

OFFICERS' Pulse

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Coverage.

The Hindu
PIB
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Rajya Sabha TV
All India Radio

At a Glance & In Depth.

Polity and Social Issues
Economy
International Relations
Environment
Science and Tech
Culture



CURRENT AFFAIRS
WEEKLY
THE **PULSE** OF UPSC AT
YOUR FINGER TIPS.

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News @ a glance

POLITY

1) Centre nudging on Ken-Betwa river interlinking project

What is the issue?

- The ₹18,000-crore project has been mired in several hurdles. Nearly 8,650 hectares of forest land including part of **Panna National Park in Madhya Pradesh will be submerged** if the project is to become a reality.
- It will also have an adverse impact on tiger reserves and wildlife sanctuaries in the region. This has led to widespread opposition from conservationists.
- There have been disagreements between the two state governments **on the share of water.**
- The project has also been delayed due to other political and environmental issues.

Need for Interlinking of Rivers:

- 80% of the water India receives through its annual rains and surface water flow happens over a 4 month period June through September.
- This **spatial and time variance in availability of natural water** versus year round demand for irrigation, drinking and industrial water creates demand supply gap, which can be balanced by interlinking of rivers.
- Interlinking of rivers involves joining rivers by a network of canals and reservoirs that solves problems of drought and flood by maintaining a **water balance between the water deficit and surplus areas.**

Constitutional Provisions

- **Article 262(1)** - provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter-State river or river valley
- **Article 262(2)** holds that neither the Supreme Court nor any other court shall exercise jurisdiction in respect of interstate water disputes.

Why in News?

- The government is pushing Uttar Pradesh and Madhya Pradesh to make progress on the Ken-Betwa river interlinking project
- The project involves **transferring surplus water from the Ken river in Madhya Pradesh to the Betwa river in Uttar Pradesh** and irrigate 3.64 lakh hectares in the **Bundelkhand region of both States.**

2) Rajya Sabha passes the Transgender Persons (Protection of Rights) Bill

Who is a transgender person?

- As per international standards, **'transgender'** is an umbrella term that includes persons whose sense of gender does not match with the gender assigned to them at birth.

Provisions of Transgender Persons Bill

- **Definition of a transgender person:**
- The Bill defines a transgender person as **one whose gender does not match the gender assigned at birth.** It includes **trans-men** and **trans-women**, persons with intersex variations, **gender-queers**, and persons with **socio-cultural identities**, such as **kinnar** and **hijra**. Intersex variations is defined to mean a person who at birth shows variation in his or her primary sexual characteristics, external genitalia, chromosomes, or hormones from the normative standard of male or female body.

Prohibition against discrimination:

- The Bill prohibits the discrimination against a transgender person, including denial of service or unfair treatment in relation to:
 1. education;
 2. employment;
 3. healthcare;

4. access to, or enjoyment of goods, facilities, opportunities available to the public;
5. right to movement;
6. right to reside, rent, or otherwise occupy property;
7. opportunity to hold public or private office; and
8. Access to a government or private establishment in whose care or custody a transgender person is.

Certificate of identity for a transgender person:

- A transgender person may make an application to the **District Magistrate for a certificate of identity, indicating the gender as 'transgender'**. A revised certificate may be obtained only if the individual undergoes surgery to change their gender either as a male or a female.

Welfare measures by the government:

- The Bill states that the relevant government will take measures to ensure the full inclusion and participation of transgender persons in society

Offences and penalties:

- The Bill recognizes the offences against transgender persons. Penalties for these offences vary between six months and two years, and a fine.

Confusing Parameters

- **Self-identification and obtaining a Certificate of Identity**
- The Bill provides for 'self-perceived gender identity' i.e. persons can determine their gender on their own.
- This is in line with a Supreme Court judgement (2014) which held that the self determination of one's gender is part of the fundamental right to dignity, freedom and personal autonomy guaranteed under the Constitution.
- Along with the provision on 'self-perceived gender identity', the Bill also provides for a screening process to obtain a Certificate of Identity.
- This Certificate will certify the person as 'transgender'.
- An application for obtaining such a Certificate will be referred to a District Screening Committee which will comprise five members including a medical officer, psychologist or psychiatrist, and a

representative of the transgender community.

- The Bill therefore allows individuals to self-identify their gender, but at the same time they must also undergo the screening process to get certified, and as a result be identified as a 'transgender'.
- In this context, it is unclear how these two provisions of self-perceived gender identity and an external screening process will reconcile with each other.
- **Why in News?**
- The Transgender Persons (Protection of Rights) Bill, 2019 was passed by Parliament, with the Rajya Sabha passing it. Passed by the Lok Sabha and introduced in the Rajya Sabha by Union Social Justice and Empowerment Minister Thawarchand Gehlot, the legislation was meant **to end discrimination against transgender persons.**

3) Govt plans to merge 2 UTs — Daman and Diu, Dadra and Nagar Haveli

What is union territory and how does it differ from State?

- Union Territory is a small administrative unit that is ruled by the Union. The Union Territories are controlled and administered directly by the Central Government.
- To sum up in simple words the basic difference between state and union territory is that a state has a separate governing body whereas, an Union territory is directly governed by the central government or union government.

History of union territories

- During the discussion on reorganisation of states in 1956, the States **Reorganisation Commission** recommended creation of a different category for these territories since they neither fit the model of a state nor do they follow a uniform pattern when it comes to governance.
- It was observed that these economically unbalanced, financially weak, and administratively and politically unstable territories can't survive as separate administrative units without depending heavily on the Union government.

- Considering all the reasons union territory was formed.

Working of Union Territories

- A UT, is administered wholly by the **Central Government** through the **Lieutenant Governor**, as appointed by the President, making “regulations for the peace, progress and good government” of these UTs.
- A UT can have an elected government too, like in the case of Delhi, Puducherry, and more recently, the UT of Jammu and Kashmir, but the administrative powers in this case are tilted in favour of the L-G.

News in Detail:

- The merger of the two UTs, located along the western coast near Gujarat, will be done for better administration and check duplications of various work.
- So far, both the Union Territories had separate budgets and different secretariats even though they are just 35 km apart.
- Dadra and Nagar Haveli has just one district while Daman and Diu has two.
- The merged Union Territory is likely to be named as Dadra, Nagar Haveli, Daman and Diu and its headquarters could be Daman and Diu.

Why in News?

- The government introduced a Bill in the Lok Sabha to merge two Union Territories — Daman and Diu, and Dadra and Nagar Haveli — into one.

4) FASTags

What is FASTag?

- It is a **prepaid radio-frequency identification-enabled tag** that facilitates **automatic deduction of toll charges**.
- The new system will now do away with a stop-over of vehicles and cash transactions at toll plazas.
- Projected as the ‘Aadhaar’ card for vehicles, the FASTag electronic toll collection programme is being implemented by the **Indian Highways Management Company Limited (IHMCL)**, a company incorporated by the **National Highways Authority of India (NHAI)**, and the **National Payments Corporation of India** in coordination with Toll Plaza Concessionaires, tag issuing agencies and banks.

What is the need?

- A joint study in 2014-15 by the Transport Corporation of India and the Indian Institute of Management-Calcutta estimated the cost of delay on Indian roads at \$6.6 billion per year. The cost of additional fuel consumption due to delays was also put at \$14.7 billion per year.
- The report had suggested that to expedite the toll collection process, India should gradually move towards electronic toll collection, which would not only reduce congestion and queues at toll plazas but also reduce operating costs for toll operators and plug revenue leakages.

What are the benefits?

- Apart from plugging revenue leakages and reducing the cost of delays and fuel consumption, which is also likely to cut down the nation’s GDP loss, according to the government .
- The tag helps remove bottlenecks, ensures seamless movement of traffic and saves time.
- The centralised system provides authentic and real-time data to government agencies for better analysis and policy formulation.
- It also helps reduce air pollution and the use of paper besides cutting the cost of managing toll plazas.

Why in News?

- The government extended the date to December 15 for making FASTag mandatory for toll payments on National Highways. The Ministry of Road Transport and Highways had earlier announced that from December 1, toll payments would be accepted through FASTags only.

5) Centre’s special power to revoke President’s Rule without prior Cabinet nod- “Rule 12”

What is ‘Rule 12’?

- **Rule 12 of the Government of India (Transaction of Business) Rules, 1961, allows the Prime Minister to depart from laid down norms at his discretion.**
- Titled “Departure from Rules” Rule 12 says, “The Prime Minister may, in case or classes of cases permit or condone a departure

from these rules, to the extent he deems necessary.

- The Cabinet can subsequently give post-facto approval for any decision taken under Rule 12.

Under what circumstances is Rule 12 used?

- Rule 12 is usually not used to arrive at major decisions by the government. However, it has been used in matters such as withdrawal of an office memorandum or signing of MoUs in the past.
- The last big decision taken through the invocation of Rule 12 was re-organisation of the state of Jammu and Kashmir into the Union Territories of Jammu and Kashmir, and Ladakh on October 31.

Why in News?

- The Centre invoked Rule 12 of the Transaction of Business Rules, 1961 that empowered it to revoke the proclamation of President's rule in Maharashtra without the prior approval of the Union Cabinet.

6) Governor's role if elections produce fractured verdicts

Constitutional Provisions

- **Article 153.** Governors of States.-There shall be a Governor for each State.
- **Article 164.**-The Chief Minister shall be appointed by the Governor and the other Ministers shall be appointed by the Governor on the advice of the Chief Minister, and the Ministers shall hold office during the pleasure of the Governor.
- **Article 163.** The Constitution envisages that the Governor **act on the aid and advice of the Council of Ministers, except in those situations** in which he is, by or under the Constitution, **required to act in his discretion**

What should the Governor do if there is a hung Assembly?

- It is clear that in identifying a candidate who, in his opinion, is in a position to command a majority, the Governor has to make his own decision, subject, of course, to democratic norms.
- When the Governor appoints the Chief Minister in this way, it is accompanied by a stipulation that the appointee prove his or

her majority within a specified time on the floor of the House.

What is the preferred procedure?

- The Governor may invite the leader of the largest single party first.
- However, if it is clear that the largest single party has no potential ally or enough independent members to ensure a majority, he may also invite the leader of the largest pre-poll combination or alliance.
- If there is no combination or alliance, he may invite leaders one by one in the order of their size in the new Assembly.
- During this process, a post-poll combination may emerge, if any one of them agrees to form a government.
- The Governor may insist on letters of support from those outside the leader's party who are willing to join or extend support to him.

Sarkaria Commission

- The Commission's report suggests the following orders for Governors to follow:
 1. An alliance formed prior to the election;
 2. The largest single party staking claim with the support of others, including independents;
 3. A post-electoral coalition, with all partners joining the government;
 4. A post-poll coalition, with some joining the government, and others extending support from outside.
- As general principles, the Sarkaria Commission says the Governor should look for a party or combination that commands the widest support in the Assembly, and that "his task is to see that a government is formed, and not to try to form a government which will pursue policies which he approves".

Why in News?

- The actions of the Maharashtra Governor over the last few days have invited scrutiny. From the early morning swearing-in ceremony to the unceremonious pre-floor test resignation of Devendra Fadnavis and Ajit Pawar, Raj Bhavan has found itself in the centre of controversy.

7) Floor Test

What is a "floor test"?

- A floor test is the determination on the floor of the House whether the Chief

Minister commands the support of the majority of the MLAs.

- This can be done by means of a voice vote, or by recording the vote of each MLA in the House.
- This determination of majority is done in a sitting of the legislature, for which the legislature has to be convened.

Who will order the convening of the Legislative Assembly?

- Under the Constitution, the Governor convenes the session of the legislature. But on multiple occasions in the past, the Supreme Court has ordered the convening of the Assembly to hold the floor test.

Who will conduct the floor test in the Legislative Assembly?

- The proceedings of a legislature are presided over by the **Speaker**. The election of the Speaker is usually the first order of business that newly elected MLAs undertake after taking their oath of office.
- Often, in cases where an immediate floor test is ordered, the election of the Speaker is taken up after the conclusion of the floor test. In the absence of a Speaker, the Governor appoints one of the MLAs to perform the duties of the Speaker.

- This MLA is referred to as the **pro tem Speaker**. He administers the oath of office to the other MLAs, and thereafter oversees the floor test in the legislature.

What basis does the Governor make his choice of pro tem Speaker?

- The Constitution gives the Governor's discretion in the selection of pro tem speaker. On many occasions, Governors have appointed the most tenured MLA in the Assembly as the pro tem Speaker.

Why in News?

- The Supreme Court has ordered a floor test in the Maharashtra legislative Assembly .It had asked to produce
- The letter written by Maharashtra Governor Bhagat Singh Koshyari recommending the revocation of President's Rule and inviting Devendra Fadnavis to form the government.
- The letter that Fadnavis submitted to the Governor to demonstrate that he has majority support among the MLAs.

ENVIRONMENT

1) Fresh biodiversity study of proposed dam sought

Why in news?

- The Centre has recommended a biodiversity study of the proposed 3,097 MW **Etalin Hydroelectric Project** in Arunachal Pradesh by a credible international institute.
- The earlier reports have been found with flaws.
- This project would divert almost 1165 hectares of forest land, felling 2,80,677 trees and threatens the existence of six globally-endangered mammal species.
- It will be built on Dibang river.
- The area also has 680 species of birds, which is about 56% of the total avian species found in India.
- This is located at the junction of the Palaearctic, Indo-Chinese and Indo-Malayan bio-geographic regions.
- It is also a place for tigers and clouded leopards.

2) When 8,000 migratory birds flock to A.P.

Kolleru Lake:

- Kolleru Lake is the largest **freshwater lake** and is located in Andhra Pradesh.
- Kolleru is located between Krishna and Godavari delta and covers an area of 308 km².
- The lake serves as a natural flood-balancing reservoir for these two rivers.
- The lake is fed directly by water from the seasonal Budameru and Tammileru streams, and is connected to the Krishna and Godavari systems by over 68 inflowing drains and channels.
- It serves as a **habitat for migratory birds**.
- It supports the livelihood of fishermen and riparian population in the area. The lake was notified as a wildlife sanctuary in November 1999 under India's Wildlife (Protection) Act, 1972, and designated a **wetland of international importance** in November 2002 under the international **Ramsar Convention** (to conserve the wetland).

Why in news?

- Many Grey Pelicans (fig 1) and Painted Storks (fig 2) have made the Atapaka Sanctuary which is part of Kolleru lake, as their winter home for breeding.
- Both these birds are under near threatened (experiencing decreasing population) category of IUCN status.



3) 'Global warming alters rainfall pattern'

- According to a study by a team of researchers, global warming has altered a key weather system i.e., MJO and that may be whetting cyclones in the Bay of Bengal, decreasing winter rain in north India and altering global rainfall patterns.

The Madden-Julian Oscillation (MJO)

- The Madden-Julian Oscillation (MJO) is a moving band of rain clouds that travels around the globe spanning 12,000–20,000 km across the tropical oceans.
- In its journey, **it interacts with surface waters** of the Indo-Pacific Ocean, the largest pool of warm water in the globe, and due to this the life cycle of the MJO gets affected.

