.

- The Punjab Government has asserted that this notification is Centre's encroachment under the guise of security or development.
- **Affecting Functioning of BSF:** Policing in the hinterland is not the role of a border guarding force, rather it would weaken the capacity of the Border Security Force in discharging its primary duty of guarding the international border.

#### Constitutional Viewpoint on Deployment of Armed forces in States

- **Under Article 355**, the Centre can deploy its forces to protect a state against **"external aggression and internal disturbance,"** even when the state concerned does not requisition the Centre's assistance and is reluctant to receive central forces.
- In the case of a state's opposition to the deployment of armed forces of the Union, the right course for the Centre is to first issue directives under **Article 355** to the state concerned.
- In the event of the state not complying with the directive of the Central government, the Centre can **take further action under Article 356 (President's Rule).**

#### Sanctions behind such powers

- **Scarcely populated borders:** At that time, border areas were sparsely populated and there were hardly any police stations for miles.
- **Trans-border crimes:** To prevent trans-border crimes, it was felt necessary that BSF be given powers to arrest.
- **Manpower crunch:** While police stations have now come up near the border, they continue to be short-staffed.

#### Why has the government extended the jurisdiction?

- **Uniformity & Efficiency:** The move is to bring in uniformity and also to increase operational efficiency.
- **Quick Response:** BSF often gets information relating to crime scenes that may be out of their jurisdiction. It is done to make the response swift and effective in such cases.
- **Increasing Incidents on Borders:** The move was also necessitated due to increasing instances of drones dropping weapons and drugs in Jammu and Kashmir and Punjab.

- **Providing More Powers:** BSF's jurisdiction has not been increased under the Arms Act, Customs Act and NDPS Act, which cover most of the smuggling offences on the border and deal with far greater offences. Separate arrangements are made to make BSF independent in its action.

#### **Impact on State Police jurisdiction**

- This move will complement the efforts of the local police. Thus, it is an enabling provision.
- It's not that the local police can't act within the jurisdiction of the BSF.

- The state police have better knowledge of the ground. Hence BSF and local Police can act in cooperation.

#### **◎ CONCLUSION**

This amendment is a welcome step as it will bring in uniformity for BSF's operations in the border state. Not only uniformity, it will also enable improved operational effectiveness in curbing trans-border crimes.

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# CHINA MAKES CRYPTOCURRENCY TRANSACTIONS ILLEGAL: AN EXPLAINER

## CONTEXT:

China has added cryptocurrency mining to a draft list of industries in which investment is restricted or prohibited, although it reduced the number of sectors on the list overall.

## ◎ BACKGROUND

- Cryptocurrency restrictions in China are not new.
- In 2017, China shut down local cryptocurrency exchanges at a time when their speculative market accounted for 90 percent of the world's trade of bitcoin.
- In June 2019, trading cryptocurrency was officially banned in China, when the PBOC stated they would be blocking access to all forms of cryptocurrency exchanges, domestic and foreign, and Initial Coin Offering websites although cryptocurrency transactions continued through foreign online exchanges.
- 2021, however, saw the government double down on its crackdown on cryptocurrencies

- Transactions are recorded in "blocks" that are then linked together on a "chain" of previous cryptocurrency transactions.

## What is in the latest ban?

- Legal currency and virtual currency exchanges, buying or selling virtual currencies (including overseas sales to Chinese residents), and providing information (including pricing services and technical support) for virtual currency are illegal currently.
- They carry the threat of investigation and prosecution.
- **Financial institutions** are banned from providing services for cryptocurrencies, including opening accounts, funds transfers, and other activities that facilitate the use of cryptocurrencies.
- **Internet companies** and websites are also banned from providing payment services in cryptocurrencies.
- **Advertisements for cryptocurrencies** are also prohibited, with the monitoring of key words relating to them.

## ◎ ANALYSIS

### What is Cryptocurrency?

- Cryptocurrency is decentralized digital money, based on blockchain technology.
- A cryptocurrency is a medium of exchange that is digital, encrypted and decentralized.
- Unlike the U.S. Dollar or the Euro, there is no central authority that manages and maintains the value of a cryptocurrency.
- Instead, these tasks are broadly distributed among a cryptocurrency's users via the internet.

**Bitcoin** was the first cryptocurrency, first outlined in principle by Satoshi Nakamoto in a 2008 paper titled "Bitcoin: A Peer-to-Peer Electronic Cash System."

That cryptographic proof comes in the form of transactions that are verified and recorded in a form of program called a **blockchain**.

### Blockchain

- A blockchain is an open, distributed ledger that records transactions in code.
- In practice, it's a little like a checkbook that's distributed across countless computers around the world.

## What can be the reasons behind the ban?

- China's ban basically reflects global concerns about cryptocurrency.
- Governments across US and Asia have raised concerns that digital currencies
  - ▶ increase risk
  - ▶ promote crime
  - ▶ harm investors
  - ▶ affect government control of monetary systems
- The Chinese government also reported that the trading of virtual currency has contributed to the rise in gambling, fraud, money laundering, pyramid schemes, and other illegal activities.
- Thus, banning cryptocurrency is necessary to **maintain social stability and national security**.

- It has been also felt that China sees cryptocurrencies as threatening to the digital yuan, an electronic currency at the advanced pilot stage.

### The concept of digital rupee in India

- About 100 million Indians own cryptocurrencies, according to a recent study.
- Top crypto exchanges serving the Indian market:
  - ▶ WazirX
  - ▶ CoinDCX
  - ▶ CoinSwitch Kuber
  - ▶ ZebPay
  - ▶ UnoCoin
- **Legality:** At the moment, there is no legislature that covers cryptocurrencies in India. But this doesn't mean that owning cryptocurrencies is illegal.

#### Government's stance on cryptocurrency trading

- **Inter-ministerial committee:** The Government of India made an inter-ministerial committee in November 2017 to examine the future of virtual currencies.
  - ▶ The report — submitted in July 2019 — lauded the blockchain technology and also made suggestions to use its applications in various sectors such as banking for numerous processes including collateral management, loan-issuance tracking and fraud detection among others.
- **RBI Circular:** As of now, there is no crackdown by the Government of India, but the RBI had issued a crackdown in April 2018. During that time, an RBI circular told the banks not to deal in virtual currencies or to facilitate any services to crypto traders.
  - ▶ The same year, the then Union Finance Minister Arun Jaitley announced that "bitcoin is not a legal tender" in India.

- **Supreme Court:** In March 2020, the Supreme Court lifted the RBI's restrictions and made its order void, permitting banks to transact in cryptocurrencies.
- **Ministry of Corporate Affairs:** The biggest impetus for digital currencies in India came in March 2021 when the Ministry of Corporate Affairs mandated the companies to disclose the investments and trading in cryptocurrencies such as Bitcoin, Ethereum, Dogecoin, among others.
  - ▶ The disclosure was, seemingly, intended to curb illegal activities that take place through digital currencies.

### IMF's warning to India

- International Monetary Fund (IMF) has recently warned against the adoption of Crypto currency, saying it can threaten financial stability of emerging markets.
- According to the IMF, Crypto currency poses new challenges to financial stability and consumer protection risks remain substantial given limited or inadequate disclosure and oversight.
- IMF's financial experts said, anonymity of crypto assets also creates data gaps for regulators and can open unwanted doors for money laundering, as well as terrorist financing.

### ◎ CONCLUSION

Cryptocurrencies — digital commerce tools that aren't linked to a centralized banking authority — first appeared in China around 2008. Chinese banks began to prohibit the use of digital currencies in 2013 and stepped up regulations after 2016.

So, although bans on crypto currencies by Chinese authorities or similar actions do not put any stumbling blocks for digital currency traders in India, they — on the other hand — give good buying opportunities to investors.

