



Sweet Revolution

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National Geospatial Policy 2022

Prelims: Geospatial Technology, Remote Sensing, SDG.

Mains: National Geospatial Policy 2022, its significance and related Concerns.

Why in News?

The **Ministry of Science and Technology** has notified a **National Geospatial Policy (NGP) 2022**, with the goal of making India a world leader in the Global Geospatial Sector.

- India's geospatial economy is expected to cross Rs 63,000 crore by 2025 at a growth rate of 12.8% and to provide employment to more than 10 lakh people.

What is Background?

- In 2021, the Ministry of Science and Technology issued “**Guidelines for acquiring and producing Geospatial Data** and Geospatial Data Services including Maps”.
- While the Guidelines deregulated the Geospatial sector by liberalizing Geospatial data acquisition/production/ access, the 2022 Policy takes it further by laying down an overarching framework for holistic development of the Geospatial ecosystem.

What is National Geospatial Policy 2022?

▪ About:

- It is a citizen-centric policy based on Geo-Spatial technology, which seeks to **strengthen the Geospatial sector to support national development**, economic prosperity and a thriving information economy.
- The policy is aimed to **set up high resolution topographical survey and mapping, with a high-accuracy Digital Elevation Model (DEM)** by 2030.

▪ Vision and Goals:

- It aims to make India a **World Leader in Global Geospatial space** with the best in the class ecosystem for innovation.
- To develop a **coherent national framework in the country** and leverage it to move towards a digital economy and improve services to citizens.
- To develop **Geospatial infrastructures, Geospatial skill and knowledge, standards, Geospatial businesses.**
- To promote **innovation and strengthen the national and sub-national arrangements for generation** and management of Geospatial information.

▪ Institutional framework:

- A Geospatial Data Promotion and Development Committee (GDPDC) at the **national level shall be the apex body for formulating and implementing strategies related** to promotion of the Geospatial sector.
- GDPDC would replace and subsume the functions and powers of the National Spatial Data Committee (NSDC) constituted in 2006 and GDPDC constituted in 2021.
- Department Of Science & Technology shall continue to be the **nodal Department of the Government and GDPDC shall make suitable recommendations to DST** in the discharge of its functions relating to the Geospatial regime.

▪ Milestones towards Realization of the Policy’s Vision:

- **Year 2025:**
 - Put in place an enabling policy and legal framework that supports liberalization of Geospatial sector and **democratization of data for enhanced commercialization with Value Added Services.**
- **Year 2030:**
 - **High resolution topographical survey & mapping** (5-10 cm for urban & rural areas and 50 cm-100 cm for forests & wastelands).
- **Year 2035:**
 - High resolution/accuracy **Bathymetric Geospatial Data of inland waters and sea surface topography of shallow/deep seas** - to support Blue Economy.
 - **National Digital Twin of major cities and towns.** The **Digital Twin** is a **virtual replica of a physical asset**, process or service that lies at the core of the new digital revolution.
 - National Digital Twin would be an ecosystem of smart, dynamic, connected Digital Twins, enabled by secure and interoperable data sharing, to facilitate better decision-making.

▪ Significance:

- Geospatial technology and data can act as agents of transformation for achieving the **Sustainable Development Goals (SDGs)**.
- This is a vibrant initiative to promote the Start-Up & reduce the last mile dependencies on the foreign soil.
- Geospatial data play a vital role in **a wide spectrum of frequencies for critical data management applications**, such as military operations, disaster and emergency management, environmental monitoring, land and city planning.

What are the Related Concerns?

- **Complex Data:**
 - Geospatial data can be described as complex data objects with complex relationships among them.
 - Securing this type of data poses major challenges and bottlenecks that are yet to be fully understood and addressed.
- **Security Concerns:**
 - Although a variety of models and techniques are available to manage access and share geospatial data, **little attention has been paid to addressing the National security concerns**, such as access control, securities and privacy policies, the development of secure and in particular interoperable GIS applications in the areas of Defence (Tri-Services).
- **Data Misuse and Privacy Violations:**
 - If the entire body of geospatial data would be made available by simply integrating the data from the different repositories, there is **severe chances of potential data misuse and privacy violations**.
 - And “also sensitive information such as building ownerships might be revealed or information about **critical infrastructure could become publicly accessible** and it is a major concern in context to the applications in Defence.

What is Geospatial Technology?

