

SCIENCE AND TECHNOLOGY

➤ **National Geospatial Policy 2022**

➤ **CONTEXT:** After making waves with liberalisation in the field of geospatial data in 2021, the government notified the 2022 National Geospatial Policy recently, for implementation with immediate effect. The policy was earlier approved by the Union Cabinet on December 16, 2022.

➤ **What is the National Geospatial Policy?**

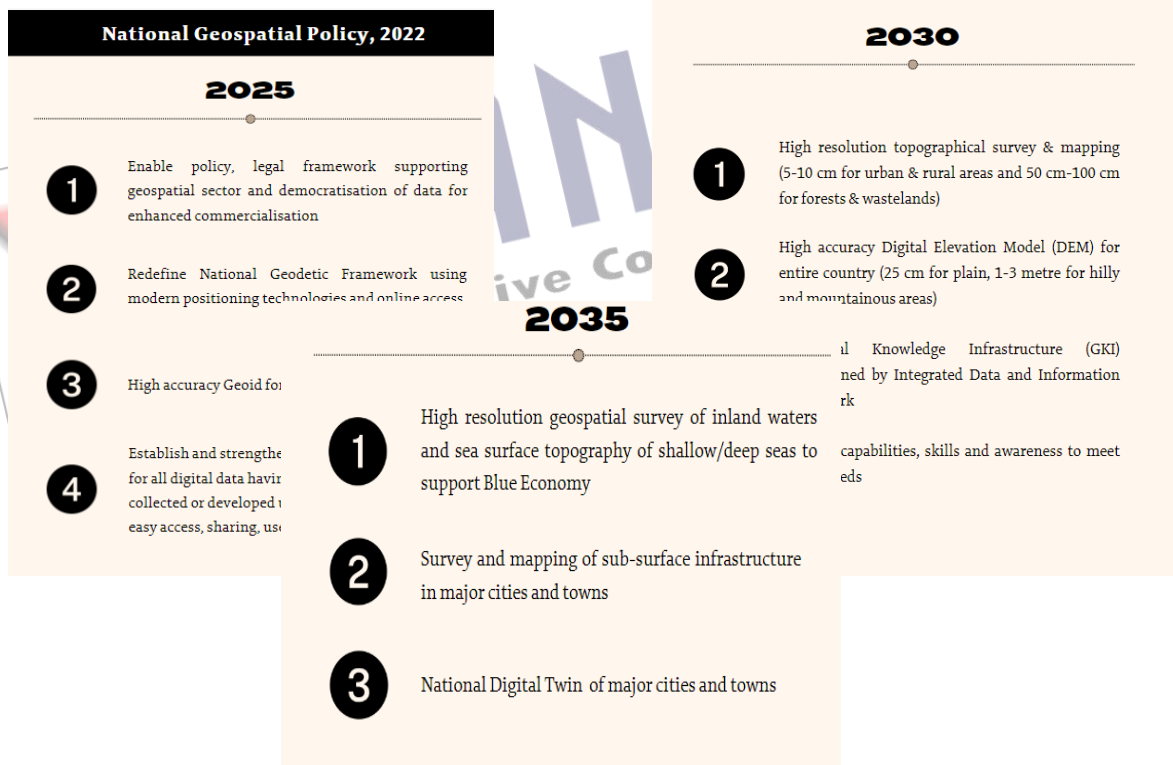
- The new Geospatial Policy will replace the National Map Policy, 2005.
- It aims to strengthen the location-centric industry to support the information economy.
- It uses guidelines for acquiring and producing geospatial data and related services including maps, issued by the Department of Science and Technology (DST) in February 2021, as its foundation.
- The DST guidelines deregulated the geospatial sector and liberalised the acquisition, production, and access of data in the field.
- Building on it, the 2022 policy lays down a framework for the development of a geospatial ecosystem, including goals and strategies to achieve it.

