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- Disclaimer -

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CURRENT AFFAIRS ANALYST WEEK- 1 (JULY, 2021)

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SECTION: A (MAINS)

CURRENT AFFAIRS

GREAT BARRIER REEF AS WORLD HERITAGE IN DANGER

CONTEXT

The UNESCO World Heritage Committee lamented that the Great Barrier Reef of Australia has deteriorated so much that it should be listed as a 'world heritage site in danger', which has drawn sharp criticism from Australia.

BACKGROUND A

- The Special Report on the Ocean and Cryosphere in a Changing Climate published in 2019 provides the latest account of what is happening to the reefs around the world.
- Marine heatwaves have resulted in large-scale coral bleaching events and its frequency has increased over the years.
- This has caused worldwide reef degradation since 1997.
- The Great Barrier Reef contributes \$4.8 billion annually to Australia's economy and supports 64,000 jobs. But the reef's long-term survival has come into question.
- It has suffered from three devastating mass bleaching events since 2015, caused by aboveaverage ocean temperatures as the burning of fossil fuels heats up the planet.

• ANALYSIS

About Great Barrier Reef

- The Great Barrier Reef is a site of remarkable variety and beauty on the north-east coast of Australia.
- It contains the world's largest collection of coral Θ reefs, with 400 types of coral, 1,500 species of fish and 4,000 types of mollusc, plus a great diversity of sponges, anemones, marine worms, crustaceans, and other species.
- It also holds great scientific interest as the habitat of species such as the dugong ('sea cow') and the large green turtle, which are threatened with extinction
- No other World Heritage property contains such o biodiversity.
- This diversity, especially the endemic species, Θ means the GBR is of enormous scientific and intrinsic importance, and it also contains a significant number of threatened species.

What are the threats to GBR?

- Climate Change
 - Rising sea temperatures

- Rising sea temperatures mean the Reef is at greater risk of heat stress and mass coral bleaching, decreasing the capacity for corals to build skeletons
- Ocean Acidification
 - The more acidic seawater becomes the • less calcium carbonate it can hold. Many marine species, including coral, need calcium carbonate to build their protective shells and exoskeletons.
- Severe weather events
 - Increased frequency of severe weather events, such as cyclones and record rainfall levels can destroy reef structures and send an influx of freshwater and sediment further out from the coast on to the Reef
- Coastal Development
 - Agriculture
 - Most land in the Great Barrier Reef catchment is used for grazing, crops, dairy and horticulture, with more than 80 per cent of the catchment supporting some form of agriculture.
 - Mining
 - Historically, extensive small-scale mining operations occurred through much of the Great Barrier Reef catchment.
 - Production of saleable coal in Queensland has more than doubled since the early 1990s and the region is now associated with some of the world's largest mines and coal ports.
 - Urban and industrial development
 - Urban and industrial development, excluding mining, in the Great Barrier Reef catchment is not extensive; however future economic projections suggest an increase in these types of land uses.
 - Population growth in coastal areas is increasing the demand for infrastructure and services such as roads, water, sewerage and power.
 - Port development

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• Port development has been the major reason for coastal reclamation — infilling areas of ocean, wetlands or other water bodies along the Great Barrier Reef coast.

- Port development can also create artificial barriers to freshwater flow, such as bund walls and infrastructure in waterways.
- Aquaculture
 - Over the past decade there has been little expansion of land-based aquaculture adjacent to the Great Barrier Reef region, however there are no marine-based aquaculture operations within the region at present.
- Island development
 - Some Great Barrier Reef islands support residential areas and tourism resorts.
- Crown-Of-Thorns Starfish
 - Crown-of-thorns starfish feed on coral. These spiky marine creatures occur naturally on reefs in the Indo Pacific region, including the Great Barrier Reef.
- Water Quality
 - Declining marine/coastal water quality, influenced by land-based run-off, is recognised as one of the most significant threats to the long-term health and resilience of the Great Barrier Reef.
 - Increased sedimentation and nutrients can cause higher algal growth, build-up of pollutants in sediments and marine species, and reduced light and smothered corals.

What is World Heritage in danger?

- The List of World Heritage in Danger is designed to inform the international community of conditions which threaten the very characteristics for which a property was inscribed on the World Heritage List, and to encourage corrective action.
- Under the 1972 World Heritage Convention, a World Heritage property can be inscribed on the List of World Heritage in Danger by the Committee when it finds that the condition of the property corresponds to at least one of the criteria in either of the two cases described below
- For cultural properties
 - ► Ascertained Danger
 - serious deterioration of materials;
 - serious deterioration of structure and/or ornamental features;
 - Potential Danger
 - modification of juridical status of the property diminishing the degree of its protection;

• lack of conservation policy;

• For natural properties

- Ascertained Danger
 - A serious decline in the population of the endangered species or the other species of Outstanding Universal Value for which the property was legally established to protect, either by natural factors such as disease or by human-made factors such as poaching.
 - Severe deterioration of the natural beauty or scientific value of the property, as by human settlement, construction of reservoirs which flood important parts of the property, industrial and agricultural development including use of pesticides and fertilizers, major public works, mining, pollution, logging, firewood collection, etc.
- Potential Danger
 - a modification of the legal protective status of the area
 - planned resettlement or development projects within the property or so situated that the impacts threaten the property

List of World Heritage in Danger

- It is designed to inform the international community of conditions that threaten sites listed on the World Heritage List and to encourage corrective action.
- Under the 1972 World Heritage Convention, a World Heritage property - as defined in Articles 1 and 2 of the Convention.
- It can be inscribed on the List of World Heritage in Danger by the Committee when it finds that the condition of the property corresponds to at least one of the criteria in either of the two cases of ascertained danger and potential danger.
- The cultural and Natural sites could be put on the list if they show certain conditions.
- Inscribing a site on the List of World Heritage in Danger allows the World Heritage Committee to allocate immediate assistance from the World Heritage Fund to the endangered property.
- Some of the sites listed in the danger list-
 - Iranian City of Bam
 - Bamiyan Valley in Afghanistan



ONCLUSION

- We know that because there have been six major coral reef extinctions in the geologic past where they were basically wiped out. All those have been associated with excessive heat and ocean acidification
- In evolutionary history, with each global temperature change Earth has undergone, corals have adapted—but never as quickly as they must today.