What are the consequences of effect?

- The MJO clouds generally spend 19 days over Indian Ocean but now on an average they are spending only 15 days.
- Over the west Pacific, it increased by five days (from an average 16 days to 23 days).
- This change in the residence time of MJO clouds that has altered the weather patterns across the globe.
- When the MJO appears in the Indian Ocean during the monsoon months of June-September, it can increase rains over India.
- The change in the MJO could **drift warmer surface water** towards the Bay of Bengal **and increase cyclones**.
- The changes in MJO behaviour have increased the rainfall over northern Australia, west Pacific, Amazon basin, southwest Africa and southeast Asia (Indonesia, Philippines and Papua New Guinea).
- At the same time these changes have brought a decline in rainfall over central Pacific, along the west and east coast of U.S. (e.g., California), north India, east Africa and the Yangtze basin in China. The frequent California fires, droughts in Africa and East Asian floods and cyclones in the Bay of Bengal may be linked to these changes in global weather,

4) New snake species found in Arunachal

Why in the news?

- Scientists have found a new species of burrowing snake in Arunachal Pradesh, named **Trachischium apteii**.
- The snakes were found under fallen logs inside a thickly forested area of the **Tally Valley Wildlife Sanctuary** near the town of Ziro in Arunachal Pradesh
- the newly discovered species belongs to a **group of fossorial snakes that live mostly underground**, and come to surface mainly during or after a heavy monsoon shower.

5) Singapore shows off rare Philippine raptors

About Philippine eagle:

- It is a **critically endangered** bird of the philippines.

- Trachischium are commonly called **slender snakes**. Seven species are distributed across the Himalayas, and the Indo-Burma and Indo-China regions.
- The snake is distinguished by **smooth and dorsal (upper side) scales** arranged in 15 rows throughout the body.
- Large-sized members of the genus measure about 293 mm to 299 mm (measuring a little less than a foot).
- They are rarely seen as they stay in their burrows a lot.



Talley valley wildlife sanctuary:

- Talley Valley is a wildlife sanctuary as well as a biodiversity hotspot located at a distance of 32 kms from Ziro towards the north east in Arunachal Pradesh.
- Comprising **sub-tropical and alpine forests** it has a variety of flora and fauna, many of which are endangered.
- Talley Valley Reserved Forest and Talley Wildlife sanctuary is situated at an elevated level with rivers like **Pange, Sipu, Karing and Subansiri** flowing through the Reserved Forest and Sanctuary.
- It is home to highly endangered species like **clouded leopard**.
- **Pleioblastus simone** is a bamboo variety only found in Talley Valley.

- Their population is estimated to be around 150-500 mature individuals and decreasing quickly.
- They are one of the world's biggest and most powerful birds whose wingspan can reach 2 metres.

Why in News?

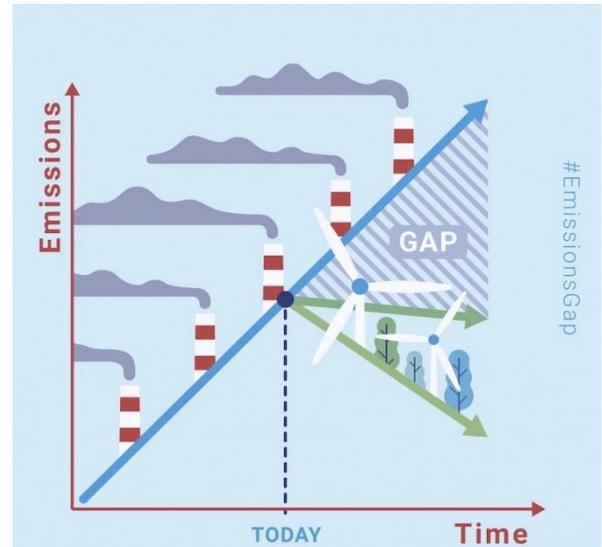
- To mark 50 years of diplomatic relations between the Philippines and Singapore, two eagles named Geothermica and Sambisig were sent to Singapore for 10 years.
- They will undergo breeding programme and any offspring born to them will be sent to the Philippines.



6) Widening gap

- **Why in the news?**
- United Nations Emission gap Report 2019 has been released at United Nations Framework Convention on Climate Change (UNFCCC) session at Madrid, Spain.
- **What it is?**
- It is an **annual report** from the United Nations Environment Programme (UNEP) which examines the progress of countries to close the gap via their commitments to emissions reduction, to ultimately stop climate change.
- The Emissions Gap Report measures and projects three key trendlines:
 - The amount of greenhouse gas emissions every year up to 2030
 - The commitments countries are making to reduce their emissions and the impact these commitments are likely to have on overall emission reduction
 - The pace at which emissions must be reduced to reach an emission low that would limit temperature increase to 1.5°C, affordably
- The report also identifies key opportunities for each country to increase the pace of emission reduction necessary to close the gap.

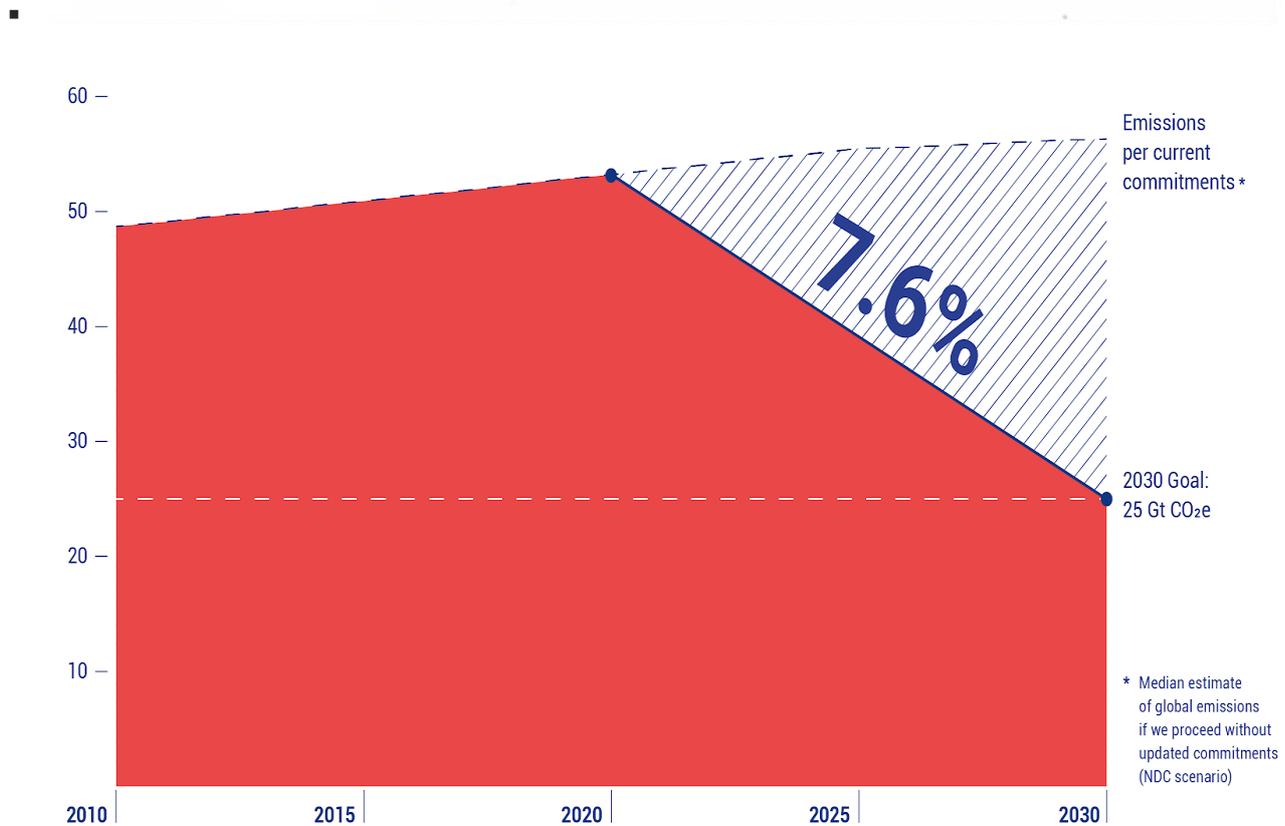
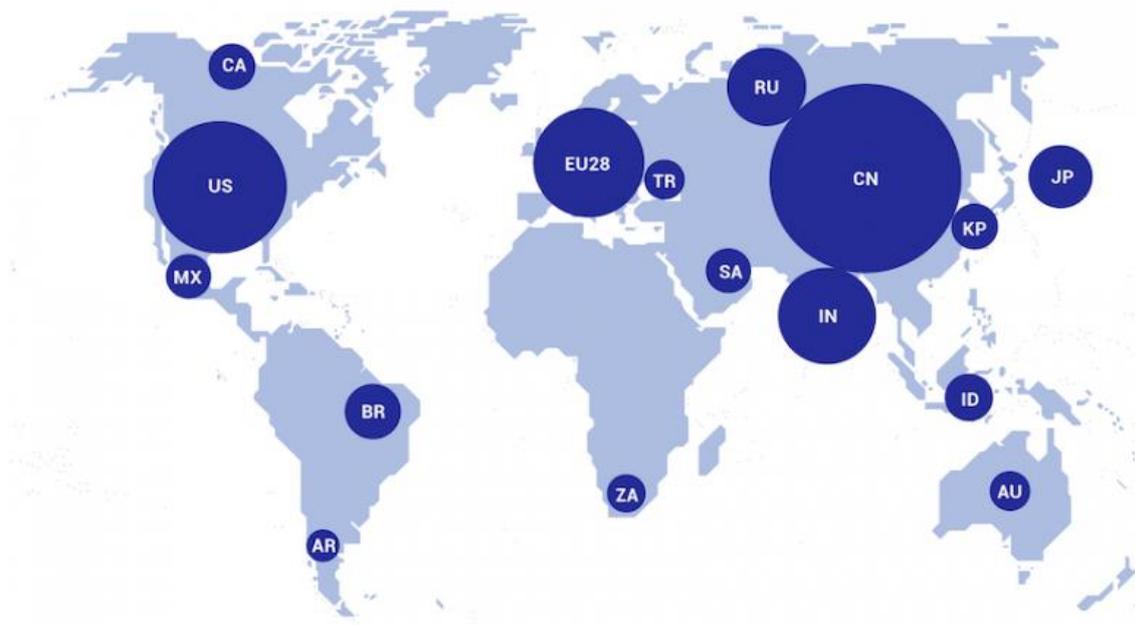
- **The findings of the 2019 report are:**
- On the **brink of 2020**, we now need to **reduce emissions by 7.6 per cent** every year from 2020 to 2030.
- **If we do not, we will miss a closing moment in history to limit global warming to 1.5°C.**



- If we do nothing beyond our current, inadequate commitments to halt climate change, temperatures can be expected to **rise 3.2°C above pre-industrial levels**, with devastating effect.
- Ten years ago, if countries had acted on this science, governments would have needed to reduce emissions by 3.3 per cent each year. Today, we need to reduce emissions by 7.6 percent each year. **By 2025 the cut needed will steepen to 15.5 percent each year. Every day we delay, the more extreme, difficult and expensive the cuts become.**
- The emissions come from the following nations in the map given.
- **G20 nations collectively account for 78 per cent of all emissions**, but only five G20 members (the EU and four individual members) have committed to long-term zero emission targets, of which three are currently in the process of passing legislation and two have recently passed legislation.
- The **top four emitters (China, USA, EU28 and India)** contribute to **over 55 per cent** of the total emissions over the last decade, excluding emissions from land-use change such as deforestation.

- If **land-use change emissions** were included, the rankings would change, **with Brazil likely to be the largest emitter.**
- **The largest share of emissions come from the energy sector and its fossil fuel**

emissions. Industry produces the next largest footprint, followed by forestry, transport, agriculture and buildings.



Do we have a chance to save the planet?

- Climate change **can still be limited to 1.5°C degrees. We must halve our emissions by 2030**—this will take a 7.6

per cent cut in emissions every year from 2020. The good news is that we have the technology and science to decarbonize

our energy sources, transport systems and cities.

Present technologies and their potential

- Renewables and energy efficiency are critical to the energy transition. They can reduce upto 12.1 gigatonnes of emissions by 2050. This is equally to emission of two and a half million coal power stations.
- Electrification of transport could reduce the sector's CO2 emissions by a huge 72 percent by 2050.

United Nations Environment Programme (UNEP)

- The United Nations Environment Programme (UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the

coherent implementation of the environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate for the global environment.

- It was founded as a result of the UN Conference on the Human Environment (Stockholm Conference) in 1972
- Headquartered in **Nairobi, Kenya**, UN Environment Programme is led by a Senior Management Team that's chaired by our Executive Director.
- UNEP also hosts several environmental conventions, secretariats and inter-agency coordinating bodies

ECONOMY

1) Consumer Expenditure Survey (CES)

What is CES?

- The CES is traditionally a **quinquennial** (recurring **every five years**) survey conducted by the government's **National Sample Survey Office (NSSO)** that is designed to collect **information on the consumption spending patterns of households** across the country, both urban and rural.
- The data gathered in this exercise reveals the **average expenditure on goods (food and non-food) and services** and helps generate estimates of **household Monthly Per Capita Consumer Expenditure (MPCE)** as well as the distribution of households and persons over the MPCE classes.

How is it useful?

- The estimates of monthly per capita consumption spending are vital in **gauging the demand dynamics** of the economy as well as for understanding the shifting priorities in terms of baskets of goods and services, and in **assessing living standards** and **growth trends** across multiple strata.
- From helping policymakers spot and address possible structural anomalies that may cause demand to shift in a particular manner in a specific socio-economic or regional cohort of the population, to providing pointers to producers of goods and providers of services, the CES is an **invaluable analytical as well as forecasting tool**.
- It is used by the government in rebasing (change of base year) the GDP and other macro-economic indicators.

Findings of the previous CES (2011-12)

- At a broad level, the survey showed that average urban MPCE (at Rs. 2,630) was about 84% higher than average rural MPCE (Rs.1,430) for the country as a whole.
- Similarly, while food accounted for about 53% of the value of the average rural Indian household's consumption during 2011-12, in the case of urban households it

accounted for only 42.6% of the average consumption budget.

- The most noticeable rural-urban differences in the 2011-12 survey related to spending on cereals (urban share: 6.7%, rural share: 10.8%), rent (urban: 6.2%, rural: 0.5%) and education (urban share: 3.5%, rural share: 7.0%).

Why in News?

- Media reports citing a **leaked version of the 2017-18 survey** have posited that the data revealed a **decline in the MPCE**, making it the **first such drop since 1972-73**.

