

CURRENT AFFAIRS

Month of
DECEMBER-2019



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CURRENT AFFAIRS ANALYST

VOL-1 (DECEMBER, 2019)

CONTENTS

Section - A: MAINS CURRENT AFFAIRS

Area of GS	Topics in News	Page No.
ECONOMY	. Exchange Traded Fund	04
	. India's solar energy challenges	08
	. National Digital Health Blueprint 2019	11
	. Understanding GST in present economic context	13
INTERNATIONAL RELATION	. South China Sea – Conflict, Issues, Problems and challenges	17
INTERNAL SECURITY	. Anti-Tank Guided Missiles	21
POLITY & GOVERNANCE	. Countrywide NRC- Its Implications	23
SOCIAL ISSUES	. Begging in India: A Menace to the Society	25

Section - B: PRELIMS CURRENT AFFAIRS

Area of GS	Topics in News	Page No.
ECONOMY	. Leaked NSSO data	29
	. National Milk Day 2019	30
ENVIRONMENT	. Emissions Gap Report 2019	31
DISASTER MANAGEMENT	. 1 st International Conference on "Landslides Risk Reduction & Resilience-2019"	32
GOVERNMENT SCHEME	. Atal Beemit Vyakti Kalyan Yojana	33
GEOGRAPHY	. Char Dham Programme	34
POLITY & GOVERNANCE	. Global diplomacy index 2019	35
	. Lokpal	38
	. Transgender Persons Bill, 2019	39
	. What is Rule 12, used by the Centre to revoke President's Rule in Maharashtra	40

POLITY & GOVERNANCE	. World Migration Report 2020 and the trend of migration globally	41
SCIENCE & TECHNOLOGY	. Coalbed methane (CBM)	42
	. Golden Rice: To Combat Vitamin A Deficiency for Public Health	43

SECTION: A

(MAINS)

CURRENT AFFAIRS

EXCHANGE TRADED FUND

CONTEXT

- Edelweiss AMC recently got the government's permission to launch India's first bond ETF (exchange traded fund) which will invest in central public sector undertakings.

◎ BACKGROUND

- Soon, Bond ETFs will be another investment vehicle available to retail investors providing access to bonds of state-run enterprises.
- Bond ETFs are similar to how **equity ETFs** invest in line with indices covering specific baskets like the **Nifty50, Nifty Next 50 and Nifty Quality 30**, among others
- While bond ETFs are **not new in India**, they have not been very popular. At present, only three **GSec ETFs** are available, all with miniscule assets and **poor trading volumes**.
- The entry of newer bond ETFs comes **at a time when** traditional bond funds are only just emerging from a painful period of multiple **credit defaults**. **Investors are wary**.
- Bond ETFs claim to be different from traditional bond funds by **offering high liquidity, transparency and lower costs**.
- The cost angle is the most distinguishing facet of bond ETFs. Being **passively managed** products, these charge a **much lower fee** than actively managed bond funds. Sometimes even less than 0.5%.
- In the debt segment, there is not much the fund manager can do to **enhance returns**. Any strategy that can optimise costs is the need of the hour.
- Globally**, Bond ETFs have reported a **healthy**

- ETFs offer **low expense ratios and fewer broker commissions** than buying the stocks individually.
- ETFs can **contain all types of investments** including stocks, commodities, or bonds; some offer domestic holdings only, while others are international.

What are Bond ETFs?

- Bond ETFs are a type of ETF that **exclusively invests in bonds**. Bond ETFs **invest in various fixed-income securities** such as corporate bonds, treasuries, municipal, international, high-yield, etc.
- Bond ETFs are passively managed and trade, **much like stock ETFs** on major stock exchanges. This helps **promote market stability by adding liquidity and transparency** during times of stress.
- Bond ETFs allow ordinary investors to gain **passive exposure to benchmark bond indices** in an inexpensive way.
- Investors of bond ETFs are exposed to the **risk of interest rate changes**.
- Bond ETFs are typically of **two types**: They either track a specific maturity bucket like short, medium or long term or they track a target maturity where they invest in bonds with similar maturity as the product.
 - Target Maturity Bond ETFs**: They provide predictable returns like Fixed Maturity Plans

growth over the last decade. The size of Global Bond ETFs now accounts for over **\$1 trillion** assets under management (AUM) out of total \$4 trillion AUM across various ETFs.

œ The **key objectives of launching Bond ETF** are:

- > To suffice borrowing needs of CPSEs
- > To increase retail participation
- > To deepen the bond market and increase liquidity

What are ETFs?

- œ An exchange-traded fund (ETF) is a **marketable security**, meaning it has an **associated price that allows it to be easily bought and sold**.
- œ ETFs are in many ways similar to mutual funds; however, they are listed on exchanges and **ETF shares trade throughout the day** just like ordinary stock.

(FMPs), if they are held till maturity.

Other type of ETFs

- œ **Market ETFs:** Designed to track a particular index like the NIFTY.
- œ **Sector and industry ETFs:** Designed to provide exposure to a particular industry, such as oil, pharmaceuticals, or high technology.
- œ **Commodity ETFs:** Designed to track the price of a commodity, such as gold, oil, or corn.
- œ **Style ETFs:** Designed to track an investment style or market capitalization focus, such as large-cap value or small-cap growth.
- œ **Foreign market ETFs:** Designed to track non-Indian markets, such as US's Dollar 30 or Dow Jones Industrial Average (DJIA).
- œ **Inverse ETFs:** Designed to profit from a decline in the underlying market or index.

- œ **Actively managed ETFs:** Designed to outperform an index, unlike most ETFs, which are designed to track an index.
- œ **Exchange-traded notes:** In essence, debt securities backed by the creditworthiness of the issuing bank; created to provide access to illiquid markets and have the added benefit of generating virtually no short-term capital gains taxes.
- œ **Alternative investment ETFs:** Innovative structures, such as ETFs that allow investors to trade volatility or gain exposure to a particular investment strategy, such as currency carry or covered call writing.

Benefits

- œ **Lower Costs:** An investor who buys an ETF doesn't have to pay an advisory/management fee to the fund manager and taxes are relatively lower in ETFs.
- œ **Lower Holding Costs:** As commodity ETFs are widely traded in, there isn't any physical delivery of commodity. The investor is just provided with an ETF certificate, similar to a stock certificate.
- œ **Exposure to debt market:** Bond ETFs are a cost-effective way for investors to take debt-market exposure.
- œ **Tax considerations:** ETFs tend to be very tax efficient and ideal for holding in taxable accounts. Since ETFs don't sell shares very often and their portfolio turnover is very low, it is very rare for them to generate a taxable distribution for their shareholders.
 - > IETFs also have the option of making an "in-kind" distribution to shareholders if they want to sell themselves and want the cash.

- > The liquidity in bond ETFs will depend on how actively market makers buy and sell units on the exchange in bulk.
- > This will allow the investor to fetch a purchase or sale price closer to the fair value of the ETF, as indicated by its net asset value (NAV).

- œ **Increasing participation:** In India, retail participation in corporate bond market is shallow due to structural challenges like poor accessibility, lack of transparency and awareness. Bond ETFs can address these challenges and can play an important role in increasing retail investor participation in corporate bond market.

Disadvantages

- œ Several ETFs in India are plagued by **crippling illiquidity**. In the **absence of trading volumes**, investors often end up buying or selling at a steep premium, or discount to the prevailing NAV.
- œ While lower cost enhances the return potential of ETFs, **absence of liquidity can effectively wipe out cost benefits**. Conventional bond funds do not face these issues.
 - > If evidence is to go by, the initial liquidity in these products will be low, restricting investor's ability to move in and out at a desired price.
 - > If the ETFs are not able to amass a decent
 - > However, if the ETF's portfolio generates dividend income, this income is taxable.
- œ **Transparency:** The entire portfolio held by the bond ETF is disclosed on a daily basis to investors.
 - > This is unlike conventional bond funds which disclose portfolios at the end of every month.

- > Further, since bond ETFs are listed on exchanges, they provide live price updates after every trade.

corpus size, poor liquidity will continue. C

œ Bond ETFs **cannot assure return to investors any more than conventional bond funds**, except certain categories of bond ETFs such as target maturity bond ETFs which have a defined maturity date.

œ Unlike actively managed bond funds, bond ETFs will **not be in a position to gain from** opportunities emerging

œ **Liquid:** Being listed on the exchanges, bond ETFs also claim to offer liquidity—ability to buy and sell units instantly—for the investor.

from **movements in interest rates or credit spreads**.

Conclusion

œ To conclude, ETFs offer both tax efficiency as well as lower transaction and management costs. Bond ETFs combine the best of both bonds and debt funds. Indians invest a substantial portion of their savings in fixed income instruments such as small savings schemes, fixed deposits, bonds and various types of fixed income mutual funds. If liquidity is sufficiently high, bond ETFs may be a good first stop for those looking to move from bank fixed deposits.

INDIA'S SOLAR ENERGY CHALLENGES

CONTEXT

The Prime Minister recently committed to setting up 450 gigawatts (GW) of non-fossil fuel power by 2022. India is determined to be the world's greatest solar energy success story, but caught in an economic slowdown, India's clean energy transition is likely to not go as per the plan.

● BACKGROUND:

- œ While speaking at the United Nations Climate Action Summit in New York, Prime Minister Narendra Modi committed to setting up **450 gigawatts (GW)** of non-fossil fuel power by 2022.
- œ With this, he more than doubled the initial target of 175GW of green energy that his own government had set in 2018.
- œ However, the renewable energy industry is flailing. India's installed green energy capacity stands at about **65GW today**.
- œ It was expected to cross 100GW by December 2022, definitely short of the government's 175GW target and far behind 450GW. But even the expected 2022 projection now seems a **bit too optimistic**
- œ The **on-going slowdown in economic growth and electricity demand has worsened** the deep stress in India's renewable energy industry.
- œ **Solar energy tariffs in India are among the lowest**, but states are keen to push them down further.
- œ Independent power developers (IPPs) are wary of admitting to a slowdown, but the signs are everywhere. Of the 64GW that was auctioned by the Centre and states in FY19, 26% received no or lukewarm bids and another 10% got cancelled

● ANALYSIS:

Why solar energy?

- œ **Climate change:** We must accept that if we have to overcome the serious challenge of climate change, then what we are doing at the moment regarding switch away from fossil fuels is just not enough.
- œ **Relatively favourable:** For the last few years, thermal power has become unfavourable due to rising coal costs and natural gas disappeared from the domestic market.
- œ **Environment-friendly:** When in use, it does not release CO₂ and other gases which pollute the air. Hence it is very suitable for India, which is one of the most polluted countries of the world.
- œ **Varied use:** Solar energy can be used for a variety of purposes like as heating, drying, cooking or

electricity, which is suitable for the rural areas in India. It can also be used in cars, planes, large power boats, satellites, calculators and much more such items, just apt for the urban population.

- œ **Abundant & Secure:** Solar power is inexhaustible. In energy deficient country like India, where power generation is costly, solar energy is the best alternative means of power generation.
- œ **Grid independent:** You don't need a power or gas grid to get solar energy. A solar energy system can be installed anywhere. Solar panels can be easily placed in houses. Hence, it is quite inexpensive compared to other sources of energy.
- œ **Solar watersheds:**
 - > In 2010, government launched National Solar Mission or Jawaharlal Nehru National Solar Mission (JNNSM).
 - > In 2015, India initiated the International Solar Alliance (ISA).

Where does India stand in its solar capacity?

- œ India is largely dependent on fossil fuel imports to meet its energy demands. About **70%** of India's electricity generation capacity is **from fossil fuels**.
- œ By 2030, India's dependence on **energy imports is expected to exceed 53% of the country's total energy consumption**. Greater import dependence is a threat to India's energy security as it makes the economy susceptible to global market volatility.
- œ It also adds to a **huge import bill** leading to a loss of valuable foreign capital. Hence there is need to shift our focus towards the renewable energy sources.
- œ **India is a late comer** in the clean energy market.
- œ Nearly 46% of Germany's energy comes from renewable sources. In China, that figure crossed 26% in 2018.
- œ BNEF estimates that by 2050, 75% of India's electricity will be from renewables (from the current 21%), higher than in China (62%) and the US (55%).
- œ To ensure that there is a stable market for solar energy, the central government has already made

- it **mandatory for state power utilities (discoms) to buy a certain amount of this clean energy** from independent power producers (IPPs).
- œ The duty structure for equipment needed to generate solar energy is more favourable compared to that needed for producing wind power. Government is ensuring grid connectivity and **subsidies for rooftop solar projects**.
 - > Why discoms favour low solar tariffs is because solar power **helps discoms meet their peak power requirement**.

India's solar potential

- œ As per World Energy Outlook Report 2015, India has substantial **solar potential; around 750 GW** (based on the assumption that 3% of wasteland in each state can be used for solar power projects, plus an assessment of the potential for rooftop solar). This represents almost three times India's total installed power capacity today.
- œ The solar resource is **strongest in the north and northwest** of the country (Rajasthan, Jammu and Kashmir), but the potential is also considerably high in several other states, including Maharashtra, Madhya Pradesh, and Andhra Pradesh.
- œ A breakup of India's earlier renewable energy target of 175GW:
 - > 100 GW from solar
 - > 60 GW from the wind
 - > 10 GW from biomass
 - > 5 GW from small hydroelectric projects
- œ 100GW of solar energy comprised:
 - > 60 GW of utility-scale projects (both solar PV and CSP) like solar parks
 - > 40 GW of rooftop solar applications for commercial users and households, together with some small-scale schemes and off-grid capacity

What has gone wrong?

- œ **Silicon panel industry losing:** A big bulk of the new investments in green energy went into silicon panels, which were powered by the sun. However, the slow pace of development in the last few years is now bringing the industry on the verge of a shutdown.
- œ **Low tariffs:** Solar energy tariffs in India are among the lowest in the world, but state governments are still keen to push them down further. These dangerously low tariffs are turning unsustainable for some developers, who in turn start compromising on quality.
 - > For example, developers in Andhra Pradesh are facing an existential crisis as the state holds

them hostage with two equally unpleasant options: either lowering the tariffs or see their long-term power purchase agreements (PPAs) cancelled.

- > The bone of contention for the state government is PPAs signed from 2014-2019 that were over and above the mandated 5% renewable power purchase obligations of the state.
- > Tariffs that states are willing to pay are capped at 2.50-2.80 per unit, limiting the room for IPPs to improve profit margins and disincentivising quality projects.
- œ **Uncertain policy changes:** Before competitive bidding for awarding projects was introduced for the renewable energy sector in 2017, states invited developers by setting a fixed tariff (called the feed-in tariff). Policy changes have been sudden and unpredictable.
 - > Uttar Pradesh made an attempt to renegotiate old renewable energy tariffs.
 - > Gujarat decided that only projects which supply power to the state discom could use land within the state, flouting a central procurement agency's rule for setting up projects under the interstate transmission system.
 - > Rajasthan, one of the most sought-after states for solar power plants, recently announced its decision to impose additional charge on all projects that sell power outside the state.
- œ **Mounting discom dues:** Some state power distribution companies (discoms) are also late on paying their power bills. As of July 2019, state discoms owe a whopping 9,735.62 crore to the renewable energy companies.
- œ **Slack in new Investment:** While the renewable energy sector has been fuelled mostly by private equity (PE) investments so far, the number of firms now able to attract investment has dwindled due to the problems faced by the industry. There is also uncertainty in the bidding of new projects. The projects that have already started, the pace has slowed down dramatically.
 - > PE investments into renewables have stayed low and large banks like State Bank of India are no longer lending to renewable energy projects that sell power at below 3 aunit.
- œ **No broad solar development:** Countries which are a success story in solar energy have all had a parallel development in solar-based IP, manufacturing and deployment. But in India, we went straight to deployment and that makes it vulnerable to global players like China and Vietnam who lead in manufacturing. That dependence will only grow more as India's energy transition slows or gets delayed.

- œ **Currency risk:** There is also currency risk involved because modules are imported and then the cost of the module itself keeps varying.
- œ **Low quality power:** Beyond the rising risks and regulatory uncertainty, an increasing area of concern is also the quality of solar energy installations in India, most of which are purchasing cheaper panels from China to break-even. There are higher-than-expected degradation levels in the solar modules that Indian developers are using.
 - > Studies have suggested that quality issues in solar Photo Voltaic (PV) cells could be the result of aggressive pricing policies and commissioning deadlines for PV plants.
- œ **Decline in power sector demand:** A large part of the stress in renewable energy sector is because the slow rates of growth in power demand, particularly from high energy-consuming industries.
 - > Data from Central Electricity Authority show all-India power demand growth slowed to 4.4% in April-September 2019, down from 6% a year ago.
- œ **Operational issues:**
 - > The solar panels used are **not designed for very high temperatures**. In remote areas with high temperatures, the panels do not yield their optimal usage.
 - > **Dust is a problem**, especially in Rajasthan, which require frequent cleaning and increase the operational costs. There is alluvial dust present in plains of north India and delta regions of south India) which turns into mud when water is poured.
 - > Other main issue is the hardness of the water. **Hard water is not suitable for cleaning**, and companies have to invest in reverse osmosis (RO) and other technology to make it suitable.
 - > **Skilled workforce is required** for cleaning and maintenance is not available in these areas and so companies have to bring them in from other areas and train them.

Consequences:

- œ In the rush to build market share, some players have become **very aggressive are bidding very low tariffs with fairly low returns**. It is important that every project remains viable from both aspects—tariff and profitability.
- œ Given that several **discoms**, the ultimate buyers of power, are in a **poor financial condition**; and India's **banking sector** is already facing its own set of **challenges**, viability of solar power projects has become a serious cause for concern.

- œ **We need to attract more players and many more investors** into this nascent sector. This will come only if the returns are attractive for investors.
- œ If the slowdown persists, not just in renewables but in the broader economy, it will adversely affect India's energy transition plans and the target of achieving 450 GW by 2022.

Consumer side Problems:

- œ There is no power generation **when the sun sets down**.
- œ It is **weather dependent** hence not reliable.
- œ There is **need to clean the panels regularly**. Cleaning panels of large solar farms is wastage of lots of water.
- œ **Sunny area is required**. Even small shadow on the panel can disrupt the generation of whole string.
- œ Replacement of **batteries in off-grid plants is costly**. While installing a solar panel is quite cheap, installing other equipment becomes expensive.
- œ Solar panels require **considerable maintenance** as they are fragile and can be easily damaged. So, extra expenses are incurred as additional insurance costs.
- œ In On-grid systems, when there is a **power cut** from the grid then your own power cannot be used instead. This results in no power at all in such situation.
- œ Finding faults in and maintenance of big solar farms is hard because of large size.
- œ The land space required to install a solar plant with solar panel is quite large. India is already a highly populous and **land starved country**.
- œ While the government has provided subsidy for rooftop solar installations, consumers are still expected to foot the **water bill and cleaning bill** which means bearing the operational costs of having solar modules on roofs.

CONCLUSION AND WAY FORWARD

Regardless of whether or not the International Solar Alliance is effective, renewable energy, particularly solar, is crucial to India's future. Due diligence should be exercised while selecting and procuring solar modules, including verifying the antecedents of the manufacturer, and independent checks on the quality of the modules imported into India. Today, discoms are forced to buy expensive power and political pressures prevent them from raising tariffs for consumers. If there is no demand for more power, the ripple effect is longer payment cycles and more standoffs between states and generators. This isn't going to change until economic growth picks up soon.

NATIONAL DIGITAL HEALTH BLUEPRINT 2019

CONTEXT

- . Niti Aayog had earlier floated the ‘National Health Stack’ paper as “implementation framework” for Ayushman Bharat. After holding consultations on it, the Ministry of Health formed a committee under former UIDAI chairman and former MeitY secretary, which drafted the ‘National Digital Health Blueprint 2019’.

● BACKGROUND

- œ Recently, the National Digital Health Blueprint (NDHB) Committee submitted the final “National Digital Health Blueprint” (NDHB) report to Union Health Minister.
- œ NDHB will help in providing a **common platform for integration of existing applications in health domain and data** which has existed in silos, either in public health facilities, or, in private healthcare facilities, in India.
- œ Building on the initial document of “**National Health Stack**” (NHS) by NITI Aayog, Ministry of Health and Family Welfare has defined clear **timelines, targets and the resources required for digital convergence of healthcare programmes** in India.
- œ The priorities of the central government of India were included in the “**National Health Policy 2017**” and **NDHB shows the implementation angle for achieving the same.**
 - > The National Health Policy 2017 (NHP 2017) envisages the goal of attainment of the highest level of **health and well-being for ALL at ALL ages**, through increasing access, improving quality and lowering the cost of healthcare delivery.
 - > The **key principles** of NHP 17 include universality, citizen-centricity, quality of care and accountability for performance.
 - > **Leveraging digital technologies** for enhancing the efficiency and effectiveness of delivery of all the healthcare services.
 - > Creation of **district-level electronic databases**, establishing registries for all diseases of public importance
 - > Establishing ‘**Federated National Health Information Architecture**’, to roll-out and link systems across **public and private health providers at State and National levels** consistent with Metadata and Data Standards (MDDS) & **Electronic Health Record (EHR)**.
 - > Leveraging the potential of digital health for 2-way systemic **linkages between primary, secondary and tertiary care** to ensure continuity of care.

- œ This can be considered as the biggest leap of towards achieving the **goal of Universal Healthcare Coverage (UHC)** with impetus on the **digital healthcare component**.

National Health Stack

- œ **NHS objective:** The NHS envisages a centralized health record for all citizens of the country in order to streamline the health information and facilitate effective management of the same.
- œ **NHS mechanism:** The proposed NHS is an approach to address the challenge and seeks to employ latest technology including Big Data Analytics and Machine Learning Artificial Intelligence, a state of the art Policy Mark-up Language and create a unified health identity of citizens - as they navigate across services across levels of care, i.e. Primary, Secondary and Tertiary and also across Public and Private.

Why is there need of NHS?

- œ **India today is witnessing significant trends in health:** increasing prevalence of non-communicable diseases for instance, as well as marked demographic shifts. Climbing out-of-pocket costs is becoming difficult for most households.
- œ **Ayushman Bharat:** To address the health needs of citizens, the Government of India had announced comprehensive policy response – the Ayushman Bharat Yojana. This flagship health programme is to develop a wellness focused strategy, ensuring cost effective healthcare for all. The program leverages a two-pronged approach:
 - > On the supply side, substantial investments will be made to build 1.5 lakh health and wellness centers offering preventive and primary care; and
 - > On the demand side, the Pradhan Mantri-Rashtriya Swasthya Suraksha Mission (PM-RSSM) will create a national insurance cover of up to 5 lakhs per year per family for over 10 crores households, towards secondary and tertiary care.
- œ **Need for technology backbone:** Achieving such scale requires core technology backbone of our system and leverage cutting edge digital solutions

to tackle the challenge. Though technology deployment for healthcare has been continuous and widespread but the benefits have been highly localized and fragmented.

- > The citizen cannot access his health records speedily nor store them conveniently.
- > In the absence of an integrated system, the service providers undertake diagnostic tests afresh and create isolated medical records enhancing the burden on the citizen significantly.

œ **Health and policy interventions:** Health service providers in the public and private sectors do not have an aggregated and complete view of the data for providing efficient health services to the citizens.

- > Governments, Central and State alike, also do not have reliable and complete data for policy analysis and evidence-based interventions.

œ **Benefits of NHS:** Once implemented, the National Health Stack will significantly bring down the costs of health protection, converge disparate systems to ensure a cashless and seamlessly integrated experience for the poorest beneficiaries, and promote wellness across the population.

National Digital Health Blueprint

œ **NDHB Objective:** NDHB objective is to create an ecosystem which can integrate the existing disparate health information systems and show clear path for upcoming programmes.

- > Establishing and managing core health data, and the infrastructure for its exchange.
- > Establishing National and Regional Registries to create "Single Source of Truth" relating to clinical establishments, healthcare professionals and health and pharmacies.
- > Adopt open standards.
- > To create Personal Health Records based on international standards, which are easily accessible to citizens and services providers, based on consent.

- > To promote enterprise-class health application keeping in mind Sustainable Development Goals related to health.
- > To ensure private sector participation.
- > To ensure national portability in the provision of health services.
- > To promote the use of Clinical Decision Support (CDS) Systems by health professionals and practitioners.
- > To leverage health data analytics and medical research for better management of the health sector.
- > To enhance Governance digital tools in the area of Performance Management.
- > To support steps taken for ensuring quality of healthcare.

œ **NDHB key features:** Key features of the blueprint include a Federated Architecture, a set of architectural principles, a 5-layered system of architectural building blocks, Unique Health Id (UHID), privacy and consent management, national portability, EHR, applicable standards and regulations, health analytics and above all, multiple access channels like call centre, Digital Health India portal and MyHealth App.

œ **NDHB recommendations:** The formation of 'National Digital Health Mission' as an implementing body recommended in this report is a balanced combination of designing, developing and realizing certain pure-play Technology Building Blocks and the essential Domain (Health) Building Blocks.

Conclusion

œ The need of the hour is to elevate the existing systems from providing disparate electronic services to integrated digital services. We need to clearly adopt the principles of Enterprise Architecture, if we must leverage the digital technologies to achieve the vision of NHP 2017.

UNDERSTANDING GST IN PRESENT ECONOMIC CONTEXT

CONTEXT

- The Goods and Services Tax (GST) has been evolving since the time it was implemented. Now given stagnant tax revenues, it is clear that urgent reforms are needed in the GST structure. It is a good time to analyse the revenue implications and economic impact of GST, as well as identify the reform areas to increase revenue productivity and minimize administrative, compliance and distortion costs.

● **BACKGROUND:**

- The overall **GST collections have been below estimates** and showed even negative growth rates in both September and October 2019.
- œ Compared to the Budget Estimates for 2018-19, the Central government has a **GST collection shortfall** of 2 trillion.
- œ **Slowing economy, tax rate cuts and Input Tax Credit (ITC) frauds** have impacted the GST revenue growth. A total of 9,385 cases of tax fraud through ITC, amounting to 45,682 crore, were detected until October 2019. The undetected amount would be much larger.
- œ With GST revenue growth falling, **state governments have not got their GST compensation** and the chances of getting full compensation in near future remains bleak.
- œ The recently announced **corporate tax cuts will also reduce the tax transfers** by the Centre to states.

● **ANALYSIS:**

Why GST?

- œ The starting point of India's nationwide goods and services tax (GST) was the **Vijay Kelkar task force on tax reforms**.
- œ The need for a **uniform, predictable and stable indirect tax regime** across the country was axiomatic to a frictionless common economic market.
- œ Being a consumption tax GST is **easier to collect** than an income tax, since it is collected on every tiny transaction and **leaves an electronic trail that makes evasion difficult**. This makes it **administratively attractive**.
- œ **Structural Benefits:** The GST constitutes a major tax reform since it eliminates the earlier system's tax-upon-tax cascade, encourages inter-state commerce, provides an inbuilt incentive for compliance, reduces leakages, corrects the earlier

skew which favoured imported goods, and is fully electronic.

The Gains

- œ Abolition of interstate check-posts has **reduced the impediments to the interstate movement of goods** and helped create a **national common market**.
 - > It is estimated that the long-distance travel time for goods transportation has reduced by almost 20%.
 - > The reform has also improved supply- chain management.
- œ The abolition of interstate sales tax has made the **tax destination-based** and reduced inequitable interstate tax exportation.
- œ **Compliance mechanisms** have improved due to linkage and exchange of information between income-tax and GST departments.
- œ **Cascading (tax on tax) has reduced** due to more a comprehensive mechanism to credit input taxes against the taxes on outputs.
 - > Earlier, the central excise duty was levied at the manufacturing stage and it cascaded into the final retail value.
 - > The state value-added tax was earlier levied on the already paid value of excise duty.
- œ The inclusion of taxes like central sales tax, octroi, purchase taxes and luxury taxes on hotels in GST too have substantially reduced cascading effects.
- œ **Creation of GST Council** is an important innovation in cooperative federalism. It has helped minimize the transaction cost of formulating domestic consumption taxes of the Centre and states.

Challenges

- œ The most important constraint in current GST structure is **stagnant revenues**:
 - > For 2017-18, the CAG estimated central government part of GST declined by 10% for the subsumed taxes as compared to the previous year.

- œ GST implemented in India has a number of shortcomings which have resulted in **erosion of the base and continued distortions**:
 - > Large list of exemptions
 - > Multiplicity of rates
 - > Exclusion of several items of consumption from the base.
- œ **Exemption of almost 50% items** in the CPI basket has narrowed the base.
- œ The tax is levied at four different rates (at 5%, 12%, 18% and 28%) in addition to the special rates on precious metals (0.25%), gold (3%) and job work in diamond industry (1.5%).
- œ **Multiplicity of tax rates** enhance administration and compliance costs, enable misclassification, and cause distortions and in some cases cause inverted duty structure.
 - > Rates have been varied set according to use of the product and value of the product.
 - > Items considered as inputs are taxed lower as compared to those judged as outputs.

Inverted duty structure is a situation where import duty on finished goods is low compared to the import duty on raw materials that are used in the production of such finished goods. This causes the manufactured goods by the domestic industry to become uncompetitive against imported finished goods.

- œ A special cess is also levied at varying rates on items under 28% categories and, in the case of some class of automobiles there's a cess of 22%, resulting in the **total incidence of 50%**.
- œ **High tax rates on automobiles, building and construction material** at a time when demand conditions are already weak has caused further slowdown in these sectors.
- œ By **excluding petroleum products, real estate and electricity**, 40% of the internal indirect taxes at the Centre as well as states are not in the net.
- œ There are **loopholes in GST forms** which have made invoice matching difficult and have given rise to a **fake invoice industry**.
- œ The **dysfunctional GST technology** platform has resulted in arbitrary integrated GST allocation and has caused delays in refunds to the exporters.
- œ The GST Act did provide for compensation out of the compensation cess if state revenues failed to grow at 14%. **But if the cess fell short**, as it is now, **there is no mechanism to ensure the states get paid**.
- œ Given that GST comprises nearly 60% of tax revenues of states, **falling revenues and default in GST compensation** is bringing activities of the States to halt.

- > While the Centre has more fiscal manoeuvring space, the decline in tax revenue growth is impacting state capex more directly.
- > States are facing pressure on fiscals, some already resorting to ways and means and even overdrafts.
- > State governments have curbed their capital expenditure, a move which will further delay the revival of private investment cycle.
- > Given that roughly two-thirds of the general government capex is contributed by states, the slashing of capex by states can deepen economic slowdown.

Reforms needed

- œ **Simplify and Rationalise**: The full potential of GST reform depends upon further simplification and rationalization.
- œ **Improve tech platform**: In order to improve revenue performance GST council must stabilize the technology platform.
- œ **Higher threshold**: The threshold for registration should be kept at a reasonably high level.
 - > The data from Karnataka for 2017-18 shows that 93% of taxpayers had less than 50 lakh turnover and they accounted for 6.5% of the turnover and 12% of the tax paid.
 - > Hence it is important to focus on those with high turnovers, who could contribute to a higher tax percentage.
 - > Having a reasonably high threshold helps also the cause of equity.
- œ **Categorical invoice matching**: 100% invoice matching is not followed anywhere. Empirical results from Korea suggest that it tried 100% invoice matching but gave it up. Perhaps, it is desirable to match invoices above a certain value—say 10,000.
- œ **Reduce multiplicity of rates**: Reducing the number of tax rates should begin by getting rid of the 28% category altogether and transferring them to the 18% slab.
 - > At a lower rate, the turnover would be higher due to increased demand and the loss of revenue will be lower.
- œ **Reducing exempted list**: The list of exempted goods and services should be pruned. Only those that are difficult to tax for administrative reasons should be exempted and many of the items under 5% should be moved to 12%.
 - > There is need to include the petroleum products and electricity in the GST base.
 - > Petroleum products contribute about 42% of the revenue from domestic indirect taxes and including it will ensure competitiveness.

- œ **Standard GST rate:** In the next stage, the 12% and 18% categories can also be merged at 15% (or a 14-16% range). This will simplify the tax system.
- œ **Broadening the basis of tax formation:** Formulating tax rates based on consumption pattern alone ignores the employment potential from these sectors.
 - > Varying rates as per use and value of the products should be eliminated.
 - > Rate differences based on the stage of production should be eliminated.
 - > There is need to do away with rate differentiation for the same group of commodities.
- œ **Separate excise for demerit goods:** "Demerit goods" such as tobacco and its products are taxed in the 28% category. Cigarettes are taxed differently according to their lengths. It is important to levy high tax rates on such items for sumptuary reason, but the proper method is to levy GST at the standard rate and have a separate excise on them.
- œ **Phased reforms:** All reforms should be sequenced and calibrated over a period of two-three years, so that there are no shocks in the economic system.
- œ **Expert consultation:** There is need of a strong technical secretariat comprising of administrators, economists, accountants and lawyers to advise the GST Council and present options so that informed decisions are taken.
 - > Equally important is the need to make all data, which is not sensitive to enforcement, available in public domain.
 - > Reluctance to share the data is a major constraint for undertaking independent research. Even CAG has raised this issue.
- œ **States' involvement:** Onus of fixing GST should not just be central government's job; states should also focus on the ground issues instead of only focusing on getting compensation.
- œ **Checking ITC frauds:** In order to avert input tax credit (ITC) frauds there is need for increasing development of business intelligence systems to detect such frauds, and setting up dedicated units in each state.

The saga of what the GST rate should be?

- . The GST rates have been estimated using the concept of a **revenue neutral rate (RNR)**.
 - > The RNR is a rate of GST at which the amount of taxes collected by the government before GST and the amount expected to be collected after GST remains the same.

- > It is the ratio of all excise plus value added (sales) taxes in the numerator, divided by the total taxable gross domestic product (GDP) in the denominator.
- . This rate was the **contentious issue** of discussion between the Centre and states prior to the roll-out of the GST.
- . Since the reform envisaged end of all indirect taxes (to be subsumed into GST), states were reluctant to put in all their existing taxes into the basket of the numerator. And since almost half of GDP is excluded from the denominator (agriculture, health, education, petroleum, electricity); a smaller denominator a higher numerator contributed to a **high RNR**.
- . Hence, RNR is an imprecise and elusive concept and a moving target. **It is not a definite rate.**
- . Even though we want GST to be comprehensive and cover a large part of the economy, ideally, **its share along with indirect taxes must not exceed 50% of the total tax kitty.**
- . Policy makers should not be administratively lured by GST because indirect taxes are regressive, as they burden the poor more than the rich in relative terms.
- . The proper way to address income inequality, or achieve redistribution, is through **progressive income taxes, not through differential GST rates.**
- . A plethora of rates makes space for discretion on part of tax inspectors, **misclassification, interpretation disputes, litigation, corruption, and worse.** Multiple rates defeat the very purpose of shifting to GST.
- . There is thus need to replace all GST rates with a **standard rate**, as envisaged in the original Kelkar report. For example, a standard GST rate set in the range of 14-16% **may not be revenue neutral, but could spur economic growth.**

© **CONCLUSION**

- œ The implementation of GST in a large and diverse federal country ruled by different political parties is a remarkable achievement. Currently, the most important constraint in GST is stagnant revenues and unless immediate measures are taken to raise revenue productivity, the euphoria of GST will wane. Significant reforms are needed to ensure better compliance and to minimize economic distortions.

CONTEXT

GST has been evolving since the time it was implemented. Now given stagnant tax revenues, it is clear that urgent reforms are needed in the GST structure

Why has the revenue been falling?

There have been a no. of shortcomings which have resulted in **erosion of the base and continued distortions**

Exemption of almost 50% items in the CPI basket has narrowed the base

Exclusion of several items of consumption from the base

Multiplicity of rates

This enhances administration and compliance costs, enable misclassification, and cause distortions and in some cases cause inverted duty structure

The **dysfunctional GST technology** platform has resulted in arbitrary integrated GST allocation and has caused delays in refunds to the exporters

There are **loopholes in GST forms** which have made invoice matching difficult and have given rise to a **fake invoice industry**

The GST Act did provide for compensation out of the compensation cess if state revenues failed to grow at 14%

But if the cess fell short, as it is now, there is no mechanism to ensure the states get paid

Besides these , the situations has compounded due to

Slowing economy

Tax rate cuts

Input Tax Credit frauds

The overall impact has adversely affected the GST revenue growth and showed even negative growth rates in both September and October 2019

For 2017-18, the CAG estimated central government part of GST declined by 10% for the subsumed taxes as compared to the previous year.

Compared to the Budget Estimates for 2018-19, the Central government has a **GST collection shortfall** of 2 trillion

With GST revenue growth falling, **state governments have not got their GST compensation** and the chances of getting full compensation in near future remains bleak

At a lower rate, the turnover would be higher due to increased demand and the loss of revenue will be lower

Simplify and Rationalise

Standard GST rate: In the next stage, the 12% and 18% categories can also be merged at 15% (or a 14-16% range)

Checking ITC frauds by increasing development of business intelligence systems

Improve tech platform: In order to improve revenue performance GST council must stabilize the technology platform

Categorical invoice matching: 100% invoice matching is not followed anywhere

Perhaps, it is desirable to match invoices above a certain value—say 10,000.

Reforms that could be ushered in

Formulating tax rates based on consumption pattern alone ignores the employment potential from these sectors

Reducing exempted list: The list of exempted goods and services should be pruned

Only those that are difficult to tax for administrative reasons should be exempted and many of the items under 5% should be moved to 12%

Varying rates as per use and value of the products should be eliminated

There is need to do away with rate differentiation for the same group of commodities

Rate differences based on the stage of production should be eliminated

SOUTH CHINA SEA – CONFLICT, ISSUES, PROBLEMS AND CHALLENGES

CONTEXT

- Recently, Indian Ocean Conference (IOC) in Maldives discussed South China disputes.

