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PIB (1st to 15th JANUARY, 2021)

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1 Urban local bodies reforms

CONTEXT:

- Manipur becomes the 4th State to complete urban local bodies reforms.

ABOUT

• What are ULB Reforms?

- Reforms in the Urban Local Bodies and the urban utilities reforms are aimed at financial strengthening of ULBs in the States and to enable them to provide better public health and sanitation services.
- Economically rejuvenated ULBs will also be able to create good civic infrastructure.
- The reforms stipulated by the Department of Expenditure to achieve these objectives are:
 - **The State will notify**
 - **floor rates of property tax** in ULBs which are in consonance with the prevailing **circle rates** (i.e. guideline rates for property transactions)
 - **floor rates of user charges** in respect of the provision of water-supply, drainage and sewerage which reflect current costs/ past inflation.
 - The State will put in place a system of periodic increase in floor rates of property tax/ user charges in line with price increases.

Impact

- With this the State has become eligible to mobilise additional financial resources through Open Market Borrowings.
- Permission for the same was issued by the Department of Expenditure on 11th January, 2021.

The other states

- Manipur has now joined the three other States namely, Andhra Pradesh, Madhya Pradesh and Telangana, who have completed this reform.
- On completion of Urban Local Bodies reform, these four States have been granted additional borrowing permission of Rs.7,481 crore.
- Reforms in the Urban Local Bodies and the urban utilities reforms are aimed at financial strengthening of ULBs in the States and to enable them to provide better public health and sanitation services. Economically rejuvenated ULBs will also be able to create good civic infrastructure.

2 Year End Review 2020: Legislative Department

CONTEXT:

- The Year End Review sheds light on various initiatives, Programmes, schemes and achievements of Legislative Department.

Important Tasks Undertaken by the Department

• Delimitation of Constituencies

- The first Delimitation Commission in India was constituted in 1952, the second in 1962, the third in 1973 and the fourth in the year 2002.
- The third delimitation exercise— based on 1971 census—was completed in the year 1975. The present delimitation, as carried out in fourth delimitation exercise based on 2001 census.
- After the enactment of Jammu and Kashmir (Reorganisation) Act, 2019 the erstwhile State of Jammu and Kashmir has been bifurcated into two Union territories, viz. Union Territory of Jammu and Kashmir with Legislative Assembly and the Union Territory of Ladakh without Legislative Assembly.
- In terms of special provision as contemplated in Section 62 of said 2019-Act the readjustment of the constituencies in the successor Union territory of Jammu and Kashmir into Assembly Constituencies shall be carried out on the basis of 2011-census figures by a Delimitation Commission to be constituted under the provisions of Delimitation Act, 2002 as amended by said 2019-Act.

• Postal Ballot Facility to Certain Classes of Voters

- A special dispensation has been provided in the existing voting system to enable aged people and persons with disability (PWDs) and also for those who are not in a position to be present in their polling station on the day of poll owing to compulsion of their service conditions, such as those on duty in aviation sector, trains, shipping sector, long distance government road transport/corporation buses, fire services, medical services, traffic, medical personnel authorized for coverage of election, etc. in the manner to opt for exercising their franchise right by postal ballot by way of filling up a specific form for the purpose.
- In this regard, a notification has been issued amending the Conduct of Election Rules, 1961 provisioning for allowing such facilities to the eligible categories of the voters.
- In said pursuance, those voters above 80 years of age and the Persons with Disabilities would be able to cast their vote by postal ballot.
- Those on temporary duty outside their constituencies on the day of poll would also be benefitted.

• Reservation of Seats for Scheduled Castes and Scheduled Tribes

- With a view to retaining the inclusive character as envisioned by the founding fathers of the Constitution, it was considered necessary by the Government to continue the reservation of seats for the Scheduled Castes and the Scheduled Tribes for another ten years i.e. up to 25th January, 2030.
- The Government introduced the Constitution (One Hundred and Twenty Sixth Amendment) Bill, 2019 before the Parliament thereby provisioning for extension of the period for a further ten years and the same was passed by both the Houses of Parliament and received the assent of the President in January, 2020.
- The said Bill was enacted as the Constitution (One Hundred and Fourth) Act, 2020.

• India Code Information System (ICIS)

- Each year number of legislations (both principal Acts and Amending Acts) are passed by the legislature and it is difficult for judiciary, lawyers as well as citizens to refer relevant and up to date Acts when required.
- This can be solved by building up an exhaustive repository of all the Acts and Amendments in one place which is open to all.

- India Code Information System (ICIS), a one stop digital repository of all the Central and State Legislation including their respective subordinate legislations has been developed with the help of NIC under the guidance of Law and Justice (Legislative Department).
- It is an important step in ensuring legal empowerment of all citizens as well as the object of ONE NATION – ONE PLATFORM.
- The main object of this system is to provide a one stop repository of all the Acts and Legislations in India in the latest and updated format as and when required by the general public, lawyers, judges and all other interested parties.

3

The Pradhan Mantri Fasal Bima Yajana (PMFBY)

CONTEXT:

- Crop Insurance Scheme- The Pradhan Mantri Fasal Bima Yajana (PMFBY) successfully completes 5 Years of operations.

ABOUT:

- The Pradhan Mantri Fasal Bima Yojana (PMFBY) was launched on 18 February 2016. It is an insurance service for farmers for their yields.
- It was formulated in line with **One Nation–One Scheme** theme by replacing earlier two schemes
 - National Agricultural Insurance Scheme (NAIS)
 - Modified National Agricultural Insurance Scheme (MNAIS)
- It aims to reduce the premium burden on farmers and ensure early settlement of crop assurance claim for the full insured sum.