- Geospatial technology uses tools like [GIS \(Geographic Information System\)](#), [GPS \(Global Positioning System\)](#) and [Remote Sensing](#) for geographic mapping and analysis.
- These tools capture spatial information about objects, events and phenomena (indexed to their geographical location on earth, geotag). The location data may be Static or Dynamic.
- Static location data include **position of a road, an earthquake event or malnutrition among children in a particular region while dynamic location data** include data related to a moving vehicle or pedestrian, the spread of an infectious disease etc.
- The technology may be **used to create intelligent maps to help identify spatial patterns in large volumes of data**.
- The technology facilitates **decision making based on the importance and priority of scarce resources**.

Way Forward

- Given the number of people and organizations involved in a disaster preparation scenario, security measures must be taken to provide users and applications only with data on a need-to-know basis.
- A clear roadmap should be drawn and SOP should be developed in **National Geospatial Policy 2022** for the National Securities Issues for the country wherein it is the three services, Para military or Critical Infrastructure Sectors.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q. Which of the following is/are the aim/aims of “Digital India” Plan of the Government of India? (2018)

1. Formation of India’s own Internet companies like China did.
2. Establish a policy framework to encourage overseas multinational corporations that collect Big Data to build their large data centres within our national geographical boundaries.
3. Connect many of our villages to the Internet and bring Wi-Fi to many of our schools, public places and major tourist centres.

Select the correct answer using the code given below:

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

Ans: (b)

[Source: FE](#)

National Green Hydrogen Mission

Prelims: Green Hydrogen, Renewable Energy.

Mains: National Green hydrogen Mission and Related Challenges.

Why in News?

The Union Government has approved a **Rs 19,744 crore National Green Hydrogen mission** that aims to make India a 'global hub' for using, producing and exporting green hydrogen.

What is the National Green Hydrogen Mission?

- **About:**
 - It is a program to **incentivise the commercial production of green hydrogen and make India a net exporter** of the fuel.
 - The Mission will facilitate demand creation, production, utilization and export of Green Hydrogen.
- **Sub Schemes:**
 - **Strategic Interventions for Green Hydrogen Transition Programme (SIGHT):**
 - It will **fund the domestic manufacturing of electrolyzers and produce green hydrogen.**
 - **Green Hydrogen Hubs:**
 - States and regions capable of supporting large scale production and/or utilization of hydrogen **will be identified and developed as Green Hydrogen Hubs.**
- **Objective:**
 - Developing green hydrogen production capacity of at least **5 MMT (Million Metric Tonne) per annum**, alongside adding **renewable energy capacity of about 125 GW (gigawatt) in India** by 2030.
 - It aims to **entail over Rs 8 lakh crore of total investments** and is expected to generate six lakh jobs.
 - It will also lead to **a cumulative reduction in fossil fuel imports by over Rs 1 lakh crore** and an abatement of nearly 50 MT of annual greenhouse gas emissions.
- **Nodal Ministry:**
 - Ministry of New and Renewable Energy
- **Significance:**
 - It will help entail the **decarbonisation of the industrial, mobility and energy sectors;** reducing dependence on imported fossil fuels and feedstock; developing indigenous manufacturing capabilities; creating employment opportunities; and developing new technologies such as efficient fuel cells.
- **Potential:**
 - India has a **favourable geographic location and abundance of sunlight and wind for the production** of green hydrogen.
 - Green hydrogen technologies are **being promoted in sectors where direct electrification isn't feasible.**
 - Heavy duty, long-range transport, some industrial sectors and long-term storage in the power sector are some of these sectors.
 - The nascent stage of this industry **allows for the creation of regional hubs that export high-value green products and engineering,** procurement and construction services.

What are the Challenges?

- **In Nascent Stages Globally:**
 - Green hydrogen development is still in the nascent stages globally and while India can take the lead in being a major producer, **it doesn't have the necessary infrastructure yet** to execute all these intermediary steps.
- **Economic Sustainability:**
 - One of the biggest challenges faced by the industry for using hydrogen commercially is the **economic sustainability of extracting green hydrogen.**
 - For transportation fuel cells, hydrogen must be cost-competitive with conventional fuels and technologies on a per-mile basis.

What is Green Hydrogen?

- **About:**
 - Hydrogen is a **key industrial fuel that has a variety of applications including the production of ammonia (a key fertilizer),** steel, refineries and electricity.
 - However, all of the hydrogen manufactured now is the **so-called 'black or brown'**

hydrogen because they are produced from coal.