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# PM GATI SHAKTI NATIONAL MASTER PLAN

## CONTEXT:

Prime Minister Narendra Modi has kicked off much talked about PM Gati Shakti National Master Plan for multi-modal connectivity.

### ◎ BACKGROUND

The Prime Minister had already announced 'PM Gati Shakti - National Master Plan' in his Independence Day speech on August 15 this year.

### ◎ ANALYSIS

#### What is Gati Shakti?

- The national master plan is aimed at
  - ▶ breaking inter-ministerial silos and integrating the planning and designing of projects with a common and holistic vision
  - ▶ enhance India's global competitiveness through next-generation infrastructure and seamless multi-modal connectivity
  - ▶ ensure seamless movement of goods and people
  - ▶ enhance the ease of living as well as the ease of doing business in the country
- It aims to lend more **speed (Gati)** and **power (Shakti)** to projects by connecting all concerned departments on one platform.

#### Digital Platform

- Under the programme, a digital platform has also been created which will bring 16 ministries including rail and roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects.
  - ▶ The platform will provide high resolution satellite images, infrastructure, utilities, administrative boundaries, land and logistics.

#### Implementation of the initiative

- There will be an **Integrated Multimodal Network Planning Group (NPG)** which will be entrusted with unified planning and integration of proposals as well as connectivity projects which are not part of the current master plan with an estimated cost of over Rs 500 crore.
- The **National Networking Group** will consist of experts or officials from all the stakeholder departments.
- The **Department of Promotion of Industry and Internal Trade** will be the nodal agency.

- The group will be responsible for sharing their specific **Action Plans for 2020-21 to 2024-25** with each other for facilitating integration of networks, enhancing optimisation through modification/expansion/new network creation to avoid duplication of works for holistic development of any region as well as reducing logistics costs through micro-plan detailing.

#### What are the targets under Gati Shakti?

- The Rs 100 lakh crore national master plan includes 11 industrial corridors, achieving a Rs 1.7 lakh crore turnover in defence production and having 38 electronics manufacturing clusters and 109 pharma clusters by 2024-25.
- It fixes targets up to 2024-25 for all infrastructure ministries.

#### Road Transport and Highways Ministry

- Like for the Road Transport and Highways Ministry, the target is
  - ▶ to have National Highways of 2 lakh km
  - ▶ completion of four or six-lane national highways of 5,590 km along coastal areas
  - ▶ all state capitals in north-east to be connected with four-lane national highways or two two-lane national highways

#### Indian Railways

- For Railways, the target by 2024-25 is
  - ▶ to handle cargo of 1,600 million tonnes from 1,210 million tonnes in 2020
  - ▶ decongesting 51 percent of the Railway network by completing additional lines and implementation of two **Dedicated Freight Corridors (DFCs)**

#### Energy

- Further, the gas pipeline network in the country is aimed to be doubled to 34,500 km by 2024-25 by building an additional 17,000 km long trunk pipeline connecting major demand and supply centres for industries, as per the plan.
- And in power lines, the total transmission network by 2024-25 is targeted to be 4.52 lakh circuit km and the renewable energy capacity is expected to be increased to 225 GW from 87.7 GW presently.

**The Need**

- wide gap between macro planning and micro implementation
- lack of coordination
- lack of advance information
- hampered construction
- wastage of budget

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## E-WASTE: TREASURE OR THREAT?

### CONTEXT:

Recently, International E-Waste Day has been observed on October 14 and it has been observed every year since 2018.

### ◎ ABOUT

- Waste electronic and electrical equipment (WEEE), a Brussels-based non-profit gave some shocking statistics about the rising tide of e-waste.
- This year's WEEE will total about 57.4 million tonnes (MT). This will be greater than the weight of the Great Wall of China, Earth's heaviest artificial object.
- Last year's Global E-waste Monitor reported that 53.6 MT of WEEE were generated in 2019. That represented a 21 per cent jump in the five years since 2014 (with e-waste predicted to reach 74 MT by 2030).

#### E-Waste

- E-Waste is short for Electronic-Waste and the term is used to describe old, end-of-life or discarded electronic appliances. It includes their components, consumables, parts and spares.
- It is categorised into 21 types under two broad categories:
  - Information technology and communication equipment.
  - Consumer electrical and electronics.
- Laws to manage e-waste have been in place in India since 2011, mandating that only authorised dismantlers and recyclers collect e-waste. E-waste (Management) Rules, 2016 was enacted in 2017.
- India's first e-waste clinic for segregating, processing and disposal of waste from household and commercial units has been set-up in Bhopal, Madhya Pradesh.

### How it can be Treasure?

- E-waste consists of both hazardous and non-hazardous items including ferrous and non-ferrous metals like copper, aluminium, silver, gold, platinum, palladium, etc. Plastics, glass, wood and plywood, printed circuit boards, concrete, ceramics and rubber. These precious earth metals like copper, aluminium, silver, gold, platinum, palladium if extracted and reutilized could prove to be a treasure trove.

### How it can be Threat?

- Out of the 44 Million tonnes (Mt) of e-waste, only 20 % of total global e-waste was collected and recycled sustainably, there is also environmental and health hazard as e-waste contains over 1,000 harmful substances, including lead, mercury, nickel, brominated flame retardants and polycyclic aromatic hydrocarbons (PAHs). Mercury for example damages the human brain and coordination system.
- E-waste is particularly hazardous as the extraction and recycling of e-waste is largely manually done and the sector is majorly dependent on informal workforce especially in developing or middle income countries. More than 18 million children and adolescents are actively engaged in the informal industrial sector, of which waste processing is a sub-sector, exposing themselves to toxic e-waste risk.

### E-waste Generation in India:

- Asia generated the greatest volume i.e. 24.9 million tonnes (Mt) of e-waste in 2019 with China and India being the two largest contributors ranking first and third globally. India alone generated 3 Mt of e-waste in 2019 and about 95 per cent of India's e-waste is recycled in the informal sector and in a crude manner.
- In 2018, the Ministry of Environment had told the tribunal that 95% of e-waste in India is recycled by the informal sector and scrap dealers unscientifically dispose of it by burning or dissolving it in acids.

#### E-Waste Management Rules, 2016

- The Ministry of Environment, Forest and Climate Change notified the E-Waste Management Rules, 2016 in supersession of the E-waste (Management & Handling) Rules, 2011.
- Over 21 products (Schedule-I) were included under the purview of the rule. It included Compact Fluorescent Lamp (CFL) and other mercury containing lamps, as well as other such equipment.
- For the first time, the rules brought the producers under Extended Producer Responsibility (EPR), along with targets. Producers have been made responsible for the collection of E-waste and for its exchange.



- Various producers can have a separate Producer Responsibility Organisation (PRO) and ensure collection of E-waste, as well as its disposal in an environmentally sound manner.
- Deposit Refund Scheme has been introduced as an additional economic instrument wherein the producer charges an additional amount as a deposit at the time of sale of the electrical and electronic equipment and returns it to the consumer along with interest when the end-of-life electrical and electronic equipment is returned.
- The role of State Governments has been also introduced to ensure safety, health and skill development of the workers involved in dismantling and recycling operations.
- A provision of penalty for violation of rules has also been introduced.
- Urban Local Bodies (Municipal Committee/Council/Corporation) have been assigned the duty to collect and channelize the orphan products to authorized dismantlers or recyclers.
- Allocation of proper space to existing and upcoming industrial units for e-waste dismantling and recycling.

### **Why it is difficult to manage e waste in India?**

- The producers/manufacturers do not have adequate information on their website regarding e waste management.
- Customer care representatives do not have inkling about any take back or recycling programme and even if they have set up collection centres, they are simply not enough for a geographically vast country like India.
- India being a vast country, setting up collection mechanism is a big challenge. If any of the brands try individually to reach out to all corners of the

country, it will economically not be sustainable or feasible.

- Improper enforcement of the existing laws is another hurdle.