Important features of the Scheme

- **Subsidization for premium cost:** Premium cost over and above the farmer share is equally subsidized by States and GoI. However, GoI shares 90% of the premium subsidy for North Eastern States to promote the uptake in the region.
- **Coverage for cropping cycle:** As an end to end risk mitigation mechanism for farmers, the scheme extends coverage for the entire cropping cycle from pre-sowing to post-harvest including coverage for losses arising out of prevented sowing and mid-season adversities.
- **Coverage of losses:** Individual farm level losses arising out of localized calamities and post-harvest losses are also covered due to perils such as inundation, cloudburst and natural fire.
- **Crop coverage:** The Scheme covers all **Food & Oilseeds crops** and **Annual Commercial/ Horticultural Crops** for which past yield data is available and for which requisite number of Crop Cutting Experiments (CCEs) are conducted being under **General Crop Estimation Survey (GCES)**.
- **Implementation:** The scheme is implemented by empanelled general insurance companies.
 - Selection of Implementing Agency (IA) is done by the concerned State Government through bidding. The scheme is compulsory for loanee farmers availing Crop Loan /KCC account for notified crops and voluntary for other others.
- **Administered by:** The scheme is being administered by Ministry of Agriculture.
- The scheme was made voluntary for all farmers, after its revamp in February 2020.
- **Other key features of the scheme:**
 - Integration of land records with the PMFBY portal

- Crop Insurance mobile-app for easy enrollment of farmers and usage of technology such as satellite imagery
- remote-sensing technology, drones, artificial intelligence
- machine learning to assess crop losses
- The scheme makes it easier for the farmer to report crop loss within 72 hours of occurrence of any event through the Crop Insurance App, CSC Centre or the nearest agriculture officer.

Background

- ▶ 5 years ago, in 2016, the Government of India took a historic step towards strengthening risk coverage of crops for farmers of India and approved the flagship crop insurance scheme - the Pradhan Mantri Fasal Bima Yojana (PMFBY).
- ▶ The scheme was conceived as a milestone initiative to provide a comprehensive risk solution at the lowest uniform premium across the country for farmers.

The progress so far

- As per the Government data, claims worth Rs 90,000 crore have so far been disbursed to farmers since the launch of the scheme on January 13, 2016.
- So far, 29 crore farmers have insured their crops under the scheme and about 5.5 crores new farmers are getting registered every year.
- Even during the COVID-19 lockdown period, nearly 70 lakh farmers benefitted and claims worth Rs 8,741.30 crore were transferred to the beneficiaries.

4

Smart Water Supply Measurement and Monitoring System

CONTEXT:

- National Jal Jeevan Mission (NJJM), Department of Drinking Water and Sanitation, Ministry of Jal Shakti in partnership with Ministry of Electronics & Information Technology launched an **ICT Grand Challenge**, for development of a 'Smart water supply measurement and monitoring system'.

ABOUT:

- **User Agency:** Jal Jeevan Mission would be the user agency of the Grand Challenge.
- **Implementing agency:** Centre for Development of Advanced Computing (C-DAC), is the implementing agency, providing technical support for the challenge.
- This grand challenge will harness the vibrant IoT ecosystems of India for creating smart rural water supply eco-system to measure and monitor the service delivery of the water supply in rural areas.

Significance of the initiative

- This challenge will provide an opportunity to work for Jal Jeevan Mission and to assure potable water supply through functional household tap connections to every rural household.
- The focus of the JJM is on service delivery -to ensure regular water supply in adequate quantity and of prescribed quality on a long-term basis.
- This necessitates the use of modern technology in monitoring of the programme and to capture service delivery data automatically for ensuring the quality of services.

- Digitisation of water supply infrastructure has the potential to solve current problems as well as help anticipate and address future challenges.

5 Pradhan Mantri Kaushal Vikas Yojana (PMKVY 3.0)

- **Context:**
- The third phase of Pradhan Mantri Kaushal Vikas Yojana (PMKVY 3.0) has been launched in 600 districts across all states of India.
- **About:**
- **Focus of the Scheme:** Spearheaded by the Ministry of Skill Development and Entrepreneurship (MSDE), this phase will focus on new-age and COVID-related skills.
- Skill India Mission PMKVY 3.0 envisages training of eight lakh candidates over a scheme period of 2020-2021 .
- "Skill India Mission" launched in 2015 has gained tremendous momentum through launch of its flagship scheme PMKVY to unlock the vision of making India the 'Skill Capital' of the world.

National Skills Development Mission:

- ▶ Skill India or the National Skills Development Mission of India is a campaign launched by Prime Minister Narendra Modi.
- ▶ It is managed by the National Skills Development Corporation of India.

Various initiatives under this campaign are:

- ▶ National Skill Development Mission
- ▶ National Policy for Skill Development and Entrepreneurship, 2015
- ▶ Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
- ▶ Skill Loan scheme
- ▶ Rural India Skill

6 Pravasi Bharatiya Divas Convention

CONTEXT:

- The Prime Minister, inaugurated the Pravasi Bhartiya Diwas Convention .

ABOUT:

- Pravasi Bharatiya Divas (PBD) Convention is the flagship event of the **Ministry of External Affairs**.
- It provides an important platform to engage and connect with the overseas Indians.
- The Convention was held in virtual format, as were the PBD Conferences held recently in the run up to the Convention.
- **Theme:** The theme of 16th PBD Convention 2021 was "Contributing to Aatmanirbhar Bharat".

Other highlights

- **Youth PBD:** The Youth PBD was also celebrated virtually on the theme "Bringing together Young Achievers from India and Indian Diaspora".
- **Pravasi Bharatiya Samman Awards:** The names of the Pravasi Bharatiya Samman Awardees for 2020-21 were also announced.
 - Pravasi Bharatiya Samman Awards are conferred to select Indian diaspora members to recognize their achievements and honour their contributions to various fields, both in India and abroad.

Pravasi Bharatiya Divas:

- Pravasi Bharatiya Divas is a celebratory day observed on 9 January by the Republic of India to mark the contribution of the overseas Indian community towards the development of India.
- The day commemorates the return of Mahatma Gandhi from South Africa to Mumbai on 9 January 1915.

7

Ease of doing business reforms

CONTEXT:

- Kerala becomes the 8th State to complete ease of doing business reforms; Additional borrowing permission of Rs. 2,261 crore granted.

ABOUT:

- **Published by:** Ease of doing business is an index published by the World Bank.
- The ease of doing business is an important indicator of the investment friendly business climate in the country.
- It is an aggregate figure that includes different parameters which define the ease of doing business in a country.