RECUSAL IN JUDICIARY

CONTEXT

In less than a week, two Supreme Court judges hailing from Kolkata have now withdrawn themselves from two politically sensitive cases involving the state government.

• BACKGROUND

- Justice Indira Banerjee expressed 'personal difficulties' in taking up a clutch of petitions related to post-poll violence in the state of West Bengal and recused herself.
- Supreme Court judge Justice Aniruddha Bose recused himself from hearing appeals of West Bengal Chief Minister and state law minister about their role on the day of the arrest of few political leaders by the Central Bureau of Investigation in the **Narada sting tape case.**

• ANALYSIS

Doctrine of Recusal: The Concept

- Recusal is removal of oneself as a judge or policy maker in a particular matter, especially because of a conflict of interest.
- It is a basic precept that no one should be a judge in his or her own case.
- Courts must keep the promise of dispensing fair and impartial justice, and must decide controversies without bias.

Need of Recusal in Judiciary

- The requirement is that the judge must be impartial and must decide the case objectively on the basis of the evidence on record.
- A person cannot take an objective decision in a case in which he has interests, for as human psychology tells us, very rarely can people take decisions against their own interests.
- This concept of recusal is applied not only to avoid the possibility of a partial decision but also to ensure public confidence in the in the impartiality of the adjudicatory process.
- In this manner Impartiality, objectivity and public confidence provide the foundation on which the superstructure of rule against bias is built.

Recusal in India

- Absence of statute:
 - In India there is no statute laying down the minimum procedure which judges must follow in order to ensure the impartiality. However, courts have always insisted that judges and other adjudicatory authorities must ensure that

they have to ensure principles of impartiality.

- Inspired from Natural Justice
 - The principles of Natural Justice have developed with the growth of civilization and the content thereof is often considered as a proper measure of the level of civilization and Rule of Law prevailing in the community. It implies fairness, reasonableness, equity and equality.
- Constitutional ethos:
 - Though the Indian constitution does not use the expression of recusal, the concept divested of all its metaphysical and theological trappings pervades the whole scheme of the Constitution.
 - Duty to act fairly and impartially is ingrained in articles 14 and 21 of the constitution. Indian courts have nourished these values with reference to administrative decision making and emphasized on the test of 'real likelihood of bias.'
- Supreme Court views
 - The reasonableness of the apprehension in the mind of the partyis relevant according to Supreme Court
 - Hence the proper approach in case of bias for the Court is not to look into his own mind and ask "am I biased?" but to look into the mind of the party before it.

Types of judiciary recusal in practise

- In India two methods are normally being practiced, automatic recusal and If no one objects, a judge may proceed with the matter.
- Automatic Recusal
 - ► Case of Justice Markandey Katju
 - He followed the practice of automatic recusal when he withdrew his name from the Novartis case by saying that it would not be proper for him to deal with the appeal filed by Novartis.
 - His withdrawal from the case was apparently meant to preclude fears of bias in the MNC camp on account of an article he had written five years earlier against liberal grant of pharma patents
- If no one objects, judge may proceed
 - ► Case of Justice S. H. Kapadia



- Disclosing the fact that he owns some shares in Vedanta, he asked the lawyers appearing in the case at Punjab High Court whether he should recuse himself from hearing the case if the lawyers had any objections.
- Had there been any objections the judge would have recused from the case
- Usual Grounds of Recusal
 - Disqualification by interest: it is where some direct or indirect interest in the proceedings, whether pecuniary or otherwise, gives rise to a reasonable apprehension of prejudice, partiality or prejudgment.
 - Disqualification by conduct: it includes 'published statements' and 'consists of cases in which conduct, either in the course of, or outside, the proceedings, gives rise to such an apprehension of bias'.
 - Disqualification by association: it consists of cases where the apprehension of prejudgment or other bias results from some direct or

indirect relationship, experience or contact with a person or persons interested in, or otherwise involved in, the proceedings.

 Disqualification by extraneous information: overlaps with the third, but commonly 'consists of cases where knowledge of some prejudicial but inadmissible fact or circumstance gives rise to the apprehension of bias'.

• CONCLUSION

- Judiciary is not yet beyond self-redemption—is thought to have respectable weight, then the argument runs that reform had better come from within, rather than being imposed from out. But it does not work in all the cases and all the times.
- Justice should not be left at the mercy of individual who so ever it may be. We are also in need of a model code of conduct on the pattern of United States, which will ensure the impartiality of judges and in turn will improve the confidence of people in the institution

60 YEARS OF ANTARCTIC TREATY

CONTEXT

The 1959 Antarctic Treaty celebrates its 60th anniversary.

