

IASBABA'S MONTHLY MAGAZINE



June 2021

**National Population Register
China's Child Policy
G-7 and India
Cryptocurrency and RBI
Model Tenancy Act**

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PREFACE

With the present shift in examination pattern of UPSC Civil Services Examination, 'General Studies – II and General Studies III' can safely be replaced with 'Current Affairs'. Moreover, following the recent trend of UPSC, almost all the questions are issue-based rather than news-based. Therefore, the right approach to preparation is to prepare issues, rather than just reading news.

Taking this into account, our website www.iasbaba.com will cover current affairs focusing more on 'issues' on a daily basis. This will help you pick up relevant news items of the day from various national dailies such as The Hindu, Indian Express, Business Standard, LiveMint, Business Line and other important Online sources. Over time, some of these news items will become important issues.

UPSC has the knack of picking such issues and asking general opinion based questions. Answering such questions will require general awareness and an overall understanding of the issue. Therefore, we intend to create the right understanding among aspirants – 'How to cover these issues?'

This is the **73rd edition** of IASbaba's Monthly Magazine. This edition covers all important issues that were in news in the month of **JUNE 2021** which can be accessed from <https://iasbaba.com/current-affairs-for-ias-upsc-exams/>

VALUE ADDITIONS FROM IASBABA

- **Must Read and Connecting the dots.**
- **Also, we have introduced Prelim and mains focused snippets and Test Your Knowledge (Prelims MCQs based on daily current affairs) which shall guide you for better revision.**
- **'Must Read' section**, will give you important links to be read from exam perspective. This will make sure that, you don't miss out on any important news/editorials from various newspapers on daily basis.
- Under each news article, **'Connecting the dots'** facilitates your thinking to connect and ponder over various aspects of an issue. Basically, it helps you in understanding an issue from multi-dimensional view-point. You will understand its importance while giving Mains or Interview.

Must Read Articles: We have not included them in the magazine. Those following DNA on daily basis may follow it- <https://iasbaba.com/current-affairs-for-ias-upsc-exams/>

"Tell my mistakes to me not to others, because these are to be corrected by me, not by them."

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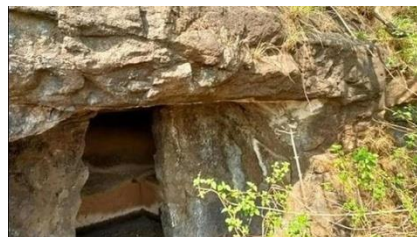
HISTORY/CULTURE/GEOGRAPHY

More Caves found at Trirashmi Hill

Part of: GS Prelims and GS -I - Culture

In news

- The Archaeological Survey of India (ASI) has found three more **caves in Trirashmi hill in Nashik, Maharashtra.**
- The **Trirashmi Buddhist caves**, also known as **Pandav Leni**, are also located at the same place.



More about the caves:

- The newly found caves are believed to be **older than the Trirashmi caves.**
- These are assumed to be the **dwelling of Buddhist monks.**
- All the caves have **verandahs** and the characteristic **square stone platform** for monks.
- There are **special arrangements** for monks **to meditate**, similar to the **Kanheri and Wai caves.**

Important value additions

Trirashmi caves

- The Trirashmi or Pandav Leni caves are a **group of 25 caves.**
- They were carved out of Trirashmi Hill between the **2nd century BC and 6th century AD.**
- It is an **ASI protected site** and a tourist destination.
- The Buddhist sculptures and caves in Nashik are early examples of **Indian rock-cut architecture** representing the **Hinayana tradition of Buddhism.**

MAHAYANA BUDDHISM	HIMAYANA BUDDHISM
It considers Gautama Buddha to be a divine being who will help his followers to attain nirvana	It considers Gautama Buddha as an ordinary human being who attained Nirvana
Its followers can be found in China, (South) Korea, Japan and Tibet	Its followers are found in Sri Lanka, Myanmar, Thailand, Cambodia and Laos
Scriptures were written in Sanskrit	Scriptures were written in Pali
It began to flourish around 500 BC.	It started to flourish around 250 BC.

Related articles

[Buddhist Philosophy on Dharmachakra Day](#)

Monsoon rains in June-September to be 101% of The Long Period Average (LPA)

Part of: GS Prelims and GS-I - Geography

In news

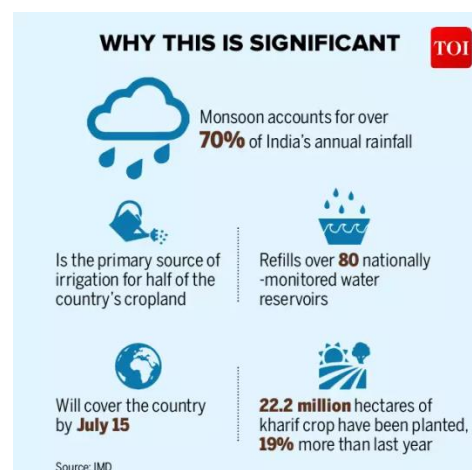
- According to the [India Meteorological Department](#) (IMD), **monsoon rains** in June-September would be **101% of the Long Period Average (LPA)** of 88 cm.
- This still constitutes 'normal' rainfall, which is from 96-104% of the LPA.

About Long Period Average (LPA)

- It is the **average of rainfall** received over a **50-year period** between 1951 and 2001, which is around 89 cm of rainfall.
- This is **kept as a benchmark** while forecasting the quantitative rainfall for the monsoon season every year.

Categories of the rainfall

- IMD maintains **five rainfall distribution categories** on an all-India scale:
 - **Excess:** If the rainfall is **more than 110 %** of this LPA.
 - **Above Normal:** If the rainfall is **between 104 and 110 %** of this LPA.
 - **Normal:** If the rainfall is **between 96 and 104 %** of this LPA.
 - **Below Normal:** If the rainfall is **between 90 and 96 %** of this LPA.
 - **Deficient:** If the rainfall is **less than 90 %** of this LPA.



Indigenously developed 'anti-hail guns'

Part of: GS Prelims and GS-I - Geography and GS II - Policies and interventions

In news

- To **help out horticulturists who face crop damage** due to hailstorms, the Himachal Pradesh government will be testing the use of **indigenously developed 'anti-hail guns'**.
 - The indigenous guns have been developed by IIT Bombay along with Dr Y S Parmar University of Horticulture and Forestry at Nauni (Solan).

About the anti-hail gun

- An anti-hail gun is a machine which generates shock waves to **disrupt the growth of hailstones in clouds**.
- It comprises a **tall, fixed structure** somewhat resembling an inverted tower, several metres high, with a long and narrow cone opening towards the sky.
- The gun is "fired" by feeding an explosive mixture of **acetylene gas and air** into its lower chamber, which releases a shock wave
 - Shock waves travel faster than the speed of sound, such as those produced by supersonic aircraft).
- These shock waves supposedly **stop water droplets** in clouds from turning into hailstones, so that they fall simply as raindrops.

Important value additions

Hail

- Hail is **solid precipitation** made of balls or irregular lumps of ice, each of which is called a hailstone.

- Hailstones consist mostly of water ice and measure between 5 mm and 15 cm in diameter.
- Any thunderstorm, which produces hail that reaches the ground, is termed a hailstorm.
- **Maharashtra** is India's most hailstorm-prone state, according to an IMD analysis of hailstorms across the country between 1981 and 2015.

Southern Ocean recognised as fifth ocean by National Geographic magazine

Part of: GS Prelims and GS -I - Geography

In news

- Recently, on the occasion of World Ocean Day (8th June), the National Geographic magazine has recognised the '[Southern Ocean](#)' as the world's fifth ocean.
- **Other four Oceans are:** Atlantic, Pacific, Indian, and Arctic Oceans.

About Southern Ocean

- The Southern Ocean is the only ocean 'to touch three other oceans (Pacific, Atlantic and Indian Ocean).
- It is the only Ocean to completely embrace a continent rather than being embraced by them.
- It is also defined by its Antarctic Circumpolar Current that was formed 34 million years ago.
 - The current flows from west to east around Antarctica

Significance of Recognition

- It is a step towards conservation of World's Oceans, redirecting public awareness onto a region which needs a conservation spotlight.
 - Southern Ocean is getting rapidly warmed due to global warming, industrial fishing on species like krill and Patagonian tooth fish.

National Maritime Heritage Complex(NMHC) at Lothal, Gujarat

Part of: GS Prelims and GS I - Culture

In news

- The Ministry of Culture (MoC) and Ministry of Ports, Shipping and Waterways (MoPSW) signed a Memorandum of Understanding (MoU) for 'Cooperation in Development of National Maritime Heritage Complex (NMHC) at Lothal, Gujarat'

About Lothal

- It is one of the prominent cities of the Ancient Indus Valley Civilization dating back to 2400 BC.
- A Dockyard has been found here where boats and ships came in from the sea and through the river.

POLITY/GOVERNANCE

Maratha community brought under Economically Weaker Section (EWS) quota

Part of: GS Prelims and GS-II - Polity and Governance

In news

- Maratha community is brought under Economically Weaker Section (EWS) quota in Maharashtra.

Key takeaways

- Earlier, [The Supreme Court had scrapped the SEBC reservation in jobs and education.](#)
- It made it possible for the State government to extend the benefit of the EWS quota to the Marathas.
- As per the government resolution, a person fulfilling the criteria for EWS would be eligible for 10% reservation in educational institutes, barring minority institutes.
- This would also be applied for State government recruitment.
- The reservation would be above the existing reservation

[New Chairman of the National Human Rights Commission \(NHRC\) appointed](#)

Part of: GS Prelims and GS -II - Statutory bodies; Indian Polity

In news

- Justice Arun Kumar Mishra was appointed as the Chairman of the [National Human Rights Commission \(NHRC\).](#)

Why does the news matter?

- National Human Rights Commission is **one of the Statutory Bodies** of India.
- **Other Statutory Bodies:**
 - National Commission for Women
 - National Commission for Minorities
 - National Green Tribunal
 - National Consumer Disputes Redressal Commission
 - Armed Forces Tribunal

Important value additions

National Human Rights Commission (NHRC)

- NHRC was **established in 1993**.
- It is in conformity with the **Paris Principles**, adopted at the **first international workshop** on national institutions for the **protection of human rights** held in **Paris in 1991**.
- **Status:** It is a **statutory organization established under the Protection of Human Rights Act (PHRA), 1993**
- **Headquarters:** New Delhi.
- **Functions:**
 - To **investigate the violation** of human rights/ the failures of the states/other to prevent a human rights violation
 - The commissions may also take on **research** about human rights, **create awareness** campaigns through various mediums, and **encourage** the work of NGOs.
- **Composition:**
 - **Chairperson**, four **full-time Members** and four **deemed Members**.
 - A Chairperson, should be **retired** Chief Justice of India or a **Judge** of the Supreme Court.
- **Appointment:** The Chairperson and members of the NHRC are **appointed by the President of India**, on the recommendation of a committee consisting of:
 - The **Prime Minister** (Chairperson)
 - The Home Minister
 - The Leader of the Opposition in the **Lok Sabha**
 - The Leader of the Opposition in the **Rajya Sabha**
 - The **Speaker** of the Lok Sabha
 - The **Deputy Chairman** of the Rajya Sabha
- The **President can remove them** from the office under specific circumstances.

Model Panchayat Citizens Charter

Part of: GS Prelims and GS -II - Panchayati Raj

In news

- A **Model Panchayat Citizens Charter** was recently released .
- **Ministry:** Ministry of Panchayati Raj
- **Prepared by:** Ministry of Panchayati Raj (MoPR) **in collaboration with** National Institute of Rural Development & Panchayati Raj (**NIRDPR**)

About the Model Panchayat Citizens Charter

- It is a **framework for delivery of the services** across the 29 sectors, aligning actions with localised [Sustainable Development Goals](#) (SDGs)
- **What is its aim?**
 - To **Provide Services** to the People in a Time Bound Manner
 - **Redressing** Their Grievances
 - **Improving** Their Lives.
- The Panchayats will **utilise this framework** to draw up a Citizens Charter and **adopt it** through a **resolution of the Gram Sabha** by 15th August, 2021.

Important value additions

National Institute of Rural Development and Panchayati Raj (NIRD&PR)

- It is an **autonomous organisation** under the Union **Ministry of Rural Development**.
- The Institute is located in **Hyderabad, Telangana**.
- It also has **North-Eastern Regional Centre (NERC)** at **Guwahati, Assam** to meet the NE-regional needs.

Tulu Language speakers demand official language status

Part of: GS Prelims and GS II - Constitution ; 8th Schedule

In news

- The [Tulu speakers have been requesting the governments](#) to give it official language status and include it in the eighth schedule to the Constitution.
 - Tulu is a Dravidian language spoken mainly in the coastal districts Dakshina Kannada and Udupi of Karnataka and Kasaragod of Kerala.

Official language of the Union

- Article 343 (1) state that Hindi written in the Devanagari Script is to be the official language of the Union.
- Official language Act, 1963 provides for use of English in addition to Hindi for all official purposes of Union and business transactions in Parliament.
- Constitution **does not specify** the official language of different states.
- Legislature of each state may adopt any one or more languages used in the state or Hindi as official language of the state.
 - Until that is done, English will be used as official language of the state.
- Most States have adopted major regional language as the official language.

Inclusion in the 8th Schedule

- At present, there is no such Criterion for languages to be included in 8th Schedule.
- Pahwa (1996) and Sitakant Mohapatra (2003) committees also failed to evolve any criteria.

List of 22 languages in 8th schedule

Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Sindhi, Tamil, Telugu, Urdu, [Bodo](#), Santhali, Maithili and Dogri

Significance of inclusion under 8th Schedule

- Recognition as official language of the nation.
- Sahitya Academy will start recognising the language.
- Books would be translated into other recognised Indian languages.
- MPs and MLAs could speak in this language in Parliament and state assemblies
- Candidates could write all India competitive examinations like civil services exam in a scheduled language

Misuse of UAPA: Delhi HC bail to student activists

Context: The recent Delhi High Court orders granting bail to three student activists - Asif Iqbal Tanha, Natasha Narwal and Devangana Kalita - jailed for over a year for their alleged role in the February 2020 riots in Delhi

Do You Know?

- According to data provided by the Ministry of Home Affairs in Parliament, a total of 1126 cases were registered under UAPA in 2019, a sharp rise from 897 in 2015.
- [UAPA](#), in relaxing timelines for the state to file chargesheets and its stringent conditions for bail, gives the state more powers compared to the Indian Penal Code.

Why were student activists arrested & jailed for over a year?

- The three students had protested against the enactment of the Citizenship (Amendment) Act (CAA).
- Delhi Police alleged that they had also fomented the riots and invoked [Unlawful Activities \(Prevention\) Act\(UAPA\)](#)
- Under Section 43D(5) of the act, there is a legal bar on granting bail if the court is of the opinion that there are reasonable grounds to believe that the accusation against those held is *prima facie* true.
- They also didn't get bail as the provision of law are titled against accused
 - The accused have to demonstrate to the court that the accusation is untrue.
 - A 2019 Supreme Court judgment bars a detailed analysis of the evidence at the bail stage and rules that bail can be denied on "the broad probabilities" of the case. These further added the burden on jailed student activists.

Delhi High Court's Bail Order ruling

- It has found that none of the three student activists were specifically or particularly accused of any 'terrorist act'. Once the UAPA charges were not seen to be true, it was open to the court to admit them to regular bail and grant them the bail.
- **New approach to grant bail:** The High Court has ruled that the bail court can look at the available evidence to satisfy itself about the *prima facie* truth of the case. In other words, there is no statutory invincibility to the prosecution case merely because the UAPA has been invoked.
- **Calling out misuse of terror law:** The court's observed that the state, in its anxiety to suppress dissent, has blurred the line between the constitutionally guaranteed right to protest and "terrorist activity". If such blurring gains traction, democracy would be in peril,

- The bail orders also refer to how the Supreme Court itself, in the 1994 case of **Kartar Singh v State of Punjab**, flagged similar concerns against the misuse of another anti-terror law, the Terrorists and Disruptive Activities (Prevention) Act, 1987.
- **Terrorism is beyond Public disorder:** The Delhi HC said that the extent and reach of terrorist activity must travel beyond the effect of an ordinary crime and must not arise merely by causing disturbance of law and order or even public order; and must be such that it travels beyond the capacity of the ordinary law enforcement agencies to deal with it by ordinary law.
- **Right to protest sacrosanct:** Noting that protests against governmental and parliamentary actions were legitimate, the HC said the right to peaceful protest is not outlawed. It held that student activists protest cannot be termed as a 'terrorist act' within the meaning of the UAPA.

Consequence of ruling on other dissenters:

- High Court has made a clear distinction between those accused of offences against the country's integrity and security on the one hand, and protesters or dissenters roped in unjustifiably under the rubric of 'terrorism' on the other.

Judiciary & AI

Context: SUPACE- Supreme Court Portal for Assistance in Court's Efficiency- was inaugurated recently by former CJI SA Bobde.

- The SUPACE follows the launch of the Supreme Court Vidhik Anuvaad Software (SUVAS), an Machine Learning(ML) tool for translating Supreme Court judgments into vernacular languages.

What is SUPACE?

- It is an **Artificial Intelligence(AI)** based tool that collects relevant facts and laws and makes them available to a judge.
- Initially, it will be used on an experimental basis by the judges of Bombay and Delhi High Courts who deal with criminal matters.

Other Potential Applications of AI in Judiciary

- Task-specific, narrowly tailored algorithms, trained through machine learning, can be deployed to automate administrative functions like scheduling hearings and creating causelists etc.
- AI tools can aid in augmenting of decision-making processes where computational tools can be used to expedite justice delivery such as those for traffic challans and motor vehicle compensation claims.

Benefits of integrating AI & ML in Justice delivery

- **Increases Speed:** AI powered tools like SUPACE will not only help organise cases, it will also bring references into the judgment at a speed not seen so far.
- **Strengthens Right of access to Justice:** AI will present a more streamlined, cost effective and time bound means to the fundamental right of access to justice.

Precaution to be taken while using AI for Justice delivery

- The **ethical and responsible use** of AI and ML for the advancement of efficiency enhancing can be increasingly embedded in legal and judicial processes.
- The relevance of AI in justice delivery will be dependent on the availability of clear and **well-labelled data sets**. Thus humans have to be kept in loop to create robust necessary labelled data sets
- Since AI powered tools is intended to do what the human mind can do, but much more efficiently and methodically, there is **apprehension of job losses** which authorities needs to take care of.

Connecting the dots

- [Women & Judiciary](#)
- [Language in Judiciary](#)
- [Judicial Administration Reform](#)
- [Responsible Artificial Intelligence](#)

Democracy & Social Media

Context: The Covid-19 pandemic has shown how social media, by connecting with various stakeholders, can help average citizens and complement the efforts of the governments in dealing with the crisis.

Positive Impacts of Social Media

- **Sustains Democracy:** Social media is an instrument that can question the seemingly invincible governments, make them accountable and bring sustained change driven by people beyond one vote in years.
- **Direct connect between Politicians & Citizens:** Social media provides unadulterated access for political leaders to connect with their own citizens
- **Civic Engagement:** Social media provides the platform for people tend to discuss & debate news over any topics. This interaction of people from varied backgrounds strengthens civil engagement in society.

Challenges

- **Political Misuse:** Data shows that political parties mostly in the last two years have spent around \$800 million (Rs 5,900 crore) on election ad. Micro-targeting through social media can enable half-baked information to alter the agenda of elections & cause faultlines in society.
- **Fake News:** The anonymous nature provided by social media platforms can help people to spread fake news and misinformation.
- **Intolerance to Contrary views:** One of the most common criticisms of social media is that it creates echo chambers where people only see viewpoints they agree with — further driving us apart.

Conclusion

If there's one fundamental truth about social media's impact on democracy it's that it amplifies human intent — both good and bad.

Connecting the dots

- [New IT rules](#)
- [Social Media Concerns](#)
- [Twitter Controversy](#) during Farmers protest
- [Dominance of Big tech](#)
- Australia's [News Media Bargaining](#) Code

Delimitation in Jammu and Kashmir started

Part of: GS Prelims and GS -II - Polity and Governance

In news

- Recently, the delimitation exercise has started in Jammu and Kashmir (J&K).

- The completion of the delimitation exercise will mark the political process in the Union Territory (UT) that has been under Centre's rule since June 2018.
- After the **abrogation of its special status under Article 370**, on 5th August, 2019, a special [delimitation commission was constituted](#) in March, 2020 to carve out Assembly and Parliament seats in the UT.

What is Delimitation?

- It is the act of fixing or redrawing the boundaries of territorial constituencies in a country or a province having a legislative body, as per the Election Commission.
- The delimitation exercise is carried out by an **independent high-powered panel known as the Delimitation Commission** whose orders have the force of law and cannot be questioned by any court.
- **Aim:**
 - To have **equal representation to equal segments of the population** in order to ensure a fair division of geographical areas.

Constitutional Basis for Delimitation

- **Article 82:** The Parliament enacts a Delimitation Act after every Census.
- **Article 170:** States also get divided into territorial constituencies as per Delimitation Act after every Census.

Delimitation Commission:

- The Delimitation Commission is appointed by the President of India.
- It works in collaboration with the Election Commission of India.
- Composition:
 - Retired Supreme Court judge
 - Chief Election Commissioner
 - Respective State Election Commissioners.

National Population Register (NPR)

Part of: GS Prelims and GS II - Citizenship

In news

- According to a Union Home Ministry manual, migrants belonging to **six non-Muslim minority communities from Afghanistan, Pakistan and Bangladesh**, while applying for long-term visas (LTVs), can also produce [National Population Register \(NPR\)](#) enrolment slips as proof of the duration of their stay in India.
- The **special provision of LTVs for Hindus and Sikhs from Pakistan and Afghanistan was first made in 2011.**
- It was also asserted that the awareness drive is not related to the [Citizenship \(Amendment\) Act, 2019 \(CAA\)](#), which is intended to benefit undocumented migrants from the six groups who entered India before the 2014 cut-off date.
 - The CAA is yet to be implemented.

About NPR

- The NPR was first compiled in 2010 simultaneously with the decadal Census exercise and later updated in 2015.
- It already has a database of 119 crore residents.
- The next phase of the NPR, expected to include contentious questions on date and place of birth of father and mother, last place of residence and mother tongue, was to be simultaneously

updated with the 2021 House Listing and Housing Census that has been indefinitely postponed due to the COVID-19 pandemic.

Recusal of Judges

Context: Recently, two Supreme Court judges — Justice Indira Banerjee and Justice Aniruddha Bose — have recused themselves from hearing cases relating to West Bengal.

Recusal = Withdrawal of a judge or prosecutor from a case on the grounds that they are unqualified to perform legal duties because of a possible conflict of interest or lack of impartiality

Why does a judge recuse?

- **To Prevent Perception of Bias:** When there is a conflict of interest, a judge can withdraw from hearing a case to prevent creating a perception that he carried a bias while deciding the case.
- **Nemo judex in causa sua:** This latin term translates to “nobody should be a judge in his/her own case” which is a cardinal principle of due process of law.
- **Fair & Trustworthy system:** Any interest or conflict of interest should be a ground to withdraw from a case since a judge has a duty to act fair. Recusal during such situation leads to reliable, trustworthy judicial system.

In what all situations conflict of interest usually arises?

The conflict of interest can be in many ways —

- If a judge is holding shares in a company that is a litigant in the case being heard
- If a judge is having/had a prior or personal association with a party involved in the case.
- When an appeal is filed in the Supreme Court against a judgement of a High Court that may have been delivered by the SC judge when she was in the HC.

What is the process for recusal?

- The decision to recuse generally comes from the judge herself as it **rests on the conscience** and discretion of the judge to disclose any potential conflict of interest.
- In some circumstances, **lawyers or parties in the case bring it up before the judge.**
- If a judge recuses, the case is listed before the Chief Justice for allotment to a fresh Bench.
- There are **no formal rules** governing recusals, although several Supreme Court judgments have dealt with the issue (Ex: Ranjit Thakur v Union of India, 1987)

Can a judge refuse to recuse?

- Once a request is made for recusal, the decision to recuse or not rests with the judge.
- While there are some instances where judges have recused even if they do not see a conflict but only because such an apprehension was cast, there have also been several cases where judges have refused to withdraw from a case.
 - In the **Ayodhya-Ramjanmabhoomi case**, Justice **U U Lalit** recused himself from the Constitution Bench after parties brought to his attention that he had appeared as a lawyer in a criminal case relating to the case.
 - In 2019, Justice **Arun Mishra** had **controversially refused to recuse himself** from a Constitution Bench set up to re-examine a judgement he had delivered previously on **2013 Land Acquisition law.**

Do judges record reasons for recusal?

- Since there are no formal rules governing the process, it is **often left to individual judges to record reasons for recusal.**
- Some judges disclose the reasons in open court; in some cases, the reasons are apparent.

- In a landmark verdict in 2015 holding that the **National Judicial Appointments Commission** as unconstitutional, Justice Kurian Joseph and Justice Madan Lokur had referred to the need for judges to give reasons for refusal to build transparency and help frame rules to govern the process.

Connecting the dots

- [Judiciary & AI](#)
- [Women & Judiciary](#)
- [Judicial Administration reform](#)

Ranked Choice Voting

Context: Ranked choice voting made its debut in New York City's mayoral polls.

What is Ranked Choice Voting?

- The system is based on a simple premise: Democracy works better if people aren't forced to make an all-or-nothing choice with their vote.
- Rather than pick just one candidate, voters in this system get to rank several in order of preference.
- Popular overseas: It has also been used by Australia, Ireland and Malta since the early 20th century. Northern Ireland, New Zealand and Scotland have all adopted it as well.
- The Oscars have also been using it since 2009 for its Best Picture category

How does ranked choice voting work?

- In New York City's version, voters get to rank up to five candidates, from first to last, on their ballot.
- If someone gets 50% plus one after all the **first-choice votes** are counted, then the election is over and that candidate wins.
- But if no one gets 50% plus one, it's on to Round 2.
- The person with the **lowest number of first-place votes is eliminated**, and that candidate's voters' **second choices get redistributed** as votes for other candidates.
- This reallocation of votes goes on until someone reaches 50% plus one.

Merits of this system

- **People's Voice Counted:** Even if a voter's top choice doesn't have enough support to win, their rankings of other candidates still play a role in determining the victor.
- **Possibility of increased voter turnout:** People can feel good about casting their vote. Instead of holding their nose for that one choice they get, voters can express at least a first choice for the person they really like.

Demerits of ranked-choice voting:

- **It is Complicated:** It requires voters to do a lot more research. It also makes races less predictable.
- **Some argue it's less democratic** because it goes against the idea of one person, one vote.
- **Transparency and trust** are also potential problems. Under the modern ranked choice system, the process of redistributing votes is done by computer. Outside groups will have a harder time evaluating whether the software sorted the ranked votes accurately.
- **Lots of people don't fill out all the choices:** It is difficult to know the true will of a majority of the people if everyone isn't filling out all the choices

- **It could encourage horse-trading.** Ranked-choice voting could open the door for candidates to make deals with one another about who their voters should go for as a second choice.
- **It might not necessarily reduce negative campaigning:** Much of the negative campaigning is done by outside groups, and nothing in ranked-choice voting stops those entities from continuing to do so.

Connecting the dots

- Proportional Representation System in Rajya Sabha elections
- [Remote Voting Facility](#)
- [NRI Voting](#)

Unclogging the Courts

Context: Recently, a senior judge of the Supreme Court of India, while hearing a case, stated that frivolous cases have been making the Court dysfunctional.

- Frivolous cases were adding to the **burden of the Supreme Court** and collaterally **harming other litigants** by delaying hearing of their cases.
- Frivolous cases also lead to **wastage of time of judges** and court system bringing down the efficiency of justice delivery system.

The problem of frivolous cases, although identified, continues because of following reasons:

1. Government as a major litigant

- The Ministry of Law and Justice in the Action Plan to Reduce Government Litigation (2017) stated that approximately 46 per cent pending cases before the courts pertain to the government.
- Supreme Court has imposed fines on governments and litigants for filing frivolous litigations. However, this has not discouraged them from indulging in such litigations.

2. Ignoring National Litigation Policy 2010

- One of the provision of the policy which states that “litigation will not be resorted to for the sake of litigating”, is not working.
- The policy has not deterred the government authorities from filing frivolous cases
- Imposition of costs on government authorities for frivolous cases is being ultimately paid from the public exchequer, leading to inefficient usage of public funds.

3. Non-appointment of judges

- Many high courts have 40 to 50 per cent vacancies at times.
- Inadequate judge strength makes frivolous cases linger for longer period of time because existing strength cannot dispose them off in short period amidst huge burden of cases.

Way Ahead

- The responsibility of unclogging the judiciary is with the central and state governments since they are the biggest litigants in the courts.
- Government has to follow National Litigation Policy, 2010 in letter & spirit.

Connecting the dots

- [Women & Judiciary](#)
- [Language in Judiciary](#)
- [Judicial Administration Reform](#)
- [Responsible Artificial Intelligence](#)

SOCIAL ISSUE/WELFARE

Performance Grading Index

Context: The Education Ministry released the latest edition of the Performance Grading Index or PGI. The Education Ministry released the first PGI in 2019 for the reference year 2017-18.

How is PGI worked out?

- **Objective:** This relatively new index measures the performance of states in school education. The objective is to help the states prioritise areas for intervention in school education
- **Multiple Data Sources:** It assesses states' performance in school education based on data drawn from several sources, including the Unified District Information System for Education Plus, National Achievement Survey, and Mid-Day Meal.
- **Parameters:** States are scored on a total of 1,000 points across 70 parameters, which are grouped under five broad categories:
 - Access (eg. enrolment ratio, transition rate and retention rate);
 - Governance and management;
 - Infrastructure
 - Equity (difference in performance between scheduled caste students and general category students)
 - Learning outcomes (average score in mathematics, science, languages and social science).
- **Grading & not ranking:** States are graded and not ranked to discourage the practice of one improving only at the cost of others, "thereby casting a stigma of underperformance on the latter".

What does the grading system reflect?

The PGI grading system has 10 levels.

- Level 1 indicates top-notch performance and a score between 951 and 1,000 points.
- Level II, also known as Grade 1++, indicates a score between 901 and 950.
- Those with Grade 1+ (or Level III) have scored between 851 and 900.
- The lowest is Grade VII, and it means a score between 0 and 550 points.

How have states performed this time?

- **None in first level:** In PGI 2019-20, no state or Union Territory could achieve the highest grade, that is Level I. Even in the 2017-18 and 2018-19 editions, no state had reached Level 1 and Grade 1++.
- **General Upward Shift:** A total of 33 States and UTs have improved their total PGI score in 2019-20 as compared to 2018-19, indicating a general upward shift. For some this improvement has been improvements in their data reporting mechanisms while for some others, the improvements have been in specific domains
- **Best Performing States:** Chandigarh, Punjab, Tamil Nadu, Andaman and Nicobar and Kerala have scored more than 90% and obtained Grade 1++ (or Level II), which makes them the best performing states. This is the first time that any state has reached Level II.
- **Biggest Improvements:** The biggest improvement in PGI this year has been shown by Andaman and Nicobar Islands, Punjab, and Arunachal Pradesh. All three have improved their score by 20%.