Calculation method

- The Index is computed by aggregating the distance to frontier scores of different economies.
- The distance to frontier score uses the 'regulatory best practices' for doing business as the parameter and benchmark economies according to that parameter.
- For each of the indicators that form a part of the statistic 'Ease of doing business,' a distance to frontier score is computed and all the scores are aggregated. The aggregated score becomes the Ease of doing business index.
- Indicators for which distance to frontier is computed include
 - construction permits
 - registration
 - getting credit
 - tax payment mechanism etc.
- Countries are ranked as per the index.

Other States

- Kerala has now joined the seven other States namely, Andhra Pradesh, Karnataka, Madhya Pradesh, Odisha, Rajasthan, Tamil Nadu and Telangana, who have completed this reform.
- On completion of reforms facilitating ease of doing business, these eight States have been granted additional borrowing permission.

Significance of the development

- **Additional borrowings:** The State has become eligible to mobilise additional financial resources through **Open Market Borrowings**.
- **Faster growth:** Improvements in the ease of doing business will enable faster future growth of the state economy.

8

Seventh Trade Policy Review of India at the WTO

CONTEXT:

- India's **seventh Trade Policy Review (TPR)** began at the World Trade Organization in Geneva.

ABOUT:

- The TPR is an important mechanism under the WTO's monitoring function, and involves a comprehensive peer-review of the Member's national trade policies.
- The Trade Policy Review Mechanism (TPRM) was introduced into **GATT** in 1989 following the Mid-Term Review of the **Uruguay Round**.
- The mechanism was confirmed as an integral part of the WTO in Annex 3 of the Marrakesh Agreement establishing the World Trade Organization.
- Before 1995, trade policy reviews were restricted to trade in goods.
- In conformity with WTO rules, since 1 January 1995 reviews have also covered new areas like trade in services and intellectual property rights.

India's progress

- According to WTO-
 - India has implemented several measures to facilitate trade, such as simplification of procedures and customs clearances for imports and exports.
 - The other trade-facilitation initiatives introduced by India since 2015 include
 - introduction of Indian Customs Electronic Gateway (ICEGATE)
 - Single Window Interface for Facilitation of Trade (SWIFT)
 - the Direct Port Delivery and the Direct Port Entry facilities
 - the increased use of the Risk Management System (RMS)

- ▶ India's last TPR took place in 2015.
- ▶ In the last 5 years, since India's previous TPR, the Government has worked diligently to reform and transform the entire economic eco-system to meet the socio-economic aspirations of a billion plus Indians.

9

Marketing & Logistics intervention for promoting products of North – East

CONTEXT:

- TRIFED under M/O Tribal Affairs initiated **Marketing & Logistics intervention** for promoting products of North – East .

About:

- The collaboration aligns with the 'Act East' policy of the government to promote economic, strategic and cultural relations with the vast Asia-Pacific region at different levels.
- **Aim:** The aim of this initiative is to:
 - create a brand for products from that region
 - increase awareness of the brand across the globe
 - provide national and international market access

Significance of the initiative

- **Enhancing tribal entrepreneurship:** With the focus on products of the North-Eastern region, and the facilitation and on boarding of more tribal suppliers will result in enhancing tribal entrepreneurship in the region
- **Employment generation:** It will further lead to increasing incomes and also generate livelihood for the tribal communities.
- **Towards Atmanirbhar India:** The objective is to increase the sale of the North-Eastern products to 4 fold. This will help in enhancing income generation of tribal suppliers and contribute effectively to the Aatmanirbhar Bharat Abhiyan and the Vocal for Local, Buy Tribal initiative

Tribal Co-operative Marketing Federation of India (TRIFED)

- It is a national level cooperative body under the administrative control of **Ministry of Tribal Affairs**, Government of India.
- It was established under the Multi-state co-operative societies act 1984 under the former Ministry of Welfare. Later it came under the control of Ministry of Tribal affairs.
- In order to empower the downtrodden tribal community it started the procurement of tribal art and craft items firstly in 1999 through its retail outlet called TRIBES INDIA.

10

High Speed Rail work gathered momentum

CONTEXT:

- With the start of **LiDAR (Aerial Ground) Survey**, High Speed Rail work gathered momentum for **Delhi - Varanasi High Speed Rail Corridor**.

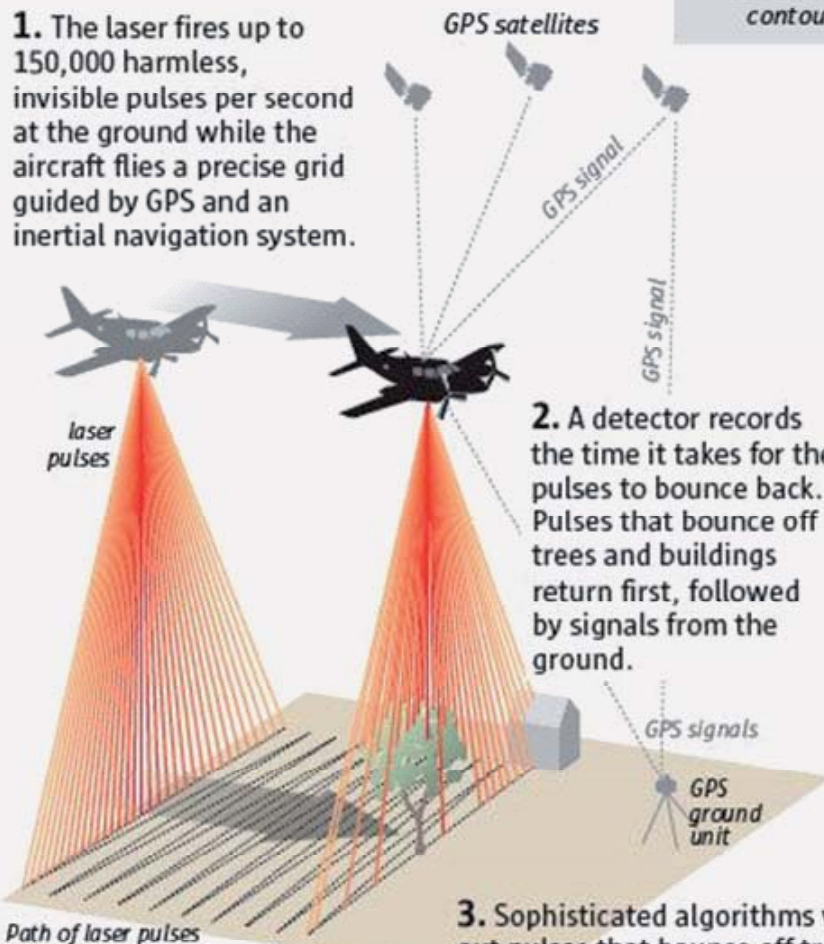
ABOUT:

- The LiDAR survey for Delhi-Varanasi High Speed Rail Corridor started from Greater NOIDA where a Helicopter fitted with state of art Aerial LiDAR and Imagery sensors took the first flight and captured the data related to ground survey.