News in Detail

- In real terms (adjusted for inflation) the MPCE slid by 3.7% from Rs. 1,501 in 2011-2012 to Rs. 1,446 in 2017-2018.
- While the inflation-adjusted consumption expenditure in rural areas declined by 8.8% over the six-year period, urban households reported a marginal 2% increase.
- The government, however, **withheld the official release of the survey** and said that the survey results had been reviewed.

Concerns

- The government's decision to withhold the survey's findings deprives policymakers of invaluable contemporary consumption data that would have helped drive their intervention strategies.
- Instead of a six-year gap, the next survey's findings — depending on when the Ministry decides to actually undertake it, 2020-21 or 2021-22 — would end up coming after 9 or 10 years after the 2011-12 round.

IMF Obligation

- As a subscriber to the **International Monetary Fund's Special Data Dissemination Standard (SDDS)**, India is obliged to follow good practices in four areas in disseminating macroeconomic statistics to the public.
- These comprise the **coverage, periodicity, and timeliness of data**; public access to those data; data integrity; and data quality.
- With the IMF's '**Annual Observance Report**' for 2018 already having flagged

concerns about India's delays in releasing economic data, the country risks falling afoul of its SDDS obligations.

2) Strategic Partnership model of defence procurement

About Strategic Partnership model

- Strategic Partnership Model aims to revitalise defence industrial ecosystem and progressively build indigenous capabilities in the private sector to design, develop and manufacture complex weapon systems for the future needs of the Armed Forces.
- This will give a major fillip towards encouraging self-reliance and aligning the defence sector with the 'Make in India' initiative of the Government.
- The model was announced on May 31, 2017 and it was first suggested by the Dhirendra Singh Committee in its July 2015 report.

How does it work?

- Few Indian private companies will be identified as Strategic Partners who would initially tie up with a few shortlisted foreign Original Equipment Manufacturers (OEMs) to manufacture big-ticket military platforms.
- The Strategic Partners (SPs) that would not only assume the role of system integrators but also lay a strong defence industrial foundation by making long-term investment on production and R&D infrastructure, creating a wider vendor base, nurturing a pool of skilled workforce, and making a commitment to indigenisation and technology absorption.
- In the initial phase, strategic partners will be selected in the following segments:
 - a) Fighter Aircraft.
 - b) Helicopters.
 - c) Submarines.
 - d) Armoured fighting vehicles (AFV)/Main Battle Tanks (MBT)
- Addition of more segments or further subdivision of the identified segments may be considered by the Ministry of Defence (MOD) as deemed necessary.
- The Applicant Company and subsequently the Strategic Partner when appointed

should be an Indian company (as defined under the Companies Act, 2013), owned and controlled by resident Indian citizens.

- The OEMs will provide manufacturing, transfer of technology (ToT), assistance in training skilled human resources and other support.
- The OEM will be jointly responsible along with the SP for certification and quality assurance of the platforms supplied.

Concerns

- The foremost concern is the lack of institutional capacity and ability to guide the new process to its logical conclusion.
- There is also a concern regarding the long-term viability of SPs largely due to the privileged position enjoyed by public sector entities.

Why in News?

- Swedish defence major SAAB, which has fielded Gripen for the Indian Air Force (IAF) tender for 114 fighter jets, was seeking some clarity on some provisions of the strategic partnership route of the Defence Procurement Procedure (DPP).

3) NIFTY - NSE

About NSE

- The National Stock Exchange of India Ltd. (NSE) is the leading stock exchange in India, located in Mumbai.
- It is the second largest in the world by nos. of trades in equity shares from January to June 2018, according to the World Federation of Exchanges (WFE) report.
- The NSE was established in 1992 as the first dematerialized electronic exchange in the country.
- NSE was the first exchange in the country to provide a modern, fully automated screen-based electronic trading system which offered easy trading facility to the investors spread across the length and breadth of the country.
- NSE launched electronic screen-based trading in 1994, derivatives trading (in the form of index futures) and internet trading in 2000, which each were the first of its kind in India.
- NSE's flagship index, the NIFTY 50, the 50 stock index is used extensively by investors

in India and around the world as a barometer of the Indian capital markets.

About NIFTY

- The NIFTY 50 is a diversified 50 stock index accounting for **13 sectors** of the economy.
- It is used for a variety of purposes such as benchmarking fund portfolios, index based derivatives and index funds.
- NIFTY 50 is **owned and managed by NSE Indices Limited** (formerly known as India Index Services & Products Limited) (NSE Indices).
- NSE Indices is India's specialised company focused upon the index as a core product.
- The NIFTY 50 Index represents about 66.8% of the free float market capitalization of the stocks listed on NSE as on March 29, 2019.

- In **free float market capitalisation**, the value of the company is calculated by **excluding shares held by the promoters**. These excluded shares are the **free float shares**.
- Both NSE and the BSE use the free float market capitalisation method to calculate their benchmark indices Nifty and Sensex respectively and assigning weight to stocks in the index.
- So a company with a higher free float has a higher weightage on the indices.
- A free float index reflects market trends better as it takes into consideration only those shares which are available for trading.

Why in News?

- NSE Nifty crossed 12000 mark (12,051.80) and was just 52 points away from its lifetime high of 12,103, reached last June.

4) Microfinance sector sees 47.85% growth in loans

About Microfinance Institutions (MFIs)

- Microfinance companies are financial institutions that offer **small-scale financial services** in both the forms – **credit and savings**, especially to the poor in rural, semi-urban and urban areas.

- These financial services are meant to help them in undertaking economic activities, mitigating vulnerabilities to income shocks, smoothening consumption, increasing savings and supporting self-empowerment.
- **Non Banking Finance Companies-Microfinance Institutions (NBFC-MFIs)** are **regulated by the Reserve Bank of India (RBI)**.
- **Microfinance Institutions Network (MFIN)** is a Self-Regulatory Organization (SRO) for NBFC-MFIs.

Need for Microfinance Institutions (MFIs)

- Microfinance is increasingly being considered as one of the **most effective tools for reducing poverty** by enabling microcredit to the poor.
- Microfinance has a **significant role in bridging the gap between the formal financial institutions and the rural poor**.
- The Micro Finance Institutions (MFIs) accesses financial resources from the Banks and other mainstream Financial Institutions and provide financial and support services to the poor.

Why in News?

- Microfinance Institutions Network (MFIN) witnessed a **47.85% growth in its gross loan portfolio (GLP)** in the second quarter ended September to Rs. 2,01,724 crore.
- It was reported in the 31st edition of **Micrometer (MFIN's publication)**.

5) Reserve Bank flags rising bad assets from Mudra loans

About PMMY

- **Pradhan Mantri Mudra Yojana (PMMY)** is a flagship scheme of Government of India to **"fund the unfunded"** by bringing the **non-corporate, non-farm small/micro enterprises** to the formal financial system and **extending affordable credit** to them.
- It enables a small borrower to **borrow from all Public Sector Banks** including **Regional Rural Banks and Cooperative Banks, Private Sector Banks, Foreign Banks, Micro Finance Institutions (MFI)** and **Non Banking Finance Companies (NBFC)** for **loans upto Rs 10 lakhs** for **non-farm income generating activities**.

- These loans are classified as **Micro Units Development & Refinance Agency Ltd. (MUDRA) loans** under PMMY.
- Under the aegis of Pradhan Mantri MUDRA Yojana, MUDRA has created the following products / schemes.
 - **Shishu** : covering loans **upto 50,000/-**
 - **Kishor** : covering loans **above 50,000/- and upto 5 lakh**
 - **Tarun** : covering loans **above 5 lakh and upto 10 lakh**
- The interventions have been named 'Shishu', 'Kishor' and 'Tarun' to signify the stage of growth / development and funding needs of the beneficiary micro unit / entrepreneur and also provide a reference point for the next phase of graduation / growth to look forward to.
- It would be ensured that **at least 60% of the credit flows to Shishu Category Units** and the balance to Kishor and Tarun Categories.
- There is **no subsidy for the loan** given under PMMY.
- However, if the loan proposal is linked some Government scheme, wherein the Government is providing capital subsidy, it will be eligible under PMMY also.
- Key takeaways of the PMMY loans are
 1. No processing fee
 2. No collateral
 3. Repayment period of loan is extended up to 5 years
 4. Applicant should not be defaulter of any Bank / Financial Institution

Why in News?

- The Reserve Bank of India (RBI) has expressed **concern over rising bad loans** from Pradhan Mantri MUDRA Yojana (PMMY).

6) Initial Public Offering (IPO)

About IPO

- An initial public offering refers to the **process of offering shares** of a corporation to the public in a new stock issuance.
- It could be a new, young company or an old company which decides to be listed on an exchange and hence goes public.

- IPOs provide companies with an **opportunity to obtain capital** by offering shares through the primary market.
- Meanwhile, the public market opens up a huge opportunity for millions of investors to buy shares in the company and contribute capital to a company's shareholders' equity.
- The company which offers its shares, known as an **'issuer'**, does so with the help of investment banks.
- After IPO, the company's shares are traded in an open market.
- Those shares can be further sold by investors through secondary market trading.

Why in News?

- The initial public offer (IPO) by one of the oldest private lenders in India, CSB Bank, formerly known as The Catholic Syrian Bank had opened for subscription.

7) Government extends 15th finance panel term

About Finance Commission

- The Finance Commission is a **constitutionally mandated body** that is at the centre of fiscal federalism.
- It is set up under **Article 280** of the Constitution by the President of India
- Its core responsibility is to evaluate the state of finances of the Union and State Governments, recommend the sharing of taxes between them, lay down the principles determining the distribution of these taxes among States.

Article 280 - Finance Commission

- The President shall, within two years from the commencement of this Constitution and thereafter at the expiration of every fifth year or at such earlier time as the President considers necessary, by order constitute a Finance Commission which shall consist of a Chairman and four other members to be appointed by the President
- It shall be the duty of the Commission to make recommendations to the President as to
 - the distribution between the Union and the States of the net proceeds of taxes which are to be, or may be, divided between them

under this Chapter and the allocation between the States of the respective shares of such proceeds;

- the principles which should govern the grants in aid of the revenues of the States out of the Consolidated Fund of India;
- any other matter referred to the Commission by the President in the interests of sound finance
- The Commission shall determine their procedure and shall have such powers in the performance of their functions as Parliament may by law confer on them

15th Finance Commission

- The 15th Finance Commission, headed by **NK Singh** was constituted on November 27, 2017 and was to submit its recommendations on October 30, 2017, for a five-year period starting April 1, 2020.
- In July, 2017, its term was extended by a month to November, 2019.
- It was constituted against the backdrop of the abolition of Planning Commission (as also of the distinction between Plan and non-Plan expenditure) and the introduction of the goods and services tax (GST), which has fundamentally redefined federal fiscal relations.
- The Terms of Reference of the current Commission have some distinctive features, including recommending monitorable performance criteria for important national flagship programmes and examining the possibility of setting up a permanent non lapsable funding for India's defence needs.

- The reorganisation of the State of Jammu and Kashmir into two Union Territories – one of Jammu and Kashmir and one of Ladakh – presents a new dynamic.
- On the whole the Finance Commission faces new challenges in the process of the evolution of our federal polity.

Why in News?

- The Union Cabinet approved the extension of the term of the 15th Finance Commission, which would now **have to submit two reports.**

News in Detail

- The term had **been extended till October 30, 2020** (from November, 2019).
- The first report, for financial year 2020-21, will be submitted in the coming months before the Union Budget, and the second report for the period 2021-26 will be presented by October 30, 2020.
- This will effectively mean the 15th Finance Commission's recommendations will be applicable for six years and not the conventional five-year period.
- There had been extensions of terms of a Commission when there is a restructuring of States, or if the terms of reference for the Commission have been significantly expanded.
- The **9th Finance Commission** under the chairmanship of N.K.P. Salve also saw its **recommendation period extended to six years** from the conventional five.

International Relations

1) India, U.S. to sign Industrial Security Agreement (ISA)

About ISA

- The ISA is **part of the General Security of Military Information Agreement (GSOMIA)**, which India had signed with the U.S. many years ago.
- While GSOMIA allowed the sharing of classified information from the US government and American defence manufacturers with the Indian government and government-owned defence firms, the ISA will enable to share such information from the U.S. with Indian private manufacturers.
- The ISA is crucial for U.S. companies bidding for big-ticket Indian deals to partner Indian private companies.
- It will add to existing agreements on **protection of classified military information** and is critical for any transfer of technology by a US firm to its Indian partners.
- The pact is also expected to enable the floundering **India US Defence Technology and Trade Initiative (DTTI)** that was signed in **2012** but has not resulted in any major project on the ground yet.
- The ISA will involve Indian government assurances on the **safety and security of technology against transfer and access to third parties**.
- Once operational, US companies wishing to transfer technology to India will be able to do so through the government route.

Why in News?

- The **2+2 dialogue** between India and the U.S. is likely to be held on December 18 in Washington, D.C., during which the two countries are expected to sign the Industrial Security Annex (ISA).

News in Detail

- The dialogue would also review the steps being taken to operationalise the Communications Compatibility and Security Agreement (**COMCASA**).
- But the Basic Exchange and Cooperation Agreement for Geo-spatial Cooperation (**BECA**), which is under discussion, is unlikely to be concluded.

- There are differences over the issue of reciprocity in the exchange of geo-spatial information and both sides are trying to resolve them.

2) Indo-US Defence Partnership-key agreements

What are the foundational agreements?

- The U.S. has **four "foundational" agreements** that it signs with its countries with which it has close military ties.
- The U.S. describes the agreements as "routine instruments that the U.S. uses to promote military cooperation with partner-nations."

What are the foundational agreements for?

- They are meant to **build basic ground work** and **promote interoperability** between militaries by creating common standards and systems.
- They also guide **sale and transfer of high-end technologies**.

GSOMIA

- The first of the four agreements, the **General Security Of Military Information Agreement (GSOMIA)**, which is for **information safety**, was **signed in 2002**.
- The agreement enables the **sharing of military intelligence** between the two countries and requires each country to protect the others' classified information.
- It allowed the **sharing of classified information from the US government and American defence manufacturers with the Indian government and government-owned defence firms**.
- The **Industrial Security Agreement (ISA)**, which is **yet to be signed**, is an annexure to the GSOMIA and will enable the US government and US defence companies **to share classified information with Indian private defence manufacturers**.

LEMOA

- The second agreement, the **Logistics Exchange Memorandum of Agreement (LEMOA)**, was **signed by the two countries on 29 August 2016**.
- The pact gives both countries **access to designated military facilities on either side** for the purpose of **refuelling and replenishment** in primarily four areas —

port calls, joint exercises, training and humanitarian assistance and disaster relief.

- India can access the string of U.S. facilities across the globe for logistical support and the U.S., which operates in a big way in Asia-Pacific, will benefit from Indian facilities.
- The **biggest beneficiary** of the LEMOA is the **Indian Navy**, which interacts and exercises the most with foreign Navies.
- The agreement **does not make the provision of logistical support binding on either country**, and requires individual clearance for each request.
- This is **purely a logistical agreement**. There will be **no basing of the U.S. troops or assets on Indian soil**.