- Hydrogen is the most abundant element in the universe. But pure, or the elemental hydrogen, is very scarce. It almost always exists in compounds like with oxygen to form H₂O, or water.
- But when **electric current is passed through water, it splits it into elemental oxygen and hydrogen through electrolysis.** And **if the electricity used for this process comes from a renewable source** like wind or solar then the hydrogen thus **produced is referred to as green hydrogen.**
- Colors attached to hydrogen indicate the **source of electricity used to derive the hydrogen molecule.** For instance, if coal is used, it is referred to as brown hydrogen.
- **Current Production:**
 - Green hydrogen currently accounts **for less than 1% of global hydrogen production** due to it being **expensive to produce.**
 - A kilogram of black hydrogen costs USD 0.9-1.5 to produce while grey hydrogen costs USD 1.7-2.3 and blue hydrogen can cost anywhere from USD 1.3-3.6. However, green hydrogen costs USD 3.5-5.5 per kg, according to a 2020 analysis by the Council for Energy, Environment and Water.
- **Need for Producing Green Hydrogen:**
 - Hydrogen is a great source of energy **because of its high energy content per unit of weight,** which is why it is used **as rocket fuel.**
 - Green hydrogen in particular is **one of the cleanest sources of energy with close to zero emission.** It can be used in **fuel cells for cars or in energy-guzzling industries like fertilizers** and steel manufacturing.
 - Countries across the world **are working on building green hydrogen capacity as it can ensure energy security** and also help in cutting carbon emission.
 - Green hydrogen has become a global buzzword, especially as the world is facing its biggest-ever energy crisis and the threat of **climate change** is turning into a reality.

What are the other Initiatives Related to Renewable energy?

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

Way Forward

- There is a need to announce **incentives to convince enough users of industrial hydrogen to adopt green hydrogen.**
- India needs to develop **supply chains in the form of pipelines, tankers, intermediate storage and last leg distribution networks** as well as put in place an effective skill development programme to ensure that lakhs of workers can be suitably trained to adapt to a viable green hydrogen economy.
- India has the **potential to bring down the cost of green hydrogen by using low-cost renewable generating plants** and cost-curtailment experience gained through solar and wind reverse auctions.
 - Huge market **potential, owing to the young demography and thriving economy, will be a long-term benefit for the government** while pushing the application of hydrogen-based technologies.

For Infographic, [click here.](#)

UPSC Civil Services Examination Previous Year Question (PYQ)

Q. Hydrogen fuel cell vehicles produce one of the following as “exhaust” (2010)

- (a) NH₃
- (b) CH₄
- (c) H₂O
- (d) H₂O₂

Ans: (c)

Exp:

- **A fuel cell is a device that converts chemical energy (energy stored in molecular bonds) into electrical energy.**
- It uses Hydrogen gas (H₂) and Oxygen gas (O₂) as fuel and the products of the reaction in the cell are water (H₂O), electricity, and heat.
- This is a big improvement over internal combustion engines, coal-burning power plants, and nuclear power plants, all of which produce harmful byproducts. **Therefore, option (c) is the correct answer**

Source: TH

Honey Mission and Sweet Revolution

For Prelims: National Beekeeping and Honey Mission, Beekeeping, Sweet Revolution

For Mains: Doubling Farmers' Income, Sweet Revolution, Promoting Apiculture

Why in News?

Under the [Honey Mission](#), **1 lakh and 75 thousand bee boxes have been distributed so far by the Khadi and Village Industries Commission (KVIC)** after providing **beekeeping training to 17 thousand 500 beneficiaries** across the country.

- As per the National Horticulture Board (NHB), **Uttar Pradesh, West Bengal, Punjab, Bihar, Rajasthan, Himachal Pradesh, Haryana, Uttarakhand, Madhya Pradesh and Karnataka** were the **top ten honey-producing states in 2021-22**.

What is Honey Mission?

- It was **launched in 2017** in line with the [‘Sweet Revolution’](#).
- Under the mission, the **KVIC under Ministry of Micro, Small and Medium Enterprises provides the farmers or beekeepers -**
 - Practical training about the examination of honeybee colonies,
 - Identification and management of bee enemies and diseases along with the management of bee colonies in all seasons.
 - Acquaintance with apicultural equipment's and
 - Honey extraction and wax purification.

What is Sweet Revolution?