How lidar works

Lidar (light detection and ranging) uses an aircraft equipped with a scanning laser rangefinder to “peer” through forests and construct a topographic map accurate to within a few inches.

1. The laser fires up to 150,000 harmless, invisible pulses per second at the ground while the aircraft flies a precise grid guided by GPS and an inertial navigation system.



COST: \$500-\$1,000 per square mile.

Sources: USGS, Snohomish County Information Services, idar-uk.com, NASA's Goddard Space Flight Center, pugetsoundlidar.ess.washington.edu/About_LIDAR.htm

A sharper view

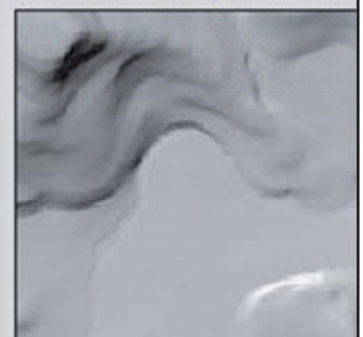
These three images of the Oso slide area (taken before Saturday's slide) illustrate lidar's superiority over aerial photos or contour maps.

AERIAL/SATELLITE IMAGE



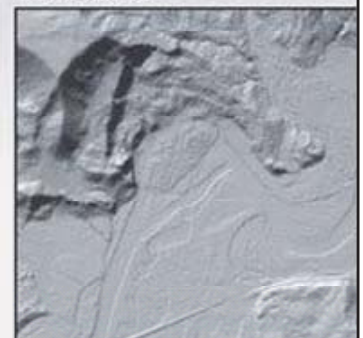
2013 USDA Ortho Imagery

STANDARD CONTOUR TOPOGRAPHY IMAGE



Elevation model derived from 1:24,000-scale USGS topographic map contours

LIDAR IMAGE



Calculated from the 2013 lidar survey

MARK NOWLIN / THE SEATTLE TIMES

- National High Speed Rail Corporation Limited is adopting **Light Detection and Ranging Survey (LiDAR)** technology which provides all the ground details .
- The ground survey is a crucial activity for any linear infrastructure project as the survey provides accurate details of areas around the alignment.
- This technique uses a combination of Laser data, GPS data, flight parameters and actual photographs to give accurate survey data.

LiDAR (Light detection and ranging):

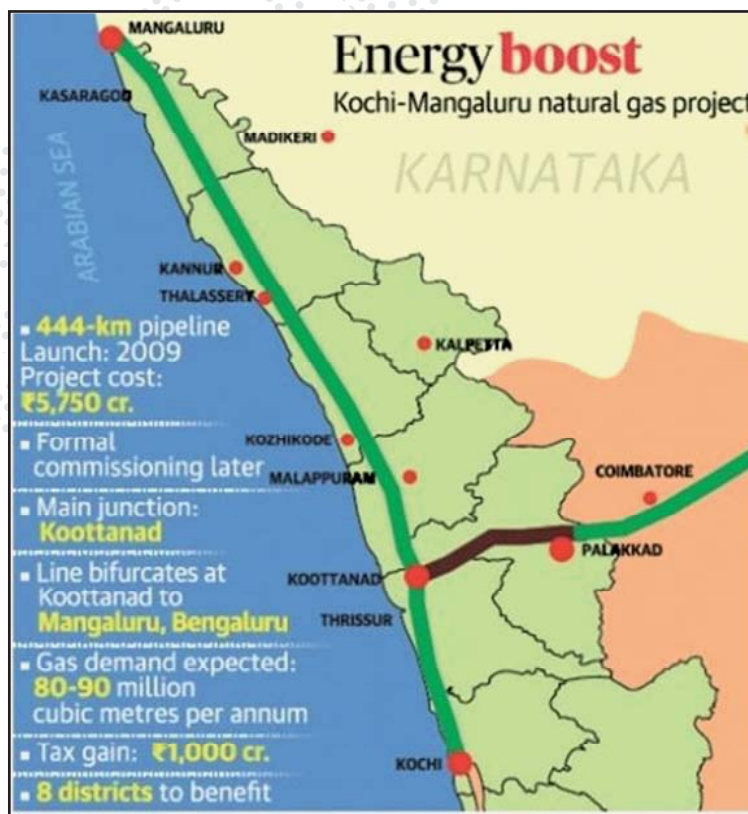
- It is a method for measuring distances (ranging) by illuminating the target with laser light and measuring the reflection with a sensor. Differences in laser return times and wavelengths can then be used to make digital 3-D representations of the target. It has terrestrial, airborne, and mobile applications.
- Lidar is commonly used to make high-resolution maps, with applications in surveying, geodesy, geomatics, archaeology, geography, geology, geomorphology, seismology, forestry, atmospheric physics, laser guidance, airborne laser swath mapping (ALSM), and laser altimetry.
- The technology is also used in control and navigation for some autonomous cars.