- **Areas of Concern:** However, there are still 31 states and UTs placed in Level III (Grade 1) or lower, showing that they still have a lot of ground to cover
- Only the UT of Ladakh has been placed in the lowest grade, that is Grade VII, but that's because it was the first time it was assessed after it was carved out of Jammu and Kashmir in 2019.

What are the areas where the states still have to improve?

- The PGI accords the highest importance to **Governance Domain** because compliance with the indicators here will lead to critical structural reforms
- According to the report, states and UTs mainly need to improve their performance in terms of governance processes. This domain carries several parameters, including
 - Teacher availability: monitoring the attendance of teachers
 - Teachers training
 - Regular inspection
 - Availability of finances.
- In the domain Governance Processes, there are 24 States/UTs which have scored less than 288 (80% of the maximum possible score)
- The second area that requires attention is the **Domain for Infrastructure** and facilities. This is a cause for concern as a proper school building with adequate facilities is a must to improve the overall quality of school education

Connecting the dots

- [ASER Survey & COVID-19 impact](#)
- ASER 2019 report: [Fix early learning in government schools](#)
- [New Educational Policy](#), 2020
- Right to Education Act

Online Module for Compiling Out-of-School Children's Data

Part of: GS Prelims and GS -II - Education; Policies and Interventions

In news

- The **Ministry of Education** has developed an online module for compiling out-of-school (due to [Covid-19 pandemic](#)) children's data identified by each State/UT.
- The collected data will be mapped with **special training centres on the PRABANDH portal of Samagra Shiksha**.

About the Module

- Through the module, the government will **facilitate age-appropriate admissions** of children in the age group of 6-14 years.
- For out of school children in the 16-18 years age group, **financial assistance** will be provided in the session 2021-22.

About PRABANDH Portal

- PRABANDH (**P**Roject **A**ppraisal, **B**udgeting, **A**chievements and **D**ata **H**andling **S**ystem) is a step towards utilising technology to increase efficiency and manage the implementation.
- It will **enable transparency and accuracy**.

Samagra Shiksha:

- It is an integrated **scheme for school education** extending from **pre-school to class XII**
- **Objective:** To ensure **inclusive and equitable quality education** at all levels of school education.
- It **subsumes the three Schemes:** Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE).

- **Main emphasis:** Improving the quality of school education by focussing on the two T's – Teacher and Technology.

Related articles:

[PM-CARES for Children scheme](#)

[Nearly 10,000 children in immediate need of care and protection: Bal Swaraj Portal](#)

All-India Survey of Higher Education (AISHE) 2019-20

Context: The ministry of education released the findings of the All-India Survey of Higher Education (AISHE) for 2019-20 on June 10.

Key Highlights of the report

Total Enrolment In Higher Education	<ul style="list-style-type: none"> • 3.42 crore in 2014-15. • 3.74 crore in 2018-19. • 3.85 crore in 2019-20: Growth of 11.36 lakh (3.04 per cent) <p>Out of these, nearly 85% of the students (2.85 crore) were enrolled in the six major disciplines such as Humanities, Science, Commerce, Engineering & Technology, Medical Science and IT & Computer.</p>
Gross Enrolment Ratio (GER)	<ul style="list-style-type: none"> • 24.3% in 2014-15 • 26.3% in 2018-19 • 27.1% in 2019-20 <p>GER in higher education is calculated for the 18-23 age group. It is the ratio of enrolment in higher education to the population in the eligible age group.</p>
Gender Parity Index (GPI)	<ul style="list-style-type: none"> • GPI in Higher Education in 2019-20 is 1.01 against 1.00 in 2018-19 indicating an improvement in the relative access to higher education for females of eligible age group compared to males.
Students Pursuing PhD	<ul style="list-style-type: none"> • 1.17 lakh in 2014-15. • 2.03 lakh in 2019-20
Total Number of Teachers	<ul style="list-style-type: none"> • 15,03,156 comprising 57.5% male and 42.5% female • Pupil Teacher Ratio in Higher Education in 2019-20 is 26.

However, the report also contains enough evidence to suggest that India's higher education sector confronts serious issues of inequality across the gender, caste, and regional axis.

1. Headline improvement in enrolment numbers hides access to professionally rewarding courses

- When it comes to accessing professionally rewarding education, caste and gender seem to be major determinants.
- The only professional courses — among the top 10 most pursued programmes at bachelor's and master's level — where women do better than men are BEd and MEd, which are usually pursued by aspiring school-teachers

2. Multi-layered social inequality among teachers in Higher Education

- More than 40% of the teachers in India's higher educational institutions are non-SC-ST-OBC Hindus. Their population share, as per the findings of the 2015-16 National Family and Health Survey (NFHS), is just 17.6%.
- Even in Institutes of National Importance, which include institutes such as IITs, NITs, AIIMS, and IIMs, the share of non-SC-ST-OBC Hindu teachers is more than 70%.
- The **share of women** at the demonstrator/tutor position in educational institutions is 65.5%, but it falls to 27.5% at the level of associate professor/professor.

3. Geography matters as much as sociology

- Access to higher education varies significantly across states.
- GER is 15.8% and 13.1% for men and women in Bihar and 44.9% and 51.8% in Delhi.

4. Regional Distribution of Government Colleges

- Only 8,565 of 39,955 colleges in India or about a fifth (21.4%) were government colleges in 2019-20. But there is wide regional variation in the share of government colleges across different states.
- Government colleges are almost as big a chunk of total colleges in Delhi (55.7%) as they are in Bihar (59.8%). This should make it clear that the public sector footprint is hardly an indicator of quality of education

Connecting the dots

- [National Education Policy \(NEP\), 2020](#): It aims at increasing the GER in higher education to 50% by 2035.
- [Prime Minister's Research Fellowship \(PMRF\)](#)

Relearning Assessment

Context: The wait for a way to assess Class XII students after the cancellation of the board examinations has created immense anxiety in students and parents.

On this issue, there is a need to look at both the short and long-term evaluation goals.

What is assessment?

- Assessment is defined as a **systematic review of learning**, use of information collected from various experiences and consistent feedback.
- Assessments should have multiple rubrics in place. This will help to gauge what learners know, measure their understanding, track progress, help in planning the next step, assign **remedial work and constantly give feedback** to the stakeholders..

Present day assessment system

- The above definition contradicts how we assess our learners because we do not give them a variety of learning experiences.
- We assess them through a year-end standardised test of three hours in the national exams.

What measures can be taken to reform our assessment system?

- **Application oriented:** Questions have to be application-based. Banks of case studies, without too many knowledge and memory-based tasks, should be created.
- **Innovative testing methods:** Interesting testing systems, such as gamified tests, periodic midterms, project-based tests, should be attempted.
- **Subject-based Evaluation techniques:** It is essential to develop a framework to evaluate more autonomously. Evaluation tools need to be changed depending on the subjects. A student cannot be evaluated in science the way she is in languages.

- **Interdisciplinary approach:** We need to create capacity-building methods where every child is equipped with a diversity of knowledge and emphasis is given to her competencies, values and attitudes, using experiential pedagogy that integrates art, play, life skills, social and emotional learning with an interdisciplinary approach.
- **Retaining the Essence of Assessment:** The purpose of assessment is to understand learning outcomes. Identifying learning, aligning it to the goal, mapping skills, designing authentic tasks through which progress can be captured should be the essence of assessment
- **A holistic report card** should be equitable, inclusive and joyful, reflecting the learner's diverse knowledge. A combination of self, peer, teacher and parent assessment will help create students who can reconcile tensions, take on responsibilities and shape better futures.
- **Leveraging Online Assessment:** Evaluating question papers physically will become a challenge. Issues of paperwork, manpower, confidentiality, and monitoring teachers in evaluation centres, will continue to pose problems. The creation of online assessment platforms has to be explored and supported by regional centres and schools

Conclusion

Unless education is more contemporary and **child-centric**, our children will not be able to cope with the rigours of the future. We need to have alternative learning systems that are enjoyable, inclusive, progressive and holistic. Breaking the mould of rote learning will help children realise their full potential.

Connecting the dots

- [National Education Policy](#) mark a shift from a summative to a [formative and competency-based learning system](#).
- [Criticism of Board Exams](#)

Improving Employability of the Youth

Part of: GS Prelims and GS -II - Policies and interventions and GS-III - Economy

In news

- Recently, the Ministry of Labour and Employment and [UNICEF](#) have signed a Statement of Intent to improve employment outcomes for the youth in India.
- It intends to provide a platform for cooperation between the Ministry and UNICEF to leverage the existing mainstreamed initiatives

Areas of Collaboration

- Connecting young people with employment opportunities.
- Upskilling in skill areas like life skills, financial skills, digital skills, vocations skills etc.
- Strengthening National Career Service (NCS).
- Support in Job forecasting by exploring the gaps.
- Supporting direct dialogue between youth and policy stakeholders.

Important value additions

National Career Service (NCS)

- It was launched in 2015, within the umbrella of the e-governance plan.
- It is a one-stop solution that provides a wide array of employment and career related services to the citizens of India.
- **Nodal Ministry:** Ministry of Labour & Employment.
- **Three Pillars:**
 - A well designed ICT based portal NCS portal,
 - Country wide set up of Model Career Centers
 - Interlinkage with all the states through employment exchanges.

Some Other Initiatives Taken by India

- [Prime Minister's Employment Generation Programme \(PMEGP\)](#)
- **Pradhan Mantri Mudra Yojana (PMMY):** Providing loans up to Rs. 10 lakh to the non-corporate, non-farm micro-enterprises.
- **Pradhan Mantri Rojgar Protsahan Yojana (PMRPY)**

Child Labour & Pandemic

Context: This year is supposed to be the International Year for Elimination of Child Labour, whereby countries and networks come together in committing themselves to address the root causes of child labour.

Some of the root causes of Child Labour are

- Poverty
- Social marginalisation,
- Lack of alternative or safe livelihoods for parents
- Adequate child protection mechanisms
- Lack of quality education.

Pandemic, Education and Child Labour

- **School Closures pushing Children into Labour:** With 1.5 million schools closed for the last one year and more. In 2021, says UNESCO, 24 million children may not find their way back to schools after the pandemic. Any child who is not in school is a potential child labourer
- **Child Marriages:** India witnessed an increase in the number of child marriages since 2020. Girls are further at risk – married off early, these child brides are also often child labourers. Save The Children puts half a million more girls at risk of early marriage
- **Abuse & Trafficking:** Closure of schools and pandemic induced poverty has increased the vulnerability of children especially the girl child to abuse and trafficking
- **Reduced Education Budget:** Despite knowing the impact of Pandemic on education system & thus on Children's future, the Union budget has Rs 5,000 crore less to spend on education for children this year.

Way Ahead

There has to be relentlessly campaigns for

- Increased allocation for education, at least 6% of GDP,
- Inclusion of breakfast along with mid-day meals
- Remedial measures for loss of learning
- Transfer of monies to vulnerable states and local governments on a priority basis.

Connecting the dots

- [Impact of Lockdown on Women & Children](#)
- [Pandemic & Domestic Violence](#)

English Language in Education

Context: Recent Andhra Pradesh government's decision to make English the medium of instruction for all undergraduate courses (save, of course, the language subjects).

- State government has maintained that Telugu will remain a compulsory subject at the school level so that students get to learn the language

Arguments against AP Government's decision.

- **Disproportionately impacts rural students:** Critics contend this would leave many students, especially from the rural areas and from economically weaker sections who are likely to have been educated in Telugu medium schools thus far, seriously disadvantaged.
- **Fears of sub-optimal learning:** Forcing such students to shift to English so late in their academic pursuit, critics fear, may cause sub-optimal learning vis-a-vis the students' actual competence and aptitude.
- **Attack on Culture:** The opposition have sought to position the decision as an attack on Telugu culture and sacrificing the protection of Telugu language.

Arguments in Favour of AP Government's decision.

- **Needed for increasing PG Education:** The language of instruction in post-graduate courses is English. Continuing with Telugu as the medium of instruction at the UG level would further delay the shift for a set of students. It would be tantamount to indirect gate-keeping of PG education.
- **Aligned with people's choices:** The set of students from a Telugu-medium background who opted for the same medium at the UG level in 2020-21 was merely a quarter of the pool that joined degree courses, and the state government says the larger share of Telugu-medium students entering UG courses have themselves opted for English instruction.
- **Enhances employability of students:** English-learning at the undergraduate level increases the employability of students in globalised world. Survey shows that English fluency results in a difference of up to 34% in hourly wages for Indian men, with the advantage going up commensurately with the degree of relative fluency.
- **Getting Future Ready:** English skills are likely to become far more important in the future; for future jobs in the technology sector (AI, Machine Learning, Big Data Analytics), English proficiency will become as key as technical training. Therefore, the state has to ensure that students get all the support needed to transition from Telugu to English.

Connecting the dots

- [New Education Policy 2020](#)
- Right to Education Act
- Operation Digital Board

[Persons with disabilities have right to reservation in promotion: Supreme Court](#)

Part of: GS Prelims and GS -II - Judiciary; Rights and duties

In news

- SC ruled that a disabled person can avail the benefit of [reservation for promotion](#) even if he or she was recruited in the regular category or developed the disability after gaining employment.
- The 1995 Act (Persons with Disabilities Act of 1995) does not make a distinction between a person who may have entered service on account of disability and a person who may have acquired disability after having entered the service.
- 1995 Act recognises the right to reservation in promotion

The background of Reservation in promotion

- In the Indira Sawhney case (1992), SC held that the reservation policy cannot be extended to promotions.
- However, the 77th Constitutional Amendment inserted clause 4A in article 16 and restored provision of reservations in promotions.

- In Nagaraj judgement (2006), Court laid down three controlling conditions that the state must meet prior to granting SC/ST a reservation in promotion:
 - state must show that backwardness of the class
 - class is inadequately represented in position or service
 - reservations are in the interest of Administrative efficiency
- In Jarnail Singh case (2018), it struck down the demonstration of backwardness provision from Nagaraj judgement.

Related articles:

[Launch of Sugamya Bharat App](#)

[National Social Assistance Programme](#)

Ration card reform

Context: Recently, the Supreme Court directed all states and Union Territories to implement the One Nation, One Ration Card (ONORC) system, which allows for inter- and intra-state portability, by July 31.

Did You Know?

- Portable welfare benefits mean that a citizen should be able to access welfare benefits irrespective of where she is in the country.
- In the case of food rations, the idea was first mooted by a Nandan Nilekani-led task force in 2011.
- 45.36 crore people or 37% of the population is that of migrant labourers.

What is One Nation One Ration Card?

- The scheme seeks to provide **portability of food security benefits** all across the nation.
- Families who have food security cards can buy subsidized food from any ration shop in the country.
- It was started in mid-2019 with pilot project in 4 states and was supposed to be rolled-out across country by June 2020 but got delayed due to Pandemic.

Taking States on board

- To promote this reform in the archaic Public Distribution System (PDS), the government has provided incentives to states.

How does ONORC work?

- ONORC is based on technology that involves details of beneficiaries' **ration card**, **Aadhaar** number, and electronic Points of Sale (**ePoS**).
- The system identifies a beneficiary through biometric authentication on ePoS devices at fair price shops.
- The system runs with the support of two portals —
 - **Annavitran Portal**- maintains a record of intra-state transactions — inter-district and intra-district
 - Integrated Management of Public Distribution System (IM-PDS) - records the inter-state transactions.
- When a ration card holder goes to a fair price shop, he or she identifies himself or herself through biometric authentication on ePoS, which is matched real time with details on the Annavitran portal.
- Once the ration card details are verified, the dealer hands out the beneficiary's entitlements.

What factors led to the launch of ONORC?

- Earlier, NFSA beneficiaries were not able to access their PDS benefits outside the jurisdiction of the specific fair price shop to which they have been assigned.
- ONORC was initially launched as an inter-state pilot. However, when the Covid-19 pandemic forced thousands of migrant workers to return to their villages last year, a need was felt to expedite the rollout.
- As part of its Covid economic relief package, the government announced the national rollout of ONORC in all states and Union Territories by March 2021.

What has been the coverage so far?

- Till date, 32 states and Union Territories have joined the ONORC, covering about 69 crore NFSA beneficiaries. Four states are yet to join the scheme — **Assam, Chhattisgarh, Delhi and West Bengal.**
- While inter-state ration card portability is available in 32 states, the number of such transactions is much lower than that of intra-district and inter-district transactions

Why have these four states not implemented it yet?

There are various reasons.

- For instance, Delhi is yet to start the use of ePoS in fair price shops, which is a prerequisite for the implementation of ONORC.
- In the case of West Bengal, the state government has demanded that the non-NFSA ration card holders — ration cards issued by the state government — should also be covered under the ONORC

Connecting the dots

- [One Nation One Election](#)
- [One Nation One Gas Grid](#)

[Nearly 10,000 children in immediate need of care and protection: Bal Swaraj Portal](#)

Part of: GS Prelims and GS -II - Policies and interventions

In news

- According to **Bal Swaraj Portal**, nearly 10,000 children in India are in **immediate need of care and protection.**
- They include children **aged between zero and 17 orphaned** or abandoned during the COVID-19 pandemic since March 2020.

Important value additions

Bal Swaraj Portal

- **Created by:** The [National Commission for Protection of Child Rights](#) (NCPCR)
- **Significance:** NCPCR has developed it as part of its role of a **monitoring authority** under section 109 of the [Juvenile Justice Act, 2015](#) and to address the **growing problem of Children** being affected by COVID-19.
- **Objective:**
 - **Online tracking** and
 - **Real-time monitoring** of Children who have lost both parents/either of the parents during COVID-19 and are in need of care and protection
- **Working:** It will **track children** affected by COVID-19 right from the **production** of children **before** the [Child Welfare Committee \(CWC\)](#) to the **restoration** of the children to their parent/guardian/relative and its subsequent follow-up.

- The data will be filled in the portal by the District officers and State officers for each child.

Why does the news matter?

- These children are at **high risk** of being pushed into **trafficking and flesh trade**.
- The Commission had already received several complaints of **government authorities illegally transferring details** of children to private entities and NGOs.
- These are **vulnerable sections** of society devastated by COVID-19

HEALTH ISSUE

Launch of Revamped Central Government Health Scheme (CGHS)

Part of: GS Prelims and GS -II - Health

In news

- Revamped Central Government Health Scheme (CGHS), Umbrella schemes of Rashtriya Arogya Nidhi (RAN) and Discretionary Grant (HMDG) on National Health Authority (NHA)'s IT platform were recently launched.
- **Ministry:** Ministry of Health
- **Objective:** For providing cashless, paperless and citizen-centric services.

Key takeaways

Central Government Health Scheme (CGHS):

- It is a comprehensive Health Scheme for Serving Employees, Pensioners, Members of Parliament, ex-MPs, etc., and their dependent family members.

Rashtriya Arogya Nidhi (RAN)

- Under RAN, financial assistance up to Rs 15 lakhs is provided to poor patients suffering from major life-threatening diseases for treatment at Government hospitals.
- The eligibility criteria to avail services under RAN had been based on State/UT-wise BPL threshold.

Health Minister's Discretionary Grant (HMDG)

- Under HMDG a maximum amount of Rs.1.25 lakhs is provided to patients whose annual income is less than Rs.1.25 lakhs.
- Beneficiaries can apply for financial assistance under both schemes by providing their Ration card number

Indemnity and Vaccine Pricing

Context: Pfizer, which supplies the Pfizer-BioNTech mRNA vaccine, is said to have requested that the government indemnify it from any claim that may arise from vaccine users in the future based on any adverse effects after getting the jab.

What is indemnity and why is it sought?

- Indemnity is a form of contract.
- Section 124 of the Indian Contract Act, 1872, defines a contract of indemnity as one by which one party promises to save the other from any loss caused to the latter.
- In the event of a court ordering payment, the company will be in a position to recover the amount from the government.

- If at all any indemnity is to be granted to any company for a particular drug or vaccine, it can only be in the **form of an indemnity bond** executed on behalf of the government of India, or a clause or set of clauses in any contract that the government may sign with the supplier.
- There appears to be no precedent for any company getting such indemnity in India for any drug.

Is the demand for or grant of indemnity a standard practice?

- Indemnity is essentially a contractual matter between the supplier and recipient, and therefore, a good deal of confidentiality is attached to such agreements.
- However, given the **peculiar global situation** arising out of the COVID-19 pandemic, and the **severe shortage of vaccines** faced by countries such as India, which urgently needs to inoculate hundreds of millions of people, some vaccine suppliers may be in a position to set conditions.

What have the overseas companies got so far?

- The Drugs Controller-General of India has already taken a big step towards fast-tracking the import of vaccines by **dispensing with the need for local trials**.
- However, companies probably fear that they would still be liable under the **ordinary law of tort**, arising from future claims by anyone adversely affected after receiving the shot.

What are the implications of giving indemnity?

- **Lower Prices:** In the absence of indemnity, overseas manufacturers may load the risk onto the price of the vaccines, making each dose more expensive. By indemnifying the companies in respect of these vaccines, the government of India may be able to negotiate lower prices and higher volumes.
- **Faster Vaccination:** Reduced prices and faster production may help accelerate India's national vaccination drive.
- **Demand for Level Playing Field:** The demand from indemnity from Pfizer has already given rise to a similar demand from domestic vaccine-maker Serum Institute of India (SII), which says all players should be treated the same way.
- **Government needs to bear entire risk:** Providing indemnity to all by government to ensure level playing field is inviting upon itself the entire risk associated with more than a billion vaccine shots.

Connecting the dots

- [Vaccine Nationalism](#)
- [Vaccine Diplomacy](#)
- [TRIPS Waiver for Vaccines](#)

Resolution 75/260 of UNGA

Part of: GS Prelims and GS -II - Health; International relations

In news

- The Union Health Minister addressed the 75th session of the United Nations General Assembly (UNGA) on prevention of [HIV/AIDS](#).
 - The **Resolution 75/260 of UNGA** deals with the **Implementation of the Declaration of Commitment on HIV/AIDS** and the political declarations on HIV/AIDS.

Key points of address

- India's unique **HIV prevention model** is centered around the concept of '**Social Contracting**' through which the 'Targeted Interventions Program' is implemented.

- The **HIV & AIDS Prevention and Control Act, 2017**, provides a **legal** and enabling framework to **safeguard the human rights** of infected and affected populations.
- India is providing **free anti-retro-viral treatment** to close to 1.4 million people.

Other initiatives

- **Project Sunrise:** Launched by the Ministry of Health and Family Welfare (2016) to tackle the rising HIV prevalence in north-eastern states
- **The Red Ribbon:** Wearing a ribbon is a way to **raise awareness** on and during the run up to World AIDS Day.
- **90-90-90:** 90% of those who are HIV positive in India know their status, 90% of those who know their status are on treatment and 90% of those who are on treatment experience effective viral load suppression.
- **[Global Fund to Fight AIDS, Tuberculosis and Malaria \(GFATM\)](#):** It is **designed to accelerate** the end of AIDS, tuberculosis and malaria as epidemics.

Important value additions

National AIDS Control Program

- **Launched by:** The National AIDS Control Organization (NACO) launched in 1992-1999.
 - NACO is a division of the Ministry of Health and Family Welfare.
- India is gradually transitioning the people living with HIV to Dolutegravir (a safer and efficacious anti-retro-viral medication regimen).

Preparing for Third Wave

Context: The fact that India faced a severe second wave of infections, which overwhelmed the health infrastructure, has underlined the importance of preparing well for the third wave.

Here are five things that must be done to reduce the impact of a possible third wave of Covid-19 infections.

1. Increase Vaccination Pace

- The pace of vaccinations will matter the most in determining whether or not there is a nation-wide third wave.
- Therefore, government needs to increase the pace of vaccination.

2. Testing facilities need to be expanded

- Testing in time and isolating infected patients is the key to containment of Covid-19 infections.
- 31 out of the 735 districts in the country had no sample collection centre. 99 had just one collection centre. Clearly, this needs to change, if the pandemic has to be monitored better

3. People, especially the poor, need to be encouraged to seek medical advice

- Lack of health facilities in proximity and affordability are reasons for not seeking medical advice among the poor.
- There needs to be behavioural change when it comes to suspected patients seeking early testing and treatment as Covid-19 begins with common symptoms such as fever and cold.

4. Acknowledge the financial burden of Covid-19 hospital admissions

- An average Covid-19 hospitalisation case is likely to cost much more than ₹50,000.
- Providing certain help from government side like soft loans from banks for COVID hospitalisation expenses will go a long way in preparing for third wave.

5. Expanding health insurance cover will help

- Over three-fourth of hospitalisation cases in India involved individuals who were not covered by a health expenditure insurance or scheme, according to the 2017-18 NSO survey.

- The [Pradhan Mantri Jan Aarogya Yojana \(PM-JAY\)](#) which was rolled out in 2018 needs to be expanded and modified to suit the needs of Pandemic times.

Connecting the dots

- [Pradhan Mantri Jan Aarogya Yojana \(PM-JAY\)](#)
- [Economic Survey 2020-21 on Health](#)
- [Health Data Management Policy: National Digital Health Mission](#)
- [Indian Health Worker Brain Drain](#)
- [Medical Oxygen Crisis in India](#)

Technology in India's health sector

Context: According to WHO “Universal health coverage (UHC) is the single most powerful concept that public health has to offer. It is a powerful social equalizer and the ultimate expression of fairness.”

Emerging technologies can be leveraged to move towards the goalpost of UHC, some of these are

- **Robots:** Hospitals can use robots to deliver medicines and food to COVID-19 patients. This helps to reduce the chances of hospital staff contracting the infection.
- **Blockchain technology:** The health blockchain would contain a complete indexed history of all medical data, including formal medical records and health data from mobile applications & wearable sensors. This can help in addressing the interoperability challenges that health information and technology systems face.
- **AI and the Internet of Medical Things:** IoMT is defined as a connected infrastructure of medical devices, software applications, and health systems and services. IoMT can be utilized to provide health-care applications that can help in quick diagnosis of illness.
- **Cloud computing** is another application that can facilitate collaboration and data exchanges between doctors, departments, and even institutions and medical providers to enable best treatment.

What are the possible challenges to above technologies?

The possible constraints in this effort are

- Standardisation of health data
- Developing a template for sharing data
- High investments

Way Ahead

- **Digital Strategy:** India needs to own its digital health strategy that works and leads towards universal health coverage and person-centred care. Such a strategy should emphasise the ethical appropriateness of digital technologies, cross the digital divide, and ensure inclusion across the economy.
- **Using Local Knowledge:** In addition to robust health systems, an effective national response must also draw upon local knowledge. Primary health centres in India could examine local/traditional knowledge and experience and then use it along with modern technology.

Connecting the dots

- [National Digital Health Mission](#)
- [Pandemic & inequality in Digital world](#)
- [Integrated Health Information Platform \(IHIP\)](#)

Consumption of white foods increases manifold

Part of: GS Prelims and GS -II – Health

In news

- White foods are those that are processed and refined, like refined wheat flour, white rice, white bread, white pasta, and simple sugars like white refined sugar, honey, and high fructose corn syrup.
- Bakery and condiment industries, which use refined wheat flour and white sugar as main ingredients, have grown exponentially.

Harmful impacts of white foods consumption

- High intake of fast food, croissants, white bread and cheese was inversely associated with poor glycaemic control.
- Evidence has consistently linked large consumption of refined sugar, particularly in the form of sugary drinks, with obesity and abdominal fat accumulation that leads to diabetes and heart diseases.
- Sugars were directly associated with greater risk of esophageal adenocarcinoma, small intestine cancer and pleural cancer.
- Along with pink, blue, and black salts, white table salt is essential to health. But it produces negative health outcomes such as high blood pressure, chronic kidney disease, and osteoporosis when consumed in excess.

Healthy white foods

- Some white foods are beneficial for overall health. Few examples include – cauliflower, onion, garlic, radish, mushroom, cashews, sesame seeds.

Suggestions to avoid white foods consumption

- White bread can be replaced with whole or multi grain breads, oats that contain more fiber, important micronutrients.
- White and other salts can be replaced with herbs and spices to bring the desired flavour.

Related article: [Lifestyle Diseases Biggest Health Risk for Indians](#)

WHO declares Ebola outbreak in Guinea over

Part of: GS Prelims and GS -II - Health

In news

- Recently, the World Health Organisation (WHO) has declared that the Ebola outbreak that started in February 2021 in Guinea, is over now.

About Ebola Virus Disease (EVD)

- Ebola, also known as Ebola virus disease (EVD) or Ebola hemorrhagic fever (EHF), is a viral hemorrhagic fever of humans and other primates caused by ebolaviruses.
- It is transmitted to people from wild animals and spreads in the human population through human to human transmission.
- **Transmission:** Fruit bats of the Pteropodidae family are natural Ebola virus hosts.
 - **Animal to Human Transmission:** Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals such as fruit bats, chimpanzees, gorillas, found ill or dead or in the rainforest.
 - **Human-to-Human Transmission:** Ebola spreads via direct contact (through broken skin or mucous membranes) with:
 - Blood or body fluids of a person who is sick with or has died from Ebola.

- Objects that have been contaminated with such body fluids (like blood, feces, vomit).
- **Symptoms:**
 - Fever, Fatigue, Muscle pain, Headache, Sore throat, Vomiting, Diarrhoea, and in some cases, both internal and external bleeding.
- **Diagnosis:**
 - ELISA (antibody-capture enzyme-linked immunosorbent assay)
 - [Reverse transcriptase polymerase chain reaction \(RT-PCR\) assay](#), etc.
- **Vaccines:**
 - The Ervebo vaccine.
 - In May 2020, the European Medicines Agency recommended granting marketing authorization for a 2-component vaccine called Zabdeno-and-Mvabea for individuals 1 year and older.
- **Treatment:**
 - Two monoclonal antibodies (Inmazeb and Ebanga) have been approved for the treatment of Zaire ebolavirus infection in adults and children by the US.

GOVERNMENT SCHEMES

[PM-CARES for Children scheme](#)

Part of: GS Prelims and GS -II - Policies and interventions

In news

- The Central government has announced the “**PM-CARES for Children**” scheme for **all those children orphaned due to [Covid-19](#)**.
- Also, the Supreme Court has ordered the district authorities to upload the details of children in need of care and protection on NCPCR (National Commission for Protection of Child Rights) portal Bal Swaraj.

Salient features of the Scheme

- **Corpus of Rs. 10 Lakh:**
 - A corpus of Rs. 10 lakh will be allocated to each of these children from the [PM CARES fund](#).
 - It will provide monthly stipend from 18 years of age.
 - On attaining 23 years, he/she will get the corpus amount.
- **Education to the Children (under 10 years):**
 - Ensure admission to Kendriya Vidyalayas/ private schools.
 - PM CARES will pay for the uniform text books and notebooks
 - If the child is admitted in a private school the fees as per the RTE norms will be provided
- **Education to the Children (11-18 years):**
 - The child will be given admission in any Central Government Residential School
 - In case the child is to be continued under the care of **guardian**, he/she will be given admission in the nearest Kendriya Vidyalaya/private school
- **Higher education:**
 - Provision of either a scholarship equivalent to the tuition fees/ educational loans.
 - Interest on the loan will be paid by the PM-CARES fund.
- **Health Insurance:**

- All children will be enrolled as a beneficiary under [Ayushman Bharat Scheme](#)
- The premium amount will be paid by PM-CARES till a child turns 18.