- **About:**
 - It is an ambitious initiative of the Government of India for **promoting apiculture, popularly known as 'beekeeping'**.
 - To provide a **booster shot to Sweet Revolution**, the government launched the **National Beekeeping and Honey Mission in 2020** (a central sector scheme under the **Ministry of Agriculture and Farmers Welfare**) as part of the [AtmaNirbhar Bharat scheme](#).
- **Aim:**
 - It aims to **accelerate the production of quality honey** and other related products.
 - The demand for good quality honey has grown over the years as it is considered a naturally nutritious product.
 - Other apiculture products such as **royal jelly, beeswax, pollens, etc., are also used extensively in different sectors** like pharmaceuticals, food, beverage, beauty, and others.
- **Significance:**
 - Technology intervention through this mission will ensure **bee conservation, prevent diseases or the loss of bee colonies and provide quality and quantity of apiculture products**.
 - Farming practices will yield **superior-quality honey and other products for the domestic as well as international market**.
 - Beekeeping is a **low investment and highly skilled enterprise model**, in which technology application has emerged as a great enabler for socio-economic growth.
 - **Scaling up beekeeping will double farmers' income, generate employment, ensure food security and bee conservation**, and increase crop productivity.

What is KVIC?

- KVIC is a **statutory body** established under the **Khadi and Village Industries Commission Act, 1956**.
- The KVIC is charged with the **planning, promotion, organisation and implementation of programmes** for the development of Khadi and other village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.
- It functions under the **Ministry of Micro, Small and Medium Enterprises**.

For Infographic, [click here](#)

UPSC Civil Services Examination, Previous Years Question (PYQ)

Q. Assess the role of National Horticulture Mission (NHM) in boosting the production, productivity and income of horticulture farms. How far has it succeeded in increasing the income of farmers? **(2018)**

[Source: PIB](#)

Supreme Court Expands Article 19 Ambit

For Prelims: Article 19 ambit, Supreme Court, Fundamental Rights

For Mains: Important Judgements, Fundamental Rights

Why in News?

Recently, the [Supreme Court](#) has ruled that a fundamental right under [Article 19/21](#) **can be enforced** even against persons other than the State or its instrumentalities.

- The court took this view while ruling that the right of **free speech and expression guaranteed under the Article 19(1)(a) cannot be curbed by any additional grounds** other than those already laid down in Article 19(2).

What is Article 19?

- Article 19 of the Constitution of India guarantees the **right to freedom of speech and expression, and is typically invoked against the state.**
 - **Article 19(1)** in The Constitution Of India 1949, All citizens shall have the right
 - (a) to freedom of speech and expression;
 - (b) to assemble peaceably and without arms;
 - (c) to form associations or unions;
 - (d) to move freely throughout the territory of India;
 - (e) to reside and settle in any part of the territory of India; and
 - (f) omitted
 - (g) to practise any profession, or to carry on any occupation, trade or business.
 - **Article 19(2)** in The Constitution Of India 1949,
 - Nothing in sub clause (a) of clause (1) shall affect the operation of any existing law, or prevent the State from making any **law, in so far as such law imposes reasonable restrictions on the exercise of the right conferred by the said sub clause** in the interests of the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality or in relation to contempt of court, defamation or incitement to an offence.
- Some fundamental rights, such as those prohibiting untouchability, trafficking, and bonded labor, **are explicitly against both the state and other individuals.**

What is the Reference for this SC's Ruling?

- **Enforcing Rights against Private Entities:**
 - This interpretation **brings an obligation on the state to ensure that private entities also abide** by Constitutional norms.
 - It opens up a **range of possibilities in Constitutional law, potentially allowing for the enforcement of privacy rights against a private doctor** or the right to free speech against a private social media entity.
- **Reference to Previous Court Rulings:**
 - The Court referenced the **2017 verdict in Puttaswamy**, in which a nine-judge bench unanimously upheld [privacy as a fundamental right](#).
 - The government had argued **that privacy is a right enforceable against other citizens and, therefore, cannot be elevated** to the status of a fundamental right against the state.
- **International Perspectives:**
 - The Court also looked to **foreign jurisdictions, contrasting the American approach with the European Courts.**
 - The US Supreme Court's ruling in ***New York Times vs. Sullivan***, which found that **defamation law as applied by the state against The New York Times** was inconsistent with the Constitutional guarantee of freedom of speech and expression, was

cited as an example of a shift in US law from a “purely vertical approach” to a “horizontal approach.

- A **vertical application of rights** would mean it can be enforced only against the state while a **horizontal approach** would mean it is enforceable against other citizens.
 - For example, a horizontal application of the right to life would enable a citizen to bring a case against a private entity for causing pollution, which would be a violation of the right to a clean environment.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q1. ‘Right to Privacy’ is protected under which Article of the Constitution of India? (2021)

- (a) Article 15
- (b) Article 19
- (c) Article 21
- (d) Article 29

Ans: (c)

Q2. Right to Privacy is protected as an intrinsic part of Right to Life and Personal Liberty. Which of the following in the Constitution of India correctly and appropriately imply the above statement? (2018)

- (a) Article 14 and the provisions under the 42nd Amendment to the Constitution.
- (b) Article 17 and the Directive Principles of State Policy in Part IV.
- (c) Article 21 and the freedoms guaranteed in Part III.
- (d) Article 24 and the provisions under the 44th Amendment to the Constitution.