### **Government efforts in this regard**

- NITI Aayog India's public policy think tank has put prominent emphasis on e-waste among 11 end-of-life products, recyclable materials, wastes that continue to pose considerable challenges.
- They have formed 11 committees to be led by the concerned line ministries and comprising officials from MoEFCC and NITI Aayog, domain experts, academics and industry representatives .
- Greens cape Eco Management is one such company that has been involved in NITI Aayog's Committee for E-Waste Management Rules and Regulation. They provide end of Life IT asset solutions ranging from collection and disposal to reintegration solutions including re-use, de-manufacturing, brand security and e-waste recycling.
- The organization actively pursues projects and initiatives that benefit the e-waste industry and the communities that serve the environment.
- As of now they're ongoing projects over 427 locations across India. Currently they have collaborated with partners in all parts of India, Singapore and Australia.

### **CONCLUSION**

The current situation is very hopeful with policy intervention, brand accountability, general public awareness, and technological advance in recycling. However much is yet to be done to achieve desired results. Getting quantifying data on the depth and spread of effort to sustainably process e-waste is necessary to get the actual scenario and increase the scale of momentum.

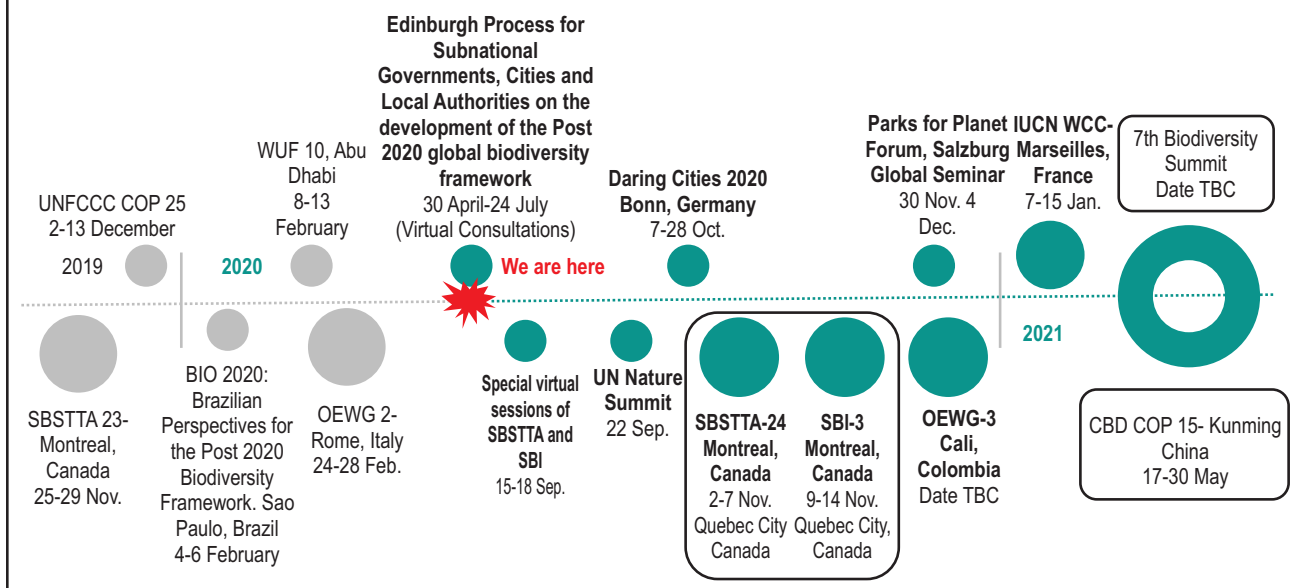
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# KUNMING DECLARATION ON BIODIVERSITY CONSERVATION

## CONTEXT:

The “Kunming Declaration” was adopted by more than 100 countries at the 15th annual COP Summit of the Parties to the United Nations Convention on Biological Diversity (UNCBD).

## Roadmap to COP 15



## ◎ ABOUT

- The adoption of this declaration will create the impetus for a new global environmental agreement.
- In a previous agreement, the Strategic Plan for Biodiversity 2011-2020, signed in Aichi, Japan, in 2010, governments agreed on 20 goals to try to reduce biodiversity loss and protect habitats by 2020.

### Kunming Declaration:

- It requires urgent and integrated action to address biodiversity concerns in all sectors of the global economy but important issues - such as savings in poor countries and commitment to chains of friendly biodiversity supply have been left to discuss over time.
- It is not an international agreement that is binding.
- It calls on the parties to play their part in protecting biodiversity in decision-making and recognizing the importance of conservation in protecting human health.
- The theme of the proclamation is Civilization: Building a Shared Future for Life on Earth.
- In recognition of this, nations are committed to supporting the development, adoption and implementation of a post-2020 operational plan, a capacity building program for the Cartagena Protocol on biosafety.
- The Protocol aims to protect biological diversity from the potential dangers of genetically modified organisms from modern biotechnology.
- As the declaration states the signatory states shall ensure that the policies, programs and programs of the epidemic return contribute to the conservation and sustainable use of biodiversity, to promote sustainable and inclusive development.

### Convention on Biological Diversity, 1992

- The Convention on Biological Diversity (CBD) came into force on 29 December 1993. It has three main objectives:
- Biodiversity conservation.
- Sustainable use of biodiversity components.
- Equitable and equitable distribution of benefits from the use of genetic resources.
- The Convention was unveiled on June 5, 1992 at the Rio "Earth Summit".
- This agreement is a legally binding agreement approved by 180 countries.
- The CBD Secretariat is based in Montreal, Canada and operates under the auspices of the United Nations Environment Program.
- Areas of legal responsibility are biodiversity conservation, sustainable use of natural resources and equal sharing of benefits from their sustainable use.

- The conference came into effect in 1993. Many biological problems are being addressed, including the conservation of habitats, intellectual property rights, environmental safety and the rights of indigenous peoples.
- It has two supplementary agreements, the Cartagena Protocol and Nagoya Protocol.
  - **Cartagena Protocol:** It is an international treaty governing the movements of living modified organisms (LMOs) resulting from modern biotechnology from one country to another.
  - **Nagoya Protocol:** It deals with Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS).

### 30 by 30 Target

- The proclamation makes a reference to the target '30 by 30' which is the main proposal discussed in COP15, which will be able to pay for 30% of land and sea land protected by 2030.