COMCASA

- The third agreement, **Communications Compatibility and Security Agreement (COMCASA)** was **signed during the inaugural 2+2 dialogue in September 2018**.
- It is an **India-specific variant of Communications and Information Security Memorandum of Agreement (CISMOA)**.
- It enables the two countries to **share secure communication and exchange information** on approved equipment during bilateral and multinational training exercises and operations.
- It is **valid for a period of 10 years** from the date of signing.
- COMCASA allows India to procure transfer specialised equipment for encrypted communications for US origin military platforms like the C-17, C-130 and P-8Is.

BECA

- The fourth agreement, **Basic Exchange and Cooperation Agreement (BECA)** has not yet been signed.
- It permits the **exchange of unclassified and controlled unclassified geospatial products, topographical, nautical, and aeronautical data, products and services** between India and the US National Geospatial-Intelligence Agency (NGA).
- BECA will allow India to use US geospatial maps to achieve pinpoint military accuracy of automated hardware systems and weapons such as cruise and ballistic missiles, even drones.

- BECA is an important **enabler of unmanned aerial vehicles** from the US, such as the **Predator-B**, that use spatial data for accurate strikes on enemy targets.

Why in News?

- The **2+2 dialogue between India and the U.S.** is likely to be held on December 18 in Washington, D.C., during which the two countries are expected to sign the Industrial Security Annex (ISA).
- The dialogue would also review the steps being taken to operationalise the Communications Compatibility and Security Agreement (COMCASA).

3) Strategic Arms Reduction Talks (START)

- Amidst the Cold War, the **U.S.** and Russia had entered into START to defuse the arms race between the two.
- These talks were aimed at reducing those two countries' arsenals of nuclear warheads and of the missiles and bombers capable of delivering such weapons.

START I

- Beginning in **1985**, the talks culminated in July **1991** with a comprehensive strategic-arms-reduction agreement signed by U.S. President George H.W. Bush and Soviet leader Mikhail Gorbachev.

Terms under START I

- The START I treaty **set limits to be reached in three phases**.
- The third phase was to be completed by the end of 2001, when both sides were to get down to 6,000 warheads on a maximum of 1,600 delivery vehicles, with no more than 4,900 warheads on deployed Intercontinental Ballistic Missiles (ICBMs) and Submarine Launched Ballistic Missiles (SLBMs).
- The treaty included demanding **verification measures**, including **on-site inspection**, monitors at the Russian mobile ICBM factory at **Votkinsk**, and access to missile telemetry, which provides details of the characteristics of missiles being tested.

Implementation

- START I had a duration of **15 years**.
- The United States and Russia reached the required levels for the second phase during 1997 as well as for the third phase by 2001.

- In fact, both the countries continued reductions even after reaching START I mandated limits.
- By the time of the treaty's expiration, their strategic nuclear arsenals were significantly below those stipulated in the treaty.
- **START I expired on Dec. 5, 2009.**

START II

- Under its terms, both sides would reduce their strategic warheads to 3,000–3,500 by **2003**.
- They would also eliminate **multiple independent reentry vehicles (MIRVs)** on their ICBMs.
- Later, in order to accommodate the delays in signing and ratifying START I, the deadlines were put back to 2004 and 2007, respectively.
- However, **START II never actually came into force.**

START III/ SORT

- In March 1997, the two countries agreed to begin negotiating START III.
- The **Strategic Offensive Reductions Treaty (SORT)**, also referred to as the **Moscow Treaty**, was ratified without difficulty by both in **2002**.
- SORT would reduce strategic nuclear weapons to between 1,700 and 2,200 warheads by Dec. 31, 2012.
- It did not require the elimination of delivery systems; it allowed non deployed warheads to be stored instead of destroyed; and for verification it relied on mechanisms outlined in START I.

New START

- The New Strategic Arms Reduction Treaty (New START) was signed April 8, 2010 in Prague by Russia and the United States and entered into force on Feb. 5, **2011**.
- **New START replaced the 1991 START I treaty**, which expired December 2009, and **superseded the 2002 Strategic Offensive Reductions Treaty (SORT)**.
- The treaty would limit each side to 1,550 deployed strategic warheads on up to 800 strategic nuclear delivery vehicles (deployed and non-deployed).
- The verification procedures of START I have been streamlined to do away with redundant monitoring procedures—for instance, ending the permanent monitoring

at Votkinsk and **reducing telemetry access.**

- **Telemetry** is the collection of measurements or other data at remote or inaccessible points and their automatic transmission to receiving equipment for monitoring.

- The New START does, however, call for **more on-site inspections.**
- Both Russia and the United States announced that they met New START limitations by Feb. 5, 2018.
- It would expire in 2021.

Why in News?

- Under the **Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms [New START]**, a U.S. inspection group was shown the **Avangard missile system with the hypersonic boost-glide vehicle** on the territory of Russia on November 24-26, 2019.

4) U.S. to cut spending on NATO budget, Germany to pay more

About NATO

- The **North Atlantic Treaty Organization (NATO)**, also called the **North Atlantic Alliance**, is an **intergovernmental military alliance** between **29 North American and European countries.**
- It was established by the **North Atlantic Treaty** (also called the **Washington Treaty**) of April 4, **1949**, which sought to create a counterweight to Soviet armies stationed in central and eastern Europe after World War II.
- Its **original members (12)** were Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom, and the United States.
- NATO constitutes a system of **collective defence** (defined in **Article 5**) whereby its independent member states agree to mutual defence in response to an attack by any external party.
- NATO's **Headquarters** are located in **Evere, Brussels, Belgium**, while the headquarters of **Allied Command Operations** is near **Mons, Belgium.**

- The **most recent member** state to be added to NATO is **Montenegro** on 5 June 2017.
- NATO currently recognizes Bosnia and Herzegovina, Georgia, North Macedonia and Ukraine as aspiring members.
- The combined military spending of all NATO members constitutes over **70% of the global total**.
- NATO **invoked Article 5 for the first time in 2001**, after the terrorist attacks that destroyed the World Trade Center in New York City and part of the Pentagon outside Washington, D.C., killing some 3,000 people.

Why in News?

- The U.S. is to cut its contribution to NATO's operating budget with Germany increasing payments.

News in Detail

- The U.S. has repeatedly criticised European members for lagging behind on an alliance commitment to spend at least 2% of GDP on defence.
- Washington currently pays 22.1% of the NATO budget — which totalled \$2.5 billion (2.37 billion euros) in 2019 — and Germany 14.8%, under a formula based on each country's gross national income.
- Under the new agreement, the U.S. will cut its contribution to 16.35% of the total, Germany's will rise to the same level and other allies will pay more.

5) India announces \$450 million to Sri Lanka

- **Why in News?**

- Newly elected Sri Lankan President Gotabaya Rajapaksa visited India which is his first overseas visit after assuming office.
- **Key outcomes of the visit**



- India and Sri Lanka agreed to **cooperate on counter-terrorism**.
- As part of this common strategy, India announced a special Line of Credit of \$50 million for strengthening Sri Lanka's abilities to counter terror threats.
- This was in addition to the \$400 million Line of Credit that India announced for infrastructure development in the island nation.
- India has already been building housing units in the Northern and Eastern parts of Sri Lanka to assist the people who were displaced during the war of 2009.
- For more about Indo-Sri Lanka relations, please refer *Officers' Pulse Issue No. 24*.
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SCIENCE and TECHNOLOGY

1) Gamma ray bursts

What are gamma ray bursts?

- When a massive star dies with a supernova explosion or condensed objects like neutron stars merge in a violent process, they let off bursts of photons lasting a few milliseconds. These are known as gamma ray bursts.
- Gamma-ray bursts are the **most powerful explosions** known in the universe and typically release **more energy in just a few seconds than our sun during its entire lifetime** – they can **shine through almost the entire visible universe**.
- They were discovered by chance at the end of the 1960s by satellites used to monitor compliance with the nuclear test ban on Earth.

Detection gamma ray bursts

- Since the 1960s, astronomers have been studying gamma-ray bursts with satellites.
- **Earth's atmosphere absorbs gamma rays**; Earth-based telescopes can't detect cosmic gamma rays directly.
- Telescopes like **H.E.S.S.** and **MAGIC** are designed to detect a faint blue glow in the atmosphere – **Cherenkov light** – induced by cosmic gamma rays.

What is Cherenkov light?

- When an energetic cosmic gamma ray hits Earth's atmosphere, it **shatters molecules and atoms**, and creates an **avalanche of particles** called an **air shower**.
- The shower particles are so energetic that they **move faster through the air than light** – although **not faster than light in a vacuum**, which according to Albert Einstein's theory of relativity is the absolute upper speed limit.
- The result is a **bluish glow**, a kind of optical counterpart to the supersonic bang.
- This **Cherenkov light**, named after its discoverer, can be observed by Cherenkov telescopes such as those of the H.E.S.S. and MAGIC observatories.

Why in News?

- Two **NASA** space observatories – **Swift** and **Fermi** – detected a burst of gamma rays,

labeled **GRB 190114C**, from a source billions of light-years away. It became the **most powerful yet detected** by a specialized telescope on Earth's surface.

News in Detail

- These are the highest energy gamma rays ever measured from a gamma ray burst, reaching about 100 billion times as much energy as visible light.
- The **MAGIC** telescope in the **Canary Islands** was able to detect it via faster-than-light Cherenkov radiation cascading through Earth's atmosphere.
- This observation – combined with a similar observation of another gamma ray burst, **GRB 180720B**, from July **2018** – are the first detections of gamma-ray bursts with ground-based gamma-ray telescopes.
- One reason the result could be achieved was that – when space-based observatories detect a gamma ray burst – they quickly alert the entire observational community.

About H.E.S.S.

- H.E.S.S. is a system of **Imaging Atmospheric Cherenkov Telescopes** that **investigates cosmic gamma rays**.
- The name H.E.S.S. stands for **High Energy Stereoscopic System**, and is also intended to pay homage to **Victor Hess**, who received the **Nobel Prize in Physics in 1936** for his discovery of cosmic radiation.
- The instrument allows scientists to explore gamma-ray sources with intensities at a level of a few thousandths of the flux of the **Crab nebula (the brightest steady source of gamma rays in the sky)**.
- H.E.S.S. is located in **Namibia**, near the Gamsberg mountain, an area well known for its excellent optical quality.

About MAGIC

- **MAGIC (Major Atmospheric Gamma Imaging Cherenkov)** is a system of two 17 m diameter **Imaging Atmospheric Cherenkov Telescopes (IACT)**.
- They are dedicated to the **observation of gamma rays** from galactic and extragalactic sources in the **very high energy range**.
- The MAGIC telescopes are situated at the **Observatory of Roque de los Muchachos**

on the Canary Island of **La Palma**, at about 2200 m above sea level.

- It consists of two dishes of 17 metres diameter covered with mirrors, reflecting Cherenkov light into a highly sensitive camera.

About Swift

- Swift is a **first-of-its-kind multi-wavelength observatory dedicated to the study of gamma-ray burst (GRB) science**.
- Its three instruments work together to observe GRBs and afterglows in the gamma-ray, X-ray, ultraviolet, and optical wavebands.
- Swift is part of NASA's **medium explorer (MIDEX)** program and was launched into a **low-Earth orbit** on a Delta 7320 rocket on November 20, **2004**.

About Fermi

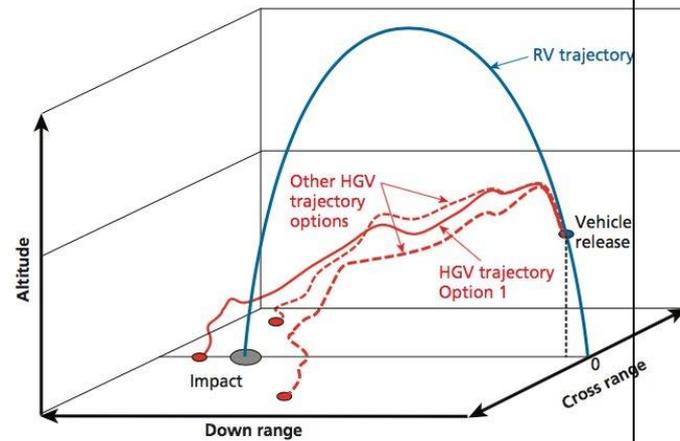
- The **Fermi Gamma-ray Space Telescope** is a **satellite observatory for photons**.
- It was launched on 11 June, **2008**, into the **low earth orbit** by NASA.
- Fermi carries two scientific instruments: the Large Area Telescope (LAT) and the Gamma-ray Burst Monitor (GBM).
- It is an **astrophysics and particle physics partnership**, developed in collaboration with the **U.S. Department of Energy** and with important contributions from academic institutions and partners in **France, Germany, Italy, Japan, Sweden** and the **United States**.

2) Avangard hypersonic boost-glide vehicle

About Avangrad

- Avangard uses a **UR-100N UTKh** ICBM as the rocket booster to loft the hypersonic boost-glide vehicle (HGV) to the appropriate altitude and boost it to the required speed.
- Afterward, the **independently maneuverable weapon** then travels along a **flatter**, distinctly **non-ballistic trajectory** toward its target.

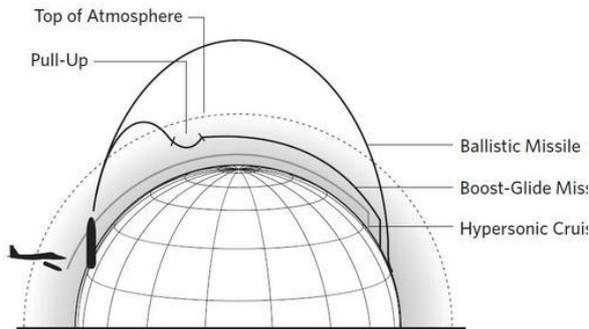
Figure 1.3
Ballistic Reentry Vehicle (RV) Versus HGV Trajectories



SOURCE: RAND analysis.
RAND RR2137-1.3

- This is one of the core benefits that hypersonic weapons offer over traditional ICBMs, which have more predictable flight paths and signatures after launch.
- This makes them **harder to spot**, track, and potentially engage with missile defense systems.
- This also gives an opponent less advance warning and, as a result, fewer opportunities to relocate critical assets or otherwise respond to an incoming strike.
- Avangard can presumably reach speeds **up to Mach 20** and can be used to deliver **nuclear and conventional** payloads.
- The weapon is capable of performing **sharp maneuvers** on its way to targets making it **absolutely invulnerable for any missile defense system**.
- Even without an explosive payload, the precision and speed of the weapon is believed to have enough force to obliterate smaller targets, such as vehicles or bases, making it an invaluable weapon in the Russian arsenal.

Schematic Diagram of Generic Trajectories for Boost-Glide Missiles, Termi Guided Ballistic Missiles, and Hypersonic Cruise Missiles



■ **Why in News?**

- Under the Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms [New START], a U.S. inspection group was shown the Avangard missile system with the hypersonic boost-glide vehicle on the territory of Russia on November 24-26, 2019.