• BACKGROUND

- Various international conflicts motivated the creation of an agreement for the Antarctic.
- After the Second World War, the U.S. considered establishing a claim in Antarctica. From August 26, 1946, and until the beginning of 1947, Operation Highjump was carried out, the largest military expeditionary force that the United States has sent to Antarctica to the present.
- In 1949, Argentina, Chile, and the United Kingdom signed a Tripartite Naval Declaration committing not to send warships south of the 60th South parallel, which was renewed annually until 1961 when it was deemed unnecessary when the treaty entered into force.
- This tripartite declaration was signed after the tension generated when Argentina sent a fleet of 8 warships to Antarctica.
- Scientific bases increased in international tension concerning Antarctica, and the danger of the Cold War spreading to that continent, caused the President of the United States, Dwight D. Eisenhower, to convene an Antarctic Conference to

the twelve countries active in Antarctica during the International Geophysical Year, to sign a treaty.

• ANALYSIS

What is Antarctic Treaty?

- The Antarctic Treaty was signed in Washington on 1 December 1959 by the twelve countries whose scientists had been active in and around Antarctica during the International Geophysical Year (IGY) of 1957-58.
- It entered into force in 1961 and has since been acceded to by many other nations.
- The total number of Parties to the Treaty is now 54.
- The treaty is remarkably short and contains only 14 articles.
- It remains the only example of a single treaty that governs a whole continent.
- Principal provisions include promoting the freedom of scientific research, the use of the continent only for peaceful purposes, and the prohibition of



military activities, nuclear tests and the disposal of radioactive waste.

Some important provisions of the Treaty:

- Antarctica shall be used for peaceful purposes only
- Freedom of scientific investigation in Antarctica and cooperation toward that end... shall continue
- Scientific observations and results from Antarctica shall be exchanged and made freely available
- Among the signatories of the Treaty were seven countries - Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom - with territorial claims, sometimes overlapping. Other countries do not recognize any claims. The US and Russia maintain a "basis of claim". All positions are explicitly protected in Article IV, which preserves the status quo:
- No new claim, or enlargement of an existing claim to territorial sovereignty in Antarctica shall be asserted while the present Treaty is in force.
- To promote the objectives and ensure the observance of the provisions of the Treaty, "All areas of Antarctica, including all stations, installations and equipment within those areas ... shall be open at all times to inspection " (Art. VII).

Expansion of the treaty

- A key reason why the treaty has been able to survive has been its ability to evolve through a number of additional conventions and other legal protocols. These have dealt with the conservation of marine living resources, prohibitions on mining, and the adoption of comprehensive environmental protection mechanisms.
- As disputes have arisen over the years, many have been addressed through the expansion of the treaty framework with these agreements. This framework is now referred to as the "Antarctic Treaty System".
- Scientific engagement in Antarctica is considered critical to exercising influence under the treaty.
- New treaty parties have to meet certain criteria relating to active scientific programs before they are able to participate in meetings as "consultative parties". A total of 29 treaty parties, including Australia, meet these scientific engagement thresholds.

Significance of Treaty

- **Peace purpose:** The most important provision of the treaty is Article IV, which effectively seeks to neutralise territorial sovereignty in Antarctica.
- No formal recognition was given to any of the seven territorial claims on the continent, by Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom.
- Russia, the United States and China signatories with significant Antarctic interests who have not formally made territorial claims — are also bound by the limitations of Article IV.
- And one sector of Antarctica is not subject to the claim of any country, which effectively makes it the last unclaimed land on earth.
- The treaty also put a freeze on any disputes between claimants over their territories on the continent. Claimants agreed to abide by the rules and obligations of the treaty, which meant countries that don't recognise claims (such as China and Russia) are free to go about scientific research and peaceful activities.
- Environment protection: Protection of the Antarctic environment has been a central theme in the cooperation among Antarctic Treaty Parties. In 1964, the ATCM adopted Agreed Measures for the Conservation of Antarctic Fauna and Flora.
- Scientific research: It has been the main activity on the Antarctic continent, and both the Antarctic Treaty and the Environment Protocol emphasize the importance of science and scientific cooperation in the Antarctic Treaty System.
- Tourism guidelines: The main ATCM regulations and guidelines for tourists and expedition organizers are contained in the Environment Protocol and Tourism Guidelines. The ATCM also issues specific guidelines for the sites most visited by tourists.

• CONCLUSION

Antarctic watchers say though that the strength – and the weakness – is that it operates on consensus. One solution to the lack of inspections is to set up an independent group of inspectors – this is something that was provisioned for in the Antarctic Treaty but never established.



AGRISTACK: E-TECHNOLOGY TO THE AID OF FARMER

CONTEXT

Tech firm Microsoft will run a pilot for the agriculture ministry's AgriStack in 100 villages in six Indian states to "develop farmer interface for smart and well-organised agriculture" aimed at improving efficiency and reducing waste.

• BACKGROUND

- A recent EY report has estimated that India's farm economy to grow to as high as \$24 billion by 2025, on the back of agritech adoption.
- The central government is preparing what is likely to be one of the largest publicly-funded digital databases to connect over 120 million farmers to a swathe of agri-related businesses from insurance companies, to credit card firms, to logistics outfits, supermarkets, and seed sellers.
- Along the same lines the world's first entirely machine-operated crop – a crop sown and tended without a human ever entering the field was harvested in 2017, a milestone in digital agriculture, sometimes known as "smart farming", or "e-agriculture".

• ANALYSIS

What is Agristack?