➤ **What is geospatial data?**

- Geospatial data are descriptions of events or occurrences with a location on or near the surface of the earth.
- This location can be static (relating to earthquakes, vegetation, etc., or dynamic) a person walking on the road, a package being tracked, etc.
- The location data obtained is usually combined with other characteristic attributes or recorded parameters to provide meaningful insights in the form of geospatial data.

➤ **Roadmap**

- The National Geospatial Policy lists the following targets to be achieved before 2035.



➤ **What is the government hoping to achieve with the policy?**

- With the National Geospatial Policy, the government aims to employ geospatial technology and data towards achieving Sustainable Development Goals (SDGs). The policy emphasises the importance of locally available and locally relevant maps and geospatial data.
- It also aims to support innovation and creation in the field, “bridging the geospatial data divide”. It seeks to create long-term, sustainable geospatial information management through capacity development and education programmes.

- The government hopes that the policy will encourage open standards, open data and platforms. The policy is structured to contribute towards the democratisation of data — Survey of India (SoI) topographic data and other geospatial data produced using public funds would be treated as common goods and made easily available.
- While the SoI will play the lead role in maintaining high resolution/high spatial accuracy orthoimagery (geometrically corrected image to remove geographical and optical distortion), actual collection and collation of data will be “increasingly done with private sector participation”.
- Liberalisation in the field has the potential to support the government’s ease of doing business policy. The private sector is expected to predominantly cater to geospatial/location data-related needs and requirements of citizens. It will also play a key role in the creation and maintenance of geospatial and mapping infrastructures.
- **What do experts say?**
- Sajid Malik, Chairman and Managing Director of Genesys International Corporation, calls the policy a “landmark reform allowing the geospatial industry to grow”. “So far, there was no clear policy, and private sector was unsure of what can and cannot be done in the field,”. According to him the policy recognises the importance of the geospatial industry and has a big role to play in the sustainability of cities.
- Geospatial data enthusiast says that the policy is a mere wish list of what the government wants to achieve but there are no fixed timelines or responsibilities to achieve those goals. “The National Geospatial Policy is a good step in the right direction but is very abstract and generic in nature.
- The e-commerce and delivery industry will be one of the main beneficiaries of deregulation in the field of geospatial data in India. Currently, Google Maps is among the biggest international companies catering to requirements in the field. Experts supporting the idea of locally-prepared maps over those provided by an international technology company. It is good for, any developer or application who uses Google Maps has to pay a huge fee to Google.
- Experts call the policy a “step in the right direction”, because geospatial data was so far tightly controlled by the government. “While the rest of the world has evolved in the field of geospatial data, India has been stuck in the past, with no clear direction on how to proceed.

GOVERNMENT POLICY AND INTERVENTION

❖ **NCPCR draft guidelines**

➤ **CONTEXT:** The National Commission for Protection of Child Rights (NCPCR) has come up with draft guidelines on the preliminary assessment of whether certain minors are to be tried under law as adults in particular cases, under the Juvenile Justice (Care and Protection of Children) Act.

➤ **What is preliminary assessment as per the JJ Act?**

- Earlier, all children under the age of 18 were considered minors by the law, but through an amendment in 2015, a provision was added to the JJ Act for trying a child in conflict with the law as an adult. Under this, a child in the age group of 16-18 years could be tried as an adult in case of heinous offences.
- Section 15 (1) of the Act states that the Juvenile Justice Board shall conduct a preliminary assessment to determine whether to try such a child as an adult or a minor.
- The Act directs that the Board shall consider the mental and physical capacity of the child for committing the alleged offence, the ability to understand the consequences of the offence, and the circumstances in which the offence was committed.
- It states that the Board can take the assistance of experienced psychologists or psychosocial workers or other experts. The Act also gives a disclaimer that the assessment is not a trial, but is only to assess the capacity of the child to commit and understand the consequences of the alleged offence.
- After the assessment, the Board can pass an order saying there is a need to try the said child as an adult and transfer the case to a children’s court with the relevant jurisdiction.
 - ✓ If tried as a minor, the child could be sent to a special home for a maximum of three years.
 - ✓ If tried as an adult, the child can be sentenced to a jail term, except being sentenced to death or life imprisonment without the possibility of release.