3) Cartosat-3

About Cartosat

- The Cartosat satellites are a series of Indian **optical earth observation satellites** built and operated by the **Indian Space Research Organisation (ISRO)**.
- The Cartosat series is a part of the **Indian Remote Sensing Program**.
- They are used for Earth's resource management, defence services and monitoring.
- A key feature of the Cartosats is that they help to **detect changes in natural geographical or man-made features**.
- The imageries from [Cartosat series] satellites are useful for cartographic applications, urban and rural applications, infrastructure planning, coastal land use and regulation, utility management such as monitoring road networks, water grids or distribution, creation of land use maps, among others.
- So far, the Indian Space Research Organisation (ISRO) has orbited **nine** (including Cartosat-3) Cartosats since May 2005.
- Data from most of them, especially the last four Carto-2 series ones, launched in relatively quick succession in the last three

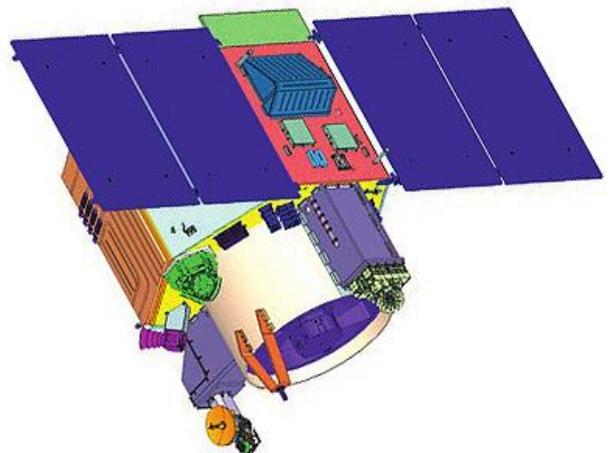
years, are exclusively used by the armed forces.

- The second one, Cartosat-2 of January 2007, breached the 1-metre resolution threshold, which was an ambitious benchmark at that time.
- Their cameras can 'look back and forth' in an angle to generate continuous spot images.
- It is frequently heard that imageries from Cartosat-2 series were used to plan and execute military operations - for example the trans-border 'surgical strikes' across the Line of Control with Pakistan in September 2016 and in Manipur at the border with Myanmar in June 2015.

Why in News?

- Cartosat-3 and 13 other nano satellites belonging to two companies in the U.S. were successfully launched from the **Satish Dhawan Space Centre SHAR**, Sriharikota, on **November 27, 2019**, through PSLV C-47.

More about Cartosat-3



- Cartosat-3 ushers in the **third generation of high-resolution 'optical imaging' satellites** that enable **precise cartographic or mapping activities**, apart from their unstated **military use**.
- The Cartosat-3 is the **9th satellite of the Cartosat series** and ISRO's fifth launch this year.
- This is India's **highest resolution civilian satellite** and **most advanced earth observation satellite** built by ISRO so far.
- One of Cartosat-3's cameras offers a **ground resolution of 25 cm** - this means it can pick up an object of a minimum of that size from a height of around 500 km.

- This camera is being called as the '**sharpest eye**' of civil remote sensing satellites in the world.
- Previously, **WorldView-3**, a satellite owned by US company Maxar, has the best ground resolution of **31 cm**.
- The previous best view from a Cartosat was 65 cm, as put in the last three or four satellites in the Cartosat-2 series - 2C, 2D, 2E and 2F.
- At 1,625 kg, Cartosat-3 is unusually heavy and more than double the mass of the previous eight in its class.
- Many new technologies have been built in, such as a highly agile or flexible camera; high-speed data transmission, advanced computer system and new power electronics.

4) Buoyant Rover for Under-Ice Exploration (BRUIE)

Why in News?

- NASA is testing an alien-hunting, upside-down underwater rover in Antarctica. It can explore ocean worlds beyond earth for signs of life.

Search for life beyond earth

- **BRUIE**, or the **Buoyant Rover for Under-Ice Exploration**, is being developed for underwater exploration in extraterrestrial, icy waters by **NASA**.
- It will spend the next month testing its endurance at **Australia's Casey research station in Antarctica**, in preparation for a mission that could one day search for life in ocean worlds beyond Earth.
- There are moons throughout the solar system believed to be covered in deep oceans hidden beneath thick, frozen surfaces.
- It is believed that these lunar oceans, such as those on **Jupiter's moon Europa** and **Saturn's moon Enceladus**, may be the best places to look for life in our solar system.

About BRUIE



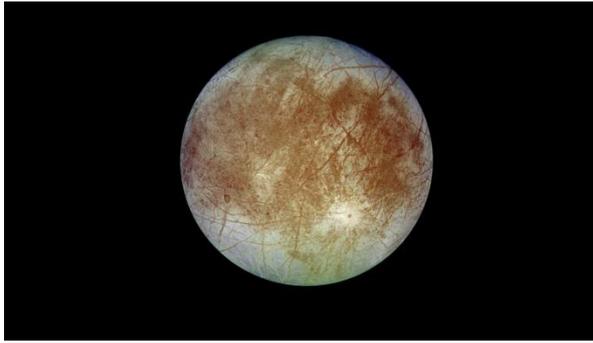
- It is a prototype of the rover that could search for life in frozen alien oceans.
- It is called the Buoyant Rover for Under-Ice Exploration (BRUIE) because, instead of relying on its weight to keep it on the ground, BRUIE **relies on buoyancy** to keep it afloat.
- It **can rove along the bottom of ice sheets**.
- BRUIE's buoyancy keeps it anchored to the ice, resistant to most ocean currents that could sweep it away.
- It's part of NASA's plans to explore the secret oceans of two distant icy moons, Europa and Enceladus. NASA plans to launch the next spacecraft to Europa in 2025.

5) Europa Clipper Mission

About the Mission

- It is an interplanetary mission in development by **NASA** comprising an orbiter.
- Europa Clipper will conduct detailed reconnaissance of **Jupiter's moon Europa** and investigate whether the **icy moon** could harbor conditions suitable for life.
- The mission will place a spacecraft in orbit around Jupiter in order to perform a detailed investigation of Europa.
- It is set for launch in **2025**.

About Europa



-
- Europa is the **smallest of the four Galilean moons** orbiting Jupiter.
- Slightly smaller than Earth's Moon, Europa is primarily made of silicate rock and has a water-ice crust and probably an iron-nickel core.
- It has a very thin atmosphere composed primarily of **oxygen**.
- In May 2018, astronomers provided supporting evidence of water plume activity on Europa.
- It shows strong evidence for an ocean of liquid water beneath its icy crust and which could host conditions favorable for life.
- The **Galileo mission**, launched in **1989**, which **orbited Jupiter from 1995 to 2003**, provides the bulk of current data on Europa.

What are Galilean moons?

- The Galilean moons (or Galilean satellites) are the **four largest moons of Jupiter—Io, Europa, Ganymede, and Callisto**.
- They were first seen by Galileo Galilei in December 1609 or January 1610, and recognized by him as satellites of Jupiter in March 1610.
- They were the **first objects found to orbit another planet**.
- **Ganymede is the largest moon** in the Solar System, and is even bigger than the planet Mercury, though only around half as massive.

Why in News?

- NASA recently confirmed Europa Clipper Mission's next phase.

JUICE Mission

- The **JUpiter ICy moons Explorer (JUICE)** is an interplanetary spacecraft in development by the **European Space Agency (ESA)**.
- The mission will **study three of Jupiter's Galilean moons: Ganymede, Callisto, and Europa** (excluding the more volcanically active Io).
- The spacecraft is set for launch in June **2022** and would reach Jupiter in October 2029.

Art and Culture

1) Sangai Festival 2019

About

- Every year the State of Manipur celebrates the “Manipur Sangai Festival” from **21st to 30th November**.
- The ‘Festival’ is named after the **State animal, Sangai, the brow-antlered deer** found only in Manipur. The brow-antlered deer or the dancing deer is found in its natural habitat only at **Keibul Lamjao National Park** over the floating biomass locally called “phumdi” in the south eastern part of Loktak Lake.
- It started in the year 2010 and has grown over the years into a big platform for Manipur to showcase its rich tradition and culture to the world.
- The festival is labeled as the grandest festival of the State today and helps promote Manipur as a world class tourism destination.
- Every edition of the festival showcases the tourism potential of the state in the field of Arts & Culture, Handloom, Handicrafts, Indigenous Sports, Cuisine, Music and Adventure sports of the state etc.



Highlights of the Festival

- The festival will reflect the State’s proud cultural heritage and the love for art which is inherent amongst various tribes inhabiting the State of Manipur.
- The State’s classical dance form, ‘**Ras Leela**’ will form an important part of the dance performances at the Manipur Sangai Festival 2019 besides the various other folk dance performances like the **Kabui Naga dance, Bamboo dance, Maibi dance, Lai Haraoba dance, Khamba Thoibi dance** etc. which will be showcased at the festival.
- The festival will also bring to light an array of Manipur’s best indigenous handlooms and handicrafts products.
- Indigenous sports will also be a major highlight of the State’s biggest tourism festival this year.
- Manipur’s famous martial arts- **Thang Ta** (a combination Spear & Sword skills), **Yubi-Lakpi** (a game played with greased coconut like rugby), **Mukna Kangjei** (a game that combines hockey and wrestling), and **Sagol Kangjei- Modern Polo** (believed to have evolved in Manipur) will all form part of the festival.
- Besides, there are a number of adventure tourism activities that one can indulge in while visiting the State.
- Adventure sports activities like trekking, white water rafting and parasailing etc. will also form a major part of the festival.
- The Manipur Sangai Festival 2019 will also introduce visitors to the best of the State’s cuisines at a number of food stalls which will be opened during the festival.

PIB ANALYSIS

1) NAFED

About National Agriculture Cooperative Marketing Federation of India (NAFED):

- National Agriculture Cooperative Marketing Federation of India was established on 2nd October 1958.
- It is registered under the **Multi State Cooperative Societies Act**.
- It was set up with the objective to promote **Cooperative marketing of agriculture produce to benefit the farmers**.

Objectives:

- It is to organise, promote and develop marketing, processing and storage of agricultural, horticultural and forest produce, distribution of agricultural machinery, implements and other inputs, undertake inter-State, import and export trade, wholesale or retail and assist for technical advice in agricultural production for the promotion.

Why in News?

- Department of Consumer Affairs had a video conference with State Government to analyse their demands in Onions.

2) Sabka Vishwas Scheme:

About Sabka Vishwas Scheme:

- Sabka Vishwas Scheme is a **Legacy dispute resolution scheme** notified by the **Finance ministry**. The aim of Sabka Vishwas (Legacy Dispute Resolution) Scheme, 2019 is to help taxpayers, including small taxpayers, in **clearing the baggage of disputes under legacy taxes (Service Tax and Central Excise)**, which are subsumed in **Goods and Service Tax**.

Two Components Of Scheme

- **Dispute Resolution:** It is aimed at liquidating the legacy cases of Central Excise and Service Tax that are subsumed in GST and other pending cases.
- **Amnesty Component:** It provides opportunity to taxpayers to pay outstanding tax and be free of any other consequence under law.

Benefits of this scheme:

- Taxpayers can pay the outstanding tax amounts due and be free from any other consequences under the law.

- Taxpayers will get substantial relief in the form of full waivers of interest, penalties and fines.
- There will be complete amnesty from prosecution proceedings.
- **Why in News?**
- Ministry of Finance has introduced Sabka Vishwas scheme (Legacy Dispute Resolution scheme) to help taxpayers.

3) Pradhan Mantri Shram Yogi Maan-dhan:

About Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM)

- Pradhan Mantri Shram Yogi Maan-dhan is a **Central Sector scheme and a voluntary and contributory pension scheme**.
- It is administered by the **Ministry of Labour and Employment** and implemented through **Life Insurance Corporation of India and Common Service Centres (CSCs)**.
- LIC will be the Pension Fund Manager and responsible for Pension pay out.

Eligibility:

- The **Unorganised workers** mostly engaged as home based workers, street vendors, brick kiln workers, cobblers, rag pickers, domestic workers, washer men, rickshaw pullers and similar other occupations whose **monthly income is Rs 15,000/ per month or less** and belong to the entry **age group of 18-40 years** are eligible for the scheme.
- They should not be covered under New Pension Scheme (NPS), Employees' State Insurance Corporation (ESIC) scheme or Employees' Provident Fund Organisation (EPFO).
- He/she **should not be an income tax payer**.

Salient Feature of PM-SYM:

- **Minimum Assured Pension:** Each subscriber under the PM-SYM, shall receive minimum assured pension of Rs 3000/- per month after attaining the age of 60 years.
- **Family Pension:** During the receipt of pension, if the subscriber dies, the spouse of the beneficiary shall be entitled to receive 50% of the pension received by the

beneficiary as family pension. Family pension is applicable only to spouse.

- If a beneficiary has given regular contribution and died due to any cause (before the age of 60 years), his/her spouse will be entitled to join and continue the scheme subsequently by payment of regular contribution or exit the scheme as per provisions of exit and withdrawal.

Why in News?

- Ministry of Labour & Employment has announced hike in pension.

4) National Child Labour Project:

About National Child Labour Project:

- The Government of India has implemented National Child Labour Project scheme for **rehabilitation of child labour**.
- It is a **Central Sector Scheme**, under this scheme the District Project Societies (DPS) are **set up at the district level under the Chairmanship of the Collector/ District Magistrate**.
- In this Scheme, the children in the age group of **9-14 years** are withdrawn from work and put into **NCLP Special Training Centres**, where they are provided with **bridge education, vocational training, mid-day meal, stipend, health care** etc. before being mainstreamed into formal education system.
- The children in the age group of **5-8 years are directly linked to the formal education** system through a close coordination with Sarva Shiksha Abhiyan.
- To ensure the effective enforcement of the provisions of the Child Labour Act and smooth implementation of NCLP Scheme, a dedicated online portal named **PENCIL (Platform for Effective Enforcement for No Child Labour)** has been developed in order to make the NCLP successful through better monitoring and implementation ensuring the timely disposal of work with transparency.

About PENCIL (Platform for Effective Enforcement for No Child labour):

- It is a unique online portal, launched by the government and created under the NCLP Scheme.
- It consists of a Child Tracking system and a Complaint corner and the portal can connect the central government to

respective state governments, district, to all societies and also to the General public.

Why in News?

- The Grand in Aid was released under NCLP Scheme State-wise.

5) Exercise Mitra Shakti-VII: 2019

About Mitra Shakti-VII

- It is conducted annually as a part of **military diplomacy and interaction between armies of India – Sri Lanka**.
- The joint training exercise is to build and promote positive relations between armies of India and Srilanka with focus on sub unit level training for counter insurgency & counter terrorism operations in urban and rural environment under United Nations mandate.
- The joint exercise is designed for incorporating the current dynamics of **United Nations peacekeeping operations** through practical & comprehensive discussions and tactical exercises.
- The **Seventh edition of Mitra Shakti** will be conducted at **Foreign Training Node (FTN), Pune**.

Why in News?