### POST - 2020 GLOBAL BIODIVERSITY FRAMEWORK CHRONOLOGY

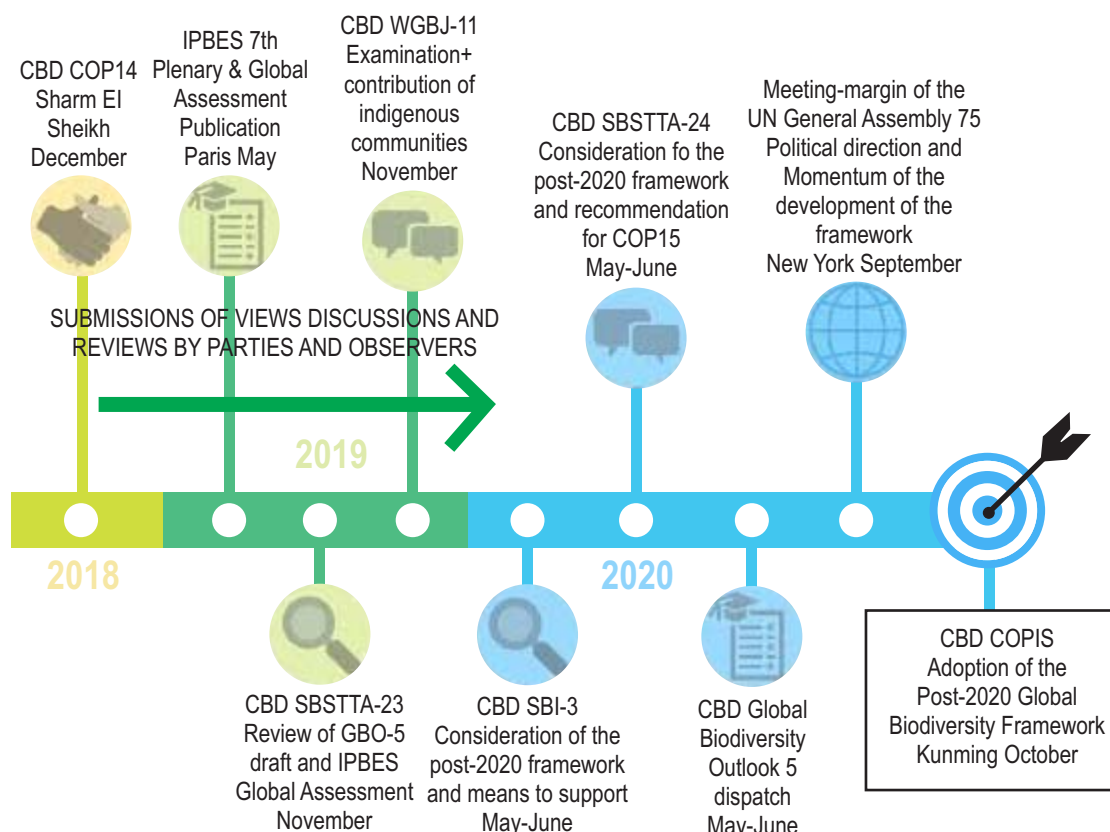


Figure 4: CBD Process and important milestones towards COP 15 (Preparations for the Post-2020 Biodiversity Framework, CBD 2019)

- Apart from this, there is also a plan to halve the use of chemicals by agriculture and to stop creating waste in plastic waste.

is already helping developing countries finance green projects.

### **Kunming Biodiversity Fund**

- China has also promised to invest USD 233 million in a new biodiversity conservation fund for developing countries. The fund is called China's Kunming Biodiversity Fund.
- It is a step in the right direction. However, some countries are skeptical about the fund.
- Some countries have called the fund a "bucket drop" as China is the world's largest polluter.
- In addition, some wealthy country donors say a new conservation fund is not needed because the United Nations' Global Environment Facility

### **◎ CONCLUSION**

The adoption of the declaration will create momentum for a new global biodiversity pact. Putting biodiversity on a path to recovery is a defining challenge of this decade, in the context of the UN Decade of Action for Sustainable Development, the UN Decade on Ecosystem Restoration and the UN Decade for Ocean Science for Sustainable Development. It requires strong political momentum to develop, adopt and implement an ambitious and transformative post-2020 global biodiversity framework that promotes the three objectives of the Convention in a balanced manner.

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# WHY EMPATHY IS A MUST-HAVE BUSINESS STRATEGY

## CONTEXT:

The COVID-19 pandemic has exacerbated issues of work-life balance, financial pressures and fears about job security. Thus, greater empathy within organizations as part of everyday culture can help address these problems.

### Understanding Empathy

- Empathy is best defined as the action of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts and experiences of another person.
- While people are generally pretty well-attuned to their own feelings and emotions, getting into someone else's head can be a bit more difficult. The ability to feel empathy allows people to "walk a mile in another's shoes".
- An empathetic point of view is achieved by setting aside our own interests, current disposition, and relation to the agent and sympathizing with the effects of a person's actions on those around him.
- It is both a cognitive and an emotional skill.
- The term empathy can be used in two ways-
  - Firstly, it can mean a "thinking" response, or the ability to think about and describe how another being feels.
  - Secondly, it can also refer to the ability to "feel" and to experience another person's or animal's feelings and circumstances.

#### Operationalization of Empathy: According to David Hume

- X notices that Y is injured and that he is in pain.
- A mental state similar to that of Y arises in X. He experiences the idea of pain, of Y.
- This feeling arises from a kind of association or due to psychological simulation of Y's pain in X's mind.
- This feeling of empathy creates a motivational drive in X to rush to Y's help.

#### The different ways of looking at empathy are

- **Affective empathy:** The ability to share the emotions of others. E.g.: People who feel scared or feel others' pain strongly within themselves when seeing others scared or in pain.

- **Cognitive empathy:** The ability to understand the emotions of others. E.g.: A psychologist who understands the emotions of the client in a rational way, but does not necessarily share the emotions of the client in a visceral sense.
- **Emotional Regulation:** The ability to regulate one's emotions. E.g.: surgeons need to control their emotions when operating on a patient.

### Importance of Empathy in Business

- Fast-forward 18 months to a global pandemic that resulted in workforce burnout, and empathy is taking on a critical role in company culture.
- One of the main issues has involved the blurring of home and work life, leading to increased loneliness and social isolation.
- This lack of boundaries, greater financial pressure and fears about job security have resulted in a decline in mental health coupled with increased anxiety. In a global study by Qualtrics, two in five (41.6%) respondents said their mental health had declined since the outbreak of COVID-19, while 57.2% reported higher levels of anxiety.
- Empathy can play a vital role in addressing these issues. It helps create a sense of belonging, reinforcing the belief that employees' perspectives matter and their voices are heard.

### Benefits of being Empathic

- **Building Social Networking:** Empathy allows people to build social networks with others. By understanding what people think and feel, people are able to respond appropriately to social situations.
  - Studies have shown that social interaction is important for both physical and mental health.
- **Emotional Control:** Empathy helps you learn to control your emotions.
  - Emotional control is important because it allows you to control what you feel, even when there is a time of great stress, without frustration.
- **Empathy Improves Moral Assistance:** Not only are people more likely to engage in helpful behaviours when they feel empathy for other people, but other people are also more likely to help you when they feel empathy.

### How you can implement empathy?

- As widely suggested people can inculcate empathy in to the organizations by following some methods such as:
  - ▶ By communicating openly and effectively with clients and colleagues.
  - ▶ Start by debunking some of the myths around empathy. Show that you are serious about empathy and realize it's not just a gimmick.
  - ▶ Use data to measure progress. Use polls to measure empathy levels in online meetings.
  - ▶ Empathy is not about grandiose gestures; it's about multiple, small-scale "empathy nudges", which are low-cost, high-impact measures.
  - ▶ Develop a creative vision. This is sometimes called "skill empathy" – the ability to imagine

yourself in someone else's position and to feel what they are feeling. Take time to mentally create an image of yourself developing an honest, dedicated interest in others.

- ▶ Create a culture where ethical behaviour is both demonstrated and promoted.

### ◎ CONCLUSION

The world has changed and leaders need to adapt. Mental health, stress and burnout are now perceived as responsibilities of the organization. The failure to deploy empathy means less innovation, lower engagement and reduced loyalty, as well as diluting your diversity agenda. Thus it's time to show our commitment to empathy; measure progress and implement a series of nudges that will stimulate an empathy revolution.

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**01****GS IL 2023-24 (Pre cum Mains)  
TEST SERIES****12** OCTOBER**02****ETHICS Q&A 2022**  
BY: MANOJ K. JHA**15** OCTOBER**03****ETHICS & ESSAY TEST SERIES 2022**  
BY: MANOJ K. JHA**15** OCTOBER**04****ESSAY WRITING 2022**  
BY: MANOJ K. JHA**30** OCTOBER**05****GS MAINS  
TEST SERIES 2022****30** OCTOBER**06****PRELIMS TEST SERIES 2022**  
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TEST SERIES BY: DR. SUDHIR KUMAR**24** OCTOBER

# **SECTION: B**

## **(PRELIMS)**

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### **CURRENT AFFAIRS**

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To Attempt  
Weekly Current Affairs Test, Visit

**[www.iasscore.in](http://www.iasscore.in)**



## CLIMATE CONDITION GO IN FOR 'DOUBLE-DIP': NOAA

### ◎ CONTEXT:

As per the update from NOAA's Climate Prediction Center, it appears a La Niña has developed for the second year in a row. The latest La Nina is expected to last through the early spring of 2022 (February).