● BACKGROUND

- œ The South China Sea, one of the world's busiest waterways, is subject to several overlapping territorial disputes involving China, Vietnam, the Philippines, Taiwan, Malaysia and Brunei.
- œ The conflict has remained unresolved for decades but has emerged as a flashpoint in China-US relations in Asia.
- œ Beijing outlines the area it claims in the South China Sea with a **nine-dash line**, rather than a continuous border. Various other claimants have sought a clearer delineation of its claims from officials. Mainland China occupied the Paracel Islands following the battle of the Paracel Islands in 1974. In the Spratly Islands, it has occupied six features since 1988 and Mischief Reef since late 1994/early 1995.

Geographic Facts

- **South China Sea** is an arm of western Pacific Ocean in Southeast Asia.
- It is south of China, east & south of Vietnam, west of the Philippines and north of the island of Borneo.
- Bordering states & territories (clockwise from north): the People's Republic of China, the Republic of China (Taiwan), the Philippines, Malaysia, Brunei, Indonesia, Singapore and Vietnam.
- It is connected by Taiwan Strait with the East China Sea and by Luzon Strait with the Philippine Sea.
- It contains numerous shoals, reefs, atolls and islands. The Paracel Islands, the Spratly Islands and the Scarborough Shoal are the most important.

- œ In 2018, the entry of an American destroyer into waters within 12 nautical miles of an island over which Beijing has claimed sovereignty is certain to draw international attention again to the rapid military build-up by the Chinese in the South China Sea
- œ At Indian Ocean Conference (IOC) in Maldives the US Ambassador to South Korea attacked China for illegally building artificial islands and militarising them in the South China Sea to which China responded by saying that it has indisputable sovereignty over the Nansha Islands (Spratly Islands) and the adjacent waters of the sea.

- œ Analysts say the likelihood of the sea becoming the main theatre of Sino-US tension as Washington galvanises allies and friendly countries to do more to challenge Beijing in the waters – in particular, by conducting FONOPs (Freedom of Navigation Operations).

Timeline

- œ 1994 – The Convention on the Law of the Sea went into effect. The United States called this treaty the "Law of the Sea Convention."
- œ 1997 – Beijing shared the first rendering of its "Nine-dash Line" extending roughly 1,118 miles from Hainan Island to waters off equatorial Borneo under China's historical claim of having it in the past.
- œ 2002 – ASEAN and China signed the Declaration on the Conduct of Parties in the South China Sea.
- œ 2009 – China issued two diplomatic notes that appear to claim a majority of the South China Sea.
- œ 2013 – The Philippines challenged China's claims of historic rights and other actions in an arbitration case under the Law of the Sea Convention.
- œ 2014 – The deployment of a Chinese drilling rig in waters near the Paracel Islands led to several confrontations between Vietnamese and Chinese ships and provoked protests in Vietnam. Later Beijing started building military installations. China has also established a new city on one of the islands – Sansha on Woody Island – in turn leading to an increased Chinese tourism.
- œ 2016 – The Arbitration Tribunal ruled in favor of the Philippines and rejected China's maritime claims that go beyond the entitlements set out in the Convention. However, Beijing rejected the ruling and described it as having "no binding force".

● ANALYSIS

What is the conflict about?

- œ The Philippines, Vietnam, China, Brunei, Taiwan and Malaysia hold different, sometimes overlapping, territorial claims over the sea, based on various accounts of history and geography.
- œ China claims more than 80 per cent, while Vietnam claims sovereignty over the Paracel Islands and the Spratly Islands.

- œ The Philippines asserts ownership of the Spratly archipelago and the Scarborough Shoal, while Brunei and Malaysia have claimed sovereignty over southern parts of the sea and some of Spratly Islands.
- œ Over the years, the claimants have seized control of a raft of sea features, including rocks, islands and low-tide elevations.
- œ China's "nine-dash line" is a geographical marker used to assert its claim. It stretches as far as 2,000km from the Chinese mainland, reaching waters close to Indonesia and Malaysia. It is violative of the principle of Exclusive Economic Zones (EEZ)
- œ The stalled negotiations between China and ASEAN made headway on Code of Conduct as four of the ASEAN nations also made territorial claims on the disputed waters which adds to the problem with already non-negotiable behavior of China.

Why is it important?

- œ The South China Sea is a key commercial thoroughfare connecting Asia with Europe and Africa, and its seabed is rich with natural resources. One third of global shipping, or a total of US\$3.37 trillion of international trade, passes through the South China Sea.
- œ About 80 per cent of China's oil imports arrive via the Strait of Malacca, in Indonesia, and then sail across the South China Sea to reach China.
- œ The sea is also believed to contain major reserves of natural resources, such as natural gas and oil.
- œ The US Energy Information Administration estimates the area contains at least 11 billion barrels of oil and 190 trillion cubic feet of natural gas. Other estimates are as high as 22 billion barrels of oil and 290 trillion cubic feet of gas.
- œ The South China Sea also accounts for 10 per cent of the world's fisheries, making it a key source of food for hundreds of millions of people.

What role does the US play in the dispute?

- œ The US has wide-ranging security commitments in East Asia, and is allied with several of the countries bordering the South China Sea, such as the Philippines, Singapore and Vietnam.
- œ Furthermore, the South China Sea is a vital trade route in the global supply chain, used by American companies who produce goods in the region.
- œ Although the US does not officially align with any of the claimants, it has conducted Freedom of Navigation operations, designed to challenge what Washington considers excessive claims and grant the free passage of commercial ships in its waters.
- œ During the summer of 2018, British and French forces conducted similar operations in the disputed waters.

Is there any resolution in sight?

- œ Southeast Asian nations have traditionally rejected looking for a bilateral solution with China, the region's main economic and military power. Despite this, one year after the landmark ruling against China's territorial claims, Philippine President Rodrigo Duterte agreed to solve the dispute with China through bilateral talks.
- œ Similarly, Vietnam, the most outspoken critic of China, has softened its stance. In April 2018, the government said it would be willing to hold talks with China to resolve disputes in the area "in accordance with international law".
- œ ASEAN has been working with China on an official code of conduct to avoid clashes in the disputed waters. A binding agreement has been discussed for years to little avail but in August 2018 it was revealed all the parties had agreed on a single draft negotiating text.

Challenges

- œ China's behavior of negligence, denial and the sense of superiority while overlooking international laws and regulations like the UN Convention on the Law of the Sea.
- œ Along with China's bullying tactics, North Korea's provocative behaviour has attracted US aircrafts in the already troubled waters. The growth of military vessels and planes in the area makes it more challenging to handle.
- œ Undefined geographic scope of the South China Sea; disagreement over dispute settlement mechanisms; different approaches to conflict management (self-restraint, mutual trust, and confidence building); and the undefined legal status of the Code of Conduct (COC) add to it.
- œ The different histories of distant, largely uninhabited archipelagos of the sea make the matter more complicated and multifaceted.

Achievements

- œ The members of the Association of Southeast Asian Nations (ASEAN) and China engaged in discussions on a potential COC to manage the South China Sea maritime and territorial disputes for a very long time and finally settled for a non-binding Declaration on the Conduct of Parties in the South China Sea (DOC) in 2002. In 2005, the first draft of guidelines to implement the DOC was drawn up, but not adopted until 2011. However, problems still linger so a plan for more robust policies is needed.
- œ After the consultations of 2016, in 2017 ASEAN and China adopted a bare-bone framework for the COC.

Suggestions

- œ New arbitration processes to bring necessary mediation, facilitation and binding resolution mechanism which can move the military dispute to border management and to joint development finally.
- œ Adopting the concept of joint development zones, which resolves the territorial disputes and allows to pursuit of joint commercial activities, environmental protection, disaster relief and humanitarian perspective and counter-piracy control.
- œ International disputes should be settled by peaceful means in line with international laws on the principle of safeguarding maritime security, navigation and over flight rights and freedoms.

India's Stand on South China Sea Issue

- œ In a Joint Strategic Vision for the Asia-Pacific and the Indian Ocean Region, India and the USA talked about ensuring freedom of navigation and resolving disputes according to UNCLOS referring to the South China Sea but after Philippines won the arbitration award in its favour in 2016, India has clearly separated itself from the dispute.
- œ New Delhi has not conducted any defence cooperation, navigational patrols and naval

exercises with the claimant states in the South China Sea (only recently it conducted a naval exercise with Vietnam).

- œ After the recent development of affairs with Japan and Russia, it might appear that India wants to raise its strategic presence in the South China Sea but it is not so. Firstly, because India is not a party to the maritime territorial disputes in the region and does not want to interfere. Secondly, India wants to preserve its "Wuhan Consensus" with China, in which both nations respect each other's spheres of influence in their adjacent water bodies.

◎ WAY FORWARD

- œ Forming an overarching authority like NATO or European Union (EU) with China as a member, in Asia to settle grievances and specifically find solutions to Asian problems, might help resolve disputes like this.
- œ The sense of power of China needs to be checked so that it abides by the intergovernmental and international agreements and conventions.
- œ Peaceful bilateral or multilateral talks and negotiations can be used because aggression or war is not a solution to this or any problem at all.

The Philippines, Vietnam, China, Brunei, Taiwan and Malaysia hold different, sometimes overlapping, territorial claims over the sea, based on various accounts of history and geography

Beijing outlines the area it claims in the South China Sea with a **nine-dash line**

It stretches as far as 2,000km from the Chinese mainland, reaching waters close to Indonesia and Malaysia

It is violative of the principle of Exclusive Economic Zones

US has wide-ranging security commitments in East Asia, and is allied with several of the countries bordering the South China Sea

South China Sea

Context

Recently, Indian Ocean Conference (IOC) in Maldives discussed South China disputes

It is a key commercial thoroughfare connecting Asia with Europe and Africa

Importance

huge reserves of resources such as

oil fisheries
natural gas

It is a vital trade route in the global supply chain, used by American companies who produce goods in the region

Accordingly, it has emerged as a flashpoint in China-US relations in Asia

India's balanced stand vis-a-vis South China

India wants to preserve its "Wuhan Consensus" with China, in which both nations respect each other's spheres of influence in their adjacent water bodies

India is not a party to the maritime territorial disputes in the region and does not want to interfere

Barring very few cases, New Delhi has avoided conducting any defence cooperation, navigational patrols and naval exercises with the claimant states in the South China Sea

Although it emphasised on resolving disputes in the sea according to UNCLOS, it has largely kept itself clear of the dispute

Possible steps to move ahead

International disputes should be settled by peaceful means

in line with international laws on the principle of safeguarding maritime security, navigation and over flight rights and freedoms

New arbitration processes to bring necessary mediation, facilitation and binding resolution mechanism

which can move the military dispute to border management and to joint development finally

Adopting the concept of joint development zones

which resolves the territorial disputes and allows to pursuit of joint commercial activities, environmental protection, disaster relief and humanitarian perspective and counter-piracy control

ANTI-TANK GUIDED MISSILES

CONTEXT

- Indian Army inducts Israel made Anti-Tank Guided Missile (ATGM) 'Spike' along LoC in J&K.

● BACKGROUND

- œ The Indian Army has inducted Israel made ATGM Spike along the LoC in the northern command in Jammu and Kashmir (J&K) to bolster defence along the border with Pakistan.
- œ India has signed a deal with Israel for the acquisition of **240 spike missiles** which are generally used for **anti-tank roles** in the forces.
- œ The spike missiles **were acquired after the Balakot operations**.
- œ **Purpose:** An anti-tank missile (ATM), anti-tank guided missile (ATGM), anti-armour guided missile or anti-tank guided weapon (ATGW) **is a missile that is created to destroy vehicles that are heavily armoured**.
- œ India started a feasibility study on a First Generation ATM in **1959**.
- œ **Background:** The task of preliminary study and wind testing was assigned to Department of Aeronautics and Institute of Science, Bangalore. In 1962, DRDO was granted funding begin work on developing an ATM due to conflict with China in Ladakh.

Facts about Anti-Tank Missiles:

- œ **Different sizes:** Sizes of ATM can range from smaller missiles that can be carried by just one person and shoulder-launched, to bigger ones that need a team to transport or launch, to even bigger missiles that are mounted on aircrafts and other vehicles.
- œ **Earlier technology was not efficient:** Earlier, anti-tank weapons provided to the infantry - such as anti-tank rockets, anti-tank mines and anti-tank rifles - did not have a high armour-penetration capacity and so, soldiers had to approach close to the target for them to work.
- œ **Improved technology now:** The rise of anti-tank guided missiles now has given infantry soldiers the ability to defeat tanks with light and medium armours from a large range, even though main battle tanks (MBTs) are still quite resistant to ATGMs.
- œ **HEAT:** Most ATGMs now have a high-explosive anti-tank (HEAT) warhead - this is a spike of metal which goes through the target.
- œ Some top anti-tank missiles are designed to launch the attack from above as the armour is usually

weaker there.

- œ ATGMs were used by more than 130 countries as of 2016.

œ Three types of guidance systems in ATGMs

- > **First generation:** These missiles are guided by manual commands and the missile is steered to the target.
- > **Second generation:** Semi-automatically commanded missiles need to operate to keep the sight fixed on the target till impact.
- > **Third generation:** This type of guided missiles relies on electro-optical imager (IIR) seeker, a laser or a W-band radar seeker in the nose of the missile. These are 'fire-and-forget' missiles where the operator can retreat right after firing as there is no more guidance required.

Anti-Tank Guided Missiles of India

- œ **DRDO Anti-Tank Missile:** The DRDO ATM is a first generation wire-guided missile developed in India by Defence Research and Development Laboratory (DRDL) of Defence Research and Development Organisation (DRDO).

- > It has a subsonic speed up to 300 ft/s (91 m/s) with a range of 1.6 km and carries a 106 mm HEAT warhead.

œ Amogha missile: Amogha-1, is a second

generation, ATGM which has pin point accuracy for a range up to 2.8 km. It is under development by Bharat Dynamics at Hyderabad. It has also become the first missile designed and tested by the **Bharat Dynamics Ltd (BDL) Company**.

- > The missile will be produced in two versions. **Amogha -2;** the land version has already been tested. The IIR version the missile (**Amogha -3**) of uses a thermal intelligent vision and then attacks the target. Amogha -3 is a fire and forget, 3rd generation ATM.
- > The missile moves near the target in a parabolic path and does not follow a completely parabolic path like conventional projectiles. It then bends at steep angles to attack the target.

œ Nag missile: The Nag missile also called

'**Prospina**' for the land attack version is an Indian third generation all weather 'fire-and-forget', lock-on after launch ATGM with an operational range of 500m-20km, single-shot hit probability of 0.9 and 10 years of maintenance free shelf-

life. Nag is under the Integrated Guided Missile Development Program (IGMDP) run by DRDO and is manufactured by BDL. The Ministry of Defence (MoD) recently announced its readiness to enter series production. It comes in five variants, namely;

- > Land version (for mast mounted system)
- > **HeliNa** (Helicopter-launched Nag)
- > Man portable (**MP ATGM**)
- > Air-launched version (for air interdiction which will replace imaging infra-red (IIR) to milli metric-wave (mmW) active radar homing seeker.
- > **NAMICA** (Nag Missile Carrier) tank buster which is a modified BMP-2 Infantry Fighting Vehicle (IFV) produced under and licensed in India by Ordnance Factory Medak (OFMK).

œ **Stand-off Anti-Tank (SANT):** SANT missile was tested for the first time, last year from a Mi-35 attack helicopter and according to media reports is a variant of HeliNA ATGM developed to be used from Unmanned Aerial Vehicles (UAVs) of MALE and HALE Class with a similar range of HeliNA.

œ **Cannon-launched Laser Guided Missile (CLGM):** CLGM developed by DRDO is a semi-active Laser homing cannon launched missile that can be launched from a 120mm main gun of the Arjun Tank. The 5 km range CLGM can target armored vehicles, including Tanks, as well as low-flying aircraft.

- > **SAMHO:** SAMHO is an infantry launched version of CLGM which requires a tripod launcher and has a range of 6kms. CLGM and SAMHO are capable of both direct and indirect laser designation.

œ **Man Portable Anti-tank Guided Missile (MP ATGM):** This is an Indian third-generation fire-and-forget AGM. It is currently under development by the DRDO in partnership with Indian defence contractor VEM Technologies Private Limited. The missile is derived from India's Nag ATGM.

- > It is fitted with a HEAT warhead. It has a range of about 2.5 km.
- > The missile has a length of about 1,300 mm and a diameter of about 120 mm.
- > It has a weight of 14.5 kg, with its command launch unit (CLU) weighing 14.25 kg.
- > It is equipped with an advanced IIR seeker with

integrated avionics. The missile has top attack capability.

- > It will reportedly compete with systems such as FGM-148 Javelin, and will be technologically more advanced than the Spike (ATGM).

œ **Jasmine anti-tank missile** - VEM Technologies Pvt Ltd proposed that they are capable of developing a 3rd generation ATM called "Jasmine" in a short time since they had all requisite technologies to develop it in-house, if interest were shown by the armed forces.

Anti-Tank Guided Missiles of Israel

œ **Spike:** Known as the 'fire and forget' missiles, Spike are portable by men and are powerful enough to destroy tanks and bust bunkers within four kilometres.

- > The SPIKE family of fourth-generation ATM is produced by EuroSpike, a joint venture between Rafael Advanced Defence Systems and Diehl BGT Defence and Rheinmetall Defence.
- > It includes three versions, namely SPIKE-MR (medium range), LR (long range) and ER (extended range).
- > The **SPIKE-MR** is a man-portable fire-and-forget missile that can be launched by infantry and special-forces, to accurately strike targets within a 200m to 2,500m range.
- > The **SPIKE-LR** can be launched from a ground-based tripod and light combat vehicles for ranges between 200m and 4,000m.
- > The **SPIKE-ER** is designed for launch by land vehicles, helicopters and naval platforms to defeat tanks within a range of 8km.
- > Missiles are fitted with tandem-charge HEAT warhead and IIR seeker for accuracy.

œ **Other ATGMS of Israel:**

- > Orev (upgraded BGM-71 TOW-2)
- > MAPATS
- > LAHAT – fired through smoothbore tank gun tubes of Merkava tanks
- > Nimrod

Other Defence Technologies imported by India from Israel

œ Heron; Searcher; SPYDER; Python-5; Barak 8.

COUNTRYWIDE NRC- ITS IMPLICATIONS

CONTEXT

- Recently, Union home minister said in Parliament that the Nation Register of Citizens (NRC) would be prepared for every state in the country.

● BACKGROUND

- œ **The National Register of Citizens (NRC) is a register containing names of all genuine Indian citizens.** At present, **only Assam has such a register.**
- œ The exercise may be extended to other states as well. **Nagaland** is already creating a similar database known as the **Register of Indigenous Inhabitants**. The Centre is planning to create a National Population Register (NPR), which will contain demographic and biometric details of citizens.
- œ National Register of Citizens, 1951 is a register prepared after the conduct of the Census of 1951.
- œ **Purpose:** To separate “illegal” immigrants and deport them.
- œ **Nodal Agency:** Registrar General and Census Commissioner India.

NRC in Assam

- . The issue of its update assumed importance as Assam witnessed large-scale illegal migration from erstwhile East Pakistan and, after 1971, from present-day Bangladesh.
- . This led to the six-year-long Assam movement from 1979 to 1985, for deporting illegal migrants.
- . The All Assam Students' Union (AASU) led the movement that demanded the updating of the NRC and the deportation of all illegal migrants who had entered Assam after 1951.
- . The movement culminated in the signing of the Assam Accord in 1985.
- . It set March 25, 1971, as the cut-off date for the deportation of illegal migrants.
- . Since the cut-off date prescribed under articles 5 and 6 of the Constitution was July 19, 1949 - to give force to the new date, an amendment was made to the Citizenship Act, 1955, and a new section was introduced.
- . It was made applicable only to Assam.
- . There had been intermittent demands from AASU and other organisations in Assam for updating the NRC, an Assam based NGO filed a petition at the Supreme Court.

- . In December 2014, a division bench of the apex court ordered that the NRC be updated in a time-bound manner.
- . The NRC of 1951 and the Electoral Roll of 1971 (up to midnight of 24 March 1971) are together called Legacy Data. Persons and their descendants whose names appeared in these documents are certified as Indian citizens.
- . On 31st August, the updated National Registry of Citizens was released in Assam after a Supreme Court deadline. Of the 3.3 crore applicants, 3.11 crore figured in the final citizens' list, while about 19 lakh residents were excluded.
- . Assam government rejected NRC data released on 31st August.

● ANALYSIS

Aim

- œ Census and National Population Register is counting residents while the proposed NRC will count citizens. Its objective is to weed out non-citizens and deport them to their countries of origin or put them in detention camps.

Scope of NRC across India

- œ An amendment in the Foreigners (Tribunals) Order, 1964, issued by the central government on May 30 paves the way for expanding the scope of NRC beyond.
- œ The amended order empowers state governments and even district magistrates of all states and Union Territories to set up tribunals to identify a “foreigner” who is living in India illegally.

Implications of Nationwide NRC

- œ It puts an entire population under suspicion of alienage. Under the foreigners' Act 1946, the burden of proof rests on the individual charged with being a foreigner. Moreover, Citizenship Act provides no mechanism for identifying aliens. With that justification can a state that does not have the ability to detect aliens or even to secure its borders against illegal immigrants, set out to find aliens by elimination? Elimination method is not the right approach.

- œ **Cost of Authentication:** Preparation of a countrywide NRC requires lot of resources. The Assam NRC is reported to have costed Rs 1600 crores. To prepare a countrywide NRC we need an estimated outlay of Rs 4.26 lakh crore. It would also need deployment of 1.33 crore officials when total number of government employees in India was 2.9 crore in 2011-12.
- œ **Lot of time to prepare it:** It is a regressive exercise and will take lot of time to prepare it.
- œ **Building new detention centers** that will be needed to incarcerate the excluded people.
- œ **Panic among people:** The necessary documents required to be included in NRC has created panic and fear in Assam and many committed suicides as they were not having the documents to prove their citizenship even when their ancestors have been living here for hundreds of years. If NRC done at national level it would have graver ramifications.
- œ **Federal Imperative of seeking the consent of state governments:** Many states in northeast are erupting in protest against NRC. It is a federal issue and requires consultations between states and the centre and it cannot be done on the whims of a particular political party that comes to party.
- œ **Fraying plural social fabric of this nation:** If the NRC carves out paths to statelessness for groups that are disfavoured, the citizenship Amendment Bill creates paths to citizenship for preferred groups. The implicit assumption in the NRC is that the infiltrators are Bangladeshi Muslims who must be disenfranchised as they have illegally acquired the citizenship. The citizenship Amendment Bill on the other hand promises citizenship to migrants belonging to all groups except Muslims – who

will be eligible for fast-track citizenship because they are persecuted minorities in Afghanistan, Pakistan and Bangladesh. However, it does not offer the same to the victims of sectarian religious persecution in neighbouring countries, such as the Ahmadiyas or the Rohingyas. It is a hypocrisy on part of the state.

Modalities for Implementation of NRC

- œ Although citizenship rules say being born in India or having parents who were born in India are enough for the citizenship. The NRC also requires you or your parents to have been born before a certain cut-off date. In case of Assam, you have to prove that your ancestors entered India before March 24, 1971, the eve of the Bangladesh War. You can be born in India in 1971, to parents who crossed the border that year, and still be considered a foreigner at the age of 48.
- œ The Home Ministry is working on modalities to implement across the country the exercise to identify illegal immigrants for deportation.

● CONCLUSION

- œ Constitutionally, India is a political community whose citizens avow the idea of the nation as a civic entity, transcending ethnic differences. 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. Hence, the rationale for a nationwide register of citizens, its feasibility, and, above all, its moral legitimacy, is questionable

BEGGING IN INDIA: A MENACE TO THE SOCIETY

CONTEXT

- The J&K High Court's verdict on the Beggary Act rejects the state's fettering of guaranteed constitutional freedoms

● BACKGROUND

- œ Since independence Government of India is playing an important role to render justice to its people in every aspect of life.
- œ But due to disproportionate distribution of wealth, poverty situation is caused.
- œ The poverty coupled with disadvantaged condition of life forced many to live like beggar in the society.
- œ Beggary is an age old social phenomenon in India. This system of begging and alms-giving to mendicants and the poor is still widely practiced in India.
- œ India has huge number of beggars and West Bengal has top the list of beggars among the states.

Meaning and Concept

- œ Beggary is defined as soliciting or receiving alms in a public places, whether or not under any pretence such as singing, dancing fortune telling, performing or offering any article for sale, entering on any private premises for the purpose of soliciting or receiving alms, exposing or exhibiting with the object of obtaining or extorting alms, any sore, wound, injury, deformity or disease whether of a human being or animal, or having no visible means of subsistence.
- œ Beggars may be found in public places such as transport routes, urban parks, and markets.
- œ Beggars have existed in society since the inception of human civilization.
- œ Begging is witnessed in all most all societies around the world.

Constitutional parameters

- œ The Indian constitution guarantees every citizen, the right to earn livelihood and the protection of social and economic rights.
- œ A right is claim of an individual integral to realize human rights and ensure individual freedom and dignity.
- œ Poverty is one of the most critical Conditions of life which touches human rights issue.

- œ Being a social welfare state, the constitution of India guarantees to all persons, without any distinction of status, the right to life and personal liberty.
- œ The Supreme Court of India has broadly interpreted Article 21 of the constitution and held that right to life mean right to life with human dignity, free from all exploitative condition.
- œ Court has made it clear that, the expression right to life in Article 21 includes Right to livelihood.
- œ Article 23 of the Constitution ensures right to life free from exploitation. It is designed to mean to stop beggar and other forms of human trafficking.
- œ Article 23(1) is to be read with articles 39(e) and 39(f) which impose obligation on the state for protection of persons against exploitation and against moral and material abandonment.

Social attitude towards beggars

- œ Beggars are not treated well in the society. There is negative attitude towards beggars, because they are poor and lazy people rely on the others sympathy.
- œ There are very few person in the society those treat beggars with compassion and sympathy.
- œ They are treated as drug trafficker and child lifter etc.
- œ There are many instances in which the states have shown negative attitude towards beggars and taken special drive to punish the beggars.
- œ It is believed that, beggars are obstacle to tourism and a scar on highly developed cities.

Legal Provisions against begging

- œ The Hyderabad Prevention of Beggary Act, 1941
- œ The Bengal Vagrancy Act, 1945
- œ The Mysore Prevention of Beggary Act, 1945
- œ The Bombay Prevention of Beggary Act, 1945
- œ The Madras Prevention of Beggary Act, 1945.
- œ The Cochin Vagrancy Act, 1945
- œ The Travancore Prohibition of Begging Act, 1945
- œ The Bhopal Prevention of Beggary Act, 1947
- œ The Bihar Prevention of Beggary Act, 1952.

Ram Lakhan v State (Case dealing with anti-Begging law)

- œ The Delhi High Court moved away from the judicial practice of castigating begging and upheld its legitimacy through a comparative discourse on the common law doctrines of necessity and duress, as well as on the principles of equality and liberty embodied in the Constitution.
- œ One significant aspect of Ram Lakhan is that it addresses the issue of begging from the touchstone of Article 19(1)(a), read with Article 21 of the Constitution, and asserts that unreasonable prohibitions on begging are unconstitutional in that they invariably deprive beggars of two fundamental rights.

The Criminal Law (Amendment) Act, 2013 provides for an imprisonment for a convict of beggary (10 years). The Act prescribes following provision:

- œ Beggars may be arrested without warrant.
- œ They can be sentenced to jail without trial or may be sent to shelter homes/certified institutions.
- œ The punishment for beggary ranges from 3-10 years imprisonment.
- œ Court may pass detention of persons if totally dependent on beggar.

- œ Prescribes Penalty for employing persons to beg or using them for purposes of begging.
- œ Provisions are made for the teaching of agricultural, industrial and general education.
- œ Provisions are made for medical care of the inmates of the Receiving Centres and/Certified institutions.
- œ If any beggar detained in a certified institution, found to be of unsound mind or a leper, he/ she can be removed to a mental hospital or leper asylum as per provisions of the Indian Lunacy Act, 1912 and of the Lepers Act, 1898.

© CONCLUSION

- œ Beggary is a social problem and this has been accepted way of life. The government intend to abolish beggaries from the society. The states have taken a lot of measures to abate poverty. The move is good, but while implemented in the social milieu it causes harassment to the innocent people. It is perceived that, the rehabilitation strategy is not matching with the legal parameters. The attitude of the personnel of beggar home need be changed. The rehabilitation institution should not be treated as jail. It should have capacity to change the mind-set of the inmates those can find an alternative for sustenance.

The Beggary laws in India

India has no federal law on begging and destitution

About 20 states had adopted the **Bombay Prevention of Begging Act, 1959**, which carries a penalty of detention of 3-10 years in so-called beggar homes

People found "begging" can be arrested without a warrant, and after a summary procedure, thrown into "Beggars' Homes"

Violation of the constitutional guarantee of the freedom of movement

The court noted that by criminalizing "wandering about" in public spaces, the law effectively attempted to exclude the poor and the marginalized from public places

It said that the **govt has the mandate to provide social security for everyone** and the presence of beggars is evidence that the state has not managed to provide these to all its citizens

Beggary laws go beyond criminalizing the act of begging; rather, they **criminalize people who are "wandering about"**

The government intend to abolish beggaries from the society and accordingly, the states have taken a lot of measures to abate poverty but quite obviously have not been completely successful

Besides the focus on intensification and implementation of poverty alleviation measures, the laws need to be made more humane and reforms introduced in the rehabilitation institutions

It is perceived that, the rehabilitation strategy is not matching with the legal parameters

The attitude of the personnel of beggar home need be changed

It should have capacity to change the mind-set of the inmates those can find an alternative for sustenance

The J&K Prevention of Beggary Rules

framed under J&K's version of the Act, authorized forced medical examinations of "beggars" taken in police custody, "shaving" of hair and "removal of clothing" in order to undertake the euphemistically-phrased "cleansing" of the body

The government's stated that by criminalizing "begging" and incarcerating "beggars" into homes, it aims to turn people into "good citizens"

Begging in India

Context

The J&K High Court declared criminalization of beggary to be unconstitutional and struck down the provisions of the Jammu & Kashmir Prevention of Beggary Act, 1960 and the Jammu & Kashmir Prevention of Beggary Rules, 1964

Violation of Article 19(1)(a)'s freedom of speech guarantee

As "begging" was a peaceful method by which a person sought to communicate their situation to another, and solicit their assistance, it was protected under freedom of speech

Violation of basic human dignity

The legislation was "steeped in prejudice against poverty and premised on an absolute presumption of potential criminality of those faced with choicelessness. It violated the **right to life and personal liberty under Article 21 of the Constitution**

Similarly, in the Ram Lakhan v State (Case dealing with anti-Begging law),

the Delhi High Court moved away from the judicial practice of castigating begging and upheld its legitimacy through a comparative discourse on the common law doctrines of necessity and duress, as well as on the principles of equality and liberty embodied in the Constitution

It decriminalized beggary by striking down, as unconstitutional, certain sections of the Bombay Prevention of Beggary Act, 1959, as extended to Delhi

Among the 25 provisions struck down are those permitting the arrest without a warrant, conducting a summary inquiry and detaining the person for up to 10 years

It seems that purpose of such provisions is not to protect public peace or prevent crimes, but to **effectively "cleanse"** these spaces of individuals who appear poor or destitute

The rehabilitation institution should not be treated as jail

SECTION: B
(PRELIMS)
CURRENT AFFAIRS

LEAKED NSSO DATA

● CONTEXT

- Leaked findings from the 2017-18 Consumer Expenditure Survey (CES) show that inflation-adjusted average monthly per capita expenditure (MPCE) declined by 3.7% in between 2011-12 and 2017-18. Government has debunked the report and decided not to release it citing 'data quality issues'.

● ABOUT

- Inflation-adjusted average monthly per capita expenditure (MPCE) declined by 3.7% in the country between 2011-12 and 2017-18, first time in four decades.
 - The decline came **because of an 8.8% decline in rural MPCE** even as **urban MPCE increased by 2%**.
 - The CES is a flagship **survey of the National Statistical Office (NSO)**, formerly known as the National Sample Survey Office (NSSO), and is conducted **every five years**.
 - The CES, in addition to being a source of **information on consumption spending and inequality**, is also used extensively in other statistical processes including revision of base years for calculation of GDP and the composition of the inflation basket.
 - The 2017-18 CES was scheduled for release in June 2019. The **previous CES was conducted in 2011-12**.
 - MOSPI has withheld the report and is examining the feasibility of conducting the **next CES in 2020-2021 and 2021-22** after incorporating all data quality refinements in the survey process.
 - CES 2017-18 is the second major NSO report to run into **controversy**. Earlier publication of the NSSO Periodic Labour Force Survey (PLFS) for 2017-18 was also in controversy. 75th round (Consumer Expenditure), 76th round (Drinking water, Sanitation, Hygiene, and Housing Conditions) survey results were also deemed controversial.
 - Leaked PLFS findings showed **the unemployment rate in the country to be 6.1%**, a four-decade high.
 - Data for 2017-18 shows Kerala has the most number of jobless people at 11.4 per cent. It is followed by Haryana (8.6 per cent), Assam (8.1 per cent) and Punjab (7.8 per cent).
 - At 3.3 per cent, Chhattisgarh had the least unemployment in 2017-18. Madhya Pradesh (4.5 per cent) and West Bengal (4.6 per cent) were at second and third places.
 - The joblessness rate rose the quickest in Gujarat — from 0.5 per cent in 2011-12 to 4.8 per cent in 2017-18.

Impact of not releasing CES report

- The decision of not releasing CES 2017-18 will have **important policy implications** given its widespread **use in calculating GDP and measuring inflation**.
- GDP **base year revisions coincide with the period of CES surveys**.
- The **base year for GDP and Index of Industrial Production (IIP)** was due to be revised to 2017-18. The **base year of Consumer Price Index (CPI)**, India's benchmark inflation measure, was to be changed to 2018.
- But by delaying the CES to 2020-21, the GDP **base year revision will have to be postponed** to at least 2025 because the survey results will not be available until 2023.
- CES surveys are also essential in **calculating the contribution of the informal sector to the GDP** and deciding **weight of various items in the CPI basket**.

Concluding arguments

- Previous CES rounds have also been subject to other kinds of controversy but never has data been withheld, and a report was junked. The best way to resolve such controversies is to release the data transparently and let everybody who is familiar with such numbers, look at it. Otherwise it gives the impression that only statistics which are acceptable will be released and it is dangerous for the credibility of our statistical system.

NATIONAL MILK DAY 2019

◎ CONTEXT

- November 26th is celebrated as National Milk Day in India. This isn't the same as World Milk Day, which is marked on June 1st, and was established by the Food and Agricultural Organisation.

◎ ABOUT

- India celebrates National Milk Day on 26th November in memory of Dr Verghese Kurien, fondly known as the Father of White Revolution.
- In 2014, all the dairy majors of the country, along with the Indian Dairy Association, resolved to observe Dr Kurien's birth anniversary on 26th November as National Milk Day.
- National Milk Day is celebrated to promote benefits related to milk and milk industry and to create awareness among people about the importance of milk and milk products.
- India is celebrating 98th birth anniversary of Dr. Kurien this year.

History: Operation Flood and the White Revolution

- In the year 1970, 'Operation Flood' was launched as a National Dairy Development Board (NDDB) project.
- It transformed India from a milk-deficient nation into the world's largest milk producer, surpassing the US in 1998.
- It created a national milk grid linking producers throughout India with consumers in over 700 towns and cities, reducing seasonal and regional price variations while ensuring that the producer gets a major share of the price consumers pay, by cutting out middlemen.
- All this was achieved not merely by mass production, but by production by the masses; the process has been called the white revolution. This is known as his 'billion-litre idea'.

Significance of National Milk Day in 2019

- India is world leader in milk production since last 15 years and the credit goes to small producers.
- India has 108.7 million buffaloes, which makes 57% of the world buffalo population.
- India is number one in bovine population with 18% of the world population and contributes 20% of the total milk produced in the world.
- Indigenous breeds are tolerant to heat and resistant to diseases.
- The indigenous breeds of cows are known to produce A2 type milk which protects us from various chronic health problems such as cardiovascular diseases, diabetes and neurological disorders.

Why there is a need of New White Revolution?

- Surplus production in India: From a chronic milk deficit country in 1950-51, with a production of 19 Million Ton per year (MMT), the production has increased to 176 MMT in 2017, and per capita availability of Milk has reached 375 grams per day. As Indian milk production has continued to grow rapidly, growth in Milk production has outstripped population growth.
- Negligence of development of recognized Indian breeds: In White Revolution, the focus was on introduction of exotic cattle breeds like HF and jersey and producing their cross bred. Therefore the developments of recognized Indian breeds were largely neglected.
- Adulteration of milk and rising demand for organic milk:
 - About 68 per cent of the milk produced in India is found to have adulterants like detergent, starch, urea and white paint.
 - Consumers are becoming more health conscious day by day which is fuelling growth for organic and natural milk products instead of milk from animals that are injected with growth hormones for more milk production and are full of antibiotics.
- Therefore there is a need to have a re-look at the whole policy for Dairy sector and to take steps so that the interests of the Indian farmers and consumers are protected.

EMISSIONS GAP REPORT 2019

◎ CONTEXT

- The 2019 UN Environment Programme (UNEP) Emissions Gap Report paints a “bleak” picture of accelerated global greenhouse gas (GHG) emissions and a growing gap between “what we need to do and what we are actually doing to tackle climate change.”

◎ ABOUT

- This is the tenth edition of the United Nations Environment Programme (UNEP) Emissions Gap Report.
- It provides the latest assessment of scientific studies on current and estimated future greenhouse gas (GHG) emissions and compares these with the emission levels permissible for the world to progress on a least-cost pathway to achieve the goals of the Paris Agreement.
- This difference between “where we are likely to be and where we need to be” has become known as the ‘emissions gap’.

What is the “Emissions Gap”?