11**Kochi - Mangaluru Natural Gas Pipeline****CONTEXT:**

- PM dedicated Kochi - Mangaluru Natural Gas Pipeline to the Nation

ABOUT:

- **Built by:** The 450 km long pipeline has been built by **GAIL (India) Ltd.**
- **Capacity:** It has transportation capacity of 12 Million Metric Standard Cubic Metres per day, and will carry natural gas from the Liquefied Natural Gas (LNG) Regasification Terminal at Kochi (Kerala) to Mangaluru (Dakshina Kannada district, Karnataka), while passing through Ernakulam, Thrissur, Palakkad, Kozhikode, Kannur and Kasaragod districts.
- The pipeline will supply environment friendly and affordable fuel in the form of Piped Natural Gas (PNG) to households and Compressed Natural Gas (CNG) to the transportation sector.
- It will also supply Natural Gas to commercial and industrial units across the districts along the pipeline. Consumption of cleaner fuel will help in improving air quality by curbing air pollution.
- **Technique:** Laying of the pipeline was an engineering challenge as the route of the pipeline necessitated it to cross water bodies at more than 100 locations.
 - This was done through a special technique called **Horizontal Directional Drilling method.**



12 Sagarmala Seaplane Services (SSPS)

CONTEXT:

- Ministry of Ports, Shipping and Waterways is kicking off ambitious Project of **Sagarmala Seaplane Services (SSPS)** with potential airline operators.

ABOUT:

- The project execution and implementation would be through **Sagarmala Development Company Ltd (SDCL)**, which is under the administrative control of the Ministry of Ports.
- The joint development and operation of "Sagarmala Seaplane Services (SSPS)" will be undertaken by forming a Special Purpose Vehicle (SPV) with Sagarmala Development Company Limited (SDCL).



Significance of the development

- The seaplanes services will be a game-changer providing a supplementary means of faster and comfortable transportation across the nation.
- Apart from providing air connectivity to various remote religious/tourist places, it will boost tourism for domestic and international holidaymakers.
- It will save travel time and stimulate localized short distance travelling especially in the hilly regions or across the rivers/lakes etc.

- In addition to the infrastructural enhancements at the places of operations, it will enormously boost tourism and business activities.

13 Rewari - Madar section of Western Dedicated Freight Corridor

CONTEXT:

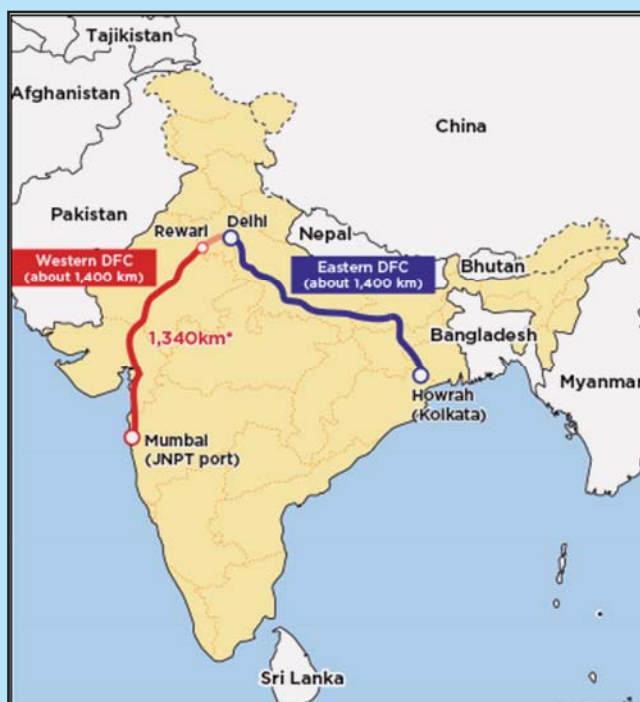
- PM dedicated Rewari - Madar section of Western Dedicated Freight Corridor to the Nation.

ABOUT:

- The Rewari - Madar section of the Western Dedicated Freight Corridor is situated in Haryana and Rajasthan .
- The opening of this stretch will benefit various industries in Rewari – Manesar, Narnaul, Phulera and Kishangarh areas of Rajasthan & Haryana and will also enable better usage of the container depot of CONCOR at Kathuwas.
- This section will also ensure seamless connectivity with the western ports of Kandla, Pipavav, Mundhra, and Dahej situated in Gujarat.

Dedicated Freight Corridor (DFC):

- Dedicated Freight Corridor (DFC) is a rail route created for freight (goods and commodity) transportation.
- Built in accordance with world-class technology, DFC ensures faster transit, reduced logistics costs, higher energy efficiency and environment-friendly operations.
- Freight transportation plays a gigantic role in the Indian economy.
- Considering its mammoth contribution of 67 percent in railway revenue, the government has decided to integrate state-of-the-art technology and up-scale the railway infrastructure via Dedicated Freight Corridors (DFC).
- The transformation will not only modernise rail infrastructure but will also enhance the freight capacity, thereby reducing the overall costs.
- By definition, Dedicated Freight Corridor (DFC) is a high-speed and high-capacity railway corridor dedicated exclusively for freight movement. It is built to affirm a higher throughput per train and a more significant share in the freight market. Besides, a world-class infrastructure, DFC also ensures:
 - High energy efficiency
 - Reduced unit logistic cost