➤ **Why has the NCPCR come up with draft guidelines now?**

- On July 13, 2022, the Supreme Court while hearing a case related to the murder of a Class 2 student in Haryana, allegedly by a 16-year-old, said the task of preliminary assessment under the J J Act is a “delicate task”.
- The court said that the consequences of the assessment on whether the child is to be tried as an adult or a minor are “serious in nature and have a lasting effect for the entire life of the child”.
- According to the court assessment requires expertise and directed that appropriate and specific guidelines be put in place. It had left it open to the Central government and the National and State Commissions for the Protection of Child Rights to consider issuing the guidelines.

- ✓ The NCPCR has framed guidelines which it describes the key procedures to conduct the preliminary assessment. It said that while the course of assessment may differ from child to child, the guidelines are meant to frame essential components and the basic mechanisms to address any ambiguity.
- **What do the draft guidelines say?**
 - The draft relying on already existing provisions in the Act says that the preliminary assessment has to determine four aspects:
 - **Physical capacity of the child:** To determine the child's 'locomotor' abilities and capacities, particularly with regard to gross motor functions such as walking, running, lifting, throwing...such abilities as would be required to engage in most antisocial activities.
 - **Mental capacity:** To determine the child's ability to make social decisions and judgments. It also directs assessments pertaining to mental health disorders, substance abuse, and life skills deficits.
 - **Circumstances in which the offence was allegedly committed:** Psychosocial vulnerabilities of the child. This is to include life events, any trauma, abuse, and mental health problems, stating that the offence behaviour is a cumulative consequence of a lot of other circumstances.
 - **Ability to understand the consequences of the alleged offence:** To determine the child's knowledge or understanding of the alleged offence's social, interpersonal and legal consequences. These include what others will say or perceive him, how it might affect his personal relationships and the knowledge of relevant laws, respectively.
 - It also states that the experts must be given an optimal opportunity to interact with the child to build a rapport. Experts can be from the field of child psychology and psychiatry. It also states they must undergo regular training. Additionally, a copy of the assessment must be given to the child and a legal aid counsel must be present during the assessment. It must be within three months of the child being produced before the Board.
 - Other reports that the Board is to rely on include the Social Investigation Report, Social Background Report an Individual Care Plan, statements of witnesses and interaction with parents, guardians, school staff, peer groups and neighbours.
- **What had the Supreme Court said about the preliminary assessment?**
 - In the Haryana case, the Board had decided in December 2017 to treat the 16-year-old as an adult. The order was challenged by his parents before the Punjab and Haryana High Court.
 - In October 2018, the High Court directed the Board to make a fresh assessment, stating irregularities, including that the documents relied on by the Board were not provided to the child, the reports of experts were incomplete and a recommendation by an expert to refer the child to a higher-level organisation was not acted upon by the Board.
 - The victim's family and the CBI filed appeals before the Supreme Court. In 2022, the SC dismissed the appeal and directed a fresh reconsideration by the Board.
 - It pointed out that the task of preliminary assessment had its own implications for the trial. It then noted that the Act or the Model Rules of the Act do not lay down guidelines or a framework to facilitate the Board in making a proper assessment.
 - The obligation of the Board, consisting of one judicial member and two others, to conduct the assessment largely depended on the Board's wisdom, without there being any guidelines on how to conduct it. In the absence of any guidelines, the Board has to use its discretion.
 - It said that the assessment had been a question of debates, analysis and research and referred to contents from various sources, including a detailed study by the National Law University, Orissa, and Guidance Notes by NIMHANS.
 - The draft guidelines by the NCPCR also refer to the SC's excerpts from these reports.