- The Emissions Gap could also be called the “Commitment Gap”.
- It measures the gap between what we need to do and what we are actually doing to tackle climate change.
- The gap is the difference between the low levels of emissions that the world needs to drop to, compared with the projected level of emissions based on countries’ current commitments to decarbonisation.

Why does the Emissions Gap Matter?

- The gap is important because if we can’t close it and meet the emissions reduction target, we will face increasingly severe climate impacts worldwide.
- It is important that policymakers, and their citizens, know what the gap is so that the commitments countries are making are sufficient to close the gap.

What does the Emissions Gap Report measure?

The Emissions Gap Report measures and projects three key trend lines:

- 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 key “headline” messages and conclusions of the report

- GHG emissions continue to rise, despite scientific warnings and political commitments;
- To close the emissions gap by 2030, annual emissions need to be 15 GtCO₂e lower than current unconditional NDCs imply for the 2°C goal, and 32 GtCO₂e lower for the 1.5°C goal;

- . Enhanced action by G20 members will be essential for the global mitigation effort. Collectively, G20 members – who account for 78% of global GHG emissions – are on track to meet their limited 2020 Cancun Pledges, but seven countries are currently not on track to meet their 2030 NDC commitments.
- . “Dramatic strengthening” of the NDCs is needed in 2020. Countries must increase their NDC ambitions threefold to achieve the “well below 2°C” goal and more than fivefold to achieve the 1.5°C goal.
- . Although the number of countries announcing net zero GHG emission targets for 2050 is increasing, only a few countries have so far formally submitted long-term low-emission development strategies to the UNFCCC.
- . Decarbonising the global economy will require fundamental structural changes, which should be designed to bring multiple co-benefits for humanity and planetary support systems.
- . Renewable and energy efficiency, in combination with electrification of end uses, are key to a successful energy transition and to driving down energy-related CO2 emissions.
- . Demand-side material efficiency offers substantial GHG mitigation opportunities that are complementary to those obtained through an energy system transformation.

1st INTERNATIONAL CONFERENCE ON “LANDSLIDES RISK REDUCTION & RESILIENCE-2019”

◎ CONTEXT

- The Union Minister of State for Home Affairs inaugurated the 1st International Conference on “Landslides Risk Reduction and Resilience” in Delhi. The conference has been organised by the National Institute of Disaster Management.

◎ ABOUT

- The conference has been organised by the National Institute of Disaster Management.
- . Aim of the Conference is to explore and debate the most recent advances in landslide risk reduction and resilience.
- . Continent-wise, Asia suffers the maximum damages / losses due to landslides and among the Asian countries, South Asian nations are the worst sufferers and even among South Asian countries India is one of the worse affected by landslides.
- . As landslides are frequent and widespread, the annual cumulative losses worldwide amount to tens of billions of USD in terms of lost property, environmental damage, repair works, and the maintenance of defence measures.
- . As per Geological Survey of India, the window of economic loss due to landslides may reach between 1-2% of the gross national product in many developing countries.

OBJECTIVES

- . The aim of Conference is to explore and debate the most recent advances in a discipline. This will be directed towards understanding past and present processes and through different approaches involve in landslide risk reduction and resilience with the following objectives:
 - œ To enhance the understanding of the issues and solutions on governance and administration for landslides risk reduction and resilience
 - œ To discuss about current practices in the landslides risk assessment, mitigation and monitoring technologies for landslide risks and resilience with case examples
 - œ To highlight the environmental and emerging issues in context with urbanization, development and climate change

- œ To share experiences related to community based landslides risk reduction and resilience
- œ To disseminate information related to national and local strategies for landslides risk reduction and resilience as well as to develop a network mode roadmap for addressing the gaps by engaging with the institutions, researchers and experts.

SPECIAL FOCUS IS GIVEN TO:

- . Governance and administrative issues and support for LRR&R
- . Tools, techniques and technologies for LRR&R
- . Impact of climatic change, development, urbanization, and population growth for LRR&R

ATAL BEEMIT VYAKTI KALYANYOJANA

● **CONTEXT**

- The total number of Insured Persons covered under Employees' State Insurance (ESI) scheme is 3.49 crores. All Insured Persons (IPs) fulfilling the contributory and other conditions under Atal Beemit Vyakti Kalyan Yojana are eligible for availing relief under this scheme.

● **ABOUT**

- Atal Bimit Vyakti Kalyan Yojana is a welfare measure being implemented by the Employee's State Insurance (ESI) Corporation.
- . It offers cash compensation to insured persons when they are rendered unemployed.
- . The scheme is implemented on pilot basis for a period of two years initially.

Benefits under the scheme

- . The scheme provides relief to the extent of 25% of the average per day earning during the previous four contribution periods to be paid up to maximum 90 days of unemployment once in lifetime of the Insured Person.
- . The maximum duration, for which an IP shall be eligible to draw the Relief under the Atal Beemit Vyakti Kalyan Yojana (ABVKY) will be 90 days once in life time after a minimum of two years of Insurable Employment.
- . The claim for relief under the Atal Beemit Kalyaan Yojana will be payable after the three months of his/her clear unemployment.
- . The relief will be paid for clear month of unemployment.
- . No prospective claim will be allowed.
- . In case the beneficiary gets gainful employment in between the three months of unemployment for which he was eligible for relief under ABVKY, the relief will be payable for clear month of unemployment between the date of unemployment and date of re-employment.

Eligibility

- . Employees covered under Section 2(9) of the ESI Act 1948.
- . The Insured Person (IP) should have been rendered unemployed during the period the relief is claimed.
- . The Insured Person should have been in insurable employment for a minimum period of two years.
- . The Insured Person should have contributed not less than 78 days during each of the preceding four contribution periods.
- . The contribution in respect of him should have been paid or payable by the employer.

- . The contingency of the unemployment should not have been as a result of any punishment for misconduct or superannuation or voluntary retirement.
- . Aadhar and Bank Account of the Insured Person should be linked with insured person database.

Disqualification/Termination of relief under ABVKY

- . During lock out.
- . Strike resorted to by the employees declared illegal by the competent authority.
- . Voluntary abandonment of employment/ voluntary retirement/ premature retirement.
- . Less than two years contributory service.
- . On attaining the age of superannuation.
- . Convicted under the provisions of Section 84 of the ESI Act read with Rule 62 of the ESI (Central) Rule
- . On being re-employed elsewhere during the period he/she is in receipt of Relief under ABVKY.
- . Dismissal/termination under disciplinary action.
- . On death of IP.

CHAR DHAM PROGRAMME

◎ **CONTEXT**

- Union Minister for Road Transport and Highways has informed Lok Sabha about the Char Dham Programme.

◎ **ABOUT**

Char Dham Programme:

- . The Char Dham programme is an initiative to improve connectivity to the Char Dham pilgrimage centres in the Himalayas namely **Gangotri, Yamunotri, Kedarnath and Badrinath**.
- . These four ancient pilgrimages sites in Uttarakhand **are known as Chota Char Dham to differentiate them from** the bigger circuit of modern day **Char Dham sites namely Badrinath, Dwarka, Puri and Rameswaram**.
- . The works under Char Dham Pariyojna are being implemented on **Engineering Procurement and Construction (EPC) mode** of contract.
- . These projects are being implemented by three executing agencies of Ministry of Road Transport and Highways, viz,
 - œ Uttarakhand State PWD,
 - œ Border Road Organization(BRO) and
 - œ National Highway & Infrastructure Development Corporation Limited (NHIDCL).

Features of the programme:

- . The project proposes the **widening of single lane roads into double lanes by up to 10 metres**, developing highways in Uttarakhand and thereby improving access to the Char Dham.
- . The projects also **includes mitigation measures/ stabilisation of chronic landslide & sinking spots/zones** as a standalone project or part of road widening projects to avoid landslide and safety of road users.

EPC model:

- . Engineering procurement and construction (**EPC**) is the system of private sector participation aimed at overcoming the shortcomings of PPP model.
- . Under EPC model the contractor is legally responsible to complete the project under some fixed predetermined timeline and may also involve scope for penalty in case of time overrun. But the entire cost is borne by the government.
- . In EPC all the clearances, land acquisition and regulatory norms have to be completed by the government itself and the private players do not have to get itself involved in these time taking procedures.

BRO:

- . The Border Roads Organisation (**BRO**) was formed in 1960 to secure India's borders and develop infrastructure in remote areas of the north and north-east states of the country.
- . It functions under the control of the Ministry of Defence since 2015.
- . BRO executes road construction and maintenance works along the northern and western frontiers primarily to meet the strategic requirements of the army and is responsible for maintenance of over 53,000 km of roads.

GLOBAL DIPLOMACY INDEX 2019

◎ **CONTEXT**

- The 2019 Global Diplomacy Index released by the Sydney-based Lowy Institute gives the latest statistics, marking how the world's diplomatic networks are expanding and, in certain cases, shrinking.

◎ **ABOUT**

- The Lowy Institute Global Diplomacy Index visualises the diplomatic networks of all G20 and OECD nations
- . The Index covers 42 nations — the 19 nations that are members of the G20 and the 34 OECD member nations (11 nations are members of both organisations).
- . Posts are classified by type: embassy or high commission, consulate-general, consulate, permanent mission or delegation to multilateral organisations, or other representation type, including delegations to countries where there is no formal diplomatic relationship.
- . The size of a country's diplomatic network is of course only one indicator of the effectiveness of its diplomacy.

- According to a research over the past six years, around half of the developed nations in the OECD have reduced their diplomatic footprint over the past decade.

Key highlights of the report

- China now has more diplomatic posts across the world than the US, a marker of its growing international clout and ambition.
- China overtook the US in 2019 with 276 embassies and consulates worldwide, which is three more than the US.
- China's expansion in worldwide diplomatic presence has come partly at the expense of Taiwan, a self-governing democracy.
- The next three spots are occupied by France, Japan, and Russia.
- India is 12th among the 61 countries. India has 123 embassies and high commissions and 54 consulates globally.
- Taiwan saw the biggest drop in diplomatic posts, down from 22 embassies in 2016 to 15 this year.

Nine Tracks of Multi-Track Diplomacy

- Track One: Government, Official Diplomacy**
 - Track One sets most of the agenda in the field and has leadership and authority over the peacemaking systems at the official level. Most political peace-building (the making of political agreements, decisions regarding use of force) is done by this track.
 - An issue for this track is that it tends to be elitist and thus hard to reach. It often shuts itself out from expertise and alternative voices in the field, such as NGOs, specialist groups, identity groups, formal and informal citizen groups. It is male dominated. Track One negotiators should be more prepared for dealing with this through multi-lateral negotiation skills training.
 - Examples of Track One organisations:** States, official diplomats, the military, government-run development programs (Governmental Organisations), Inter-governmental organisations such as the UN, UNESCO, NATO, the EU, the OSCE, the WEU, The World Bank, The IMF, the FAO
- Track Two: Nongovernmental/Professional and Peacemaking through Conflict Resolution.**
 - This is the field of **professional non-governmental actors and organisations that try to manage prevent and analyse conflict**. They come from vastly different backgrounds. Individuals and organisations in this track do mediation, consulting, problem-solving workshops, conferences etc.
 - The single **biggest challenge for this track is money**. Funders are often looking for product, but conflict resolution specialists are often focused on nurturing a process. Examples are: Search for Common Ground (Conflict Resolution), The Institute for Multi-Track Diplomacy, Pax Christi, Life and Peace Institute.
 - Other professional organisations without a clear conflict resolution agenda are also included in this track like: Doctors without Borders (MSF), the Red Cross, Oxfam, Novib and other Development Organisations.
- Track Three: Business, or Peacemaking through Commerce**
 - This is the business world with its potential for peace-building through commerce. The traditional business community is profit-oriented, competitive and conservative. But lately the business community has recognised that peacemaking activities can create more stable environments for business and safety for its employees.
 - Issues for the business community often include environmental responsibility and social responsibility for the countries in which it operates: How to balance profitability with responsibility.

Track Four: Private Citizens or Peacemaking through personal involvement

- œ This includes all attempts by private citizens to do peace-building. This could be through citizen diplomacy (exchange programs), voluntary organisations and development programs, advocacy or special interests groups, professional interest groups and democracy-building organisations.
- œ This track often includes a wide range of NGOs, local and international. These individuals have a tremendous amount of knowledge of what happens on the ground, although they often have difficulty finding connections with the rest of the peace building system.

Track Five: Research, Training, and Education or Peacemaking through learning

- œ This includes research,
 - œ academic departments, research institutes and think-tanks
- œ Training, transfer of practitioner skills such as: mediation, negotiation, conflict resolution, third party facilitation
 - œ Education, from kindergarten to Ph.D. programs
- œ One of the issues of this track is how to produce and transfer relevant information for practical use in conflicts.

Track Six: Activism, or Peacemaking through Advocacy

- œ This track involves environmental and peace activism from disarmament to human rights and socio-economic justice issues. People involved in this track often try to change attitudes, policies or institutions. Most of their work is stated in terms of opposition to certain situations.
- œ Often organisations in Track Six are one topic oriented, like Amnesty International and Human Rights Watch in regards to Justice and Human Rights.
- œ An argument could be made for placing Amnesty International under track 2 as well. These organisations engage in a whole range of activities: education, advocacy, organising, supporting, witnessing and protesting.
- œ Issues for this track include small NGOs relative lack of power, their reputation as 'peaceniks' and way of often defining themselves as 'anti' this or that, as opposed to constructive involvement.

Track Seven: Religion, or Peacemaking through Faith in Action.

- œ This includes the efforts of religiously based communities and their efforts to make peace, from small church groups to larger religious communities of different denominations.
- œ In many places they are involved in reconciliation processes with a long-term commitment and thus are very well placed as contacts and confidants of conflicting parties.

Track Eight: Funding or Peacemaking through Providing Resources.

- œ These are the organisations that provide the financial support for many of the activities that take place on the other tracks, which is a persistent problem.
- œ Many funding organisations look for measurable results within a limited amount of time (typical funding cycles are 2-3 years), which can be too little time in many peace-building processes.

Track Nine: Communication and the Media, or Peacemaking through Information

- œ This is the realm where public opinion formation takes place through TV, radio, printed media etc. This track informs the public and engages it in issues of conflict and peace.
- œ One of the problems related to this field is that the media has a preference for 'bad news' above 'good news'. A successful attempt at preventing an outbreak of conflict, for example the preventive diplomacy between India and Pakistan over Kashmir issue is often not considered 'news' and thus receive criticism in India.

LOKPAL

◎ **CONTEXT**

◎ **ABOUT**

- **Anti-corruption ombudsman Lokpal released its logo and motto.**
- The logo is in tricolour representing the national essence of Lokpal.
- A Lokpal is an anti-corruption authority or body of ombudsman who represents the public interest in the Republic of India.
- The current Chairperson of Lokpal is Pinaki Chandra Ghose.
- The Lokpal has jurisdiction over central government to inquire into allegations of corruption against its public functionaries and for matters connected to corruption.
- The Lokpal is responsible for enquiring into corruption charges at the national level while the Lokayukta performs the same function at the state level.

Powers of the Lokpal

- The Lokpal has jurisdiction to inquire into allegations of corruption against anyone who is or has been Prime Minister, or a Minister in the Union government, or a Member of Parliament, as well as officials of the Union government under Groups A, B, C and D.
- Also covered are chairpersons, members, officers and directors of any board, corporation, society, trust or autonomous body either established by an Act of Parliament or wholly or partly funded by the Union or State government.
- It also covers any society or trust or body that receives foreign contribution above 10 lakh
- The Lokpal, however, cannot inquire into any corruption charge against the Prime Minister if the allegations are related to international relations, external and internal security, public order, atomic energy and space, unless a full Bench of the Lokpal, consisting of its chair and all members, considers the initiation of a probe, and at least two-thirds of the members approve it.
- Such a hearing should be held in camera, and if the complaint is dismissed, the records shall not be published or made available to anyone.

Other features

- A complaint under the Lokpal Act should be in the prescribed form and must pertain to an offence under the Prevention of Corruption Act against a public servant.
- There is no restriction on who can make such a complaint.
- When a complaint is received, the Lokpal may order a preliminary inquiry by its Inquiry Wing, or refer it for investigation by any agency, including the CBI, if there is a prima facie case.
- Before the ordering of an investigation by the agency, the Lokpal shall call for an explanation from the public servant to determine whether a prima facie case exists.
- The Lokpal, with respect to Central government servants, may refer the complaints to the Central Vigilance Commission (CVC).

The Lokpal and Lokayuktas Act, 2013

- Lokpal will have power of superintendence and direction over any central investigation agency including CBI for cases referred to them by the ombudsman.

- . A high-powered committee chaired by the PM will recommend selection of CBI director. The collegium will comprise PM, leader of opposition in Lok Sabha and Chief Justice of India. PM has been brought under purview of the Lokpal, so also central ministers and senior officials.
- . Directorate of prosecution will be under overall control of CBI director. At present, it comes under the law ministry.
- . Appointment of director of prosecution to be based on recommendation of the Central Vigilance Commission.
- . Director of prosecution will also have a fixed tenure of two years like CBI chief.
- . Transfer of CBI officers investigating cases referred by Lokpal with the approval of watchdog.
- . Bill incorporates provisions for attachment and confiscation of property acquired by corrupt means, even while prosecution is pending.
- . Bill lays down clear timelines for preliminary enquiry and investigation and trial. Provides for special courts. Public servants will not present their view before preliminary enquiry if the case requires 'element of surprise' like raids and searches.
- . Bill grants powers to Lokpal to sanction prosecution against public servants.
- . CBI may appoint a panel of advocates with approval of Lokpal, CBI will not have to depend on govt advocates.

TRANSGENDER PERSONS BILL, 2019

● **CONTEXT**

- **The Transgender Persons (Protection of Rights) Bill, 2019 was recently introduced in Lok Sabha by the Minister for Social Justice and Empowerment. The bill seeks to empower the transgender community by providing them a separate identity.**

● **ABOUT**

Key Features

- . **Definition of a transgender person:** The Bill defines a transgender person as one, who is,
 - œ Neither wholly female nor male; or
 - œ A combination of female and male; or
 - œ Neither female nor male.
 - œ In addition, the person's gender must not match the gender assigned at birth. This will include trans-men, trans-women, persons with intersex variations and gender queers.
- . **Certificate of identity for a transgender person**
 - œ A person recognised as transgender person under the Bill shall have a right to self-perceived gender identity.
 - œ A transgender person has to obtain a Certificate of Identity which will confer rights and be proof of recognition of identity as a transgender person.
 - œ An application for obtaining such a Certificate should be made to the District Magistrate (DM). The DM will refer such an application to a District Screening Committee.
 - œ The District Screening Committee will comprise a:
 - > Chief Medical Officer;
 - > District Social Welfare Officer;
 - > Psychologist or psychiatrist;
 - > Representative of the transgender community; and
 - > Government officer

- œ The DM will issue a Certificate of Identity as 'transgender' based on the recommendation of this Committee.
- œ The gender of a transgender person will be recorded in all official documents, on the basis of this Certificate.
- œ If there is any change in gender, the transgender person may apply for a revised certificate by following the same process as that of obtaining a Certificate of Identity.

• **Benefits related to employment, health and education**

- œ The central or state governments shall provide welfare schemes and programmes to facilitate and support livelihood for transgender persons. This will include vocational training and self-employment.
- œ The central and state governments shall take steps to provide healthcare facilities to transgender persons including:
 - > Separate HIV surveillance centers;
 - > Sex reassignment surgery and hormonal therapy counselling;
 - > Review of medical curriculum; and
 - > A comprehensive insurance scheme.
- œ Educational institutions shall provide inclusive education and opportunities for sports, recreation and leisure activities to transgender persons.

• **Offences and Penalties**

- œ The Bill specifies the following offences:
 - > Compelling transgender persons to beg or do forced or bonded labour (excluding compulsory government service for public purposes);
 - > Denial of use of a public place;
 - > Denial of residence in household, village or other place of residence; and
 - > Physical, sexual, verbal, emotional or economic abuse.
- œ These offences will attract imprisonment between six months and two years, and a fine

National Council for Transgender persons:

- A National Council for Transgender (NCT) persons will be set up to advise the central government on policies, and legislation related to transgender persons.
- It will also monitor and evaluate such policies.
- The NCT will consist of representatives from,
 - > Ministries such as social justice and empowerment, health, minority affairs;
 - > NITI Aayog;
 - > National Human Rights Commission and National Commission for Women;
 - > State governments;
 - > Nominated members from the transgender community; and
 - > Experts from non-governmental organisations.

WHAT IS RULE 12, USED BY THE CENTRE TO REVOKE PRESIDENT'S RULE IN MAHARASHTRA

© **CONTEXT**

- After the assembly polls in October 2019, the state of Maharashtra was placed under the President's rule amid a stalemate over the formation of the government in the state. However, to end the president's rule, "Rule 12" has been used by the PM to end President's rule in Maharashtra.

The President's Rule:

- . President's rule is imposed through the **invocation of Article 356** of the Constitution by the President on the advice of the Union Council of Ministers.
- . Under Article 356, President's Rule is imposed if the **President, upon receipt of the report from the Governor of the State** or otherwise, **is satisfied** that a situation has arisen in which the **government of the State cannot be carried on in accordance** with the provisions of **the Constitution**.

What is this rule, known as '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.
- . The proclamations issued by the President that day, dividing various districts between the two Union Territories, were issued under Rule 12.
- . The Cabinet gave post-facto approval to the same on November 20.

WORLD MIGRATION REPORT 2020 AND THE TREND OF MIGRATION GLOBALLY

● **CONTEXT**

- **At 17.5 million, Indian diaspora largest in the world: UN report. The Global Migration Report 2020 highlighting the international migrants stock was recently released.**

● **ABOUT**

- It is released by the UN-affiliated International Organization for Migration (IOM).
- . The International Organization for Migration (IOM) provides services and advice concerning migration to governments and migrants, including internally displaced persons, refugees, and migrant workers.
- . IOM's stated mission is to promote humane and orderly migration by providing services and advice to governments and migrants.
- . IOM works to help ensure the orderly and humane management of migration, to promote international cooperation on migration issues, to assist in the search for practical solutions to migration problems and to provide humanitarian assistance to migrants in need, be they refugees, displaced persons or other uprooted people.

Top destinations

- . The top destination for international migrants is the US where, as of September 2019, there were 50.7 million international migrants.
- . The US remained the top remittance-sending country (\$68.0 billion) followed by the United Arab Emirates (\$44.4 billion) and Saudi Arabia (\$36.1 billion).

- . The US is followed by Germany, Saudi Arabia, Russian Federation and the UK.
- . Gulf countries have some of the largest numbers of temporary labour migrants in the world, including the United Arab Emirates, where they make up almost 90 percent of the population.

Indian case

- . India continues to be the largest country of origin of international migrants with a 17.5 million-strong diaspora across the world.
- . It received the highest remittance of \$78.6 billion from Indians living abroad
- . After India the largest number of migrants living abroad is followed by Mexico (11.8 million), and China (10.7 million).

Other Highlights of the report

- . Overall figure represents just a tiny fraction of the world's population, although it is a 0.1 percent increase on the level indicated in its last report, published two years ago.
- . More than half of all international migrants (141 million) live in Europe and North America.
- . In Africa, Asia and Europe, most international migrants stay within their regions of birth, but the majority of migrants from Latin America and the Caribbean and North America do not.
- . IOM's Internal Displacement Monitoring Centre highlighted that a total of 41.3 million people were forced to flee their homes at the end of 2018 a record since monitoring began in 1998.
- . Turning to the impact of climate and weather disasters, the report notes that Typhoon Mangkhut in the Philippines contributed to the fact that 3.8 million people were newly displaced there at the end of 2018, the largest number globally.

COALBED METHANE (CBM)

◎ CONTEXT

- **Global Coal Bed Methane Market Growth Analysis, Forecasts To 2025**

◎ ABOUT

- Coalbed methane, coalbed gas, coal seam gas or coal-mine methane is a form of natural gas extracted from coal beds.
- . In recent decades it has become an important source of energy in United States, Canada, Australia, and other countries.
- . The term refers to methane adsorbed into the solid matrix of the coal. It is called 'sweet gas' because of its lack of hydrogen sulphide.
- . The presence of this gas is well known from its occurrence in underground coal mining, where it presents a serious safety risk.
- . India has fifth-largest proven coal reserves in the world. So it has significant prospects for exploiting CBM.

Where is coalbed methane found?

- . Coalbed methane is associated with coal deposits, and is found in coal seams.
- . In the past, the gas was the cause of numerous explosions in underground mines. More recently, the gas has been vented to the surface from underground mines.
- . Various basins in the Rocky Mountains hold much of this country's coalbed methane resources.

How is coalbed methane extracted from coal?

- . When water is removed from a coal seam, it lowers the reservoir pressure.
- . Methane that was held in place by water pressure tends to follow the water as it is pumped to the surface, where it is captured and transported through pipelines to storage facilities or shipped.
- . This relatively inexpensive and straightforward procedure has made coalbed methane a useful, easily accessible form of energy.

Advantages of CBM as a fuel

- . CBM is an environmentally safe gas
- . It will halt its emission into environment and thus reducing emission of greenhouse gas from coal mining.
- . It would help in increasing the domestic gas production.

Challenges and concerns:

- . Global methane emissions from coal mines are projected to for approximately 8 percent of total global methane emissions.
- . Disturbance of lands drilled and its effect on wildlife habitats results in ecosystem damage.
- . CBM production behaviour is complex and difficult
- . Water discharges from CBM development could potentially have on downstream water sources.
- . Issue of high salinized water that is removed in the process of extraction is released into freshwater ecosystems could have adverse effects.\

GOLDEN RICE: TO COMBAT VITAMIN A DEFICIENCY FOR PUBLIC HEALTH

◎ CONTEXT

- **Said to be answer to Vitamin A deficiency, yet to be planted on large scale. Bangladesh could be on the verge of becoming the first country to approve plantation of this variety.**

◎ ABOUT

- In the late 1990s, German scientists developed a genetically modified variety of rice called Golden Rice.
- . It was claimed to be able to fight Vitamin A deficiency, which is the leading cause of blindness among children and can also lead to death due to infectious diseases such as measles.
- . Bangladesh could be on the verge of becoming the first country to approve plantation of this variety.
- . In Bangladesh, over 21 per cent of the children have vitamin A deficiency.
- . The Golden Rice that is being reviewed in Bangladesh is developed by the Philippines-based International Rice Research Institute.
- . This rice variety will not be more expensive than the conventional variety.

Why the Golden colour?

- . Rice is naturally low in the pigment beta-carotene, which the body uses to make Vitamin A. Golden rice contains this, which is the reason for its golden colour.

Bio fortification of staple crops

- . Fortification is the practice of deliberately increasing the content of an essential micronutrient, i.e. vitamins and minerals (including trace elements) in a food, so as to improve the nutritional quality of the food supply and provide a public health benefit with minimal risk to health.
- . Bio fortification is the process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology.
- . Bio fortification differs from conventional fortification in that bio fortification aims to increase nutrient levels in crops during plant growth rather than through manual means during processing of the crops.

Examples of bio fortification projects include

- . Iron-bio fortification of rice, beans, sweet potato, cassava and legumes;
- . Zinc-bio fortification of wheat, rice, beans, sweet potato and maize;
- . Provitamin A carotenoid-bio fortification of sweet potato, maize and cassava; and
- . Amino acid and protein-bio fortification of sorghum and cassava.

Vitamin A and its deficiency

- . Vitamin A is a fat-soluble vitamin that is good for healthy vision, skin, bones and other tissues in the body.
- . Vitamin A often works as an antioxidant, fighting cell damage, but it also has many other uses.
- . Through its role with cell growth and division, vitamin A has an important role in the normal formation and maintenance of the heart, lungs, kidneys and other vital organs.
- . Good sources are fortified milk, eggs, meat, and cheese, liver, halibut fish oil, cream and kidneys.
- . Vitamin A deficiency is the leading cause of childhood blindness in Southeast Asia.
- . Symptoms of a severe deficiency are night blindness, dry eyes, diarrhea and skin problems.

CURRENT AFFAIRS ANALYST

vol-2 (DECEMBER, 2019)

CONTENTS

Section - A: MAINS CURRENT AFFAIRS

Area of GS	Topics in News	Page No.
Economics	. Why India Needs Labour Reforms?	48
Environment	. Climate change	53
International Relations	. India-China diplomacy stand-off in South Asia	56
Polity and Governance	. Citizenship Amendment Bill, 2019	60
	. Why Audit of Mid-Day Meal scheme is needed?	62

Section - B: PRELIMS CURRENT AFFAIRS

Area of GS	Topics in News	Page No.
Economics	. HDI 2019 Report	67
Environment and Ecology	. Heavy Metals Contaminating India's Rivers	68
	. National Clean Air Programme	69
	. Ocean Deoxygenation	70
International Relations	. International Civil Aviation Day	72
Internal Security	. RISAT-2BR1	73
Polity and Governance	. Anglo-Indians - Nomination Quota and History	74
	. Creamy layer principle in SC, ST quota for promotion	76
	. Data Protection Bill, 2019	77
	. International Financial Services Centres Authority Bill, 2019	79
	. Prime Minister Van Dhan Yojana	81
Science & Tech.	. World Malaria Report, 2019	82
	. Gender related laws in India	83

Section - C: MISCELLANEOUS

. 4 th India Water Impact Summit	89
. AIM-SIRIUS Deep Technology Learning, Innovation Programme	89
. Constitution (126 th amendment bill), 2019	89
. DUCHIFAT 3	90
. First Mega Food Park of Central India	90
. Head on Generation technology	90
. International Solar Alliance	91
. 'Iron Union 12'	91
. OPEC and its allies decide to cut oil production	91
. Sarai Sewage Treatment Plant	92
. Small Finance Banks	92
. White Island	92

SECTION: A

(MAINS)

CURRENT AFFAIRS

WHY INDIA NEEDS LABOUR REFORMS?

CONTEXT

- Recently, Industrial Relations Code was introduced in the Parliamentary by Minister of Labour.

● BACKGROUND

- œ Labour reforms essentially mean taking steps in increasing production, productivity, and employment opportunities in the economy in such a manner that the interests of the workers are not compromised.
- œ Essentially, it means skill development, retraining, redeployment, updating knowledge base of workers-teachers, promotion of leadership qualities, etc. Labour reforms also include labour law reforms.
- œ Labour laws are concerned with the trade union rights of the workers, industrial relations and job security and policies relating to wages, bonus and other incentive schemes.
- œ Labour reforms are of great important as the laws enacted in the labour market aim at regulating the market, protecting employment and ensuring social security of workers.
- > Trade Union Act, 1926 provide that any

● ANALYSIS

Problems of Labour Market in India

- œ Indian labour market is characterised by a sharp dichotomy.
 - > Organised sector is stringently regulated while the unorganised sector is virtually free from any outside control and regulation with little or no job security.
 - > Wages are 'too high' in the organised sector and 'too low', even below the subsistence level in the unorganised sector. This dualistic set up suggests how far the Indian labour market is segmented.
- œ Poor Social Security:
 - > Social security to organised labour force in India is provided through a variety of legislative measures.
 - > Workers of small unorganised sector as well as informal sectors remain outside the purview of these arrangements.
- œ Multiplicity of Archaic Labour Laws
 - > Labour Laws govern trade unions, industrial relations, and job security
 - > Labour is a concurrent subject and more than 40 Central laws more than 100 state laws govern the subject.

œ Trade Union Issues:

- seven employees could form a union.
- > During the freedom struggle, Indian trade union contributed handsomely. It is now better organized.
- > **Frequent Strikes:** Industrial Disputes Act, 1947 aims at promoting good relations between employers and workmen, protecting workers against retrenchment and settling disputes through conciliation, arbitration or adjudication. However, industrial relations climate were far from satisfactory when trade unions resorted to militancy in the 1960s and early 1970s. Between 1972 and 1981, the average number of work days lost per year per employee in the manufacturing sector stood at 4.070. This figure went up to 5.736 between 1982 and 1992—a very high figure compared to other countries in the contemporary period.
- > Multiplicity of trade unions hamper dispute resolution.
- > In ter-union rivalry and political rivalries are considered to be the major impediments to have a sound industrial relation system in India.
- > Indian labour laws are highly protective of labour, and labour markets are relatively inflexible. As usual, these laws are applicable in the organised sector only.

œ Rigid Laws:

- > India's labour laws for the workers in the organised sector give workers permanent employment, of course, after a probation period ranging from 6 months to 2 years.
- > Job security in India is so rigid that workers of large private sector employing over 100 workers cannot be fired without government's permission.

œ Unskilled labour

- > Lack of enough skilled workers is a common concern raised by the employers in defence of their inability to hire more.
- > They resort to contract employment
- > They adopt hire and fire policy.

œ Gender gap

- > Low female labour force participation

- > 71% of men above 15 years are a part of the workforce as compared to just 22 percent women (Labour Force Survey)
- œ Low labour Productivity:
 - > Promotions are based on seniority and thus workers get fixed annual wage increments unrelated to work performance.
 - > The labour market policies followed in India in the past have led to serious problems due to low labour productivity even in the context of an economy where the firms were shielded from both international competition (by the very high import tariffs) and domestic competition (by the licensing policies).
- œ This, in turn, created an inefficient and internationally uncompetitive industrial sector which eventually led to lower wages (for example, Indian wages in the manufacturing sector are only seventh the Singaporean wages), fewer jobs, and higher unemployment.
- œ Labour market regulations operating since 1947 have tended to discourage both the growth of employment and productivity. Further, it has pushed many activities into the unorganised sector. This is evident from the fact that annual growth rate of employment in the unorganised sector was much higher (2.73 p.c.) than the organised sector (1.58 p.c.) during 1981-91.

Agenda for labour Reforms

- œ Consolidation and simplification of numerous States' and Centre labour laws
- œ Streamlining of Minimum Wages in the country and ensuring they reach the beneficiaries.
- œ Introduction of fixed term employment, to curb tendency for employing (socially insecure) contract labour.

Steps Taken by Government

- œ Four Labour Codes aims at simplification, amalgamation and rationalisation of Central Labour Laws
- œ Child labour (prohibition and Regulation) Amendment Act, 2016 provides complete ban on employment of children below 14 years of age.
- œ Maternity Benefit Amendment Act, 2017 has increased paid maternity leave from 12 weeks to 26 weeks
- œ The 2nd National Commission of labour had recommended simplification, amalgamation and rationalisation of Central Labour Laws. The central government is compressing of 44 central labour laws into four 'codes' or broad categories — wages, social security, industrial relations and occupational health and safety.

Labour Codes on wages Bill, 2019

œ Need

- > It arises in the absence of statutory National Minimum Wage for different regions, which impedes the economic prospect.
- > It seeks to consolidate laws relating to wages by replacing- Payment of Wages Act, 1936; Minimum Wages Act, 1948; Payment of Bonus Act, 1965 and Equal Remuneration Act, 1976.

œ Key Features

- > The Code will apply to any industry, trade, business, manufacturing or occupation including government establishments.
- > Wages include salary, allowance, or any other component expressed in monetary terms. This will not include bonus payable to employees or any travelling allowance, among others.
- > It differentiates the central and State Jurisdiction in determining the wage related decision for establishment such as Railways Mines and oil fields.
- > A concept of statutory National Minimum Wage for different geographical areas has been introduced. It will ensure that no State Government fixes the minimum wage below the National Minimum Wages for that particular area as notified by the Central Government.

œ Concerns

- > The definition of worker is not clear in the Wage Code Bill.
- > The calculation of the level of minimum wage by an expert committee is at variance with ILO parameters.
 - . A 'national minimum wage' is a good idea, but its computation is cause for concern. Instead of a single national minimum wage, the bill proposes multiple minimum wage structure at different geographical zones.
 - . The economic survey 2018-19 had also mentioned that a national mandatory minimum wage is a requirement.

Labour Code on Industrial relations, 2019

œ Need

- > It aims to create greater labour market flexibility and discipline in labour – to improve upon ease of doing business and also to encourage entrepreneurs to engage in labour-intensive sectors.
- > It would replace three laws i.e. Trade Unions Act, 1926; Industrial Employment (Standing Orders) Act, 1946 and the Industrial Disputes Act, 1947.

œ Key Features

- > It seeks to allow companies to hire workers on fixed-term contract of any duration.
- > The code has retained the threshold on the worker count at 100 for prior government approval before retrenchment, but it has a provision for changing 'such number of employees' through notification. This provision has been criticized sharply by the labour groups and trade unions as any notification may change it later.
- > It also provides setting up of a two-member tribunal (in place of one member) wherein important cases will be adjudicated jointly and the rest by a single member, resulting speedier disposal of cases.
- > It has vested powers with the government officers for adjudication of disputes involving penalty as fines.
- > Introduces a feature of 'recognition of negotiating union' under which a trade union will be recognized as sole 'negotiating union' if it has the support of 75% or more of the workers on the rolls of an establishment.
- > As several trade unions are active in companies, it will be tough for any one group to manage 75% support, hence taking away their negotiating rights. In such a case, a negotiating council will be constituted for negotiation.
- > Underlines that fixed-term employees will get all statutory benefits on a par with the regular employees who are doing work of the same or similar nature.
- > Under the code, termination of service of a worker on completion of tenure in a fixed-term employment will not be considered as retrenchment.
- > Proposes setting up of a "re-skilling fund" for training of retrenched employees. The retrenched employee would be paid 15 days' wages from the fund within 45 days of retrenchment.
- > While this means workers can be hired seasonally for six months or a year it also means that all workers will be treated at par with regular workers for benefits.

œ Concerns

- > The Industrial Relations Code of 2019 has evoked strong reactions, as the right to form unions and accord them powers of representation has been severely curtailed.
- > It provided that a minimum of 10% of workers or 100 workers employed in an establishment or industry would be needed - from seven at present - to register a trade union.

Labour Code on Social Security & Welfare, 2017

œ Need

- > Almost 90% of the current workers are not covered under any social security.
- > The current thresholds for wage and number of workers employed for a labour law to be applicable creates tenacious incentives for the employers to avoid joining the system which results in exclusions and distortions in the labour market.