Ans: (c)

Mains

Q. Examine the scope of Fundamental Rights in the light of the latest judgement of the Supreme Court on Right to Privacy. (2017)

Source: IE

Cancellation of Bauxite Lease

Prelims: Environment Impact Assessment, Environment Protection Act, 1986, Metalurgical process and related concerns.

Mains: Bauxite and its Distribution, Environment Impact Assessment.

Why in News?

Ahead of Odisha State Pollution Control Board's (OSPCB) hearing on [Environment Clearance of Mali Parwat Bauxite Mining Lease](#), local people have started protests demanding permanent cancellation of the lease.

What is the Issue?

▪ Background:

- The opposition to the mining activities in Maliparbat dates back to 2003, when a public hearing was organized by the Odisha SPCB for environmental clearance.
- After a lease was granted to Hindalco in 2007, **villagers had alleged that their grievances and objections to the project were ignored.**
- According to activists, the company's [Environment Impact Assessment](#) report mentioned that **there was no water-body in Maliparvat.**
- Villagers had, however, argued that 36 perennial streams flow down from the Maliparvat, which **was the source of water for villagers for their agricultural and drinking purposes** and the **bauxite mining project should be cancelled.**
- Till 2011 the company **failed to carry out mining and subsequently, its environmental clearance expired.** But, in 2012-2014 it **started mining illegally without going in for renewal of environmental clearance.**
- The industry has got a **fresh lease for 50 years for which the public hearing was necessitated.**

▪ Concerns:

- Tribals residing in nearby villages have alleged that mining activities in Maliparbat would affect **around 42 villages under Sorishapodar**, Dalaiguda and Pakhahola panchayats.
- Environmentalists have also said that mining can **deplete water sources from around 32 perennial streams** and four canals in Maliparbat, adversely affecting the livelihoods of the tribals.
 - The Mali and forest area are **inhabited by members of Kondha, Paraja and Gadaba tribes.**

What is the Environment Impact Assessment?

- It can be **defined as the study for predicting the effect of a proposed activity/project on the environment.**
- It is statutory under the [Environment Protection Act, 1986](#) for some projects.
- **Process:**
 - Screening based upon scales of investment, type of development, and location of the development is done to see whether a project requires an environmental clearance as per the statutory notifications.
 - Scoping is a process of detailing the Terms of Reference (ToR) of EIA, that is the main issues or problems in the development of a project.
 - Impact Prediction involves mapping the environmental consequences of the significant aspects of the project and its alternatives.
- The public mandatorily needs to be informed and consulted on the proposed development after the completion of the EIA report.

What is Bauxite?

▪ About:

- Bauxite is an ore of aluminum. It is a rock **consisting mainly of hydrated aluminium oxides.**
- The deposits of Bauxite are mainly associated with laterites and occur as capping on hills and plateaus, except in **coastal areas of Gujarat and Goa.**
- Bauxite is primarily used to **produce alumina through the Bayer process.**
- Like many metals, world demand for aluminium, and therefore **bauxite, has grown substantially over the past several years in response to economic growth in emerging Asian economies.**

▪ World Distribution:

- **Reserves:** As per **2015 data**, world bauxite reserves are estimated **at 30 billion tonnes and are located mainly** in Guinea (25%), Australia (20%), Vietnam (12%), Brazil (9%), Jamaica (7%), Indonesia (4%) and China (3%).
- **Australia continued to be the major producer** and accounted for about 29% share in the total production, followed by China (19%), Guinea (18%), Brazil (10%) and India (7%).
- **Distribution in India:**
 - **Reserves:** By States, **Odisha alone accounts for 51% of country's resources of bauxite followed by** Andhra Pradesh (16%), Gujarat (9%), Jharkhand (6%), Maharashtra (5%) and Madhya Pradesh & Chhattisgarh (4% each) in 2019. Major bauxite resources are concentrated in the East Coast bauxite deposits in Odisha and Andhra Pradesh.
 - **Production:** In terms of production, in 2020, **Odisha accounted for 71% of the total output** followed by Gujarat (9%) and Jharkhand (6%).