POLITY

- ❖ **Delegated legislation**
- **CONTEXT: In upholding the Centre's 2016 decision on demonetisation, one of the key questions to decide for the Supreme Court was whether Parliament gave excessive powers to the Centre under the law to demonetise currency. While the majority ruling upheld the validity of the delegated legislation, the dissenting verdict noted that excessive delegation of power is arbitrary.**
- **What is delegated legislation?**
 - Parliament routinely delegates certain functions to authorities established by law since every aspect cannot be dealt with directly by the law makers themselves. This delegation of powers is noted in statutes, which are commonly referred to as delegated legislations.
 - The delegated legislation would specify operational details, giving power to those executing the details. Regulations and by-laws under legislations are classic examples of delegated legislation.

- A 1973 Supreme Court ruling explains the concept as: “The practice of empowering the Executive to make subordinate legislation within a prescribed sphere has evolved out of practical necessity and pragmatic needs of a modern welfare State. At the same time it has to be borne in mind that our Constitution-makers have entrusted the power of legislation to the representatives of the people, so that the said power may be exercised not only in the name of the people but also by the people speaking through their representatives. The role against excessive delegation of legislative authority flows from and is a necessary postulate of the sovereignty of the people.”
- **What was the delegation of power in the demonetisation case?**
- Section 26(2) of the Reserve Bank of India Act, 1934 essentially gives powers to the Centre to notify that a particular denomination of currency ceases to be legal tender.
 - ✓ The provision reads: “On recommendation of the Central Board the Central Government may, by notification in the Gazette of India, declare that, with effect from such date as may be specified in the notification, any series of bank notes of any denomination shall cease to be legal tender.”
- Here, Parliament, which enacted the RBI Act, is essentially delegating the power to alter the nature of legal tender to the central government. The Centre exercised that power by issuing a gazette notification, which is essentially the legislative basis for the demonetisation exercise.
- **Why was this challenged?**
- The petitioner’s challenge was this: “In the event that Section 26(2) is held to permit demonetization, does it suffer from excessive delegation of legislative power thereby rendering it ultra vires the Constitution?”
- The Constitution gives law-making powers to the Parliament. While operational aspects can be delegated to statutory bodies, essential powers cannot be delegated. Also, the delegation must be with sufficient guidelines on how the power can be used.
- The petitioners in the demonetisation case argued that since Section 26(2) contains no policy guidelines on how the Centre can exercise its powers, it is arbitrary and therefore, unconstitutional.
- **Why is excessive delegation power an issue?**
- A 1959 landmark ruling in Hamdard Dawakhana v Union of India, the Supreme Court had struck down delegation of powers on the grounds that it was vague. A Constitution Bench considered the validity of certain provisions of the Drug and Magic Remedies (Objectionable Advertisements) Act that prohibited advertisements of certain drugs for treatment of certain diseases and dealt with the powers of search, seizure and entry.
 - The Court held that the central government’s power of specifying diseases and conditions as given in Section 3(d) is ‘uncanalised’, ‘uncontrolled’, and going beyond the permissible boundaries of valid delegation. Hence, the same was deemed unconstitutional.
 - ✓ The court said “The question for decision then is, is the delegation constitutional in that the administrative authority has been supplied with proper guidance. In our view the words impugned are vague. Parliament has established no criteria, no standards and has not prescribed any principle on which a particular disease or condition is to be specified in the Schedule. It is not stated what facts or circumstances are to be taken into consideration to include a particular condition or disease,”.
- The Court applies the “policy and guideline” test to decide the constitutionality of the delegated legislation.
- The Attorney General for India argued that the RBI Act itself has guidance for exercise of delegated powers. He cited the Preamble and Section 3 of the Act as guidance on the purpose of the law and the Centre’s role in “regulating” monetary policy.
 - ✓ Section 3 deals with establishment and incorporation of Reserve Bank.
- **What did the Court decide?**
- The majority verdict held that since the delegation of power is to the Centre which is anyway answerable to the Parliament, the delegation power cannot be struck down.
 - ✓ The court said “In case the Executive does not act reasonably while exercising its power of delegated legislation, it is responsible to Parliament who are elected representatives of the citizens for whom there exists a democratic method of bringing to book the elected representatives who act unreasonably in such matters,”.
- First, Justice BV Nagarathna held that Centre could not have exercised its delegated powers because Section 26(2) of the RBI only gives powers to the Centre when the recommendation is “initiated” by the RBI Central Board.
- From a reading of the record presented by the Centre, the judge held that it is clear that the proposal originated from the Centre and therefore the Centre could not have drawn its powers to demonetise from Section 26(2).
- The dissenting view also held that, even if the Centre has the power under Section 26(2) allowing for demonetisation of “any” notes is a vast power that is arbitrary and therefore unconstitutional.