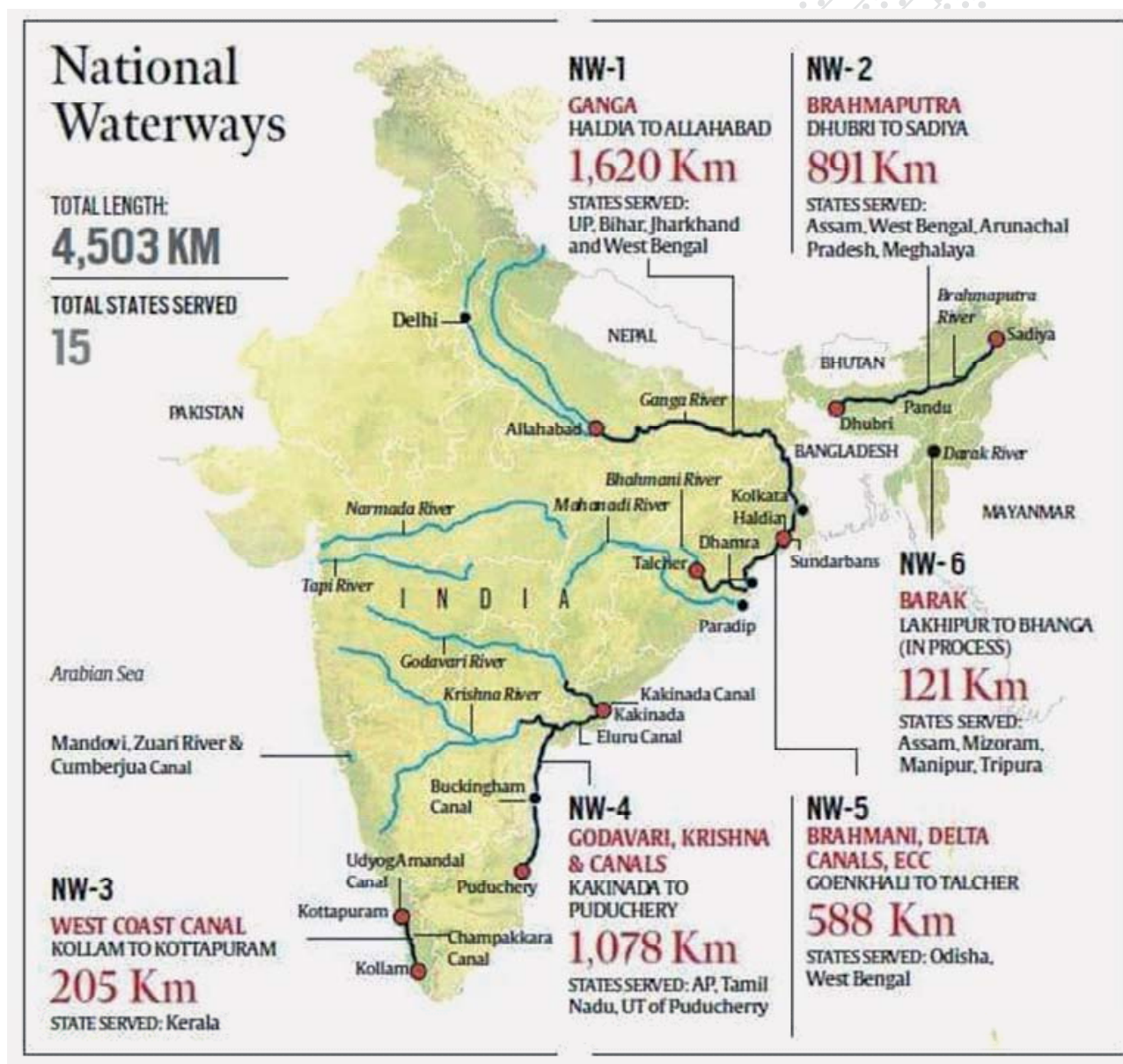


- Faster transit
- Employment generation
- Real estate expansion
- Environment-friendly operations

14 Improving Waterways in West Bengal

CONTEXT:

- World Bank Signed \$105 Million Project to Improve Waterways in West Bengal



ABOUT:

- The West Bengal Inland Water Transport, Logistics and Spatial Development Project will
 - facilitate passenger and freight movement across the Hooghly river
 - undertake spatial planning to improve accessibility in the Kolkata Metropolitan Area
 - enhance the quality of life of its residents
 - contribute to the growth of the state's logistics sector
- This Project will help improve the river transport infrastructure in West Bengal and help in the economic development of the state by connecting the hinterland with markets and job centers in Kolkata's Metropolitan Area.
- Developing the river transport infrastructure will enable a large population of the state to utilize its waterways, have alternative, multi-modal options for transportation for both freight and passengers, connect the hinterland with Kolkata Metropolitan Area's markets and job centers and emerge as a logistics hub.

The need

- The existing ferry system, operational for decades, caters to less than 2 percent of the passenger traffic and a small portion of the freight movement.
- West Bengal's ferries can provide an efficient, flexible mode of public transport for both passengers and freight, saving on operating costs and travel time when compared with road journeys.
- The Inland waterways are now emerging as a cost effective and an environment friendly option for passenger and freight movement.

15	Scientific expedition to Antarctica
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Context:

- 40th Indian scientific expedition to Antarctica launched. This Indian expedition marked four decades of country's scientific endeavour to the southern white continent.

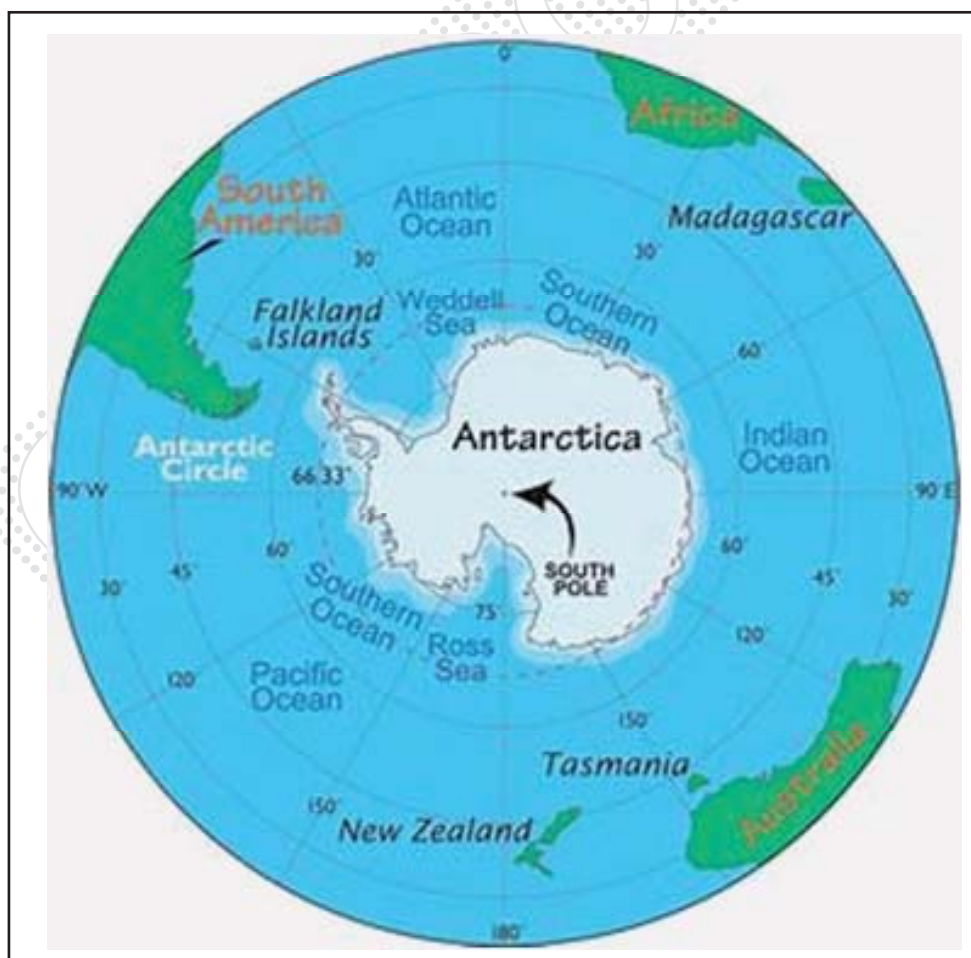
About:

- The Indian Antarctic expeditions began in 1981. The first trip comprised of a team of 21 scientists and support staff led by Dr SZ Qasim.
- The Indian Antarctic programme has now credited to have built three permanent research base stations in Antarctica—named:
 - **Dakshin Gangotri**
 - **Maitri**
 - **Bharati**
- As of today, India has two operational research stations in Antarctica named **Maitri and Bharati**.
- The **National Centre for Polar and Ocean Research (NCPOR)**, Goa, manages the entire Indian Antarctic program.
- Some of the noteworthy accomplishments of Indian scientific community in Antarctica are:
- Identification of a number of new species of bacteria from the cold habitats of Antarctica- 30 out of 240 new species discovered so far have been by Indian scientists.

- Identification of new genes from the bacteria as genes required for the survival of bacteria at low temperature.
- Identification of a number of lipases and proteases active at low temperatures and useful for the biotechnology industry.
- Preparation of comprehensive geological and geomorphological maps of the Schirmacher Oasis.
- Studies of cold adaptability of human beings in the harsh environment of Antarctica which have provided significant baseline data for use in similar studies on India's armed forces serving in the Himalaya.

Objectives:

- Continuation of the scientific programs in the Antarctica in the fields of atmospheric sciences, climate change, geoscience and glaciology, human physiology and medicine, polar biology and environmental science.
- Initiating novel programmes in the frontier realms of polar science, viz. Assessment of microbial diversity in Arctic and Antarctic: Past and Present; Environmental monitoring and health of the Indian Antarctic Stations in pursuit of Antarctica-Treaty-System and its governance; Long-term monitoring and modeling of precipitation over Antarctica; and Satellite-based monitoring Antarctic sea ice and land ice topography, with special focus on glaciers.
- Ensuring a prominent and sustained presence of India in the Antarctica through initiation of scientific research in some of the frontier realms of polar science including paleo-climate reconstruction from the Antarctic coastal water.
- Continue to play a lead role amongst the nations with a sustained presence in Antarctica.



16 New Strain of novel Coronavirus

Context:

- The UK has identified a fast-moving new variant of the coronavirus that is more than 70% more transmissible than existing strains.

About:

- The new SARS-CoV-2 variant was revealed to be the reason behind the rapid surge in Covid-19 cases in South and East England.
- It is being referred to as **VUI (Variant under Investigation) 202012/01, or the B.1.1.7 lineage.**
- The variant was identified in genomic surveillance by COVID-19 Genomics UK (COG-UK), a consortium that analyses genome sequencing data from the UK.
- COG-UK is the largest contributor to the global Covid-19 database GISAID.
- The variant is the result of multiple mutations in the spike protein of the novel coronavirus SARS-CoV-2, as well as mutations in other genomic regions of the RNA virus.
- Preliminary analysis suggests that it is more transmissible than previously circulating variants. COG-UK identified one of these mutations as "N501Y", in an area of the spike protein that binds to a key protein in the human cell, the ACE2 receptor.
- This was an indication that the alterations may, theoretically, result in the virus becoming more infectious.

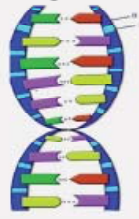
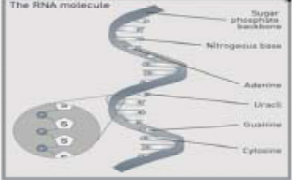
Strains of Coronavirus:

- Coronaviruses did not just appear recently. They're a large family of viruses that have been around for a long time. Many of them can cause a variety of illnesses, from a mild cough to severe respiratory illnesses.
- The new (or "novel") coronavirus is one of several known to infect humans. It's probably been around for some time in animals.
- When viruses infect a person, they attach to his/her cells, get inside them, and make copies of their RNA, which helps them spread.
- If there's a copying mistake, the RNA gets changed. Scientists call those changes mutations.
- These changes happen randomly and by accident. It is a normal part of what happens to viruses as they multiply and spread.

Ribonucleic acid (RNA)

- Ribonucleic acid (RNA) is an important biological macromolecule that is present in all biological cells. It is principally involved in the synthesis of proteins, carrying the messenger instructions from DNA, which itself contains the genetic instructions required for the development and maintenance of life.

DNA	vs.	RNA
• <u>Double</u> stranded		• <u>Single</u> stranded
• <u>Deoxyribose</u> sugar		• <u>Ribose</u> sugar
• Bases: C, G, A, T		• Bases: C, G, A, U
• Self replicate		• Can't self replicate
		• <u>mRNA, tRNA, rRNA</u>

Both contain a sugar, phosphate, and base.

17 Light Combat Aircrafts (LCA)

CONTEXT:

- Cabinet approves Procurement of 83 Light Combat Aircrafts (LCA) 'Tejas' from HAL for IAF.