[Launch of SAGE \(Seniorcare Ageing Growth Engine\) Initiative](#)

Part of: GS Prelims and GS -II - Policies and interventions

In news

- **SAGE (Seniorcare Aging Growth Engine) initiative** and **SAGE portal** were launched recently.
- **Ministry:** Ministry of Social Justice and Empowerment,
- **Objective:** To support India's elderly persons

About the initiative:

- The SAGE portal will be a **"one-stop access"** of elderly care **products** and services by **credible start-ups**.
- A **fund** of upto **Rs.1 crore** as **one-time equity** will be granted to each selected start-up.
- An amount of **Rs 100 crore** has been assigned for the promotion of the **silver economy**.

Important value additions

- **Silver economy** is the system of **production, distribution and consumption of goods and services** aimed at **using the purchasing potential of older and ageing people** and satisfying their **consumption, living and health needs**.
- Earlier a **Senior Citizen Welfare Fund** was started in 2016.

[Swachh Bharat Mission Grameen Phase-II](#)

Part of: GS Prelims and GS -II - Governance

In news

- Swachh Bharat Mission (Grameen) [SBM (G)] Phase-II is making steady progress amidst Covid-19 with 1249 villages declared ODF(Open Defecation Free) Plus.

About SBM(G) Phase-II:

- SBM (G) Phase-II was approved in February 2020 by the **Ministry of Jal Shakti** and will be implemented from **2020-21 to 2024-25** with total outlay of Rs. **1,40,881 crores**.
- The fund sharing pattern between Centre and States will be 90:10 for North-Eastern States and Himalayan States and UT of J&K; 60:40 for other States; and 100% for other Union Territories.

Other Schemes as part of SBM:

- **Individual Household Latrines (IHHL)** initiative whereby individuals get around 15,000 Rs for the construction of toilets.
- [GOBAR-DHAN](#) (Galvanizing Organic Bio-Agro Resources) Scheme launched by the Ministry of Jal Shakti in 2018. The scheme aims to augment income of farmers by converting biodegradable waste into compressed biogas (CBG).
- **Swachh Vidyalaya Abhiyan** launched by the Ministry of Education with an objective to provide separate toilets for boys and girls in all government schools.

[Electronic Weighing Machines at Fair Price Shops](#)

Part of: GS Prelims and GS-II - Policies and Interventions

In news

- The Central Government has asked the States Governments to buy **electronic weighing machines for ration shops from electronic Point of Sale devices (ePoS) savings.**
- For this, the Ministry of Consumer Affairs has **amended the Food Security (Assistance To State Government Rules) 2015** to encourage the states to generate savings through judicious use of e-PoS devices.
- **Benefits:**
 - The **integration** of ePoS devices with electronic weighing scales will **ensure the right quantity to beneficiaries** being covered under the [National Food Security Act \(NFSA\), 2013](#).
 - Subsidised food grains provided to the **rightful beneficiary through biometric authentication.**

About National Food Security Act (NFSA), 2013

- **Objective:** To provide for food and nutritional security in the human life cycle approach, by ensuring access to adequate quantities of quality food at affordable prices to people to live a life with dignity.
- **Coverage:** 75% of the rural population and upto 50% of the urban population for receiving subsidized foodgrains under Targeted Public Distribution System (TPDS).
- **Eligibility:**
 - Priority Households to be covered under TPDS, according to guidelines by the State government.
 - Households covered under existing Antyodaya Anna Yojana.
- **Provisions:**
 - 5 Kgs of foodgrains per person per month at Rs. 3/2/1 per Kg for rice/wheat/coarse grains.
 - Meals to children upto 14 years of age.
 - Food security allowance to beneficiaries in case of non-supply of entitled foodgrains or meals.
 - Setting up of grievance redressal mechanisms at the district and state level.

Special Purpose Vehicle for Mission Karmayogi

Part of: GS Prelims and GS-II - Policies and interventions

In news

- Recently, a three-member task force has been formed to help the government in bringing major bureaucratic reforms through its ambitious "[Mission Karmayogi](#)".
 - The Centre had recently approved the 'National Programme for Civil Services Capacity Building – Mission Karmayogi' to effect a transformational shift from rule based training to role-based capacity development of all civil services in the country.

About the task force

- A Special Purpose Vehicle (SPV), namely 'Karmayogi Bharat', would be set up as a not-for-profit company.
- It will be set up under section 8 of Companies Act, 2013 as a 100% government-owned entity.
- The SPV will be responsible:
 - manage governance of telemetry data and ensure provision of monitoring and evaluation.
- The task force shall submit its recommendations on organisational structure for the SPV aligning its vision, mission and functions.

6 Years of Transformative Urban Missions

Part of: GS Prelims and GS -II - Polity and governance

In news

- Recently, the Ministry of Housing and Urban Affairs (MoHUA) organised an online event to commemorate six years of the three transformative Urban Missions vis. [Smart Cities Mission \(SCM\)](#), [Atal Mission for Urban Rejuvenation and Urban Transformation \(AMRUT\)](#) and [Pradhan Mantri Awas Yojana-Urban \(PMAY-U\)](#).

Mission	Details	Progress
PMAY-U	<ul style="list-style-type: none"> It addresses urban housing shortage among the economically weaker sections and middle-income good categories including the slum dwellers by ensuring a pucca house to all by 2022 	<ul style="list-style-type: none"> 1.1 to crore houses sanctioned For the first time interest subsidy on home loans given to MIG having annual income of up to Rs 18 lakhs credit linked subsidy scheme. Affordable rental housing complexes for urban migrants/poor launched as response to reverse migration induced by covid-19.
AMRUT	<ul style="list-style-type: none"> Aims to provide basic services like water supply, sewerage, etc. to households and build amenities in cities. 500 cities selected under AMRUT. 	<ul style="list-style-type: none"> 105 lakh household water tap and 78 lakh sewer connections have been provided. 88 LED street lights have been replaced with energy efficient LED lights against target of 101 lakh leading to energy savings of 193 crore units. As per TERI, 84.6 lakh tonnes carbon footprint produced under AMRUT.
SCM	<ul style="list-style-type: none"> Aims to promote cities that provide core infrastructure, clean and sustainable environment to their citizens to the application of smart solutions like smart grid Smart water using IoT etc. 	<ul style="list-style-type: none"> 70 smart cities have developed and operationalized their Integrated Command and Control Centre which were used as war-rooms for covid management

INTERNATIONAL

China's Child Policy

Context: Days after China's census data showed population growth slipping to its slowest rate since the 1950s, the country has announced it will now allow three children per married couple — five years after it first relaxed its controversial one-child policy to two.

How well did China's one-child policy work?

- **Population growth impeding economic growth:** China embarked upon its one-child policy in 1980, when the Communist Party was concerned that the country's growing population, which at the time was approaching one billion, would impede economic progress.
- **Initial Success:** Chinese authorities have long hailed the policy as a success, claiming that it helped the country avert severe food and water shortages by preventing up to 40 crore people from being born.
- **Criticisms of One Child Policy:** However, the one-child limit was also a source of discontent, as the state used brutal tactics such as forced abortions and sterilisations. It also met criticism and remained controversial for violating human rights, and for being unfair to poorer Chinese since the richer ones could afford to pay economic sanctions if they violated the policy.
- **Tool of Social Control:** Additionally, China's rulers have been accused of enforcing reproductive limits as a tool for social control. The Uighur Muslim ethnic minority, for example, has been forced to have fewer children to restrict the growth of their population.
- **Problem of faster ageing:** Experts have also blamed the policy for making China's population age faster than other countries, impacting the country's growth potential. India's population, for instance, will start ageing from the middle of this century onwards.

Did relaxing the one-child policy help?

- From 2016, the Chinese government finally allowed two children per couple **to arrest the rapid fall in population growth**
- However, the policy change that did little. China's 2020 census data, released earlier this month, shows the country's rate of population growth falling rapidly despite the 2016 relaxation.
- By 2025, the country is set to lose its '**most populous' tag to India**, which in 2020 had an estimated 138 crore people, 1.5 per cent behind China.

Why do many remain skeptical about the three-child policy?

Experts say relaxing limits on reproductive rights alone cannot go a long way in averting an unwanted demographic shift.

- **Economic Factors:** The main factors behind fewer children being born, they say, are rising costs of living, education and supporting ageing parents. The problem is made worse by the country's pervasive culture of long working hours.
- **Cultural Shift:** There has also been a cultural shift during the decades in which the one-child policy remained in force, with many couples believing that one child is enough, and some expressing no interest in having children.

Q. Should India also adopt China's method of controlling its population?

Cabinet gives ex-post facto nod for SCO agreement on mass media cooperation

Part of: GS Prelims and GS-II - International Relations

In news

- The Union Cabinet has approved the ratification of an Agreement on “Cooperation in the field of Mass Media” between all the Member States of [Shanghai Cooperation Organisation](#).
- The Agreement was signed in June, 2019.

About the Agreement on “Cooperation in the field of Mass Media”

- **Aim:** To promote equal and mutually beneficial cooperation among associations in the field of mass media.
- It would provide an **opportunity** to the member states **to share best practices** and **new innovations**
- The **main area of cooperation** is the **creation of favorable conditions** for wide and mutual **distribution of information** through mass media
- It will **provide mutual assistance in training media professionals**

Why does the news matter?

- **Mass media** inform, educate and entertain people.
- They **influence the way** people look at the world and make them change their views.
- They help in organizing public opinion.

Important value additions**Shanghai Cooperation Organisation (SCO)**

- The SCO is a permanent intergovernmental international organisation.
- It is a Eurasian political, economic, and security alliance
- **Established in:** 2001.
- **Supreme decision-making body:** Heads of State Council (HSC)
- It meets once a Year .
- **Two permanent bodies:**
 - SCO Secretariat based in Beijing.
 - Executive Committee of the Regional Anti-Terrorist Structure (RATS) based in Tashkent.

World Food Safety Day

Part of: GS Prelims and GS -II – Health; International

In news

- The Union Minister for Health and Family Welfare virtually attended the World Food Safety Day (7th June) celebrations organized by [Food Safety and Standards Authority of India \(FSSAI\)](#).
- Access to sufficient amounts of safe food is key to sustaining life and promoting good health
- Global food waste accounts for 6.7% of global greenhouse gas emissions, directly leading to climate change.

About World Food Safety Day

- WHO and FAO jointly facilitate the observance of World Food Safety Day.
- It was first celebrated in 2019, to strengthen the commitment to scale up food safety made by the Addis Ababa Conference and the Geneva Forum in 2019 under the umbrella of “The Future of Food Safety”.
- **Aim:** To draw attention and inspire action to help prevent, detect and manage foodborne risks, contributing to food security, human health, economic prosperity, agriculture, market access, tourism and sustainable development.
- 2021 Theme: Safe Food for a Healthy Tomorrow.

Value Addition**Indian Initiatives for Food Safety:**

- **State Food Safety Index**, released by FSSAI to measure the performance of States on five parameters of food safety namely Human Resources and Institutional Data, Compliance, Food Testing – Infrastructure and Surveillance, Training & Capacity Building and Consumer Empowerment.
- **Eat Right India Movement**: Initiative of the Government of India and FSSAI to transform the country's food system in order to ensure safe, healthy and sustainable food for all Indians.
- **Eat Right Awards**: Instituted by FSSAI to recognize the contribution of food companies and individuals to empower citizens to choose safe and healthy food options,
- **Eat Right Mela**: Organised by FSSAI, it is an outreach activity for citizens to nudge them towards eating right

Also Read: [COVID-19 and Food Security](#)

[I-Familia: Global Database to Identify Missing Persons](#)

Part of: GS Prelims and GS –II- International

In news

- Recently, the Interpol has launched a new global database named “I-Familia” to identify missing persons through family DNA and help the police solve cold cases in member countries

About I-Familia:

- There is growing international concern about the number of missing persons and unidentified victims around the world due to increased international travel, the prevalence of organized crime and human trafficking, the rise in global migration, conflicts and natural disasters.
- The first of its kind, I-Familia is a global database for identifying missing persons based on international DNA (deoxyribonucleic acid) kinship matching.
- The database seeks to identify missing persons or unidentified human remains when direct comparison is not possible, by using DNA samples from family members instead.
- Family members must give their **consent** for their data to be used for international searching.

Value Addition

International Criminal Police Organization (Interpol)

- Interpol is an intergovernmental organization headquartered in Lyon, France that helps coordinate the police force of 194 member countries.
- Each of the member countries hosts an Interpol National Central Bureau (NCB) which connects their national law enforcement with other countries and with the General Secretariat.
- The [Central Bureau of Investigation](#) (CBI) is designated as the National Central Bureau of India.
- **Interpol Notices** are international requests for cooperation or alerts allowing police in member countries to share critical crime-related information.

[New Atlantic Charter between USA and UK](#)

Part of: GS Prelims and GS -III - International relations

In news

- Recently, the USA's President and UK's Prime Minister signed a new version of the 80-year old Atlantic Charter.

- The Atlantic Charter was a joint declaration released by US President Franklin D. Roosevelt and British Prime Minister Winston Churchill on 14th August, 1941 during World War II in Newfoundland.

New Atlantic Charter (2021)

- The new charter is **an effort** towards a grand vision of global relationships of democracy and territorial integrity.
- It calls on Western allies to **oppose interference through disinformation** or other malign influences, including in elections.
- It vows that as long as there are nuclear weapons, North Atlantic Treaty Organisation (NATO) will remain a nuclear alliance.

EU urged to consider its GSP+ status given to Sri Lanka

Part of: GS Prelims and GS -II - International Relations and GS -III - Economy

In news

- Recently, a resolution was adopted by the European Parliament, urging the [European Union](#) (EU) Commission to consider the temporary withdrawal of the [Generalised Scheme of Preferences](#) Plus (GSP+) status given to Sri Lanka.
- The EU's GSP is widely recognised as the most progressive in terms of coverage and benefits.
- The EU continuously monitors and reviews GSP+ beneficiary countries' effective implementation of the international conventions on human rights, labour rights.
- The GSP was adopted at UNCTAD in New Delhi in 1968 and was instituted in 1971
 - The United Nations Conference on Trade and Development was established in 1964 as a permanent intergovernmental body.
 - UNCTAD is the part of the United Nations Secretariat dealing with trade, investment, and development issues.

Generalized System of Preferences (GSP)

- Umbrella that comprises the bulk of preferential schemes granted by industrialized nations to developing countries.
- Reduced Most Favored Nations (MFN) Tariffs or duty-free entry of eligible products exported by beneficiary countries to the markets of donor countries.

42nd Session of FAO Conference

Part of: GS Prelims and GS -II - International Relations

In news

- Recently, the Union Minister of Agriculture and Farmers' Welfare addressed the 42nd session of Food and Agriculture Organization's (FAO) Conference.
 - The Conference takes place every two years.
 - India is a founder member of the FAO

Key notes from the address

- The Country Program Framework prepared by FAO India in collaboration with Ministry of Agriculture and Farmers Welfare, Government of India has multi sectoral approach.
- India has been extending technical expertise and assistance in incidences of trans-boundary pests mainly Fall Army Worm and Desert Locust.
- FAO also endorsed the Indian proposal for an International Year of Pulses (2016) and International Year of Millets (2023) .

- India has launched various projects under the National Mission on Sustainable Agriculture to make agriculture resilient to adverse impacts of climate change.
- India is promoting Organic farming at a large scale.

Initiatives during COVID-19 by India

- Indian Agriculture sector registered an all time high production of 305 million tons of food grains during COVID-19.
- [KISAN RAIL](#): Special parcel trains with refrigeration facilities were introduced to transport the essential commodities
- [Pradhan Mantri Garib Kalyan Package](#) was launched under which free food grains were provided to 810 million beneficiaries and the scheme has been further extended till November.
- [PM Kisan Scheme](#): More than Rupees 1,37,000 Crore have been sent to the bank accounts of over 100 million farmers.

Maiden IN-EUNAVFOR Exercise

Part of: GS Prelims and GS II - International Relations

In news

- Indian Naval Ship Trikand, mission deployed for Anti-Piracy Operations, participated in the maiden IN – EUNAVFOR Joint Naval Exercise in the Gulf of Aden.
- **Coordinated by:** European Union Naval Force (EU NAVFOR).
 - Along with Indian Navy, other naval forces are from Italy, Spain and France.
 - The naval exercise included advanced air defence and anti-submarine exercises, tactical manoeuvres, Search & Rescue, and other maritime security operations.
- EUNAVFOR and the Indian Navy converge on multiple issues including counter piracy operations and protection of vessels deployed under the charter of World Food Programme (UN WFP).
- The two navies also have regular interaction through SHADE (Shared Awareness and Deconfliction) meetings held annually at Bahrain.

About Gulf of Aden

- The Gulf of Aden is also known as the Gulf of Berbera.
- It is a deepwater gulf between Yemen to the north, the Arabian Sea to the east, Djibouti to the west, and the Guardafui Channel, Socotra (Yemen), and Somalia to the south. (See the map)
- The waterway is part of the important Suez Canal shipping route between the Mediterranean Sea and the Arabian Sea in the Indian Ocean.

US-Russia: Biden-Putin Meet

Context: In March 2021, after assuming the White House, Mr. Biden described Mr. Putin as a “killer” and criticised Russia’s interference in US elections. Three months later, Biden met Putin and sought a more predictable relationship between the “two great powers”.

West & China

- **Focus Shifted to China:** Earlier NATO’s main focus was Russia now it is China. NATO members warned against the “systemic challenges to the rules-based international order” emanating from China’s rise.
- **Criticism of China’s HR record:** The G7 industrialised nations has recently issued a communique slamming China’s human rights records. Issues such as the detention of Uighurs in Xinjiang, the crackdown on dissent in Hong Kong, growing tensions with Taiwan was highlighted

- **Collaboration to compete better:** US and EU has decided to set up a high-level trade and technology council, which would boost innovation and investment, so as to better compete with China.

Conclusion

- It's too early to see any meaningful change in Russia-U.S. relations. But the Geneva summit suggests that policymakers in Washington have at least started thinking of Russia as a secondary challenge that needs to be tackled diplomatically, not only through coercion,

Connecting the dots

- [QUAD](#)
- China's Belt and Road Initiative
- [Shanghai Cooperation Organisation](#) (SCO)
- [Reviving SAARC to deal with China](#)

60th anniversary of Antarctic Treaty

Part of: GS Prelims and GS -II - International relations

In news

- Recently, the 60th anniversary of the Antarctic Treaty was celebrated.
- The Antarctic treaty remains the **only example of a single treaty that governs a whole continent**.
 - It is also the foundation of a rules-based international order for a continent without a permanent population.
 - Antarctica is defined as all of the land and ice shelves south of 60°S latitude.

About the Antarctic Treaty

- The Antarctic Treaty was **signed between 12 countries in Washington** on 1st December 1959 for **making the Antarctic Continent a demilitarized zone** to be preserved for scientific research only.
- **The twelve original signatories:** Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the Union of Soviet Socialist Republics, the UK and the US.
 - India became a member of this treaty in 1983.
- **Headquarters:** Buenos Aires, Argentina.
- **Major Provisions:**
 - Promoting the freedom of scientific research.
 - Countries can use the continent only for peaceful purposes.
 - Prohibition of military activities, nuclear tests and the disposal of radioactive waste.
 - Neutralising territorial sovereignty, this means a limit was placed on making any new claim or enlargement of an existing claim.
 - It put a freeze on any disputes between claimants over their territories on the continent.

About Indian Antarctic Programme

- It is a scientific research and exploration program under the **National Centre for Antarctic and Ocean Research (NCPOR)**.
- It started in 1981 when the first Indian expedition to Antarctica was made.
- **Dakshin Gangotri:** First Indian scientific research base station established in Antarctica
- **Maitri:** India's second permanent research station in Antarctica. It is situated on the rocky mountainous region called Schirmacher Oasis. India also built a freshwater lake around Maitri known as Lake Priyadarshini.

- **Bharti:** India's latest research station operation since 2012. It is India's first committed research facility.
- **Sagar Nidhi:** In 2008, India commissioned the Sagar Nidhi, for research. An ice-class vessel, it can cut through the thin ice of 40 cm depth and is the first Indian vessel to navigate Antarctic waters.

G20 Labour and Employment Ministers' Meeting

Part of: GS Prelims and GS III - International Relations

In news

- Recently, the Union Minister for Labour and Employment has said that India is making collective efforts to reduce gender gaps in labour force participation.
 - He was delivering the Ministerial Address on Declaration and Employment Working Group Priorities at [G20 Labour and Employment Ministers' Meeting](#).
 - The Employment Working Group deliberated upon key issues, including women employment, social security and remote working.

Initiatives Highlighted by India

- **Educational and Skilling Efforts:**
 - India is strengthening its educational and skilling efforts to ensure quality education from preschool to senior secondary stage through [national Educational Policy, 2020](#).
- **National Skill Development Mission:** Aims to create convergence across sectors and States in terms of skill training activities.
- [Pradhan Mantri Kaushal Vikas Yojana](#): Enables the youth to take up industry related skill training to assist them in securing better opportunities.
- **New Code on Wages, 2019:** India will reduce gender-based discrimination in wages, recruitment and conditions of employment.
- [Pradhan Mantri Mudra Yojana](#): It provides financial support to women entrepreneurs to start small enterprises. There are around 70% of women in this scheme.

The G20 Roadmap Towards and Beyond the Brisbane Target has been set as

- Increasing the quantity and quality of women's employment.
- Ensuring equal opportunities and achieving better outcomes in the labour market.
- Promoting a more balanced distribution of paid and unpaid work between women and men.
- Addressing discrimination and gender stereotypes in the labour market.

Exercise Sea Breeze

Part of: GS Prelims and GS II - International Relations

In news

- Ukraine and USA launched joint naval Exercise 'Sea Breeze' in the Black Sea to show Western cooperation with Ukraine as it faces off with Russia.
 - The exercise Sea Breeze has been held since 1997, involving NATO states and their allies.
 - This edition (2021) will be the largest in Exercise's history that will involve some 5,000 military personnel from more than 30 countries.

Aim of the Exercise

- Improving naval and land operations
- Improving cooperation among participating countries.

- Sending a powerful message to maintain stability and peace in the region.

Significance of Black Sea for Russia

- The unique geography of the Black Sea region provides several geopolitical advantages to Russia
 - Russia has always wanted to control the region.
- It is an important crossroads and strategic intersection for the entire region.
- Its Access greatly enhances the projection of power into several adjacent regions.
- The region is an important transit corridor for goods and energy.
- It is rich in cultural and ethnic diversity, and shares close historical ties with Russia.

INDIA AND THE WORLD

BRICS | The coming together of the powerful five

Origin of BRICS

- **BRICS was not invented by any of its members.** In 2001, Goldman Sachs' Jim O'Neill authored a paper called "Building Better Global Economic BRICs", pointing out that future GDP growth in the world would come from China, India, Russia and Brazil.
- Significantly, the paper **didn't recommend a separate grouping** for them, but made the case that [the G-7](#) should include them
- Common ground for the members was built by ensuring that **no bilateral issues** were brought up in the forum.

Issues with BRICS

- **Lacks Focus:** Despite being formed in 2006, the group still mystifies all and lacks focus.
- **Little in Common:** Started as an alternate grouping of emerging economies that could challenge the post-War world order, it has been criticised as a rag-tag band of disparate countries across four continents with little in common
- **Russia-China Axis:** Ties between countries such as Russia and China are growing at a much strong pace than the group's own cohesion
- **Long Term Investor Sentiment is dim** for the group due to following reasons:
 - **China's** decision to launch the trillion-dollar [Belt and Road Initiative](#) in 2017 was opposed by India, and even Russia did not join
 - **South Africa's** debt-laden economy and negative current account has led some to predict an economic collapse in the next decade.
 - **Brazil's** poor handling during the Covid-19 crisis has ranked it amongst the world's worst-affected countries and its recovery is expected to be delayed.
 - **India's economic slowdown** was a concern even before Covid-19 hit, and government policies like "Aatmanirbhar" were seen as a plan to turn inward.
 - There are concerns about **aggressions from China** in the South China Sea, the border with India and internally in Hongkong and Xinjiang.

Achievements of BRICS

- **Regular Summits:** All the contradictions and criticism notwithstanding, BRICS is an idea that has endured two decades, an idea its members remain committed to, and not one has skipped the annual summits held since 2009.
- **Alternative to World Bank:** BRICS has created the [New Development Bank \(NDB\)](#) set up with an initial capital of \$100 billion

- **BRICS Contingent Reserve** Arrangement fund to deal with global liquidity crunches.
- **BRICS payment system** proposing to be an alternative to the SWIFT payment system.
- **Stand on Geopolitical Events:** While its foundation was economic, BRICS statements have always been deeply political, calling for more inclusion in the multilateral world order, decrying U.S.-Europe backed military interventions, and expressing an independent line on several world events from Afghanistan to West Asia.
- BRICS countries move ahead on a “**BRICS Vaccine Centre**”, proposed to be based in Johannesburg, given that at least three members — Russia India and China — have manufactured a substantial chunk of all globally authorised vaccines.
- BRICS has repeatedly **called for reforming multilateral institutions**, including the UN and the UNSC, International Monetary Fund and World Bank and the World Trade Organization.
- BRICS supported negotiations at the **WTO for the [waiver of trade-related intellectual property rights \(TRIPs\)](#)** for vaccines and medicines to tackle the Coronavirus pandemic.

Conclusion

It is still possible that the BRIC grouping could become as large as the G7 within the next generation. If international trade, investment, and financial flows between the BRIC countries and the rest of the world continue, this level of growth would be good for everyone.

Connecting the dots

- [Takeaway from 12th BRICS Summit](#)
- [Shanghai Cooperation Organisation](#)
- Future of SAARC and BIMSTEC
- India's Non-Alignment Policy in the times of increasing Polarisation in world

G-7 and India

Context: At the invitation of UK Prime Minister Boris Johnson, Prime Minister Narendra Modi will participate in the Outreach Sessions of the [G7](#) Summit on June 12 and June 13, in virtual format.

The UK currently holds the presidency of the G7 and has invited India, along with Australia, Republic of Korea and South Africa, as guest countries for the Summit.

About G-7

- The [G7](#) comprises the US, UK, France, Germany, Italy, Canada and Japan.
- It is an intergovernmental organisation that was formed in **1975**.
- The bloc meets annually to discuss issues of common interest like global economic governance, international security and energy policy.
- The [G-7](#) does not have a formal constitution or a fixed headquarters. The decisions taken by leaders during annual summits are non-binding.
- The G7 was known as the 'G8' for several years after the original seven were joined by Russia in 1997. The Group returned to being called G7 after Russia was expelled as a member in 2014 following the latter's annexation of the Crimea region of Ukraine

What is on the agenda of G-7 this year?

The theme for the summit is 'Build Back Better' and the UK has outlined four priority areas for its presidency. These are

- Leading the global recovery from coronavirus while strengthening resilience against future pandemics;
- Promoting future prosperity by championing free and fair trade;

- Tackling climate change and preserving the planet's biodiversity;
- Championing shared values and open societies.

Is India attending it for the first time?

- Since 2014, this is the second time PM Modi will be participating in a G7 meeting.
- During Prime Minister Manmohan Singh's UPA rule, India attended the G8 five times.
- In 2020, US under President Donald Trump had extended an invitation to India.
- Calling the G7 a "very outdated group" Trump had suggested that the Group of 7 be called "G10 or G11" by including India, Australia, South Korea and Russia. That, however, did not happen owing to the pandemic and the US elections' outcome.

What to watch out for at this G-7 summit?

- **Break from Trump's America First Policy:** This will be US President Joe Biden's first visit to Europe, where he will signal his key message "America is back". This will be a shift from Trump's American First Policy where US withdrew from Global leadership roles.
- **US realignment with Russia:** After meeting allies at the G7 summit US President Biden continue on to a NATO conclave in Brussels on June 14, before his conversation with Russian President Vladimir Putin in Geneva later.
- **Strategic Rival in China:** The key element that is making Washington take the important step of engaging with Moscow to contain the damage in their bilateral ties is that the US wants to focus on its strategic rival, China.
- **Reviving Multilateralism:** This ties in well with the US President's initial foray into multilateralism — he held the first summit of leaders of "the Quad" — Australia, India, Japan and the US. This is considered as contrast to Trump's style of dealing bilaterally.
- **Post COVID Economic Recovery:** The Group of Seven might make a further joint declaration on "a comprehensive plan to help end this pandemic as rapidly as possible".
- **Global Vaccination:** Biden will announce a major new initiative to vaccinate the world against Covid-19 ahead of the G7 summit. According to US media reports, the Biden administration is set to buy 500 million doses of the Pfizer/BioNTech vaccine for international distribution. Doses will be aimed at developing countries.

What's in it for India?

- **Tackling China:** With an assertive China looming, the US is calling all like-minded countries to partner in dealing with Beijing. If US and UK want to take the leap forward and constitute a global democratic alliance of 10-11 countries, it will be an important signal.
- **Vaccine Shortage:** As India faces a massive shortage of vaccines, Delhi will be watching the allocation announced by the US President very carefully. Recently, the US had said that it will distribute vaccines to India as part of its "strategy for global vaccine sharing"
- **Russia:** On Washington's rapprochement with Moscow, New Delhi will be extremely relieved as the US can then focus on China. This will relieve some tension that are built into India-Russia relationship due to US rivalry with Russia.

Connecting the dots

- [India and G-11](#) – Critical Analysis
- [G-20](#)
- OECD
- [FATE](#)

[India-China relations, a year after Galwan](#)

Context: Defence Minister on June 12 approved a revised policy on how India compiles, archives and disseminates its war documents and related history.

As per the new policy,

- Once an operation/war is completed, the first cut of history is to be prepared and disseminated for internal circulation **within five years**.
- Whether this first draft of history is to be placed in the public domain or not, will be determined on a **case by case basis**, depending on the sensitivity of the operation/war.
- Predictably, the Henderson **Brooks-Bhagat report relating to the 1962 war** with China, which is still under wraps, will not be part of the new policy. Apparently, another committee will take a view on previous wars.

A year after [Galwan Incident](#)

Carefully shaped narratives about the military defending national sovereignty and territorial integrity are crucial for any political leadership — authoritarian or democratic — and Galwan has special salience for both China and India.

- India has interpreted Galwan as a case of **Chinese aggressiveness** and places the onus on Beijing to restore the status quo.
- In China, the incident is being projected as a case of guarding the border and defending the motherland. The incident has been used to stoke pride in military and **muscular nationalism** domestically.
- **India's narrative about Galwan remains opaque** and there has been no detailed official statement from the Ministry of Defence on the current tactical situation in Ladakh.