### What is Double-dip?

- Two La Ninas happening one after the other (with a transition through ENSO neutral conditions in between) is not uncommon.
- It is usually referred to as a 'double-dip'. In 2020, La Nina developed during the month of August and then dissipated in April 2021 as ENSO-neutral conditions returned.

Previous La Ninas occurred during the winter of 2020-2021 and 2017-2018. An El Nino developed in 2018-2019.

### Understanding the geographic phenomenon

- La Nina (means 'little girl' in Spanish) is a natural ocean-atmospheric phenomenon.
- It is marked by cooler-than-average sea surface temperatures across the central and eastern Pacific Ocean near the equator.

**El Nino:** It is the opposite of El Nino (meaning 'little boy'), that is marked by warmer-than-average sea surface temperatures across the central and eastern Pacific Ocean near the equator.

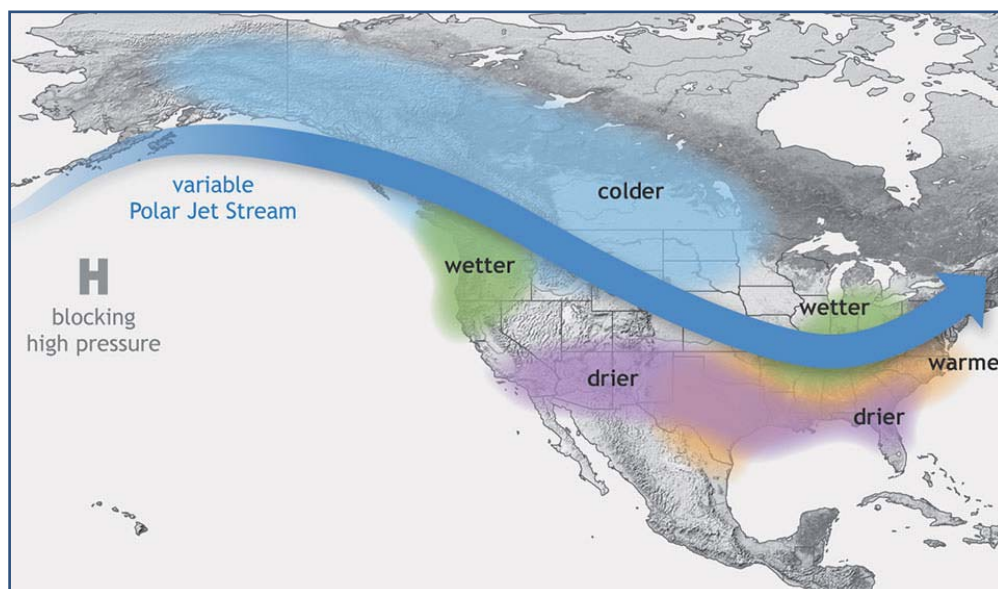
|   | La Nina (Little Girl)  | El Nino (Little Boy)   |
|---|--|--|
| Precipitation                             | La Nina causes an increase in precipitation. It also causes formation of low-pressure areas.     | El Nino usually causes a decrease in precipitation and has been found to cause drought-like conditions in India. |
| Wind strength                             | Trade winds are even stronger than usual, pushing more warm water toward Asia.                   | Trade winds weaken. Warm water is pushed back east, toward the west coast of the Americas.                       |
| El Nino Southern Oscillation (ENSO) Cycle | A part of the <b>El Nino Southern Oscillation (ENSO) Cycle</b> .<br>(See Figure: 1 on next page) | A part of the <b>El Nino Southern Oscillation (ENSO) cycle</b> .<br>(See Figure: 2 on next page)                 |

- \* ENSO is characterized by opposing warm and cool phases of oceanic and atmospheric conditions in the tropical Pacific Ocean.

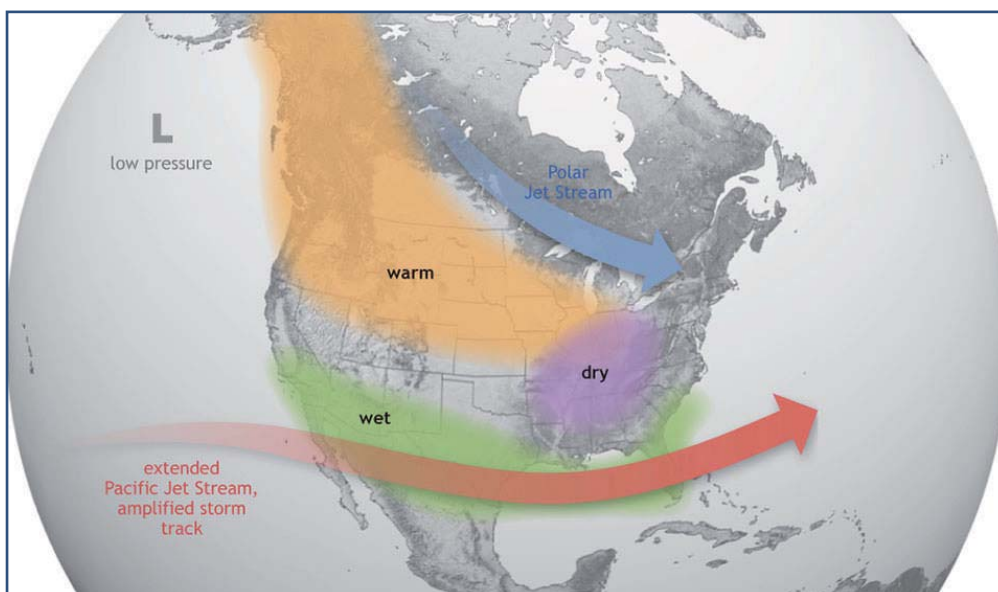
## BHASKARABDA: A LUNI-SOLAR CALENDAR

### ◎ CONTEXT:

Assam government has approved Bhaskarabda, a period counted from the date of ascension by the great Kamrup king Kumar Bhaskar Varma as an official calendar and the Saka and Gregorian charts.



(Figure: 1 - La Nina (Little Girl))



(Figure: 1 - El Nino (Little Boy))

### What is Bhaskarabda?

- Bhaskarabda can be understood as a period calculated from the date of the ascension of the **7th-century local ruler Bhaskar Varman**.
- It is based on both phases of the moon and the solar year.
- The gap between **Basaskarabda** and **Gregorian** is **593 years**.
- It all started when Baskaravarman was crowned ruler of the **Kamrupa kingdom**.

### Kamrup king Kumar Bhaskar Varma

- Kamrup, which was also known as Pragjyotish in the mythological era, has been recognised as the first historical kingdom of Assam and was the most advanced territory under his reign.
- Bhaskar Varma was a contemporary to the north Indian emperor **Harshavardhan**, another celebrated ruler of **Bharatvarsa**.

- Both enjoyed political ties with mutual respect.

#### Kamrupa kingdom

- Kamarupa was a typical Hindu kingdom of old.
- It now designates a district of Assam, was formerly applied to the whole of the eastern province of the ancient Bharatavarsha.
- It is synonymous with Pragjyotish which, however, seems to have been the older appellation for the country.
- In the Ramayana and Mahabharata the country is called **Pragjyotish**, and its ruler, the **Pragjyotisheswara**.
- The term Kamarupa is first made use of in some of the **Puranas** and **Tantras**, which are admittedly of a later date than the great epics.

#### Use of the calendar by Assam

- Currently, the official Assam government official calendar uses the **Saka calendar and the Gregorian calendar**.
  - However, the Basquearabda calendar will be used from now on.