- ✓ “The Central Government in its wisdom may also initiate the process of demonetisation as has been done in the instant case. But the said power cannot be exercised by the mere issuance of an executive notification in the Gazette of India. In other words, when the proposal to demonetise any currency note is initiated by the Central Government with or without the concurrence of the Central Board of the Bank, it is not an exercise of the executive power of the Central Government under subsection (2) of Section 26 of the Act. In such a situation, as already held, the Central Government would have to resort to the legislative process by initiating a plenary legislation in the Parliament.”.

PRELIMS

1. Cold wave

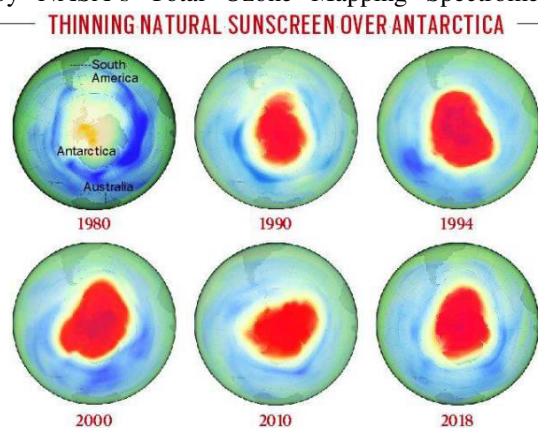
- **CONTEXT: Delhi and other parts of northwest India have been reeling under a cold wave spell.**
- In Delhi, lowest minimum temperature recorded this month was 1.9 degrees Celsius on January 8, the second-lowest minimum temperature in January in 15 years.
- While lower-than-normal temperatures were recorded over parts of Northwest India from the last week of December 2022, these conditions intensified in the first week of January 2023.
- Fog and low cloud coverage brought severe cold day conditions to the region, when temperatures remained below normal over parts of Delhi, Punjab, Haryana, Chandigarh, Himachal Pradesh, Rajasthan, Uttar Pradesh and Madhya Pradesh.
- **What is a cold wave?**
- The IMD marks a cold wave in terms of minimum temperatures – when the minimum temperature in the plains is 4 degrees or less or when the minimum temperature is less than 10 degrees and 4.5 to 6.4 degrees below the normal.
- One of the major factors contributing to colder than normal temperatures over north India recently is the large-scale fog cover
- according to IMD. “While westerly and northwesterly winds of around 5 to 10 kmph in the afternoon have also been contributing to the dip in temperature, an important factor is fog, which has been lasting for longer durations, preventing sunlight from reaching the surface and affecting the radiation balance.
- There is no heating in the day time, and then there is the impact of the night. Foggy or cloudy nights are usually associated with warmer nights, but if the fog remains for two or three days, cooling begins even at night.
- Light winds and high moisture near the land surface have been contributing to the formation of a blanket of fog over large swathes of the Indo-Gangetic plains in the morning.
- Since there has not been any significant impact of western disturbances over the region, cold northwesterly winds have also been contributing to low temperatures.
 - ✓ Western disturbances, which are storms from the Mediterranean region, are associated with a change in wind direction, bringing easterly winds to northwest India. The last time the region saw easterly winds was on December 29.
- Delhi usually records cold wave spells in December and January. Over the past decade, the number of cold wave days in January has ranged from none to seven.
- While there were no cold wave days in December in Delhi this winter, the five such days so far this month are more than January in 2022.