Way Ahead

- The Galwan anniversary should encourage the government to set up an independent **panel of experts to review the institutional lapses** that led to an altered LoAC in the Ladakh sector.
- Concurrently, Delhi will need to objectively review and **anticipate what the PLA may embark upon next**.
- The incident should encourage government to craft affordable and effective long-term strategic/security policies that are **not clouded by political compulsions**.

Connecting the dots:

- [India-China Border flare-up](#)
- [Galwan Valley Clashes in 2020](#)
- [US Report on Galwan](#)
- [Galwan: Postscript to a tragedy](#)
- China's Belt & Road Initiative

[India extends \\$100 mn loan to Sri Lanka for Solar Energy Projects](#)

Part of: GS Prelims and GS II - GS -II – International relations

In news

- Recently, India has signed an agreement extending a USD 100 million Line of Credit (LOC) to Sri Lanka for Solar Energy projects.
 - The LOC is for a period of 20 years, with an interest of 1.75%.
 - It was signed between the Government of Sri Lanka and the Export-Import (EXIM) Bank of India.

- EXIM Bank is a specialized financial institution, wholly owned by the Government of India.
- LOC will help Financing various projects in Sri Lanka's solar energy sector

India's Initiatives for Global Cooperation Solar Energy

- [International Solar Alliance \(ISA\):](#)
 - Launched by the Indian Prime Minister and the French President in 2015
 - **ISA' vision:** To enable One World, One Sun, One Grid (OSOWOG).
- [One Sun, One World, One Grid \(OSOWOG\):](#)
 - **Focus:** A framework for facilitating global cooperation, building a global ecosystem of interconnected renewable energy resources (mainly solar energy) that can be smoothly shared.

Schemes for Promoting Solar Energy in India

- Recently, India achieved **5th global position in solar power deployment** by surpassing Italy.
- **National Solar Mission** aims to establish India as a global leader in solar energy by creating the policy conditions for its deployment across the country.
- **Rooftop Solar Scheme:** To generate solar power by installing solar panels on the roof of the houses
- [Production-linked Incentive \(PLI\) scheme to promote manufacturing of high efficiency solar PV modules](#) in India.

ECONOMY

[India's GDP contracts by 7.3%](#)

Part of: GS Prelims and GS -III - Economy

In news

- India's Gross Domestic Product (GDP) contracted by 7.3% in 2020-21, as per report released by the Central Statistical Office.
- GDP growth in 2019-20, prior to the COVID-19 pandemic, was 4%.

Key takeaways

- The Gross Value Added (GVA) in the economy also shrank 6.2% in 2020-21, compared to a 4.1% rise in the previous year.
- **Sharpest decline:** Trade, hotels, transport, communication and broadcasting-related services (-18.2%), followed by construction (-8.6%), mining and quarrying (-8.5%) and manufacturing (-7.2%).

Important value additions

- **Gross domestic product (GDP)** is a monetary measure of the market value of all the final goods and services produced in a specific time period.
- In economics, **gross value added (GVA)** is the measure of the value of goods and services produced in an area, industry or sector of an economy.

[World Milk Day observed](#)

Part of: GS Prelims and GS -III - Economy

In news

- A virtual program organised on the occasion of World Milk Day was chaired by Union Minister for Fisheries, Animal Husbandry & Dairying.
- 1st June is observed as World Milk Day every year.

Key takeaways

- On the occasion, the launch of Gopal Ratna Awards were announced.
- E-Gopala App will be integrated with [UMANG](#) platform and users of Umang platform will get access to App.
- e-GOPALA app (Generation of wealth through Productive Livestock) is a comprehensive breed improvement marketplace and information portal for direct use of farmers.

Important value additions

Milk sector in India

- India is the world's largest milk producer and accounts for over one-fifth of the global milk production.
- **Other major producers:** USA, China, Pakistan and Brazil.
- Value of output of milk is more than the value of output of wheat and paddy together

[Initiatives launched to provide major fillip to the SATAT initiative](#)

Part of: GS Prelims and GS -III - Economy

In news

- Union Minister of Petroleum & Natural Gas launched a number of initiatives to provide major fillip to the [SATAT initiative](#) in a virtual ceremony.

Important value additions

- **Aim of SATAT scheme:** To set up Compressed Bio-Gas (CBG) production plants and make CBG available in the market for use as a green fuel.
- 'SATAT' aims to target production of 15 MMT of CBG from 5000 plants by 2023.
- It has the potential to boost availability of affordable transport fuels, better use of agricultural residue, cattle dung and municipal solid waste.
- It will also provide an investment of 1.75 lakh crore, an additional revenue source to farmers, and 75,000 direct job opportunities and lakhs of indirect jobs.

[RDSO becomes first Institution to be declared SDO](#)

Part of: GS Prelims and GS-III - Economy

In news

- RDSO (Research Design & Standards Organization) of Indian Railways has become the FIRST Institution to be declared Standard Development Organisation (SDO) under "One Nation One Standard" mission of BIS (Bureau of Indian Standards)

Key takeaways

- Bureau of Indian Standards (BIS), which is the National Standards Body, has launched a scheme which provides for "Recognition of SDO" to attain "One Nation One Standard" vision of Government of India.
- **Aim of the scheme:** Aggregating and integrating the existing capabilities and dedicated domain specific expertise of various organizations in India which are engaged in standards development in their specific sectors.

- It will also enable convergence of all standard development activities resulting in “One National Standard for One Subject”.
- Research Designs & Standards Organization (RDSO), Lucknow, is the only Research & Development Wing of Ministry of Railways.

India's GDP fall

Context: India's [Gross Domestic Product \(GDP\) contracted](#) by 7.3% in 2020-21. Between the early 1990s until the pandemic hit the country, India grew at an average of around 7% every year.

There are two ways to view this contraction in GDP.

- One is to look at this as an outlier — after all, India, like most other countries, is facing a once-in-a-century pandemic.
- The other way would be to look at this contraction in the context of what has been happening to the Indian economy over the last decade — and more precisely over the last seven years

Perhaps the best way to arrive at such a conclusion is to look at the so-called fundamentals of the economy.

Gross Domestic Product	<ul style="list-style-type: none"> • After the decline in the wake of the Global Financial Crisis, the Indian economy started its recovery in March 2013 • This recovery turned into a secular deceleration of growth since the third quarter (October to December) of 2016-17. • The GDP growth rate steadily fell from over 8% in FY17 to about 4% in FY20, just before Covid-19 hit the country. • Demonetisation on November 8, 2016 is seen by many experts as the trigger that set India's growth into a downward spiral. • India's GDP growth pattern resembled an “inverted V” even before Covid-19 hit the economy.
GDP per capita (GDP divided by the total population)	<ul style="list-style-type: none"> • As the red curve in Chart 3 (above) shows, at a level of Rs 99,700, India's GDP per capita is now what it used to be in 2016-17 — the year when the slide started. • As a result, India has been losing out to other countries. A case in point is how even Bangladesh has overtaken India in per-capita-GDP terms
Unemployment rate	<ul style="list-style-type: none"> • This is the metric on which India has possibly performed the worst. • Unemployment was at a 45-year high in 2017-18 — the year after demonetisation and the one that saw the introduction of GST. • Then in 2019 came the news that between 2012 and 2018, the total number of employed people fell by 9 million — the first such instance of total employment declining in independent India's history. • As against the norm of an unemployment rate of 2%-3%, India started routinely witnessing unemployment rates close to 6%-7% in the years leading up to Covid-19. The pandemic, of course, made matters considerably worse.

Inflation rate	<ul style="list-style-type: none"> • After staying close to the \$110-a-barrel mark throughout 2011 to 2014, oil prices (India basket) fell rapidly to just \$85 in 2015 and further to below (or around) \$50 in 2017 and 2018. This fall allowed government to tame the high retail inflation in the country. • But since the last quarter of 2019, India has been facing persistently high retail inflation. Even the demand destruction due to lockdowns induced by Covid-19 in 2020 could not extinguish the inflationary surge • Going forward, inflation is a big worry for India.
Fiscal deficit	<ul style="list-style-type: none"> • On paper, India's fiscal deficit levels were just a tad more than the norms set, but, in reality, even before Covid-19 • In the Union Budget for the current financial year, the government conceded that it had been underreporting the fiscal deficit by almost 2% of India's GDP.
Rupee vs dollar	<ul style="list-style-type: none"> • A US dollar was worth Rs 59 in 2014. Seven years later, it is closer to Rs 73. • The relative weakness of the rupee reflects the reduced purchasing power of the Indian currency.

What's the outlook on growth?

- The biggest engine for growth in India is the expenditure by common people in their private capacity. This "demand" for goods accounts for 55% of all GDP.
- In Chart 3, the blue curve shows the per capita level of this private consumption expenditure, which has fallen to levels last seen in 2016-17. This means if the government does not help, India's GDP may not revert to the pre-Covid trajectory for several years to come.
- It is for this reason that the latest GDP should not be viewed as an exception

Connecting the dots

- [India needs a Fiscal Council](#)

[Indian Economic challenges](#)

Context: According to NSO's provisional estimates for 2020-21, the annual contraction in real GDP turned out to be 7.3 per cent, an improvement over the earlier estimate of 8 per cent.

Economic Projections

- A real GDP growth of 7.8 per cent would be required in 2021-22 to reach back to 2019-20 real GDP levels.
- It is estimated that with suitable policy interventions, a 9 per cent real GDP growth may still be feasible if the lockdowns wind-up by end July.
- The Controller General of Accounts' data for the Centre's fiscal aggregates indicate a gross tax revenues (GTR) of Rs 20.2 lakh crore and net tax revenue of Rs 14.2 lakh crore for 2020-21.
- The projected gross and net tax revenues for 2021-22 would mean Rs 22.7 lakh crore and Rs 15.8 lakh crore respectively.
- Taking into account RBI's recently announced dividend of Rs 0.99 lakh crore to the Centre, the main shortfall may be in non-debt capital receipts. Together, the overall **shortfall in total non-**

debt receipts may be limited to about Rs 0.9 lakh crore or 0.4 per cent of estimated nominal GDP.

What expenditure should be prioritised?

Given the economic challenges in the wake of the second wave, three expenditure heads need to be prioritised.

- First, an increase in the provision for **income support measures** for the vulnerable rural and urban population. This would require an amount of Rs 1 lakh crore which may be partly provided through expenditure restructuring.
- Second, in light of the recent decision, the budgeted [expenditure on vaccination](#) of Rs 0.35 lakh crore ought to be augmented, at the very least, doubled.
- Third, additional **capital expenditure for select sectors**, particularly healthcare, should also be provided for. This may be another Rs 1 lakh crore.

Together these additional expenditures would amount to Rs **1.7 lakh crore**, about 0.8 per cent of the estimated nominal GDP.

What will the impact of all these on fiscal deficit?

- Thus, we need to plan for a **fiscal deficit of about 7.9 per cent of GDP** consisting of
 - (a) a budgeted fiscal deficit of 6.7 per cent
 - (b) 0.4 per cent to make up for the shortfall in total non-debt receipts and
 - (c) 0.8 per cent for the additional stimulus measures.
- Given the higher fiscal deficit, it would need to **add to its borrowing programme** another Rs 2.6 lakh crore, taking the total borrowing, including GST compensation, to about Rs 16.3 lakh crore, from Rs 12.05 lakh crore now.

Way Ahead

- The success of the borrowing programme of the Centre depends on the **support provided by the RBI**.
- The support need not be direct. It can be indirect as is currently happening with RBI **injecting liquidity** into the system in a big way.
- The injection of liquidity has its limits. Even as we emphasise the expansion in government spending, it is necessary to keep in mind the implications that liquidity expansion will have for **inflation**.

Connecting the dots

- [Union Budget 2021-21](#)
- [Recession in India](#)
- [Economic Survey 2021](#)

Cryptocurrency and RBI

Context: Days after some leading banks cautioned people against dealing in cryptocurrencies, the Reserve Bank of India (RBI) said banks cannot cite its April 2018 order on virtual currencies – that had banned them - as it has been set aside by the Supreme Court of India in 2020.

How do Cryptocurrencies work?

- Cryptocurrencies work using a technology called blockchain. Blockchain is a decentralized technology spread across many computers that manages and records transactions.

- So, instead of relying on traditional financial institutions like RBI who verify and guarantee your transactions, cryptocurrency transactions are verified by the user's computers logged into the currency's network.
- Cryptocurrency mining is the process in which transactions between users are verified and added to the blockchain public ledger.
- The process of mining is also responsible for introducing new coins into the existing circulating supply and is one of the key elements that allow cryptocurrencies to work as a peer-to-peer decentralized network, without the need for a third party central authority.

Concerns with Cryptocurrencies

- Extreme volatility
- It isn't backed up by a sovereign state and a public institution like a central bank
- Regulatory authorities have expressed concerns of these being used as instruments for illicit activities, including money laundering and terror funding.
- Anxiety among investors about the regulatory uncertainties plaguing India's position on cryptocurrency. Indian investors are said to hold some Rs 10,000 crore in digital currency already.

Implication of RBI's clarification: Relief to investors of cryptocurrencies

- As many Indians have invested in cryptocurrencies like Bitcoin and Ethereum, the RBI move will be a big respite for them and their money – estimated to be around Rs 10,000 crore — won't be blocked.
- Also, banks can't take action against investors in virtual currencies following the court and RBI directives.

What's the RBI's position?

- The RBI's 2018 position was more restrictive. The RBI had said regulated entities which already provide such services should exit the relationship within three months from the date of the circular.
- RBI Governor said recently that "Central bank digital currency is a work in progress. The RBI team is working on it, technology side and procedural side... how it will be launched and rolled out,"

Connecting the dots

- [Blockchain Technology](#)
- [China's Digital Currency](#)

[Emergency Credit Line Guarantee Scheme \(ECLGS\) 4.0](#)

Part of: GS Prelims and GS -III - Economy

In news

- Government has increased the scope of the Emergency [Credit Line Guarantee Scheme \(ECLGS\)](#) for three more months.
- **Why was it extended?**
 - To help businesses across several sectors affected by the second [wave of COVID 19](#).

About ECLGS 4.0

- **100% guarantee cover** to be provided on loans, in hospitals/nursing clinics/medical colleges/homes, up to Rs.2 crore.
- Loan can be utilized to **set up on-site oxygen generation plants**.

- **Civil Aviation sector** will be **eligible** under ECLGS 3.0.
- **Validity** of ECLGS extended to Sept 30 2021 or till guarantees for ₹3 trillion are issues

Significance of the move

- ECLGS 4.0 will **enhance the utility and impact** of ECLGS by providing additional support to MSMEs.
- It will **safeguard livelihoods**.
- It will help in the **resumption of business activity**.
- It will facilitate **flow of institutional credit** at reasonable terms.

Important value additions

Emergency Credit Line Guarantee Scheme (ECLGS)

- ECLGS was launched **under Atmanirbhar Bharat Abhiyan** in May 2020.
- **Objective:** To overcome the distress caused on economy due to lockdown.
- It helped different sectors by providing credit to them.
- Credit was provided to them for four years besides one year moratorium period on principled repayment.

Kerala retains top rank in SDG India Index 2020-21, Bihar worst performer

Part of: GS Prelims and GS -II - Development; Governance

In news

- **Sustainable Development Goals (SDG) India Index 2020-21** was recently released.
- **Launched by:** NITI Aayog
- **The SDG India Index** was developed in collaboration with the Ministry of Statistics & Programme Implementation (MoSPI), Global Green Growth Institute and United Nations in India.
- **Kerala** has retained the **top rank**, while **Bihar** was ranked as the **worst performer**.

Key takeaways

- **Second best performers:** Himachal Pradesh and Tamil Nadu
- **Worst performing States besides Bihar:** Jharkhand and Assam

Why does the index matter?

- It is a **primary tool for monitoring progress** on the SDGs in India
- The index has been **successful** as an advocacy tool to **propagate sustainability, resilience, and partnerships**.

Important value additions

The Sustainable Development Goals or Global Goals

- They are a collection of 17 interlinked global goals.
- They are designed to be a "blueprint to achieve a better and more sustainable future for all".
- **Set up in 2015**
- **Set up by** United Nations General Assembly
- **Target to achieve the goals:** 2030.

Centre asks States to split wage payments under MGNREGA scheme into separate categories

Part of: GS Prelims and GS-III - Economy

In news

- The Centre has asked the States to split wage payments under the [Mahatma Gandhi National Rural Employment Guarantee Act \(MGNREGA\)](#) scheme into separate categories for Scheduled Castes, Scheduled Tribes and others from this financial year.
- Separate budget heads shall also be provided by the Government for SC and ST categories
- Funds shall be allocated according to job cards provided for SC and ST beneficiaries.

Issues with the order

- This will unnecessarily **complicate** the payment system,
- It may also lead to a **reduction in scheme funding**.

Important value additions**About MGNREGA**

- Mahatma Gandhi National Rural Employment Guarantee Act (NREGA) was **notified** in 2005.
- **Goal** – To improve the livelihood security of people in rural areas.
- It is a universal scheme **guaranteeing 100 days of wage employment** in a year to **every rural household** that expresses a demand.
- The **failure of provision** for employment **within 15 days** of the receipt of job application will result in the **payment of unemployment allowance** to the job seekers.
- Employment is **to be provided within 5 km of an applicant's residence**
- Employment under MGNREGA is a **legal entitlement**.

Oil Price Rise

Context: Crude oil prices have hit a two-year high with Brent crude rising above the \$71 per barrel mark.

Why are crude oil prices rising?

- **Economic recovery:** Crude oil prices have been rising steadily since the beginning of 2021 when Brent Crude was trading at about \$52 per barrel buoyed both by hopes of improving demand due to economic recoveries across geographies.
- **Supply cuts by key oil-producing countries:** The [Organisation of Petroleum Exporting Countries](#) extended supply cuts made in 2020 when crude oil prices had reached a low of under \$19 per barrel through the first five months of 2021. Saudi Arabia notably made an additional voluntary production cut of 1 million barrels per day between February and April.
- **No impact of Iran relief:** A potential breakthrough in international efforts for a new [Iran nuclear deal](#) which would see international sanctions on Iranian oil removed would also not have a major impact on oil prices according to OPEC. Any increase in crude oil production from Iran would happen gradually and would not destabilise crude oil prices.

How are high crude oil prices impact India?

- **Inflation:** The prices of petrol & diesel are set to rise further unless there is a cut on levies on autotuels or a fall in crude oil prices. These rising prices will feed into transport costs of goods & services thus causing inflation.
- State and central taxes account for about 58 per cent of the pump price of petrol and 52 per cent of the pump price of diesel in the national capital.

Connecting the dots

- 2020 [Oil Market meltdown](#)
- [India's GDP fall](#)
- Strategic Oil Reserves in India

Global Economic Prospects Report by World Bank

Part of: GS Prelims and GS -III - Economy

In news

- Recently, the World Bank has released its June 2021 Global Economic Prospects
- It has forecast India's GDP growth to be **8.3% for the year 2021-22**.
- India's economy is expected to grow at **7.5% for 2022-23** and **6.5% for 2023-24**.

Key findings of the report

- The world economy is expected to expand at 5.6%, the fastest post-recession growth rate in eighty years.
- However, global output will still be 2% below pre-pandemic projections by year-end.
- India's recovery is being hampered by the largest outbreak of any country since the beginning of the pandemic.
- The forecast for FY22 (8.3%) takes into account expected economic damage from an enormous second Covid-19 wave and localised mobility restrictions since March 2021.
- For 2022-23, growth is expected to slow to 7.5% as a result of the pandemic's effects on the financial position of households, companies and banks.

Suggestions by the report

- Globally coordinated efforts are essential to **accelerate vaccine distribution** and **debt relief**, particularly for low-income countries.
- Policymakers need to **address the pandemic's lasting effects**.
 - They need to take steps to **stimulate green, resilient, and inclusive growth**.

Major Reports by the World Bank

- [Ease of Doing Business](#).
- Human Capital Index.
- World Development Report.
- Migration and Development Brief.
- Global Economic Prospects.

India's Agriculture Trade Summary for 2020-21

Part of: GS Prelims and GS III - Economy

In news

- After remaining stagnant for the past three years, the **export** of agriculture and allied products during 2020-21 **jumped** to \$ 41.25 billion, indicating an **increase of 17.34%**.
- **Largest markets for India's agriculture products:** USA, China, Bangladesh, UAE, Vietnam, Saudi Arabia, Indonesia, Nepal, Iran and Malaysia.
- **Key agricultural commodities exported:** Marine products, rice, buffalo meat, spices etc.
- The organic exports during 2020-21 registered a growth of 50.94%.
- **Organic exports include:** Oil cake/ meals, oil seeds, cereals and millets, spices and condiments, tea, medicinal plant products, dry fruits, sugar, pulses, coffee etc.

The growth is attributed mainly to:

- Opportunities offered due to Covid-19 offered like sharp rise in global commodity prices.
- Various programmes emerging from Agriculture Export Policy, 2018
- **Improved market access:** India has recently gained market access for pomegranate in Australia; mango and basmati rice in Argentina
- Capturing of new markets in foreign countries

- Adherence to European Union norms
- GI tag to domestic products for recognition in international market

World Competitiveness Index 2021

Part of: GS Prelims and GS -III - Economy

In news

- According to the World Competitiveness Yearbook (WCY), **India maintained 43rd rank** on the annual World Competitiveness Index.
 - The World Competitiveness Index is a **comprehensive annual** report on the competitiveness of countries.
- **Compiled by:** Institute for Management Development (IMD).
- It examined the impact of COVID-19 on economies around the world this year.
- It measures the prosperity and competitiveness of countries by examining four factors (334 competitiveness criteria):
 - Economic performance
 - Government efficiency
 - Business efficiency
 - Infrastructure

Key analysis by the report

- Many Countries succeeded in transitioning to a remote work routine while also allowing remote learning.
- Addressing unemployment has been fundamental.

Rankings

- **Top countries:** Switzerland (1st), Sweden (2nd), Denmark (3rd), the Netherlands (4th).
- **The top-performing Asian economies:** Singapore (5th), Hong Kong (7th), Taiwan (8th) and China (16th).

India's Performance

- India has maintained its position for the past three years.
- This year, it had significant improvements in government efficiency
- **India performed better** in investments in telecoms (1st), mobile telephone costs (1st), ICT services exports (3rd), remuneration in services professions (4th) and terms of trade index (5th).
- India's Performance was worst in broadband subscribers (64th), exposure to particulate pollution (64th), human development index (64th), GDP per capita (63rd)

Recent Steps Taken by India to Increase its Competitiveness

- Introduction of various [Production-Linked Incentive \(PLI\) Schemes](#)
- The five pillars of '[Atmanirbhar Bharat Abhiyan](#)' are - Economy, Infrastructure, System, Vibrant Demography and Demand.

FDI Inflows

Context: India has attracted highest ever total FDI inflow of U.S.\$81.72 billion during the financial year 2020-21 (10% above FY2019-20). RBI reported that equity component of inflows was over U.S.\$61.4 billion.

Positive

- Rising FDI inflows into India is at times where Global FDI inflows in 2020 had declined by 42% over the level in 2019, and inflows to developing countries had fallen by 12%

Concerns

- **Jio Deal:** Data shows that three Reliance Group companies together received U.S.\$27.8 billion or, 54.1% of the total equity inflows during the three quarters of FY2020-21.
- **Concentration in distribution:** Without the top five FDI deals, FDI inflows during 2020-21 would have declined by about a third of their level a year ago.
- **Lacks Creation of Productive assets:** The nature of the bulk of the “investments” involved a mere transfer of shares without creating productive assets in the country. Thus, FDI can’t contribute much to the revival of economy.
- **Inadequate Investment in Manufacturing sector:** This sector received just 17.4% of the total inflows during 2020-21 in contrast to Service sector attracting 80% of total inflows.

Conclusion

Going forward, the pipeline of FDI for 2021-22 could be supported by the thrust given to PLI and domestic growth prospects.

Connecting the dots

- [Production Linked Incentive Scheme](#)
- [Recession in Indian Economy](#)
- [Economic Survey](#)

Federal Reserve signals and Indian markets

Context: US Federal Reserve indicated that there could be two rate hikes by 2023.

After this announcement, in India, the benchmark Sensex fell marginally and the rupee lost over 1% against the dollar

What did the Federal Reserve say?

- US Federal Reserve maintained that they would continue with an accommodative monetary policy and bond buying programme to support the economy, generate employment and achieve inflation of around 2%.
- At the same time, they discussed the **rate hike** and an **eventual reduction, or tapering**, of the central bank’s bond buying programme. This was a deviation from its March announcement.
 - In March 2021, the Fed signalled that they would hold the rates near zero through 2023.
- Some members were also in favour of raising rates at least once in 2022.
- The Federal Reserve noted that the progress on vaccinations has reduced the spread of Covid-19 in USA and with strong policy support the fundamentals of the economy has strengthened necessitating rate hike.

How did the markets react?

- A hike in interest rates in the US has a bearing on the debt and equity markets, not just in the US but also in emerging economies.
 - India had witnessed record foreign portfolio investments (FPI) over the last one year due to easy monetary policy of US Federal Reserve. Investors could get easy loans & pump it into emerging markets for quick returns.
- After the Fed’s signalling, the Dow Jones Industrial fell 265 points and the treasury yield rose from 1.498% to 1.569%.
- In India, the benchmark Sensex fell 461 points or 0.87% and the rupee lost 75 paise or 1% against the dollar.

What could be the impact of an early hike in interest rates?

- News of a hike in interest rate in the US leads not only to an **outflow of funds from equities into US treasury bonds**, but also to an outflow of funds from emerging economies to the US.
- The rupee is also expected to come under pressure as the dollar strengthens.
- After June witnessed **FPI inflows of Rs 14,500 crore into Indian capital markets**, it remains to be seen if there is a slowdown in the pace of inflow over the coming weeks and months

What are domestic concerns for India?

- Wholesale inflation has been rising for five months, and is expected to rise further as the impact of high crude prices and surging commodity prices feed in due to **weakened rupee**.
- Meanwhile, as there is no further scope for a rate cut by RBI, all eyes are on the **government for fiscal policy action** to spur growth.

Connecting the dots

- [Employment & recovery of Indian Economy](#)
- [Recession in India](#)

Demand for New Fiscal Stimulus

Context: Confederation of Indian Industry (CII) has urged the government should spend an additional Rs 3 lakh crore as fresh fiscal stimulus to boost demand in the economy.

It has also suggested where this money should be spent:

- Provide **direct cash transfers** to families with Jan Dhan bank accounts,
- To increase [MGNREGA](#) allocation and provide more job guarantees in rural India,

Why the repeated calls for fresh stimulus?

- The economic recovery is on the cards but in the absence of a fresh stimulus from the government the recovery could be quite slow.
- In sum, both production (or supply) and consumption (or demand) of goods and services are likely to be depressed in the coming period unless the government transfers money, one way or another, into the hands of the people.

Where will the additional Rs 3 lakh crore come from?

- The government's finances are already quite stretched. Fiscal deficit is already more than twice the norms set by FRBM Act.
- CII suggested that the government should ask the RBI to "expand its balance-sheet in order to accommodate the increased stimulus". In other words, it wants RBI to print Rs 3 lakh crore worth of new cash and give it to the government to spend.
- This printing of additional money is requested so that lending costs remain contained.
 - If government borrows money from market to fund the stimulus, then the resulting competition for money will rise the interest rates in the market, which is not preferred by Private sector looking for economic rebound.

Concerns with printing money

- Printing money can lead to inflation. India already has high inflation and, as such, this suggestion is problematic.
- Also, inflation hits the poor the hardest.
- Printing money can push governments to spend irresponsibly leading to poor fiscal situation & inefficient usage of money.

Are there any alternatives to printing more money?

There are several alternatives.

1. Compressing “pay ratios” in the corporate world

- The pay ratio of a firm (Ex: 5) is the ratio of the salary of the top-paid manager (Rs 25 lakhs) in the firm to the median salary (Rs 5 Lakhs) in the firm.
- Compressing Pay-ratio will put more money in the hands of workers thus increasing their purchasing powers & boosting demand.
- However, this measure is for the companies to decide and the government cannot do anything.

2. Wealth tax

- The total net worth of private individuals in India in 2018 was Rs 570 lakh crore
- Of this amount, the top 1% owns 58% or around Rs 330 lakh crore.
- A 2% tax on the wealth of just the top 1% would fetch Rs 6.6 lakh crore.

3. Inheritance Tax

- If we assume that every year 5% of the total wealth of this top startup gets transferred to their children, or other legatees, as inheritance, then even a modest taxation of one-third of such inheritance would fetch Rs 5.5 lakh crore

Connecting the dots

- [Atmanirbhar Bharat Abhiyan](#)
- [Economic Stimulus Package](#) under Atmanirbhar Bharat Abhiyan 3.0

Proposal to Ban ‘Flash sales’ on E-commerce Sites

Part of: GS Prelims and GS -III - E-commerce

In news

- The government proposed changes to the Consumer Protection (e-commerce) Rules 2020, banning all “flash sales” in order to monitor the deep discounts offered on e-commerce websites.

Rationale for Making Changes

- **Conventional flash sales** by third party sellers are **not banned** on e-commerce platforms but only the predatory ones.
- Small businesses complain of **misuse of market dominance and deep discounting** by e-commerce marketplaces such as Amazon and Flipkart.

Other Important Proposals

- The e-commerce sites are also directed to ensure **appointment of Chief Compliance Officer (CCO)** for 24x7 coordination with law enforcement agencies.
- These companies will also have to name a **resident grievance officer** who has to be a company employee and a citizen of India.
- To tackle growing concerns of preferential treatment, the new rules propose to ensure none of the related parties are allowed to use any consumer information for ‘unfair advantage’.
- The companies will also have to **identify goods based on their country of origin** and provide a filter mechanism at a pre-purchase stage for customers.
 - They will also have to offer alternatives to these imported goods to provide a “fair opportunity” to domestic sellers.
- In the event a seller **fails to deliver** a good or service, the **final liability** will fall on the e-commerce marketplace.

- E-commerce firms operating in India will also have to **register under the Department for Promotion of Industry and Internal Trade (DPIIT)**, under the Ministry of Commerce and Industry.

About E-Commerce

- [Electronic commerce](#) (e-commerce) is a business model that lets firms and individuals **buy and sell things over the Internet**.
- The Indian e-commerce market is expected to grow to USD 200 billion by 2026 from USD 38.5 billion in 2017 due to following reasons:
 - Rising smartphone penetration
 - The launch of 4G networks
 - Increasing consumer wealth
- It is expected to surpass the US to become the second-largest e-commerce market in the world by 2034.

New Draft Rules for E-Commerce Companies

Context: The government has proposed changes to the e-commerce rules under the Consumer Protection Act to make the framework under which firms operate more stringent.