#### Type of Calendars

- **Solar:** Any dating system based on the **seasonal year** of approximately **365 1/4 days**, the time it takes the Earth to revolve once around the Sun.
- **Lunar:** Any dating system based on a year that **contains synodic moons** - that is, complete cycles of phases of the Moon.
- **Luni-Solar:** The luni solar calendar month is a month but the solar years were used in early Middle Eastern civilizations and Greece.

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## APJ ABDUL KALAM: MISSILE MAN OF INDIA

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### ◎ CONTEXT:

Recently, the Prime Minister paid tribute to the former President APJ Abdul Kalam on his **90<sup>th</sup>** birth anniversary.

#### About Dr APJ Abdul Kalam

- Dr APJ Abdul Kalam was born on **15 October 1931** in **Rameswaram in Tamil Nadu**.
  - His birthday is celebrated as **National Innovation Day**.
- He graduated with a degree in Science from St Joseph's College, Trichy in 1954 and did a degree in Aeronautical Engineering from the Madras Institute of Technology (MIT) in 1957.
- He is one of the most respected scientists in India with the unique honor of receiving accredited **doctoral degrees from 48 Universities** and institutions from India and abroad.
- He was sworn in as **India's 11th President in 2002** and completed his term in 2007.
- He planned to produce a number of successful missiles, which helped him earn the nickname "**Missile Man**".
- He was a pioneer in **fiberglass technology** and led a small team to launch this effort in **ISRO** from construction, in a development that led to the production of **computerized rocket motor cases**.

- He was instrumental as Project Director to develop **India's first native satellite Launch Vehicle (SLV-3)** which successfully injected the **Rohini satellite** into **Near-Earth Orbit in July 1980** and made India a special member of the Space Club.
- He was responsible for the emergence of the ISRO launch vehicle program, particularly the **PSLV** configuration.
- After working for 20 years at ISRO and having the expertise to introduce automotive technology, he has taken on the responsibility of developing **the Indigenous Guide**.
  - He has been the **Chief Executive of Integrated Guided Missile Development Program (IGMDP)**.
- It has led to the use of missile strategic weapons and the testing of **Pokhran-II** in collaboration with the **Atomic Energy Department**, making India a **World Nuclear Weapon**.
- In 1998, he launched a national program called **Technology Vision 2020**, which he described as a road map to transform India from a less developed society to a more developed society in 20 years.
  - The plan required that, among other things, increase agricultural productivity, emphasize technology as a means to grow the economy, and increase access to health and education.
- He was interested in bringing prosperity to rural areas through **PURA (Providing Urban Amenities to Rural Areas)**, where science and technology should play a major role.

### Prizes Received

He has been awarded the most prestigious awards -

- Padma Bhushan (1981)
- Padma Vibhushan (1990)
- The highest public award Bharat Ratna (1997)

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## INDO-US JOINT MILITARY EXERCISE “EX YUDH ABHYAS 2021”

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### ◎ CONTEXT

The 17<sup>th</sup> edition of the exercise “Yudh Abhyas” is to be conducted at Joint Base Elmendorf Richardson in Alaska, USA from October 15 to 29.

### What is Exercise Yudh Abhyas?

- Exercise Yudh Abhyas is the **largest military training and defense cooperation** between India and the USA.
- It was started in **2004** under the **US Army Pacific Partnership Program**. This work is being carried out in rotation between the two countries.
- **Aim:** To increase **understanding, cooperation** and **interoperability** between the two armies.
  - The previous version of the exercise was held at the **Mahajan Field Firing Ranges in Bikaner, Rajasthan in February 2021**.

**India-US Defence Relations**

- In June 2016, the US had designated India a “**Major Defence Partner**”.
- The two countries have also signed key defence and security pacts over the past few years, including the:
  - Logistics Exchange Memorandum of Agreement (LEMOA) in 2016
  - COMCASA (Communications Compatibility and Security Agreement) in 2018
  - BECA (Basic Exchange and Cooperation Agreement) agreement in 2020

**What are some other exercises between India and the US?**

- **Exercise Tiger Triumph:** It is a tri-service military exercise between India and the US.
- **Exercise Vajra Prahar:** It is a Special Forces joint military training exercise. It has been conducted alternately in **India and the US since 2010**.
- **Exercise Cope India:** It is a series of bilateral Air Force exercises between India and the United States.
- **Exercise Malabar:** It is a multilateral naval exercise that includes simulated war games and combat manoeuvres. It was started in 1992 as an act of cooperation between Indian and American navies. Japan joined in 2015. In 2020, the Australian Navy will participate in this work for the first time since 2007.

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## PM'S 60-POINT ACTION PLAN

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**© CONTEXT**

Recently, the Centre has prepared a comprehensive 60-point action plan following Prime Minister Narendra Modi's marathon meeting with secretaries of all departments and ministries.

**About**

- The 60-point plan is targeted at specific ministries and departments.
- It can be broadly categorized under three heads:
  - leveraging IT and technology for governance
  - improving business climate
  - upgrading the civil services

**Key-highlights of the major categories:**

- **Leveraging IT and Technology for Governance:**
  - There are several actionable inputs for the **Ministry of Electronics and Information Technology** from streamlining the disbursement of scholarships to bridging the digital divide for underprivileged students by **developing indigenous tablets and laptops**.
  - Digitizing all land records by 2023 under the central database called '**Matribhumi**.' Integration with the e-Courts system will provide transparency on title/possession-related issues.
  - Citizenship can be linked to birth certificates using technology and focus.
- **Improving Business Climate:**
  - It includes the complete abolition of certain permits, reducing the cost of starting a business in 10 sectors and bringing it in line with Vietnam and Indonesia, automatic permitting information, and one-point access to all government services.

- Incentives for timely land acquisition and forestry approval, a **comprehensive Environment Management Act** that makes for a variety of laws in the field.
- An advisory platform for start-ups and skills programs in emerging sectors.
- It uses the **Geographic Information System (GIS)** decision-making map to increase the **country's GDP (Gross Domestic Product)**.
- Aiming to find jobs while negotiating trade measures.
- **Upgrading the Civil Services**
  - **Capacity building (Mission Karmayogi)** - training of officers on various aspects of infrastructure in both the Centre and states, infusion of expertise, and **exposure to latest technologies for higher civil services**.
  - Performance-oriented, clear, and targeted performance of Ministers and departments as is the case in the public sector, the mechanisms for dealing with countries with their limited jurisdiction, and the restructuring of departments through **Government Technology Reconstruction (GPR) every ten years**.
  - GPR is designed to address the '**problems**' or '**needs**' of an organization or its customers to improve the overall quality of services.
  - **More Appointments of Chief Information Officers (CIOs) and Chief Technology Officers (CTOs)** as data can be used effectively. All government information must be made accessible to all sectors.

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## KUSHINAGAR INTERNATIONAL AIRPORT TO PROVIDE SEAMLESS CONNECTIVITY

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### ◎ CONTEXT:

The Kushinagar Airport in Uttar Pradesh is the latest entrant in India's list of international Airports. The airport is expected to provide seamless connectivity to people from Southeast and East Asian countries for Buddhist Pilgrimage Tourism.

### Important Facts on Kushinagar (death- place of Lord Buddha)

- Kushinagar is a historical place located in the north-eastern marginal area of Uttar Pradesh.
- It is located on National Highway 28, about 50 km east of Gorakhpur.
- This is a Buddhist pilgrimage where **Gautam Buddha** had **Mahaparinirvana**.
- It is one of the four sacred places of Lord Buddha.
- Buddha delivered his last sermon, attained **Mahaparinirvana (salvation) in 483 BC** and was cremated at **Rambhar Stupa**.
- The reclining nirvana statue of Lord Buddha inside the temple is 6.10 mt. long and is made of monolith red-sand stone of the **5th century A.D.**
- It represents the '**Dieing-Buddha**' reclining on his right side with his face towards the west.
- Being the **death- place of Lord Buddha**, it is holy place for pilgrimage.