- The Agristack digital infrastructure will collect details of farmers and their landholdings, what crops they cultivate, the climatic factors at play in specific geographies, and average output, before linking these details to farmers' individual Aadhaar biometric IDs.
- The database will ally a farmer's Aadhaar ID with the location of his/her farm holdings while also accounting for their location, size and dimensions towards determining the level of output that can be expected, and the amount of income that can be derived.
- This data may be available with local governing bodies like Panchayats while GPS technology can be used to further corroborate government data.
- The database will also need to include information relating to the type and quantity of crops being grown.
- Data relating to cropping patterns will be crucial in informing agribusinesses so they can customise packages to individual farmer needs.
- Again, satellite imagery can be used to accrue this data along with records from local government bodies.
- The Agristack innovation has the potential to significantly drive down lag times between farmers, intermediaries and businesses.

Significance of digitalization of agriculture

- Digital technologies including the Internet, mobile technologies and devices, data analytics, artificial intelligence, digitally-delivered services and apps—are changing agriculture and the food system.
- Examples abound at different stages of the agrifood value chain: farm machinery automation allows fine-tuning of inputs and reduces demand for manual labour; remote satellite data and insitu sensors improve the accuracy and reduce the cost of monitoring crop growth and quality of land or water; and traceability technologies and digital logistics services offer the potential to streamline agri-food supply chains, while also providing trusted information for consumers.
- Digital technologies can also help governments improve the efficiency and effectiveness of existing policies and programmes, and to design better ones. For instance, freely available and high-quality satellite imagery dramatically reduces the cost of monitoring many agricultural activities.
- This could allow governments to move towards more targeted policies which pay (or penalise) farmers based on observed environmental outcomes. In addition to monitoring compliance with environmental policies, digital technologies enable automation of administrative processes for agriculture and the development of expanded government services, such as in relation to extension or advisory services.
- Finally, digital technologies can support trade in agriculture and food products, by connecting private sector suppliers to new markets, and enabling new ways for governments to monitor and ensure compliance with standards and to provide faster and more efficient border procedures that are essential for perishable products.

Digital technologies in agriculture

- **Internet of Things (IoT):** world agricultural the disrupting unstructured and structured data to provide insights into food production.
- Data driven farming: by analyzing and correlating information about weather, types of seeds, soil quality, probability of diseases, historical data etc farmers will make more informed decision
- **Chatbots:** AI powered chatbots can also be leveraged by agriculture sector.



Challenges for digitalization of agriculture

- For policymakers, the challenge will be to shape policy and regulatory settings so that they facilitate opportunities offered by digital technologies.
- At the same time, and not unique to the agriculture sector, digital technologies raise questions about privacy, interoperability, and even potential liability issues, all of which will need careful consideration.
- Reaping the benefits of digital technologies in agriculture requires the participation and cooperation of farmers, researchers, private sector, non-profits and government.

What can governments do to reap the benefits of digital technologies for the agriculture sector?

- Policymakers will need to consider potential benefits, costs and risks, and to understand the factors affecting technology uptake so that interventions can be targeted to where there is a market failure, or a public interest.
- This requires understanding how technology can help in different components of the policy cycle,

and may require government bodies to expand their skillsets, invest in technology and training, or partner with other actors (both government and non-government).

 Digital technologies may create new roles or responsibilities for governments, including to enable the digital infrastructure (is there a case for governments to be a provider or a rule maker of new digital infrastructure, and under what circumstances); but on the other hand, if technology can reduce information asymmetries and transactions costs, less government intervention may be needed.

ONCLUSION

At present the majority of farmers across India are small and marginal farmers with limited access to advanced technologies or formal credit that can help improve output and fetch better prices. Among the new proposed digital farming technologies and services under the programme include sensors to monitor cattle, drones to analyse soil and apply pesticide, may significantly improve the farm yields and boost farmers' incomes



NEPOTISM AT WORKPLACE

CONTEXT

A number of President Biden's senior officials have relatives or spouses working for the administration, and the Biden administration is being accused of promoting nepotism in the newly formed government following the 2020 US Presidential election.

• BACKGROUND

- Secretary of State Tony Blinken, national security adviser Jake Sullivan and White House press secretary Jen Psaki each have one direct family member working for the federal government.
- In addition to them, top White House staffers such as senior adviser Anita Dunn, counselor Steve Richetti, deputy chief of staff Bruce Reed and Presidential Personnel Office director Cathy Russell each have at least one family member employed by the administration.
- Former President Donald Trump appointed his daughter Ivanka Trump and son-in-law, Jared Kushner, as senior advisers.

• ANALYSIS

What is nepotism?

Nepotism is the practice of those with power (perhaps your boss or manager), showing favouritism towards friends or family; usually by way of giving them a job or benefits.

Advantages of Nepotism in the Workplace

- Pleasant environment: In hiring friends or relative in an organization can create a friendly and pleasant working environment. Friends and family may bring many useful skills to your business.
- Better work division: You already know the capabilities of your relatives and close friends. This will let you assign just the right tasks to each person, based on their individual strengths and weaknesses. However, only hire friends or relatives that you are sure are qualified for the position. So that it cannot lead problems in the workplace.
- Quick training: Friends and family may already be familiar with your company and how it works. You wouldn't need to spend as much time training new employees with the aims of your company.
- Individual Benefit: Hiring your children can also bring special advantages. Your company will have another capable employee, while your family will be earning extra money. There may also be tax

advantages to hiring your children.

- Better Sense of ownership: Family members and close friends enter a business agreement with you already possessing a strong commitment to you as an individual, and, most likely, to your company. Because of this, they may be more willing to work longer hours (such as evenings or weekends) when necessary.
- Dedicated HR: Family members are usually very dedicated resulting in high turnover. There is a higher level of commitment since relatives want to see the company succeed. Loyalty, morale and trust are also high.