2. Ozone hole, filling up now: What this means for climate action

- **CONTEXT: The ozone ‘hole’, once considered to be the gravest danger to planetary life, is now expected to be completely repaired by 2066, a scientific assessment has suggested. In fact, it is only the ozone layer over Antarctica, which will take a long time to heal completely. Over the rest of the world, the ozone layer is expected to be back to where it was in 1980 by 2040 itself, a UN-backed scientific panel has reported.**
- The recovery of the ozone layer has been made possible by the successful elimination of some harmful industrial chemicals, together referred to as Ozone Depleting Substances or ODSs, through the implementation of the 1989 Montreal Protocol. The assessment has reported that nearly 99 per cent of the substances banned by the Montreal Protocol have now been eliminated from use, resulting in a slow but definite recovery of the ozone layer.
- **Damage to the ozone layer**
- The depletion of the ozone layer, first noticed in the early 1980s, used to be the biggest environmental threat before climate change came along.
- Ozone (chemically, a molecule having three Oxygen atoms, or O₃) is found mainly in the upper atmosphere, an area called stratosphere, between 10 and 50 km from the Earth’s surface.
- It is critical for planetary life, since it absorbs ultraviolet rays coming from the Sun. UV rays are known to cause skin cancer and many other diseases and deformities in plants and animals.

- Though the problem is commonly referred to as the emergence of a 'hole' in the ozone layer, it is actually just a reduction in concentration of the ozone molecules. Even in the normal state, ozone is present in extremely low concentrations in the stratosphere. Where the 'layer' is supposed to be the thickest, there are no more than a few molecules of ozone for every million air molecules.
- In the 1980s, scientists began to notice a sharp drop in the concentration of ozone. This drop was much more pronounced over the South Pole, which was later linked to the unique meteorological conditions (temperature, pressure, wind speed and direction) that prevail over Antarctica. The ozone hole over Antarctica is the biggest during the months of September, October, and November.
- By the middle of 1980s, scientists had figured out that the chief cause of ozone depletion was the use of a class of industrial chemicals that contained chlorine, bromine or fluorine.
- The most common of these were the chlorofluorocarbons, or CFCs, that were used extensively in the airconditioning, refrigeration, paints, and furniture industries.
- **Improvement in the situation**
- The ozone hole has been steadily improving since 2000, because of the effective implementation of the Montreal Protocol.
- The latest scientific assessment has said that if current policies continued to be implemented, the ozone layer was expected to recover to 1980 values by 2066 over Antarctica, by 2045 over the Arctic, and by 2040 for the rest of the world.
- The elimination of ozone-depleting substances has an important climate change co-benefit as well. These substances also happen to be powerful greenhouse gases, several of them hundreds or even thousands of times more dangerous than carbon dioxide, the most abundant greenhouse gas and the main driver of global warming.
- The report said that global compliance to the Montreal Protocol would ensure the avoidance of 0.5 to 1 degree Celsius of warming by 2050. This means that if the use of CFCs and other similar chemicals had continued to grow the way it did before they were banned, the world would have been 0.5 to 1 degree Celsius warmer than it already is.
- In fact, it was with this climate change objective in mind that the Montreal Protocol was amended in 2016 to extend its mandate over hydrofluorocarbons, or HFCs, that have replaced the CFCs in industrial use.
- HFCs do not cause much damage to the ozone layer (the reason they were not originally banned) but are very powerful greenhouse gases.
- The Kigali Amendment to the Montreal Protocol seeks to eliminate 80-90 per cent of the HFCs currently in use by the year 2050. This is expected to prevent another 0.3 to 0.5 degree Celsius of global warming by the turn of the century.
- **Precedent for climate action**
- The success of the Montreal Protocol in repairing the ozone hole is often offered as a model for climate action. It is argued that emissions of greenhouse gases can also similarly be curtailed to arrest rapidly rising global temperatures.
- However, the parallels of elimination of ODSs with greenhouse gases are limited. The use of ODSs, though extensive, was restricted to some specific industries. Their replacements were readily available, even if at a slightly higher cost initially. The impact of banning these ozone-depleting chemicals was therefore limited to these specific sectors. With some incentives, these sectors have recovered from the initial disruption and are thriving again.
- The case of fossil fuels is very different. Emission of carbon dioxide is inextricably linked to the harnessing of energy. Almost every economic activity leads to carbon dioxide emissions. Even the so-called renewable energies, like solar or wind, have considerable carbon footprints right now, because their manufacturing, transport, and operation involves the use of fossil fuels.
- The emissions of methane, the other major greenhouse gas, comes mainly from agricultural practices and livestock. The impact of restraining greenhouse gas emissions is not limited to a few industries or economic sectors, but affects the entire economy, and also has implications for the quality of life, human lifestyles and habits and behaviours. Climate change, no doubt, is a far more difficult and complex problem than dealing with ozone depletion.
- **PRIOR TO 1979**, scientists had not observed atmospheric ozone concentrations below 220 Dobson Units (DU; measure of the total amount of ozone in a vertical column of air above the Earth's surface). In the early 1980s, scientists using ground-based and satellite measurements began to realise that the Earth's natural sunscreen was thinning dramatically over the South Pole each spring. This thinning of the ozone layer over Antarctica came to be known as the ozone hole. The stratospheric ozone layer protects life on Earth by absorbing ultraviolet light, which damages DNA in plants and animals (including humans) and leads to sunburns and skin cancer.