About:

- Light Combat Aircraft Mk-1A variant is an indigenously designed, developed and manufactured state-of-the-art modern 4+ generation fighter aircraft.
- This aircraft is equipped with critical operational capabilities of:
 - Active Electronically Scanned Array (AESA) Radar
 - Beyond Visual Range (BVR) Missile
 - Electronic Warfare (EW) Suite
 - Air to Air Refuelling (AAR)
- Under the Atmanirbhar Bharat Abhiyaan, India is continuously growing in its power to indigenously design, develop and manufacture advanced cutting edge technologies and systems in the Defence Sector.
- The manufacturing of Light Combat Aircraft by Hindustan Aeronautics Limited, HAL will give a further push to Atmanirbhar Bharat initiative and boost indigenisation of defence production and the defence industry in the country.

18 Advisory for management of Human-Wildlife Conflict (HWC)

CONTEXT:

- The Standing Committee of National Board of Wildlife (SC-NBWL) in its 60th meeting has approved the advisory for management of Human-Wildlife Conflict(HWC) in the country.

ABOUT:

- Human-wildlife conflict (HWC) occurs when animals pose a direct and recurring threat to the livelihood or safety of people, leading to the persecution of that species.
- Retaliation against the species blamed often ensues, leading to conflict about what should be done to remedy the situation.

Key-takeaways from the advisory

- The advisory makes important prescriptions for the States/ Union Territories for dealing with Human-Wildlife conflict situations and seeks expedited inter-departmental coordinated and effective actions.
- **Empowering Gram Panchayats:** The advisory envisages empowering gram panchayats in dealing with the problematic wild animals as per the **section 11 (1) (b) of Wild Life (Protection) Act, 1972.**
- The advisory also envisages prescribing:
 - inter-departmental committees at local/state level

- adoption of early warning systems
- creation of barriers
- dedicated circle wise Control Rooms with toll free hotline numbers which could be operated on 24X7 basis
- Identification of hotspots
- formulation and implementation of special plans for improved stall-fed farm animal etc

Crop compensation against crop damage due to HWC

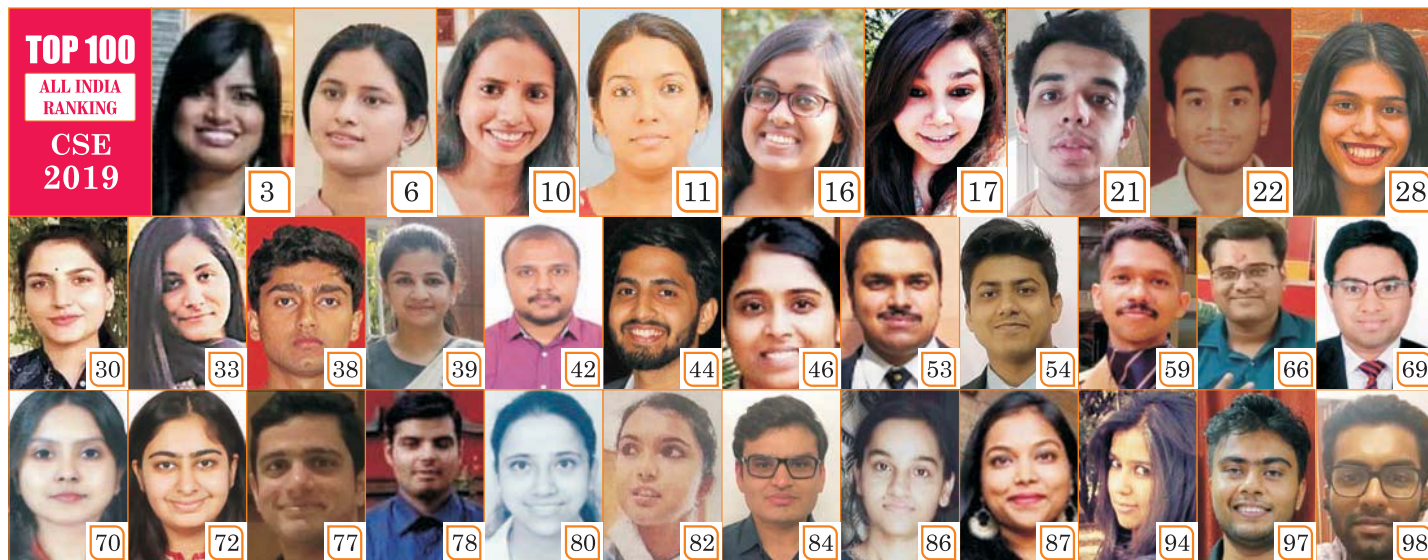
- Utilising **add-on coverage** under the **Pradhan Mantri Fasal Bima Yojna** for crop compensation against crop damage due to HWC and augmenting fodder and water sources within the forest areas are some key steps envisaged to reduce HWC.
- Payment of a portion of ex-gratia as interim relief within 24 hours of the incident to the victim/family.

The Wild Life Protection Act, 1972:

- ▶ The Wild Life Protection Act, 1972 is an Act of the Parliament of India enacted for protection of plants and animal species. Before 1972, India had only five designated national parks.
- ▶ Among other reforms, the Act established schedules of protected plant and animal species; hunting or harvesting these species was largely outlawed.
- ▶ The Act provides for the protection of wild animals, birds and plants; and for matters connected there with or ancillary or incidental thereto. It extends to the whole of India.
- ▶ It has six schedules which give varying degrees of protection.
 - **Schedule I and Schedule II (Absolute protection):** Schedule I and part II of Schedule II provide absolute protection - offences under these are prescribed the highest penalties.
 - **(Schedule III and Schedule IV) Light penalties:** Species listed in Schedule III and Schedule IV are also protected, but the penalties are much lower.
 - **Schedule V (Legally vermin animals):** Animals under Schedule V, e.g. common crows, fruit bats, rats and mice, are legally considered vermin and may be hunted freely.
 - **Schedule VI (endemic plants):** The specified endemic plants in Schedule VI are prohibited from cultivation and planting.

The National Board for Wildlife (NBWL)

- ▶ The National Board for Wildlife (NBWL) is constituted by the Central Government under Section 5 A of the Wildlife (Protection) Act, 1972 (WLP Act).
- ▶ The Standing Committee of NBWL considers proposals after a series of levels of scrutiny and have recommendations of the State Chief Wildlife Warden, State Government and the State Board for Wildlife.
- ▶ During the meetings of SC-NBWL, the views of the expert members are taken into consideration before arriving at decisions.



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