**Historical perspective**

- The Kushinagar's history dates back to centuries back and in those times it was dubbed as **Kushavati (Jatakas)**.
- It has its mention in Ramayana and it is said that the town got its name from the son of Lord Rama, Kusha.
- Besides this, it was a famed place of the **Malla Empire** of ancient India.

**Kushinagar International Airport**

- The airport, built at an estimated cost of Rs 260 crore, will boost economy of the region.
- The Kushinagar airport project will connect the region associated with different phases of Lord Buddha's life such as Kushinagar, Sarnath, Bodh Gaya and Kapilvastu to the rest of the world.
- The project will not only provide better connectivity to followers of Buddhism in India but also to those in countries such as **Sri Lanka, Thailand, Singapore, Cambodia, Japan, South Korea and others**.
- The opening of Kushinagar International Airport is expected to be a milestone in **India-Sri Lanka relations**.
- During the opening of the Airport, Sri Lanka presented India pictures of two murals paintings:
  - One Mural Painting depicts **Arahat Bhikkhu 'Mahinda, son of Emperor Ashoka** delivering a Buddha message to King Devanampiyatissa of Sri Lanka.
  - One shows the arrival of **'The hero Bhikkhuni' Sanghamitta, the daughter of the Emperor, Sri Lanka**, holding a small stem of the **'sacred tree of Bodhi' which Siddhārtha Gautama** is believed to have received enlightenment under.
- The **Buddhist circuit** shows the use of soft power in India's foreign policy.
- Further, **the Buddhist faith**, due to its emphasis on peaceful co-existence and its wide pan-Asian presence, lends itself well to soft-power diplomacy.

**About the Buddhist Circuit**

- In 2014-15, the Department of Tourism launched the **Swadesh Darshan program** to develop theme-based tourism circuits in terms of high tourism value.
  - The Department has identified the **Buddhist Circuit** as one of the fifteen **thematic circuits for** development under this program.
- The Buddhist circuit is the path that follows the footsteps of the Buddha from **Lumbini in Nepal to Kushinagar in Uttar Pradesh India**, where he died.
  - Buddhist pilgrims look to Kushinagar as a shrine, believing that Gautama Buddha delivered his **last sermon** and received the **'Mahaparinirvana' or salvation**.
- Investing in the **Buddhist Circuit** is the result of the first partnership between
  - **The Government of India's Ministry of Tourism**
  - **The State Governments of Bihar and Uttar Pradesh**
  - **The private sector**
  - **Buddhist monasteries and sects**
  - **The World Bank Group**

## DISAPPEARING AFRICAN RARE GLACIERS

- ◎ **CONTEXT:** Recently, a report from the World Meteorological Organization (WMO) stated that Africa's rare glaciers will disappear in the next two decades due to climate change.

### About the Report

- The WMO made the findings in **The State of the Climate in Africa 2020 report**.
- It details how Africa is disproportionately vulnerable to the consequences of climate change.
- The report was done in collaboration with the African Union Commission, the Economic Commission for Africa (ECA) through the Africa Climate Policy Centre (ACPC), and other international and regional scientific organizations.

### Key-highlights of the Report

- **Africa** is the continent that contributes least to global warming yet it is going to **suffer the most**.
  - While African countries contribute less than **4% of greenhouse gas emissions**, the report highlighted the major impact of climate change on 1.3 billion people on the continent.
- The last three glaciers in Africa are **Mount Kilimanjaro (Tanzania)**, **Mount Kenya (Kenya)**, and the **Ruwenzori Mountains (Uganda)** receding so fast that they can disappear within two decades.
- **In sub-Saharan Africa**, climate change could once again reduce domestic production by **3% by 2050**.
  - The cost of adapting to climate change in Africa will rise to **\$ 50 billion a year by 2050**.
- The Indian Ocean island nation of **Madagascar** is one where **"famine-like conditions"** are driven by climate change.
- **Parts of South Sudan** have experienced severe flooding in about 60 years.
- Further, **massive displacement, hunger, and increasing climate shocks such as droughts and flooding** are expected to increase in the future.
  - This is a major factor in the warnings of disasters for millions of people in Africa.

### Responsible Reasons

- **Global Warming:** A combination of carbon dioxide, methane, and other greenhouse gases (GHGs) produced by industry, transportation, deforestation, and burning of fossil fuels, among other human activities, warms the planet and causes glaciers to melt.
- **Sea Warming:** Oceans absorb 90% of global warming, and this affects the melting of glaciers, which are found mostly near poles.
- **Rapid Industrial Establishment:** Since the early 1900s, many glaciers have melted rapidly, in particular, since the beginning of the industrial revolution, carbon dioxide, and other greenhouse gases have increased temperatures, even higher in the poles, and as a result, glaciers are melting faster, stability at sea and return to land..

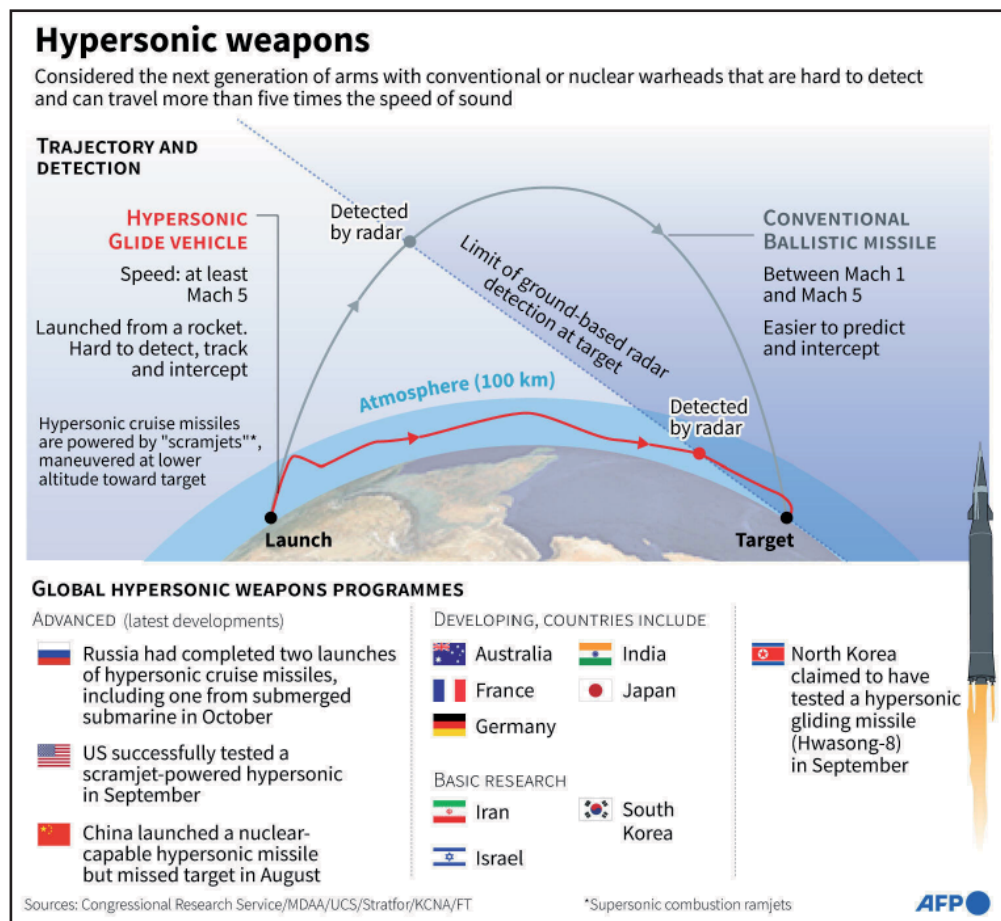
## HYPERSONIC TECHNOLOGY

- ◎ **CONTEXT:** Recently, it has been reported that China tested a nuclear-capable hypersonic glide vehicle that circled the globe before speeding towards its target.