- **The images** given have showing the size and shape of the ozone hole every year from 1979 through 2019.
- The measurements were made from 1979-2004 by NASA's Total Ozone Mapping Spectrometer instruments; from 2005-11 by the Royal Netherlands Meteorological Institute's Ozone Monitoring Instrument (which flies on NASA's Aura satellite); and from 2012-19 by the Ozone Mapping Profiler Suite on the NASA/NOAA Suomi NPP satellite. Red and yellow areas in the images indicate the ozone hole. The maps show the ozone hole on the day the lowest ozone concentrations were measured each year.
- **IN 1979**, the maximum depth of the hole was 194 Dobson Units (DU). In 1982, it fell to 173 DU, in 1983 to 154 DU, and in 1985 to 124 DU.
- **IN 1991**, ozone concentration fell below 100 DU for the first time. The deepest hole was in 1994, when concentrations fell to 73 DU on Sept 30.



Pictures and caption: NASA Earth Observatory

ANSWER WRITING

Q. “Starlink will change the internet connectivity “. Discuss the utility of the project in bringing remote connectivity.

Introduction

- It is a SpaceX project to build a broadband network with a cluster of orbiting spacecrafts that could eventually number in thousands.
- The Starlink satellites carry Hall thrusters, which use electricity and krypton gas to generate an impulse, to manoeuvre in orbit, maintain altitude and guide the spacecraft back into the atmosphere at the end of their mission.
- Starlink will be positioned in the Low Earth Orbit (LEO) around 500km-2000km from earth, compared to stationary orbit satellites which are approximately 36,000km away.
- **Utility of Starlink Project:**

- **Low Latency:** Latency, or the time needed for data to be sent and received, is contingent on proximity.
 - As LEO satellites orbit closer to the earth, they are able to provide stronger signals and faster speeds than traditional fixed-satellite systems.
 - Additionally, because signals travel faster through space than through fibre-optic cables, they also have the potential to rival if not exceed existing ground-based networks.
- **Coverage:** The signals from one geostationary satellite can cover roughly a third of the planet — and three to four satellites would be enough to cover the entire Earth.
- **Easier Connectivity:** As satellites appear to be stationary, it is easier to link to them.

Issue related to satellite-based broadband:

- **Increase Space Debris:** Due to an increase in space debris and an increased risk of collision, these constellations of Internet satellites will make it impossible to observe other space objects and distinguish their signals.
- **Hindrance of Bad weather:** Weather conditions have an impact on how satellite internet signals travel. Storms, rain, and strong winds may result in a weak signal and prevent the Earth from receiving internet service.

Conclusion

Starlink project will be a revolution in providing satellite-based internet to remote parts of the world and will reduce digital inequity.