Disadvantages of Nepotism in the Workplace

- Poor work-life balance: Hiring friends and family may allow for familial disputes and interactions to negatively affect the way your business runs.
- **Poor workforce rationalization**: A friend or family member may take advantage of their status, knowing that it is more difficult to fire someone who is close to you.
- Other employees may feel jealous when you hire a friend or family member, thinking it is favouritism. This may especially be the case when a family member or friend is given a promotion over a nonrelative/friend.
- **Ripple effects on other employees:** Personal family problems or disagreements between friends may be brought to the workplace. This may make it uncomfortable for other employees and difficult for work to get done.
- Poor HR management: Problems in the work place may be brought home to the family. They may also influence your relationship with your friends. It may be more difficult to create a necessary change in the workplace when it might negatively affect your friend or relative that works for you.
- Decrease of Moral: Mistreating your employees by favoring your relatives, undeserved promotions and benefits it lead to problem to the workplace, the employees who work well to their jobs may disappoint and they discourage to perform their jobs complete.



ONCLUSION

Nepotism is a harmful practice in the organization or workplace if it used and interpret it in negative way. However, these may avoid in few possible solutions:

- Only hire friends or relatives that you are sure are qualified for the position.
- Hire friends or family on a 3-month ad-hoc basis. Then, if you like they way they work hire them on a permanent basis.
- Make it very clear to friends and family that they will be treated the same as any other employee. Meaning that they could be fired just the same as other employees.

Have a written contract with each friend or relative that explains their duties and responsibilities to the company, as well as their compensation. Having a written contract in place can ease tension and make their job less personal and more professional.





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SECTION: B (PRELIMS)

CURRENT AFFAIRS

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PROPOSED MODEL OF THE INTEGRATED THEATRE COMMANDS

• **CONTEXT:** Chief of Defence Staff General Bipin Rawat held a meeting in the backdrop of concerns about the proposed model of integrated theatre commands.

About 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, as the name suggests, includes the three Service Chiefs, and is headed by the CDS as its permanent chairman.
- 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 three forces.

The proposed commands are:

- Maritime Theatre Command: It will take care of all the maritime security needs of the country on both the eastern and the western seaboards, and will include air strike assets and amphibian forces of the Army.
- **Air Defence Command**: It will be mandated with air defence across the country and beyond. The fighter jets will have reconnaissance and surveillance assets as well.
- Land-based commands: 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.
- Logistics Command: There will be a Logistics Command, which will have the logistics of all the Services under one person; and there will be a Training and Doctrine Command so that all Services work under a common doctrine and have some basic common training.

What is an Integrated theatre command?

- 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 that will look at a border with a particular country or thematic, as a command for all maritime threats.
- Several nations in the world have theatre commands, including the United States and China.
- The idea of creating an integrated tri-Services command in India had been recommended at various levels after the Kargil conflict.
- Gen Rawat was appointed Chief of Defence Staff to head the integrated command.

Existing commands in India

- As of now, the three forces have 17 commands between them.
- The Army has seven commands: Northern, Eastern, Southern, Western, Central, Southwestern and Army Training Command (ATRAC).



• **The Air Force has seven as well:** Western, Eastern, Southern, Southwestern, Central, Training, and Maintenance commands.

- **The Navy has three**: Western, Eastern and Southern, of which Southern is largely about training.
- **Tri-Service Command**: There are two existing tri-Service commands as well the Andaman and Nicobar Command (ANC), which is headed by rotation by officers from the three Services, and the Strategic Force Command, which is responsible for India's nuclear assets.

CDS and its need

- The creation of the Chief of Defence Staff (CDS) is a start to defence reforms. This
 would improve joint manship in peacetime.
- Major problems:
 - historical lack of unified warfighting strategy formulation at the apex military level
 - the unclear division of responsibility and resources between service Chiefs and Commandersin-Chief (C-in-Cs)
 - the differing natures of command and control between the three services, which manifest as differences in structural organisations.
- Treating India as one unified theatre can reduce these problems.
- This announcement was followed by the creation of a new Department of Military Affairs (DMA) to be headed by the CDS.

Status of Integrated Theatre Commands in China and USA

- Both the USA and China have well established integrated theatre commands.
- > On the other hand, India is still struggling to get it.
- The area covered under the commands by both the countries can be seen in the pictures.

WORLD DAY AGAINST CHILD LABOUR

• CONTEXT:

The World Day Against Child Labour was observed.

 Citizens are appealed to report the instances of Child Labour on the PENCIL Portal or by calling on Childline-1098.

About the World Day Against Child Labour

- The day is observed on 12thJune every year around the world.
- The International LabourOrganization (ILO) launched it in 2002.
- It is observed to focus attention on the global extent of child labour.
- Theme: The theme this year is 'Act Now: End Child Labour'.

Platform for Effective Enforcement for No Child Labour (PENCiL) portal

• It is an initiative under the Ministry of Labour and Employment.



- It is an online platform that aims at engaging the Central Government, State Government, District, civil society and the public.
- It is launched to eradicate child labour to make society free of child labour.
- This portal enables the citizens to raise a complaint and report incidents of child labour through effective tracking and monitoring mechanism.