- India and Srilanka have collaborated on counterterrorism and counterinsurgency operations over the years.

6) Indian Computer Emergency Response Team (CERT-In)

About CERT-In:

- It is the **National nodal agency** for responding to **Computer security** incidents as and when they occur.
- It is the National Incident Response Centre for major computer security incidents in its constituency i.e. Indian cyber community.
- It comes under the aegis of **Ministry of Electronics and Information Technology**.
- In the recent Information Technology Amendment Act 2008, CERT-In has been designated to serve as the national agency to perform the following function in the area of cyber security
 - 1) Collection, analysis and dissemination of information on cyber incidents.
 - 2) Forecast and alert of cyber security incidents.

- 3) Emergency measures for handling cyber security incidents.
- 4) Issue guidelines, advisories, vulnerability notes and whitepaper relating to information security practices, procedures, prevention, response and reporting of cyber incidents.
- 5) Such other functions relating to cyber security as may be prescribed.

Why in News?

- Complete check of the administrative network of Kudankulam Nuclear Power Plant (KKNPP) was done by Indian Computer Emergency Response Team (CERT-In) along with Computer & Information Security Advisory Group (CISAG) of Department of Atomic Energy (DAE).

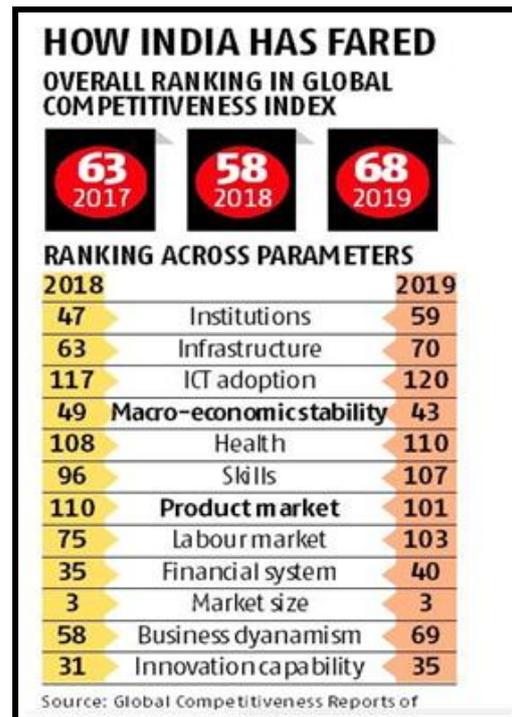
7) Global Competitiveness Index

About Global Competitiveness Index:

- The Global Competitiveness Index was released by the World **Economic Forum**.
- It ranks the competitiveness landscape of 141 economies through 103 indicators organised into 12 pillars they are Infrastructure, Institutions, ICT adoption, Macroeconomic stability, Product market, Labour market, Financial system, Business dynamism, Market size and Innovation capability.
- India slipped down ten places to be ranked **68th** in the annual **Global Competitiveness Index 2019**. India was ranked at the 58th position in the 2018 edition.
- Singapore has become the world's most competitive economy in 2019, pushing the US to second place.

Why in News?

- The Government has announced several measures to boost economic growth rate and also to improve the ease of doing business and ease of living, which in turn, will improve Global Competitiveness Index's ranking.



8) YuWaah:

About YuWaah:

- YuWaah is a **Youth Skilling Initiative** which was launched by UNICEF.
- According to UNICEF YuWaah is called as **Generation Unlimited**.
- It is a multi-stakeholder alliance which aims to facilitate youth to gain relevant skills for productive lives and the future of work.
- The target group of YuWaah includes adolescent girls and boys and its key mission is to promote access to foundational, transferable and 21st-century skills for youth inside and outside formal education systems, which includes defining foundational skills, life skills and flexible learning and identifying and scaling impactful delivery models.
- UNICEF YuWaah intends to create platforms to guide youth to market opportunities (career guidance, mentorship, internships, apprenticeships) and facilitate integration of career guidance in school education.

Why in News?

- UNICEF has informed that they have launched YuWaah - Youth skilling initiatives.

News in Depth

AIR NEWS

1) Mission Indradhanush 2.0

About Mission Indradhanush 2.0:

- The scheme is aimed at immunizing **children under the age of 2 years and pregnant women** against eight vaccine preventable diseases.
- The IMI covers vaccines for diphtheria, whooping cough, tetanus, poliomyelitis, tuberculosis, measles, meningitis and Hepatitis B. Vaccines for Japanese encephalitis and haemophilus influenzae are also being provided in selected areas.
- The IMI 2.0 aims to achieve targets of full immunization coverage in 272 districts spread over 27 States.
- The Immunization activity under IMI 2.0 will be carried out in 4 rounds between December 2019 and March 2020.
- Under this campaign, vaccination services will be provided free of cost to the drop out and left out children and pregnant women.

Why in News?

- Government of India launched nationwide vaccination drive to prevent eight diseases under Intensified Mission Indradhanush 2.0

2) NCT of Delhi (Recognition of Property Rights of Residents in Unauthorised Colonies) Bill, 2019

Key Provisions of the bill:

- The Bill provides for recognising the property rights of residents of certain unauthorised colonies in the National Capital Territory of Delhi. The Bill provides that the central government may regularise transactions of immovable properties held by residents of certain unauthorised colonies, through notification.
- The Bill defines a resident as a person with physical possession of property on the basis of a registered sale deed or certain other documents. The definition includes

legal heirs of residents but does not include any tenant, licensee, or persons permitted to use the property.

- An unauthorised colony is defined as a colony or development comprising of an adjoining area, where no permission has been obtained for the approval of layout or building plans. Further, the Delhi Development Authority must have had notified the colony for regularisation.
- The residents will be required to pay certain charges to obtain such ownership. These charges may be notified by the central government.

Why in News?

- Lok Sabha passed the National Capital Territory of Delhi (Recognition of Property Rights of Residents in Unauthorised Colonies) Bill, 2019.

3) Constitution Day

About:

- The **Constitution Day**, also known as **Samvidhan Divas**, is observed annually on **November 26 to mark the anniversary of the adoption of Indian Constitution on November 26, 1949** by the Constituent Assembly of India, which came into effect on 26 January 1950.
- Constitution Day was first celebrated in 2015, when Narendra Modi Government decided to mark the day as a tribute to Dr B R Ambedkar who played an important role in its framing as the Chairman of the Drafting Committee.
- The year of 2015 was the **125th birth anniversary of Ambedkar, who played a key role in the drafting of the constitution**. Previously this day was celebrated as **National Law Day**.

About Indian Constitution

- The constituent assembly took **two years, eleven months and seventeen days** to accomplish the stupendous task of drafting the historic document.

- It had many members who fought for the freedom of the country and came from different regions, religions, communities reflecting the country's diversity.
- The Constitution declares India a sovereign, socialist, secular, democratic republic, assuring its citizens justice, equality and liberty and endeavours to promote fraternity. The Constitution of India is the longest written constitution of any sovereign country in the world.

- The Indian constitution stood the test of time as India has been a successful democracy, unlike many others who had become independent at the same time.

Why in News?

- The yearlong nationwide activities on Constitution Day are being launched to mark the 70th anniversary of the adoption of the Indian Constitution by the Constituent Assembly, beginning November 26, 2019.

Hindu Editorial Analysis

1) The broken promise of decent and fair wages

Context:

- In this article the author tries to highlight the concerns associated with Code on wages Act,2019. He says that the draft rules to the Wages Act, expected to provide economic and social justice, but will only exploit workers further.
- **Need for Wage Code in India;**
- Informal workers accounts for 93% of the total working population and contribute to over 60% of India's GDP
- 62% of workforce are made up of casual workers who needs right to minimum wage.
- Present minimum wage system is complex with states fixing minimum wage for 1709 scheduled employments and centre for 45
- 33% of wage workers were paid less than indicative minimum wages in 2009-2010 according to labour ministry.

▪ **Code on Wages Act,2019:**

- Code on Wages Act,2019 seeks to regulate wage and bonus payments in all employments where any industry, trade, business, or manufacture is carried out.
- The Code **replaces the following four laws:**
 - the Payment of Wages Act, 1936,
 - the Minimum Wages Act, 1948,
 - the Payment of Bonus Act, 1965, and
 - the Equal Remuneration Act, 1976.
- **Coverage:** The Code will apply to **all employees**. The central government will make wage-related decisions for employments such as railways, mines, and oil fields, among others. State governments will make decisions for all other employments.
- Wages include **salary, allowance**, or any other component expressed in monetary terms. This **does not include bonus** payable to employees or any travelling allowance, among others.
- **Floor wage:** According to the Code, the central government will fix a **floor wage**,

taking into account **living standards of workers**. Further, it may set different floor wages for different geographical areas. Before fixing the floor wage, the central government may obtain the advice of the Central Advisory Board and may consult with state governments.

- The **minimum wages** decided by the central or state governments must be **higher than the floor wage**. In case the existing minimum wages fixed by the central or state governments are higher than the floor wage, they cannot reduce the minimum wages.
- **Fixing the minimum wage:** The Code prohibits employers from paying wages less than the minimum wages. Minimum wages will be **notified by the central or state governments**. The minimum wages will be **revised and reviewed** by the central or state governments at an interval of not more than **five years**. While fixing minimum wages, the central or state governments may take into account factors such as: (i) skill of workers, and (ii) difficulty of work.
- **Overtime:** The central or state government may **fix the number of hours** that constitute a normal working day. In case employees work in **excess of a normal working day**, they will be entitled to **overtime wage**, which must be at least twice the normal rate of wages.
- **Deductions:** Under the Code, an employee's wages may be **deducted on certain grounds** including: (i) fines, (ii) absence from duty, (iii) accommodation given by the employer, or (iv) recovery of advances given to the employee, among others. These deductions should not exceed 50% of the employee's total wage.
- **Determination of bonus:** All employees whose wages do not exceed a specific monthly amount, notified by the central or state government, will be entitled to an **annual bonus**. The bonus will be at least: (i) 8.33% of his wages, or (ii) Rs 100, whichever

is higher. In addition, the employer will distribute a part of the gross profits amongst the employees. This will be distributed in **proportion to the annual wages** of an employee. An employee can receive a maximum bonus of 20% of his annual wages.

- **Gender discrimination:** The Code **prohibits gender discrimination** in matters related to wages and recruitment of employees for the same work or work of similar nature. Work of similar nature is defined as work for which the skill, effort, experience, and responsibility required are the same.
- **Advisory boards:** The central and state governments will constitute advisory boards. The Boards will advise the respective governments on various issues including:
 - **fixation of minimum wages, and**
 - **increasing employment opportunities for women.**
- **Offences:** The Code specifies **penalties for offences committed by an employer**, such as (i) paying less than the due wages, or (ii) for contravening any provision of the Code. Penalties vary depending on the nature of offence, with the maximum penalty being imprisonment for three months along with a fine of up to one lakh rupees.

Concerns with Code on Wages Act:

- **Floor wage concept**
- Proposing the concept of a floor wage in the draft rules would mean that “**starvation wages**” which currently guarantees just ₹178 per day, will continue to exist and it will **not go beyond offering food, clothing and housing.**

- **Starvation wage:**
- Starvation wages are wages which are **below the level necessary for subsistence.**

- Recently reported “Consumer Expenditure Survey” result; shows the average family expenditure in rural areas to be ₹83 per day, and in urban areas as ₹134. These figures show how workers will continue to live in exploitative and marginalised conditions, where their constitutional right

to a fair wage will be infringed upon by employers and the state.

- The rules **didnot consider** the Supreme Court of India’s landmark jurisprudence in the ‘**Raptakos**’ case (1991) which advocated the **concept and the right of a living wage.**
- The rules proposed floor wage **despite ‘Need-Based Minimum Wage’ being a Supreme Court jurisprudence** (covering nutrition, health care, education, housing and provisions for old age as well).

Arbitrary deduction of wages:

- Another huge concern with the law is in its **provision of an arbitrary deduction of wages** (up to 50% of monthly wages) based on performance, damage or loss, advances, etc.
- Workers will **not be able to demand even basic work rights** in the fear of wage deductions, and will continue to be oppressed and marginalised.
- In a country such as India, where employers, due to their higher social status, continue to exploit labour, this provision will **only continue to push workers further into exploitative conditions**, stamping on their bargaining power and rights of association.

Labour inspection system:

- The draft rules **do not clarify the governance and institutional structure** for the “**labour inspection system**” in the law.
- The **International Labour Organisation’s Labour Inspection Convention** of 1947 (Convention C081) — as it has been ratified by India — provides for a **well-resourced and independent inspectorate** with provisions to allow thorough inspections and free access to workplaces. Ignoring these provisions, the draft rules propose another ad-hoc and unclear mechanism called the “inspection scheme”.

Different types of wages:

- **Minimum wages:**
- Minimum wages have been defined as “**the minimum amount of remuneration** that an employer is required to pay wage earners for the work performed during a given period, which **cannot be reduced by collective agreement** or an individual

contract.

- **Living wages:**
- A living wage is a **socially-acceptable level of income** that provides adequate coverage for basic necessities such as adequate food, shelter, child services, and healthcare.
- **Fair wage:**
- Fair wage is a **mean between the living wage & the minimum wage.**

2) The misadventure of a new citizenship regime

Context:

- Union home minister Amit Shah has said that India shall soon **introduce a nationwide National Register of Citizens (NRC).**

What is NRC?

- The National Register of Citizens (NRC) is a **register containing names of all genuine Indian citizens.**

Objective of Nationwide NRC:

- The objective of this latest initiative is **to count citizens, specifically to sift and sort citizens from non-citizens**, to include and exclude, and hence **to weed out “infiltrators”** destined for detention camps and potential deportation.

Concerns with Nationwide NRC:

- **Entire population under suspicion**
- Under the Foreigners’ Act, 1946, the individual charged with being a foreigner is supposed to bare the burden of proof. Since the Citizenship Act **did not provide any independent mechanism for identifying aliens**, the NRC effectively places an entire population under suspicion of alienage.
- **Cost of authentication**
- When Assam NRC is reported to have cost ₹1,600 crore with 50,000 officials deployed to enrol almost 3.3 crore applicants in an exercise that ended up excluding 19 lakh people, taking as an indicative number the Indian electorate of 87.9 crore, a nationwide NRC **would require an outlay of ₹4.26 lakh crore**, which is **more than double the presumptive loss in the 2G scam**, and **four times the budgetary outlay for education this year.**
- **Uncertain cutoff date:**

- March 1971 has little relevance beyond Assam, also the speculation about a July 1948 date for the rest of India is failing to convince in light of constitutional provisions, post-Partition jurisprudence, and the enactment of the Citizenship Act in 1955.
- **Voluntary or compulsory:**
- There is **no mention** about if enrolment in the NRC be compulsory or voluntary (as in Assam), and about the consequences of not seeking registration.
- **Consent of states**
- There is the **federal imperative of seeking the consent of State** governments but already many States in northeast India are erupting in protest.

What does Citizenship Amendment Bill, 2019 says?