Key Changes mooted are:

- **Commonalities with the IT intermediary rules:** The draft rules also stipulate the appointment of a chief compliance officer, a nodal contact person for 24x7 coordination with law enforcement agencies.
- **Fall-back liability:** Here, e-commerce firms will be held liable in case a seller on their platform fails to deliver goods or services due to negligent conduct, which causes loss to the customer. Earlier, the platform used to direct an aggrieved person to seller, now they will be able to reach out to the platform itself.
- **Fair platform:** The rules propose to restrict e-commerce companies from “manipulating search results or search indexes” so as to prevent preferential treatment to certain products.
- **Push for made-in-India products:** E-commerce entities offering imported goods or services to ‘incorporate a filter mechanism to identify goods based on country of origin and suggest alternatives to ensure a fair opportunity to domestic goods’.
- **Ban of “specific flash sales” by e-commerce entities:** While as per the draft rules, conventional e-commerce flash sales are not banned, specific flash sales or back-to-back sales “which limit customer choice, increase prices and prevents a level playing field are not allowed”.
- **Integration with Consumer Helpline:** The draft amendment also proposes to ask e-commerce firms to mandatorily become a part of the National Consumer Helpline

Other proposals

- Registration has also been made mandatory for all e-commerce players
- Any entity having 10 per cent or more common ultimate beneficial ownership will be considered an “associated enterprise” of an e-commerce platform.
- All entities must provide information within 72 hours on any request made by an authorised government agency probing any breach of law including cybersecurity issues.

Analysis of the draft rules

- **Greater Oversight by Government:** Following the enactment of [New IT Rules](#), the draft e-commerce amendments show the Government’s increasing keenness to exercise greater oversight over all online platforms.

- **Level playing field for offline retailers:** The deep-pocketed e-commerce companies have adopted deep discounting strategies to enhance their market share. This predatory business practices have hurt offline retailers. New rules aim to rectify this.

Concerns

- The enforcement of many of these norms is bound to spur protracted legal fights.
- Overregulation with scope for interpretative ambiguity risks retarding growth and job creation in the hitherto expanding e-commerce sector.

Connecting the dots

- [New IT rules](#)
- [Social Media Concerns](#)
- [Dominance of Big tech](#)
- Australia's [News Media Bargaining](#) Code

Increase in Direct Tax Collections

Part of: GS Prelims and GS-III - Economy

In news

- India's [direct tax](#) collections in the first two and a half months (April - June) of 2021-22 stand at nearly Rs. 1.86 lakh crore, which is double the collections over the same period of last year that was affected by the national lockdown.
 - It includes Corporation Tax collections and Personal Income Tax inflows.
- The increase in the direct tax collections is mainly attributed to healthy exports and a continuation of various industrial and construction activities.
 - It is expected that [GDP](#) will record a double-digit expansion in Quarter 1 of 2021-22.

About Direct Tax

- A direct tax is a tax that a person or organization pays directly to the entity that imposed it.
- An individual taxpayer, for example, pays direct taxes to the government for various purposes, including income tax, real property tax, personal property tax, or taxes on assets.

Government Initiatives to Improve Direct Taxes

- The Finance Act, 2020 has provided an option to individuals and co-operatives for paying income-tax at concessional rates if they do not avail specified exemption and incentive for Personal Income Tax
- [Vivad se Vishwas](#): Under Vivad se Vishwas, declarations for settling pending tax disputes are currently being filed.
 - This will benefit the Government by generating timely revenue and also to the taxpayers by bringing down mounting litigation costs.
- For widening the tax base, several new transactions were brought into the ambit of Tax Deduction at Source (TDS) and Tax Collection at Source (TCS).
 - These transactions include huge cash withdrawal, foreign remittance, purchase of luxury cars, e-commerce participants, sale of goods, acquisition of immovable property, etc.
- 'Transparent Taxation - Honoring The Honest' platform: It is aimed at bringing transparency in income tax systems and empowering taxpayers.

Consultative Document on Regulation of Microfinance by RBI

Part of: GS Prelims and GS -III - Economy

In news

- [RBI](#) has released a Consultative Document on Regulation of Microfinance.
- It is released for harmonising the regulatory frameworks for various regulated lenders in the microfinance space.
- It also said that all micro loans should be regulated by a common set of guidelines irrespective of who gives them.

The key proposals of the Consultative Document are

- A common definition of microfinance loans for all regulated entities.
- There would be **no ceiling prescribed for the interest rate**. There would be no **collateral allowed** for micro loans.
- Display of minimum, maximum and average interest rates charged on microfinance loans on the websites of regulated entities.

About MicroFinance Institution (MFI)

- Microfinance is a **form of financial service** which provides small loans and other financial services **to poor and low-income households**.
- **MFIs** are financial companies that provide small loans to people who do not have any access to banking facilities.
- In India, all loans that are below Rs. 1 lakh can be considered as microloans.
- The difference between an NBFC-MFI and other NBFC is that while other NBFCs can operate at a very high level, MFIs cater to only the smaller level of social strata, with need of smaller amounts as loans.

Enforcement Directorate transfers assets of Fugitive Economic Offenders

Part of: GS Prelims and GS -III - Money Laundering

In news

- The [Enforcement Directorate](#) has transferred assets worth Rs. 8,441.50 crore to public sector banks that suffered losses to the tune of Rs. 22,585.83 crore due to frauds committed allegedly by [Vijay Mallya](#), Nirav Modi and Mehul Choksi.
- All the three have been declared '[Fugitive Economic Offenders](#)' by PMLA (Prevention of Money Laundering Act) Court in Mumbai.

About Fugitive Economic Offenders Act, 2018

- It seeks to confiscate properties of economic offenders who have left the country to avoid facing criminal prosecution or refuse to return to the country to face prosecution.
- **Fugitive Economic Offender (FEO)**
 - A person against whom an arrest warrant has been issued for committing an offence listed in the Act and the value of the offence is at least Rs. 100 crore.
- Some of the offences listed in the act are:
 - Counterfeiting government stamps or currency.
 - Cheque dishonour.
 - Money laundering.
 - Transactions defrauding creditors.

About Prevention of Money Laundering Act (PMLA)

- Money laundering is punishable with rigorous imprisonment for a minimum of 3 years and a maximum of 7 years and Fine.
- The property is believed to be "proceeds of crime" and can be provisionally attached for 180 days.
- Such an order is required to be confirmed by an independent Adjudicating Authority
- The Enforcement Directorate (ED) is responsible for investigating offences under the PMLA

About Enforcement Directorate

- It is a specialized financial investigation agency.
- It comes under the Department of Revenue, Ministry of Finance.
- ED enforces the following laws:
 - Foreign Exchange Management Act, 1999 (FEMA)
 - Prevention of Money Laundering Act, 2002 (PMLA)

Do you know?

- Money laundering is concealing or disguising the identity of illegally obtained proceeds so that they appear to have originated from legitimate sources.

Interest Rates on Small Saving Schemes

Part of: GS Prelims and GS-III - Economy

In news

- Government may [reduce interest rates on small saving schemes](#) for the July - September Quarter.
- A cut in small savings rates at this point would further hurt households amid increase in inflation.

About Small Saving Schemes/Instruments

- They are the major source of household savings in India and comprises 12 instruments.
- The depositors get an assured interest on their money.
- Collections from all small savings instruments are credited to the National Small Savings Fund (NSSF).
- Small savings have emerged as a key source of financing the government deficit.

Small savings instruments can be classified as

- **Postal Deposits** comprising savings account, recurring deposits, time deposits of varying maturities and monthly income scheme.
- **Savings Certificates:** National Small Savings Certificate (NSC) and Kisan Vikas Patra (KVP).
- **Social Security Schemes:** Sukanya Samriddhi Scheme, Public Provident Fund (PPF) and Senior Citizens' Savings Scheme (SCSS).

AGRICULTURE

Horticulture Cluster Development Programme (CDP)

Part of: GS Prelims and GS-III - Economy

In news

- Horticulture Cluster Development Programme (CDP) was launched recently.
- **Objective:** To ensure holistic growth of horticulture,
- **Launched by:** Ministry of Agriculture

Key takeaways

- In a pilot phase, the programme will be implemented in 12 horticulture clusters covering 11 States/UTs.
- It is a central sector programme.
- **Implemented by:** National Horticulture Board (NHB) of the Ministry of Agriculture and Farmers' Welfare.
- **Aim:** Growing and developing identified horticulture clusters to make them globally competitive.
- The programme will benefit about 10 lakh farmers.

Important value additions

Horticultural crops include:

- Tree, bush and perennial vine fruits;
- Perennial bush and tree nuts;
- Cut flowers, potted ornamental plants, and bedding plants (involving both annual or perennial plants); and
- Trees, shrubs, turf and ornamental grasses propagated and produced in nurseries for use in landscaping or for establishing fruit orchards or other crop production units.

Related articles

[ADB, India sign \\$10 million loan to support horticulture in Himachal Pradesh](#)

[Preventing Agro Brain Drain](#)

Launch of Seed Minikits Programme

Part of: GS Prelims and GS-III - Economy

In news

- The **Seed Minikit Programme** was launched recently.
- **Launched by:** Ministry of Agriculture
- Seed Minikits consisting of **higher yielding varieties of seeds** of Pulses and oilseeds were distributed to farmers.
- It is **wholly funded** by the Government of India through the National Food Security Mission.

Benefits of the Programme

- It is a major tool for introducing new varieties of seeds in the farmers' fields.
- The distribution is **free of cost**

Who is providing the kits?

- The **Central Agencies National Seeds Corporation (NCS), NAFED and Gujarat State Seeds Corporation**

Model Tenancy Act

Context: After releasing the draft in 2019, the Union Cabinet has approved the Model Tenancy Act (MTA) to streamline the process of renting property in India and aid the rent economy in the estate sector.

Why this Act?

- **Restrictive Laws:** As per Census 2011, more than 1 crore houses were lying vacant in urban areas. The existing rent control laws are restricting the growth of rental housing and discourage owners from renting out their vacant houses due to fear of repossession.
- **Large scale informalisation in sector:** One of the potential measures to unlock the vacant house is to bringing transparency and accountability in the existing system of renting of premises and to balance the interests of both the property owner and tenant in a judicious manner.
- **Lack of Uniformity:** Since it is a state subject, states have enacted their laws and it differs from one state to another.

Where it applies

- After enforcement of this Act, no person can let or take on rent any premises except by an agreement in writing.
- The new Act will be applicable prospectively and will not affect existing tenancies.
- The Act seeks to cover urban and as well as rural areas.

What's new in Model Tenancy Act?

- **Dedicated Institutions:** States will set up a grievance redressal mechanism comprising of Rent Authority, Rent Court and Rent Tribunal to provide fast-track resolution of disputes.
- **Time Bound Resolution:** Disposal of a complaint/appeal by the Rent Court and the Rent Tribunal will be mandatory within 60 days.
- **No monetary ceiling on rents:** At present, in many old properties let out under archaic rent-control Acts, such ceilings have left landlords stuck with outdated rent amounts. This will be done away with in new model act.
- **Provision for eviction:** The Rent Court can allow repossession by the landlord if the tenant misuses the premises, after being served a notice by the landowner. Misuse of the premises, as defined, includes public nuisance, damage, or its use for "immoral or illegal purposes".

Merits of MTA

- Formalise the shadow market of rental housing
- Protects interests of both tenant and owner
- Increase transparency and discipline.
- Attracts private investment into the sector.

Connecting the dots

- [Need for Land Leasing Reforms](#)
- [Model Agricultural Land Leasing Act](#)

Are 'remunerative' MSPs boosting rural demand?

Context: On June 9, the union cabinet approved [Minimum Support Prices](#) (MSP) for the 2021-22 kharif marketing season.

- [MSP](#) for paddy will be ₹1940 per quintal, compared to ₹1868 last year.
- Cabinet Committee on Economic Affairs (CCEA) says that the latest MSP offers a 50% mark-up over the projected cost of cultivation in 2021-22.

The cost measures used in calculating MSP

A2	All the types of cash expenditure to generate the crop like seeds, manure, chemicals, labour costs, fuel costs and irrigation costs.
A2+FL (Used by	It includes A2 plus an imputed value of unpaid family labour.

government)	
C2 (demanded by farmers)	This includes A2+FK and the imputed rental value of owned land and interest on value of owned fixed capital, thereby including the opportunity cost of practising agriculture.

Issues

1. Nominal growth in MSPs has been low in recent years

- Although the government claims that latest MSP announcements fulfil the 50% mark-up over A2+FL criteria, the increase in nominal terms is not much.
- Paddy and wheat MSPs for the 2021-22 kharif and rabi marketing seasons have increased by 3.9% and 2.6% respectively.

2. Nominal MSPs are not enough to access the demand impact

- MSPs, directly or indirectly (in terms of creating a price floor), affect the prices received by farmers, and hence their nominal incomes.
- **Demand**, on the other hand, is a function of purchasing power, which is **determined by relative prices**.
- Wages account for more than 60% and almost one-third of A2+FL cost of cultivation for paddy and wheat. **Rural wages**, which were rising at a fast pace until 2014-15, have stagnated in the recent past
- If agricultural labour and farmers experience a squeeze on income (rural wages and imputed value of wages), this will put a pressure on purchasing power and therefore rural component of aggregate demand, including that for farmers.

3. Headwinds in future

- Two factors might further worsen the terms of trade for farmers going forward.
- Farm sector is the shock absorber in terms of the labour market and the longer it takes for the non-farm labour market to recover, the more difficult the farm sector will find to cushion incomes

What should government do going forward?

- It is unrealistic to think that the farm economy will keep delivering even though the non-farm part is in crisis
- This is why it is important that the government provides a fiscal stimulus to both the labour-intensive component of both farm and non-farm sectors.

Connecting the dots

- [MSP in the age of Surplus](#)
- [New Farm Acts](#)
- [How has agri-marketing policy changed over years](#)
- Ashok Dalwai Committee on [Doubling Farmer's income](#)
- [National Food Security Act](#)

Minimum Support Price (MSP) hiked for Paddy, Pulses and Oilseeds

Part of: GS Prelims and GS -III - Economy

In news

- In order to **encourage crop diversification**, the Central Government has hiked the [Minimum Support Price](#) (MSP) for Paddy, Pulses and Oilseeds.

- The MSP is the **rate** at which the **government purchases crops from farmers**.
- It is based on a calculation of at least one-and-a-half times the cost of production incurred by the farmers.

Crops under MSP

- **The Commission for Agricultural Costs & Prices (CACP)** recommends MSPs for 22 mandated crops and **fair and remunerative price (FRP)** for sugarcane.
 - CACP is an attached office of the Ministry of Agriculture and Farmers Welfare.
- The mandated crops include 14 crops of the kharif season, 6 rabi crops and 2 other commercial crops.
 - The MSPs of **toria and de-husked coconut** are fixed on the basis of the MSPs of **rapeseed/mustard and copra**, respectively.

How does CACP fix MSP?

- It takes into account:
 - Supply and demand situation for the commodity
 - Market price trends (domestic and global)
 - Implications for consumers (inflation)
 - Environment (soil and water use)
 - Terms of trade between agriculture and non-agriculture sectors.

Significance of MSP Hike

- Focus on nutri-rich cereals will incentivise its production in the areas where rice-wheat cannot be grown
- Realigned MSPs in favour of oilseeds, pulses and coarse cereals will encourage farmers to shift production towards these crops.

Issues with Hike

- Modest increase as compared to cultivation costs and inflation
- Absence of assured procurement leading to no incentive to cultivate crops.

Related articles:

[MSP — the factoids versus the facts](#)

[New Agriculture Bills and opposition to it](#)

Nutrient Loss in Wheat & Rice: ICAR Study

Part of: GS Prelims and GS-II - Health and GS -III - Agriculture

In news

- Recently, researchers from various institutes under the [Indian Council of Agricultural Research \(ICAR\)](#) and Bidhan Chandra Krishi Viswavidyalaya found depleting trends in grain density of zinc and iron in rice and wheat cultivated in India.
 - Zinc and iron deficiency affects billions of people globally and the countries with this deficiency have diets composed mainly of rice, wheat, corn, and barley.

Findings of the study

- Zinc Concentrations in Rice and Wheat:
 - **For rice:** Zinc concentrations in grains of rice cultivars depleted to 20.6 mg/kg (2000s) from 27.1 mg/kg (1960s)
 - **For wheat:** The concentrations of zinc dropped to 23.5 mg/kg during the 2010s from 33.3 mg/kg (1960s)
- Iron Concentrations in Rice and Wheat:

- **For rice:** Iron concentrations in grains of rice cultivars depleted to 43.1 mg/kg within the 2000s from 59.8 mg/kg (1960s).
- **For wheat:** The concentrations of iron dropped to 46.4 mg/kg (2010s) from 57.6 mg/kg (1960s).
- A cultivar is a plant variety that has been produced in cultivation by selective breeding.

Reason for the Decrease

- 'Dilution effect' which is caused by decreased nutrient concentration in response to higher grain yield.
 - This means the rate of yield increase is not compensated by the rate of nutrient take-up by the plants.
- Also, the soils supporting plants could be low in plant-available nutrients.

Suggestions

- Improving the grain ionome (that is, nutritional make-up) while releasing cultivars in future breeding programmes.
- There is a need to concentrate on other options like biofortification, where we breed food crops that are rich in micronutrients.
 - Biofortification is the process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology.

Initiatives Taken by India

- Recently, the Prime Minister dedicated 17 biofortified varieties of 8 crops to the nation.
- Some examples:
 - Rice- CR DHAN 315 has excess zinc.
 - Wheat- HI 1633 rich in protein, iron and zinc.
 - Maize- Hybrid varieties 1, 2 and 3 are enriched with lysine and tryptophan.
- [Madhuban Gajar](#), a biofortified carrot variety higher β -carotene and iron content.
- ICAR has started Nutri-Sensitive Agricultural Resources and Innovations (NARI) programme for promoting family farming linking agriculture to nutrition.

Biotech-KISAN Programme for North East region

Part of: GS Prelims and GS -III - Sci and tech; Agriculture

In news

- The Department of Biotechnology (DBT) has issued a Special Call for North East Region as a part of its Mission Programme [“Biotech-Krishi Innovation Science Application Network \(Biotech-KISAN\)”](#).
- **Aim:** To understand the local problems of the NER farmers and provide scientific solutions to those problems.

Reason for the Special Call:

- The present call specifically focuses on the North East Region as it is predominantly agrarian with 70% of its workforce engaged in agriculture and allied sector for livelihood.

About the Special Call:

- **Objective:** Linking available innovative agriculture technologies to the farm with the small and marginal farmers, specially women farmers of the region.

About Biotech-KISAN

- It is a scientist-farmer partnership scheme launched in 2017 for agriculture innovation.

- **Objective:** To connect science laboratories with the farmers to find out innovative solutions and technologies to be applied at farm level.
- **Progress:**
 - So far 146 Biotech-KISAN Hubs have been established covering all 15 agroclimatic zones and 110 Aspirational Districts
 - The scheme has benefitted over two lakhs farmers so far by increasing their agriculture output and income.
 - Over 200 entrepreneurship have also been developed in rural areas.
- **Ministry:** Department of Biotechnology, Ministry of Science and Technology.

E-launch of NAFED Fortified Rice Bran Oil

Part of: GS Prelims and GS -III - Economy; Agriculture

In news

- Department of Food and Public Distribution recently E-launched “NAFED Fortified Rice Bran Oil”.

About Rice bran oil

- Rice bran oil is the oil **extracted from the hard outer brown layer of rice called chaff** (rice husk).
- Rice bran oil has a **composition similar to that of peanut oil**.

Health benefits

- **Lowering cholesterol level** due to its low trans-fat content and high monounsaturated and polyunsaturated fat contents.
- It also acts as a **booster and reduces the risk of cancer** due to the high amount of Vitamin E it contains.
- It is recommended by the WHO as **one of the best substitutes** for other edible oils.

About NAFED

- [National Agricultural Cooperative Marketing Federation of India Ltd \(NAFED\)](#) is an apex organization of marketing cooperatives for agricultural produce in India.
- It was founded on 2 October 1958.
- It is registered under Multi State Co-operative Societies Act.
- **Headquarters:** New Delhi.
- **Ministry:** Ministry of Agriculture

ENVIRONMENT/POLLUTION

Black Carbon Report by World Bank

Part of: GS Prelims and GS-III - Conservation; Climate change

In news

- The report titled “**Glaciers of the Himalayas: Climate Change, Black Carbon and Regional Resilience**” has reported that the **glaciers are melting faster** than the global average ice mass.
- A **strong policy on black carbon** can **sharply cut** glacier melt.
- **Report released by:** [World Bank](#)
- The [Himalayas](#), Karakoram, and [Hindu Kush \(HKHK\) mountain ranges](#) were covered in the report.

Key takeaways from the report

- **Black Carbon (BC)** is a **short-lived pollutant**
 - It is the **second-largest contributor** to cause Global warming after carbon dioxide (CO₂).
 - **Unlike** other greenhouse gas emissions, **BC is quickly washed out and can be eliminated** from the atmosphere if emissions stop.
- **Industry (primarily brick kilns) and residential burning of solid fuel** together account for **45-66% of** regional man-made BC **deposition**, followed by **on-road diesel fuels and open burning** in the region.
- It acts in **two ways hastening the pace of glacier melt**:
 - By **decreasing surface** reflectance of sunlight.
 - By **raising the air temperature**
- **Full implementation of current policies** to mitigate BC can **achieve a 23% reduction** but **enacting new policies** and **regional cooperation among countries** can achieve enhanced benefits.
 - **National Mission on Sustaining Himalayan Ecosystem (NMSHE)** is one such policy adopted in India.
 - It is one of the **eight missions** under the **National Action Plan on Climate Change (NAPCC)**.
- **Steps that can be taken in the Himalayas**
 - **Reduce black carbon emissions** from - (1) cookstoves; (2) Diesel engines; (3) Open burning. It could **significantly reduce radiative forcing**
- **Steps to be Taken by Regional Governments:**
 - **Review the policies** on water management
 - **Careful planning and use of hydropower** to reflect changes in water flows and availability.
 - **Increasing the efficiency of brick kilns** through proven technologies.
 - **Greater knowledge sharing** in the region.

Important value additions

- There are almost 55,000 glaciers in the HKHK mountains which store more freshwater than any other region outside the North and South Poles.
- **Glacier melt** produces
 - Flash floods
 - Landslips
 - Soil erosion
 - [Glacial lake outburst floods \(GLOF\)](#)
- **Radiative forcing** is a **measure of the change in energy balance** as a result of a change in a forcing agent (e.g., greenhouse gases, aerosol, cloud, and surface albedo) to affect the global energy balance and contribute to climate change.

[Green future for Indian cities](#)

Context: A progressive track of urban development while keeping sustainability, disaster risk resilience and community building at its core has been the guiding principle for urban development in India.

The following national programmes and missions of the Ministry of Housing and Urban Affairs has contributed to the mitigation of Climate Change and helping India progress towards greener cities

The Swachh Bharat Mission (Urban)

- This scheme focuses on achieving an open-defecation-free India, building solid waste management capacity and bringing about behavioural change.
- It was, in effect, the harbinger of a total transformation of our urban landscape.

The Smart Cities Mission

- This mission has been the one taking charge of the **technological advancements** of our cities to improve governance, sustainability and disaster risk resilience.

Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

- Under AMRUT, water supply and management, energy efficiency and increased green spaces have been part of the goal in 500 target cities.
- The mission is likely to result in the **mitigation of 48.52 million tonnes of CO2** equivalent of GHG emissions by 2022.

Pradhan Mantri Awas Yojana (Urban)

- With 1.12 crore houses sanctioned, PMAY(U) has focused on new construction technologies that are innovative, environmentally friendly and disaster-resilient.
- The Global Housing Technology Challenge was launched, and 54 new technologies identified & incorporated in construction.
- About 43.3 lakh houses are being constructed where **fly ash bricks/blocks** and concrete blocks are being used.
- Overall, the mission has the potential to mitigate around 12 million tonnes CO2 equivalent of GHG emissions by 2022.

Public Transport- Metro

- Lastly, the metro rail, an energy-efficient mass rapid transit system, is operational in 18 cities with over 720 km of line constructed.
- Another 1,055 km of new lines is under construction in 27 cities.
- This network is expected to mitigate around 21.58 million tonnes of CO2 eq GHG from 2015-2022.

Conclusion

Cumulatively, the national missions under the MoHUA are projected to mitigate GHG emissions equivalent to more than 93 million tonnes of CO2 by 2022. This number is bound to increase.

Connecting the dots

- [Paris Climate Accord](#)
- [Top Three SDGs and India](#)

UNDP Report on Hindu Kush Himalayan Mountains

Part of: GS Prelims and GS -III - Climate change; Conservation

In news

- According to UNDP (United Nations Development Programme) report, 'Melting glaciers; Threatened livelihoods; Confronting climate change to save the Third pole', the [Hindu Kush Himalayan \(HKH\) mountain](#) ranges could lose up to two-third of its ice by 2100.
- About **2 billion people** may face food, water shortages by 2100.
- **Glacier melting** in HKH region is **caused by**:
 - larger **anthropogenic modifications** of the atmosphere
 - **disruption** in weather patterns and precipitation **due to global warming**
 - **changes** in Glacier volume

- **Unplanned** urbanization

Impact

- **Threatens** climate as well as monsoon patterns
- It **impacts 10 major river systems** which help in agricultural activities, provide drinking water and hydro electricity production in the region
- **socio-economic disruption** and human displacement

Recommendation

- **Shifting** away from fossil fuel use in energy transport and other sectors
- **Changing diets and agricultural practices** to move to net zero emissions of greenhouse gases
- **Improve data and information capacity** building and early warning systems

Important value additions

- HKH extends over **8 countries** - Afghanistan, Bhutan, Bangladesh, China, India Myanmar, Nepal and Pakistan
- It contains the **world's third largest storage of frozen water** after Antarctica and Arctica
- It is also referred as the **third pole of the world**.

National Mission on Biodiversity and Human Well-Being (NMBHWP)

Context: Preserving biodiversity is directly relevant to the social, economic, and environmental well-being of our people.

- Estimates suggest our forests alone may yield services worth more than a **trillion rupees per year**. Imagine how much greater this value will be with grasslands, wetlands, freshwater, and marine added.

Key features of National Mission on Biodiversity and Human Well-Being (NMBHWP)

- **Sustainable Utilization:** The Mission will strengthen the science of restoring, conserving, and sustainably utilising India's natural heritage
- **Integration in Development:** The mission will embed biodiversity as a key consideration in all developmental programmes, particularly in agriculture, ecosystem services, health, bio-economy, and climate change mitigation;
- **Mission's "One Health" programme**, integrating human health with animal, plant, soil and environmental health, has both the preventive potential to curtail future pandemics along with the interventional capability for unexpected public health challenges.

Connecting the dots

- [Paris Accord](#)
- [National Mission for Sustainable Agriculture](#) (NMSA)

High-level Dialogue on Desertification, Land Degradation and Drought

Part of: GS Prelims and GS -II - International Relations and GS III - Conservation

In news

- Recently, the Indian Prime Minister delivered a keynote address at the **United Nations (UN)** "High-Level Dialogue on Desertification, Land Degradation and Drought" via video conference.

Steps Taken by India to deal land degradation

- India is **on track** to achieve its **national commitment on Land Degradation Neutrality (LDN)** (Sustainable Development Goal target 15.3).
- It is **working to restore** 26 million hectares of degraded land by 2030.
- A **Centre of Excellence** is being set up in India to promote a scientific approach towards land degradation issues.
 - It is at Indian Council of Forestry Research and Education.

What is Land Degradation and its impact?

- Land degradation is caused by multiple forces, including **extreme weather conditions**, particularly drought and human activities that pollute or degrade the quality of soils and land utility.
- It **adds to** droughts, wildfires, involuntary migration and the emergence of zoonotic infectious diseases.

Global Efforts to Check Land Degradation

- **United Nations Convention to Combat Desertification (UNCCD)**: Sole legally binding international agreement
- **The Bonn Challenge**: To bring 150 million hectares of the world's deforested and degraded land into restoration by 2020, and 350 million hectares by 2030.
- **Great Green Wall**: Initiative by Global Environment Facility (GEF), where eleven countries in Sahel-Saharan Africa have focused efforts to fight against land degradation and revive native plant life to the landscape.

Children and Digital Dumpsites Report released by WHO

Part of: GS Prelims and GS -III - E-waste

In news

- The **World Health Organization (WHO)** in its recent report "**Children and Digital Dumpsites**" has highlighted the risk that children working in informal processing are facing due to discarded **electronic devices or e-waste**.
 - It is the first ever WHO report on electronic waste and child health.
 - E waste refers to **old, end-of-life or discarded electronic items** and their parts.

Key highlights of the report

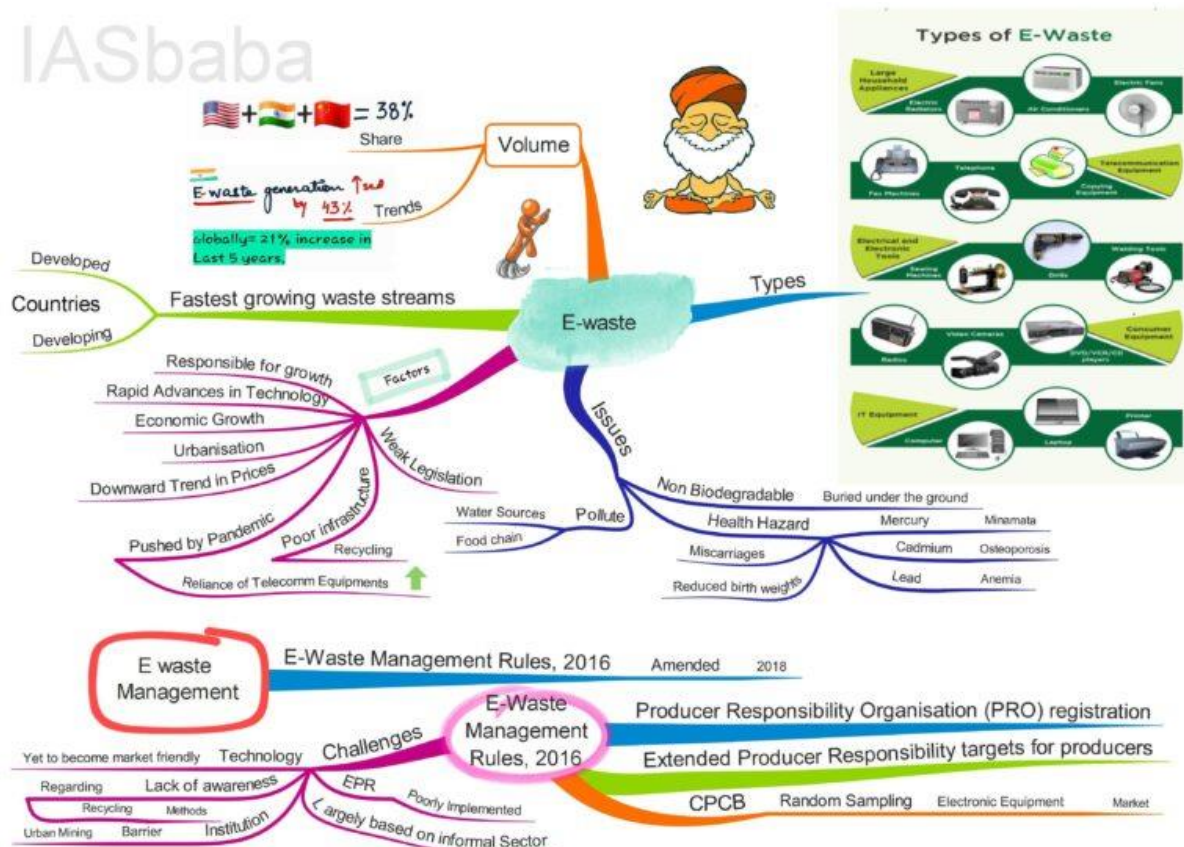
- Around 12.9 million women are working in informal waste sector exposing them to toxic e-waste (like Nickel, lead and Mercury) and put them and their unborn children at risk.