Constitutional provisions to protect Children against labour

Article	Title	Description
21A	Right to Education	The State shall provide free and compulsory education to all children of the age of 6 to 14 years in such manner as the State by law, may determine.
24	Prohibition of Employment of Children's in Factorles	No child below the age fourteen years shall be employed in work in any factory or mine or engaged in any other hazardous employment.
39	The state shall in Particular direct its policy towards securing	That the health and strength of workers, men and women, and the tender age of childern are not abused and that citizens are not forced by economic necesslty to enter avocations unsuited to their age or strength.

International conventions against Child Labour

- The Universal Declaration of Human Rights (UDHR) was adopted unanimously by the United Nations General Assembly in 1948. This declaration may well be the most important document in international agreements between countries on human rights, including the rights of children.
- The International Convention on the Rights of the Child (ICRC) recognises the right of every child to be protected from economic exploitation and from performing work that is hazardous or harmful to their health and development or that interferes with their education. It also requires governments to set a minimum age for employment and to provide for appropriate hours and conditions of employment.
- The most concrete international agreements on combating child labour are the conventions of the International Labour Organisation (ILO) concerning the minimum age for the admission to employment and on the prohibition and immediate action for the elimination of the worst forms of Child Labour.

BLACK RICE & ITS PRODUCTION IN INDIA

• CONTEXT:

According to the UNDP's latest appraisal report, Chandauli is one of India's four most progressed districts under the Aspirational Districts. The Black rice has earned UP's Chandauli big United Nations Development Programme (UNDP) praise and good profit.



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About the Black rice

- Black rice is of Chinese origin and known as 'forbidden rice'. In ancient China, it is believed to be exclusive for royal consumption.
- In India, black rice or chak-hao (delicious rice) is indigenous to Manipur for centuries.
 Manipur was also awarded the GI tag for black rice.
- Its production across the country is mooted due to better price realization, growing international demand, and health benefits.
- The Black color of the rice is due to a compound called 'anthocyanins'.

- **Benefits:** Anthocyanins also give it powerful anti-inflammatory, antioxidant, and anticancer properties.
 - It also contains important carotenoids which are known for improving eye health.
 - It is naturally gluten-free.
 - It is rich in-
 - Protein, Iron, vitamin E, calcium, magnesium, and natural fiber.
 - It promotes weight loss and is a natural detoxifier.
 - Its consumption helps in the prevention of ailments such as atherosclerosis, diabetes, Alzheimer's, hypertension, among others.

Production of Black rice in India

- Chandauli started producing the 'healthier' black rice in 2018.
 - It is being exported to Australia and New Zealand.
 - It was exported to the neighboring district of Mirzapur as 'Vindhya black rice'.
- Its cultivation is promoted in India under various schemes
 - 'One District-One Product'
 - 'Export Policy 2020-25'
- Simdega (Jharkhand), Sonbhadra (Uttar Pradesh), and Rajgarh (Madhya Pradesh) are areas that also produce it.

Different other types of Rice

- **Brown rice** is a whole grain rice with the inedible outer husk is removed. Brown rice is a whole grain and a good source of magnesium, phosphorus, selenium, thiamine, niacin, vitamin B6, and manganese, and is high in fiber.
- **Red rice** is a variety of rice that is colored red by its anthocyanin content. It is usually eaten unhulled or partially hulled, and has a red husk.
- Gold rice commonly known as African rice.

CHANGES IN THE RULES FOR E-COMMERCE COMPANIES

• CONTEXT:

The government has proposed changes to the e-commerce rules under the Consumer Protection Act, 2019 to make the operation framework more stringent.



Key changes proposed in the e-commerce rules

- The rules are issued by the Ministry of Consumer Affairs.
- These rules are proposed to change the Consumer Protection (e-commerce) Rules 2020.

e-commerce entity

- An e-commerce entity is a company incorporated under the Companies Act, 1956 or the Companies Act, 2013.
- A foreign company covered under clause (42) of section 2 of the Companies Act, 2013 or an office, branch or agency outside India owned or controlled by a person resident in India under the Foreign Exchange Management Act, 1999.

Consumer Protection (e-commerce) Rules 2020

- No e-commerce entity shall adopt any unfair trade practice, whether in the course of business on its platform or otherwise.
- Every e-commerce entity shall establish an adequate grievance redressal mechanism. It shall appoint a grievance officer for consumer grievance redressal.
- Every e-commerce entity shall ensure that the grievance officer acknowledges the receipt of any consumer complaint within forty-eight hours and redresses the complaint within one month from the date of receipt of the complaint.
- No e-commerce entity shall impose cancellation charges on consumers cancelling after confirming purchase unless similar charges are also borne by the e- commerce entity, if they cancel the purchase order unilaterally for any reason.
- No e-commerce entity shallmanipulate the price of the goods or services offered on its platform in such a manner as to gain unreasonable profit.
- The rules seek to ban "specific flash sales" by e-commerce entities.
- The specific flash sales limit the consumer choice.
 - It prevents a level playing field.
 - It does not ban conventional e-commerce flash sales.
- It also introduced the concept of "fall-back liability".
 - According to this, e-commerce firms will be held liable in case of loss to the customer.
- It also restricts e-commerce companies from "manipulating search results or search indexes".
- It also protects the personal information of the consumer.
- Any online retailer will first have to register itself with the Department of Promotion for Industry and Internal Trade (DPIIT).
- Any entity having 10 percent or more common ultimate beneficial ownership will be considered an "associated enterprise" of an e-commerce platform.
- It also mandates e-commerce companies to appoint a grievance officer, a chief compliance officer, and a nodal contact person "for 24×7 coordination with law enforcement agencies".
- To share information with a "government agency which is lawfully authorized for investigative or protective or cybersecurity activities.