- The Bill had mandated that those who cross the border to India from **Afghanistan, Bangladesh and Pakistan** and belong to **“minority communities”**, namely, **Hindus, Sikhs, Buddhists, Jains, Parsis and Christians**, **would not be treated as illegal immigrants** despite having entered the country without valid documents or with travel papers that had expired.
- The amendment shortened the period of residency from **12 to seven years** for gaining **citizenship by naturalisation.**
- The Bill had also empowered the government to **cancel registration as Overseas Citizen of India in case of any violation of the Citizenship Act or any other laws.**

Concerns with National Register of Citizens and Citizenship Amendment Bill, 2019:

- **Disfavoured Vs Preferred**
- If the **NRC carves out paths to statelessness for groups that are disfavoured** (implicit assumption in the NRC is that the infiltrators are Bangladeshis), the **Citizenship Amendment Bill** creates **paths to citizenship for preferred groups** i.e. migrants belonging to specified religious groups — all except Muslims — will be eligible for fast-track citizenship because they are persecuted minorities in Afghanistan, Bangladesh and Pakistan.

- The Bill **does not specify** if any, **evidence** would be required for validating claims of **religious persecution**.
- It does not offer similar respite to the victims of sectarian religious persecution in neighbouring countries, such as the Ahmadiyahs or the Rohingyas.

Transformative shift:

- The NRC-CAB combination signals a **transformative shift from a civic-national conception to an ethno-national conception** of India, as a political community in which identity determines gradations of citizenship.
- These two instruments are suspected as a threat to the plural social fabric of the nation and equality of citizenship, based on birth that our Constitution guarantees.

3) Stubble burning is not the only culprit

- **Context:**
- In this article, the author tries to highlight that **stubble burning is not the only cause** for Delhi's air pollution and also suggested **measures to reduce stubble burning**.
- **Delhi air pollution:**
- It is a **public health emergency** in Delhi as pollutants in the air have spiked to extremely toxic levels.
- The air quality is in the **severe+ zone**, which means that it is bad for even the healthy.

About Air Quality Index:

- Air Quality Index (AQI) is a tool for **effective dissemination of air quality information** to people.
- The index will measure **eight major pollutants**, namely, particulate matter (PM 10 and PM 2.5), nitrogen dioxide, sulphur dioxide, ozone, carbon monoxide, ammonia and lead.
- The index will be based on real time monitoring, and the health risks will be easily identified through a colour coded system.
- There are **six AQI categories**, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe.

Causes of Delhi Air pollution:

- Stubble burning in Punjab, Haryana region
- Burning of biomass in urban Delhi,
- Coal fired ovens (tandoors) and coal-based industries,
- Coal-based power plants in the outskirts of Delhi,
- Exponential increase in sport utility vehicles.
- It is evident that Stubble burning is not the only culprit (though it is an important one) and other factors need to be attended to as well.

What is stubble burning?

- Stubble burning is **intentionally setting fire to the straw stubble** that remains after grains, like paddy, wheat, etc., have been harvested.

Why does farmers practice stubble burning?

- Machines to dispose paddy stubble are **unaffordable**
- Even if one somehow gets hold of a machine, there's **no proper facility to dump** the residue
- They **don't get proper compensation** for their labour and produce.
- While wheat stubble can be converted into chaff and sold as animal fodder at a good price, there's no such utilisation in case of paddy stubble,
- With a **short window (about three weeks)** between harvesting paddy and sowing wheat, farmers take the shortcut of burning the stubble and then irrigating the fields for sowing wheat.

Pros and cons of stubble burning:

- **Pros:**
- Farmers resort to stubble burning as it is the **quickest method to get the farm ready for wheat cultivation**.
- **Relatively cost effective** compared to usage of machines to dispose stubble.
- **Cons:**
- **Air pollution:**
- Burning crop residues consist of **methane (CH₄) and nitrous oxide (N₂O) gases** produced by the combustion of a percentage of crop residues burnt on-site which are potential green house gases.
- **Affects soil health:**
- It is found that apart from the disastrous effect on the atmosphere in and around the

region, burning of crop residue affects the soil health.

- It **kills all beneficiary micro-organisms** and earthworms present in the soil.
- Straw burning leads to **loss of essential nutrients** which are vital for growth of wheat, resulting in additional fertilizers being used by farmers to replenish the same.
- **Weeds are more prone to grow** in the field cleared by burning the stubble, and by extension, the soil.
- Growth of weeds affects the health of the principal crop – therefore, farmers respond by using **chemical weedicides** that **increase the cost of production and aggravates bio-magnification**.

How to overcome the adverse effects of stubble burning?

- **Reduce paddy area/production**
- **Allow farmers to plant/transplant paddy before June and**
- **Distribute “happy seeders”.**
- This will, according to many, address the problem of air pollution in Delhi during October and November.

Concerns associated with these three ways out:

- **Reduction in area/production of paddy:**
- **Background:**
- Punjab was **never a traditional rice cultivator**. It took up rice cultivation in response to the national policy of food self-sufficiency during 1970s.
- They achieved the **highest productivity** in the country and contributed maximum among all States to the central pool of rice procurement.
- In the process, the **area went up** from 2.6 million hectares in 2001 to 3 million hectares in 2017; **production went up** from 9 million tonnes to 12.5 million tonnes.
- Attempts at diversification did not take off because of the difference in net farm returns and market risks.

What can be done?

- To reduce area of common paddy by half a million hectares, resulting in a reduction of output of 2 million tonnes, the **Central government has to step in** and support this change for the next five years.
- This half-a-million hectare should be in **water-stressed blocks** and can be

encouraged to **shift to maize or any other crop**. Another one lakh hectare can shift to **basmati production**.

- An estimate by agricultural economist Ashok Gulati suggests **₹12,000 per hectare** (keeping power saving in mind) as an **acceptable compensation**.

Allow farmers to plant/transplant paddy before June:

- There exist strong arguments to prevent over **exploitation of groundwater especially if farmers cultivate rice in April/May**. Though strong evidence is necessary to establish improvement in groundwater levels, there is some evidence to show that the rate of deterioration has slowed down.

Happy seeders:

- The “happy seeder” is the most talked about solution.
- The Happy Seeder is a tractor-mounted machine that cuts and lifts rice straw, sows wheat into the bare soil, and deposits the straw over the sown area as mulch.
- **What’s the problem with Happy seeders?**
- Direct seeders do help but **have limitations**.
- First, the seeder has to operate within about 4-5 days of the harvest.
- The **effectiveness depends on the moisture** (not too moist, not too dry) present in the soil at the time of seeding . This requires a good understanding of soil conditions.
- The **agronomic practices need to change** particularly with regard to application of fertilizer and irrigation.
- These machines may be **used only during the 15-day window** in a whole year. They will remain idle for the remaining 350 days.

Way forward:

- The problem is **complex and needs a solution**. But the solution should take into consideration the economic condition of farmers, the scientific options available and the willingness of the Central government to change policy and fund a major part of the expenditure.

Various measures taken by government to address air pollution in general:

- Government has taken several steps to address air pollution which include
- Notification of National Ambient Air Quality Standards;
- Setting up of monitoring network for assessment of ambient air quality;
- Introduction of cleaner / alternate fuels like gaseous fuel (CNG, LPG etc.),
- Ethanol blending;
- Launching of National Air Quality Index;
- Universalization of BS-IV from 2017;
- Leap-frogging from BS-IV to BS-VI fuel standards from 1st April, 2018;
- Notification of Construction and Demolition Waste Management Rules;
- Banning of burning of biomass;
- Promotion of public transport network;
- Streamlining the issuance of Pollution Under Control Certificate;
- Issuance of directions under Air (Prevention and Control of Pollution) Act, 1981 and under Environment (Protection) Act, 1986;
- Installation of on-line continuous (24x7) monitoring devices by major industries;
- Notification of Graded Response Action Plan for Delhi and NCR etc.

Government measures to address stubble burning in particular:

- The government has taken several steps to prevent burning of stubble.

Providing Subsidy:

- The State government provides 50 per cent subsidy on the cost of getting the SMS (Straw Management System) fitted to combine harvester.
- **Drawback:**
- Operators are not willing to get this facility as it will decrease efficiency of the engine and increase fuel consumption.

Mechanisation:

- **Encouraging farmers to use agricultural machines like**
- Happy Seeder (used for sowing of crop in standing stubble)
- Rotavator (used for land preparation and incorporation of crop stubble in the soil)

- Zero till seed drill (used for land preparations directly sowing of seeds in the previous crop stubble)

Power generation:

- Given the fact that stubble can be used for power generation, the State governments have also introduced bio-fuel policy that provides attractive fiscal incentive.
- **Drawback:** But making sure that the entrepreneur who benefits from the policy procures bio-waste from the farmers is a challenging task.

Complete ban

- The government has imposed a complete ban on residue burning and has put satellite imagery mechanism in place, which can pin-point fields where residue is burned.
- **Drawback:**
- Strict implementation of this law is difficult as it involves dealing with militant farmers' associations.
- Farmers don't have the sole responsibility of adjusting their practices so that the urban population of Delhi-NCR that engages in innumerable activities that generate pollution don't suffer.
- It is the collective responsibility of the civil society, citizens, farming community and governments to design a practical solution to the problem.

4) A blow to disclosure norms

Context:

- A Constitution bench of the Supreme Court comprising the Chief Justice of India (CJI) Ranjan Gogoi and 4 others on November 13, 2019, gave a judgment on the applicability of the Right to Information (RTI) Act, 2005 to itself.

Provisions for disclosure of information under RTI:

- Provisions for disclosure of information available under **Sections 8(1)(j) and 8(2) of the RTI Act** says that,
- **Personal information** can be disclosed if it has any **relationship with public activity or interest**.
- Even if such details have no relationship with public interest, they can be given if the **disclosure does not cause an unwarranted invasion of privacy**.

- Even if the information causes unwarranted invasion of privacy, it could still be given **if the larger public interest justifies the act.**
- Finally, even if there is no larger public interest, it could still be shared **if the public interest in disclosure outweighs the interest in its protection.**

2012 supreme court judgement:

- Supreme Court's 2012 judgment in **Girish Ramchandra Deshpande v. Central Information Commissioner** was hitherto being used as a **precedent** by the Department of Personnel and Training and various CPIOs to deny information on records of public servants.
- The case pertained to a Special Leave Petition on an RTI request related to the service record and assets of a serving bureaucrat. The Supreme Court held that such information **could not be revealed unless there was a larger public interest** demonstrated. In this case, the court held that the applicant was not able to show a bona fide public interest element and hence denied information to the person.

How November 13 judgement supersedes the precedent?

- The judgement mentioned,
- "Reading of the aforesaid judicial precedents... would indicate that
- personal records, including name, address, physical, mental and psychological status... are all treated as personal information.
- Similarly, professional records, including... evaluation reports, disciplinary proceedings, etc. are all personal information.
- Medical records... information relating to assets, liabilities, income tax returns... are personal information.
- Such personal information is entitled to protection from unwarranted invasion of privacy and conditional access is available when stipulation of larger public interest is satisfied.
- This list is indicative and not exhaustive."
- **Impact:**
- This judgement would make it difficult in obtaining information related to educational qualifications, performance report or disciplinary proceedings pertaining to public servants, the cost of medical treatment reimbursed by the state

and so on, as this judgement brings those information under personal information.

- The Bench's long list **contradicts the provisions for disclosure** available under Section 8 of RTI act.
- Every time, the applicant will be made **to prove public interest**, a concept which has been made further complex and ambiguous by the court.
- The last sentence of this paragraph, which makes the restrictions "indicative", could become another tool in the hands of public servants to deny access requests.

Concerns with this judgement:

- The apex court's recent verdict makes **several categories of information inaccessible** to the public under RTI.
- It **reduced the scope of 'information'** and widened that of 'restrictions'.
- It **expanded** the power, length and depth of **exceptions under Section 8 of the Act.**
- It restricted the understanding of the terms 'held by' and 'under the control' of a public authority, making several classes of information inaccessible to the public.
- It will potentially be used by **bureaucrats to shoot down many RTI** applications during the first request.
- Instead of empowering citizens with greater access to information, the court has instead **armed public servants to kill access requests.**

Only Significance of the judgement:

- It did not deny that the **apex court is a public authority** and answerable under the RTI Act.
- The judgement made clear that **judicial independence will only be strengthened with greater transparency.**

5) Getting organ donation to tick again

Organ donation day:

- **Indian Organ Donation Day** is observed by the Government of India on **November 30** and this year marks 10th of such observation. It was organised by the National Organ & Tissue Transplant Organization (NOTTO).
- As per Global Observatory on Donation and Transplantation, India performs the second largest number of transplants in the world, after the USA.

Objective of Organ donation day:

- Organ donation day is observed with the **primary objective of promoting organ donation and transplantation** so that a number of persons suffering from organ failure, such as the kidneys and liver, can get a new lease of life using organs gifted by others who have lost their lives (such as in road accidents or other reasons).

Why does organ donation numbers decline?

- **Various reasons** could be attributed as follows,
 - **Trust gap between doctors and patients**
 - Highly privatised health-care system in India and the growing trust gap between patients and doctors trapped in the profit-seeking business of tertiary care;
 - A classic example of this is the **steep drop seen in Kerala** — from 76 deceased donors in 2015 to eight in 2018 — due to a perceived scandal that private hospitals were declaring persons brain dead when they were not really so, in order to retrieve their organs and profit from them.
 - Unavoidable suspicion that unethical practices may take place. This is because while an organ comes free, as donated to society, transplanting it to another person costs anywhere between ₹5 lakh and ₹25 lakh, including profit to the hospital.

Cost factor

- While **majority of the donors come from lower middle class** and below, **only a small number** of organ recipients can afford transplant surgery and costly lifetime medication thereafter. The cost factor is the key reason why more than three quarters of donated hearts and lungs do not get taken.

Can public hospitals help?

- A **common solution to this, advocated by many**, is that **public hospitals should chip in and help the poor**.
- Very few public hospitals in the country do kidney transplants and less than five do liver and heart transplants. It's not that they should get involved much more.

What can be done?

- **Solutions:**
- **Regulate hospitals:**
- One usual approach is **to regulate hospitals through acts and rules**.

- **Substitution of bureaucratic procedures** for hospital and transplant approval by self-declaration and mandatory sample verification involving civil society will improve compliance — as proved in other countries — and will also help get more hospitals involved.
- **Ensure state autonomy:**
- Further **amendment is needed to ensure full State autonomy** in this area, avoiding the Central government's interference in organ distribution, which is now demotivating many hospitals.
- **Ensure transparency:**
- All State organ distribution agencies need to make their operations fully transparent. Steps such as making online organ distribution norms and the full details on every organ donation will help build public confidence in the system.
- **Targeting low priority services**
- In a country where public spend on health care remains very low as 1.2% of GDP — less than a third of what even some developing countries spend — priority should be on spending the limited allocation on areas that would benefit the greatest number of persons.
- World Health Organisation Consultative Group in its 2014 report points to a study in Thailand which finds that money spent on dialysis can save 300 times more healthy life years if spent on tuberculosis control.
- It considers expansion of low- and medium-priority services before near-universal coverage of high priority services. A given amount, if spent on organ failure prevention will save many more lives than if spent on organ transplant.
- **Making affordable and accessible to the inaccessible:**
- To mandate that **every third or fourth transplant** done in a private hospital should be done **free of cost to a public hospital** patient. This will amount to cross-subsidisation, with the hospital, the doctor and the recipient footing the bill for free surgery to the section of the population that donates a majority of organs.