œ Key Features

- œ Definition of employee and categorization of workers covers all kinds of employment including part-time workers, casual workers, fixed term workers, piece rate/ commission rated workers, informal workers, home-based workers, domestic workers and seasonal workers.
- œ A proper percentage-based structure for contribution, vis-à-vis socio economic category and minimum notified wage, has been put in place under the Code.
- œ It introduces new approaches to ensure a transparent and fair financial set up, such as,
 - > Time bound preparation of Accounts within six months of the end of the financial year;
 - > Provision for social audit of social security schemes by State Boards after every five years;
 - > Accounts of Intermediate Agencies to be subject to CAG Audit on the same lines as that of Social Security Organizations.
- œ Wage Ceiling and Income Threshold: The term 'wage ceiling' is for the purpose of determining a maximum limit on contribution payable; whereas the term 'income threshold' is for the purpose of enabling the government to provide for two different kind of schemes (for same purpose) for two different class of workers.
- œ Contribution Augmentation Funds would be established through which governments could contribute to the social security in respect of workers who are unable to pay contribution.
- œ National Stabilization Fund will be used for harmonizing the Scheme Funds across the country and will be managed by the Central Boards.

Labour Code on Occupational Safety, Health & Working Conditions, 2018

œ Need

- > The proposed code is the first single legislation prescribing standards for working conditions, health and safety of workers and it will apply on factories with at least 10 workers.

- > It will amalgamate 13 labour laws including the Factories Act, 1948; the Mines Act, 1952; the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996; the Contract Labour (Regulation and Abolition) Act, 1970 etc.

œ Key Features

- > Centre has been empowered to prescribe standards on occupational safety and health
- > Annual health check to be made mandatory in factories and its charge will be borne by the employers
- > Appointment letters for all workers (including those employed before this code), underlying their rights to statutory benefits
- > At least 50% of penalty levied on employers could go towards providing some relief to families of workers who die or are seriously injured while working
- > National Occupational Safety and Health Advisory Board at national level and similar bodies at state level, have been proposed to recommend standards on related matters.
- > Appointment of facilitators with prescribed jurisdiction for inspection, survey, measurement, examination or inquiry has been proposed
- > Mandatory license for every contractor who provides or intends to provide contract labour. Also, license is needed for industrial premises as well.

œ Concerns

- > "The Occupational Safety, Health and Working Conditions Code, 2019" is also being protested by trade unions for allegedly diluting workers' safety provisions instead of strengthening them.
- > All the central trade unions have expressed their displeasure and have demanded thorough consultation and recasting of the Code. They want it to be reviewed by the department-related Standing Committee of Parliament in consultation with them.

Way Forward

- œ Reforms should be made with consensus amongst workers and their unions, and employers and their associations. Trust between workers and employers should be increased.
- œ A national policy for domestic workers needs to be brought in at the earliest to recognise their rights and promote better working conditions.
- œ Apprenticeship should be promoted. The government should form National Apprenticeship Corp. by merging the Regional Directorate of Skill Development and the Entrepreneurship and Board of Apprenticeship Training to achieve the objective of training the 10 million apprentices and finding jobs through an exclusive job portal.

Need for labour Reforms

As per the World Bank, India's labour laws are among the most restrictive in the world

Mammoth numbers

There are over 200 laws related to labour in India

India has to urgently reform its British colonial-era labour laws to prevent its 'demographic dividend' from turning into a 'demographic disaster'

Context

Recently, Industrial Relations Code was introduced in the Parliamentary by Minister of Labour

More than 40 Central laws

More than 150 from the states

The urgency of reforms

Research done by several economists claims that labour reforms in India are a necessity for achieving employment growth

the labour laws are applicable only to the formal sector

Labour laws also restrict the growth of MSMEs

These laws often have overriding provisions and facilitate

inspector raj of the worst kind

These contractual workers do not have any security of tenure

Manufacturers do not invest in training of these workers as they are not permanent

As a result, the manufacturing companies prefer to hire contractual workers to get around the inflexible labour laws

The SMEs do not increase the scale of their operations so as to not come under the ambit of these convoluted laws

Hence, the tough labour laws ultimately lead to lower benefits to the labour class and affect the ease of doing business as well

Agenda for labour Reforms

Streamlining of Minimum Wages in the country and ensuring they reach the beneficiaries

Introduction of fixed term employment, to curb tendency for employing (socially insecure) contract labour

Consolidation and simplification of numerous States' and Centre labour laws

Child labour (prohibition and Regulation) Amendment Act, 2016 provides complete ban on employment of children below 14 years of age

Steps Taken by Government

Maternity Benefit Amendment Act, 2017 has increased paid maternity leave from 12 weeks to 26 weeks

Following the recommendations of the **2nd National Commission of labour**, the central govt is compressing 44 central labour laws into four 'codes'

Labour Code on Industrial relations

It aims to create greater labour market flexibility and discipline in labour – to improve upon ease of doing business and also to encourage entrepreneurs to engage in labour-intensive sectors

Labour Codes on wages

It arises in the absence of statutory National Minimum Wage for different regions, which impedes the economic prospect

Labour Code on Social Security & Welfare

This aims to address the concern that almost 90% of the current workers are not covered under any social security

Labour Code on Occupational Safety, Health & Working Conditions

The proposed code is the first single legislation prescribing standards for working conditions, health and safety of workers and it will apply on factories with at least 10 workers

Reforms should be made with consensus amongst workers and their unions, and employers and their associations

Way Forward

A national policy for domestic workers needs to be brought in at the earliest to recognise their rights and promote better working conditions

Apprenticeship should be promoted

The government should form National Apprenticeship Corp. by merging the Regional Directorate of Skill Development and the Entrepreneurship and Board of Apprenticeship Training to achieve the objective of training the 10 million apprentices and finding jobs through an exclusive job portal

CLIMATE CHANGE

CONTEXT

- The 16 year old climate activist, Greta Thunberg, was declared ‘person of the year’ by Time magazine. CoP 25 summit was held in Madrid, Spain in December 2019.

● **BACKGROUND:**

- œ **Climate Activism:** With Greta Thunberg creating more consciousness in the world against risks of climate change, there is an attitudinal change about the issue and world’s youth is leading the demand for action. Many youth climate activists have marched in streets across the world demanding their leaders to take action against climate.
- œ **Climate Conference 25 (Cop25):** CoP25 to UNFCCC was held in Madrid in December 2019 with the aim to finalise rules for the 2015 Paris climate accord, which required countries to limit global temperature rises to “well below” 2C above pre-industrial levels, and even further to 1.5C.
- œ **UN ‘emission gap’ assessment:** The UNEP released annual “emissions gap” assessment, according to which, the world is on track to being 3.2C warmer, and needs to cut carbon emissions by 7.6% each year, every year, until 2030 to hit 1.5C limit.
- œ **Cost of climate change:** Climate change could directly cost the world economy \$7.9 trillion by 2050 (3% of world GDP). In general, developing countries are less resilient to climate change than richer ones.

● **ANALYSIS:**

Evidence of climate change:

- œ **2010s hottest decade:** According to the UN, 2010s is the hottest decade in history as emissions are on the rise. Each of the last four decades has been hotter than the last. According to World Meteorological Organization (WMO), global temperatures are roughly 1C above pre-industrial average for 2019. WMO suggests an increase of 3-5C by the end of the century.
- œ **Climate related calamities:** Heat waves and floods which used to be ‘once in a century’ events are becoming more regular occurrences. Examples include:
 - > Deadly heat waves and drought in southern Europe, Australia and Japan
 - > Super storms in southeast Africa
 - > Wildfires in Australia, California, South America and eastern Siberia

- > Unusual Cyclonic conditions in the Indian ocean and Bay of Bengal
- œ **Permanent ecological damages:** Apart from calamity occurrences, climate change is causing permanent ecological damages. The can have devastating consequences for the environment and sustainability of the planet.
 - > Amazonian deforestation releasing carbon in atmosphere
 - > Ice vanishing from both poles, especially West Atlantic ice sheet
 - > Many rainforests turning to desert
 - > Rising sea levels flooding into interior of continents
 - > Irreversible loss of diversity among plants and animal
- œ **Ocean warming:** Healthy oceans absorb carbon and provide a buffer against climate chaos, so damage to them is damage to the climate, and vice versa. Oceans absorb 90% of additional heat in the atmosphere and they are heating up at an unprecedented scale.
 - > Oceans have absorbed 20-30% of anthropogenic CO₂, have undergone increased acidification, and loss of oxygen from the surface down to the depth.
 - > According to studies, rapid warming in Indo-Pacific is behind the change in global rainfall patterns.
- œ **Displacement:** Disasters rooted in climate change have forced 20 million people to leave their homes annually over the past decade. Pacific nations, especially low-lying islands like Fiji, are particularly vulnerable to tropical storms and rising sea-level caused by climate change. Given the risk submergence, they must consider displacement of populations living close to the sea. People are three times more likely to be internally displaced because of climate change than conflict.

Causes of climate change

- œ **Co₂ emission on rise:** According to the Global Carbon Project, CO₂ emissions are on rise by 0.6% in 2019 (2.1% in 2018). The reductions are not enough to stop global warming. Despite a significant decline in coal consumption in US and

Europe, the higher global emissions are attributed to growth in natural gas and oil usage.

- œ **Industrial heat:** Industrial products are essential to construction, infrastructure and manufacturing, but making them requires a lot of heat—heat that emits more carbon dioxide than all the world's cars and planes. Many industrial processes start with melting rocks by burning fossil fuels, and development of alternative technologies is far behind and expensive.
- œ **Land degradation:** Land degradation, mainly due to human activities like deforestation, mining/quarrying, construction, roads, other infrastructure for economic development, human settlements for increasing population, etc., is a contributing factor to climate change. Even agriculture and related activities are degrading land, including groundwater resources.
- œ **Meat consumption:** IPCC report 'Climate Change and Land' emphasises the ever-increasing global meat consumption and the resulting distorted land-use pattern to meet this requirement, as a cause contributing to climate change. The EAT-Lancet Commission report also supports this; it adds biodiversity loss, natural water depletion and carbon emission to the associated risks.
 - > Creating pastures to feed cattle causes huge deforestation. Processing, preservation and packaging of cattle slaughtered is also highly GHG-generation intensive process.
 - > Cattle itself is responsible for producing high quantities of methane, which has a far greater carbon footprint compared to carbon dioxide.
- œ **Disregard for ocean health:** Overfishing, plastic pollution, micro-plastics, flow of fertilisers and chemicals etc. is suffocating fish and damaging ocean health. More than 1 billion people depend on the oceans. Ocean health is vital to biodiversity, healthy fisheries and to regulate the climate.

New-age measures adopted/suggestions to control climate damage

- œ **Carbon markets:** Creation of 'carbon markets' under the Paris Agreement allows countries, or industries, to earn carbon credits for emission reductions they make in excess of what is required of them. These credits can be traded to the highest bidder in exchange of money. The buyers of carbon credits can show the emission reductions as their own and use them to meet their own emission reduction targets.
- œ **Climate- Neutral Europe:** In a 'Green Deal', Europe has vowed to become the first 'climate-neutral' continent by 2050, as it aims to eliminate its net discharges of greenhouse gases. This will be done through creating single set of definitions, to determine what economic activities are

sustainable and should count as green, in areas ranging from finance to design of cities.

- > Stricter emission limits for industries from cars to chemicals; revamped energy taxes; new rules on subsidies for companies; greener farming; and a possible environmental import tax.
- œ **Markets pricing carbon risks:** For long climate specialists warned about a "carbon bubble" in which markets ignore or massively undervalue the risks to companies from climate change. But latest studies suggest that especially since the Paris Agreement of 2015, financial markets have seriously started to factor in 'carbon risk premiums' in their price settings and valuation of stocks.
- œ **Carbon capture:** Carbon capture, use and storage (CCUS) is essential to reducing carbon emissions from heavy industry, especially cement and steel production. It is more affordable than most other option—far cheaper and more readily available than electrical heating or burning biomass.
 - > CCUS also supports production of one of the most viable and versatile low-carbon fuels: hydrogen.
 - > Low-carbon hydrogen is known as "blue" hydrogen.
 - > CCUS can create future opportunities for "green" hydrogen, made from zero-carbon electricity and water.
- œ **Shift to vegetarianism:** While the entire process of agricultural production also generates significant GHG, but there is scientific evidence that its carbon footprint is much less compared to meat production. A much less area of land is needed globally to feed the population if we to shift to a plant-based diet.
- œ **New Climate Economy:** Studies suggest that shifting to a low-carbon economy represents USD 26 trillion growth opportunity that could create 65 million new jobs by 2030. Today, the fastest-growing job creators in several economies are those related to solar, wind and geothermal energy and related businesses.

Kuznets Curve:

- Kuznets curve hypothesis postulates that climatic pressure increases up to a certain level as economic growth goes up, but after a threshold the relationship reverses. GDP is taken as a measure of growth.

Alternate measures of growth:

- . It is argued that it is impossible to achieve sustainable decision-making aiming at sustainable progress and economic well-being if welfare is being considered from a purely financial point of view. Alternate measures, instead of GDP, as proxy measures for growth:
- . Happy Planet Index by New Economics Foundation: based on factors such as life expectancy and ecological footprint per capita, and one subjective indicator 'life satisfaction'.
- . Economic Freedom Index by Heritage Foundation and Fraser Institute.
- . Genuine Progress Indicator (proposed in 1989) could be a superior measure to proxy the growth and well-being of individuals, primarily in the field of ecological economics. It is often debated that it

Japan are not on track to meet their NDC targets for 2030.

- œ Accumulated carbon credits: A carbon market already existed under the 1997 Kyoto Protocol (getting replaced by Paris Agreement in 2020). Several countries walked out of the Kyoto Protocol, resulting in lack of demand for carbon credits. Developing countries like India, China and Brazil had accumulated huge amounts of carbon credits, which are now in danger of getting redundant.
 - > Some countries want the accumulated carbon credits to remain valid under the new carbon market to be instituted. But developed countries are resisting this suggestion claiming that weak verification mechanisms under the Kyoto Protocol had allowed dubious projects to earn credits.

Where does India stand in the fight against climate change?

- œ India is also facing the brunt of climate change; with erratic monsoon, unusual rainfall, differing season patters, drought conditions, cyclonic disturbances, flash floods, rise in average temperatures, etc. Electricity generation is the largest source of carbon emissions in India, with 72% of electricity being generated by burning coal. India launched the National Solar Mission in 2010 and set up the International Solar Alliance (ISA) in 2015. Its current commitment to set up non-fossil fuel power in the country is 450 GW. India must also consider becoming net carbon neutral.

● **CONCERNS**

- œ Europe's Climate-neutral stand requires scrutiny: Europe will create standards for green investments, which will require its banks to back sustainable assets. But any capital relief for green assets must be based on clear evidence that they are less risky than non-green assets.
- œ China's international activity: China is financing construction of many new coal plants in other countries. China's reliance on coal can undo the positive work being done to address the issue; hence Chinese involvement is critical in fighting climate change.
- œ Non-meaningful action by countries: US has threatened to walk out of the Paris Agreement. UN's Production Gap report estimates that the world is on track to produce 150% more coal in 2030 than compliance limit. Some other countries are suggesting a Paris walkout. Climate action by three major fossil fuel producers, the US, Saudi Arabia, and Russia, is estimated to be critically insufficient. Seven large economies—the US, Brazil, South Korea, South Africa, Australia, Canada and

● **CONCLUSION**

- œ Climate change is outpacing humanity's ability to adapt to it. Since steps needed to address climate change are costly in the short run, governments, businesses, and individuals often make climate change someone else's problem. Governments must fulfil their national commitments made under various global treaties, businesses must become more responsible, and individuals must become more conscious of their carbon footprint. This is the only way to avert the looming climate crisis.

INDIA-CHINA DIPLOMACY STAND-OFF IN SOUTH ASIA

CONTEXT

- The global world order is changing, and increasing hinging on Asia as its axis. Both India and China want a share in it. In this context it is important to access the India-China diplomacy stand-off in South Asia.

● BACKGROUND

- œ India-China ties are not one-dimensional. There are structural problems in India-China ties — boundary dispute, Pakistan factor, and historical mistrust.
- œ A delicate balance: Even when Chinese and Indian militaries were in a standoff in Doklam at the India-China-Bhutan tri-junction in the Himalayas in 2017, both governments were careful enough not to let the situation spiral out of control.
 - > The Doklam incident was followed by the first Prime Ministerial level informal summit in Wuhan in 2018. Mamallapuram summit should also be seen against this background.
- œ Four constituents in the multidimensional India-China partnership that can take their ties to the next level:
- œ **1. Economic aspect:** China is keen to make investments in India, especially in building infrastructure and fifth generation technology architecture. India, on the other side, wants greater market access in China, and action by Beijing to address the trade imbalance. At the Wuhan summit, leaders agreed to India-China cooperation in projects in third world countries.
- œ **2. Multilateralism:** China's influence in both established international organizations like the UN and in the new institutions China is setting up, such as AIIB may hamper Indian interests and goals in multilateral forums. Both India and China see the unilateral world order in decline, and are champions of multilateralism. Security and stability in Asia is the common interest of both countries.
- œ **3. Negotiable Pakistan stand:** Last year, China agreed to Pakistan being placed on the FATF grey list, after India offered support for China's vice-chair push at the FATF. China also removed its technical hold on the declaration of Masood Azhar as an international terrorist. This shows that China can take a U-turn on its iron-friend, Pakistan, given India's diplomacy on international stage.
- œ **4. South Asia stand-off:** India must have a clear foreign policy stand with respect to China, of which there are two way:
 - > Competing with China for dominance of Asia.
 - > Focussing on its own rise, of which competition with China is a part.

● ANALYSIS:

Foreign policy strategy

- œ Foreign policy must factor in three geopolitical constituents— immediate neighbourhood, extended neighbourhood and great powers.
 - > An emerging power should stay focussed on building capacities while maintaining good ties with the neighbours, deep engagement with the extended neighbours and balancing between great powers.
- œ **Six potential strategic options with India towards China:** staying unaligned, hedging, building indigenous military power, forming regional partnerships, aligning with China, or aligning with the United States.

China in the neighbourhood

- œ **Defence outreach:** Back in 1980s and 1990s there was a Sino-Pak military axis; today even the defence forces of Bangladesh, Sri Lanka and Maldives have Chinese equipment.
- œ **Friendlier approach:** China is off late changing its hostile relationships with some neighbours to becoming friendlier. For example, with Philippines, Myanmar, Singapore, Japan and South Korea.
- œ **Soft loans:** China has been extending soft-loans to neighbouring nations to help them develop state of infrastructure. The downside of this has been countries being caught in a debt-trap, like in Sri Lanka and Maldives.
- œ **Concerns about China involvement:** China has only two real friends in the world: Pakistan and North Korea. Big and small nations are increasingly wary about Chinese intensions.
 - > Even in The Arctic Circle council, Greenland (Denmark) expressed deep distrust towards China's investment in its aviation sector.
- œ **Reorienting diplomacy:** China's 'major power

diplomacy' consists of four aspects: economic expansion, political penetration, "friendship" creation, and core interest protection.

China's argument

- œ **China's concern:** China has argued that India is trying to undermine China's efforts to maintain close ties with Nepal, Sri Lanka, Bhutan and other South Asian neighbours. According to China India

is uneasy about China's growing influence in the region.

- œ **Bhutan example:** India is one of crucial reasons why China and Bhutan, controlled by India economically and diplomatically, have not yet established diplomatic relations.
- œ **Indian media hype:** Whenever a top leader from India's neighbouring countries visits China, Indian media hypes that India is losing them or "China's emerging weight in South Asia will be New Delhi's new threat".
- œ **Shared neighbours:** Most of India's peripheral countries are also China's neighbours. Promoting stable relations with surrounding nations plays a vital role in any country's own domestic development.
- œ **Aid to regional development:** Sri Lanka and Nepal are looking forward to joint projects with China, given their poor infrastructure. It is inevitable for China to boost defence collaboration with them to protect not only China's, but also the region's interest.
- œ **Dalai Lama factor:** India in intensifying its communication with the Dalai Lama tries to display its strength and leverage in order to put pressure on or counterbalance China.

India's response

- œ **India is not concerned:** India is not worried over China's relation with its neighbours, and South Asian countries are free to have ties with any country including China.
 - > India's relationships with these countries are very strong; they are historical, with people-to-people contacts. For example, India and Nepal have open borders.
 - > India has no concerns about China's rise. In fact Bollywood films like Dangal become a huge hit in China, while Chinese phone maker Xiaomi became the largest mobile handset seller in India.
- œ **Sovereignty and territorial integrity:** India is willing to be part of projects, provided they are transparent, meet ecological and environmental standards, and do not violate the sovereignty and territorial integrity of a country.
 - > India objects to CPEC, which is a flagship project of BRI, because it violates India's sovereignty and territory integrity as it passes through the Pakistan-occupied Kashmir (PoK).
- œ **China's Quad concerns:** China's has concerns over the US, India, Japan and Australia quadrilateral grouping. India has never been a part of any alliance. Both India and China are too big to be part of any alliance; both have very independent domestic and foreign policies.

œ **India's presence in South Asia:** India has been supplying power to Bangladesh and Nepal, and is also working on prospects of a global electricity grid that may initially aim to link countries such as Myanmar, Thailand, Cambodia, Laos, and Vietnam with the sub-continent.

- > India's energy diplomacy initiatives include, supplying petroleum products and setting up liquefied natural gas (LNG) terminals.
- > It plans to develop power transmission links with Sri Lanka.

œ **Economic independence:** An important reason why India backed off from the RCEP was due to apprehensions over entry of Chinese goods in India through ASEAN route.

œ **China factor may wane in future:** China's economic engine has slowed to a 27-year low. Industrial output is below 2002 levels. Chinese economy is past its best growth years. China's working age population is also shrinking. In future, China may not be as big a contender in South Asia, leaving more space for India.

What does MEA budget show?

- œ Most important component of MEA budget over the years has been an aid to its immediate neighbours.
 - > Of these, Afghanistan and Bhutan consume a major chunk.
 - > Chinese inroads into Nepal, Myanmar, Bangladesh, Maldives and Sri Lanka require India to not only better its defence capabilities, but also developmental projects in these countries to ensure a higher level of Indian engagement and continued influence.
- œ Ministry of External Affairs (MEA) budget in the Union Budget was 0.1% of India's GDP in 2012-13, and declined to 0.08% in 2018-19.
- œ Other details:
 - > Allocation to BIMSTEC has increased, in the backdrop of a dysfunctional SAARC.
 - > On the soft power front, allocation to Nalanda University increased.
 - > Allocation to South Asian University fell.
 - > Allocation to Indian Council for Cultural Relations (ICCR) also fell.
 - > Chahbahar port and Seychelles were two areas of Indian aid of geo-strategic importance whose allocation declined.
 - > Aid allocation to Maldives's friendly new government increased significantly.
- œ India's diplomacy, implemented through MEA, needs a higher budget outlay for carrying out its geo-strategic objectives.

70 years of China: Why China moved ahead of India and what can we learn?

- œ **Common starting point:** China became a communist republic in 1949, the same year when India adopted its constitution. Both countries began rebuilding in 1950 - China under Mao Zedong and India under Pundit Jawaharlal Nehru.
 - > India adopted a socialist economic model where wealth creation and big private enterprise were not encouraged.
 - > Indian economy grew at around 3.5 per cent rate through the 1960s and 1970s while population grew in excess of 2.5 per cent.
- œ **China is ahead:** China is ahead of India in respect of the economy, military power, and technological progress and even in pollution control, while India is still considered an emerging power. Technically, China was a "poorer" country than India in terms of GDP per capita till as late as 1990. Now, in 2019, the Chinese per capita GDP is 4.6 times of India's.
- œ **Market economy:** In 1978, after Mao Zedong's death, China's new leadership began opening its economy.
 - > It invited foreign investment particularly in coastal areas making export-import easy.
 - > It created SEZs marked with better infrastructure and access to cheap labour for investors.
 - > The new regime started freeing agriculture from state control.
 - > It enforced one-child policy in order to control population explosion and utilise the demographic dividend.
- œ **Infrastructure:** China laid an excessive emphasis on investment in infrastructure. This provided employment to millions of people and improved their economic status and purchasing power, which was an essential ingredient for industrial progress.
 - > China still continues to invest heavily in infrastructure; as evident in its One Belt One Road (OBOR) initiative.
 - > Estimates suggest, India's average investment in infrastructure in the first 5 decade after Independence was 3% of GDP when it required 6.5%. While China invested nearly 9% of GDP in infrastructure when it could have done with 6.5%.
 - > Economic Survey 2019 found that investment was 27% lower than required. It called for an infra investment of 7-8% of GDP to make India a \$5 trillion economy by 2025.
- œ **Sectorial approach:** China has followed a 'sectoral approach' and took to building labour-intensive industries - like textile, light engineering and electronics - to rope in available cheap labour.

- œ **Military:** In 1962 India and China fought a war. China occupied Aksai Chin. Since then China has revamped and modernised its military while Indian forces are still organised on World War II model.
- œ **Energy:** Energy is the key to survival and progress of a country and conventional sources of energy - coal and oil - are limited. China is energy conscious, has made substantial shift to reduce its dependence on coal, and has emerged as the second-largest solar energy producer.
 - > China has aggressively pushed for use of electric vehicles - a step India is following.
 - > According to a WEF report, China has the largest number of electric vehicles and public charging points.
- œ **Access to sanitation:** 72.01% of the population had access to at least basic sanitation services in 2017. Compare this with the 77.49% of Chinese city dwellers with access to sanitation in 2000, or the 90.79% today.
- œ **Water:** India has about four times more freshwater than China, which is three times its size. But India is facing a bigger water problem today than China. India is the biggest puller of groundwater and the volume used surpasses that in China and USA combined.
 - > To overcome its water scarcity, China has been successful in teaching its farming community to use less water without compromising on agricultural productivity.
 - > China imposes hefty fines on industries and businesses which overuse groundwater or pollute rivers and ponds.
- œ **One flaw:** While China has made many strides in growth and development, its system of governance lacks appreciation of individual liberty as a human value and fundamental right. Current situation in Hong Kong is an example. India has fared much better in this aspect.

Conclusion and Take-away

- œ Many centuries ago in the 1600 and 1700s, both China and India were very important economic powers in the world. Both China and India are ancient civilizations. Despite contrasting forms of government, India and China have many aspects of governance and economic growth in common. Following the US approach, India should focus on its own rise and building capacities, not on conflicts and rivalries. At the same time, India should deepen its tactical engagement with the powerful China and learn from areas in which China has excelled. India should not be the focus of political debate of neighbouring nations. Relationship with India should be of a distinct character so that business with neighbouring nations does not depend on the party in power. Indian diplomacy should ensure bipartisan support across political spectrum; and unlike a situation where Bangladesh's loyalty hinges on a particular party being in power.

India-China diplomacy stand-off in South Asia

Context

The global world order is changing, and increasing hinging on Asia as its axis. Both India and China want a share in it and consequently involved in a diplomacy stand-off in South Asia

China is off late changing its hostile relationships with some neighbours to becoming friendlier

Friendlier approach

One belt one road initiative has strengthened Chinese strategic interests in many countries

OBOR

China's Strategic Approach

Defence outreach

Today even the defence forces of Bangladesh, Sri Lanka and Maldives have Chinese equipment

Soft loans

China has been extending soft-loans to neighbouring nations to help them develop state of infrastructure

Most important component of MEA budget over the years has been an aid to its immediate neighbours of which, Afghanistan and Bhutan consume a major chunk

On the contrary, in India, MEA budget in the Union Budget was 0.1% of India's GDP in 2012-13, and declined to 0.08% in 2018-19

This has left other neighbours relatively neglected

Chinese inroads into Nepal, Myanmar, Bangladesh, Maldives and Sri Lanka require India to not only better its defence capabilities, but also focus on developmental projects in these countries to ensure a higher level of Indian engagement and continued influence

India says that it is **not concerned over China's relations with neighbours** as India has its own strong relationships with most of these countries

India has been working with its neighbours like supplying power to Bangladesh and Nepal, supplying petroleum products and setting up LNG terminals, plans to develop power transmission links with Sri Lanka, etc

China's has concerns over the US, India, Japan and Australia quadrilateral grouping **but both India and China are too big to be part of any alliance**; both have very independent domestic and foreign policies

India's response to Chinese dominance

China's economic engine has slowed to a 27-year low and economy is past its best growth years. **In future, China may not be as big a contender in South Asia**, leaving more space for India

India is willing to be part of projects, provided they are transparent, meet environmental standards, and **do not violate the sovereignty and territorial integrity of a country**

An important reason why India backed off from the RCEP was due to **apprehensions over entry of Chinese goods** in India through ASEAN route

Economic Aspect

China is keen to make investments in India

India wants a greater market access in China and address trade imbalance

Negotiable Pakistan stand

China can take a U-turn on its iron-friend, Pakistan, given India's diplomacy on international stage (as seen from China's agreement to Pakistan being listed grey in FATF and declaration of Masood Azhar as international terrorist)

Way ahead for India-China engagement

South Asia stand-off

India must have a clear foreign policy stand with respect to China, of which there are two ways

Competing with China for dominance of Asia

Focussing on its own rise, of which competition with China is a part

Multilateralism

Both India and China see the unilateral world order in decline, and are champions of multilateralism → common grounds of cooperation need to be explored and acted upon

CITIZENSHIP AMENDMENT BILL, 2019

CONTEXT

- The Union Cabinet has cleared the Citizenship (Amendment) Bill that seeks to grant citizenship to non-Muslim refugees from Pakistan, Bangladesh and Afghanistan if they faced religious persecution there.
- The Act amends the Citizenship Act, 1955, in order to grant Indian nationality to Hindus, Sikhs, Buddhists, Jains, Parsis and Christians who come to India after facing religious persecution in Bangladesh, Pakistan and Afghanistan.

◎ ABOUT-

What is the Citizenship (Amendment) Act?

- œ The Act doesn't spell it out clearly, but the fact that it entitles Hindus, Sikhs, Buddhists, Jains, Parsis, and Christians facing religious persecution in the three nations, to seek Indian citizenship, highlights the exclusion of Muslims.
- œ This amendment is of the Citizenship Act, 1955 which requires the applicant to have resided in India for 11 of the previous 14 years. The amendment relaxes this requirement from 11 years to six years, for Hindus, Sikhs, Buddhists, Jains, Parsis, and Christians from the three nations.

How is citizenship acquired in India?

- œ In India, citizenship is regulated by the Citizenship Act, 1955. The Act specifies that citizenship may be acquired in India through five methods – by birth in India, by descent, through registration, by naturalisation (extended residence in India), and by incorporation of territory into India.

About Illegal Migrants-

- œ An illegal migrant is prohibited from acquiring Indian citizenship.
- œ An illegal immigrant is a foreigner who either enters India illegally, i.e., without valid travel documents, like a visa and passport, or enters India legally, but stays beyond the time period permitted in their travel documents.
- œ The Act provides that the following minority groups will not be treated as illegal migrants: Hindus, Sikhs, Buddhists, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan. However, to get this benefit, they must have also been exempted from the Foreigners Act, 1946 and the Passport (Entry into India) Act, 1920 by the central government.
- œ The Act says that on acquiring citizenship: (i) such persons shall be deemed to be citizens of India from the date of their entry into India, and (ii) all legal proceedings against them in respect of their illegal migration or citizenship will be closed.

- œ An illegal migrant can be prosecuted in India, and deported or imprisoned.

Provisions of the Act across the Country-

- œ The Act clarifies that the proposed amendments on citizenship to the specified class of illegal migrants will not apply to certain areas. These are:
 - œ (i) the tribal areas of Assam, Meghalaya, Mizoram, and Tripura, as included in the Sixth Schedule to the Constitution, and
 - œ (ii) the states regulated by the "Inner Line" permit under the Bengal Eastern Frontier Regulations 1873.
- œ These Sixth Schedule tribal areas include Karbi Anglong (in Assam), Garo Hills (in Meghalaya), Chakma District (in Mizoram), and Tripura Tribal Areas District.
- œ Further, the Inner Line Permit regulates visit of all persons, including Indian citizens, to Arunachal Pradesh, Mizoram, and Nagaland.

Issues surrounding the Act-

- œ The Act makes only certain illegal migrants eligible for citizenship.
- œ These are persons belonging to the six specified religious communities, from the three specified countries, who entered India on or before December 31, 2014, and do not reside in the Sixth Schedule areas or in the states regulated by the Inner Line Permit states.
- œ This implies that all other illegal migrants will not be able to claim the benefit of citizenship conferred by the Act, and may continue to be prosecuted as illegal migrants.
- œ Article 14 of the Constitution guarantees equality to all persons, citizens and foreigners, thus differentiating between people on the grounds of religion would be in violation of the constitution.
- œ The Act provides differential treatment to illegal migrants on the basis of (a) their country of origin, (b) religion, (c) date of entry into India, and (d) place of residence in India.
- œ The Act classifies migrants based on their country of origin to include only Afghanistan, Pakistan and

- Bangladesh. While the Statement of Objects and Reasons (SoR) in the Act reasons that millions of citizens of undivided India were living in Pakistan and Bangladesh, no reason has been provided to explain the inclusion of Afghanistan.
- œ The Act also creates further differentiation between the specified class of illegal migrants based on when they entered India (before or after December 31, 2014), and where they live in India (provisions not applicable to Sixth Schedule and Inner Line Permit areas). However, the reasons provided to explain the distinction is unclear.
 - œ Assam has a major problem regarding infiltration of Bangladeshi illegal immigrants. This Act does not consider Bangladeshi Hindus as illegal immigrants.

In context to Overseas Citizens of India-

- œ The Act also amends the provisions on registration of Overseas Citizens of India (OCI).
- œ OCI cardholders are foreigners who are persons of Indian origin.
- œ For example, they may have been former Indian citizens, or children of current Indian citizens.
- œ An OCI enjoys benefits such as the right to travel to India without a visa, or to work and study here. At present, the government may cancel a person's

OCI registration on various grounds specified in the Act.

- œ In case of a cancellation, an OCI residing in India may be required to leave the country.
- œ The Act adds another ground for cancelling OCI registration — violation of any law notified by the central government. However, the Act does not provide any guidance on the nature of laws which the central government may notify.

◎ CONCLUSION-

- œ The Citizenship Amendment Act has not been sitting well with the Assamese as it contradicts the Assam Accord of 1985, according to which illegal migrants heading in from Bangladesh after March 25, 1971, would be deported. Also, the Act has introduced religion as a new concept into the citizenship law. Thus, the proposed legislation has polarised the Northeast and triggered a process of social and political realignment in the entire nation. This whole situation undermines the secularity of India. As the Constitution of India rejects discrimination on the grounds of religion, the proposed law makes religion a new basis of identification. Hence, there is an urgent need for India to undertake a balancing act here.

WHY AUDIT OF MID-DAY MEAL SCHEME IS NEEDED?

CONTEXT

- The Union government is set to conduct an audit of mid-day meal programme across India, following the controversy surrounding the quality of food served in some schools in Uttar Pradesh.

◎ BACKGROUND

- œ The mid-day meal scheme is one of the largest school meal programmes in the world and caters to more than 91.2 million students across 1.13 million schools.
- œ A School in Uttar Pradesh served "roti and salt" to students. The district administration later filed a police complaint against journalist for reporting it in media and evoking wider criticism.
- œ However, it is not the first time that the mid-day meal scheme has got into controversy.
- œ It has been reported that various children have been hospitalized or died after consuming contaminated food. In July 2018, at least 30 students suffered food poisoning after having the mid-day meal in Delhi. In October last year, 45 children in Goa were hospitalized after having the mid-day meal. At least, 23 children had died in Bihar's Chhapra district in 2013 after consuming contaminated mid-day meal.
- œ In the wake of these issues the Union government is set to conduct an audit of mid-day meal programme across India.
- œ Malnutrition caused 69 per cent of deaths of children below the age of five in India, according to a UNICEF 2019 report. So Mid-Day Meal is of greater significance for India.

Mid-Day Meal Scheme - Facts

- Scheme covers all children studying in class I to VIII.
- The programme supplies free lunches on working days for children in primary and upper primary classes in government, government aided, local body, Education Guarantee Scheme, and alternate innovative education centres, Madarsa and Maqtabs supported under SSA and National Child Labour Project schools run by the ministry of labour.
- MDM is covered by National Food Security Act, 2013.

- Ministry/Department :** Department of School Education & Literacy, Ministry of Human Resource Development
- Objective:** To enhance, retention and attendance and simultaneously improving nutritional levels among children.

Factual Information:

- Started in 1995 as National Programme of Nutritional Support to Primary Education
- To achieve the above objectives, a cooked mid-day meal with the following nutritional content is provided to all eligible children.
- For Primary students:
 - > Calories 450
 - > Protein 12 gms
- For Upper Primary students:
 - > Calories 700
 - > Protein 20 gms
- Adequate quantities of micro-nutrients like Iron, Folic Acid and Vitamin-A.

◎ ANALYSIS

Issues with Mid-Day Meal Scheme

- œ Aim: The program aims to "enhance enrollment, retention and attendance and simultaneously improve nutritional levels among children." The program has the potential to end chronic malnutrition and starvation. However, the program has many issues which the government must immediately address.

Organizational problems:

- œ There are too many layers of government involved in the scheme, resulting in poor information, coordination and monitoring.
- œ A few examples of poor monitoring and coordination show the issues this scheme encounters. In July, 2013, 23 children from the Indian state of Bihar died as a result of unsafe food preparation.

- œ No special structure is there to look after the quality of food served, hygienic conditions and other aspects of the scheme.

Corrupt practices

- œ Rampant corrupt practices have been found from food procurement to distribution of hot cooked meals among children.
 - > A video showed plain chapatis being served with salt in a school.
 - > Another video revealed how a litre of milk was mixed with water so that it would suffice for the more than 80 children present that day in school.
 - > As per the government norms, every child is entitled to receive 150 ml of milk as part of the mid-day meal.