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q. 1 Which of the following minerals are found in a natural way in the State of Chhattisgarh? (2008)

1. Bauxite
2. Dolomite
3. Iron ore
4. Tin

Select the correct answer using the code given below:

Code:

- (a)** 1, 2 and 3 only
- (b)** 1 and 3 only
- (c)** 2 and 4 only
- (d)** 1, 2, 3 and 4

Ans: (d)

Q.2 Consider the following minerals: (2020)

1. Bentonite
2. Chromite
3. Kyanite
4. Sillimanite

In India, which of the above is/are officially designated as major minerals?

- (a)** 1 and 2 only
- (b)** 4 only
- (c)** 1 and 3 only
- (d)** 2, 3 and 4 only

Ans: (d)

Exp:

- According to the National Account Statistics (2007), minerals are broadly classified into major and minor minerals.
- Major Minerals Includes

- Fuel Minerals: Coal, Lignite, Natural Gas, Petroleum (Crude).
- Metallic Minerals: Bauxite, Chromite, Copper Ore, Gold, Iron Ore, Lead (Concentrates), Zinc (Concentrates), Manganese Ore, Silver, Tin (Concentrates), Tungsten (Concentrates).
- Non-Metallic Minerals: Agate, Andalusite, Apatite, Asbestos, Ball Clay, Barytes, Calcite, Chalk, Clay, Corundum, Calcareous sand, Diamond, Diaspore, Dolomite, Kyanite, Laterite, Limestone, Limestone Kankar, Lime Shell, Magnesite, Mica (crude), Ochre, Pyrites, Pyrophyllite, Phosphorite, Quartz, impure quartz, Quartzite, Fuchsite Quartzite, Silica Sand, Salt (Rock), Salt (Evaporated), Shale, Slate, Steatite, Sillimanite, Vermiculite, Wollastonite.
- Minor Minerals include Bentonite, Boulder, Brick Earth, Building Stones, Chalcedony or Corundum, Fuller's Earth, Gravel, Lime Stone, Dunite, Felspar, Fire Clay, Felsite, Flourite (Graded), Flourite (Concentrates), Gypsum, Garnet (Abrasives), Garnet (Gem), Graphite run-on-mines, Jasper, Kaolin, Marble, Murram, Ordinary Clay, Ordinary Sand, Ordinary Earth, Pebbles or Kankar, Quartzite and Sand stone, Road Metal, Salt Petre, Shale, Shingle, Slate.
- Chromite, Kyanite and Sillimanite are major minerals, whereas Bentonite is a minor mineral. **Hence, 1 is not correct and 2, 3, and 4 are correct.**
- **Therefore, option (d) is the correct answer.**

[Source: TH](#)

Jallikattu

For Prelims: Jallikattu, Article 29, Animal Welfare Board of India vs A. Nagaraja case, Pongal, Kambala,

For Mains: Traditional and Cultural significance of Jallikattu, Issues related to Jallikattu

Why in News?

A [Constitution Bench](#) of the [Supreme Court](#) reserved for judgment a batch of petitions seeking to strike down a **Tamil Nadu law** which protects [Jallikattu](#) by claiming that the [bull-taming sport](#) is a **cultural heritage of the State** and is protected under [Article 29 \(1\) of the Constitution](#).

- While these practices may be **deeply rooted** in the **culture and traditions of certain communities, they are often controversial and have been criticized by animal welfare advocates.**

What is Jallikattu?

- **Jallikattu** is a traditional sport that is popular in the Indian state of **Tamil Nadu**.
- The sport involves **releasing a wild bull** into a **crowd of people**, and the participants attempt to **grab the bull's hump and ride it** for as long as possible, or **attempt to bring it under control**.
- It is celebrated in the month of **January**, during the [Tamil harvest festival, Pongal](#).

What are the Associated Concerns?

- The primary question involved was whether **Jallikattu** should be granted constitutional protection as a collective **cultural right under Article 29 (1)**.

- **Article 29 (1)** is a [fundamental right](#) guaranteed under **Part III** of the Constitution to protect the **educational and cultural rights** of citizens.
- The court examined if the laws “**perpetuate cruelty to animals**” or were actually a means to ensure “**the survival and well-being of the native breed of bulls**”.
- The **five-judge Bench** heard parties on whether the new **Jallikattu laws** were “**relatable**” to **Article 48 of the Constitution**, which urged the state to endeavor to organize agriculture and animal husbandry on modern and scientific lines.
- The Constitution Bench also looked into whether **Jallikattu** and **bullock-cart** races laws of **Karnataka and Maharashtra** would actually **sub-serve the objective of “prevention” of cruelty to animals under the Prevention of Cruelty to Animals Act of 1960.**

What are the Associated Legal Interventions?