MCQs

- Which of the following statements is/are correct?
 - It is a statutory body established by the Commission for Protection of Child Rights (CPCR) Act, 2005.
 - The NCPCR is a body that works towards achieving a child rights-centric approach in all the laws, programs, policies, and administrative mechanisms in India.
 - It functions under the Ministry of Women & Child Development of the central government.
 - As per the commission, a child is defined as a person who is below the age 15 years.

Select the correct answer using the codes given below:

a) 1, 2 and 4 only b) 1, 3 and 4 only c) **1, 2 and 3 only** d) 2, 3 and 4 only
- Consider the following statements:
 - Away from the moderating influence of sea.
 - Snowfall in the nearby Himalayan region.
 - Cold winds from the Central Asian region

4. Air mass comes from Polar Regions to Northern India.
Which of the above is/are correct reason/s for the excessive cold in North India during the cold weather season?
a) 1 and 2 only b) 1 and 3 only c) **1, 2 and 3 only** d) 2,3 and 4 only
3. Consider the following statements
1. Remote sensing and GNSS (Global Navigation Satellite System) are part of Geospatial technology.
2. The new Geospatial Policy will replace the National Map Policy, 2005.
3. In India Yojnas like Jal Jeevan Mission, Atal Bhujal Yojana have set up projects using Geo spatial technology.
Which of the statement/s given above is/are correct?
a) 1 and 2 only b) 2 and 3 only c) 1 and 3 only d) **1,2 and 3**
4. With reference to the Parliament of India, which of the following Parliamentary Committees scrutinizes and reports to the House whether the powers to make regulations, rules, sub-rules, by-laws, etc. conferred by the Constitution or delegated by the Parliament are being properly exercised by the Executive within the scope of such delegation?
a) Committee on Government Assurances
b) **Committee on Subordinate Legislation**
c) Rules Committee
d) Business Advisory Committee
5. Consider the following statements regarding depletion of the ozone layer:
1. Excessive release of chlorine and bromine in the environment from man-made compounds, such as chlorofluorocarbons.
2. Occurrence of certain natural phenomena such as sunspots, and stratospheric winds.
3. Degradation of materials by ultra-violet radiation
4. Major volcanic eruptions.
Which of the above can be categorized as causing ozone depletion?
a) 1, 2 and 3 only
b) 1, 3 and 4 only
c) **1, 2 and 4 only**
d) 2, 3 and 4 only
6. With reference to India-U.K. Migration and Mobility MoU, Consider the following statements:
1. The initiative was developed as part of an India-U.K. Migration and Mobility MoU agreed upon in May 2021.
2. The scheme aims to increase mobility for a limited number of young people between India and the UK.
Which of the above statement/s is/are correct?
a) 1 only b) 2 only c) **Both 1 and 2** d) Neither 1 nor 2
7. With reference to Prithvi-II missile which successfully tested-fired recently, consider the following statements
1. It is an intercontinental ballistic missile
2. The Prithvi-II missile has a range of around 3500 kilometres.
Which of the above statement/s is/are not correct?
a) 1 only b) 2 only c) Both 1 and 2 d) **Neither 1 nor 2**
8. Paigah Tombs often heard in news recently situated in which of the following state?
a) Andhra Pradesh b) **Telangana** c) Maharashtra d) Uttar Pradesh
9. Recently Tigress T4 of Pench Tiger Reserve gave birth to four cubs, which of the following States are associated with the said tiger reserve?
a) Maharashtra - Chhattisgarh
b) **Maharashtra - Madhya Pradesh**
c) Madhya Pradesh - Chhattisgarh
d) Maharashtra - Karnataka
10. Consider the following statement
1. India is the world's largest producer of spices.
2. Spice Board of India functions under ministry of agriculture and farmers welfare
3. World Spice Congress 2023 to be held in India
Which of the statement/s given above is/are correct?
a) **1 and 3 only** b) 2 and 3 only c) 1 and 2 only d) 1,2 and 3 only