Social Discrimination

- œ Caste bias and discrimination continues in the implementation of the scheme
- œ It has been found in many schools that foods cooked by lower caste cooks were not eaten by children.
- œ Food is central to the caste system, so in many schools, children are made to sit separately according to their caste status.

Unhygienic issue

- œ There have been multiple incidents of unhygienic mid-day meals.
- œ Dead rats, worms, lizards and insects have been spotted in mid-day meals served at schools across India.
- œ Recently, the CAG found that schools in Punjab were noted to have no water testing, no use of gloves, and violation of prescribed menus.
- œ Children were made to wash utensils, despite the school having hired staff to do so

Fortification Issue

- œ Sub-standard food is served in many schools because there is not enough monitoring and accountability at the lower levels
- œ 85% of Indian children between the ages of 7 to 12 have high rates of micronutrients deficiencies (in iron, folic acid, Vitamin A). These can impair cognitive developments; impair concentration, cause school absenteeism and even illness. As successful pilot projects in Odisha have shown, staple essentials of Mid-Day meals like rice and wheat like can fortified with micronutrients. Micronutrient premixes can be added to cooked meals. These have shown success in reducing anaemia.

- œ However, fortification has only made its debut in some states like Karnataka instead of a pan-India rollout.

Irregular Food Supplies

- œ Constant food and fuel supplies are not provided to the schools
- œ It is also a difficult challenge to deliver food to rural areas. Roads are not paved and the infrastructure is lacking. Even if food makes it to these remote areas, kitchens to cook the food in are not available within the schools.

Problems faced by Teachers

- œ Teachers play a key role in the successful implementation of mid-day meal scheme at school level.
- œ Teachers face a number of problems such as problem of management of the mid-day meal, wastage of food by the students, insufficient and delayed receipt of funds, increased workload of teachers, procuring dry ration from the retail shops, lack of infrastructure for storage, cooking and serving food, lack of safety provisions, unhygienic surroundings, etc.

Lack of Documentation

- œ A record of what students eat is not maintained.
- œ In some regions, one can see the daily menu painted on the school wall.
- œ Writing letters to authorities and documenting the gap between the painted menu and what is actually served might be a great activity.

Other issues

- œ Other issues range from delayed payments, poor food quality, cooks not receiving pay and food being wasted. There is even embezzlement of the money by way of fake enrollments.
- œ The scheme is perceived as charity, not a civic responsibility. With the growing shift of the better-off parents to private schools, government schools are viewed as places for the poor. Therefore, the mid-day meal is associated with poverty both in public perception and state policies.

Achievements of Mid-day Meal Scheme

- œ Increased Enrollment and Attendance: The meal scheme is generally a successful one as it has led to "increased enrollment in schools, increased attendance in schools, improved performance of students in class in terms of better attention span and academic progress.
- œ Improved nutritional status of students: Studies have found that the scheme reduced the daily

protein deficiency of a primary-school student by 100 percent, the calorie deficiency by almost 30 percent and the daily iron deficiency by nearly 10 percent.

œ There is a dramatic fall in underweight and stunted

children (from 48 % to 39 % (2005-6 and 2013-

UNICEF's Executive Director's Letter – Hope and Worry

- . UNICEF's executive director Henrietta Fore recently wrote an open letter to the world's children.
- . It marked 30 years since the promulgation of children's rights by global consensus.
- . The letter listed eight reasons why she is worried and another eight why she is hopeful.
- . Reading the two lists, one will feel that there is a lot more to worry about than to feel hopeful about.
- . Coverage - The letter starts by acknowledging that poverty, inequality and discrimination still deny millions of children their rights.
- . Food and education are among them.
- . Then there are larger issues like the impact of conflicts, climate change, new technologies and their impact on the integrity of democratic procedures.
- . The concluding part of the letter is about children's loss of trust in institutions.
- . From fake news to divisive policy choices, the UNICEF chief's global letter evokes a wide range of local thoughts.
- . A whole new industry backed by public institutions is now handling the supply side of public demand for moral training during the formative years of life.
- . UNICEF must be aware that some of its sister agencies in the UN system are actively involved in the emerging neuroscience of ethics.
- . One cannot charge fake news alone for waylaying the young.

Suggestions

- œ To minimize the layers in the governance of the Mid-Day Meal scheme for effective Implementation and effective accountability mechanisms.
 - > Monitoring & Accountability Model: Committee of parents to audit food quality and other issues
 - > Audit reports to be discussed in PRIs

- œ To institute automated monitoring systems for the midday meals supply, via apps, SMS, email or whatsapp.
- œ The civil society, government and concerned citizens should work in a coherent manner to produce tangible results.
- œ Instead of the school teachers being involved with every aspect of Mid Day Meal, from shopping to tasting, a separate person should be engaged as Mid Day Meal incharge at cluster level under the scheme for maintaining records and making purchases.
- œ Funds and food supply should be given at regular intervals to the schools to avoid discontinuation of Mid Day Meal Scheme or financial burden over teachers. Provision of advance payment should be made.
- œ Mechanism should be evolved to monitor the schools in far-flung and mountainous areas so that the benefits of the scheme can reach really to the needy population.
- œ Cook-cum-helpers should be given awareness about hygienic conditions. They should be paid well so that they work with motivation and commitment and should be trained for hygiene and desirable cooking practices.
- œ Storage and other hygiene facilities should be provided in the schools
- œ Provision of hand wash should be made available in each school for students so that they can learn hygiene.
- œ Seasonal fruits, milk, egg, green leafy vegetables and vitamin rich foods should be added to the menu to meet the nutritional needs of the students.

CONCLUSION

- œ Recent data released by UNICEF and the Global Health Database shows that in 2015 around 33 percent of Indian children were malnourished. India currently has more malnourished children than sub-saharan Africa and half of all child deaths are a result of malnutrition.
- œ Hopefully nonprofits and the government can work together to improve and perfect the Mid-Day Meal Scheme, as India's children definitely need it and can benefit from its proper implementation as the program has the potential to end chronic malnutrition and starvation.

The program aims to “enhance enrollment, retention and attendance and simultaneously improve nutritional levels among children.”

Achievements

Increased Enrollment and Attendance

Improved nutritional status of students

However, the program has many issues which the govt must immediately address:

Audit

Context

The Union govt is set to conduct an audit of mid-day meal programme across India, following the controversy surrounding the quality of food served in some schools in UP

There are too many layers of government involved in the scheme, resulting in poor information, coordination and monitoring

No special structure is there to look after the quality of food served, hygienic conditions and other aspects of the scheme

Other issues range from delayed payments, poor food quality, cooks not receiving pay and food being wasted. There is even embezzlement of the money by way of fake enrollment

Organisational issues

Irregular Food Supplies

Constant food and fuel supplies do not reach many schools, especially in rural areas

Administrative

Lack of Documentation

A record of what students eat is not maintained at many places, resulting in lack of accountability

Issues with the scheme

Rampant **corrupt practices** have been found from food procurement to distribution of hot cooked meals among children

Social Discrimination
Caste bias and discrimination continues in the implementation of the scheme

Quality of Food

Unhygienic Conditions

There have been multiple incidents of unhygienic mid-day meals

Fortification

Sub-standard food is served in many schools because there is not enough monitoring and accountability at the lower levels. Proper fortification of food is sorely missing

Cook-cum-helpers should be made aware about hygienic conditions and given incentives

Provision for hand wash should be made available in every school

Storage and other hygiene facilities should be provided in the schools

maintaining hygiene

Mechanism should be evolved to monitor the schools in far-flung and mountainous areas so that the benefits of the scheme can reach really to the needy population

Suggestions

Seasonal fruits, milk, egg, green leafy vegetables and vitamin rich foods should be added to the menu to meet the nutritional needs of the students

for effective implementation and accountability mechanisms

Committee of parents could audit food quality and other issues

Audit reports should be discussed in PRIs

Funds and food supply should be given at regular intervals

SECTION: B
(PRELIMS)
CURRENT AFFAIRS

HDI 2019 REPORT

● **CONTEXT**

- Recently, Human Development Report 2019 says that India is home to 28% of world's poor.

● **ABOUT**

- The annual HDI 2019 report, ranked India at the 129th position, one rank above last year's ranking, out of a total 189 countries.
- India remains the home to 28 percent of global poor. About 41 per cent of the world's poor live in South Asia.
- Between 1990 and 2018, India's HDI value increased by 50 per cent (from 0.431 to 0.647), which places it above the average for countries in the medium human development group (0.634) and above the average for other South Asian countries (0.642).
- This means that in the last three decades, life expectancy at birth in India increased by 11.6 years, whereas the average number of schooling years increased by 3.5 years. Per capita incomes increased 250 times.
- The report finds that despite progress, group-based inequalities persist on the Indian subcontinent, especially affecting women and girls.
- While Singapore has the region's lowest incidence of intimate partner violence against women, the report states that a staggering 31 per cent of women in South Asia have experienced intimate partner violence.
- India is only marginally better than the South Asian average on the Gender Development Index (0.829 vs 0.828), and ranks at a low 122 (of 162) countries on the 2018 Gender Inequality Index.
- The report states that as the number of people coming out of poverty is increasing, the world is veering towards another type of poverty. The old inequalities were based on access to health services and education whereas the next generation of poverty is based on technology, education and climate, according to the report.
- The report ranked countries after analysing reduction in absolute poverty, gains in life expectancy, education, and access to health care.
- India has both types of poverty. Even as Indians continue to face a lack of access to healthcare and education, many others are becoming poor based on the new criteria.

What is HDI?

- The underlying principle of the HDI, considered path breaking in 1990, (created by Pakistani economist Mahbub ul Haq) is elegantly simple: National development should be measured not only by income per capita, but also by health and education achievements.
- The HDI is the composite measure of every country's attainment in three basic dimensions:
 - œ Standard of living measured by the gross national income (GNI) per capita.
 - œ Health measured by the life expectancy at birth.
 - œ Education levels calculated by mean years of education among the adult population and the expected years of schooling for children.
- This index makes it possible to follow changes in development levels over time and to compare the development levels of different countries.
- Additional indices have been developed to capture other dimensions of human development to identify groups falling behind in human progress and to monitor the distribution of human development.
- In 2010 three indices were launched to monitor poverty, inequality and gender empowerment across multiple human development dimensions
 - œ The Multidimensional Poverty Index (MPI),

- œ The Inequality-adjusted Human Development Index (IHDI)
- œ The Gender Inequality Index (GII).

Human Development Dashboard

Quality of human development

Quality of health

- . India lost 13.9% in total life expectancy as health expectancy in 2016.
- . There were only 7.6 physicians per 10,000 people in the period 2007-17 falling behind Pakistan who have a better physician to people ratio with 9.8 physicians for every 10,000 people.
- . There are only 7 beds for every 10,000 people in India where a smaller nation like Nepal have 50 beds for every 10,000 people and has a lot to catch up with international standard.

Quality of education

- . There is only one teacher in primary schools for every 35 pupil in India falling in the bottom tercile. International model standard comes up to somewhere 15-18 pupils per children.
- . Only 70% teachers in primary schools are trained to teach in Indian schools.

Quality of standard of living

- . 77.5% of the employed people are engaged as unpaid family workers and own account workers.
- . 77.6% of the rural population had access to electricity in 2016.
- . 87.6% of the total population was using improved drinking water sources in 2015, with only 44.2 % people having access to improved sanitation facilities in 2015.

HEAVY METALS CONTAMINATING INDIA'S RIVERS

◉ CONTEXT

- Recently, the Central Water Commission (CWC) has reported that the samples from two-thirds of the water quality stations spanning India's major rivers have a heavy metal contamination problem.

◉ ABOUT

- According to the Report, samples taken from two-thirds of water quality stations on major rivers revealed the presence of a heavy metal (or in some cases more than one) beyond limits specified by the Bureau of Indian Standards.

Key Points-

- . The Central Water Commission (CWC) has collected a total of 442 surface water samples, of which 287 were found to be polluted by heavy metals.
- . The exercise was limited to surface water and did not cover groundwater contamination.
- . The most common heavy metal found was iron, and above safe limits in 156 samples.
- . Lead, nickel, chromium, cadmium and copper were the other metals.
- . The CWC study covered 67 rivers in 20 river basins, and across three seasons.
- . According to the report, Arsenic and zinc are the two toxic metals whose concentration was always obtained within the limits throughout the study period.
- . For other metals, contamination levels changes with the season.

- For instance, iron contamination was persistent through most of the Ganga during monsoon but dipped significantly during the non-monsoon periods.

Concerns-

- Over the last few decades, the concentration of these heavy metals in river water and sediments has increased rapidly.
- The report suggested increased monitoring of these levels.
- The report has held "population growth and rise in agricultural and industrial activities" responsible for the contamination.
- While some amount of metals in drinking water is normal and even required, if the level goes beyond the set limits it can lead to a range of diseases.
- Long-term exposure can lead to "progressing physical, muscular, and neurological degenerative processes that mimic Alzheimer's disease, Parkinson's disease, muscular dystrophy and multiple sclerosis.
- India's 42 rivers have at least two toxic heavy metals beyond the permissible limit.
- This is worrying because a majority of Indians still use water directly from rivers for their domestic use.
- With an increase in population, the pressure on these rivers will only increase.
- According to the report, mining, milling, plating and surface finishing industries are the main sources of heavy metal pollution and the concentration of such toxic metals has increased rapidly over the past few decades.
- Consequently, concentrations of toxic metals in grains and vegetables grown in contaminated soils have increased at alarming rates.
- This poses a serious threat to humans and the environment because of its toxicity, non-biodegradability and bioaccumulation.

Measures-

- Quality of water should be monitored at least four times a year.
- All the toxic metallic elements like chromium and its other associated heavy metals coming from the tanneries, mining and other industries should be treated chemically and biologically before such wastes find their way to River.

NATIONAL CLEAN AIR PROGRAMME

● **CONTEXT**

- Minister of Environment, Forest and Climate Change has launched National Clean Air Programme (NCAP) as a long-term, time-bound, national-level strategy to tackle the air pollution problem across the country in a comprehensive manner.**

● **ABOUT**

- The government is targeting to achieve 20 per cent to 30 per cent reduction in Particulate Matter PM10 and PM2.5 concentrations by 2024 keeping 2017 as the base year for the comparison of concentration.
- The government is targeting to achieve 20 per cent to 30 per cent reduction in Particulate Matter PM10 and PM2.5 concentrations by 2024 keeping 2017 as the base year for the comparison of concentration.
- Under NCAP, 102 non-attainment cities have been identified based on ambient air quality data for the period 2011 - 2015 and WHO report 2014 - 2018.
- The city-specific Action Plans have been prepared and approved for ground implementation for all 102 non-attainment cities.

About National Clean Air Programme

- . India is committed to clean environment and pollution free air and water. In fact, it is mandated in our constitution.
- . The Air (Prevention and Control of Pollution) Act, 1981, was enacted under Art. 253 of the Constitution to implement the decisions taken at the United Nations Conference on Human Environment held at Stockholm in June 1972, in which India participated.
- . In order to address the issue, Government has undertaken many significant steps which inter-alia includes:
 - œ Notification of National Ambient Air Quality Standards and sector specific emission and effluent standards for industries;
 - œ Setting up of monitoring network for assessment of ambient air quality;
 - œ Introduction of cleaner gaseous fuels like CNG, LPG etc and ethanol blending;
 - œ Launching of National Air Quality Index (AQI);
 - œ Universalization of BS- IV for vehicles by 2017;
 - œ Leapfrogging from BS-IV to BS-VI standards for vehicles by 1st April, 2020;
 - œ Banning of burning of biomass;
 - œ Promotion of public transport network;
 - œ Pollution Under Control Certificate;
 - œ Issuance of directions under Air (Prevention and Control of Pollution) Act, 1981;
 - œ Installation of on-line continuous (24x7) monitoring devices by 17 highly polluting industrial sectors.
 - œ Ban on bursting of sound emitting crackers between 10 PM to 6 AM.
 - œ Notification of Graded Response Action Plan for Delhi and NCR identifying source wise actions for various levels of air pollution, etc.

OCEAN DEOXYGENATION

● CONTEXT

● ABOUT

- **Marine life, fisheries increasingly threatened as the ocean loses oxygen – IUCN report**
- International Union for Conservation of Nature (IUCN) has released a report titled "Ocean deoxygenation: Everyone's problem".
- . The report is the largest peer-reviewed study so far into the causes, impacts and possible solutions to ocean deoxygenation; and was released by IUCN at COP25 to the UNFCCC.
- . With this report, the scale of damage climate change is wreaking upon the ocean has come into stark focus. As the warming ocean loses oxygen, the delicate balance of marine life is thrown into disarray.
- . Large areas of the open ocean are increasingly threatened with low levels of dissolved oxygen. It is harming marine ecosystems which were already under stress from ocean warming and acidification.
- . The potentially dire effects on fisheries and vulnerable coastal communities make the decisions taken at the UN Climate Change Conference (CoP25) even more crucial.
- . "To drive action towards restoring ocean health" is one of the key themes of IUCN World Conservation Congress in Marseille in 2010.

What is the problem?

- . Ocean deoxygenation is one of the most pernicious, yet under-reported side-effects of human-induced climate change.
- . Oxygen loss from warming of oceans has alarming consequences for global oceanic oxygen reserves, which have already reduced by 2% over a period of just 50-years (from 1960 to 2010).
- . Ocean regions with low oxygen concentrations are expanding, with around 700 sites worldwide now affected by low oxygen conditions – up from only 45 in the 1960s.
 - œ In the same period, volume of anoxic waters – areas completely depleted of oxygen – in the global ocean has grown four times.
- . If situation continues as is, the ocean is expected to lose 3–4% of its oxygen inventory globally by the year 2100.
 - œ But impact witnessed at the local level will be far more severe compared to that seen on average at the global level.
 - œ For example, impact will be more severe in mid to high latitudes.
 - œ Most of the losses are predicted to be concentrated in upper 1000m of the water column, which is the richest in marine biodiversity.

What are the causes?

- . The primary causes of deoxygenation are:
 - œ Eutrophication (increased nutrient run-off from land and sewage pollution).
 - œ Nitrogen deposition from burning of fossil fuels.
 - œ Widespread impacts from ocean warming.
- . Ocean oxygen loss is closely related to ocean warming and acidification caused by anthropogenic carbon dioxide emissions and biogeochemical consequences related to anthropogenic fertilization of the ocean.
- . As the ocean warms, its water hold less oxygen and become more buoyant, resulting in reduced mixing of oxygen-rich water near the surface with the ocean depths, which naturally contain less oxygen.
- . Nutrient pollution causes oxygen loss in coastal waters. Fertiliser, sewage, animal and aquaculture waste cause excessive growth of algae, which in turn deplete oxygen as they decompose.

What is the impact?

- . The loss of oxygen from world's ocean is increasingly threatening fish species and disrupting ecosystems.
- . Deoxygenation is starting to alter the balance of marine life , favouring low-oxygen tolerant species (e.g. microbes, jellyfish and some squid) at the expense of low-oxygen sensitive ones (many marine species, including most fish).
- . Some of the ocean's most productive biomes – which support one fifth of the world's wild marine fish harvest – are formed by ocean currents carrying nutrient-rich but oxygen-poor water to coasts that line the eastern edges of the world's ocean basins.
 - œ As naturally oxygen-poor systems, these areas are particularly vulnerable to even small changes in ocean oxygen.
 - œ Impacts here will ultimately ripple out and affect hundreds of millions of people.
- . Species groups such as tuna, marlin and sharks are particularly sensitive to low oxygen because of their large size and energy demands.
 - œ These species are starting to be driven into increasingly shallow surface layers of oxygen-rich water, making them more vulnerable to overfishing.

- Very low ocean oxygen can also affect basic processes like the cycling of elements crucial for life on Earth, such as nitrogen and phosphorous.

What should be done?

- There is urgent need to dramatically raise our ambitions to tackle climate change, before human actions irreparably impact and change the conditions favourable for life on earth.
- To curb ocean oxygen loss alongside other disastrous impacts of climate change, world leaders must commit to immediate and substantial emission cuts.
- There is need to decisively curb greenhouse gas emissions as well as nutrient pollution from agriculture and other sources.

INTERNATIONAL CIVIL AVIATION DAY

◎ **CONTEXT**

◎ **ABOUT**

- **International Civil Aviation Day** was established in 1994 as part of ICAO's 50th anniversary activities.
- In 1996, pursuant to an ICAO initiative and with the assistance of the Canadian Government, the United Nations General Assembly officially recognized 7 December as International Civil Aviation Day in the UN system.
- The purpose of International Civil Aviation Day is to help generate and reinforce worldwide awareness of the importance of international civil aviation to the social and economic development of States, and of the unique role of ICAO in helping States to cooperate and realize a truly global rapid transit network at the service of all mankind.
- For 2015-2018 inclusive the Council has selected the following theme: "Working Together to Ensure No Country is Left Behind".

Chicago Convention:

- The Chicago Convention (also known as the Convention on International Civil Aviation), established the International Civil Aviation Organization (ICAO), a specialized agency of the United Nations charged with coordinating and regulating international air travel.
- The Convention establishes rules of airspace, aircraft registration and safety, and details the rights of the signatories in relation to air travel; it also exempts air fuels from tax.
- The Convention was signed by 52 states on 7 December 1944 in Chicago, Illinois, U.S., and came into effect on 4 April 1947.
- The Convention provided for the sovereignty of airspace above the territory of each state, together with five freedoms (later expanded to nine by the addition of four unofficial freedoms) which govern the freedom of states to operate air transport flights (including the carriage of passengers, cargo and mail) across, into and within the airspace of other states.

Freedom	Description
1 st	Right to overfly a foreign country without landing
2 nd	Right to refuel or carry out maintenance in a foreign country
3 rd	Right to fly from one's own country to another
4 th	Right to fly from a foreign country to one's own
5 th	Right to fly between two foreign countries during flights which begin or end in one's own

6 th	Right to fly from one foreign country to another one while stopping in one's own country
7 th	Right to fly between two foreign countries while not offering flights to one's own country
8 th	Right to fly between two or more airports in a foreign country while continuing service to one's own country
9 th	Right to fly inside a foreign country without continuing service to one's own country

RISAT-2BR1

◎ **CONTEXT**

- India placed a spy satellite, **RISAT-2BR1**, and nine customer satellites in orbit on Polar Satellite Launch Vehicle's (PSLV) 50th mission.

◎ **ABOUT**

- IRISAT-2BR1 is a synthetic-aperture radar (SAR) imaging satellite for reconnaissance built by Indian Space Research Organisation (ISRO).
- It is part of India's RISAT series of SAR imaging space crafts and 4th satellite in the series.
- RISAT-2BR1 was launched in December 2019 aboard PSLV-C48 from First Launch Pad of Satish Dhawan Space Centre.
- It was the 50th launch of Polar Satellite Launch Vehicle (PSLV) and 75th launch from Satish Dhawan Space Centre.
- RISAT-2BR1 usage: Apart from being used for military purposes, RISAT-2BR1 has applications in fields such as agriculture and disaster management support.

Technical details

- The RISAT-2BR1 is follow on to RISAT-2B and has an X-band SAR with unfurl-able radial rib reflector antenna of 3.6 meter diameter.
- It can operate in different modes including Very High Resolution imaging modes of 1m x 0.5m resolution and 0.5m x 0.3m resolution with swath of 5 to 10 km.
- Mass: 628 kg
- Orbit: 557 km (circular) at inclination of 37°
- Mission life: 5 years

About the launch

- RISAT-2BR1 was launched with nine other ride-sharing commercial satellites.
- Launch vehicle used was QL variant of PSLV with four PSOM-XL strap-ons, and employed a 195 kg Dual launch Adapter (DLA) to accommodate primary and secondary payloads.
- After flight of 16 minutes 27 seconds, RISAT-2BR was separated from PSLV fourth stage (PS4) and injected into 576 km circular orbit with 37° inclination.
- After primary payload, DLA-Upper and subsequently nine other co-passenger satellites were separated.
- RISAT-2BR1 deployed its solar panels within 3 minutes after separation.

About Secondary payloads

- Nine commercial ridesharing satellites weighed 157.6 kg cumulatively. These customer satellites included six from United States, and one each from Japan, Italy and Israel:

- œ QPS SAR-1 "Izanagi" by iQPS.
- œ Four Lemur-2 cubesats by Spire Global.
- œ Duchifat-3 by Sha'ar Hanegav High School students built at Herzliya Science Center
- œ 1HOPSAT by Hera systems for Seguritech of Mexico.
- œ Tyvak-0129
- œ Tyvak-0092
- . The international satellites on board PSLV-C48 were for a range of applications.
 - œ The US satellites were for earth imaging, multi-mission remote sensing platform, and technology demonstration;
 - œ Japan's was for radar imaging earth observation;
 - œ Italy's for search and rescue;
 - œ Israel's for remote sensing.

About RISAT

- . RISAT 2B, RISAT 2BR1 and RISAT 2BR2 (Radar Imaging Satellite) are satellite imaging missions of ISRO using an active SAR (Synthetic Aperture Radar) imager to provide continuity of service for RISAT-2.
- . Objective of the RISAT mission is to use the all-weather and day-and-night SAR observation capability in applications such as agriculture, forestry, soil moisture, geology, sea ice, coastal monitoring, object identification, and flood monitoring, and also for military surveillance.

Other significant PSLV launches

- . Chandrayaan-1, the Mars Orbiter Mission (MOM) and a record launch of 104 satellites in one go.
- . In the last 26 years, PSLV has had five variants with the carrying capability increased to 1.9 tonnes from 850 kg. This vehicle has so far lifted a total of 52.7 tonnes of which 17% is customer satellites.
- . The PSLV will soon be used in a mission to the sun.
- . PSLV has proven its capability repeatedly with international clients queuing up to put their smaller satellites into orbit using the launch vehicle. PSLV trip is far more affordable than those on launch vehicles of other countries.
 - œ Between 1994 and 2019, the PSLV launched 50 Indian satellites and 222 foreign satellites for over 70 international customers from 20 countries.
- . The first PSLV launch (PSLV-D1) back in 1993 had failed to place the IRS-1E satellite into orbit. After that, it's been a road to success.
- . In November 2019, PSLV-C47 launched Cartosat-3 and 13 commercial nano-satellites.

ANGLO-INDIANS - NOMINATION QUOTA AND HISTORY

◎ CONTEXT

- Recently, Parliament passed the Constitution (126th Amendment) Bill, extending reservation for SC/STs but doing away with the provision for nomination of Anglo Indians to Lok Sabha and some state Assemblies.

● **ABOUT**

- Article 331 of the Constitution Provides for nomination of two Anglo-Indians to Lok Sabha. It says: "Notwithstanding anything in Article 81, the President may, if he is of opinion that the Anglo-Indian community is not adequately represented in the House of the people, nominate not more than two members of that community to the House of the People." The 126th Amendment does away with this.
- The idea of such nominations is traced to Frank Anthony, who headed the All India Anglo-Indian Association. Article 331 was added in the Constitution following his suggestion to Jawaharlal Nehru.
- Article 333 deals with representation of the Anglo-Indian community in Legislative Assemblies. It says: "Notwithstanding anything in Article 170, the Governor of a State may, if he is of opinion that the Anglo-Indian community needs representation in the Legislative Assembly of the State and is not adequately represented therein, [nominate one member of that community to the Assembly]."
- Currently 14 Assemblies have one Anglo-Indian member each: Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand and West Bengal. The 126th Amendment does away with this as well.
- According to the 10th Schedule of the Constitution, Anglo-Indian members of Lok Sabha and state Assemblies can take the membership of any party within six months of their nomination. But, once they do so, they are bound by their party whip. The Anglo-Indian members enjoy the same powers as others, but they can not vote in the Presidential election because they are nominated by the President.

Who are Anglo-Indians?

- The Anglo-Indian community in India traces its origins to an official policy of the British East India Company to encourage marriages of its officers with local women.
- The term Anglo-Indian first appeared in the Government of India Act, 1935.
- In the present context, Article 366(2) of the Constitution Of India states: "An Anglo-Indian means a person whose father or any of whose other male progenitors in the male line is or was of European descent but who is domiciled within the territory of India and is or was born within such territory of parents habitually resident therein and not established there for temporary purposes only..."

STATE-WISE ENUMERATION

West Bengal	9
Odisha	4
Chhattisgarh	3
Maharashtra	16
Andhra Pradesh	62
Karnataka	9
Kerala	124
Tamil Nadu	69

(Source: All India Anglo Indian Association)

- According to 2011 Census there are only 296 people who identified themselves as belonging to the sect Anglo Indian. However, All India Anglo Indian Association contested the data and asserts that there are many more Anglo-Indians in the country.

Who are the Anglo-Indians nominated to Lok Sabha over the years?

- Henry Gidney made it to the Central Legislative Assembly under the Special Interests/ Anglo-Indian category in the 1920, 1923, 1926, 1930, and 1934 elections.
- Frank Anthony got nominated to Lok Sabha in 1952, 1957, 1962, 1967, 1971, 1980, 1984 and 1991. A E T Barrow came close to him with seven tenures — in 1951-1952, 1957, 1962, 1967, 1977, 1980, 1984. Marjorie Godfrey was nominated in 1971. In 1977, Rudolph Rodrigues replaced Anthony.
- Joss Fernandez and Paul Mantosh were nominated by the Janata Dal government headed by V P Singh in 1989.

- . The Congress government led by P V Narasimha Rao nominated Robert E Williams in 1991. Sheila F Irani had a brief stint from 1995 to 1996. Neil O'Brien and Hedwig Rego also had brief tenures of two years, from 1996 to 1998. Beatrix D'Souza and Neville Foley, both of the Samata Party, led by George Fernandes, were nominated in 1998. D'Souza continued in 1999 too, but Foley was dropped to make way for Denzil B Atkinson of the BJP.
- . When the Congress-led UPA came to power, Ingrid McLeod got the nomination twice, in 2004 and 2009. Francis Fanthome came in to the Lok Sabha in 2004 and Charles Dias, a civil servant, in 2009. The BJP-led government of Narendra Modi brought in George Baker, an actor, and Richard Hay, a teacher from Kerala, in 2014.
- . In 2014 the NDA government nominated George Baker, an actor, and Richard Hay, a teacher from Kerala. In the current Lok Sabha the two seats still empty.

Conclusion

- . The All India Anglo-Indian Association has contested the population figures given by 2011 census. 296 number is very low and how come there can be nominated members in Assemblies when the census shows no Anglo-Indians in those states. There is urgent need to relook into the issue and find out the actual population of the community. There was no need to end the nomination to the Lok Sabha and the state Assemblies of Anglo Indians if they were not fairly represented.

CREAMY LAYER PRINCIPLE IN SC, ST QUOTA FOR PROMOTION

◎ CONTEXT

- Recently, government has sought review of SC judgment that creamy layer should be applied to SC/ST.

◎ ABOUT

- The union government has called upon the Supreme Court to form a seven judge Bench to reconsider the formulation in M. Nagaraj vs Union of India (2006) that creamy layer should be applied to the SC and ST communities.
- . The Supreme Court in M. Nagaraj v. Union Of India 2006 case while upholding the constitutional validity of Art 16(4A) held that any such reservation policy in order to be constitutionally valid shall satisfy the following three constitutional requirements:
 - œ The SC and ST community should be socially and educationally backward.
 - œ The SC and ST communities are not adequately represented in Public employment.
 - œ Such reservation policy shall not affect the overall efficiency in the administration.
- . In Jarnail Singh vs Lachhmi Narain Gupta case of 2018, Supreme Court holds that reservation in promotions does not require the state to collect quantifiable data on the backwardness of the Scheduled Castes and the Scheduled Tribes.
- . The Court held that creamy layer exclusion extends to SC/STs and, hence the State cannot grant reservations in promotion to SC/ST individuals who belong to the creamy layer of their community.
- . In May 2019 the Supreme Court upheld the Karnataka law that allows reservations in promotions for SCs and STs with consequential seniority.

Centre's Arguments against the Extension of Creamy layer concept to SC and ST

- . While the Centre has accepted that the 'creamy layer' norm is needed to ensure that only those genuinely backward get reservation benefits, it is justifiably upset that this principle has been extended to Dalits, who have been acknowledged to be the most

backward among the backward sections.

- Another problem is the question whether the exclusion of the advanced sections among SC/ST candidates can be disallowed only for promotions. Most of them may not fall under the 'creamy layer' category at the entry level, but after some years of service and promotions, they may reach an income level at which they fall under the 'creamy layer'. This may result in the defeat of the object of the Constitution amendments that the court itself had upheld to protect reservation in promotions as well as consequential seniority. Another landmark verdict in the history of affirmative action jurisprudence may be needed to settle these questions.

Historical background

- William Hunter and Jyotirao Phule in 1882 originally conceived the idea of caste-based reservation system.
- The reservation system that exists today, in its true sense, was introduced in 1933 when British Prime-Minister Ramsay Macdonald presented the 'Communal Award'.
- The award made provision for separate electorates for Muslims, Sikhs, Indian Christians, Anglo-Indians, Europeans and the Dalits.
- After long negotiations, Gandhi and Ambedkar signed the 'Poona Pact', where it was decided that there would be a single Hindu electorate with certain reservations in it.
- After independence, initially reservations were provided only for SCs and STs.
- OBCs were included in the ambit of reservation in 1991 on the recommendations of the Mandal Commission.
- In the Indra Sawhney Case of 1992, the Supreme Court while upholding the 27 percent quota for backward classes, struck down the government notification reserving 10% government jobs for economically backward classes among the higher castes.
- Supreme Court in the same case also upheld the principle that the combined reservation beneficiaries should not exceed 50 percent of India's population.
- The concept of 'creamy layer' also gained currency through this judgment and provision that reservation for backward classes should be confined to initial appointments only and not extend to promotions.
- Recently, the Constitutional (103rd Amendment) Act of 2019 has provided 10% reservation in government jobs and educational institutions for the "economically backward" in the unreserved category.
- The Act amends Articles 15 and 16 of the Constitution by adding clauses empowering the government to provide reservation on the basis of economic backwardness.
- This 10% economic reservation is over and above the 50% reservation cap.

Conclusion

- Reservation for SC, ST and OBC is a positive discrimination and is step towards inclusive development of the country. However, excluding the creamy layer from marginalized groups will be in favour of the principle of equality.

DATA PROTECTION BILL, 2019

◎ CONTEXT

- The Personal Data Protection Bill, 2019 has been introduced in Lok Sabha by the Minister of Electronics and Information Technology, Mr. Ravi Shankar Prasad, on December 11, 2019.
- The Bill seeks to provide for protection of personal data of individuals, and establishes a Data Protection Authority for the same.

● **ABOUT**

- The Personal Data Protection bill, drafted by a panel headed by a former Supreme Court judge and submitted to the government last year, is key for how firms including global tech giants Amazon, Facebook, Alphabet's Google and others process, store and transfer Indian consumers' data.
- Broad guidelines on collection, storage and processing of personal data, consent of individuals, penalties and compensation, code of conduct and an enforcement model is likely to be a part of the law.
- Personal data is data which pertains to characteristics, traits or attributes of identity, which can be used to identify an individual.
- The Bill categorises certain personal data as sensitive personal data. This includes financial data, biometric data, caste, religious or political beliefs, or any other category of data specified by the government, in consultation with the Authority and the concerned sectoral regulator.

Applicability:

- The Bill governs the processing of personal data by:
 - œ government,
 - œ companies incorporated in India, and
 - œ foreign companies dealing with personal data of individuals in India

About data fiduciary-

- A data fiduciary is an entity or individual who decides the means and purpose of processing personal data. Such processing will be subject to certain purpose, collection and storage limitations.
- For instance, personal data can be processed only for specific, clear and lawful purpose. Additionally, all data fiduciaries must undertake certain transparency and accountability measures such as:
 - œ implementing security safeguards (such as data encryption and preventing misuse of data), and
 - œ instituting grievance redressal mechanisms to address complaints of individuals. They must also institute mechanisms for age verification and parental consent when processing sensitive personal data of children.

About the Rights of the individual-

- The Bill sets out certain rights of the individual (or data principal). These include the right to: (i) obtain confirmation from the fiduciary on whether their personal data has been processed, (ii) seek correction of inaccurate, incomplete, or out-of-date personal data, (iii) have personal data transferred to any other data fiduciary in certain circumstances, and (iv) restrict continuing disclosure of their personal data by a fiduciary, if it is no longer necessary or consent is withdrawn.

Why companies are worried?

- The proposed law may have a considerable impact on MNCs operating in India, whether with or without a physical presence, due to its data localisation requirements and cross-border data transfer restrictions.
- The Reserve Bank of India had, in April last year, issued a data localisation directive, mandating all authorised payment system operators and banks to store payment systems data only in India.
- This led to various ambiguities in the requirements as well as industry pushback on the strict requirements imposed, especially by global payment companies.

Grounds for processing personal data-

- The Bill allows processing of data by fiduciaries only if consent is provided by the individual. However, in certain circumstances, personal data can be processed without consent.

- These include: (i) if required by the State for providing benefits to the individual, (ii) legal proceedings, (iii) to respond to a medical emergency.

Data Protection Authority-

- The Bill sets up a Data Protection Authority which may:
 - œ take steps to protect interests of individuals,
 - œ prevent misuse of personal data, and
 - œ ensure compliance with the Bill.
- It will consist of a chairperson and six members, with at least 10 years' expertise in the field of data protection and information technology. Orders of the Authority can be appealed to an Appellate Tribunal. Appeals from the Tribunal will go to the Supreme Court.

Conclusion-

- The Bill amends the Information Technology Act, 2000 to delete the provisions related to compensation payable by companies for failure to protect personal data. The central government may direct data fiduciaries to provide it with any: (i) non-personal data and (ii) anonymised personal data (where it is not possible to identify data principal) for better targeting of services.