Suggestions

- **Environmentally sound disposal** of e-waste and safety of workers.
- **Monitor** e waste exposure and health outcomes.
- **Facilitate** better use of e waste

Do you know?

- According to UN Global e waste monitor 2020 53.6 million metric tonnes of e waste was generated worldwide in 2009.
- Out of this, only 17.4% of e waste was collected and recycled.
- India is the **third largest electronic waste generator** after China and USA.
- In 2016 **India enacted E waste (Management) Rules** under which e Waste is categorised under two broad categories: Information technology and Telecommunications equipment and consumer electrical and electronic.



Pic courtesy: [iasbaba](https://iasbaba.com)

Sale of illegal HTBt cotton seeds doubles

Part of: GS Prelims and GS III – Economy; Biotechnology

In news

- The illegal cultivation of herbicide tolerant (HT) Bt cotton has seen a huge jump this year,
- Sale of illegal seed packets has more than doubled from 30 lakh last year to 75 lakh this year.
- BT Cotton** is a genetically modified crops that produces an insecticide to combat the Cotton bollworm, a common pest.
- HTbt Cotton variant makes the plant resistant to the Herbicide glyphosate
- Glyphosate has carcinogenic effect and can also result in spread of herbicide resistance to near by plants through pollination

DO you know?

- Regulatory Framework for approval of GM crops is covered under the Environment protection Act 1986
- Genetic engineering appraisal committee** under Ministry of Environment, forest and climate change is Apex body that allows for commercial release of GM crops in India
- Cartagena protocol on biosafety provides well-defined mechanism of regulation of GM crops including biosafety evaluation and environmental release

Great Barrier Reef recommended to be added to a list of “in danger” World Heritage Sites

Part of: GS Prelims and GS -III - Climate change

In news

- Recently, the UNESCO World Heritage Committee has recommended that the [Australia’s Great Barrier Reef](#) should be added to a list of “in danger” World Heritage Sites.
 - It was recommended to add to the list because of the impact of climate change.
- Despite Reef 2050, the coral reef ecosystem has suffered three major bleaching events since 2015 due to severe marine heatwaves.
 - **The Reef 2050 Long-Term Sustainability Plan** is the Australian and Queensland Government’s framework for protecting and managing the Great Barrier Reef by 2050.

About Great Barrier Reef

- It is the world’s most extensive and spectacular coral reef ecosystem composed of over 2,900 individual reefs and 900 islands.
- This reef structure is composed of and built by billions of tiny organisms, known as coral polyps.
 - Polyps are tiny, soft-bodied organisms.
 - At their base is a hard, protective limestone skeleton called a calicle, which forms the structure of coral reefs.
 - These polyps have microscopic algae called zooxanthellae living within their tissues. The corals and algae have a mutualistic (symbiotic) relationship.
 - It was selected as a World Heritage Site in 1981.

Initiatives to Protect Corals

- International Coral Reef Initiative
- Global Coral Reef Monitoring Network (GCRMN)
- Global Coral Reef Alliance (GCRA)
- [The Global Coral Reef R&D Accelerator Platform](#)
- The Ministry of Environment and Forests and Climate Change (MoEF&CC), India has included the studies on coral reefs under the Coastal Zone Studies (CZS).
- The Zoological Survey of India (ZSI), with help from Gujarat’s forest department, is attempting a process to restore coral reefs using “biorock” or mineral accretion technology.
- National Coastal Mission Programme, to protect and sustain coral reefs in India.

ANIMALS/NATIONAL PARKS IN NEWS

Species in news: Litoria Mira

Part of: GS Prelims and GS -III – Environment; Biodiversity

In news

- A species of frog lives in the rainforests of New Guinea that appears to be made from chocolate.
 - The cocoa-coloured frogs have turned out to be a new species.
 - Large size, webbing on hand, short limbs, and small violet patch of skin on the edge of its eyes.
 - The island of New Guinea is separated from the ‘horn’ of Queensland by the Torres Strait.
-

Dihing Patkai is Assam's 7th National Park

Part of: GS Prelims and GS-III - National Parks

In news

- **Dihing Patkai** as a National Park was recently notified as Assam's national Park.
 - **Raimona National Park** in western Assam's Kokrajhar district was also notified recently.

Key takeaways

- Assam now has the **third most National Parks** after the 12 in **Madhya Pradesh** and nine in the **Andaman and Nicobar Islands**.
- The **five older National Parks in the State**: Kaziranga, Manas, Nameri, Orang and [Dibru-Saikhowa](#).
 - Kaziranga and Manas are **UNESCO World Heritage Sites**.
 - They are also tiger reserves along with Nameri and Orang.
- Dihing Patkai is a major elephant habitat
- Short stretches of the **Dirak and Buri Dihing rivers** have been included in the park,
- Raimona adjoins the **Buxa Tiger Reserve** in West Bengal to its west, **Phipsoo Wildlife Sanctuary** in Bhutan to its north and the first addition to [Manas National Park](#) to the east.
- Raimona is home to the golden langur, elephant, tiger, clouded leopard and Indian gaur

Species in news: Gharials

Part of: GS Prelims and GS -III - Environment; Conservation

In news

- Recently, Odisha announced a cash award of Rs. 1,000 to conserve gharials in Mahanadi River Basin.

About Gharials

- Gharials (or gavials) are a type of **Asian crocodilian** distinguished by their long, thin snouts.
 - Crocodilians are a **group of reptiles** that includes crocodiles, alligators, caimans, and more.
- India has three species of Crocodilians namely:
 - Gharial: **IUCN Red List- Critically Endangered**
 - Mugger crocodile: **IUCN- Vulnerable**.
 - Saltwater crocodile: **IUCN- Least Concern**.
- All the three are listed on **Appendix I of CITES** and **Schedule I of the Wild Life (Protection) Act, 1972**.
 - However, Saltwater Crocodile populations of Australia, Indonesia and Papua New Guinea are included in Appendix II of CITES.
- **Habitats include:** Fresh waters of the northern India - Chambal river, Ghagra, Gandak river and the Sone river (Bihar).
- Population of Gharials is a good indicator of clean river water.
- Conservation Efforts:
 - **Breeding Centres of Kukrail Gharial Rehabilitation Centre** in Lucknow, Uttar Pradesh, **National Chambal Sanctuary** (Gharial Eco Park, Madhya Pradesh).

Heritage Trees

- The Maharashtra Cabinet has passed an action plan to protect and preserve trees older than 50 years in urban areas by terming them heritage trees
- Few important criteria for considering a tree as a "heritage tree" are: size, shape, rarity, aesthetical/historical values, association with historic person, place or even myths.
- A certain species need not be native to an area for this tag.

Operation Oliva for Olive Ridley Turtles

Part of: GS Prelims and GS -III - Conservation

In news

- Recently, the Indian Coast Guard has pressed into service an **aircraft for 'Operation Oliva'** to protect [Olive Ridley turtles](#).

What is Operation Oliva

- It was initiated in the early 1980s
- Every year, Operation Olivia helps protect Olive Ridley turtles as they congregate along the Odisha coast for breeding and nesting from November to December.

Olive Ridley Turtles

- These are the **smallest and most abundant** of all sea turtles found in the world.
- They are carnivores
- They migrate thousands of kilometers between feeding and mating grounds in the course of a year.
- They are best known for their unique mass nesting called **Arribada**, where thousands of females come together on the same beach to lay eggs.
- **Habitat:**
 - They are found in **warm waters** of the Pacific, Atlantic and Indian oceans.
 - The Odisha's [Gahirmatha Marine Sanctuary](#) is known as the world's largest rookery of sea turtles.
- **IUCN Red List:** Vulnerable
- **CITES:** Appendix I
- **Wildlife (Protection) Act, 1972:** Schedule I

Other Initiatives

- To reduce accidental killing in India, the Odisha government has made it mandatory for trawls to use **Turtle Excluder Devices (TEDs)**, a net specially designed with an exit cover which allows the turtles to escape while retaining the catch.

About Black Softshell Turtle

- **Scientific Name:** Nilssonia nigricans
- **Habitat:**
 - They are found in ponds of temples in northeastern India and Bangladesh.
 - Its distribution range also includes the Brahmaputra River and its tributaries.
- **Protection Status:**
 - **IUCN Red List:** Critically Endangered
 - **CITES:** Appendix I
 - **Wildlife (Protection) Act, 1972:** No legal protection
- **Threats:**

- Consumption of turtle meat and eggs,
- Silt mining
- Encroachment of wetlands
- Change in flooding pattern.

Turtle Conservation

- **National Marine Turtle Action Plan:**
 - It contains ways and means to not only promote inter-sectoral action for conservation but also guide improved coordination amongst the government, civil society and all relevant stakeholders.
- **Indian Ocean Sea Turtle Agreement (IOSEA)**
 - India is a signatory to the Indian Ocean Sea Turtle Agreement (IOSEA) of the [Convention on Migratory Species \(CMS\)](#).
 - It puts in place a framework through which States of the Indian Ocean and South-East Asian region and other concerned States can work together to conserve and replenish depleted marine turtle populations for which they share responsibility.
- **KURMA App:**
 - It has a built-in digital field guide covering 29 species of freshwater turtles and tortoises of India.
 - **Developed by:** Indian Turtle Conservation Action Network (ITCAN) in collaboration with the Turtle Survival Alliance-India and Wildlife Conservation Society-India.

Related articles:

[World Turtle Day 2020](#)

[Barnadi Wildlife Sanctuary: Assam](#)

Part of: GS Prelims and GS -III - Environment

In news

- Recently, the [World Wide Fund for Nature-India](#) (WWF) found a few tigers inhabiting the Barnadi Wildlife Sanctuary in Assam.
- It is one of the smallest WS (Wildlife Sanctuary) of Assam

About the Sanctuary

- It is located in northern Assam's Baksa and Udalguri districts bordering Bhutan.
- It is bordered by the Barnadi river and Nalapara river to the west and east respectively.
- Barnadi was established specifically to protect the Pygmy Hog (*Sus salvanius*) and Hispid Hare (*Caprolagus hispidus*).
- About 60% of the BWS is reported to be grassland, most of it is now grassy woodland.
- **The main Forest types:** Tropical Moist Deciduous (northern edge of the Sanctuary) and mixed scrub and grassland (southern part).
- Most of the natural vegetation has been replaced by commercial plantations of *Bombax ceiba*, *Tectona grandis* and *Eucalyptus* and by thatch grasses

Other Protected Areas in Assam:

- [Dibru-Saikhowa National Park](#)
- [Manas National Park](#)
- Nameri National Park

- [Rajiv Gandhi Orang National Park](#)
- [Kaziranga National Park.](#)

INFRASTRUCTURE/ENERGY

Devika River Project: J&K

Part of: GS Prelims and GS -II - Policies and interventions and GS-III - Infrastructure

In news

- Recently, the **Minister of State for Development of North Eastern Region** has asked for suggestions for the **Devika River project** in **Udhampur, J&K**.
 - This project is compared with the **Namami Gange Project**.

About Devika River project

- This is a **Rs. 190 crore Project**.
- The work on the project was **started in March 2019** under the **National River Conservation Plan (NRCP)**.
- Under the project,
 - **Bathing “ghats”** (places) on the banks of the Devika River will be **developed**,
 - **Encroachments** will be **removed**
 - **Natural water bodies** will be **restored**
 - **Catchment areas** will be **developed** along with **cremation ground**
 - **Small hydropower plants** and three **solar power plants** shall also be developed.
- The project will lead to reduction in pollution and improvement in water quality.

About Devika River

- Devika river **originates** from the **hilly Suddha Mahadev temple** in Udhampur district of Jammu and Kashmir.
- It **flows down** towards western Punjab (now in Pakistan) where it **merges** with the **Ravi river**.
- The river holds **religious significance** as it is revered by Hindus as the **sister of river Ganga**.
- In June 2020, **Devika Bridge** was inaugurated in Udhampur.

About National River Conservation Plan (NRCP)

- It is a **centrally funded scheme**
- **Launched in 1995**
- **Aim:** Preventing the pollution of rivers.
- **Programs for river conservation** are being implemented under National River Conservation Plan (NRCP) and NGRBA (National Ganga River Basin Authority).
- **Activities under NRCP:**
 - **Interception and Diversion works** to capture the raw sewage flowing into the river through open drains and divert them for treatment.
 - **Low Cost Sanitation works** to prevent open defecation on riverbanks.
 - **Electric Crematoria and Improved Wood Crematoria** to conserve the use of wood
 - **River Front Development** works such as improvement of bathing ghats.
 - **Public awareness** and public participation.

Indian Railways Gets 5 MHz Spectrum

Part of: GS Prelims and GS -III - Infrastructure

In news

- Recently, the Union Cabinet approved the **allotment of 5 MHz spectrum** in the 700 MHz frequency band to the Indian Railways for improving its communication and signalling systems.
- With this spectrum, the railways will introduce **Long-Term Evolution (LTE)**-based Mobile Train Radio Communication (MTRC) on its routes.
 - LTE is a fourth-generation (4G) wireless standard that provides increased network capacity and speed for cellphones and other cellular devices compared with third-generation (3G) technology.

Benefits of the allotment

- **Provide Modern signalling and train protection systems**
- **Secure and reliable voice, video and data communication**
- **Help prevent train accidents and reduce delays**
- Enable the railways to undertake **Internet of Things (IoT) based** remote asset monitoring
 - IoT is a computing concept that describes the idea of everyday physical objects being connected to the internet and being able to identify themselves to other devices.

Train Collision Avoidance System (TCAS)

- It is a **microprocessor based control system**, which continuously monitors the speed, direction of travel, and alertness of the motorman.
- It will **help in improving the safety** and increasing the line capacity to accommodate more trains using the existing infrastructure.
 - The modern rail network will result in reduced transportation cost and higher efficiency.

Important value additions

Radio Spectrum

- The radio spectrum (also known as Radio Frequency or RF) is a part of the electromagnetic spectrum.
 - Electromagnetic waves in this frequency range are called radio frequency bands or simply 'radio waves'.
 - Radio waves have the longest wavelengths in the electromagnetic spectrum.
 - These were discovered by Heinrich Hertz in the late 1880s.
- RF bands spread in the range between 30 kHz and 300 GHz
- The generation and transmission of radio frequency bands is strictly regulated by national laws, coordinated by an international body, the International Telecommunication Union (ITU).

Fast Tracking Freight in India: NITI Aayog

Part of: GS Prelims and GS -III - Infrastructure

In news

- **NITI Aayog**, Rocky Mountain Institute (RMI) and RMI India's new report, "**Fast Tracking Freight in India: A Roadmap for Clean and Cost-Effective Goods Transport**", present key opportunities for India to reduce its logistics costs.
- The report outlines solutions for freight sector related to policy, Technology, Business models and infrastructure development
 - Freight transportation is the process of transporting commodities, goods and cargo balance by land, sea or air

- Logistics sector represents 5% of India's GDP and employs 2.2 crore people.
- Due to the rising demand for goods and services, freight transport demand is expected to grow rapidly in the future.

According to the report, India has the potential to

- **Reduce** its logistics cost by **4% of GDP**
- **Achieve** 10 gigatonnes of cumulative CO₂ emissions savings between 2020 and 2050
- **Reduce nitrogen oxide (NO_x)** and particulate matter (PM) emissions by 35% and 28%, respectively, until 2050

Issues

- High logistics costs
- Contributes to rising CO₂ emissions and air pollution in cities.

Recommendations

- **Increasing** the rail network's capacity
- **Promoting** intermodal transport
- **Improving** warehousing and trucking practices
- **Policy measures**
- **Pilot projects** for clean technology adoption
- **Stricter** fuel economy standards.

Recent Initiatives for freight transportation:

- **Dedicated Freight Corridor (DFC)**: Railway corridor that is exclusively meant for the transportation of freight,
- **E-Way Bill** Integration with **FASTag**, RFID
- **FAME Scheme**: adoption of electric vehicles (EV), with a goal of reaching 30% EV penetration by 2030.
- **Bharat Stage VI norms**
- **Corporate Average Fuel Efficiency (CAFE) Regulations**: aim to increase fuel efficiency of vehicles on the road by 35% by 2030.

India's Roadmap to Ethanol

Part of: GS Prelims and GS -III - Economy

In news

- The central government has released an expert committee **report on the Roadmap for Ethanol Blending in India by 2025**.
- The roadmap **proposes** a gradual rollout of ethanol-blended fuel to achieve E10 fuel supply by April 2022 and phased rollout of E20 from April 2023 to April 2025.
- The Government of India has advanced the target for 20% **ethanol blending in petrol** (also called E20) to 2025 from 2030.

What is Ethanol?

- It is one of the **principal Biofuels**.
 - It is **naturally produced** by the **fermentation of sugars by yeasts** or via petrochemical processes such as **ethylene hydration**.

Recommendations of the Roadmap:

- **Notify** Ethanol Blending Roadmap
- **Better Infrastructure** for Oil Marketing Companies

- **Speed up** regulatory clearances
- **Incentivise** Ethanol Blended Vehicle
- **Lower pricing** of ethanol blended Gasoline

Modifications in FAME II Scheme

Part of: GS Prelims and GS III - Economy

In news

- Department of Heavy Industry (DHI) has recently modified [FAME II scheme](#).
- **Objective of the modification:** To drive adoption of electric vehicles

Modifications

- Introduction of a **demand incentive** of Rs. 15,000 per kWh for electric two wheelers with a maximum cap at 40% of the vehicles' cost.
- Launch of an aggregate demand for 300,000 electric [three- wheelers](#) by Energy Efficiency Services Limited.

FAME scheme

- It was launched in 2015
- It forms a part of **National Electric Mobility Mission Plan 2020**.
- It **aims to promote manufacturing of electric and hybrid vehicle technology** and to ensure sustainable growth of the same
- Phase 2 of the scheme was approved for a period of **three years** starting from first April 2019
- It **aims to generate** demand by way of supporting e-buses, e 2-wheelers, e three- wheelers
- By selling over 75,000 vehicles FAME has so far resulted in **savings** of over 20 million litres of fuel and has led to almost 40 million kg **reduction** in CO₂.

Dagmara Hydro-Electric Project: Bihar

Part of: GS Prelims and GS I - Geography and GS -III - Infrastructure

In news

- Recently, a Memorandum of Understanding (MoU) has been signed between National Hydro Power Corporation (NHPC) Limited and Bihar State Hydroelectric Power Corporation Limited (BSHPC) for Implementation of Dagmara Hydro-Electric Project, Supaul, Bihar
 - The project is located on Kosi river.

About the Project

- It is a Run-of-the-River scheme.
 - Run-of-river hydro projects use the natural downward flow of rivers and micro turbine generators to capture the kinetic energy carried by water.
- The project will have the total capacity of generating 130 MW energy,

Significance

- It will be a landmark project in the power sector scenario of Bihar as far as green power is concerned.
- It will enhance the socio-economic and infrastructure development and create employment opportunities.

About Kosi River

- The Kosi is a trans-boundary river which flows through Tibet, Nepal and India.
- It has its source in Tibet

- **Major tributaries:** Sun Kosi, Arun and Tamur
- Its unstable nature causes course changes.
- The Kosi carries the maximum amount of silt and sand after the Brahmaputra in India.
- It is also known as the “Sorrow of Bihar” due to the extreme flooding that it causes.

MoU for Seaplane Services in India

Part of: GS Prelims and GS -III - Infrastructure

In news

- Ministry of Ports, Shipping and Waterways (MoPSW) and Ministry of Civil Aviation (MoCA) signed Memorandum of Understanding (MoU) for Development of [Sea Plane Services](#) in India.

Key highlights of the MoU

- **Objective:** Development of Non Scheduled/Scheduled operation of seaplane services within territorial jurisdiction of India under RCS-UDAN scheme
- A Co-ordination Committee is to be set up for timely completion of operationalisation of Seaplane services at various locations.
 - The members shall include officials of MoCA, MOPSW and Ministry of Tourism (MoT).

Benefits:

- Enhanced smooth connectivity by promoting eco-friendly transportation through Seaplanes.
- Boost to the tourism industry.
- Help in expediting the development of new water aerodromes and operationalization of new seaplane routes in India.

Designated functions:

- MoPSW would identify and develop water front infrastructure of Aerodromes.
- MoCA would carry out bidding and select potential airlines operators.
- MoCA shall provide funds/financial support.

Tamil Nadu industrial corridor

Part of: GS Prelims and GS -II – International relations and GS-III - Infrastructure

In news

- The [Asian Development Bank \(ADB\)](#) and the Government of India signed a \$484 million loan **to improve transport connectivity and facilitate industrial development** in the Chennai–Kanyakumari Industrial Corridor (CKIC) in Tamil Nadu.
 - CKIC is part of India’s **East Coast Economic Corridor (ECEC)**.
 - It stretches from West Bengal to Tamil Nadu
 - It connects India to the production networks of South, Southeast, and East Asia.
 - ADB is the lead partner of the Government of India in developing ECEC.

About the CKIC

- The project shall provide:
 - seamless road connectivity across industrial clusters
 - transport gateways and consumption centers
 - help reduce logistics and production costs
- **Objective:** To accelerate **industrial transformation** by providing essential transport, energy and urban infrastructure
- It emphasises sustainability, climate change resilience, and road safety elements.

Deep Ocean Mission

Context: The Cabinet Committee on Economic Affairs approved the Deep Ocean Mission of the Ministry of Earth Sciences with a view to explore the deep ocean for resources and develop deep-sea technologies for sustainable use of ocean resources.

- **Blue Economy** is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health.

Importance of Oceans for India

- For India, with 7,517 km long coastline, nine coastal states with 30 percent of the country's population and three sides surrounded by the oceans, the ocean is a **major economic factor** supporting fisheries and aquaculture, tourism, livelihoods and blue trade.
- Oceans also provide **ecosystem services** like carbon sequestration, coastal protection, waste disposal and the existence of biodiversity.

The Deep Ocean Mission will consist of six major components:

1. Development of Technologies for Deep Sea Mining, and Manned Submersible:

- A manned submersible will be developed to carry three people to a depth of 6,000 metres in the ocean with a suite of scientific sensors and tools.
- An Integrated Mining System will also be developed for mining Polymetallic Nodules from a depth of 6,000 metres in the central Indian Ocean.

2. Development of Ocean Climate Change Advisory Services:

- A suite of observations and models will be developed to understand and provide future projections of important climate variables on seasonal to decadal time scales under this proof of concept component.

3. Technological innovations for exploration and conservation of deep-sea biodiversity:

- The bio-prospecting of deep-sea flora and fauna including microbes and studies on sustainable utilisation of deep-sea bio-resources will be the main focus of the mission.

4. Deep Ocean Survey and Exploration:

- The primary objective of this component is to explore and identify potential sites of multi-metal Hydrothermal Sulphides mineralisation along the Indian Ocean mid-oceanic ridges.

5. Energy and freshwater from the ocean:

- Studies and detailed engineering design for offshore Ocean Thermal Energy Conversion (OTEC) powered desalination plant is envisaged in the concept proposal.

6. Advanced Marine Station for Ocean Biology:

- This component is aimed at the development of human capacity and enterprise in ocean biology and engineering.
- This component will translate research into the industrial application and product development through on-site business incubator facilities.

Conclusion

One of the biggest bottleneck for this initiative is that the technologies required for deep-sea mining have strategic implications and are not commercially available. Thus, there is scope for indigenisation.

Connecting the dots

- [Sagarmala Project](#)
- [Genome Mapping in Indian Ocean](#)

Inland Vessel Bill 2021

Part of: GS Prelims and GS -III - Infrastructure

In news

- Recently, the Union Cabinet approved the Inland Vessels Bill, 2021.
 - It will replace the Inland Vessels Act, 1917 after passing in Parliament.
- The Bill will regulate safety, security and registration of inland vessels.

Features of the Bill:

- Unified law for the entire country, instead of separate rules framed by the States.
- It enlarges the definition of 'inland waters', by including tidal water limit and national waterways
- It also deals with pollution control measures of Inland Vessels.
- It directs the Central Government to designate a list of chemicals, substances, etc. as pollutants.

Important value additions

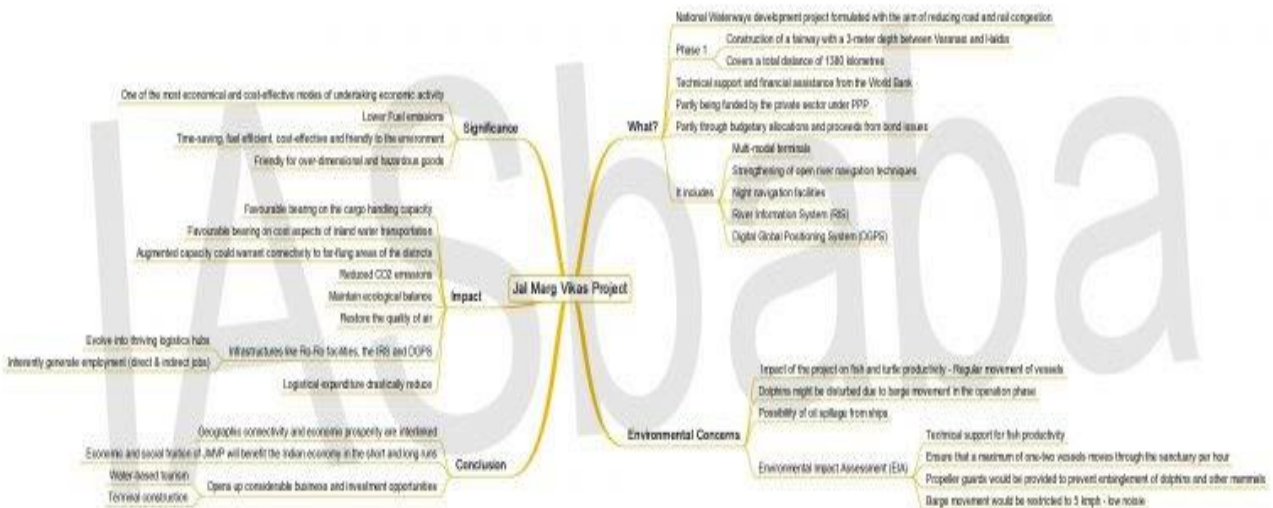
Inland Waterways

- India has about 14,500 km of navigable waterways which comprise of rivers, canals, backwaters, creeks, etc.
- As per the National Waterways Act 2016, 111 waterways have been declared as National Waterways (NWs).
- NW-1: Ganga-Bhagirathi-Hooghly River System (Prayagraj-Haldia) with length 1620 km is the longest National Waterway in India.

Pic courtesy: [Ganga Today](#)

Do you know?

- The Inland Waterways Authority of India (IWAI) is implementing the Jal Marg Vikas Project (JMVP) for capacity augmentation of navigation on the Haldia-Varanasi stretch of Ganga (part of NW-1) with the technical and financial assistance of the World Bank.



Pic courtesy: [iasbaba](#)

Draft National strategy and roadmap for promoting tourism released

Part of: GS Prelims and GS -III – Infrastructure

In news

- Ministry of Tourism released three Draft National strategy and roadmap for promoting tourism in India.
- It aims to identify, diversify, develop and promote tourism products.
- It will help to overcome the aspect of seasonality and will promote India as a 365 days' destination to attract tourists

Draft National strategy and roadmap for development of rural tourism in India

Key provisions

- State assessment and tracking on rural tourism.
- Digital Technologies and platforms for rural Tourism.
- Development of clusters and marketing support
- Capacity building of stakeholders

Draft National strategy and roadmap for medical and Wellness tourism

Key provisions

- 'Heal in India' brand for promoting India as medical value travel destination.
- Enable digitalization by setting up online medical value travel portal.
- liberalised visa policy and better air connectivity.
- Establishing National Medical and Wellness tourism promotion board

Drone Survey Mandatory for All National Highways Projects

Part of: GS Prelims and GS III - Infrastructure

In news

- The National Highways Authority of India (NHAI) has made **use of drones mandatory** for video recording of the national highway projects **during different stages** of development, construction, operation and maintenance.
- These videos will be **saved on NHAI's portal "Data Lake"** to assess the progress made on the projects.

Significance

- Enhance **transparency and uniformity**.
- The videos can be used during the physical inspection of the projects.
- They can also be used as evidence **during the dispute resolution process** before Arbitral Tribunals and Courts.
- The mandatory deployment of Network Survey Vehicle (NSV) to carry out road condition surveys on the National Highways will enhance the overall quality of the highways.

About National Highways Authority of India (NHAI)

- NHAI was set up under NHAI Act, 1988.
- It has been entrusted with the National Highways Development Project (NHDP), along with other minor projects for development, maintenance and management.
- NHAI maintains the National Highways network to global standards and in a cost effective manner

NHAI's Portal "Data Lake"

- NHAI has gone 'Fully Digital' with the launch of Data Lake and Project Management Software.
- It is cloud based and Artificial Intelligence powered Big Data Analytics platform

- All project documentation, contractual decisions and approvals are now done through the portal only.

Power Sector: Issues with DISCOMS

Context: There was a sharp decline in the dues owed by power distribution companies, discoms, to power generating companies as they made use of liquidity facility arranged by the Centre.

Issues

- **Sustenance Issues:** Improvement in DISCOM's financial and operational indicators not being sustained calling for another rescue package from centre.
- **High AT&C (Aggregate Technical and Commercial) losses,** at 21.7%, due to poor or inadequate infrastructure or on account of theft or bills not being generated or honoured.
- **Profitability:** The gap between discoms' costs (average cost of supply) and revenues (average revenue realised), supposed to have been eliminated by now, stands at Rs 0.49 per unit due to lack of regular and commensurate tariff hikes.
- **Pandemic Impact:** With demand from industrial and commercial users falling, revenue from this stream, which is used to cross-subsidise other consumers, has declined, leading to build up of stress on DISCOMS.
- **Lack of Data:** Even six years after UDAY was launched, various levels in the distribution chain — the feeder, the distribution transformer (DT) and the consumer — have not been fully metered. This lack of data makes it difficult to ascertain the level in the chain where losses are occurring.

Some of the suggestions put forward to alter the status quo are:

- National power distribution company.
- Privatisation of distribution chain.
- Deduct discom dues, owed to both public and private power generating companies, from state balances with the RBI forcing states to take the necessary steps to fix discom finances.
- Linking additional state borrowings to the completion of distribution reforms can incentivise states to act.