- In **2011**, the **Centre added bulls** to the **list of animals** whose **training and exhibition is prohibited.**
- The **Supreme Court banned Jallikattu** through a judgment in **May 2014** in the ***Animal Welfare Board of India vs A. Nagaraja case*** on the grounds of cruelty to animals.
- In **2018**, the **Supreme Court** referred the **Jallikattu case** to a **Constitution Bench**, where it is pending now.
- The bone of contention is the [Prevention of Cruelty to Animals \(Tamil Nadu Amendment\) Act of 2017](#) and [Prevention of Cruelty to Animals \(Conduct of Jallikattu\) Rules of 2017](#), which had **re-opened** the gates for the conduct of the popular **bull-taming sport** in **the name of culture and tradition despite a 2014 ban** by the **Supreme Court.**

What were the Arguments adduced for and against Jallikattu?

- **Argument in Favour:**
 - In Tamil Nadu, jallikattu is **both a religious and cultural event celebrated by the people of the State** and its influence extends beyond the confines of caste and creed.
 - “A practice which is centuries-old and symbolic of a community’s identity can be regulated and reformed as the human race evolves rather than being completely obliterated,” the State government submitted.
 - It added that any ban on such a practice would be viewed as “hostile to culture and against the sensitivities of the community”.
 - Describing jallikattu as “a tool for conserving this precious indigenous breed of livestock,” the government argued that the traditional event **did not violate principles of compassion and humanity.**
 - It contended that the traditional and cultural significance of the event and its intertwining with **the sociocultural milieu was being taught in high school curriculum** so that “the significance is maintained beyond generations.”
- **Arguments in Opposition:**
 - The **petitioners’ line of argument** was that animal life was inextricably connected to the lives of humans. Liberty was “inherent in every living being, whether it be in any form of life,” an aspect that had been recognized by the **Constitution.**
 - The **Tamil Nadu** law was brought to circumvent the ban on **jallikattu** imposed by the **Supreme Court.**
 - **Deaths and injuries** have been caused to humans as well as bulls which had taken place in several districts of the State while conducting **jallikattu.**
 - The petitioners contended that contrary to the arguments advanced by **Tamil Nadu**, several tamers pounced on bulls.
 - According to them, “**extreme cruelty**” was inflicted on the animals.
 - There was no material to justify **jallikattu** as a part of culture.
 - The critics had equated the event with practices such as **sati and dowry**, which were also once recognized as part of culture and stopped through legislation.

What is the Position in Other States for Similar Sports?

- **Karnataka** too passed a law to save a similar sport, called [Kambala](#).

- Except in **Tamil Nadu** and **Karnataka**, where **bull-taming** and **racing continue** to be organized, these sports remain **banned** in all other states including **Andhra Pradesh, Punjab** and **Maharashtra** due to the **2014** ban order from the **Supreme Court**.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q. What are the challenges to our cultural practices in the name of Secularism? (2019)

[Source: TH](#)

Ranji Trophy

Why in News?

Ranji Trophy 2022-23 started from **13th December, 2022** and will end on **20th February, 2023**.

What is Ranji Trophy?

- The Ranji Trophy **founded by the Board of Control for Cricket in India (BCCI)**, was named after one of **India's first test cricketer, Ranjitsinhji, who played for England and Sussex**.
 - Ranjitsinhji known as **'Father of Indian cricket', never actually played for India**.
- Largely regional in nature, the Ranji Trophy can be summed up as a **domestic first-class cricket series played by various regional teams against one another**.
- The series was **announced in 1934**, and the initial fixtures took place in 1934-35. **Maharaja Bhupinder Singh of Patiala donated the trophy**.
- The Ranji Trophy has gained vast popularity over the years, and in modern times has achieved a **similar status like county cricket, which is prevalent in England**.
- One of the most distinctive features of the series is that apart from **regional cricket boards of various states, government teams also take part in the tournament, like the Railways team**, and several other teams associated with government enterprises.
- In **Ranji Trophy 2022-23**, a total of **135 matches will be played and a total of 32 teams are taking part** that have been split into **four groups**.
 - **Madhya Pradesh won the 2021-22 Ranji Trophy**.

What are the Other Domestic Cricket Tournaments?