INTERNATIONAL FINANCIAL SERVICES CENTRES AUTHORITY BILL, 2019

◎ CONTEXT

- **International Financial Services Centres Authority Bill, 2019 was introduced in Lok Sabha by Union Finance Minister.**

◎ ABOUT

- The Bill provides for the establishment of an Authority to develop and regulate the financial services market in the International Financial Services Centres in India.
- Key features of the Bill include:
 - œ It will apply to all International Financial Services Centres (IFSCs) set up under the Special Economic Zones Act, 2005.
 - œ It sets up the International Financial Services Centres Authority (IFFSCA)
 - œ Composition:
 - > IFFSCA will consist of nine members, appointed by the central government.
 - > Members of the Authority will include: (i) the Chairperson, (ii) one member each to be nominated from the Reserve Bank of India (RBI), the Securities and Exchange Board of India (SEBI), the Insurance Regulatory and Development Authority of India (IRDAI), and the Pension Fund Regulatory and Development Authority (PFRDA), (iii) two members from among officials of the Ministry of Finance, and (iv) two members to be appointed on the recommendation of a Search Committee.
 - > Members will have a term of three years, subject to reappointment.
- Functions of the Authority:
 - œ To regulate financial products (such as securities, deposits or contracts of insurance), financial services, and financial institutions which have been previously approved by any appropriate regulator (such as RBI or SEBI), in an IFSC.
 - œ It will follow all processes which are applicable to such financial products, financial services, and financial institutions under their respective laws.

- œ The appropriate regulators are listed in a Schedule to the Bill and include the RBI, SEBI, IRDAI, and PFRDA. The central government may amend this schedule through a notification.
- œ Regulating any other financial products, financial services, or financial institutions in an IFSC, which may be notified by the central government, and recommending any other financial products, financial services, or financial institutions to the central government, which may be permitted in an IFSC.
- . The Bill sets up the International Financial Services Centres Authority Fund. The following items will be credited to the Fund: (i) all grants, fees and charges received by the Authority, and (ii) all sums received by the Authority from various sources, as decided by the central government. The Fund will be used for: (i) salaries, allowances and other remuneration of members and employees of the Authority, and (ii) expenses incurred by the Authority. Further, the central government may provide grants to the Authority for the regulation of IFSCs.
- . The IFFSCA will constitute a Performance Review Committee to review its functioning. The Review Committee will consist of at least two members of the Authority. It will review whether: (i) the Authority has adhered to the provisions of the applicable laws while exercising powers or performing functions, (ii) the regulations made by the Authority promote transparency and best practices of governance, and (iii) the Authority is managing risks to its functioning in a reasonable manner. The Committee must submit a report of its findings to the Authority at least once every year.
- . As per the Bill, all transactions of financial services in IFSCs will be in such foreign currency as specified by the Authority, in consultation with the central government.

What is International Financial Services Centre?

- . An international financial services centre caters to customers outside the jurisdiction of domestic economy, dealing with flows of finance, financial products and services across borders.
- . Gujarat International Finance Tec-City Co. Ltd is being developed as the country's first international financial services centre (IFSC)

What are the services an IFSC can provide?

- . Fund-raising services for individuals, corporations and governments
- . Asset management and global portfolio diversification undertaken by pension funds, insurance companies and mutual funds
- . Wealth management
- . Global tax management and cross-border tax liability optimization, which provides a business opportunity for financial intermediaries, accountants and law firms.
- . Global and regional corporate treasury management operations that involve fund-raising, liquidity investment and management and asset-liability matching
- . Risk management operations such as insurance and reinsurance
- . Merger and acquisition activities among trans-national corporations

What does an IFSC require?

- . IFSCs such as Dubai International Financial Centre and Shanghai International Financial Centre, which are located within SEZs, have six key building blocks:
- . Rational legal regulatory framework
- . Sustainable local economy
- . Stable political environment
- . Developed infrastructure
- . Strategic location
- . Good quality of life

Should an IFSC be located within an SEZ?

- . Since India has many restrictions on the financial sector, such as partial capital account convertibility, high SLR (statutory liquidity ratio) requirements and foreign investment restrictions, an SEZ can serve as a testing ground for financial sector reforms before they are rolled out in the entire nation.
- . Apart from SEZ-related incentives, as per the SEZ Act, there is an exemption from the securities transaction tax levied under Section 98 of the Finance Act, 2004, in case taxable securities transactions are entered into by a non-resident through an IFSC.

Why are banks taking up space in the GIFT SEZ?

- . Commercial banks are allowed to open offshore banking units (OBUs) within SEZs, which are deemed as overseas branches. Such OBUs can trade in foreign currencies in overseas markets and also with Indian banks, raise funds in foreign currency as deposits and borrowings from non-resident sources and provide loans and liability products for clients. State Bank of India set up its first OBU at Santacruz Electronics Export Processing Zone in Mumbai, in 2003.

Need for and the benefits of a unified authority

- . **Multiple regulators:** Currently, the banking, capital markets and insurance sectors in IFSC are regulated by multiple regulators, i.e. RBI, SEBI and IRDAI.
- . The dynamic nature of business in the IFSCs necessitates a high degree of inter-regulatory coordination. It also requires regular clarifications and frequent amendments in the existing regulations governing financial activities in IFSCs.
- . The development of financial services and products in IFSCs would require focussed and dedicated regulatory interventions.

Conclusion

- . Therefore, the bill providing a unified financial regulator for IFSCs in India would provide world class regulatory environment to financial market participants. This is also essential from an ease of doing business perspective.

PRIME MINISTER VAN DHAN YOJANA

● **CONTEXT**

- **Minister of State for Tribal Affairs will be announcing 100 Days achievements of 'Prime Minister Van Dhan Yojana'.**

● **ABOUT**

- TRIFED under Ministry of Tribal Affairs is going to forge a partnership with Ritu Beri Designs to promote Indian tribal crafts and culture across the country and the world.
- . Ms. Beri will be the Chief Design Consultant for Tribes India.
- . Pradhan Mantri Van Dhan Yojana (PMVDY) is a Market Linked Tribal Entrepreneurship Development Program for forming clusters of tribal SHGs and strengthening them into Tribal Producer Companies has been launched with participation from all the 27 States from the Country.

Additional information about Prime Minister Van Dhan Yojana

- . The Van Dhan Scheme is an initiative of the Ministry of Tribal Affairs and TRIFED.
- . It was launched in 2018 and seeks to improve tribal incomes through value addition of tribal products.
- . The scheme will be implemented through Ministry of Tribal Affairs as Nodal Department at the Central Level and TRIFED as Nodal Agency at the National Level.

- . At State level, the State Nodal Agency for MFPs and the District collectors are envisaged to play a pivot role in scheme implementation at grassroot level.
- . Locally the Kendras are proposed to be managed by a Managing Committee (an SHG) consisting of representatives of Van Dhan SHGs in the cluster.

The Tribal Cooperative Marketing Development Federation of India Limited (TRIFED)

- . TRIFED is engaged in marketing development of tribal products and provides marketing support to the products made by tribals through a network of retail outlets.
- . It is indulged in capacity building trainings of tribal handicraft artisans and tribal people engaged in the collection of Minor Forest Produce like Honey, Gum Karaya, Mahuwa Flower, Lac Cultivation and Dona Pattal making etc., with the ultimate objective of increasing their income and ensuring sustainable economic development.
- . It has following four main activities
 - > Retail Marketing Development Activity
 - > MFP Marketing Development Activity
 - > Vocation Training, Skill Upgradation and Capacity Building of ST Artisans and Minor Forest Produce (MFP) Gatherers
 - > Research & Development/Intellectual Property Right (IPR) Activity.

WORLD MALARIA REPORT, 2019

◎ **CONTEXT**

- **Despite a dip in cases, India still one of the worst-hit countries.**

- . **While Africa and India saw the maximum dip in malaria cases between 2017 and 2018, they still accounted for 85 per cent deaths.**

◎ **ABOUT**

- The World malaria report 2019 provides a comprehensive update on global and regional malaria data and trends.
- . The report tracks investments in malaria programmes and research as well as progress across all intervention areas: prevention, diagnosis, treatment, elimination and surveillance.
- . It also includes dedicated chapters on the consequences of malaria on maternal, infant and child health, the “High Burden to High Impact” approach as well as biological threats to the fight against malaria.
- . The 2019 report is based on information received from more than 80 countries and areas with ongoing malaria transmission.

Findings in the report-

- . Nineteen countries in sub-Saharan Africa and India accounted for 85 per cent of the global malaria burden in 2018. Globally 228 million malaria cases were reported in 2018, which is marginally lower than the number of cases in 2017 (231 million), as per the World Malaria Report 2019 released by the World Health Organization.
- . India registered a fall of 2.6 million malarial cases in 2018 as compared to previous year. The country also has one of the lowest funding per person at risk of being inflicted with malaria at just US\$0.2.
- . Despite being the highest burden country in the South-East Asia region, India showed a reduction in reported cases of 51 per cent compared to 2017 and of 60 per cent compared to 2016.

- Although cases continue to decrease in the public sector, estimates indicate that there are still gaps in reporting from the private sector and those seeking treatment in India, as in Myanmar and Indonesia. The estimated burden of malaria, the WHO report says is 6.7 million while only 4 million cases were reported in 2018.
- India, Indonesia and Myanmar accounted for 58 per cent, 21 per cent and 12 per cent of the total reported deaths in the region, respectively.

Major Challenges-

- In the South-East Asia region, the major challenges remain decreased funding, treatment failures and vector resistance to pyrethroids, the insecticides used against the vectors.
- The biggest region of concern for the WHO is the African region as it contributes 93 per cent cases to the global burden. This region also accounted for 94 per cent of all malarial deaths.
- Malaria is mostly caused by Plasmodium falciparum and Plasmodium vivax parasites mainly. India accounted for a little less than half (47 per cent) of malaria caused by P vivax. Globally P. vivax, caused 7.5 million malarial cases. More than half (53 per cent) were found to be in South-East Asia.

Way Ahead-

- WHO says more and more countries are on the verge of eliminating malaria. As many as 49 countries reported fewer than 10 000 such cases, up from 46 countries in 2017 and 40 countries in 2010.
- The number of countries with fewer than 100 indigenous cases—a strong indicator that elimination is within reach—increased from 17 countries in 2010 to 27 countries in 2018.
- South Africa had reported a five-fold increase in the number of malaria between 2016 and 2017. In 2018, the cases declined by 57 per cent. There are multiple reasons for the increase in cases: improved diagnosis and reporting, inadequate vector control and climatic factors (in African region).

GENDER RELATED LAWS IN INDIA

● **CONTEXT**

- In Hyderabad, a 25 year old woman veterinarian was raped and murdered recently. Violence against women continues to be rampant in India.**

● **ABOUT**

- Types of crimes against women:** In 2017, according to NCRB report, majority of cases under crimes against women out of the total IPC crimes against women were registered under 'Cruelty by Husband or His Relatives' (33.2%), followed by 'Assault on Women with Intent to Outrage her Modesty' (27.3%), 'Kidnapping & Abduction of Women' (21%) and 'Rape' (10.3%).
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- Accused is no stranger:** Rape by known persons constitutes a large percentage of all the cases reported. The accused are often reported to be friends, online friends, employers, neighbours, were friends, partners or separated husbands of the victims.
- Domestic violence:** According to a National Family and Health Survey in 2005, total lifetime prevalence of domestic violence was 33.5% and 8.5% for sexual violence among women aged 15–49.
- Extent of effect:** A 2014 study in The Lancet report 8.5% prevalence of sexual violence in the country affects 27.5 million women in India, given India's large population. A survey carried out by the Thomson Reuters Foundation ranked India as the most dangerous country in the world for women.

- . **Conviction rates:** Conviction rate for rape cases in India was 44.3% in 1973 and 37.7% in 1983. It was 26.9% in 2009, and 32.2% in 2017. In metropolitan cities it was 27.2%.
- . **Most unsafe places:** NCRB data reveals that Uttar Pradesh, Maharashtra, West Bengal (in this order) is the most unsafe states for women in India, with the maximum number of crime against women.
- . **Delhi:** Delhi is often called out for being unsafe for women. According to Delhi Police, in 2018, five women were raped and eight were molested everyday on an average.

Constitutional Provisions for protection of women

- . **Article 14:** The Constitution of India guarantees the “right to equality” to women and prohibits unreasonable discrimination between persons.
 - œ Air India v. Nargesh Meerza case: The Supreme Court struck down regulations of Air India and Indian Airlines that provided that an airhostess would retire on attaining the age of 35 years, or on the first pregnancy, whichever was earlier.
- . **Article 15(1):** This article prohibits the state from discriminating on the basis of religion; race, caste, sex, or place of birth. Article 15(3) allows the state to make special provisions for women and children.
- . **Article 16:** It provides equality of opportunity for all citizens in matters relating to employment or appointment to any office under the State.
 - œ C. B. Muthamma v. Union of India case: The Supreme Court held that provision of service rules requiring a female employee to obtain permission of the government in writing before getting married, and denying her the right to be promoted on the ground of her being married, was discriminatory.
- . **Article 39 (a):** Urges the state to provide equal right to adequate means of livelihood to men and women. Article 39 (d) warrants equal pay for equal work for both men and women.
- . **Article 42:** In pursuance of Article 42, the Maternity Benefit Act was passed in 1961.
- . **Article 44:** Requires the state to secure for the citizens a uniform civil code throughout the territory of India.
- . **Article 51 A (e):** States that it is the duty of the citizens to renounce practices that are derogatory to the dignity of women.

Constitutional guarantees for participation in local government:

- . **Article 243-D(3):** One-third of total number of seats to be filled by direct election in every Panchayat shall be reserved for women.
- . **Article 243-D(4):** One-third of total number of offices of chairpersons in the Panchayats at each level shall be reserved for women
- . **Article 243-T(3):** One-third of total number of seats to be filled by direct election in every Municipality shall be reserved for women
- . **Article 243-T(4):** Offices of chairpersons in Municipalities shall be reserved for women in such manner as the State Legislature may provide.

Legal provisions for protection of women

- . Protection of Women from Domestic Violence Act (2005) is a comprehensive legislation. It also covers women who have been/are in a relationship with the abuser and are subjected to violence of any kind—physical, sexual, mental, verbal or emotional.
- . Immoral Traffic (Prevention) Act (1956) prevents trafficking in women and girls for the purpose of prostitution as an organised means of living.
- . Indecent Representation of Women (Prohibition) Act (1986) prohibits indecent representation of women through advertisements or in publications, writings, paintings, figures or in any other manner.
- . Commission of Sati (Prevention) Act (1987) provides for more effective prevention of the commission of sati and its glorification on women.

- . Dowry Prohibition Act (1961) prohibits the giving or taking of dowry at or before or any time after the marriage from women.
- . Maternity Benefit Act (1961) protects the employment of women during the time of her maternity and entitles her of a 'maternity benefit' – i.e. full paid absence from work – to take care for her child.
- . Medical Termination of Pregnancy Act (1971) provides for the termination of certain pregnancies by registered medical practitioners on humanitarian and medical grounds.
- . Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex Selection) Act (1994) prohibits sex selection and prevents the misuse of pre-natal diagnostic techniques for sex determination leading to female foeticide.
- . Equal Remuneration Act (1976) provides for payment of equal remuneration to both men and women workers for same work or work of a similar nature.
- . Dissolution of Muslim Marriages Act (1939) grants a Muslim wife the right to seek the dissolution of her marriage.
- . Muslim Women (Protection of Rights on Marriage) Act (1986) protects the rights of Muslim women who have been divorced by or have obtained divorce from their husbands. It makes all declaration of talaq, including in written or electronic form, to be void (i.e. not enforceable in law) and illegal.
- . Family Courts Act (1984) provides for establishment of Family Courts for speedy settlement of family disputes.
- . Indian Penal Code (1860) contains provisions to protect Indian women from dowry death, rape, kidnapping, cruelty and other offences.
- . Code of Criminal Procedure (1973) has safeguards for women like obligation of a person to maintain his wife, arrest of woman by female police and so on.
- . Indian Christian Marriage Act (1872) contain provisions relating to marriage and divorce among the Christian community.
- . Legal Services Authorities Act (1987) provides for free legal services to Indian women.
- . Hindu Marriage Act (1955) introduced monogamy and allowed divorce on certain specified grounds. It provided equal rights to Indian man and woman in respect of marriage and divorce.
- . Hindu Succession Act (1956) recognizes the right of women to inherit parental property equally with men.
- . Minimum Wages Act (1948) does not allow discrimination between male and female workers or different minimum wages for them.
- . Mines Act (1952) and Factories Act (1948) prohibits the employment of women between 7 P.M. to 6 A.M. in mines and factories and provides for their safety and welfare.
- . National Commission for Women Act (1990) provides for the establishment of a National Commission for Women to study and monitor all matters relating to the constitutional and legal rights and safeguards of women.
- . Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal). Act (2013) provides protection to women from sexual harassment at all workplaces both in public and private sector, whether organised or unorganized.
 - œ The Vishaka Guidelines were a set of procedural guidelines for use in India in cases of sexual harassment. They were promulgated by the Indian Supreme Court in 1997 and were superseded in 2013 by the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.
- . The Prohibition of Child Marriage Act, 2006 This act defines child marriage as a marriage where the groom or the bride are underage, that is, the bride is under 18 years of age or the boy is younger than 21 years.
- . Special Marriage Act, 1954 provides a special form of marriage in certain cases, provide for registration of certain marriages and, to provide for divorce. When people

from different faiths and caste chose to get married they do it under the Special Marriage Act.

- Indian Divorce Act, 1969 The Indian Divorce Act allows the dissolution of marriage, mutual consent, nullity of marriage, judicial separation and restitution of conjugal rights.

New legal provisions evolved to suit the changing nature of crimes

- Information and Technology Act (2008)
- The Protection of Children from Sexual Offences Act (2012)
- Child Labour (Prohibition and Regulation) Amendment Act (2016)
- Decriminalization of Gay Sex (Section 377-2018)
- Criminal Law (Amendment) Act (Death penalty for raping a minor- 2018).

India is also party numerous international human rights instruments in this regard;

- International Covenant on Civil and Political Rights, Economic, Social and Cultural Rights
- Convention on the Elimination of All Forms of Discrimination against Women
- International Convention on the Elimination of All Forms of Racial Discrimination
- Convention on the Rights of the Child
- Convention on the Rights of Persons with Disabilities

STATUS OF UNEMPLOYMENT OF WOMEN IN INDIA

◎ CONTEXT

- Recently the trends in Labour Force Participation Rate and unemployment in India were released through the Periodic Labour Force Surveys (PLFS). Women fare poorly. Other studies, like OECD Economic Survey also suggest similar trends.

◎ ABOUT

- Labour Force Participation Rate (LFPR):** Labour is considered a primary factor of production. LFPR is the sum of all workers who are employed or actively seeking employment, divided by the total working-age population (age group of 16-64).
- Unemployment rate is defined as the share of labour force that is jobless, expressed as a percentage. Workers are considered unemployed if they currently do not work, despite the fact that they are able and willing to do so. 6.1% of India's labour force and 17.8% of young people (15-29 years) in the labour force are unemployed.
- Unemployment trends for women in India:**
 - Only a quarter of the females in the country are either working or seeking jobs. Female LFPR is 23.3%.
 - Fall in LFPR was more for females than males.
 - The decline in LFPR for females was steeper in rural areas than urban.
 - Considerable wage gap between men and women; highest in Asia.
- OECD Economic Survey of India: The OECD survey found that India has the largest difference between employment rates of women and men among OECD nations at 52 percentage points.
 - Unemployment among young, educated women in urban areas is quite higher.
 - Employment gap between women and men is highest in the 15 to 29 years bracket.
 - Underemployment and poor job quality remain important issues.

- . Status in other countries: In China, 43.5% women are in the workforce, in Sri Lanka 34.5%, Bangladesh 29.5% and in India 24.3%, according to World Bank data.
- . Women in politics: India ranks 20th from the bottom in terms of representation of women in Parliament. Only 9% of MPs or MLAs are women. The 17th Lok Sabha has 14% women representation.

Educated unemployed women

- . According the recent NSSO survey, 2017-18, In India, more educated women are unemployed than before.
- . In urban areas unemployment among educated women was twice their male counterparts.
 - œ The rate went up to 19.8% in 2017-18 from 10.3% in 2011-12.
- . For rural educated women, unemployment stood at 17.3% in 2017-18 increasing sharply from 9.7 per cent in 2011-12.
- . It is mostly uneducated women in dire straits and in desperate need of an income who go out to work in farms as daily wage workers even when their wages are lower than a man's.
- . Parents on the other hand educate girls in order to find better matches for them in the marriage market.
- . 'Gender Inclusion in Hiring in India' Report: 8.7% of working-age urban, educated women in the country are unemployed but only 4% of comparable men find themselves without a job.

Reasons to Low Female Labour Force Participation (FLFP)

- . Structural, social and cultural factors contribute to low FLFP.
- . There is growing feminisation of agriculture tying women in this field due to socio-cultural restrictions, lack of alternate skills, and movement of men to cities away from agriculture.
- . Unpaid care and domestic work hours of Women in India are second highest in world.
- . Women in India do almost 10 times as much unpaid work as men.

Social barriers to women's mobility

- . There exist social barriers to women's mobility outside the house; it requires women to look for work with flexibility in timings and proximity to their households.
- . Social constructs also prevent women from engaging in paid labour in certain employment opportunities like in gas stations, as plumbers, carpenters etc., where men can easily find work.
- . Early age at marriage and child-birth is also a challenge to women joining the workforce.
- . In case of most rural women, the lack of opportunity and information, patriarchy and lack of training in special skills are standing in the way of their finding remunerative wage employment outside the home.

Conclusion

- . Half of India's working-age population is not contributing to any economic activity. This is a serious cause of worry because it essentially means that India is not fully utilising its demographic dividend advantage. Studies suggest that increasing female participation in the labour force could increase the Indian GDP by 27 per cent.

MISCELLANEOUS

CURRENT AFFAIRS

4th INDIA WATER IMPACT SUMMIT

- Ministry of Jal Shakti, Government of India and the Centre for Ganga River Basin Management and Studies (cGanga) led by IIT Kanpur organised the 4th India Water Impact Summit from 5-7 December 2019 at the Vigyan Bhawan, New Delhi.
- The Summit this year will focus on integrated water resources management in urban and rural settings in order to achieve the Government's goal of providing water to every household in the next 5 years.
- The Summit will also host the 2nd "Water Finance Forum", a special event within an event that will bring together global financial institutions and investors keen on investing in the rejuvenation of the largest environmental programme.
- This year's theme shall focus on Financing of High Impact Projects in the water sector.
- The technology showcase track promises to showcase the very best of water related solutions from around the world.
- Additional Tracks in the 2019 Summit are:
 - œ Water impact in smart cities
 - œ Water impact in rural areas | delivering on Jal Jeewan mission

AIM-SIRIUS DEEP TECHNOLOGY LEARNING, INNOVATION PROGRAMME

- The second phase of NITI Aayog's Atal Innovation Mission (AIM) and Russia's SIRIUS Deep Technology Learning and Innovation Programme 2019 in Sochi comes to an end as 25 Indian students returned today with best practices of contemporary innovation and entrepreneurship.
- SIRIUS hosted an eight-day project oriented educational program from 28 November to 8 December 2019. It was held in accordance with Memorandum of Understanding signed between AIM and SIRIUS last year.
- All 50 Russian and Indian students shared best contemporary innovation practices with each other under various categories: IT & Data Analysis, Clean Energy, Biotech, Remote Earth Sensing and Drones & Robotics.
- Under 'Clean Energy', students created a carbon free energy system/island where researchers from all over the world can lead research on tech advancement.
- Photo-biotechnology under 'Biotech' category was also designed for the production of bio antioxidants from microalgae. It overcomes the problems of food shortage and environment pollution by making better and safe food and absorbing CO₂ from the environment for photosynthesis.
- SIRIUS Innovation Festival held in India last year witnessed a delegation of 10 Russian student innovators and 10 Indian innovators from the best performing Atal Tinkering Labs (ATLs).

CONSTITUTION (126th AMENDMENT BILL), 2019

- Union Minister of Law and Justice introduced the Constitution (126th Amendment Bill) 2019, in the Lok Sabha, that provides to further amend Article 334 of the Constitution proposing to extend the reservation for these marginalised sections for another 10 years.
- The proposed amendment does away with the reservation provided to the Anglo-Indian community in the Lok Sabha and state legislatures.
- The need for bringing in the Bill was felt as the current reservation provision ends on January 26, 2020, and the government wants to get the approval of parliament ahead of the deadline.
- The Bill amends provisions related to reservation of seats for Scheduled Castes (SCs) and Scheduled Tribes (STs).
- The Constitution provides for reservation of seats for SCs and STs and representation of the Anglo-Indian community by nomination, in Lok Sabha and Legislative Assemblies of states. This has been provided for a period of 70 year since the enactment of the Constitution and will expire on January 25, 2020. The Bill seeks to extend the reservation for SCs and STs by another 10 years till January 25, 2030.

DUCHIFAT 3

- Three youngsters from an Israeli school will travel to India next week to launch a satellite -- Duchifat 3 -- designed and built by them aboard PSLV C48 from ISRO's Sriharikota launch site.
- Duchifat 3 is the third in the series of Israeli student-made satellites. Jointly built by Herzliya Science Center and Sha'ar Hanegev High School students, the satellite is designed to serve children from across the country to "observe the Earth".
- It is a photo satellite used for ecological research of Earth from space. The size of the satellite is 10x10x30 cm (3U) and weighs 2.3 kg. The students worked for almost two and a half years to build it. The satellite will be of good help to agriculturists.

FIRST MEGA FOOD PARK OF CENTRAL INDIA

- Avantee mega Food Park inaugurated in MP's Dewas.
- This first food park of central India is spread over 51 acres and has been constructed at a cost of about 150 crore rupees.
- Processing of soyabean, gram, wheat and other grains and vegetables will be done in the park. Warehouses will also be opened in Indore, Ujjain, Dhar and Agar in the next phase.

Mega Food Park Scheme:

- The Scheme of Mega Food Park aims at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers so as to ensure maximizing value addition, minimizing wastage, increasing farmer's income and creating employment opportunities particularly in rural sector.
- The Mega Food Park Scheme is based on "Cluster" approach and envisages creation of state of art support infrastructure in a well-defined agri / horticultural zone for setting up of modern food processing units in the industrial plots provided in the park with well-established supply chain.
- The Mega Food Park project is implemented by a Special Purpose Vehicle (SPV) which is a Body Corporate registered under the Companies Act. State Government, State Government entities and Cooperatives are not required to form a separate SPV for implementation of Mega Food Park project.

HEAD ON GENERATION TECHNOLOGY

- In a bid to control the pollution, Indian Railways has developed an improvised converter, Head on Generation (HOG), in electric locomotives.
- Premium passenger trains of Indian Railways with AC coaches generally run on the End-on-Generation (EOG) system. This adds to both air and noise pollution.
- HOG system utilizes power from overhead catenary in order to feed auxiliaries in the coaches hauled by electric locomotives. According to the Railway Ministry, it saves up to 1 million litres of diesel per train annually.
- Over the years, the locomotives that have been manufactured by Chittaranjan Locomotive Works (CLW) are HOG compliant. Moreover, from April 2018 onwards, the pace of HOG conversion works for Linke Hofmann Busch (LHB) coaches have been increased to harness the benefits of this high-end technology.

About:

- Some of the advantages of the HOG system are as follows:
 - œ With HOG system, the noise level reduces from 100 dB to noiseless
 - œ Till now, there has been a significant reduction of CO₂ (over 2500 Ton) as well as NO_x (over 10 Ton) emissions
 - œ The HOG system reduced consumption of diesel, leading to huge savings in operational costs to the tune of over Rs 1,100 crore per annum
 - œ Compared to EOG Power, which is Rs 22/unit, the HOG Power is economical at Rs 6/unit.

INTERNATIONAL SOLAR ALLIANCE

- . India called upon more countries to join the International Solar Alliance (ISA) to reduce dependence on fossil fuels to meet the growing energy requirement.
- . Ministerial Plenary on “SOLAR AND THE SIDS – Making the Sun Shine Brighter” was held on the sidelines of the 25th session of Conference of Parties under the UN framework convention of Climate Change (UNFCCC COP25), in Madrid, Spain.

About International Solar Alliance:

- . Indian Prime Minister Narendra Modi and former French President Francois Hollande had unveiled the International Solar Alliance (ISA) in 2015.
- . The project was launched to combine the efforts of both countries to work against climate change and adopt renewable energy, replacing the use of fossil fuels.
- . A total of 121 countries are prospective members of ISA, usually those located between the equator and the Tropics of Cancer and Capricorn.
- . The ISA is the first international body to have a secretariat in India. Although it was founded in Paris, France, its headquarters is in Gurugram, India. The first assembly of ISA will be held in Delhi on 2nd October 2018.
- . Two countries – Eritrea and St. Kittis and Nevis, signed the framework agreement of ISA on October 31, 2019. With this 83 countries have signed the ISA framework agreement.

‘IRON UNION 12’

- . Iron Union 12’, a joint military exercise between the ground forces of the UAE and the United States, commenced.
- . Spanning a few weeks, ‘Iron Union 12’ will see the two sides take part in joint military cooperation to enhance combat and tactical capabilities.
- . The joint military exercises of the UAE Armed Forces with fraternal and friendly countries takes place in a manner consistent with latest developments, and reflects the UAE Armed Forces’ determination to stand firmly against all threats and challenges facing the region.

OPEC AND ITS ALLIES DECIDE TO CUT OIL PRODUCTION

- . OPEC group of oil-producing countries and their allies, including Russia, have decided to cut oil production by 500,000 barrels per day.
- . They agreed to reduce production to stem pressure on prices from abundant reserves and weak global economic growth.

About Organization of the Petroleum Exporting Countries (OPEC):

- . The Organization of the Petroleum Exporting Countries (OPEC) is a permanent, intergovernmental Organization, created at the Baghdad Conference on September 10–14, 1960, by Iran, Iraq, Kuwait, Saudi Arabia and Venezuela.
- . These countries were later joined by Qatar (1961), Indonesia (1962), Libya (1962), the United Arab Emirates (1967), Algeria (1969), Nigeria (1971), Ecuador (1973), Gabon (1975), Angola (2007), Equatorial Guinea (2017) and Congo (2018).
- . Qatar terminated its membership on 1 January 2019.
- . OPEC had its headquarters in Geneva, Switzerland, in the first five years of its existence. This was moved to Vienna, Austria, on September 1, 1965.

SARAI SEWAGE TREATMENT PLANT

- . India's first hybrid annuity model (HAM) based 14 MLD sewage treatment plant (STP) has been inaugurated in Sarai, Haridwar, Uttarakhand.
- . The project has been developed under the Namami Gange project of National Mission for Clean Ganga (NMCG).
- . In order to improve the quality of water in the river Ganga in Uttarakhand, 34 projects of sewerage infrastructure works have been taken up at a cost of approximately Rs 1,144.77 crore for creating treatment capacity of 165.50 MLD and laying sewerage network of 152 km.
- . Once all these projects are commissioned, the entire sewage capacity of Uttarakhand will be met and there will be a substantial improvement in the quality of water of the river Ganga.
- . Namami Gange – National Mission for Clean Ganga is an Integrated Conservation Mission (ICM) , approved as 'Flagship Programme' with budget outlay of Rs.20,000 Crore.

SMALL FINANCE BANKS

- . RBI releases guidelines for on-tap licensing of Small Finance Banks in the private sector.
- . The Reserve Bank of India (RBI) had last issued guidelines for licensing of Small Finance Banks in the private sector on 27 November 2014.
- . Major changes from the earlier Guidelines on Small Finance Banks dated 27 November 2014, are:
 - œ The licensing window will be open on-tap;
 - œ minimum paid-up voting equity capital / net worth requirement shall be Rs 200 crore;
 - œ for Primary (Urban) Co-operative Banks (UCBs), desirous of voluntarily transiting into Small Finance Banks (SFBs) initial requirement of net worth shall be at Rs 100 crore, which will have to be increased to Rs 200 crore within five years from the date of commencement of business;
 - œ SFBs will be given scheduled bank status immediately upon commencement of operations;
 - œ SFBs will have general permission to open banking outlets from the date of commencement of operations;
 - œ Payments Banks can apply for conversion into SFB after five years of operations, if they are otherwise eligible as per these guidelines.

WHITE ISLAND

- . Volcanic eruption in White Island of New Zealand.
- . Whakaari/White Island (also known as just White Island) is an active andesite stratovolcano, situated 48 km (30 mi) from the east coast of the North Island of New Zealand, in the Bay of Plenty.
- . Whakaari/White Island is New Zealand's most active cone volcano which has been built up by continuous volcanic activity over the past 150,000 years. About 70 percent of the volcano is under the sea, making this massive volcanic structure the largest in New Zealand.
- . Previous Eruptions: On 27 April, 2016 a short-lived eruption occurred in the evening. It deposited material all over the crater floor onto some of the crater walls.

CURRENT AFFAIRS

Vol -3 (DECEMBER, 2019)

CONTENTS

Section - A: MAINS CURRENT AFFAIRS

Area of GS	Topics in News	Page No.
Economics	. India's Demographic Dividend	96
	. Oil & Gas Sector – An Analysis	100
International Relations	. Syrian Civil War	102
Polity and Governance	. Atal Bhujal Yojana - A Scheme for Groundwater	105
	. Need of Collegium System for Appointment of CEC & ECs	107
	. NPR - National Population Register	110

Section - B: PRELIMS CURRENT AFFAIRS

Area of GS	Topics in News	Page No.
Economics	. Global Value Chains	113
	. Middle Income Trap	113
	. RBI Foreign exchange reserve management	115
	. Washington Consensus	117
Environment and Ecology	. Avian Botulism in Sambhar Lake	118
	. National Green Corps 'Eco Club' Programme	119
	. NTCA acknowledges need for greater transparency in census	120
Geography	. Rohtang Tunnel	121
Government Schemes	. SwadeshDarshan scheme	122
	. Islamic Cooperation Countries (OIC)	124

International Affairs	. Joint Comprehensive Plan of Action (JCPOA)	125
	. Good Governance Index	126
Polity and Governance	. Khadi and Village Industries Commission (KVIC)	127
	. 'Nagpur Resolution: A Holistic approach for empowering citizens')	128
Science and Technology	. Quick Reaction Surface-to-Air missiles	129

SECTION: A

(MAINS)

CURRENT AFFAIRS

INDIA'S DEMOGRAPHIC DIVIDEND

CONTEXT

- India has a big advantage of demographic dividend, which will be key driver for its future growth. But as savings and incomes are down and economy is sluggish, India is losing out on its Demographic advantage.

● BACKGROUND

œ **Demographic transition theory:** The demographic transition theory is a generalised description of the changing pattern of **mortality, fertility and growth rates**, as society moves from one demographic phase to another.

œ **Four phases of demographic transition model:** There are four stages to the classical demographic transition model.

- > **Stage 1:** This pre-transition phase is characterised by **high birth rates and high death rates**. This phase marks an underdeveloped society which is characterised **with non-advanced or no modern medical facilities**. Deaths caused by epidemics, diseases, famines and war are high, to people produce more children to compensate for high death numbers. This is a **low population phase**, where economic growth and development is also low. Example; pre-industrial age societies.
- > **Stage 2:** This is an early phase of transition where **death rate begins to fall**. This fall is mostly caused by **development of medical facilities**. But since reproductive decisions are often lagged, **birth rates continue to remain high**. In this phase, **population starts to grow rapidly**. This is also the phase of early development of industries, and where growth begins to pick up. Example; industrial-age Europe.

Demographic Dividend: The period between stage 2 and 3 is a period when young population increases; the working age population (people between 15 and 64 years of age) grows larger than the dependant population (children aged 14 or below, and people above 65 years of age). As these individuals enter workforce, find work, earn money and spend it, the economy is expected to grow and develop at a faster pace. Example; China's growth story.

This transition happens largely because of a decrease in total fertility rate (TFR, which is the number of births per woman) after the increase in life expectancy gets stabilised.

- > **Stage 3:** In this later phase of transition, reproductive adjustments are made to the falling death rate. **Birth rate starts to decline** and the rate of **population growth decelerates**. Example; current situation in China.
- > **Stage 4:** This phase marks post-transitional societies and is characterised by **low birth and low death rates**. Here, **population growth is negligible**, or even becomes negative. Example; current situation in many developed countries of Europe.

● ANALYSIS

Case of other countries:

- œ Many **Asian economies** — Japan, China, South Korea — were able to use their demographic dividend.
 - > **Japan** was among the first major economies to experience rapid growth because of changing population structure.
 - > **China** entered this stage in 1994. Although its growth accelerated immediately after Deng Xiaoping's economic reforms of 1978, the years of demographic dividend helped sustain this rate for a very long period.
 - > The dividend years in **Singapore** started in 1979, and in the next 10 years there were only two years when its economy grew at less than 7%.
 - > **South Korea** entered this phase in 1987.
 - > In Hong Kong the dividend years kicked-in in 1979.
- œ **Case of Latin America:** A change in population structure alone cannot push growth. There are many other factors. While demographic dividend resulted in a seven-fold increase in GDP of many Asian countries. In Latin America, the growth was only two-fold.
 - > According to UNFPA, countries can only harness the economic potential of youth bulge if they are able to provide **good health, quality education and decent employment** to its entire population.

India's demographic transition

œ **Large workforce:** India has entered into the phase of demographic transition where workforce of the country is growing at a very fast pace. Nearly 12 million Indians enter the workforce each year, i.e. one million a month.

- > At present close to 30% of India's population is in age group 0-14 years.
- > The elderly in 60-plus age group are still a small proportion (8%).
- > The working age group (15-59 years) accounts for 62.5% of India's population. It is estimated to reach its highest proportion of approximately 65% in 2036.