6) India's food basket must be enlarged

Nutrition status of India:

- **Hunger** is defined by **caloric deprivation; protein hunger; hidden hunger by deficiency of micronutrients.**
- India is ranked **102 in the Global Hunger Index (GHI)** out of 117 qualified countries.
- Nearly 47 million or four out of 10 children in India do not meet their potential because of **chronic undernutrition or stunting.**
- This leads to diminished learning capacity, increased chronic diseases, low birth-weight infants from malnourished parents.
- The global nutrition report pegs 614 million women and more than half the women in India aged 15-49 as being **anaemic.**

Measures to improve nutrition status:

- **Nutrition garden guidelines**
- 'Nutrition garden' guidelines encourages **eco-club students to identify fruits and vegetables best suited to topography, soil and climate.**
- These gardens can give students lifelong social, numerical and presentation skills, care for living organisms and team work, besides being used in the noon-meal scheme.
- Students also learn to cultivate fruits and vegetables in their homes and this could **address micronutrient deficiencies.**
- This was introduced recently by the **Ministry of Human Resources Development** at school level.

Agro biodiversity

- Agrobiodiversity (**relating to diversity of crops and varieties**) is crucial in food security, nutrition, health and essential in agricultural landscapes.

Importance of ensuring agrobiodiversity

- Today, Only **30 crops form the basis of the world's agriculture** and just three species of maize, rice and wheat supply more than half the world's daily calories. Out of 2,50,000 globally identified plant species, and about 7,000 species historically used in human diets.
- **Genetic diversity of crops, livestock and their wild relatives, are fundamental to improve crop varieties and livestock breeds.**

- Agrobiodiversity helps **nutrition-sensitive farming and bio-fortified foods.** For instance, moringa (drumstick) has micro nutrients and sweet potato is rich in Vitamin A. There are varieties of pearl millet and sorghum rich in iron and zinc.

Genetic diversity and India:

- India is a centre of **origin of rice, brinjal, citrus, banana, cucumber species.**
- Across the world, 37 sites are designated as Globally Important Agricultural Heritage Systems (GIAHS), of which three are Indian — Kashmir (saffron), Koraput (traditional agriculture) and Kuttanad (below sea-level farming).
- Our promising genetic resources include rice from Tamil Nadu (Konamani), Assam (Agni bora) and Kerala (Pokkali), Bhalia Wheat and mushroom (Guchhi) from Himachal Pradesh and rich farm animal native breeds — cattle (42), buffaloes (15), goat (34), sheep (43) and chicken (19).

Developmental Goals:

- The **UN Sustainable Development Goal 2** advocates for **Zero Hunger** and the **Aichi Biodiversity Target** focuses on countries conserving genetic diversity of plants, farm livestock and wild relatives.
- It emphasises that countries develop strategies and action plans to halt biodiversity loss and reduce direct pressure on biodiversity.

Strategic Plan for Biodiversity (2011-2020)

- Strategic Plan for Biodiversity (2011-2020) was adopted by the parties to the Convention on Biological Diversity (CBD) at the tenth Conference of the Parties (COP10) in October, 2010.
- The plan encompasses a ten-year framework for action by all countries and stakeholders along with twenty targets known as the Aichi biodiversity targets which aim at safeguarding biodiversity and the benefits it provides along with its sustainable use.

Aichi Biodiversity Target

- A set of 20 global targets under the Strategic Plan for Biodiversity 2011-2020. They are grouped under five strategic goals:
- Address the **underlying causes of biodiversity loss** by mainstreaming biodiversity across government and society.

- Reduce the direct pressures on biodiversity and **promote sustainable use**.
- **Improve the status of biodiversity** by safeguarding ecosystems, species and genetic diversity.
- **Enhance the benefits** to all from biodiversity and ecosystem services.
- **Enhance implementation** through participatory planning, knowledge management and capacity building.

Measures to improve agri biodiversity:

- The Centre for Biodiversity Policy and Law (CEBPOL), a policy advocacy unit of the National Biodiversity Authority, came out with recommendations to increase India's agrobiodiversity in 2019. These include
 - a **comprehensive policy on 'ecological agriculture'** to enhance native pest and pollinator population providing ecosystem services for the agricultural landscape.
 - promotion of the **bio-village concept** of the M.S. Swaminathan Research Foundation (MSSRF) for ecologically sensitive farming;
 - **conserving crop wild relatives** of cereals, millets, oilseeds, fibres, forages, fruits and nuts, vegetables, spices etc. for crop genetic diversity healthier food;
 - **providing incentives** for farmers cultivating native landrace varieties and those conserving indigenous breeds of livestock and poultry varieties.

- encouraging **community seed banks** in each agro-climatic zone so that regional biotic properties are saved and used by new generation farmers;
- preparing an **agrobiodiversity index**, documenting traditional practices through People's Biodiversity Registers, identifying Biodiversity Heritage Sites under provisions of the Biological Diversity Act, 2002;
- **strengthening Biodiversity Management Committees** to conserve agrobiodiversity and traditional knowledge.
- Developing a **national level invasive alien species policy** is required to identify pathways, mapping, monitoring, managing, controlling and eradicating the invasive species and prioritising problematic species based on risk assessment studies.
- Loss of crop genetic resources is mainly a **result of adopting new crop varieties** without conserving traditional varieties. The consumption pattern and culinary diversity must be enlarged to increase India's food basket
- To conserve indigenous crop, livestock and poultry breeds, it is **recommended to mainstream biodiversity into agricultural policies**, schemes, programmes and projects to achieve India's food and nutrition security and minimise genetic erosion.

RSTV Big Picture

1) Status Symbol or Protection

Context

- The Special Protection Group cover which was given to Sonia Gandhi, Rahul Gandhi, Priyanka Gandhi and former PM Manmohan Singh was replaced with the 'Z Plus' security of the Central Reserve Police Force as decided by the Home Ministry.

What are the aims and objectives of SPG Act, 1985?

- It was introduced in the wake of former Prime Minister Indira Gandhi's assassination in 1985.
- The Special Protection Unit (SPU) to provide protection to the Prime Ministers was recommended by Birbal Nath Committee.
- The law initially did not include protection to the former Prime Ministers and thus the protection was withdrawn when Rajiv Gandhi stepped down as the Prime Minister.
- The act was amended to offer protection to all former PMs and their families for at least 10 years following Rajiv Gandhi's assassination.
- "An Act to provide for the constitution and regulation of an armed force of the Union for providing proximate security to the Prime Minister of India and former Prime Ministers of India and members of their immediate families and for matters connected therewith."
- The Act was amended again in 2003 to bring the period of automatic protection from 10 years to "a period of one year from the date on which the former prime minister ceased to hold office" and thereafter based on the level of threat as decided by the government.

How are the threat perceptions decided?

- The Home Ministry takes the decision based on inputs from intelligence agencies, which include the Intelligence Bureau and the Research and Analysis Wing.

- The intelligence inputs largely give a subjective measure of threat to life or injury to a person from terrorists or any other group, based on information from their sources.
- The inputs from all sources are incorporated, assessed and the decision is made in a very precise and transparent manner based on the logical need and the threat faced by the individual.

What are the different categories?

- The **X category** entails one gunman for the protection of the individual.
- The **Y category** allows for two police personnel, one for mobile and one for static plus four for rotation.
- The **Z category** allows for six gunmen for mobile security and two for residence security, while eight are for rotation purposes.
- The **Z+ category** entitles 10 personnel for mobile security and two for residence security while eight are for rotation purposes.

What are the challenges ahead?

- The carefree allotment of security causes a huge drain on the resources of the state.
- It has to be kept in mind that this is at the cost of public security and public welfare.
- Security allotment has to be made realistic.
- The allotment has to be on the basis of actual need and requirement instead of on the whimsical imagination and ambition of a person.

Conclusion

- It is the job of the state to analyze and give protection to a person who needs it, as security is a matter of utmost importance. We have to move towards a more politically mature system of allotment of security for an individual instead of setting it as a parameter for social status. SPG is a distinctive force that is made for a specialized role and shouldn't deviate from that.

2) DTH v/s OTT

Factors influencing the growth of online video in India^{2,3,4,5,6,7}



Context

- The Telecom Regulatory Authority of India (TRAI) in its recent report said that the average active subscriber base of DTH services has seen a sharp decline of 25 percent in this quarter coming down to 54.26 million in April to June quarter in comparison to 72.44 million in January to March this year.

What is the background?

- The trends coincides with the new DTH tariff regime implemented from 1st April.
- The decline in subscriber base highlights the challenges faced by DTH operators during the transition to new tariff regime.
- The rise of OTT services also seems to have impacted the DTH subscription numbers.
- A recent survey suggests that almost 55% Indians prefer OTT over DTH services and almost 87% of Indians use mobile to watch videos these days.

What do we understand by DTH?

- DTH is an acronym for 'Direct To Home' service.
- It is a digital satellite service that provides television viewing services directly to subscribers through satellite transmission anywhere in the country.

- The signals are digital by nature and are received directly from the satellite.
- The content and the context of DTH and OTT are completely different.
- OTT platforms are very personal whereas DTH connections are more social in nature.
- They complement each other as well like the OTT platforms suggest about the material available on DTH by advertisements.

What do we understand by OTT?

- An 'Over The Top' media service is any online content provider that offers streaming media as a standalone product.
- The term is commonly applied to video-on-demand platforms, but also refers to audio streaming, messaging services, or internet-based voice calling solutions.
- It needs access to the internet and smartphones, tablets, laptop/computers.

What are the problems faced by DTH service providers?

- The information about the reduction of 25% is not entirely correct because TRAI has changed the method of computation, worked out the numbers in a new and more accurate way by which some phantom figures have been removed and the loss of subscribers is not that huge.

- The price factor and the tariffs of OTT platforms have not really gone down to the extent of wiping out DTH or reducing the subscribers significantly.
- New tariff order has changed the bill empowering consumers to pay only for what they want to watch.
- Bundling or packages of channels makes it easy for the consumer to choose because selecting content to watch with minimal tariff is an extremely difficult exercise. It is not fully developed plan but the sector is working on it.
- It is about the customers preferences also about what and how they want to watch and on which platform. There will always be a place for the conventional broadcast tv and there will be a space for newer options like OTT platforms as well.
- TRAI has taken measures by making an app to help consumers choose channel combinations and minimise their bills.

What are the prospectus for OTT in India?

- OTT is going to be on the rise for sure.
- The ease in information collection and more importantly the trust towards the phones show that the base of OTT is going to increase further.
- It is the question of convenience where quality is improving with more young people getting involved with the OTT platforms.
- According to KPMG Report, India will have more than 500 million subscribers on all OTT platforms by 2023.

What are the regulatory aspects involved?

- OTT providers are governed by the Information Technology Act, 2000 Section 79 where the intermediate liabilities lie.
- OTT providers do not have to get involved in the inception, transmission and reception of the content which make them not liable for the content.
- Our licence services are very heavily regulated so the issue is not the regulation but reduction in the high level regulations of the Telecom service in order to empower everyone to choose their ways of consumption.
- Clear ways under the Information Technology Act are mentioned to deal with the content after it is made available to the OTT platforms.

Conclusion

- The need for transparency on the OTT platforms is a very important, especially for an industry that touches so many people and with limited regulations on it, because it is an entertainment platform mainly and this will further provide choices to the consumers.

3) Legislative Impact Assessment



Context

- Recently, the Chairman of Rajya Sabha advocated the idea of Legislative Impact Assessment and called for informed law-making process in the country by bringing out social, economic, environmental, and institutional impacts of legislative proposals which will help in realizing the stated objectives of various laws.
- He also stressed on the need of Parliamentary reforms in the form of 15 point charter.

What do we understand by Legislative Impact Assessment?

- The study of the impact of a law (being made and enforced) on the society over a period of time is known as Legislative Impact Assessment (LIA).
- LIA is a method of estimating the likely impacts of legislative proposals and government policies, before and after they are adopted and enacted, and comparing them with different policy designs to determine which policy produces the best result.

What are the essential elements of LIA?

- Identification of the policy problem
- Identification of potential legislative/policy options

- Comparative analysis of potential legislative/policy options with each other
- Stakeholder consultation
- Selection of the preferred legislative/policy option
- Impact analysis of the preferred option
- Identification of impact mitigation measures required (if any)
- Cost-benefit analysis of the preferred option
- Reporting

What is the requirement for LIA?

- Quick decision-making raises the questions regarding implementation of the law, associated costs and most importantly, the negative impacts that the laws may have like **Biological Diversity Act, 2002**, which aims to protect India's biological resources.
- The inherent contradictions between some of its provisions have caused significant barriers to conservation, use and development of biodiversity, thus undermining the fundamental purpose of the Act.
- It is essential that laws are analysed in detail before their enactment, as the country cannot afford to make expensive or irreversible mistakes with already limited resources.

What is Delegated legislation?

- Delegated legislation is referred to as secondary legislation.
- It is made by a person or body other than Parliament.
- Parliament, through an Act, can permit another person or body to make such legislation.
- Parliament creates the broader framework of a particular law and gives the authority for legislation to other persons or bodies to provide more details to the passed Act.

What are the challenges ahead?

- Currently, no such institutionalized study is conducted to analyse the impact of the legislations being made on the society.

- Sometimes, the hasty passage of laws by the bureaucracy creates various hurdles in the effective implementation of that law.
- In India, the intent of the legislature is great but the implementation of the law suffers from certain drawbacks. Parliament is reflective of the society, hence it needs to evolve the laws having social and economic impact with time.
- There is a need to address this legislation mismatch with the changing pace of societal needs, which can be effectively done by the LIA.

What is the way forward?

- Undertaking an Impact Assessment on legislation provides analysis of the potential effects and effectiveness of a legislative proposal before its enactment.
- It could have the following benefits: improve the quality of legislation; increase the productivity of legislature; improve governance; help make informed choices; identify potential effective alternatives, and reduce redundant legislation.
- In the Social Impact Assessment under the Land Acquisition Law there is proper mechanism to carry out social impact of the project.
- Similarly, the Environmental Impact Assessment is done for big manufacturing mines and plants before approving them for the set up.
- On similar lines, LIA can be made mandatory for improving the implementation and achieving the intended objectives of the laws.

Conclusion

- It is the accountability and responsibility of the Parliament to ensure the effectiveness of the passed legislation. On the sidelines of Australian practise where an institution outside the Parliament specifically performs the post enactment assessment of the passed law, similar institutions can be established in India.

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