India's e-commerce Industry

India e-commerce will reach US\$ 99 billion by 2024.

- It is growing at a 27% CAGR over 2019-24.
- Since 2014, the Government of India has announced various initiatives, namely
 - Government eMarketplace (GeM)
 - Open Network for Digital Commerce (ONDC)
 - The Consumer Protection (e-commerce) Rules 2020
 - ► National Retail Policy
 - Under the Digital India movement, the Government launched various initiatives like Umang, Start-up India Portal, Bharat Interface for Money (BHIM),etc
 - ▶ FDI in E-commerce marketplace model to up to 100% (in B2B models)

LINKING OF INNOVATIVE AGRICULTURE TECHNOLOGIES TO FARMS UNDER BIOTECH-KISAN PROGRAM

• CONTEXT: About the Biotech-Krishi Innovation Science Application Network (Biotech-KISAN)

- Biotech-KISAN is a scientist-farmer partnership scheme.
- It was launched in 2017.
- It aims for agriculture innovation.
- Its objective is to connect science laboratories with the farmers to find out innovative solutions and technologies to be applied at the farm level.
- So far 146 Biotech-KISAN Hubs have been established under the scheme. It covers all 15 agro-climatic zones and 110 aspirational districts in the country.
- The scheme has benefitted over two lakh farmers so far by increasing their agriculture output and income.

Key proposals under the initiative

- Under the program, the local issues of farmers are to be considered and they would be provided with the scientific solutions.
- The program is targeted to benefit small and marginal farmers, especially women.
- The program is an initiative supported by the **Department of Biotechnology** under the **Ministry of Science & Technology**.
- The hubs in NER will collaborate with the top scientific institutions across the country as well as State Agricultural Universities (SAUs) / Krishi Vigyan Kendras (KVKs) / existing state agriculture extension services/system and other farmers' organizations.
- The North-East Region is predominantly agrarian and 70 percent of its workforce is engaged in agriculture and allied sectors for livelihood.
- However, the region produces merely 1.5 percent of the country's food grain. It depends on imports for its domestic consumption.
- The NE region has untapped potential to enhance the income of the farming population by promoting location-specific crops, horticultural and plantation crops, fisheries, and livestock production.

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GENETICALLY MODIFIED RUBBER PLANTED IN KERALA

• **CONTEXT:** Rubber Research Institute of India had developed a rubber plant tailored for the climatic conditions in the Northeast.

• **ABOUT:** The Genetically Modified Organism (GMO)

- A genetically modified organism (GMO) or living modified organism (LMO), is any organism whose genetic material has been modified.
- Mass production of GM technology-based human insulin, vaccines, growth hormones and other drugs has greatly facilitated the availability and access to life-saving pharmaceuticals are the results of Genetic Modification.
- Under this, the gene is incorporated into the DNA of crop plant using laboratory-based gene gun or agrobacterium approaches.

The Genetically modified rubber plant of Kerala

- This is the world's first genetically modified (GM) rubber plant tailored for the climatic conditions in the Northeast.
- The plant was developed at the Kerala-based Rubber Research Institute of India (RRII).
- This is the first time any GM crop has been developed exclusively for a particular region.
- 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.
 - The growth of young rubber plants remains suspended during the winter month.
- The GM rubber would tide over the severe cold conditions during winter, which impacts its growth.
- The GM rubber has additional copies of the gene MnSOD or manganese-containing superoxide dismutase.
- The MnSOD gene can protect plants from the adverse effects of severe environmental stresses such as cold and drought.





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CURRENT AFFAIRS WEEKLY

• Indian farmers started cultivating Bt cotton in 2002-03.

- By 2014 the area had expanded to 11.6 million hectares and nearly 96 per cent of the cotton area was covered by Bt cotton.
- India became the fourth largest cultivator of GM crops by acreage and the second-largest producer of cotton.



LATEST VERSION OF DESERTIFICATION AND LAND DEGRADATION ATLAS OF INDIA RELEASED

\odot CONTEXT:

The latest version of 'Desertification and Land Degradation Atlas of India' has been released on Desertification and Drought day (17th June).

- It was conducted by the Ministry of Environment, Forest, and Climate Change.
- The event also observed the release of the Coffee Table Book "India Hosting UNCCD-COP 14".

• ABOUT:

The Atlas

- The atlas is published by Space Application Centre, ISRO, Ahmedabad.
- The Atlas provides the state-wise area of degraded lands for the time frame 2018-19.
- It also provides the change analysis for the duration of 15 years, from 2003-05 to 2018-19.
- It will help strengthen the envisaged National Action Plan for achieving land restoration targets.



UNCCD-COP 14

- India hosted the 14th session of the Conference of Parties (COP 14) of the United Nations Convention to Combat Desertification (UNCCD) in September 2019.
- India's position: India is striving towards achieving the national commitments of Land Degradation Neutrality (LDN) and restoration of 26 Million ha of degraded land by 2030 which focus on sustainable and optimum utilization of land resources.

United Nations Convention to Combat Desertification (UNCCD)

It was established in 1994.

- The United Nations Convention to Combat Desertification (UNCCD) is the sole legally binding international agreement linking environment and development to sustainable land management.
- The Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found.
- The new UNCCD 2018-2030 Strategic Framework is the most comprehensive global commitment to achieve Land Degradation Neutrality (LDN) in order to restore the productivity of vast expanses of degraded land, improve the livelihoods of more than 1.3 billion people, and reduce the impacts of drought on vulnerable populations to build
- The UNCCD is particularly committed to a bottom-up approach, encouraging the participation of local people in combating desertification and land degradation.
- The UNCCD secretariat facilitates cooperation between developed and developing countries, particularly around knowledge and technology transfer for sustainable land management.