## What is Hypersonic missile?

- A hypersonic missile is a vehicle that achieves a speed five times faster than the speed of sound, crossing Mach 5.
- These missiles travel at a speed of around 6,115 km per hour, with a combination of technology and manoeuvrability of ballistic missiles and cruise missiles.
- **Technology Used:** Most hypersonic vehicles primarily use scramjet technology, which is a type of Air Breathing propulsion System.
  - This is an extremely complex technology, which also needs to be able to handle high temperatures, making the hypersonic systems extremely costly.



## Types of Hypersonic missile

There are two types of Hypersonic missiles:

- **Hypersonic cruise missiles:** These are the ones that use rocket or jet propellant through their flight and are regarded as being just faster versions of existing cruise missiles.
- **Hypersonic Glide Vehicle (HGV):** These missiles first go up into the atmosphere on a conventional rocket before being launched towards their target.

## Significance of Hypersonic missiles (over subsonic and supersonic weapons)

- It will provide a nation with significantly enhanced strike capabilities.
- It can overcome the defences of a heavily defended target such as that of an aircraft carrier.

## Development of hypersonic missiles and implication for India

- Several countries, including **the US, Russia and China**, are developing hypersonic missiles.

- Hypersonic technology developments, in the backdrop of growing US-China rivalry and a year-long standoff with Indian forces in eastern Ladakh, is certainly a threat for India's space assets along with the surface assets.
- The offence system operating at these speeds would mean a requirement to develop defence systems at these speeds.

## LOOKING AT THE POSITIVE SIDE OF VIRUSES

### ◎ CONTEXT:

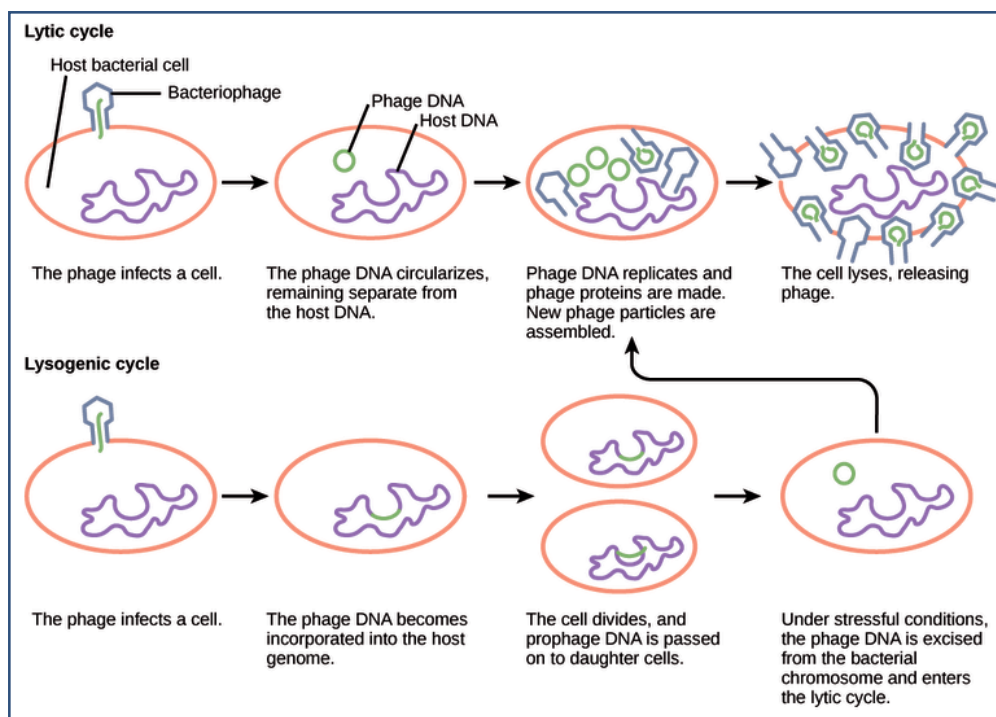
**Though Viruses have a bad reputation (responsible for the COVID-19 pandemic), there are few things to celebrate about them. There is, at least for one specific type of virus — namely, bacteriophages, or viruses that infect bacteria.**

### What is Bacteriophages (or phages)?

- Bacteriophages, or phages for short, keep bacterial populations in check, both on land and at sea.
- They kill up to 40 per cent of the oceans' bacteria every day, helping control bacterial blooms and redistribution of organic matter.
- Their ability to selectively kill bacteria also has medical doctors excited.
- Natural and engineered phages have been successfully used to treat bacterial infections that do not respond to antibiotics.
- This process, known as **phage therapy**, could help fight antibiotic resistance.
- Recent research points to another important function of phages: They may be nature's ultimate genetic tinkers, crafting novel genes that cells can retool to gain new functions.

### What are the types of Phages?

There are two types of Phages:



- **Virulent phages:** They operate on an invade-replicate-kill programme. They enter the cell, hijack its components, make copies of themselves and burst out.
- **Temperate phages:** They play the long game. They fuse their DNA with the cell's and may lay dormant for years until something triggers their activation. Then they revert to virulent behaviour: replicate and burst out.

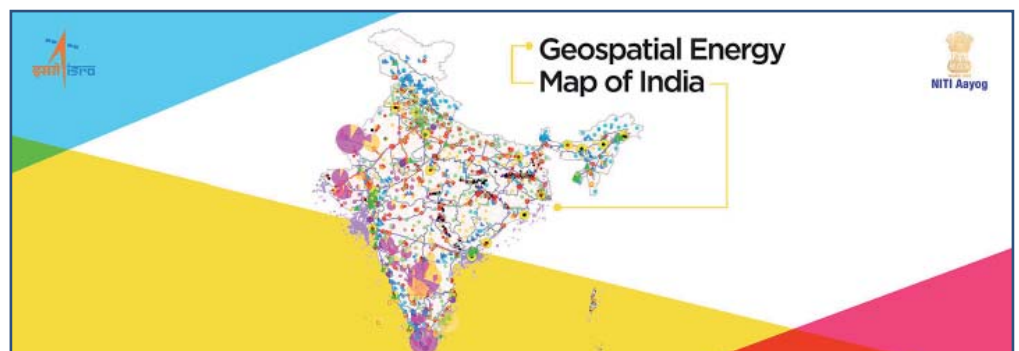
## NITI AAYOG LAUNCHES GIS-BASED GEOSPATIAL ENERGY MAP OF INDIA

### ◎ CONTEXT:

NITI Aayog launched a Geographic Information System (GIS)-based Energy Map of India.

### About GIS-based Energy Map of India

- The GIS map provides a holistic picture of all energy resources of the country which enables visualisation of energy installations such as
  - conventional power plants
  - oil and gas wells, petroleum refineries
  - coal fields and coal blocks
  - district-wise data on renewable energy power plants
  - renewable energy resource potential through 27 thematic layers
- The map attempts to identify and locate all **primary** and **secondary** sources of energy and their transportation/transmission networks to provide a comprehensive view of energy production and distribution in a country.
- It is developed by NITI Aayog in collaboration with Indian Space Research Organisation (ISRO) with the support of Energy Ministries of Government of India.



### Significance of identification of energy sources

- Effective organization of scattered data
- Interactive and user-friendly
- Better policy formulation and decision making
- Better management of disasters

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**TOP 100**  
ALL INDIA RANKING  
CSE 2020

8 9 12 13 14 16 17 19 20  
24 26 28 30 31 36 38 41 45 50  
51 52 55 56 58 59 67 68 70 71 73  
74 76 78 83 84 85 86 89 93 98 100

**SUCCESS IS A PRACTICE WE DO!**

**TOP 100**  
ALL INDIA RANKING  
CSE 2019

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

**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

3 10 19 31 33 35 40 41 44 45 48  
54 57 63 64 68 71 75 77 80 83 93 97 100