œ **Small window of utilisation:** India's phase of demographic dividend started in 2005-06 and will last till 2055-56, longer than any other country in the world. India must utilise this bulge in working-age population before it slips into the next phase of demographic transition.

Demographic Disaster: If unutilised, the demographic dividend can turn into a demographic disaster. A situation of demographic disaster is when the unutilised working age population becomes a burden on country's resources and does not contribute to any economic activity.

When a working-age population is left unemployed, it will not be able to secure its old age; in terms of pension or other guarantees, hence creating additional burden on the government.

œ **State wise differences:** The demographic window of opportunity is available to different states at different times, because of differing population parameters. Fertility decline across states and regions has been different.

- > **Kerala, Tamil Nadu, Delhi, Andhra Pradesh, Telangana, Gujarat, Punjab and West Bengal,** have low total fertility rates (around 1.6 children per woman). Their window of demographic opportunity will close in next five years.
- > **Karnataka, Odisha, Himachal Pradesh, Maharashtra, Jammu and Kashmir, Assam, Uttarakhand and Haryana** have replacement level of around 2.1. Their window of opportunity will remain open for another 10-15 years.
- > **The states of hinterland India—Chhattisgarh, Jharkhand, Madhya Pradesh, Rajasthan, Uttar Pradesh and Bihar,** have high-fertility

rates (around 3 children per woman). Their window of opportunity is yet to open and will continue even in 2050s and 2060s.

- **Growth potential:** According to IMF, India's continuing demographic dividend, if harnessed properly, can add about 2% to the annual rate of economic growth.

Is India headed to a demographic disaster?

œ **India's growth story:** India saw unprecedented growth during 2000s. It was expected that the rapid economic growth would pull millions of Indians out of poverty. But since 2011, growth has started to slow down. Indian economy is currently witnessing a sordid state of affairs.

œ **Rise of debt and fall in income:** GDP is obtained by adding private consumption expenditure, investment, government expenditure and net exports (exports minus imports). Among those four categories, except for government spending, the situation is dire.

- > **Private consumption expenditure,** which constitutes bulk of the economy (59.4% in 2018-19), was at peak of its growth in 2011-12 at 17.53%. Today it has fallen to single digits and stands at 7.02%.
- > **Net financial savings of households** (their fixed deposits, insurance policies, mutual funds, small savings, etc., minus their financial liabilities) peaked between 2008-09 and 2010-11 (greater than 10% of the gross national disposable income (GNDI)). Since then it has been falling, and in 2017-18 stood at 6.52% of GNDI.
- > **Financial liabilities** peaked at 4.28% of GNDI in 2017-19. This indicates that a large part of growth in private consumption expenditure has been financed through borrowings by the household sector.
- > **Growth in per capita GNDI** has also been on a downward trend. Adjusting for inflation, the income in real terms for the salaried class has barely grown. Growth in rural income has also slowed rapidly.

œ **Fall in Investment:** Investment is the key driver of growth and consumption. Investment creates jobs. Jobs provide income to people. People spend this money, and it boosts consumption, and further helps other people to earn income. These earners spend their money, and provide further impetus to consumption.

- > **Investment to GDP ratio** peaked at 35.81% in 2007-08, the year before financial crisis. It fell over the next few years only to rise again to 34.31% in 2011-12. This happened primarily because of an increase in government

expenditure in the aftermath of financial crisis (e.g. MGNREGA spending), along with inducements that encouraged public sector banks to lend more to industry. Today this ratio is less than 30%.

- > **The NPA crisis** of today goes back to the above time, when public sector banks ended up disbursing loans to many projects, which eventually turned into bad loans.
- > Like consumers, corporate sector confidence is low, and it is not interested in investing at this point of time.
- œ **No gains on manufacturing or exports front:** Lately, India's export capability has crashed. Exports of goods and services peaked at 25.43% of GDP in 2013-14. In 2018-19, exports fell to 19.74% of GDP. Manufacturing output has also shrunk to record low levels.
 - > While over 80% of India's 520 million workforces are engaged in informal economy.
- œ **Low employment:** Unemployment rate among the youth has risen significantly. According to the National Sample Survey Office's Periodic Labour Force Survey, the rate of unemployment among 15-29 year olds jumped from 5% in 2011-12 to 17.4% in 2017-18.
 - > **There is high female unemployment.** Socio-economic conditions are forcing more educated women to stay out of workforce. There is growing feminisation of agriculture.
- œ **India's demographic dividend is collapsing:** Give job creation is not happening, what will the million individuals entering India's workforce every month (our demographic dividend) do? Hence, it is safe to say that, if the situation is not immediately corrected, India's demographic dividend is collapsing.

Utilising India's demographic advantage:

Way Forward

- œ **Reforms:** For Indian manufacturers to be able to compete internationally, reforms are required on the land, labour, and tax fronts.
- œ **Electricity and freight benefit to entrepreneurs:** The government has recently reduced corporate income-tax rates. But to compete within the country, Indian entrepreneur should get benefits for basic inputs like electricity and freight.
 - > Currently, the cost of cheap electricity for farmers is being borne by industry.
 - > Similarly, railway passengers are subsidized at the cost of freight.
 - > Taxes on aviation fuel make air cargo rates in India among the highest in world.

- œ **Simplify GST:** The goods and services tax (GST) system is multi-rate and complicated, and must be rationalised for the benefit of industry.
- œ **Lowering taxes:** Tax structure should be brought down from excess of 33% to around 20% (like in the US). This will ensure that retained capital does not go back to paying taxes, and funds are available to finance future growth.
 - > Retrospective taxation should be avoided.
 - > Time lag in tax refund should also be checked.
- œ **Improve manufacturing and export growth:** Government must adopt measures to improve business sentiments in the market. It must adopt the right mix of monetary and fiscal policy to spur economic activity. Exports must be incentivised.
- œ **Skill workforce:** As highlighted in ASER reports, our primary education system continues to produce children with poor competence in reading, writing and basic math. 48% of India employers report difficulty in filling job vacancies due to talent shortages. There is urgent need to ensure that the workforce which enters job market is skilled and meets industry requirements.
- œ **Health and Education:** We need to increase productivity and ensure that per person contribution to GDP goes up. Hence, there is need for higher public spending on health and education. Given India's high burden of Non-communicable diseases, adequate lifestyle checks should be imposed. Quality of air and water should be checked and improved. Preventive healthcare should also be adopted.
- œ **Women-friendly work environment:** Women's access to various services is indirectly related to the demographic opportunity. If women do not have access to good health services, and have higher number of children, they might not join workforce, reducing 50% of working population.
 - > Women friendly work environment should be encouraged.
 - > Women should have wider access to jobs, without any gender stereotypes to which occupations they can be a part of.
 - > Women should gain more economic and political rights.
 - > Gender wage gap should be closed.
- œ **Reduce inequalities:** India will also need to reduce caste-based and urban-rural inequality, especially in access to reproductive care, health, education and jobs.
- œ **Institutional checks:** Both justice and police systems also need rapid reform in order to ensure sustained and easy growth path.

œ **Differential approach to socio-economic policy:** The differing windows of demographic dividend in various states call for a differential approach to socio-economic policy planning.

- > **In states where the window is closing soon,** the focus has to be on ageing and migrant-friendly policies and programmes. For example, Policies to attract high quality labour from younger states, even re-training them to match needs of the states with low workforce.
- > **In states where the window is open and will close in next 10-15 years,** the focus should be

on empowering girls and women, provisioning of health, education and skill development for young people, and employment generation.

- > **In states where the window is yet to open** the focus should be threefold—addressing harmful practices such as child marriage, access to quality sexual and reproductive health services and family planning services to all, and provisioning of health, education, life and vocational skills to young people; in order to prepare future workforce.

OIL & GAS SECTOR – AN ANALYSIS

CONTEXT

- Recently, Government has formed an expert panel for time-bound resolution of disputes in oil & gas sector.

◎ BACKGROUND

- The oil and gas sector is among the **eight core industries** in India and plays a major role in influencing decision making for all the other important sections of the economy.
- India has a **flourishing crude oil refining industry** with an **annual capacity of 249.40 MMT**, making it the **second largest refiner in Asia** (as of Apr. 1, 2019).
- India's economic growth is closely related to energy demand; therefore the need for oil and gas is projected to grow more, thereby making the sector quite conducive for investment.
- The Government of India has adopted several policies to fulfill the increasing demand. The government has allowed 100 per cent Foreign Direct Investment (FDI) in many segments of the sector, including natural gas, petroleum products, and refineries, among others. Today, it attracts both domestic and foreign investment, as attested by the presence of Reliance Industries Ltd (RIL) and Cairn India.
- Annual oil consumption stood at **4.69 million barrels per day (MBPD)** and 54.20 billion cubic meters (bcm) of gas. **By 2035, India's energy demand is expected to double to 1,516 Mtoe from 753.7 Mtoe in 2017.** According to the International Energy Agency (IEA), India is expected to account for almost one-third of the global growth in energy demand by 2040.

Oil & Gas Sector – Facts and Figures

- Crude imports rose to \$111 billion in 2018-19 from \$88 billion in 2017-18.
- India retained its spot as the third largest consumer of crude in the world with consumption of 227 MMT in 2018-19.
- India was the fourth-largest Liquefied Natural Gas (LNG) importer in 2017 after Japan, South Korea and China. LNG imports increased to 29 BCM in 2018-19 from 27 BCM in 2017-18.
- Crude oil domestic production declined to 32.5 MMT in 2018-19 from 34.0 MMT in 2017-18, while production of natural gas increased to 32 BCM in 2018-19 from 31.7 BCM in 2017-18

- India refined 257 MMT of crude in 2018-19, compared to 252 MMT in 2017-18
- LPG coverage in the country increased to 90% in FY 2019 primarily on the back of PradhanMantriUjjwalaYojana scheme.
- PNGRB auctioned 50 geographical areas in its 10th round of bidding for City Gas Distribution (CGD)

◎ ANALYSIS

Key Problems

Basins and Categories

Sedimentary Basins of India

The existing 26 Sedimentary Basins have an area of approximately 3.14 million Sq. Kms. The sedimentary basins of the country have been classified into four categories as below::

Category-I

Basins with established commercial production. Cambay, Mumbai Offshore, Rajasthan, Krishna Godavari, Cauvery, Assam Shelf and Assam-Arakan Fold Belt

Category-II

Basins with known accumulation of hydrocarbons but no commercial production achieved so far Kutch, Mahanadi-NEC (North East Coast) Basin, Andaman-Nicobar, Kerala-Konkan-Lakshadweep Basin.

Category-III

Basins having hydrocarbon shows that are considered geologically prospective Himalayan Foreland Basin, Ganga Basin, Vindhyan basin, Saurashtra Basin, KeralaKonkan Basin, Bengal Basin

Category-IV

Basins having uncertain potential which may be prospective by analogy with similar basins in the world. Karewa basin, Spiti-Zaskar basin, Satpura–South Rewa–Damodar basin, Chhattisgarh Basin,

Narmada basin, Deccan Syneclise, Bhima-Kaladgi, Bastar Basin, PranhitaGodavari basin, Cuddapah basin.

- œ **Declining domestic crude production:** Most of the producing fields (in Cambay, Assam-Arakan and Mumbai Offshore) are maturing or have already matured. Due to inadequate new oil and gas discoveries and subsequent development, India is witnessing a decline in crude production.
- œ **Large crude import bills:** In 2018-19, India imported more than 80% of its crude consumption and spent in excess of \$110 billion.
- œ **Inadequate transmission & distribution infrastructure:** India needs to invest heavily in midstream and downstream sector to overcome infrastructure constraints in LNG, gas pipelines and CGD.
- œ **Technology constraints:** The country needs investment in exploring and developing Category-2 and Category-3 basins. However, Indian operators do not have the requisite technology and experience in this area.
- œ **Low share of MNCs:** Despite being one of the largest consumers of energy, India has a low share of MNCs in the domestic market.
- œ **Environmentally friendly fuels:** India continues to rely heavily on coal and petroleum products to meet its energy needs.

Government Initiatives

Some of the major initiatives taken by the Government of India to promote oil and gas sector are:

- œ The Government of India is planning to set up around 5,000 compressed bio gas (CBG) plants by 2023.
- œ Government of India is planning to invest Rs 70,000 crore (US\$ 9.97 billion) to expand the gas pipeline network across the country.
- œ In September 2018, Government of India approved fiscal incentives to attract investments and technology to improve recovery from oil fields which is expected to lead to hydrocarbon production worth Rs 50 lakh crore (US\$ 745.82 billion) in the next twenty years.
- œ State-run oil firms are planning investments worth Rs 723 crore (US\$ 111.30 million) in Uttar Pradesh to improve the liquefied petroleum gas (LPG) infrastructure in a bid to promote clean energy and generate employment, according to MrDharmendraPradhan, Minister of Petroleum and Natural Gas, Government of India.
- œ A gas exchange is planned in order to bring market-driven pricing in the energy market of India and the proposal for the same is ready to

be taken to the Union Cabinet, according to MrDharmendraPradhan, Minister of Petroleum and Natural Gas, Government of India.

- œ The Oil Ministry plans to set up bio-CNG (compressed natural gas) plants and allied infrastructure at a cost of Rs 7,000 crore (US\$ 1.10 billion) to promote the use of clean fuel.
- œ Government has formed an expert panel for time-bound resolution of disputes in oil & gas sector

Achievements

- œ Construction of around 13,500 km long gas pipeline is under way, at the end of 2018.
- œ Under City Gas Distribution (CGD) network, 86 Geographical Areas constituting 174 districts in 22 States/ Union Territories are covered
- œ As of December 5, 2018 more than 58.3 million connections have been released under PradhanMantriUjjwalaYojana (PMUY).

Suggestions

- œ Reduce oil cess on nomination era blocks and rationalisation of royalty rates to boost domestic production.
- œ Provide impetus to renewable energy production to reduce crude import dependence
- œ Build road map for a gas-based economy in order to achieve the vision of increasing the share of gas in the energy mix to 15% by 2030
- œ Development of pipeline infrastructure by the government for a gas trading hub to be functional in India
- œ Bring gas, diesel and petrol under the GST

• CONCLUSION

- œ Energy demand of India is anticipated to grow faster than energy demand of all major economies, on the back of continuous robust economic growth. Consequently, India's energy demand as a percentage of global energy demand is expected to rise to 11 per cent in 2040 from 5.58 per cent in 2017.
- œ Crude oil consumption is expected to grow at a CAGR of 3.60 per cent to 500 million tonnes by 2040 from 221.76 million tonnes in 2017.
- œ Natural Gas consumption is forecasted to increase at a CAGR of 4.31 per cent to 143.08 million tonnes by 2040 from 54.20 million tonnes in 2017.
- œ Therefore, India must act to set the oil and gas sector in order in the form of policy support for the sector to solve the problems and incentivize the private players to set up R&D facilities to solve technical problems.

SYRIAN CIVIL WAR

CONTEXT

- Recently, United States announced its pull-out from Syria. The on-going conflict in Syria is the second deadliest of 21st century and fought between several factions. It is difficult to understand the Syrian civil war without understanding the regional and foreign players involved in it and their motives.

● BACKGROUND:

œ **Geographical location:** Syria is a country in West

Asia, sharing borders with **Lebanon, Turkey, Iraq, Jordan and Israel**. In its west, it shares coastline with the **Mediterranean Sea**.

œ **Population groups:** Syria is home to diverse

ethnic and religious groups, including Syrian Arabs, Kurds, Turkmen, Assyrians, Armenians, Circassians, Mandaean and Greeks.

> Religious groups include Sunnis, Christians, Alawis, Druze, Ismailis, Mandaean, Shiites, Salafis, Yazidis, and Jews.

> **Arabs are the largest ethnic group, and Sunnis the largest religious group of Syria.**

œ **History:** Syria is a historically rich country. The name 'Syria' historically referred to a wider region, broadly synonymous with the **Levant**, and known in Arabic as '**Al-Sham**'. The modern state encompasses the sites of several ancient kingdoms and empires, including the **Ebla Kingdom** of 3rd millennium BC.

> Aleppo and the capital city of Damascus are among the **oldest continuously inhabited cities of the world**.

> In Islamic era, Damascus was the seat of **Umayyad Caliphate** and the provincial capital of **Mamluk Sultanate in Egypt**.

> The modern Syrian state was established in mid-20th century after centuries of Ottoman rule and a brief period of French mandate.

> It gained de jure **independence in 1945**, when **Republic of Syria** became a founding member of the United Nations, legally ending the former French Mandate.

> The post-independence period was tumultuous, with many **military coup** shaking the country.

> In **1958, Syria entered a brief union with Egypt** called the **United Arab Republic**, which was terminated by the 1961 Syrian coup d'état. After a **constitutional referendum in late**

1961, the republic was renamed Syrian Arab Republic.

> The republic was unstable until the **1963 Ba'athist coup d'état**, since which time the

Ba'ath Party has maintained its power.

> Syria was under **Emergency Law from 1963 to 2011**, effectively suspending most constitutional protections for citizens.

œ **Governance:** Syria is a unitary republic consisting of **14 governorates** and is the **only country that politically espouses Ba'athism**.

> **Bashar al-Assad** is the President of Syria since **2000**. His father, Hafez al-Assad, was also the President of Syria from 1971 to 2000.

> Many political scientists have characterized Assad family's rule of Syria as a **Personalist dictatorship**.

> Many have **condemned and criticized the ruling Ba'ath Party** for human rights abuses, frequent executions of citizens and political prisoners, and massive censorship.

œ **International representation:** Syria is member of one other international organization other than the **United Nations, the Non-Aligned Movement**.

> The 'Arab League' suspended Syria in 2011.

> 'Organisation of Islamic Cooperation' suspended it in 2012.

> In 2011, Syria self-suspended itself from the 'Union for the Mediterranean'.

● ANALYSIS

Syrian civil war

œ Unrest in Syria started as part of wider wave of the **Arab Spring**. It began in 2011 out of **discontent with the Syrian Ba'athist government**, with protests demanding removal of President Bashar al Assad; protesters were violently suppressed.

> The on-going conflict in Syria is the **second deadliest of 21st century**.

> Syria was **ranked last on the Global Peace**

Index from 2016 to 2018.

> Syrian conflict is widely described as a **series of overlapping proxy wars** between the regional and world powers, primarily between **US and Russia**, as well as between **Iran and Saudi Arabia**. The war is fought between several factions. (Refer to mains article "West Asia

Politics and Conflict” for background reference.)

Understanding the different factions in Syrian civil war

Understanding the different belligerents in Syrian civil war is complicated, but to start with, can be done on the basis who supports and who opposes Mr Assad and his government. There are some other factions also in the Syrian war whose motives are independent of their support or opposition to Assad Government, like the ISIS.

Supporters of Syrian government:

œ **Syrian Militia:**

- > **Syrian Armed Forces (SDA)** of which Assad is Commander-in-chief.
- > **National Defence Force (NDF)**, who draw their salaries and equipment from the government.
- > **Shabiha**, an unofficial militia drawn largely from Syria's Alawite minority group, the same sect to which Assad belongs.

œ **Russia:** Carries air **strikes against the rebels**

(on behest of Syrian government) and provides **political support** to Syria at the UN. Russia has **military interests** in Syria, including its only Mediterranean naval base and an airbase in Latakia province of Syria.

œ **Iran:** Iran sees Mr Assad, a member of the heterodox **Shia Alawite sect**, as its **closest Arab ally**. Syria is also the main **transit point for Iranian weapon shipments to Hezbollah** in Lebanon.

œ **Hezbollah:** This Lebanese Shia movement has sent thousands of fighters to fight alongside the Russian forces.

œ **Egypt:** Abdel Fattah al-Sisi, Egyptian president, openly supports Assad in the Syrian Civil War, on grounds that national armies are best suited to fight terror, and that a victory by Syrian rebels could have negative consequence of inspiring renewed support for Muslim Brotherhood in his own country.

œ **Foreign Shia-Muslim militias:** Recruited by Iran from Iraq, Afghanistan and Yemen.

Opposers of Syrian government (also referred to as Syrian Rebels):

œ **Syrian National Coalition (SNC):** This is a coalition of anti-government groups, based in Turkey. It aims to establish a modern, civil, democratic state, and is **recognised as the legitimate government of Syria by numerous Gulf States**.

œ **Free Syrian Army (FSA):** FSA was formed in 2011 by a defecting group of SDA officers. It was initially Syrian government, but it began backing rebel groups **alleging** that Mr Assad was responsible for widespread atrocities, including **chemical attacks on protesters**.

- > US mostly maintain an **official stand of fight against**

headquartered in Turkey and later in northern Syria. FSA is **backed by Saudi Arabia**.

œ **Syrian Democratic Forces (SDF):** An alliance of mainly Kurdish but also Arab, Syriac-Assyrian, and Turkmen militias with mainly **left-wing and democratic political leanings**. It is led predominantly by Kurdish **People's Protection Units (YPG)**. SDF is opposed to Assad government, but has directed most of its efforts against Al-Nusra Front and ISIS.

œ **Syrian Salvation Government (SSG):** SSG is an alternative opposition government, though not recognised by the main opposition group SNC. **Hayat Tahrir al-Sham** is its military arm.

œ **Turkey:** Provides arms, military and political support to government opposers. Turkey sees YPG militia in Syria as an extension of the **outlawed Kurdistan Workers Party (PKK)**, which has been fighting the Turkish military for decades.

- > To prevent Syrian Kurds from establishing a contiguous autonomous region along its border, Turkey has carried out air **strikes on the YPG**.

- > **Kurds and YPG** have considerably benefitted from **military support from the US**, which sees them as one of **most effective anti-IS forces on ground**. But **Turkey is against US support to YPG**.

œ **Gulf Arab states:** Regional Sunni powers like Saudi Arabia **oppose Iran's influence in Syria**. They provide logistical support, training, money and weapons to rebel groups. They also **backed the US-led coalition against ISIS**. There is no longer a Saudi Arabian embassy in Syria.

œ **United States:** The US provides arms, training and military **assistance to "moderate" groups**.

US mostly stay away from direct attack on the **ISIS as reason for its presence in Syria**. Lately, it announced its exit from Syria citing that the fight against ISIS was over, and it is not US concern to topple the Assad regime.

Salafi Jihadists

œ **Al-Nusra Front:** The Al-Qaeda-linked Al-Nusra Front has often been considered the most aggressive and violent of all opposition groups. In several battles, it **also fought alongside the FSA**. Al-Nusra has often been **accused of being backed by Turkey**. In 2016 it renamed itself to **Jabhat Fateh Al-Sham**, and later became the leading member of Hay'at Tahrir al-Sham.

- œ **Islamic State of Iraq and the Levant (ISIL):** Also called the ISIS, **exploited the war in Syria** to carve out a large part of the country **for creation of an Islamic proto-state “caliphate”**. As part of an international campaign against the IS militants, both supporters and opposers of Assad have attacked ISIS to curb its growth and release areas that it had captured. **Raqqah** (in northern Syria), the last strong hold of ISIS, was taken back in 2017.

Who are the Kurds?

- œ Kurds – **mostly Sunni Muslims**, with a small minority of Yazidis – represented 10% of Syria's population at the start of 2011 uprising. Kurds had suffered **decades of discrimination** and neglect, deprived of basic civil, cultural, economic, and social rights.
- œ When protests began in **2011**, **Assad government granted citizenship** to an estimated 200,000 stateless Kurds, in an effort to neutralize potential Kurdish opposition.
- œ Despite this concession, most Kurds remain opposed to the government, hoping instead for a more **decentralized Syria based on federalism**.
- œ In early 2014, Kurdish people living in Syria's north (**Rojava region**) declared creation of an autonomous government in areas under their control.
- œ To further their purpose, **Syrian Democratic Council (SDC)** was established in 2015. It is the **political wing of SDF**.

Syrian Refugee Crisis

- œ **Refugees** of Syrian Civil War are the citizens and permanent residents of Syria, who have **fled their country during the course of Syrian Civil War**.
- œ The war has **killed more than half a million** people, caused **7.6 million internally displaced people** (July 2015 UNHCR) and over **5 million**

refugees (July 2017 UNHCR), making population assessment difficult in recent years.

- œ **Seeking asylum**, many Syrians have fled to other countries. Many are placed in **Syrian refugee camps** established in **Turkey** (~3.6 million), **Lebanon** (~0.9 million), **Jordan** (~0.6 million), **Egypt** (~0.1 million) and other countries.
- œ Syrian refugees have contributed to the **European migrant crisis**.
- œ **The Turkey factor:** Many neighbouring countries like Turkey and Lebanon often call for deporting refugees with them to Europe or sending them back to Syria.
 - > Turkey has also used the threat of deporting its Syrian refugees to Europe as a means to garner Europe's support in its fight against Syrian Kurds and YGP. Europe on the other hand, has threatened Turkey of Sanctions for any such move.
- œ Humanitarian aid to internally displaced persons (IDPs) within Syria and Syrian refugees in neighbouring countries is planned largely through **UNHCR**.
- œ In 2015, the **Regional Refugee and Resilience Plan (3RP)** was established as a coordination platform including Syrian neighbouring countries (except Israel) and Egypt.

© CONCLUSION

Syrian civil war has had devastating consequences on Syrian economy and Syrian population. The many foreign players in Syria want to bolster their influence in Middle-East, and globally, by trying to be the key player in Syria. However, need of the hour is that nations stop treating Syria as a battleground for attaining global eminence. In fact, there is urgent need to take serious actions to reverse the humanitarian crisis in Syria.

ATAL BHUJALYOJANA - A SCHEME FOR GROUNDWATER

CONTEXT

- . AtalBhujalYojana has been launched amid growing concerns over the country's groundwater resources.

● **BACKGROUND**

- œ Prime Minister launched the AtalBhujalYojana, or AtalJal.
- œ AtalJal is a World Bank-funded, central scheme aimed at improving groundwater management.
- œ The idea first came up in 2015, in view of depleting groundwater resources. The government announced its intention to start a programme for management of groundwater resources in the Budget of 2016-17.

● **ANALYSIS**

Features of the scheme

- œ ATAL JAL has been designed with the principal objective of strengthening the institutional framework for participatory groundwater management and bringing about behavioral changes at the community level for sustainable groundwater resource management in seven States, viz. Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.
- œ Implementation of the scheme is expected to benefit nearly 8350 Gram Panchayats in 78 districts in these States.
- œ ATAL JAL will promote panchayat led ground water management and behavioural change with primary focuses on demand side management.
- œ Out of the total outlay of Rs. 6000 crore to be implemented over a period of 5 years, 50% shall be in the form of World Bank loan, and be repaid by the Central Government.
- œ The remaining 50% shall be through Central Assistance from regular budgetary support.
- œ The entire World Bank's loan component and Central Assistance shall be passed on to the States as Grants.

How scarce is water in India?

- œ India accounts for 16 per cent of the world's population living in less than 2.5 per cent of the

global area, and has just 4 per cent of the global water resources.

- œ According to the Central Water Commission (CWC), the estimated water resources potential of the country, which occurs as natural runoff in the rivers, is 1,999 billion cubic metres. Of this, the estimated utilisable resources are 1,122 billion cubic metres per year.
- œ With the population rising, demand for water will increase manifold in coming years.
- œ By CWC benchmarks, a water-stressed condition happens when per capita availability is less than 1,700 cubic metres, and a water-scarcity condition when per capita availability falls below 1,000 cubic metres.
- œ Some river basins are facing a water-scarcity condition. Among these are the basins of the Indus (up to the border), Krishna, Cauvery, Subarnarekha, Pennar, Mahi, Sabarmati and east-flowing rivers, and west-flowing rivers of Kutch and Saurashtra including Luni.
- œ Water scarcity is most acute in the basins of the Cauvery, Pennar, Sabarmati and east-flowing rivers, and west-flowing rivers of Kutch and Saurashtra including Luni.

What is the groundwater situation in particular?

- œ According to 'Water and Related Statistics 2019', a report published by the CWC, the annual replenishable groundwater resources in India (2017) are 432 BCM, out of which 393 BCM is the annual "extractable" groundwater availability.
- œ Fifteen states account for about 90 per cent of the groundwater potential in the country.
- œ Uttar Pradesh accounts for 16.2 per cent, followed by Madhya Pradesh (8.4%), Maharashtra (7.3%), Bihar (7.3%), West Bengal (6.8%), Assam (6.6%), Punjab (5.5%) and Gujarat (5.2%).
- œ The largest user being the irrigation sector. This is why the government has called for alternatives to water-intensive crops such as paddy and sugarcane.
- œ Among the states where at least 100 wells were monitored, the highest depletion has been in Karnataka (80%), Maharashtra (75%), Uttar Pradesh (73%), Andhra Pradesh (73%), Punjab (69%).

What is the role of the CGWB?

- œ The Board monitors water levels and quality through a network of 23,196 "National Hydrograph Monitoring Stations"
- œ A piezometer is a device placed in a borehole to monitor the pressure or depth of groundwater.
- œ The CGWB has classified the country's assessment units (blocks, taluks, mandalsetc) into safe, semi-critical and over-exploited in terms of groundwater resources.
- œ In the north, more than 60% of the assessment units in Delhi, Punjab, Haryana and Rajasthan are either over-exploited or critical.
- œ Jal Shakti Ministry had said 14% of the country's assessment units are semi-critical, 5% are critical, and 17% are over-exploited, as of 2017.

How much of this does the scheme seek to address?

- œ For now, the AtalBhujalYojana will be implemented in seven states – Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and UP over five years from 2020-21 to 2024-25.
- œ It is expected that it will benefit about 8,350 gram panchayats in 78 districts.

- œ If the scheme meets its objectives in water-stressed areas, it will be extended to other parts of the country.

How will these objectives be met?

- œ The focus will be on arresting the rate of decline of groundwater levels as well as water consumption.
- œ The scheme will seek to strengthen the institutional framework and bring about behavioural changes at community level for sustainable groundwater resource management.
- œ It envisages community-led Water Security Plans.
- œ There has been a Groundwater Management and Regulation scheme to manage the country's groundwater resources since 2013.
- œ The new scheme is an updated and modified version. Concepts such as 'Water User Associations' and Water Budgeting will be introduced.
- œ Better performing districts and panchayats will get more funds.

Ways to protect and conserve groundwater

1. **Go Native:** Use native plants in your landscape. They don't need much water or fertilizer, reducing the need for extensive watering or chemical applications.
2. **Reduce Chemical Use**
3. Use fewer chemicals around you and make sure to dispose of them properly - don't dump them on the ground!
4. **Manage Waste:** Properly dispose of potentially toxic substances like unused chemicals, pharmaceuticals, paint, motor oil, and other substances.
5. **Don't Let It Run:** Shut off the water when not needed.
6. **Fix the Drip:** Check all the faucets, fixtures, toilets, and taps in your home for leaks and fix them right away, or install water conserving models.
7. **Water Wisely:** Water the lawn and plants during the coolest parts of the day and only when they truly need it.
8. **Reduce, Reuse, and Recycle:** Reduce the amount of "stuff" you use and reuse what you can. Recycle paper, plastic, cardboard, glass, aluminum and other materials.
9. **Natural Alternatives:** Use all natural/nontoxic household cleaners whenever possible.

NEED OF COLLEGIUM SYSTEM FOR APPOINTMENT OF CEC & ECS

CONTEXT

- Recently, the Supreme Court has agreed to hear a public interest litigation seeking that the chief election commissioner and election commissioners be appointed by a three-member collegium.

● BACKGROUND

- œ The collegium will comprise the Prime Minister, the leader of opposition in Lok Sabha and the Chief Justice of India. A bench comprising Chief Justice S. A. Bobde and Justices B.R. Gavai and Surya Kant took note of submissions that the plea needed an urgent hearing. Advocate Ashwini Upadhyay filed the PIL seeking to ensure more autonomy for the chief election commissioner's office and election commissioners. The plea has also sought an independent secretariat for the Election Commission of India and that it should also be given the power to make rules.
- œ The Election Commission of India (ECI) is an autonomous constitutional authority responsible for administering Union and State election processes in India.
- œ The body administers elections to the Lok Sabha, Rajya Sabha, State Legislative Assemblies, and the offices of the President and Vice President in the country.
- œ Structure of the Commission
 - > Originally the commission had only one election commissioner but after the Election Commissioner Amendment Act 1989, it has been made a multi-member body.
 - > The commission presently consists of one Chief Election Commissioner (CEC) and two Election Commissioners (ECs).
- œ The secretariat of the commission is located in New Delhi.

● ANALYSIS

Historical demands for appointment of election commission

- œ The demand of collegium system was first raised in 1990 when the **Dinesh Goswami Committee** suggested the need for a selection committee or a panel to appoint the CEC (at that time ECI was a single-member body).

- œ Based on this recommendation, **70th Constitutional Amendment Bill, 1990** was introduced in the Parliament which demanded for the selection committee comprising of the Presiding Officers of both Houses and Leader of the Opposition in Lok Sabha.
- œ However, due to lack of political will, it was not passed and was withdrawn in 1993. Till date, no such bill was formed.
- œ The issue was debated in the Constituent Assembly which finally left over to the government to decide the appointments. The constituent Assembly suggested that election commission should be appointed after a proposal of the same is supported by two-third majority of the parliament.
- œ **Global Practice:** In the USA, South Africa, Canada, etc. there is a mechanism for outside consultation with expert body for making suitable appointments.

Present System of Appointment of Election Commissioners

. Constitutional versus Executive Power of Appointment:

- > There is no prescribed procedure for appointment of the Chief Election Commissioner and Election Commissioners as per the constitution. Under the Transaction of Business rules, the President shall appoint the CEC and EC based on the recommendations made by the Prime Minister.
- > Therefore, it is the executive power of the President to appoint CEC and ECs.
- > However, according to Article 324(5), the Parliament has the power to regulate the terms of conditions of service and tenure of ECs. It is under this article that the Parliament has made laws till date, and not under Art. 324(2) in which the Parliament can establish a selection committee for regulating the appointments made by the President.

. Aberrations in Appointment:

- > **Constituent Assembly Debates:** The issue was debated in the Constituent Assembly which finally left over to the government to decide

the appointments.

- > Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991 was passed to determine the conditions of service of the Chief Election Commissioner and other Election Commissioners and to provide for the procedure for transaction of business by the ECI. However, the Parliament at that time decided not to put any collegium system for appointment.

Challenges in establishing a collegium system for appointments

œ Similar Demand for other appointments

- > For other constitutional positions similar demand can be raised where it is the imperative of the executive to make such appointments like for Attorney General or Comptroller & Auditor-General.
- > The government has the right to decide such appointments like it did for CBI director or the Chief Vigilance Commissioner But these are statutory positions. As of now, there is no committee for constitutional appointments.

œ Constitutional Dilemma

- > According to Article 324(2), the President shall make the appointment till the time there is no law being made by the Parliament for this purpose.
- > Because of the absence of such law, the possible statutory appointment process has been made a constitutional appointment (done under executive domain) by the President.
- > Even in the debates of Constituent Assembly, it was argued that the appointments be made by the President in consultation with PM with the concurrence of two-thirds of the majority of the joint session of both the Houses of Parliament.

œ Distinction between CEC & EC

- > There is a difference between the position of a CEC & EC. The appointments to both the position may differ according to the task they perform. Therefore, to differentiate the process of appointment which is still done on an ad-hoc basis (because of absence of any constitutional law) becomes a challenging task that needs to be addressed properly to ensure the independent working of the commission.

œ Demand for Collegium System

- > In the recent past, this demand has gained prominence in the backdrop of allegations raised by political parties regarding the independence of the Commission. Therefore,

it is due to political necessity and not legal conundrum that there is a demand for multiparty approach in appointment process.

œ Judicial Overreach:

- > The Supreme Court (SC) interprets any law on the basis of provisions of the constitution, and constitutionally decision for appointment procedure of EC comes under executive domain. Thereby, decision by the Supreme Court in this regard can possibly shake the harmonious balance of power.

Other Electoral Reforms

Law Commission 255th Report on Electoral Reforms: Strengthening the office of the Election Commission of India

- œ The Commission in its report inter-alia suggested, the ECI must be strengthened by:
- œ Giving equal constitutional protection to all members of the Commission in matters of removability;
- œ Making the appointment process of the Election Commissioners and the CEC consultative; and
- œ Creating a permanent, independent Secretariat for the ECI.
- œ Deficiencies in the present system of appointment process needs to be removed. And adequate safeguards must be put into place to ensure that ethical and capable people head the concerned positions.
- œ **Independence:** There must be similar election and removal procedure for CEC and ECs, and they must exercise the same powers unless specifically prescribed by a law. Also the expenses of ECI must be charged expenditure on Consolidated Fund of India.
- œ **Transparency:** Appointments through collegium or any other system as discussed in constitutional debate can bring more transparency in the appointment process.
- œ **Autonomy:** Even, the Law Commission in its 255th report on electoral reforms (2015) for ensuring greater autonomy to the ECI, recommended for the constitution of a selection committee.
- œ **Legislation:** There is a need for debate and discussions in the Parliament on the issue of independency of ECI and consequently passing of required legislation.
- œ **Article 324(5) of the Constitution must be amended** to equate the removal procedures of the two Election Commissioners with that of the Chief

- Election Commissioner. Thus, equal constitutional protection should be given to all members of the ECI in matters of removability from office.
- œ The appointment of all the Election Commissioners, including the CEC, must be made by the President in consultation with a three-member collegium or selection committee, consisting of the Prime Minister; the Leader of the Opposition of the Lok Sabha (or the leader of the largest opposition party in the Lok Sabha in terms of numerical strength); and the Chief Justice of India.
 - œ Elevation of an Election Commissioner must be on the basis of seniority, unless the three member collegium/committee finds such Commissioner unfit.
 - œ Amendments must be made in the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991 to reflect this.

- œ It also recommended, to add a new sub-clause as (2A) to Article 324 of the Constitution to provide for a separate independent and permanent Secretariat for the ECI along the lines of the Lok Sabha/Rajya Sabha Secretariats under Article 98 of the Constitution. This will further improve the independence of the ECI.