- **Duleep Trophy:**
 - **Named after Kumar Shri Duleepsinhji** of Nawanagar, the Duleep Trophy is a **domestic first-class cricket competition** in India whose **first edition was played in 1961-62**.
- **Vijay Hazare Trophy:**
 - Vijay Hazare Trophy is a **limited overs domestic competition that involves different state teams from India to fight against each other** for the title and is named after **Prominent Indian Batsman-Vijay Hazare**.
- **Deodhar Trophy:**
 - The Deodhar Trophy is a **List-A domestic fifty-over competition annually conducted in India**, having first started in the **1973-74 season**.
- **Irani Cup:**
 - **On completion of 25 years of the Ranji Trophy Championship**, The BCCI inaugurated the Irani Trophy **in the name of late Z R Irani in 1960**.
 - Irani Cup sees a match annually between the **Ranji Trophy champions of the**

preceding year and rest of Indian team.

▪ **Syed Mushtaq Ali Trophy:**

- **Introduced in the year 2008-09**, the Syed Mushtaq Ali Trophy is a **Twenty20 cricket domestic championship**, organized by BCCI, **among the teams from Ranji Trophy.**

UPSC Civil Services Examination, Previous Years Question (PYQ)

Q. Consider the following statements in respect of the ICC World Test Championship: (2021)

1. The finalists were decided by the number of matches they won.
2. New Zealand was ranked ahead of England because it won more matches than England.

Which of the above statements is/are correct?

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

Ans: (d)

Exp:

- The 2021-2023 ICC World Test Championship is the second edition of the ICC World Test Championship. It started on 4 August 2021 and is scheduled to finish on 31 March 2023.
- Revamped Point System
 - The ICC announced in 2020, that the finalists would be decided by percentage of points earned. The amount of points available per Test has been made uniform. This system allows the relative performance of teams to be compared at any point in time, meaning the cancellation of any matches or series for any reason does not directly impact the points table. **Hence, statement 1 is not correct.**
- New Zealand was the first team to qualify for the inaugural final. It was ahead of England due to its ratings, i.e., points (126) after playing 22 matches. On the other hand, England after playing 35 matches has got a 107 rating. **Hence, statement 2 is not correct.**
- **Therefore, option (d) is the correct answer.**

[Source: TH](#)

Rapid Fire Current Affairs

First Female Indian Olympic Medalist

Sakshi Malik is an **Indian freestyle wrestler**. At the **2016 Summer Olympics**, she won the bronze medal in the 58 kg category, becoming the **first Indian female wrestler to win a medal at the Olympics** and the fourth female Olympic medalist from the country.

The **Olympic Games are an international sports festival organised by the International Olympic Committee (IOC), held every four years.**

The last **Olympics game was held in Beijing, China in 2022** and the **next Olympic Games will be**

held in Paris, France in 2024.

Read More: [Winter Olympics](#)

Country's Largest Liquid Waste Treatment Plant

The Municipal Corporation of Tirupati (MCT), Andhra Pradesh is **set to take a significant step in water treatment** by putting in place what is claimed to be the **country's largest liquid waste treatment plant to use phytoid technology**.

The phytoid technology is developed by the [Council of Scientific & Industrial Research's \(CSIR\)](#) National Environmental Engineering Research Institute (NEERI). It is **being used increasingly for various types of [biodegradable](#) wastewater across India**.

The technology **involves a constructed [wetland](#)** exclusively designed for the treatment of municipal, urban, agricultural and industrial wastewater. This technology works without electricity, minimum maintenance, less manpower and importantly self-sustainable.

Read More: [Waste Water Management](#)

Loss of Optimal Habitat

Nilgiri landscape, varied in climate and vegetation, is **rich in [biodiversity](#) and has the largest single population of the endangered Asian elephant** anywhere in the world. However, according to a study [Endangered Asian elephant has lost most of its optimal habitat in the Nilgiri Biosphere Reserve](#) (Tamil Nadu, Karnataka and Kerala).

Human settlements and crop cultivation have hindered the movement of the elephants, **keeping them confined to the hilly areas, considered sub-optimal habitats**.

In these sub-optimal habitats, **their chances of survival are lower** due to dangerous terrain for animals of this size. Study shows that when barriers are constructed, particularly in areas with slopes, **their movement is blocked, and gene flow reduced. This could ultimately lead to increasing the extinction risk of this [endangered species](#)**.

Read More: [Nilgiri Biosphere Reserve](#)

Manohar International Airport, Goa

The newly inaugurated Manohar International Airport at Mopa in North Goa has been **operationalised recently**.

The **foundation stone of the airport was laid by the Prime Minister in November 2016**. The airport has been **built on the theme of sustainable infrastructure and comprises a [solar power plant](#), green buildings, LED lights on the runway, [rainwater harvesting](#), state-of-the-art [sewage treatment plant](#) with recycling facilities**, among other such facilities.