Connecting the dots

- [India's DISCOM Stress](#) – Financial issue and hurdles in timely payment
- [Draft of Electricity \(Rights Of Consumers\) Rules, 2020](#)
- [Ujwal DISCOM Assurance Yojana \(UDAY\)](#)

SCIENCE AND TECHNOLOGY

AmbiTAG

Part of: GS Prelims and GS -III - Sci and Tech

In news

- IIT Ropar, Punjab has developed "AmbiTAG"- India's first indigenous temperature data logger for cold chain management.

Key takeaways

- AmbiTag is a first-of-its-kind IoT device that records real-time ambient temperature during the transportation of perishable products, vaccines and even body organs and blood.

- That recorded temperature further helps to know whether that particular item transported from anywhere in the world is still usable or perished because of temperature variation.
- This information is particularly critical for vaccines including Covid-19 vaccine, organs and blood transportation.
- The device has been developed under Technology Innovation Hub – AWaDH (Agriculture and Water Technology Development Hub) and its Startup ScratchNest.
- AWaDH is a Govt of India project.

Low Earth Orbit (LEO) technology

Context: Following the successful launch of 36 satellites on May 28, OneWeb's Low Earth Orbit (LEO) constellation reached 218 in-orbit satellites

- The company only has one more launch to complete before it obtains the capacity to enable its 'Five to 50' service of offering internet connectivity to all regions north of 50 degrees latitude.

What is OneWeb?

- OneWeb is a global communications company that aims to deliver broadband satellite Internet around the world through its fleet of LEO satellites.
- In 2010, the company declared bankruptcy but was able to resume operations following an inflow of investment from a consortium consisting of the UK Government, Hughes Communication, Sunil Mittal's Bharti Global Limited, SoftBank and Eutelsat, a leading European satellite operator.

LEO technology

- LEO satellites have been orbiting the planet since the 1990s, providing companies and individuals with various communication services
- LEO satellites are positioned around 500km-2000km from earth, compared to stationary orbit satellites which are approximately 36,000km away.
- Therefore, LEO satellite broadband is only preferable in areas that cannot be reached by fibre and spectrum services. OneWeb's target market will therefore be rural populations and military units operating away from urban areas.

Did You Know?

- Google launched its 'Loon' project in 2013, using high-altitude balloons to create an aerial wireless network. After testing the service in rural Kenya, Google's parent company, Alphabet, abandoned the project in 2021.
- Taking a different track, Facebook attempted to beam internet down to earth using drones. However, after two failed test flights, it also abandoned the project in 2018.
- Over 70% of rural Indians do not have access to the Internet, a problem that is particularly worrisome given the increasing need for digital integration in the fields of education and banking in light of the pandemic.

Concerns of Leo Technology

- **Complexity due to multiple players:** OneWeb satellites are produced in the US, its rockets are made and launched in Russia and its launches are facilitated by a company based out of France. Due to multiple stakeholders involved, the regulatory framework will be complicated
- **Frequency interruption:** Satellites travelling at a lower orbit can also interrupt the frequency of those orbiting above them, an accusation that has been levelled against Starlink satellites already.
- **Increased space junk & dangers of collision:** Another worry is that there are already almost 1 million objects larger than 1cm in diameter in orbit, a byproduct of decades of space activities.

Those objects, colloquially referred to as 'space junk,' have the potential to damage spacecrafts or collide with other satellites.

- **High Cost:** While companies like OneWeb and Starlink have marketed themselves to rural Indian consumers, given their price points it is unlikely that most rural Indians will be able to afford their services.

Connecting the dots

- [IN-SPACe: Growing Private Role](#)
- [SpaceX Crew Dragon](#): A new era in space exploration
- India needs [reforms in Space](#) sector

[Experimental Advanced Superconducting Tokamak \(EAST\): China's Artificial Sun](#)

About

- Experimental Advanced Superconducting Tokamak (EAST) reactor is an advanced **nuclear fusion experimental research device** located at the Institute of Plasma Physics of the Chinese Academy of Sciences (ASIPP) in Hefei, **China**.
- The purpose of the artificial sun is to **replicate the process of nuclear fusion**, which is the same reaction that powers the sun.
- Apart from the EAST, China is currently operating the HL-2A reactor as well as J-TEXT.
- The EAST project is part of the **International Thermonuclear Experimental Reactor (ITER) facility**, which will become the world's largest nuclear fusion reactor when it becomes operational in 2035. The project includes the contributions of several countries, including India, South Korea, Japan, Russia and the United States.

How does the 'artificial sun' EAST work?

- The EAST Tokamak device is designed to replicate the nuclear fusion process carried out by the sun and stars.
- Nuclear fusion is a process through which high levels of energy are produced without generating large quantities of **nuclear waste**.
- Previously, energy was produced through **nuclear fission** — a process in which the nucleus of a heavy atom was split into two or more nuclei of lighter atoms.
- While fission is an easier process to carry out, it generates far more nuclear waste. Unlike fission, fusion also does not emit greenhouse gases and is considered a safer process with lower risk of accidents.
- Once mastered, nuclear fusion could potentially provide **unlimited clean energy** and very low costs.
- For nuclear fusion to occur, **tremendous heat and pressure are applied** on hydrogen atoms so that they fuse together.
- The **nuclei of deuterium and tritium** — both found in hydrogen — are made to fuse together to create a helium nucleus, a neutron along with a whole lot of energy.
- Fuel is heated to temperatures of **over 150 million degrees C** so that it forms a hot plasma "soup" of subatomic particles.
- With the help of a strong magnetic field, the plasma is kept away from the walls of the reactor to ensure it does not cool down and lose its potential to generate large amounts of energy. The **plasma is confined for long durations for fusion to take place**.

What is the latest record by EAST and why does it matter?

- The EAST reactor set a new record when it achieved a plasma temperature of 216 million degrees Fahrenheit and also **managed to run for 20 seconds at 288 million degrees Fahrenheit**.
- To put this in perspective, the sun's core only reaches about 15 million degrees Celsius, which means the reactor was able to touch **temperatures that are 10 times hotter** than that.
- The **next goal** for the scientists behind the experimental reactor is to maintain the high temperature **for a long period of time**.
- Previously, the EAST had reached a record temperature of 100 million degrees Celsius in 2018.
- This future technology is critical for **China's green development push** and the new record is a small step in this direction of creating artificial sun
- But China is **not the only country** that has achieved high plasma temperatures. In 2020, South Korea's KSTAR reactor set a new record by maintaining a plasma temperature of over 100 million degrees Celsius for 20 seconds.

Conclusion

There is still a long way to go for China's experimental 'artificial sun'. It will take decades for a working reactor to emerge from its experimental stages.

Connecting the dots

- [USA's plan to have Nuclear Reactor On Moon](#)
- [Russia's floating Nuclear Power Plant](#)

Largest collection of Fast Radio Bursts (FRBs) catalogue

Part of: GS Prelims and GS -III - Sci and Tech

In news

- **Researchers** from the Pune-based Tata Institute for Fundamental Research (TIFR) and the National Centre for Radio Astrophysics (NCRA), have assembled **the largest collection of Fast Radio Bursts (FRBs) catalogue**.
- The data is from **Canadian Hydrogen Intensity Mapping Experiment (CHIME)**.

About Fast Radio Bursts (FRBs)

- FRBs are bright **bursts of radio waves** whose **durations** lie in the **millisecond-scale**, because of which it is **difficult to detect them** and determine their position in the sky.
 - It was first discovered in 2007.
- Their **origins are unknown** and their appearance is highly unpredictable.

About CHIME:

- It is a **novel radio telescope** that has no moving parts.
- It is optimized to have a high mapping speed.
- It is located at the Dominion Radio Astrophysical Observatory, Canada.

Significance of Studying FRBs

- These phenomena can be used to answer some long-standing questions about the universe.
- It can be used to understand the three-dimensional structure of matter in the universe

PASIPHAЕ: International collaborative sky surveying project

About

- Polar-Areas Stellar-Imaging in Polarisation High-Accuracy Experiment (PASIPHAЕ) is an international collaborative sky surveying project.
- The project has been funded by the world's leading institutions from USA, Norway, South Africa and Private foundations.
- The distances to these stars will be obtained from measurements of the GAIA satellite (of European Space Agency)
- By combining these data, astronomers can create a 3-Dimensional model of the distribution of the dust and magnetic field structure of the galaxy using a novel polarimeter instrument known as WALOP (Wide Area Linear Optical Polarimeter).

What is WALOP?

- Wide Area Linear Optical Polarimeter (WALOP) is an instrument, when mounted on two small optical telescopes, that will be used to detect polarised light signals emerging from the stars along high galactic latitudes.
- A WALOP each will be mounted on the 1.3-metre Skinakas Observatory, Crete (Greek islands), and on the 1-metre telescope of the South African Astronomical Observatory located in Sutherland.
- 200 kg weighing WALOP will be capable of observing hundreds of stars concurrently present both in the northern and the southern skies

Why is PASIPHAЕ important?

- Since its birth **about 14 billion years ago**, the universe has been constantly expanding, as evidenced by the presence of **Cosmic Microwave Background (CMB)** radiation which fills the universe.
- Immediately after its birth, the universe went through a **short inflationary phase** during which it expanded at a very high rate, before it slowed down and reached the current rate.
- However, so far, there have only been theories and indirect evidence of inflation associated with the early universe.
- The mysteries surrounding the origin of the universe can be unravelled with the help of insights provided by PASIPHAЕ

Connecting the dots

- [IN-Space](#) of India
- UN Outer Space Treaty

Synthetic Biology & Bio-security

Context: The growth of exponential technologies such as synthetic biology, artificial intelligence and nanotechnology is bound to change the theory and practice of national security. COVID-19 has quickened the inevitable.

- **Incomplete Understanding:** The rapid rise of synthetic biology in the last two decades and its still-to-be-understood implications haven't received sufficient attention from the security studies or policy communities.
- **Deliberate Misuse:** While the technology is still not easily accessible, the day is not far off when such technologies won't be difficult to access. There is a need to carefully review, especially in the wake of the pandemic, the biosecurity systems in place where such technologies are in use.
- **Bioweapons:** A well-planned attack using highly infectious pathogens synthetically engineered in a lab could be disastrous. This should concern security establishment.

- **Lacks attention of Policy makers:** The linkage between national security and synthetic biology is yet to become an agenda item in mainstream national security debates. Contrast this with the focus on nuclear weapons, facilities and material.
- **Inadequate International Regulation**
 - Unlike the nuclear domain, the fields of biology or synthetic biology are not regulated internationally despite growing military interest in synthetic biology applications and their potential misuse.
- **India Uniquely Unprepared:** Given poor disease surveillance, insufficient coordination among various government departments dealing with biosecurity issues, porous borders and ill-trained border control institutions and the pathetic state of the healthcare system, India is ill prepared for defending against pathogens or dangerous biological organisms attack.

Way Forward

The November 2021 BTWC review conference must take stock of the advances in the field, address the thinning line between biotechnology research and bio-weapons research, and consider international measures for monitoring and verification.

Connecting the dots

- [Biological Threats](#)
- [Universal Bio-deterrence](#)

[100% of Human Genome sequenced](#)

Part of: GS Prelims and GS III - Sci and tech; Biotechnology

In news

- Researchers at the Telomere-to-Telomere Consortium, an international collaboration, have sequenced the first complete human reference genome.

About Genome Sequencing and genome

- Genome Sequencing means deciphering the exact order of base pairs in an individual.
- Genome is an organism's complete set of DNA.
- Human Genome contains about 3 billion base pairs.

Benefits of Genome Sequencing

- **Help** in identifying genomic causes of rare diseases.
- **Improving** the understanding of how virus spreads.
- **Identifying** the genetic mutations

Various initiatives taken for genome Sequencing

- **IndiGen programme:** Funded by the Council for scientific and Industrial Research to undertake whole genome sequences of 1000 Indian individuals representing diverse ethnic groups from India.
- [Genome India project](#) by Department of Biotechnology which aims to collect 10,000 genetic samples from citizens across India
- **Human Genome Project:** An international research to determine DNA sequence of the entire Human Genome. It began in 1999 and was completed in 2003.

[New Doppler Radars in Maharashtra: IMD](#)

Part of: GS Prelims and GS -III - Indigenization of Technology

In news

- Recently, the [India Meteorological Department \(IMD\)](#) announced that it will install seven new doppler radars in Maharashtra, including Mumbai in 2021.
 - In January 2021, Ministry of Earth Sciences commissioned two of the ten indigenously built **X-Band Doppler Weather Radars (DWR)** to closely monitor the weather changes over the Himalayas.

About Doppler Radar

- It is a specialized radar that uses the Doppler effect to produce velocity data about objects at a distance.
 - **Doppler effect:** When the source and the signal are in relative motion to each other there is a change in the frequency observed by the observer.
 - If they are moving closer, frequency increases and vice versa.
- Based on Doppler principle the radar is designed to improve precision in long-range weather forecasting and surveillance using a parabolic dish antenna and a foam sandwich spherical radome.
- DWR has the equipment to measure rainfall intensity, wind shear and velocity and locate a storm centre and the direction of a tornado or gust front.

About India Meteorological Department

- It is an agency of the Ministry of Earth Sciences, established in 1875.
- It is the principal agency responsible for meteorological observations, weather forecasting and seismology.

Robo Sapiens- Future of the Work

Context: A recent study by McKinsey flags that ultimately it is activities rather than jobs that are being automated. \$2tn in wages or 45% of work activities in the US could already be automated with existing technologies

Concerns with emergence of robots/automation:

- **Premium on Creative Skills:** There will be increased demand for jobs within occupational groups that require social intelligence, creativity and complex problem solving as opposed to repetitive, low dexterity skills.
- **Job Losses:** Up to 47% of US jobs could be at risk over the next 20 years from computerisation. And in Emerging Markets, this figure could reach 85%.
- **Impact on India IT Sector jobs:** India-based IT outsourcers, who spearheaded the growth post 1991 reforms, appear to be planning for a 3 million/30% reduction in 'low-skilled' roles globally by 2022 because of Robot Process Automation (RPA) upskilling. This represents \$100 bn in reduced salary costs.
- **Workers disputes:** The nature of the work for human are undergoing changes for instance recent decade saw rise of gig jobs rather than 9 t 5 employment. Emergence of robots is also bound to change nature of human jobs which might give rise to regulatory disputes around sick/overtime pay, insurance, worker's rights, etc
- **Global disconnect between labour & Technology:** This disconnect is due to the 20th century education practices dating back to the Victorian age which have not kept up with the rapidly changing 21st century workplace
- **Reskilling Burden on Governments:** Around 100 million Europeans may need to acquire new skills this decade to transition to new jobs. One area of retraining could be from fossil to renewables where in the US, it could cost just \$180mn to retrain 90,000 coal workers to work in solar.

Conclusion

Lifelong learning, corporate training and development, vocational education, and massive open online courses (MOOCs) will also be critical tools to future-proofing employment prospects.

Connecting the dots

- [Responsible Artificial Intelligence](#)
- [Blockchain Technology and Voting](#)

Guidelines for Other Service Providers (OSPs)

Part of: GS Prelims and GS -III - Telecommunications

In news

- Recently, the Department of Telecommunications (DoT) has eased the norms for [Other Service Providers \(OSPs\)](#).

Important Features of New Policy

- Distinction between Domestic and International OSPs has been removed.
 - A BPO centre with common Telecom resources will now be able to serve customers located worldwide including in India.
- Now, the interconnectivity between all types of OSP centres is permitted.
- The Electronic Private Automatic Branch Exchange (EPABX) of OSPs can now be located anywhere in the world.
- Removed the requirement of OSPs submitting their reports to the DoT on a period basis.
- Other Provisions:
 - Exempted OSPs from requirement of any registration.
 - No Bank Guarantees are to be furnished.
 - Work from Home and Work from Anywhere also permitted.
 - Penalties for violations were removed altogether

Benefits

- The move is expected to provide a fillip to the BPO sector as well as create jobs.
- The new guidelines will add to India's attractiveness in ease of doing business,

About Business process outsourcing (BPO)

- [BPO](#) is a business practice in which an organization contracts with an external service provider to perform an essential business task.
- OSPs or Other Service Providers are companies or firms which provide secondary or tertiary services such as telemarketing, telebanking or telemedicine for various companies.

Renewable Power Generation Costs in 2020: IRENA

Part of: GS Prelims and GS -II - International Relations and GS III - Renewable Resources

In news

- Recently, the [International Renewable Energy Agency \(IRENA\)](#) released the 'Renewable Power Generation Costs in 2020' report.

Key highlights of the report

- 38% of the total global energy capacity now has higher operating costs than new utility-scale photovoltaics and onshore wind energy.
- Around 162 GW or 62% of total renewable power capacity added last year had lower costs than the cheapest new fossil fuel option.

- The growth was due to:
 - advancements in technologies,
 - consistent fall in component costs,
 - cost-competitive supply distribution channels,
 - learning by using
 - commercial-scale availability.

Indian Initiatives for Renewable Energy:

- [Hydrogen Energy Mission](#).
- [Jawaharlal Nehru National Solar Mission \(JNNSM\)](#).
- [International Solar Alliance](#).
- [PM- KUSUM](#).
- [National Wind-Solar Hybrid Policy](#).
- Rooftop Solar Scheme.

About International Renewable Energy Agency

- It is an intergovernmental organisation, officially founded in Bonn, Germany, in January 2009.
- Currently it has 164 members, India is the 77th Founding Member of IRENA.
- **Headquarters:** Abu Dhabi, UAE.
- Major Functions:
 - It supports countries in their transition to a sustainable energy future,
 - It promotes the widespread adoption and sustainable use of all forms of renewable energy,

World's First Genetically Modified Rubber: Assam

Part of: GS Prelims and GS III - Sci and tech

In news

- Recently, the world's first Genetically Modified (GM) rubber plant developed by Rubber Research Institute was planted in Assam.

About the GM Rubber

- Genetic modification (GM) technology allows the transfer of genes for specific traits between species using laboratory techniques.
- The GM rubber has additional copies of the gene MnSOD, or manganese-containing superoxide dismutase, inserted in the plant, which is expected to tide over the severe cold conditions during winter in the northeast.
- Why is it done?
 - Natural rubber is a native of warm humid Amazon forests and is not naturally suited for the colder conditions in the Northeast, which is one of the largest producers of rubber in India.
 - Growth of young rubber plants remains suspended during the winter months. This is the reason for the long immaturity period of this crop in the region.

About natural rubber

- Rubber is made from the latex of a tree called *Hevea Brasiliensis*.
- It is an equatorial crop, but under special conditions, it is also grown in tropical and sub-tropical areas.
- **Temperature:** Above 25°C with moist and humid climate.
- **Rainfall:** More than 200 cm.

- **Soil Type:** Rich well drained alluvial soil.
- Cheap and adequate supply of skilled labour is needed for this plantation crop.
- India is currently the sixth largest producer of NR in the world.
- **Top Rubber Producing States:** Kerala, Tamil Nadu, Karnataka.
- **Government Initiatives:**
 - Rubber Plantation Development Scheme and Rubber Group Planting Scheme
 - 100% FDI in plantations of rubber, coffee, tea, cardamom, palm oil tree and olive oil tree.
- **Major Producers Globally:** Thailand, Indonesia, Malaysia, Vietnam, China and India.
- **Major Consumers:** China, India, USA, Japan, Thailand, Indonesia and Malaysia.

DISASTER MANAGEMENT

Sea levels to rise around Lakshadweep Islands due to global warming

Part of: GS Prelims and GS-III – Environment; Conservation; Climate change

In news

- Recently, a study has projected that sea levels will rise around [Lakshadweep Islands](#) due to the impact of global warming.
- This is for the first time, that climate model projections were used to assess the potential areas of inundation over the archipelago of Lakshadweep Islands in the Arabian Sea.

Key takeaways of the study

- It will affect airport and residential areas that are quite close to the present coastline.
- Sea-level rise effects are seen to have the least impact on Androth Island under all emission scenarios.

Impact of Coastal inundation

- It could have wide socio-economic impact.
- Projected inundation due to sea-level rise can impact the islanders as residential areas are quite close to the present coastline.

What needs to be done?

- It is necessary to have appropriate coastal protection measures and best-practices to formulate planning guidelines.

Important value additions

Sea Level Rise (SLR)

- SLR is an increase in the level of the world's oceans due to the effects of climate change, especially global warming, induced
- SLR takes place by three primary factors:
 - Thermal Expansion
 - Melting Glaciers
 - Loss of Greenland and Antarctica's ice sheets.
- Consequences of SLR:
 - Coastal Flooding
 - Destruction of Coastal Biodiversity
 - Dangerous Storm Surges
 - Lateral and Inland Migration.

- Impact on Infrastructure
- Threat to Inland Life:

India's Efforts

- [Coastal Regulation Zone](#)
- **National Action Plan on Climate Change:**
 - It was launched in 2008 by the Prime Minister's Council on Climate Change.
 - It aims at creating awareness among the representatives of the public, different agencies of the government, scientists, industry and the communities on the threat posed by climate change and the steps to counter it.

US Heat Wave

Context: Recently, US Weather service has issued another excessive-heat warning for much of Washington state and North East.

- In most parts of the country, temperatures must be above the historical average in an area for two or more days before the label "heat wave" is applied to a hot spell.
- But the definition can vary by region; in the Northeast USA, it is defined as three straight days in the 90s or above.

What causes a heat wave?

- Heat waves begin when **high pressure in the atmosphere moves** in and pushes warm air toward the ground. That air warms up further as it is compressed, and we begin to feel a lot hotter.
- The high-pressure system pressing down on the ground expands vertically, forcing other weather systems to change course. It even minimizes wind and cloud cover, making the air more stifling.
- This is also why a heat wave parks itself over an area for several days or longer.

What is a heat dome?

- As the ground warms, it loses moisture, which makes it easier to heat even more. And in the drought-ridden West USA, there is plenty of heat for the high-pressure system to trap.

Why is it hotter than normal in North America?

- We have long known that the world has warmed by more than 1 degree Celsius (about 1.8 degrees Fahrenheit) since 1900, and that the pace of warming has accelerated in recent decades.
- The warmer baseline contributes to extreme-weather events and helps make periods of extreme heat more frequent, longer and more intense.
- Magnified effect of **paved and concrete surfaces in urban areas** and a lack of tree cover.
- **Urban heat island effects** can make ambient temperatures feel 3 to 4 degrees more than what they are.

Health Impacts of Heat Waves

- The health impacts of Heat Waves typically involve **dehydration, heat cramps, heat exhaustion and/or heat stroke**.
- It also causes heat cramps, fatigue, weakness, dizziness, headache, nausea, vomiting, muscle cramps and sweating.
- The extreme temperatures and resultant atmospheric conditions adversely affect people living in these regions as they cause physiological stress, sometimes resulting in death.

Way Forward

- While climate change does have a strong link with the occurrence of extreme weather events, it **isn't the cause for extreme weather events**. Episodes of heat waves are growing more common as climate change intensifies. Therefore, the intensity and frequency of heatwaves can be reduced if the global community adopts and adheres to a lower emissions scenario in the future.

Connecting the dots

- [Australia's wildfires](#) in 2020
- [Amazon Rainforest Fires](#)

DEFENCE/INTERNAL SECURITY/SECURITY

Construction of Conventional Submarines under Project P 75 (I) approved

Part of: GS Prelims and GS -III - Defence and Security

In news

- The [Defence Acquisition Council \(DAC\)](#) has **approved** the issuance of a **Request For Proposal (RFP)** for construction of six **Conventional Submarines under Project P 75 (I)** under the **Strategic Partnership (SP) Model**.

What is this Project about?

- This Project **envision**s indigenous construction of six conventional submarines equipped with the **state-of-the-art Air Independent Propulsion system** at an estimated cost of **Rs 43,000 crore**.
- This is the **first case processed** under the SP model.
- The **SP model** of the [Defence Procurement Procedure \(DPP\)](#) aims to **promote** the role of Indian industry in **manufacturing and build a domestic defence industrial ecosystem**.
- This would be **one of the largest 'Make in India' projects**.

What is the Strategic Partnership (SP) Model?

- The SP model shall **identify few Indian private companies as Strategic Partners** who would **tie up** with a few **shortlisted foreign Original Equipment Manufacturers (OEMs)** to **manufacture defence equipment**.
- The **selection** of SPs and their foreign OEM partners would be **based on a competitive process** to be undertaken simultaneously.
- The Ministry of Defence (MoD) would also **identify a list of Indian companies** in each segment **based on certain technical, financial and infrastructure-related parameters**.

Recent Reforms in Defence Sector

Part of: GS Prelims and GS -III – Security

In news

Recently, the Defence Minister released an E-booklet titled '20 Reforms in 2020' highlighting the major reforms undertaken by the Ministry of Defence (MoD) in 2020.

- Structural Reforms:** The post of [Chief of Defence Staff \(CDS\)](#) was created to increase efficiency & coordination among the Armed Forces and reduce duplication, while [Department of Military affairs \(DMA\)](#) was established to ensure improved civil-military integration.

- **Boost to Indigenisation:** To promote 'Make in India' in the defence sector, a list of 101 defence items for which there would be an embargo on the import was notified in August 2020, while [Defence Acquisition Procedure](#) 2020 was unveiled in September 2020. The increased partnership with the private sector has led to a substantial rise in defence exports.
- **Funding:** There was a 10% budget increase in 2020-21 over the previous year.
- **Promoting Innovation:** To promote innovation by young minds, five Young Scientists Laboratories of Defence Research and Development Organisation (DRDO) were launched in 2020.
- **Digitising Tribunals:** The Armed Forces Tribunal began digital hearing for the first time in August 2020.
- **Strategic Connectivity:** World's longest [Atal tunnel](#) above 10,000 feet, at Rohtang on the Leh-Manali Highway was inaugurated.
- **Women Participation:** Ten streams of Indian Army were opened for giving [Permanent Commission](#) to Short Service Commission (SSC) Women officers. All Sainik Schools were thrown open for girl students from academic session 2020-21.
- **NCC:** Expanding the reach of the National Cadet Corps (NCC) to remote locations was a major announcement.

[Innovations for Defence Excellence](#)

Part of: GS Prelims and GS -III - Defence and Security

In news

- Recently, the Defence Minister has approved the budgetary support of Rs. 498.8 crore to **Innovations for Defence Excellence (iDEX) challenge** under the Defence Innovation Organisation (DIO) for the next five years.

About iDEX

- It was launched by the Prime Minister in April **2018**.
- It **aims to achieve self - reliance and foster innovation** and technology development in Defence and Aerospace.
 - It engages Industries including MSMEs, start-ups, individual innovators, R&D institutes and academia.
- **Funded and managed by:** DIO
 - It also functions as the executive arm of DIO.
 - DIO is a 'not for profit' company registered under Section 8 of the Companies Act 2013.
 - **Founding members:** Hindustan Aeronautics Limited (HAL) & Bharat Electronics Limited (BEL) - Defence Public Sector Undertakings (DPSUs).
- It will provide the engaging industries with funding and other support to carry out Research & Development.
- iDEX has partnered with leading incubators in the country to provide hand holding, technical support and guidance to the winners of iDEX challenges.

[Global Expansion of Nuclear Arsenal: SIPRI Report](#)

Part of: GS Prelims and GS -II - International Relations

In news

- According to a recent report published in the [SIPRI Yearbook](#) 2021, the number of nuclear warheads which are ready and deployed have increased globally.

- The SIPRI Yearbook is released by the [Stockholm International Peace Research Institute \(SIPRI\)](#) which researches international armament and conflict.

Key highlights of the report

- The overall number of warheads in global military stockpiles now appears to be increasing.
- China is in the middle of a significant modernisation and expansion of its nuclear weapon inventory.
- **The nine nuclear armed states** - the U.S., Russia, the U.K., France, China, India, Pakistan, Israel and North Korea.
 - These countries together possessed an estimated 13,080 nuclear weapons at the start of 2021.
 - Russia and the U.S. together possessed over 90% of global nuclear weapons
- **The five largest arms importers were:** Saudi Arabia, India, Egypt, Australia and China.
 - They together accounted for 36% of total arms imports.

[Policy for Declassification of War History](#)

Part of: GS Prelims and GS -II - Policies and interventions and GS-III - Defence and security

In news

- The Union Defence Minister has approved a policy on archiving, declassification, compilation and publication of war and operations histories by the Ministry of Defence (MoD).
 - A policy on declassification of war histories was recommended by the Kargil Review Committee headed by K Subrahmanyam as well as the N.N. Vohra Committee.
- Timely publication of war histories would give people accurate account of the events, help in academic research and counter the baseless rumours.

Key takeaways

- A committee shall be formed for compilation of war and operations histories headed by Joint Secretary, MoD.
- Records older than 25 years should be appraised by archival experts and transferred to the National Archives of India after compilation.
- Declassification of older wars like the 1962 war will be taken up on case by case basis by a committee to be constituted under the new policy.

[OFB corporatisation gets Cabinet approval](#)

Part of: GS Prelims and GS -III - Defence and security

In news

- The Union Cabinet approved a plan to **corporatise the Ordnance Factory Board (OFB)**.
- OFB has 41 factories which will be divided into seven fully government owned corporate entities on the lines of **Defence Public Sector Undertakings (DPSU)**.
- Once implemented, the OFB will cease to exist.
- There will be no change in service conditions of the employees

Benefits of the approval

- Make the country self-sufficient in defence manufacturing
- Transform the ordnance factories into productive and profitable assets,
- Deepened specialisation in the product range

- Enhanced competitiveness
- Improved quality
- Help in overcoming various existing shortcomings like eliminating inefficient supply chains

Helpline for Cyber Fraud launched

Part of: GS Prelims and GS -III - Cyber security

In news

- The Ministry of Home Affairs has operationalised the national Helpline 155260 and Reporting Platform for preventing financial loss due to cyber fraud.
 - Cyber Fraud is the crime committed via a computer with the intent to corrupt another individual's personal and financial information stored online.
- The National Helpline and Reporting Platform provides a mechanism for persons cheated in cyber frauds to report such cases to prevent loss of their hard earned money.
- Also, a National Cyber Security Strategy 2020 is being formulated by the Office of National Cyber Security Coordinator at the National Security Council Secretariat.

About the initiative

- The helpline has been made operational by the Indian Cyber Crime Coordination Centre (I4C), in coordination with the Reserve Bank of India, all major banks, payment banks, wallets and online merchants.
- It has been developed by I4C to integrate Law Enforcement Agencies and Banks and Financial Intermediaries.
- The facility empowers both the banks and the police.

Important value additions

Indian Cyber Crime Coordination Centre

- The scheme to set up I4C was approved in October 2018.
- It deals with all types of cybercrimes in a comprehensive and coordinated manner.
- It has seven components:
 - National Cyber Crime Threat Analytics Unit
 - National Cyber Crime Reporting Portal
 - National Cyber Crime Training Centre
 - Cyber Crime Ecosystem Management Unit
 - National Cyber Crime Research and Innovation Centre
 - National Cyber Crime Forensic Laboratory Ecosystem
 - Platform for Joint Cyber Crime Investigation Team.
- **Location:** New Delhi.