DETAILED PROJECT REPORTS OF LIDAR SURVEY OF FOREST AREAS RELEASED

• CONTEXT:	The Detailed Project Reports (DPRs) of LiDAR-based survey of forest areas was released by the Ministry of Environment, Forest, and Climate Change released.		
	• The study was conducted in ten states namely Assam, Bihar, Chhatisgarh, Goa, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Nagaland, and Tripura.		
• ABOUT:	LIDAR Survey of Forest Areas		
	• The project study is awarded by WAPCOS, a PSU under the aegis of the Ministry of Jal Shakti.		
	• The Detailed Project Reports (DPRs) were formed using the LiDAR technology.		
	• The DPR's were produced using LiDAR technology in which the 3-D(three-dimensional) DEM (Digital Elevation Model), imagery, and layers of the project areas are used.		
	Outcomes of the Study		
	• WAPCOS with the participation of State Forest Departments identified one major ridge inside a forest block in these states with average area of 10,000 ha selected in each State.		
	• The areas have been selected for the preparation of Detailed Project Reports for planning		



and identifying locations and structures for construction of appropriate and feasible micro soil and water conservation structures consistent with site specific geography, topography and soil characteristics.

- States/UTs identified one major ridge inside a forest block with the criteria that area selected should have average rainfall of the state, and the area requires assisted natural generation which means the density of forests should be less than 0.4 or below, but should have reasonable potential to regenerate with the ANR interventions.
- The sites that have been selected are ones which are slightly degraded, and the states have identified these so that water and fodder augmentation projects, as well as afforestation, can be carried out in the identified site.

Significance of Study:

The project will help augment water and fodder in jungles areas. It will -

- reduce human-animal conflict
- help in groundwater recharge
- help local communities
- state forest departments to use CAMPA funds
- The project reports will help recommend the micro soil and water conservation structures consistent with site-specific geography, topography, and soil characteristics.
- It will recommend different types of Soil & Water conservation structures such as Anicut, Gabion, Gully Plug, Mini percolation tank, Percolation Tank, Field bund, Sunken pond, Farm pond, etc.
- These structures will help in catching the rainwater and prevent stream runoff, which will help in recharging Groundwater.
- The study is highly accurate with around 90% of accuracy.

What is LiDAR technology?

- Lidar stands for Light Detection and Ranging.
- It is a remote sensing method.
- It uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth.
- These light pulses—combined with other data recorded by the airborne system — generate precise, three-dimensional information about the shape of the Earth and its surface characteristics.

Application of Lidar system:

• It allows scientists and mapping professionals to examine both natural and manmade environments with accuracy, precision, and flexibility.

NEUTRINO OSCILLATIONS INDUCED BY SPACE-TIME

• CONTEXT:

A study conducted by the National Centre for Basic Sciences (SNBNCBS) shown that the geometry of space-time can cause neutrinos to oscillate.

The study was supported under the Department of Science & Technology (DST).



• ABOUT: Neutrinos and their Oscillation

- They are mysterious particles, produced copiously in nuclear reactions in the Sun, stars, and elsewhere.
- Neutrinos interact very weakly.

- They oscillate and different types of neutrinos change into one another.
- The phenomenon of neutrino oscillations requires neutrinos to have tiny masses.
- Probing oscillations of neutrinos and their relations with mass are crucial in studying the origin of the universe.

Findings of the study

- The geometry of space-time can cause neutrino oscillations through quantum effects even if neutrinos are massless.
 - Einstein's theory of general relativity says that gravitation is the manifestation of space-time curvature.
- The neutrinos, electrons, protons, and other particles which are in the category of fermions show a certain peculiarity when they move in presence of gravity.
- Space-time induces a quantum force in addition to gravity between every two fermions.
- This force can depend on the spin of the particles and causes massless neutrinos to appear massive when they pass through matter, like the Sun's corona or the Earth's atmosphere.
- Something similar happens for electroweak interactions, and together with the geometrically induced mass, it is enough to cause oscillation of neutrinos.

Space-time

- Space-time is a mathematical model which fuses the three dimensions of **space** and the one dimension of **time** into a single four-dimensional manifold.
- **Spacetime** diagrams can be used to visualize relativistic effects, such as why different observers perceive differently where and when events occur.





SMUGGLING OF AMBERGRIS

• **CONTEXT:** In the past few weeks, the Mumbai Police has arrested five persons trying to sell Ambergris or whale vomit.

What is Ambergris?

- Ambergris is generally referred to as whale vomit.
- It is a solid waxy substance that floats around the surface of the water body and at times settles on the coast.
- A sperm whale eats several thousand squid beaks a day.
 - Occasionally, a beak makes its way to the whale's stomach and into its looping convoluted intestines where it becomes ambergris through a complex process, and

may ultimately be excreted by the whale.

How valuable is this whale vomit?

- This excretion is so valuable it is referred to as floating gold.
- As per the latest estimates, 1 kg of ambergris is worth Rs 1 crore in the international market.
- The reason for its high cost is its use in the perfume market, especially to create fragrances like musk.
- It is also believed to be used in some traditional medicines.

Laws on Ambergris

- Due to its high value, Ambergris has been a target for smugglers, especially in coastal areas.
- Since the sperm whale is a protected species, hunting the whale is not allowed.
- However, smugglers are known to have illegally targeted the fish to obtain the valuable Ambergris from its stomach.





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