Other Initiatives to Tackle Cybercrime:

- Draft Personal Data Protection Bill, 2018 to secure citizens data.
- Cyber Swachhta Kendra
- Indian Computer Emergency Response Team (CERT-IN)

Krivak Stealth Frigates

Part of: GS Prelims and GS -III - Defence and Security

In news

- Recently, the Vice-Chief of the Naval Staff has inaugurated the construction of the second frigate of the Krivak or Talwar class.

- The construction of the first ship was laid in January, 2021. It would be delivered in 2026 and the second ship after six months.

About the Krivak

- The Krivak class stealth ships are being built with technology transfer from Russia by Goa Shipyard Ltd. (GSL) under [‘Make in India’](#).
 - Engines for the ships are supplied by Ukraine.
 - In October 2016, India and Russia signed an Inter-Governmental Agreement (IGA) for four Krivak or Talwar stealth frigates.
 - The first two frigates will be built in Yantar Shipyard, in Kaliningrad, Russia. The following two will be built in GSL.
- The new Krivak frigates will have the same engines and armament configuration as Yantar’s last three frigates - INS Teg, Tarkash and Trikand.
- These will be armed with [BrahMos](#) anti-ship and land attack missiles.
- Use:
 - Accomplish a wide variety of naval missions such as finding and eliminating enemy submarines and large surface ships.

Army issues tender for 1,750 Futuristic Infantry Combat Vehicles

Part of: GS Prelims and GS-III - Defence and Security

In news

- The Indian Army has issued a Request For Information (RFI), for the procurement of 1,750 **Futuristic Infantry Combat Vehicles (FICVs)** to replace the Russian-origin infantry vehicles in service.
 - This is the Army’s third attempt for the procurement of a new infantry vehicle.
 - Early this month, an RFI was also issued for the procurement of 1770 Future Ready Combat Vehicles (FRCV) for the procurement of the next generation Main Battle Tank with planned induction from 2030.

About the RFI

- A three-stage induction model has been proposed by the Army and Indian vendors can collaborate with Foreign Original Equipment Manufacturers (OEMs) to supply FICVs within two years of the contract at the rate of 75-100 vehicles per year,
- According to the RFI, the FICVs would be employed for: cross-country operations in:
 - Plain and desert terrain along the Western borders and high altitudes, up to 5,000 m
 - Mountain terrain along the northern borders in eastern Ladakh,
 - Central India
 - North Sikkim.
- They would replace the 1980s vintage Russian-origin BMP-2.
- The **main operational tasks** that would be performed by the FICV include destroying:
 - enemy tanks
 - armoured personnel carriers
 - combat vehicles
 - low-flying helicopters
 - other ground-based weapon platforms and positions.
- The FRCV platform is planned to be procured under the **‘Strategic Partnership’ route of the [Defence Acquisition Procedure 2020](#)**.

- The FRCV is envisaged as a **medium weight tank** and will remain in service for the next 40-50 years as the MBT of the Army.

Integrated Theatre Commands

Context: Chief of Defence Staff General Bipin Rawat held a meeting with the Vice Chiefs of the armed forces and government representatives from multiple ministries and proposed the model of the integrated theatre commands — both within the Services and outside, as it involves paramilitary forces as well.

Present Structure of our armed forces

- As of now, the three forces have 17 commands between Army, Navy & Airforce
- Even if these commands operate in the same region, they are not co-located, and their areas of operational responsibility are not necessarily the same.

Army	Seven commands	Northern, Eastern, Southern, Western, Central, Southwestern and Army Training Command (ARTRAC).
Navy	Seven commands	Western, Eastern, Southern, Southwestern, Central, Training, and Maintenance commands.
Air Force	Three commands	Western, Eastern and Southern, of which Southern is largely about training.
	Andaman and Nicobar Command	<ul style="list-style-type: none"> • It is tri-Service command • It is headed by rotation by officers from the three Services
	Strategic Force Command,	<ul style="list-style-type: none"> • It is tri-Service command • It is responsible for India's nuclear assets.

What are integrated theatre commands?

- In the simplest words, it is a **unified command** under which all the resources of the Army, the Navy and the Air Force are pooled, depending on the threat perception.
- The commands could be **geographical** — like looking at a border with a particular country — or **thematic**, like a command for all maritime threats.
- Theatre commands enhances **jointness among the forces**, and also **reduces duplication of resources**.
- Several nations in the world have theatre commands, including the United States and China. The Andaman & Nicobar Command in India is an example of theatre command.

Is theatre commands a new idea?

- The idea of creating an integrated tri-Services command in India is not new — it had been **recommended at various levels after the Kargil conflict**.
- After Gen Rawat was appointed Chief of Defence Staff in January 2020, he held discussions with Vice Chiefs of the forces to come up with ideas of what these commands could look like.
- In early 2020, Gen Rawat had suggested that the first of these commands, the **Air Defence Command**, could come up by the end of 2020. However, the process has been delayed due to multiple factors, including the Covid-19 pandemic.

What is the proposal under discussion?

- A model with four to five integrated tri-Services theatre commands is under discussion, with each command headed by a three-star officer.
- This officer, the theatre commander, will report to the **Chiefs of Staff Committee (COSC)**, which, includes the three Service chiefs, and is headed by the CDS as its permanent chairman.
- This brings in a major change — the Service chiefs currently have all the operational control over their forces; **operational powers will now move to the COSC.**
- Each of these commands will have the needed assets from all the three forces. Operational control over all of those assets, regardless of the force, will lie with the commander of that theatre.

The proposed commands are:

- **Maritime Theatre Command**, which will take care of all the maritime security needs of the country on both the eastern and the western seaboard, and will include air strike assets and amphibian forces of the Army.
- **Air Defence Command**, which will be mandated with air defence across the country and beyond. The fighter jets will have reconnaissance and surveillance assets as well.
- **Two or three land-based commands** are proposed. If there are two commands, there will be one each for India's borders with China and Pakistan.
 - There is also a proposal to have another command looking at India's borders with Pakistan and China in Jammu and Kashmir, and Ladakh, given the unique territory and security needs of the country in that region.
- **Functional tri-Services commands:** Apart from these theatre commands, the following functional commands are also mooted
 - **Logistics Command**, which will have the logistics of all the Services under one person.
 - **Training and Doctrine Command**, so that all Services work under a common doctrine and have some basic common training.

What will be the role of the Services, if not operational?

- As of now, the Services have to speak to each other in times of need and urgency to request their assets to conduct a particular operation.
- The presence of Theatre commander would leave the Service chiefs with no direct control over their assets operationally.
- This does not mean the roles of Chiefs will be made redundant. Now they will have the core tasks to **Raise, Train and Sustain their respective forces.**
- Also, as **each chief will be a member of the COSC**, and an expert of his/her domain, his or her inputs will be necessary for all operational decisions.

Is everybody happy with the proposed idea?

- While the Army and the Navy are on board with the proposal, the **Air Force has certain reservations.**
 - One, the Air Force does not want the Air Force chief to lose operational control of Air assets.
 - Two, the Air Force is concerned that all of its assets might be divided within these integrated theatres.
- All such concerns need to be addressed before such a significant transformation of the defence set-up takes place.

Connecting the dots

- [Chief of Defence Staff](#)
- [Defence Self-reliance](#)

- Challenges in [India's defence trade](#)
- [Rethinking Defence doctrine](#)
- [Recent reforms in Defence Sector](#)

MISCELLANEOUS

In News	Description
1. Coronavirus Variant found in India to be called 'Delta' in new WHO system	<ul style="list-style-type: none"> • The World Health Organisation (WHO) has recommended a set of names to label emerging coronavirus variants that are regarded as global concern. • The Indian variant which was known as B.1.617.2 will be called 'Delta' • The existing scientific nomenclature system will also continue • Four Variants of Concern (VOC) have been identified by the WHO: B.1.1.7, B.1.351, P2 and B.1.617.2. • Their public labels will be: Alpha, Beta, Gamma and Delta respectively
2. World Environment Day.	<ul style="list-style-type: none"> • The World Environment Day was observed on 5th June, 2021. • Objective of the day: Encouraging worldwide awareness and action to protect our environment. • Theme for 2021: "REIMAGINE. RECREATE. RESTORE" with focus on ecosystem restoration (to prevent, halt and reverse the degradation of ecosystems on every continent and in every ocean). • Every World Environment Day has a different host country, where the official celebrations take place. • Host for 2021 is Pakistan. • The Prime Minister of India released the "Report of the Expert Committee on Road Map for ethanol blending in India 2020-2025". • Government has resolved to meet the target of 20% ethanol blending in petrol by 2025. • He also launched the ambitious E-100 pilot project in Pune for the production and distribution of ethanol across the country.
3. Operation Pangea XIV: Interpol	<ul style="list-style-type: none"> • Recently, the International Criminal Police Organization (Interpol) through its Operation Pangea XIV targeted the sale of fake medicines and products online. • Operation Pangea, is a well-established international effort of Interpol to disrupt the online sale of counterfeit and illicit health products. • Pangea works to raise awareness of the risks associated with buying medicines from unregulated websites.

	<ul style="list-style-type: none"> • The first Operation Pangea was conducted in 2008.
4. EnVision MISSION	<ul style="list-style-type: none"> • European Space Agency (ESA) announced that it has selected EnVision as its next orbiter that will visit Venus sometime in the 2030s. • Once launched on an Ariane 6 rocket, the spacecraft will take about 15 months to reach Venus and will take 16 more months to achieve orbit circularisation. • The spacecraft will carry a range of instruments to study the planet's atmosphere and surface, monitor trace gases in the atmosphere and analyse its surface composition. • A radar provided by NASA will help to image and map the surface. • Core of the ESA's mission will be to find out how Earth and Venus evolved so differently from each other considering that they are roughly of the same size and composition. • Recently, NASA has selected two missions - DAVINCI+ and VERITAS to the planet Venus.
5. Jiyo Parsi scheme.	<ul style="list-style-type: none"> • The scheme has resulted in a rise in the number of births in the Parsi community. • It was launched in 2013 • Objective: To prevent the decline in population of the Parsi zoroastrian community in India • Developed by: Ministry of Minority affairs and Parzor Foundation • It comprises three components: Medical assistance for assisted reproductive treatments, Advocacy and Health of the community.
6. Raja Parba	<ul style="list-style-type: none"> • It is also known as Mithuna SanKranti. • It is a three-day festival celebrating womanhood in Odisha. • It is believed that during this period Mother Earth menstruates and prepares herself for future agricultural activities with the arrival of monsoon. • People worship goddess Bhudevi who is the wife of Lord Jagannath • Women are given a break from household work and people abstain from walking barefoot on the earth.
7. Indo-Thai CORPAT	<ul style="list-style-type: none"> • Recently, the 31st edition of India-Thailand Coordinated Patrol (Indo-Thai CORPAT) between the Indian Navy and the Royal Thai Navy was conducted in the Andaman sea close to the Strait of Malacca. • Aims: • To keep part of the Indian Ocean safe and secure for commercial shipping and international trade. • To ensure effective implementation of the United Nations Conventions on Laws of the Sea (UNCLOS). • Other Military Exercises between India and Thailand:

	<ul style="list-style-type: none"> • Exercise MAITREE (Army). • Exercise SIAM BHARAT (Air Force)
8. China's Shenzhou-12 Manned Mission	<ul style="list-style-type: none"> • Recently, a Chinese spaceship "Shenzhou-12" carrying a three-person crew docked with China's new space station module Tianhe-1. • This has come after the launch of the Tianzhou-2 cargo spacecraft, which carried vital supplies for the space station. • China is the third country after the former Soviet Union and the United States to carry out a manned mission on its own. • It will help test technologies related to long-term astronaut-stays and health care, the recycling and life support system, the supply of space materials, extravehicular activities and operations, and in-orbit maintenance.
9. Sickle Cell Anaemia	<ul style="list-style-type: none"> • The Minister of Tribal Affairs inaugurated the Second National Sickle Cell Conclave on 'Sickle Cell Disease'. • The Conclave is being held to mark the World Sickle Cell Day observed on 19th June 2021 every year. • The disease is characterized by a modification in the shape of the red blood cell from a smooth, donut-shape into a crescent or half-moon shape. • These cells lack plasticity and can block small blood vessels, impairing blood flow. This condition leads to shortened red blood cell survival, and subsequent anaemia, often called sickle-cell anaemia. • This leads to chronic acute pain syndromes, severe bacterial infections, and necrosis (tissue death). Anaemia is a medical condition in which the red blood cell count or haemoglobin is less than normal. • Symptoms: Fatigue, Shortness of breath, Hair loss etc. • Treatment: It can be managed by simple procedures including: <ul style="list-style-type: none"> • High fluid intake • Healthy diet • Folic acid/Iron supplementation • Pain medication • Vaccination and antibiotics for the prevention and treatment of infections • A number of other therapeutic measures. • Sickle cell disease (SCD), which is the most prevalent inherited blood disorder, is widespread amongst many tribal population groups in India • The disease in India is prevalent predominantly in Jharkhand, Maharashtra, Madhya Pradesh, Chhattisgarh, western Odisha, eastern Gujarat and in pockets of the Nilgiri Hills in north Tamil Nadu and Kerala.

<p>10. Summer Solstice: 21st June</p>	<ul style="list-style-type: none"> • 21st June is the longest day in the Northern Hemisphere, technically this day is referred to as Summer solstice. • It is a natural phenomenon that occurs twice every year, once in the summer and again during winter, in each hemisphere of the earth - Summer and Winter Solstice. • It is the longest day and shortest night of the year in the Northern Hemisphere. • During this, countries in the Northern Hemisphere are nearest to the Sun and the Sun shines overhead on the Tropic of Cancer (23.5° North). • During the solstice, the Earth's axis — around which the planet spins, completing one turn each day — is tilted in a way that the North Pole is tipped towards the sun and the South Pole is away from it. • Typically, this imaginary axis passes right through the middle of the Earth from top to bottom and is always tilted at 23.5 degrees with respect to the sun. • At the Arctic Circle, the sun never sets during the solstice. • 21st June is also observed as the International Yoga Day.
<p>11. Land for Life Award: UN</p>	<ul style="list-style-type: none"> • Recently, Shyam Sundar Jyani, a Rajasthan-based climate activist, has won the prestigious United Nations' Land for Life Award for his environment conservation concept, Familial Forestry. • Familial Forestry means transferring the care of the tree and environment in the family so that a tree becomes a part of the family's consciousness. • Every two years, the United Nations Convention to Combat Desertification (UNCCD) organizes the Land for Life Award. • The Award recognizes excellence and innovation in efforts towards land in balance. • The Award was launched in 2011 at the UNCCD Conference of Parties (COP)10 in the Republic of Korea as part of the Changwon Initiative. • The Changwon Initiative intends to complement activities being undertaken in line with The Strategy (for 2008-18) and in accordance with COP 10 decisions.
<p>12. 4th Tiger Reserve in Rajasthan</p>	<ul style="list-style-type: none"> • Recently, the Ramgarh Vishdhari wildlife sanctuary received a nod from the National Tiger Conservation Authority's (NTCA) technical committee to become the 4th Tiger reserve of Rajasthan. • Other Three Tiger Reserves of Rajasthan: <ul style="list-style-type: none"> ○ Ranthambore Tiger Reserve (RTR) in Sawai Madhopur ○ Sariska Tiger Reserve (STR) in Alwar ○ Mukundra Hills Tiger Reserve (MHTR) in Kota. • Protection Status of Tiger <ul style="list-style-type: none"> ○ Indian Wildlife (Protection) Act, 1972: Schedule I ○ IUCN Red List: Endangered. ○ CITES: Appendix I. • The NTCA was launched in 2005, following the recommendations of the Tiger Task Force. • It is a statutory body of the Ministry of Environment, Forests and

	Climate Change., with an overarching supervisory/coordination role, performing functions as provided in the Wildlife (Protection) Act, 1972.
13. Delta plus variant	<ul style="list-style-type: none"> • Union Health ministry has categorised the Delta plus variant (B.1.617.2.1) as a variant of concern. <ul style="list-style-type: none"> ◦ Like Delta it has mutation in the spike protein region of the RNA virus making it more Transmissible. • WHO classifies a variant as one of concern when it is associated with: <ul style="list-style-type: none"> ◦ an increase in transmissibility ◦ increase in virulence or change in clinical disease presentation ◦ decrease in the effectiveness of Public Health and social measures or there is decrease in availability of Diagnostics, vaccines and therapeutics.
14. Gujarat International Maritime Arbitration Centre (GIMAC)	<ul style="list-style-type: none"> • Recently, a Memorandum of Understanding (MoU) was signed between the Gujarat Maritime University and International Financial Services Centres Authority in GIFT (Gujarat International Finance Tec-City) City. • This will be the first centre of its kind in the country that will manage arbitration and mediation proceedings with disputes related to the maritime and shipping sector. • The GIMAC will be part of a maritime cluster that the Gujarat Maritime Board (GMB) is setting up in GIFT City at Gandhinagar. • Benefits: <ul style="list-style-type: none"> ◦ Facilitate faster dispute resolution. ◦ Enhance the attractiveness of GIFT Special Economic Zone (SEZ) among the International Maritime Community. ◦ Increase the ease of doing business. ◦ Reduce burden on courts.
15. Baihetan Dam	<ul style="list-style-type: none"> • Recently, China has put into operation the Baihetan Dam, world's Second Biggest Hydropower Dam. <ul style="list-style-type: none"> ◦ The Three Gorges Dam is the largest hydropower dam in the world and is also along China's Yangtze River • It is on the Jinsha River, a tributary of the Yangtze (the longest river in Asia). • It has been built with a total installed capacity of 16,000 megawatts. • It will eventually be able to generate enough electricity each day once to meet the power needs of 5,00,000 people for an entire year. • It is part of Chinese efforts to curb surging fossil fuel demand by building more hydropower capacity • Concerns: <ul style="list-style-type: none"> ◦ A huge dam could hold back the massive amount of silt carried by the river which could affect farming in the areas downstream. ◦ India is also worried about the release of water during the

	<p>monsoons</p> <ul style="list-style-type: none">○ It could have disastrous consequences in the ecologically sensitive zone.○ Huge displacement of hundreds of thousands of local communities.
16.	<ul style="list-style-type: none">•

(TEST YOUR KNOWLEDGE)

Model questions: (Answers are provided at the end)

Q.1 Who releases data of national income in India?

- a) NSSO
- b) CSO
- c) NITI Aayog
- d) None of the following

Q.2 Which of the following does not come under horticulture crops?

- a) Vegetables roots
- b) Aromatic plants
- c) Potted ornamental plants
- d) Maize

Q.3 Consider the following statements regarding AmbiTag:

1. Real-time ambient temperature during the transportation of perishable products
2. It was recently developed by the scientists of the USA

Which of the above is or are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.4 Litoria Mira is a A species of which of the following that lives in the rainforests of New Guinea?

- a) Frog
- b) Snake
- c) Tortoise
- d) Lizard

Q.5 Which of the following has launched a scheme which provides for “Recognition of SDO” to attain “One Nation One Standard” vision of Government of India.

- a) NITI Aayog
- b) Ministry of Health
- c) Bureau of Indian Standards
- d) Central Pollution Control Board

Q.6 Consider the following statements regarding Sustainable Alternative Towards Affordable Transportation (SATAT) initiative:

1. It is an initiative aimed at setting up of Compressed Bio-Gas production plants
2. The initiative was launched by the Ministry of Petroleum & Natural Gas

Which of the above is or are correct?

- a) 1 only

- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.7 Coronavirus Variant found in India will be called which of the following in new WHO system?

- a) Alpha
- b) Beta
- c) Gamma
- d) Delta

Q.8 Which of the following is not a member of Shanghai Cooperation Organization?

- a) China
- b) Tajikistan
- c) India
- d) Japan

Q.9 Consider the following statements regarding Mahatma Gandhi National Rural Employment Guarantee Act

1. It is an initiative launched for both urban and rural areas
2. It guarantees 200 days of wage employment.

Which of the above is or are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.10 Global Coach Program initiative has been launched by which of the following?

- a) World Health Organisation
- b) Amnesty International
- c) World Bank
- d) UNICEF

Q.11 Clean Energy Ministerial's (CEM) Industrial Deep Decarbonization Initiative was launched by which of the following countries?

- a) USA and Japan
- b) China and Sri Lanka
- c) France and Russia
- d) India and UK

Q.12 Consider the following statements regarding National Institute of Rural Development and Panchayati Raj (NIRD&PR):

1. It is an autonomous organisation under the Union Ministry of Rural Development.
2. It is a premier national centre of excellence in rural development and Panchayati Raj.

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.13 Devika River originates in which of the following State/Union territory of India?

- a) Nashik
- b) Kochi
- c) Uttarakhand
- d) Jammu and Kashmir

Q.14 Consider the following statements:

- 1. Indian Government has resolved to meet the target of 20% ethanol blending in petrol by 2025.
- 2. E-100 pilot project in Delhi was recently launched for the production and distribution of ethanol across India

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.15 Consider the following statements regarding Asia Pacific economic cooperation (APEC):

- 1. APEC is a regional economic forum.
- 2. India is one of the members of the APEC

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.16 Food Price Index is released by which of the following?

- a) World bank
- b) Food and Agricultural Organisation
- c) World Economic Forum
- d) Organisation of Economic Cooperation and Development

Q.17 Consider the following statements Key findings of the 'Ecosystem Restoration for people, nature and climate' report:

- 1. It was published by United Nations Framework Convention on Climate Change
- 2. 1/3rd of commercial fish species are over-exploited.

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.18 Consider the following statements:

- 1. There has been 10% budget increase in 2020-21 over the previous year for the defence sector
- 2. Atal tunnel was constructed by National Highways Authority of India

Which of the above is or are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.19 Consider the following statements regarding GOBAR-DHAN (Galvanizing Organic Bio-Agro Resources) Scheme:

1. It was launched by the Ministry of Agriculture
2. It aims to augment income of farmers by converting biodegradable waste into compressed biogas (CBG).

Which of the above is or are correct ?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.20 Hindu Kush Himalayan region does not extend over which of the following countries?

- a) China
- b) India
- c) Vietnam
- d) Bangladesh

Q.21 Operation Pangea, is a well-established international effort of Interpol to disrupt which of the following?

- a) Child trafficking
- b) Online sale of counterfeit and illicit health products
- c) Cyberbullying
- d) Terrorist activities

Q.22 Consider the following statements regarding *Train Collision Avoidance System (TCAS)*

1. It is indigenously developed in India.
2. It will help in improving the safety and increasing the line capacity to accommodate more trains using the existing infrastructure.

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.23 Which of the following state has passed an action plan to protect and preserve trees older than 50 years in urban areas by terming them heritage trees?

- a) Manipur

- b) Maharashtra
- c) Madhya Pradesh
- d) Meghalaya

Q.24 Consider the following statements regarding All India Survey on Higher Education (AISHE) 2019-20 report:

1. There has been overall increase of over 18% in female enrolment.
2. Share of girl students is lowest in institutes of national importance

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.25 EnVision Mission is European Space Agency (ESA)'s mission to which of the following?

- a) Jupiter
- b) Moon
- c) Venus
- d) Arctic Pole

Q.26 Consider the following statements:

1. CACP is an attached office of the Ministry of Fertilisers.
2. The MSPs of toria and de-husked coconut are fixed on the basis of the MSPs of rapeseed/mustard and copra

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.27 Jiyo Parsi scheme is developed by which of the following?

- a) Ministry of Minority affairs
- b) Parzor Foundation
- c) NITI Aayog
- d) Both (a) and (b)

Q.28 Consider the following statements regarding FAME scheme:

1. It forms a part of National Electric Mobility Mission Plan 2020.
2. It aims to promote manufacturing of electric and hybrid vehicle technology and to ensure sustainable growth of the same

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.29 Gahirmatha Marine Sanctuary is located in which of the following state of India?

- a) West Bengal
- b) Odisha
- c) Maharashtra
- d) Kerala

Q.30 Which of the following are initiatives taken for genome Sequencing by India?

- 1. IndiGen programme
- 2. Human Genome Project
- 3. Genome India project

Select the correct code:

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

Q.31 Raja Parba is a festival of which of the following state of India?

- a) Odisha
- b) Tamil Nadu
- c) Assam
- d) Punjab

Q.32 Which of the following river is known as "Sorrow of Bihar"?

- a) Ganga
- b) Yamuna
- c) Brahmaputra
- d) Kosi

Q.33 Exercise MAITREE is conducted between Which of the following countries?

- a) India and Nepal
- b) India and China
- c) India and Vietnam
- d) India and Thailand

Q.34 8th Schedule of the Indian Constitution deals with?

- a) Schedule Tribes
- b) Disqualification of MPs and MLAs on the ground of defection
- c) Panchayats
- d) Recognized Official Languages

Q.35 International Solar Alliance (ISA) was launched by Which of the following countries?

- a) India and France
- b) India and China
- c) India and USA
- d) India and Russia

Q.36 Consider the following statements regarding East Coast Economic Corridor (ECEC):

1. It stretches from Sikkim to Tamil Nadu
2. ADB is the lead partner of the Government of India in developing ECEC.

Which of the following is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither nor 2

Q.37 Which of the following will be the nodal Ministry for the Deep Ocean Mission (DOM)?

- a) Ministry of Environment
- b) Ministry of Defence
- c) Ministry of Sci and Technology
- d) Ministry of Earth Sciences (MoES)

Q.38 Which of the following city of Indus Valley Civilization had a Dockyard?

- a) Lothal
- b) Harappan
- c) Mohenjo-daro
- d) Dholavira

Q.39 Consider the following statements regarding Indian Cyber Crime Coordination Centre:

1. It deals with only financial cyber crime
2. Its center is located in New Delhi

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.40 Consider the following statements regarding Sickle cell Anaemia:

1. The disease is characterized by a modification in the shape of the red blood cell from a smooth, donut-shape into a crescent or half-moon shape.
2. Sickle cell disease (SCD), which is the most prevalent inherited blood disorder, is widespread amongst many tribal population groups in India

Which of the above is or are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.41 Consider the following statements:

1. Regulatory Framework for approval of GM crops is covered under the Environment protection Act 1986
2. Genetic engineering appraisal committee under Ministry of Environment, forest and climate change is Apex body that allows for commercial release of GM crops in India

Which of the above is or are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.42 In summer solstice, the season in the south of the equator is?

- a) Summer
- b) Winter
- c) Autumn
- d) Spring

Q.43 Consider the following statements regarding Indian Ocean Sea Turtle Agreement (IOSEA)

1. India is not a signatory to the Indian Ocean Sea Turtle Agreement (IOSEA).
2. It puts in place a framework through which States of the Indian Ocean and South-East Asian region can work together to conserve and replenish depleted marine turtle populations.

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.44 United Nations' Land for Life Award is organised by which of the following?

- a) UNICEF
- b) WHO
- c) UNFCCC
- d) UNCCD

Q.45 Consider the following statements regarding National Food Security Act (NFSA), 2013

1. 75% of the rural population and upto 50% of the urban population are covered under it.
2. Meal and maternity benefit of not less than Rs. 6,000 to pregnant women and lactating mothers during pregnancy and twelve months after the child birth.

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.46 Consider the following statements regarding Delimitation Commission:

1. It is appointed by the President of India.
2. It works in collaboration with the Election Commission of India.

Which of the above is or are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.47 How are coral reefs made?

- a) From hardened lava from volcanoes
- b) From rocks that are forced up from the ocean floor
- c) From hardened sea salt
- d) From small living organisms call polyps

Q.48 Which of the following recently became the 4th Tiger reserve of Rajasthan?

- a) Bhadra Wildlife sanctuary
- b) Chinnar Wildlife sanctuary
- c) Kutch Desert Wildlife sanctuary
- d) Ramgarh Vishdhari wildlife sanctuary

Q.49 WHO classifies a variant as one of concern when it is associated with:

1. An increase in transmissibility
2. Increase in virulence or change in clinical disease presentation
3. Decrease in the effectiveness of Public Health and social measures

Which of the above is/are correct?

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

Q.50 Which of the following is not a part of Indian Antarctic Programme?

- a) Dakshin Gnapotri
- b) Himadri
- c) Maitri
- d) Bharti

Q.51 Consider the following statements:

1. BPO is a business practice in which an organization contracts with an external service provider to perform an essential business task.
2. OSPs or Other Service Providers are companies or firms which provide secondary or tertiary services such as telemarketing, telebanking or telemedicine for various companies.

Which of the above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.52 Consider the following statements regarding Prevention of Money Laundering Act (PMLA)

1. Money laundering is punishable with rigorous imprisonment for a minimum of 3 years and a maximum of 7 years and Fine.
2. The property is believed to be "proceeds of crime" and can be provisionally attached for 180 days.

Which of the above is/are correct?

- a) 1 only

- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.53 Where is Headquarters of International Renewable Energy Agency located?

- a) UAE
- b) France
- c) Belgium
- d) Gurugram

Q.54 Consider the following statements regarding LiDAR:

1. It is a remote sensing method that uses light in the form of a pulsed laser to measure ranges & variable distances.
2. These light pulses generate precise, three-dimensional information about the shape of the Earth and its surface characteristics.

Which of the above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.55 Consider the following statements regarding the United Nations Office on Drugs and Crime (UNODC), in its World Drug Report 2021

1. Opioids continue to account for the largest burden of disease attributed to drug use.
2. A rise in the non-medical use of pharmaceutical drugs was also observed during the coronavirus pandemic.

Which of the above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.56 Which of the following is IUCN Red List status of Sperm Whale?

- a) Vulnerable
- b) Endangered
- c) Least concern
- d) Extinct

Q.57 Consider the following statements:

1. INS Kadamba is an Indian Navy base located near Karwar in Karnataka.
2. INS Kadamba is currently the third-largest Indian naval base.

Which of the above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.58 Consider the following statements About Agni-P (Prime)

1. The 'Agni Prime' is the advanced version of the 'Agni-1' missile.
2. It is a short-range ballistic missile that will have a range of 1000 km to 1500 km.

Which of the above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.59 Which of the following Article deals with the office of AG of India?

- a) Article 67
- b) Article 76
- c) Article 86
- d) Article 96

Q.60 Which of the following is not associated with Reservation in promotion?

- a) Nagaraj judgement
- b) Indira Sawhney case
- c) Jarnail Singh case
- d) Kesavananda Bharati

Q.61 Abrogation of Article 370 led to which of the following?

- a) Fundamental duties were made enforceable
- b) Creation of Union Territories of jammu and kashmir and Ladakh
- c) Creation of state of Telangana
- d) Deletion of few languages from 8th Schedule

2021 JUNE MONTH CURRENT AFFAIRS MCQs SOLUTIONS

1 B	19 A	37 D	55 C
2 D	20 C	38 A	56 A
3 A	21 B	39 B	57 C
4 A	22 C	40 C	58 C
5 C	23 B	41 C	59 B
6 C	24 C	42 B	60 D
7 D	25 C	43 B	61 B
8 D	26 B	44 D	
9 D	27 D	45 A	
10 C	28 C	46 C	
11 D	29 B	47 D	
12 C	30 B	48 D	
13 D	31 A	49 C	
14 A	32 D	50 B	
15 A	33 D	51 C	
16 B	34 D	52 C	
17 B	35 A	53 A	
18 C	36 B	54 C	