© CONCLUSION

The present political questions on the institution of election commission must not be confused with the constitutional questions. The political problems need a political solution supported by a strong legislation. The collegium system no doubt will open way for independence and transparency in the working of the election commission but it will also develop a tendency to snatch what belongs to the executive.

NPR - NATIONAL POPULATION REGISTER

CONTEXT

- The Union Cabinet approved a proposal to update the National Population Register (NPR), which is linked to the Census. The exercise will cost Rs 8,500 crore, the government said.

◎ BACKGROUND

General Features of the National Population Register

- œ The Census Commission has said the objective of the NPR is to create a comprehensive identity database of every "usual resident" of the country.
- œ The database will have demographic details.
- œ A "usual resident", for the NPR, is a person who has lived in an area for at least six months or more, or a person who intends to live in an area for the next six months or more. It is mandatory for every "usual resident" of India to register in the NPR.
- œ The NPR, since it is linked to the Census, is seen as the first step towards a nationwide exercise to implement the National Register of Citizens (NRC).
- œ Though an NPR doesn't necessarily mean it's guaranteed there will be an NRC, it clears the path for a nationwide citizens' list.
- œ This is seen as one of the reasons why some states like West Bengal and Kerala, which are opposed to the NRC, have stopped work on the NPR.
- œ NPR was first done in 2010 and was later updated in 2015 when it was linked with the Aadhar.

What is NPR?

- œ The NPR is a register of the usual residents of the country.
- œ It contains information collected at the local (village/sub-town), subdistrict, district, state and national level under provisions of the Citizenship Act, 1955 and the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003.

Who is usual resident of India?

- œ A usual resident is defined, for the purposes of the NPR, as a person who has resided in a local area for the past six months or more, or a person who intends to reside in that area for the next six months.
- œ The law compulsorily seeks to register every citizen of India and issue a national identity card.

Who will conduct NPR?

- œ The process of updating NPR will be carried out under the aegis of the Registrar General and ex-Officio Census Commissioner, India.

How is NPR different than census?

- œ While the process of NPR and Census will begin simultaneously, the two databases are not same.
- œ The decennial census is the largest single source of a variety of statistical information on different characteristics of the people of India.
- œ While NPR only contains demographic information, more details are required for census like information on demography, economic activity, literacy and education, and housing and household amenities besides others.
- œ The census is the basis for reviewing the country's progress in the past decade, monitoring the on-going schemes of the government and plan for the future.
- œ The census provides detailed and authentic information on demography, economic activity, literacy and education, housing and household amenities, urbanisation, fertility and mortality, scheduled castes and scheduled tribes, language, religion, migration, disability besides others.
- œ The enumerators also collect data related to cultivators and agricultural labourers, their sex, occupational classification of workers in the non-households industry, trade, business, profession or service by class of worker and sex.
- œ There will be a detailed survey on gender and literacy rate, a number of towns, slum households and their population.
- œ Information is also collected on sources of potable water, energy, irrigation, method of farming, whether a house is a concrete, thatched or others.

How is NPR different than NRC?

- œ National Population Register is a database of people living in India, citizens or not, but National Register of Citizens is a database of Indian citizens.
- œ The NRC process demands proof of citizenship from the respondents. Those who found in want of the proof may face deportation or detention in long run. But in NPR, there is no need to provide any document.

Will anyone lose citizenship because of NPR?

- œ It is possible that some names are missed in the NPR, still their citizenship will not be revoked because this is not the process of NRC.
- œ The officials have also said that there is no plan to use data collected during NPR to form the basis of NRC.

What is the use of NPR?

- œ NPR data helps identify the demographics of actual residents who will be direct beneficiaries of any schemes launched in the area.

- œ The NPR data will help government design and adapt schemes like Ayushman Bharat, JandhanYojna, or medium of instruction in schools as per the current demographics, thus making the schemes more effective.
- œ It will streamline data of residents across various platforms.
- œ It will help in implementing the idea of 'One Identity Card' that has been recently floated by the government
- œ It would also eliminate duplication in voter lists, government insists.

SECTION: B

(PRELIMS)

CURRENT AFFAIRS

GLOBAL VALUE CHAINS

● CONTEXT

- Global Value Chains (GVCs) have often been in news. It is important to understand their role in trade and growth.

● ABOUT

- Earlier, companies used to make things primarily in one country. Today, a single finished product often results from **manufacturing and assembly in multiple countries**, with each step in the process adding value to the end product.
- **Through GVCs, countries trade more than products**; they trade know-how, and make things together. Imports of goods and services matter as much as exports to successful GVCs.
- **GVCs integrate the know-how of lead firms and suppliers of key components** along stages of production and in multiple offshore locations.
- The international, inter-firm flow of know-how is the key distinguishing feature of GVCs.
- How countries engage with GVCs determines how much they benefit from them.
- **Example:** iPhone is a good example to understand GVCs. The US prepares the iPhone design, Taiwan and South Korea produce critical inputs such as processors. Final assembly takes place in China from where they are marketed all over.

Advantages of GVC

- **Promote productivity and growth:** According to WTO report, a 1% increase in GVC participation is estimated to boost per capita income levels by more than 1%—about twice as much as standard trade.
 - œ In Ethiopia, firms participating in GVC are more than twice as productive as similar firms that participate in standard trade.
- **Reduce poverty: Since gains in growth from GVC are larger than from trade in final products, their impact on poverty reduction is also larger.**
 - œ Regions in Mexico and Vietnam that participated more intensively in GVCs experienced greater reductions in poverty.
- **Deliver better jobs:** Firms in GVC draw people into more productive manufacturing and services activities and tend to employ more women, supporting structural transformation in developing countries.
- **Important for growth:** GVCs are a powerful driver of productivity growth, job creation, and increased living standards. Countries that embrace them grow faster, import skills and technology, and boost employment.
 - œ With GVC-driven development, countries generate growth by moving to higher-value-added tasks and by embedding more technology and know-how in all their agriculture, manufacturing, and services production.
 - œ GVCs provide countries the opportunity to leap-frog their development process.

MIDDLE INCOME TRAP

● CONTEXT

- Many economists have cautioned that India runs the risk of getting caught in the middle-income trap.

● ABOUT

- **Middle income trap:** The middle income trap is a theoretical economic development situation in which a country that attains a certain income (due to given advantages) gets

stuck at that level. The Middle income countries are not able to move up to the Higher income status due to operation of several adverse factors:

- œ A country in the middle income trap has lost its competitive edge in the export of manufactured goods because of rising wages.
- œ Also, it is unable to keep up with more developed economies in the high-value-added market.
- œ There is failure to build institutional, human and technological capital.
- . **Middle-income range:** World Bank defines a middle-income country as one with a gross national income (GNI) per capita of \$1,000-12,000 at constant 2011 prices.

Case of different countries:

- . **Countries that escaped it:** Japan, South Korea, Portugal, Poland and Latvia are success stories of transformation to high-income status.
- . **South Africa and Brazil:** Newly industrialised economies such as South Africa and Brazil have not, for decades, left what the World Bank defines as the 'middle-income range'. They suffer from low investment, slow growth in secondary industry, limited industrial diversification and poor labour market conditions.
- . **Africa, Egypt, Thailand and Turkey** also tried to develop but could not transition to the high-income level. These countries failed to develop and remain stuck below their potential.
- . **Argentina, Mexico, and Russia** have been trapped in the upper middle-income category for a long time.
- . **China**, with a GNI per capita of around \$9,800, is most likely on its way out of the middle-income trap—unless it stumbles.

Case of India

- . **Lower middle income country:** In 1960, India had a per capita income of \$1,033 (in 2011 purchasing power parity terms). This was equivalent to 6% of per capita income of US. India attained lower middle-income status in 2008. By 2017-18, India's per capita income was \$6,538—or 12% of US per capita income.
- . **Critics:** Critics have cautioned that India runs the risk of getting caught in the middle-income trap. It has been argued that India's growth has mostly been driven by demand generated by few. India does not have broad income base, and this narrow demand base/market size could act as a growth barrier, resulting in India slipping into a middle-income trap.
 - œ Even if India reaches \$5 trillion in GDP by 2024-25 — Government of India's objective — it will still be a lower middle-income country.
- . **Factors that can hurt India's growth:** The 2017 Economic Survey warned that four factors could hurt India:
 - œ Hyper-globalization repudiation.
 - œ Thwarted/impeded structural transformation.
 - œ Human capital regression due to technological progress.
 - œ Climate change-induced agricultural stress.

How to avoid Middle income trap?

- . **New process and markets:** Avoiding the middle income trap entails identifying strategies to introduce new processes and find new markets to maintain export growth.
- . **Domestic demand:** Ramping up domestic demand is also important—an expanding middle class can use its increasing purchasing power to buy high-quality, innovative products and help drive growth.
 - œ Inequality is a barrier to the broadening of the demand base in an economy.
- . **Innovation:** The biggest challenge is moving from resource-driven growth that is dependent on cheap labour and capital to growth based on high productivity and innovation.
 - œ This requires investments in infrastructure and education—building a high-quality education system that encourages creativity and supports breakthroughs in science and technology that can be applied back into the economy.

RBI FOREIGN EXCHANGE RESERVE MANAGEMENT

● CONTEXT

- The Reserve Bank of India released its bi-annual report on management of foreign exchange reserves.

● ABOUT

- Reserve Bank of India's(RBI) bi-annual report on **management of foreign exchange (forex) reserves** is part of its efforts towards enhanced transparency and levels of disclosure.
- Findings of the report:
 - œ **India's forex reserves** for the week ended 13 December stood at **\$454.492 billion** on account of increase in foreign currency assets (FCA).
 - œ India's forex reserves **increased by 5%** during the second half of the financial year ended September 2019 (H2FY20).
 - œ As at end-September, 2019, the Reserve Bank held **618.17 tonnes of gold**, with 325.87 tonnes being held overseas in safe custody with the Bank of England and the Bank for International Settlements, while the remaining gold is held domestically.
 - œ The foreign exchange reserves **cover of imports stood at 10 months**.
 - œ The **ratio of short term debt to reserves** which was 26.3% at the end of March 2019 **declined** to 25.5% at the end of June 2019.
 - œ In dollar terms, the **share of gold in total foreign exchange reserve increased** to 6.1% at the end of September from 5.6% as of March 30.

Objectives of forex reserve management

- Demands placed on foreign exchange reserves may vary widely depending upon a variety of factors including;
 - œ Exchange rate regime adopted by the country
 - œ Extent of openness of the economy
 - œ Size of the external sector in a country's GDP
 - œ Nature of markets operating in the country.

Legal Framework and Policies

The Reserve Bank of India Act, 1934 provides the overarching legal framework for deployment of reserves in different FCA and gold within the broad parameters of; currencies, instruments, issuers and counterparties. The law broadly permits the following investment categories:

- œ Deposits with other central banks and the Bank for International Settlements (BIS).
- œ Deposits with overseas branches of commercial banks.
- œ Debt instruments representing sovereign/sovereign-guaranteed liability with residual maturity for debt papers not exceeding 10 years.

- œ Other instruments/institutions as approved by the Central Board of RBI in accordance with provisions of the Act.
- œ Dealing in certain types of derivatives.

Terms related to Foreign exchange

- . **Foreign Currency Assets(FCA):** FCA are maintained as a multi-currency portfolio comprising of major currencies, such as, US dollar, Euro, Pound sterling, Japanese yen, etc. and are valued in terms of US dollars. FCA excludes:
 - œ Investment in bonds issued by India Infrastructure Finance Company (UK)
 - œ SDR holdings of Reserve Bank, which is included under SDR
 - œ Amount lent under SAARC Swap Arrangement.
- . **Currency Risk:** Currency risk arises due to movements in exchange rates. Forex reserve related decisions are taken on account of long-term exposure to different currencies, depending on their likely movements and other considerations in the medium and long-term.
- . **Special Drawing Rights (SDR):** An SDR is an artificial currency instrument created by the IMF in 1969 to supplement the existing money reserves of member countries. It was created in response to concerns about the limitations of gold and dollars as sole means of settling international accounts; SDRs augment international liquidity by supplementing the standard reserve currencies. The IMF uses SDRs for internal accounting purposes. SDRs are allocated by the IMF to its member countries and are backed by their full faith and credit. SDR is built from a basket of important national currencies.
 - œ US dollar
 - œ Euro
 - œ Chinese Yuan
 - œ Japanese Yen
 - œ Pound Sterling
- . **Reserve Tranche Position (RTP):** The IMF is funded through its members and their quota contributions. A reserve tranche is a portion of the required quota of currency each member country must provide to the International Monetary Fund (IMF) that can be utilized for its own purposes—without a service fee or economic reform conditions.
 - œ It is basically an emergency account that IMF members can access at any time without agreeing to conditions or paying a service fee.
- . **SAARC Swap Arrangement:** A currency swap between the two countries is an agreement or contract to exchange currencies with predetermined terms and conditions. SAARC swap Arrangement entails currency swap between the SAARC countries. It is mostly done to meet short term foreign exchange liquidity requirements or to ensure adequate foreign currency to avoid Balance of Payments (BOP) crisis. SAARC swap Arrangement framework includes:
 - œ RBI will offer swap arrangement within the overall corpus of USD 2 billion.
 - œ Swap withdrawals can be made in US dollar, Euro or Indian rupee.
 - œ The framework provides certain concessions for swap withdrawals in Indian rupee.
 - œ The facility will be available to all SAARC member countries, subject to their signing of bilateral swap agreements.
 - œ The particular framework is valid from 14th November, 2019 to 13th November, 2022.

WASHINGTON CONSENSUS

● CONTEXT

- Lately economists have cautioned that the Washington Consensus is losing its hold over institutions.

● ABOUT

- **Washington Consensus:** The Washington Consensus is a set of 10 economic policy prescriptions by Washington, D.C.-based institutions such as the **International Monetary Fund (IMF), World Bank and United States Department of the Treasury**.
 - œ It constitutes the “standard” reform package promoted for crisis-stricken developing countries.
 - œ The prescriptions encompassed policies in such areas as macroeconomic stabilization, economic opening with respect to both trade and investment, and expansion of market forces within the domestic economy.
- 10 Policy prescriptions:
 - œ **Fiscal policy discipline**, with avoidance of large fiscal deficits relative to GDP.
 - œ **Redirection of public spending from subsidies** (especially indiscriminate subsidies) toward broad-based provision of key pro-growth, pro-poor services like primary education, primary health care and infrastructure investment.
 - œ **Tax reform**, broadening the tax base and adopting moderate marginal tax rates.
 - œ **Interest rates that are market determined** and positive (but moderate) in real terms.
 - œ **Competitive exchange rates**.
 - œ **Trade liberalization:** Liberalization of imports, with particular emphasis on elimination of quantitative restrictions (licensing, etc.); any trade protection to be provided by low and relatively uniform tariffs.
 - œ **Liberalization** of inward foreign direct investment.
 - œ **Privatization of state enterprises**.
 - œ **Deregulation:** Abolition of regulations that impede market entry or restrict competition, except for those justified on safety, environmental and consumer protection grounds, and prudential oversight of financial institutions.
 - œ **Legal security for property rights**.

Criticism

- Most criticism for Washington Consensus has been focused on **trade liberalization and the elimination of subsidies**, especially in the agriculture sector.
- In nations with substantial natural resources, the focus of criticism is on **privatization of industries exploiting these resources**.

Is the Washington consensus still relevant?

- œ **Changing IMF stance:** It has been argued that IMF might be moving away from the Washington Consensus world view of freely floating exchange rates and opposition to capital controls that dominated its thinking for decades.
- œ **China factor:** When Renminbi was just included in the basket of currencies that make up the Special Drawing Rights (SDR), economic concerns led to a massive capital flight that saw China’s foreign exchange reserves go down by a trillion.
- œ China imposed drastic capital controls to avoid currency crash so soon after its SDR inclusion. And it worked, unlike Washington consensus prescription.

- . **Rethinking on the 'capital account fundamentalism':** The term denotes a belief that free flow of capital provides the greatest possible equity and prosperity, and that any interference with the market process decreases social well-being.
 - œ However, empirical example suggests, it has not been the case.
 - œ Free capital flow destabilized emerging economies after the crisis of 2009. Easy monetary policies in the developed world encouraged "carry trade"—cross-border investment in search of higher yields. Capital flooded into emerging economies with higher domestic interest rates. But when Federal Reserve Bank (Fed) tapering started, capital flows reversed, leaving emerging economies very unstable.
- . **A possible repetition of 2009:** If the US economy stumbles into a recession, which presently seems like a possibility, Fed would be left with no choice but to further expand its quantitative easing. And this could once again have consequences on emerging economies.
- . A similar distress can be caused by the actions of European Central Bank which is easy on printing currency and buying bonds that carry negative interest rates.

AVIAN BOTULISM IN SAMBHAR LAKE

● **CONTEXT**

- Recently, the Indian Veterinary Research Institute (IVRI) has attributed the deaths of migratory birds to avian botulism at Sambhar Lake in Rajasthan.

● **ABOUT**

- The avian botulism is a neuro-muscular illness caused by Botulinum (natural toxin) that is produced by a bacteria — Clostridium botulinum.

Sambhar Lake

- . The Sambhar Salt Lake is India's largest inland saltwater body located near Jaipur in Rajasthan.
- . The lake is surrounded on all sides by the Aravali hills.
- . It is the source of most of Rajasthan's salt production.
- . Sambhar has been designated as a Ramsar site (recognized wetland of international importance) because the wetland is a key wintering area for tens of thousands of flamingos and other birds that migrate from northern Asia.

- . The bacteria are commonly found in the soil, rivers, and seawater. It affects both humans and animals.
- . The bacteria also need anaerobic (absence of oxygen) conditions and do not grow in acidic conditions.
- . It affects the nervous system of birds, leading to paralysis in their legs and wings.
- . The outbreaks of avian botulism tend to occur when average temperatures are above 21 degrees Celsius, and during droughts..

Causes of Mass Mortality at Sambhar Lake

The possible causes for avian botulism at Sambhar Lake are:

- . **Reduced water levels:** This might have increased salinity levels leading to the death of living organisms.
- . The decaying plant or animal materials are capable of hosting the bacteria for a longer period of time.
- . **A bird-to-bird cycle:** Since only insectivorous and omnivorous birds were affected and not herbivores, the birds feeding on dead birds could have been a possible cause of such mortality.

- The possibility of external factors like water pollution and eutrophication are ruled out as no farming is being carried out in the vicinity of sambhar lake.
- **CONCLUSION**
 - Sambhar Lake is not the first instance where deaths due to botulism have been recorded. 7,000 water birds died in Lake Michigan in 2007 and 2008. In Hawaii, the toxin killed around 183 Laysan Ducks in 2008.
 - The botulism outbreaks are likely to become more frequent as climate change alters wetland conditions to favour bacteria and pathogens.
 - Thus, the establishment of rescue and medical centres along with the mitigation of climate change need to be considered by the government as a precautionary measure for the future.

NATIONAL GREEN CORPS 'ECO CLUB' PROGRAMME

- **CONTEXT**
 - Recently, the Ministry of Environment, Forest and Climate Change (MoEFCC) organized an annual meeting of state nodal agencies implementing the 'Ecoclub' programme for the first time.
 - **ABOUT**
 - National Green Corps is a programme started in 2001-02 by the Ministry of Environment Forests and Climate Change.
 - **Aim:** To provide opportunities for children to understand the environment and environmental problems through school eco-clubs.
 - The programme is a sub part of Environment Education Awareness and Training (EEAT) which is a central sector scheme of the Ministry of the Environment continuing since 1983-84.
- Objectives of the Programme**
- To impart knowledge to school children through hands-on experience, about their immediate environment, interactions within it and the problems therein.
 - To develop requisite skills of observation, experimentation, survey, recording, analysis and reasoning for conserving the environment through various activities.
 - To inculcate the proper attitude towards the environment and its conservation through community interactions.
 - To sensitize children to issues related to environment and development through field visits and demonstrations.
 - To promote logical and independent thinking among children so that they are able to make the right choices in a spirit of scientific inquiry.
 - To motivate and stimulate young minds by involving them in action projects related to environmental conservation.
- Implementation**
- The scheme is being operated through Eco-clubs of 50-60 students having an interest in environment related issues, formed in member schools.
 - Eco clubs are supervised by a Teacher In-charge who is selected from among the teachers of the member schools on the basis of his/her interest in environment related issues.
 - There is District Implementation and Monitoring Committee to supervise, organise training for In-charge teachers and monitor periodically the implementation of scheme at the District level.

- There is a State Steering Committee for guidance, direction and to oversee the implementation of the scheme.
 - The State Nodal Agency coordinates the implementation of the scheme in the State and organize related activities like training to Master Trainers.
 - The National Steering Committee will give overall direction to the programme and ensure linkages at all levels.
- ◎ **CONCLUSION**
- The NGC is the largest programme in the world. The programme targets that the children participating in the programme will grow up and take care of the environment. The NGC cadets are given pride places at celebrations of national days when they participate in their NGC uniform. Also, when NGC cadets take up environmental activities they attract huge public attention.

NTCA ACKNOWLEDGES NEED FOR GREATER TRANSPARENCY IN CENSUS

- ◎ **CONTEXT**
- **Tiger Census Report, released in July 2019 has been clouded by doubts over the counting methods. Now for the first time, NTCA has acknowledged the need for greater transparency in census.**
- ◎ **ABOUT**
- The Tiger Census Report 2019, released in July, put the population at 2,967, a 33 per cent increase over 2014 when tigers were last enumerated. But the achievements in conservation have been clouded by doubts over the counting methods.
 - Investigations revealed that the tiger census had over-reported the population by 16 per cent.

Various Methods Used For Counting Tigers

- **Pug Mark Method:** In this method, the foot print of the tiger is important. It is considered that each pug mark is unique in itself & by analyzing various foot prints in the areas of tigers, the number of tigers in that area can be counted.
- **Camera Trap:** In this various method, cameras are installed in the tiger areas having night vision facility as well. By recording various tigers in the camera, the number of tigers can be estimated.
- **Poop/scat Method:** In this method the number of tigers is counted by poop/scat. The poop is analyzed by DNA sampling and then we can arrive at a more accurate count.
- **Radio Collar Method:** Tigers are captured in this method & are fitted with a radio collar. In this way the tigers can be counted.

- Following that investigation, the National Tiger Conservation Authority (NTCA) — which along with the Dehradun-based Wildlife Institute of India (WII) conducts the tiger census — has taken the first step towards introducing correctives. It has admitted the necessity of “bringing more scientific robustness to the exercise”.
- In the 1970s, when India embarked on Project Tiger, conservation authorities sought to identify every tiger in the wild from its paw print. But scientists criticised this method as highly subjective and riddled with the possibilities of duplication.
- Sariska National Park in Rajasthan had lost all its tigers in 2005 but a year before, pug mark surveys had claimed that all was well at the reserve.
- Since 2006, tiger audits have relied on camera traps, they have estimated the animal's prey base and tried to gauge the health of the tiger's habitats. All this has helped the NTCA and WII to arrive at more realistic numbers. But doubts over methodology have

persisted. The quality of camera traps has been a major issue in several reserves and scientists have contended that the NTCA and WII have not devised sound protocols.

Criticism of Tiger Census Methods

- . The Camera Trap estimation of tiger numbers in source populations, in tiger reserves was poorly done which was a violation of capture-recapture modeling.
- . The estimated of prey species densities from line transects were poorly done which is against the current practices.
- . The complicated, 'double-sampling' based regression model is somewhat flawed and obsolete approach.
- . Their statistical methodology of relying on calibrations and regressions based on track and dung surveys to generate wider estimate tiger numbers in wider landscapes was also deeply flawed.
- . Based on Enumerators Subjective Ability to Identify Individual Tigers from Pugmarks.
- . Variation in Pugmarks with substratum, gait, and observers recording skills
- . Not possible to obtain Pugmarks from all Tiger Occupied Landscapes.
- . Camera trap method becomes useless in areas having salty waters. It damages the camera.
- . Not always that someone will get the poop of all the tigers in an area.
- . In Radio Collar Method the method fails when the concerned tiger enters the salty water.

● CONCLUSION

Project Tiger and National Tiger Conservation Authority (NTCA)

- . Project Tiger was launched in 1973 with 9 tiger reserves for conserving our national animal, the tiger. Currently, the Project Tiger coverage has increased to 50, spread out in 18 tiger range states.
- . The tiger reserves are constituted on a core/buffer strategy. The core areas have the legal status of a national park or a sanctuary, whereas the buffer or peripheral areas are a mix of forest and non-forest land, managed as a multiple use area.
- . It is an ongoing Centrally Sponsored Scheme of the Ministry of Environment, Forests and Climate Change providing central assistance to the tiger States for tiger conservation in designated tiger reserves.
- . The National Tiger Conservation Authority (NTCA) is a statutory body of the Ministry, with an overarching supervisory/coordination role, performing functions as provided in the Wildlife (Protection) Act, 1972.
- . The NTCA was launched in 2005, following the recommendations of the Tiger Task Force. It was given statutory status by 2006 amendment of Wildlife (Protection) Act, 1972.

NTCA acknowledged the need for "accountability" that will translate into effective tiger conservation. It is the right time to being in peer-review of the tiger census.

ROHTANG TUNNEL

● CONTEXT

- . Prime Minister honoured the contribution of former Prime Minister AtalBihari Vajpayee by naming the Strategic Tunnel under Rohtang Pass after him.

● ABOUT

- . The historic decision to construct a strategic tunnel below the Rohtang Pass was taken on June 03, 2000, when late AtalBihari Vajpayee was the Prime Minister.
- . The foundation stone for the Access Road to the South Portal of the tunnel was laid on May 26, 2002.

How long is the tunnel, and what is special about it?

- . Upon completion, the 8.8 km-long tunnel will be the world's longest highway tunnel at an altitude of above 10,000 feet (3,000 metres).
- . It is a 10.5 m-wide single tube, a bi-lane tunnel with a fireproof emergency tunnel built into the main tunnel itself. The 10.5-m width includes a 1-metre footpath on both sides.
- . Vehicles will travel at a maximum speed of 80 km per hour inside the tunnel. Up to 3,000 cars and 1,500 trucks are expected to use the tunnel every day.
- . It will reduce the distance between Manali and Leh by 46 kilometres and save crores of rupees in transport costs.
- . It will also provide all-weather connectivity to remote border areas of Himachal Pradesh and Ladakh, which otherwise remained cut off from the rest of the country for about six months.
- . The project has significant strategic implications for the military. Once the tunnel is operational, the forces will have access beyond the Rohtang Pass even in peak winter.
- . The tunnel is now nearing completion and is a step in the direction of providing all weather connectivity to remote border areas of Himachal Pradesh and Ladakh which otherwise remained cut off from the rest of the country for about six months during winters.
- . While Rohtang Pass is at a height of 13,050 feet, the pass on the road to Leh is Baralacha La at 16,040 feet. A 13.2-km long tunnel would be required to bypass this pass.
- . An alternative road link to Ladakh has also been developed by BRO on the Darcha-Padam-Nimu axis, but here again; a 4.15 km-long tunnel at Sinka La Pass (16,703 feet) would be required for all-weather access.

SWADESH DARSHAN SCHEME

◎ CONTEXT

- The Union Cabinet gave its approval to release funds to the tune of Rs 627.40 crore for the 10 projects under SwadeshDarshan scheme sanctioned during 2018-19. It also gave its approval for the release of an additional Rs 1,854.67 crore for sanctioning of new projects during 2019-20 in SwadeshDarshan scheme.

◎ ABOUT

- India's rich cultural, historical, religious and natural heritage provides great scope to develop tourist circuits on specific themes to attract the tourists having a special interest in visiting such places.
- . Government of India, Ministry of Tourism (MoT) launched the SwadeshDarshan Scheme (Central Sector Scheme)– for integrated development of theme based tourist circuits in the country in 2014-15.
- . The Ministry of Tourism has already sanctioned 77 projects at the cost of Rs. 6131.88 Crore to 30 States and UTs. Of these 30 projects / major components of projects are expected to be completed during the current financial year, of which 12 projects worth Rs.1024.49 crore, covering the state of Manipur, Meghalaya, Nagaland, Arunachal Pradesh, Andhra Pradesh, Madhya Pradesh, Chhattisgarh Kerala and Sikkim have already been inaugurated.

Salient Features of Bharat Darshan Scheme

- . 100% centrally funded for the project components undertaken for public funding.
- . To leverage the voluntary funding available for Corporate Social Responsibility (CSR) initiatives of Central Public Sector Undertakings and corporate sector.
- . Funding of individual project will vary from state to state and will be finalised on the basis of detailed project reports prepared by PMC (Programme Management Consultant). PMC will be a national level consultant to be appointed by the Mission Directorate.
- . A National Steering Committee (NSC) will be constituted with Minister in charge of M/O Tourism as Chairman, to steer the mission objectives and vision of the scheme.
- . A Mission Directorate headed by the Member Secretary, NSC as a nodal officer will help in identification of projects in consultation with the States/ UTs governments and other stake holders.

Scheme Objectives

- . To position tourism as a major engine of economic growth and job creation;
- . Develop circuits having tourist potential in a planned and prioritized manner
- . Promote cultural and heritage value of the country to generate livelihoods in the identified regions
- . Enhancing the tourist attractiveness in a sustainable manner by developing world class infrastructure in the circuit /destinations
- . Follow community based development and pro-poor tourism approach
- . Creating awareness among the local communities about the importance of tourism for them in terms of increased sources of income, improved living standards and overall development of the area.
- . To create employment through active involvement of local communities;
- . Harness tourism potential for its effects in employment generation and economic development
- . To make full use of the potential and advantages in terms of available infrastructure, national culture and characteristic strong points of each and every region throughout the country by development of theme based circuits.
- . Development of tourist facilitation services to enhance visitor experience/satisfaction.

Significance

- . Under the scheme, the Ministry of Tourism is developing critical tourism infrastructure in a sustainable and inclusive manner.
- . The provision of this critical infrastructure will catalyse the private sector investment in revenue-generating projects which in turn would lead to positive enhancement of overall experience of tourists.
- . This would lead to increased footfall in the areas, growth of revenue and employment.

● CONCLUSION

- . Bharat Darshan Scheme is one of the most ambitious schemes that is going to transform the tourism industry in India. It will help in building critical infrastructure by catalyzing the private sector investment apart from public spending.

ISLAMIC COOPERATION COUNTRIES (OIC)

◎ **CONTEXT**

- All about the Islamic summit where India was invited for the first time ever

◎ **ABOUT**

The organization

- The Organisation of Islamic Cooperation (OIC) is the second largest inter-governmental organization after the United Nations with a membership of 57 states spread over four continents.
- The Organization was established upon a decision of the historical summit which took place in Rabat, Kingdom of Morocco on 12th Rajab 1389 Hijra (September 25, 1969).
- In 1970, the first-ever meeting of the Islamic Conference of Foreign Minister (ICFM) was held in Jeddah, which decided to establish a permanent secretariat.
- The secretariat comprises a secretary-general who is the Chief Administrative Officer of the organisation.
- The majority of its member states are Muslim-majority countries, while others have significant Muslim populations, including several African and South American countries.
- Over the last 40 years, the membership has grown from its founding members of 30 to 57 states.
- The OIC has permanent delegations to the United Nations and the European Union. The official languages of the OIC are Arabic, English, and French.
- While the 22 members of the Arab League are also part of the OIC, the organisation has several significant non-Arab member states, including Turkey, Iran and Pakistan.
- It also has five observer members, including Russia and Thailand.
- The OIC holds an Islamic Summit once every three years.
- Member states each get a vote. Each member state can table a resolution and then others can vote on it or suggest tweaks.

The new programme OIC-2025 focuses on 18 priority areas with 107 goals. The priority areas include issues of

- Peace and Security
- Palestine and Al-Quds (Jerusalem)
- Poverty Alleviation
- Counter-terrorism
- Investment and Finance
- Food Security
- Science and Technology
- Climate Change and Sustainability
- Moderation
- Culture and Interfaith Harmony
- Empowerment of Women
- Joint Islamic Humanitarian Action
- Human Rights and Good Governance

Why was the OIC established?

- The OIC first met in Morocco in September 1969, a month after an arson attack inside the Al-Aqsa Mosque that destroyed part of the roof and the 800-year-old pulpit of Salahuddin, best known for recapturing Jerusalem from the Crusaders in the 12th century.

- Reacting to the incident, representatives from 24 Muslim countries met in the capital Rabat to establish a body that would promote cooperation across the Muslim world.
- Issues relating to Palestine have been central to the OIC's agenda and summit discussions. The organisation has continuously condemned what member states consider Israeli aggressions against the Palestinians.

Objectives and role

- OIC aims to preserve Islamic values, safeguard and defend the national sovereignty and independence of member states and to contribute to international peace and security.
- While the organisation has been known for its cultural and social projects, its political influence has been relatively limited.
- OIC doesn't have a unified voice because most of its member countries are not democracies. So, while their populations may be in agreement they do not always represent the views of their populations.

Is the OIC relevant and effective?

- OIC includes a significant number of Arab states among its membership; it has often been compared with the Arab League.
- While the two organisations share many similarities, the main difference lies in the OIC's limited politicisation compared with the Arab League.
- The OIC is very different in the sense that member states cannot get a consensus across.

JOINT COMPREHENSIVE PLAN OF ACTION (JCPOA)

◎ **CONTEXT**

- In 2018, United States announced its withdrawal from the Joint Comprehensive Plan of Action.

◎ **ABOUT**

- **Joint Comprehensive Plan of Action (JCPOA):** JCPOA is also known as the "Iran deal" or "Iran nuclear deal".
 - œ The deal was made in July 2015.
 - œ It is an agreement on Iran's nuclear program **made between Iran, the P5+1** (the five permanent members of the United Nations Security Council—China, France, Russia, United Kingdom, United States—plus Germany) **and the European Union.**
 - œ **JCPOA limits Iran's uranium enrichment programme until 2030** and contains monitoring and transparency measures that will remain in place long after that date.
 - œ A few days after the JCPOA was agreed, it was **endorsed by the United Nations Security Council (UNSC).**
- However, in May 2018, **United States announced its withdrawal from JCPOA.**

Why did US withdraw from JCPOA?

- United States cited major flaw in JCPOA's temporary nature and its lack of controls on Iran's ballistic missile programme.
- Mr. Trump was also highly critical of Iran's actions in Syria and elsewhere in the region, which he characterizes as Iran's 'malign behaviour'.

Concern due to US's withdrawal

- **Supporters:** American conservatives in the United States, Israel, Saudi Arabia and allies have supported the move.

- . **IAEA concern:**By all accounts, Iran was honouring its provisions. Leading up to United States' withdrawal, the IAEA asserted that its inspectors had verified that Iran had implemented its nuclear-related commitments since the agreement.
- . **Politically motivated:** Rather than an evidence-based technical objection to the agreement or its implementation, the US decision to withdraw from JCPOA seems to be a political measure aimed against Iran.
- . **Impact on Iran:**The withdrawal caused concerns in Iran due to its impact on Iran's economy caused by US sanctions.
- . **Undermines multilateral diplomacy:**It undermines the value of multilateral diplomacy and raises questions about the sanctity and sustainability of interstate agreements. Furthermore, it challenges the authority of UNSC which had unanimously passed a resolution endorsing the JCPOA, and had called on all UN member states as well as regional and international organizations to take action to support the agreement's implementation.
 - œ US withdrawal from JCPOA risks seriously weakening trust and confidence in international institutions and arrangements that are essential parts of the global security architecture.
- . **Undermines nuclear non-proliferation:**US action undermines the global effort for nuclear non-proliferation by sabotaging an important and effective anti-proliferation agreement.
 - œ By exiting JCPOA,the US has heightened risks stemming from Iran.
 - œ Due to a multi-pronged effect on other parties, this can trigger a preventive race to acquire nuclear weapons.
- . **Europe's stand:**European Commission announced its intention to implement the blocking statute of 1996 to declare the US sanctions against Iran illegal in Europe and ban European citizens and companies from complying with them.
 - œ The commission also instructed the European Investment Bank to facilitate European companies' investment in Iran.

GOOD GOVERNANCE INDEX

◎ **CONTEXT**

◎ **ABOUT**

- Centre releases Good Governance Index ranking States and UTs in 10 sectors.
- The rankings were launched by the Department of Administrative Reforms and Public Grievances, and the Centre for Good Governance.
- The GGI takes into consideration ten sectors:
 - œ Agriculture and Allied Sectors,
 - œ Commerce & Industries,
 - œ Human Resource Development,
 - œ Public Health,
 - œ Public Infrastructure & Utilities,
 - œ Economic Governance,
 - œ Social Welfare & Development,
 - œ Judicial & Public Security,
 - œ Environment and
 - œ Citizen-Centric Governance.

- œ These ten Governance Sectors are measured on total 50 indicators.
- œ The Good Governance Day is observed on the birth anniversary of former Prime Minister Shri Atal Bihari Vajpayee.
- œ Good Governance Index has been scientifically designed on various parameters of governance.

Outcomes of the report

- Tamil Nadu topped the Good Governance Index. Maharashtra, Karnataka, Chhattisgarh and Andhra Pradesh followed among the 'Big States'.
- Among the 'Big States', the poor performers are Odisha, Bihar, Goa, and Uttar Pradesh with Jharkhand coming last.
- The States and UTs are divided into three groups — Big States, North-East and Hill States, and Union Territories.
- Puducherry is the best governed Union Territory followed by Chandigarh and Delhi. Lakshwadeep is the worst performing UT.
- In the agriculture and allied ranking, Madhya Pradesh, Mizoram and Daman and Diu are the best performing States in their groups.
- While assessing the performance of commerce and industries across States, Jharkhand, Uttarakhand and Delhi top the lists of their groups.

State of governance

Rank	Big States	Score
1.	Tamil Nadu	5.62
2.	Maharashtra	5.40
3.	Karnataka	5.10
4.	Chhattisgarh	5.05
5.	Andhra Pradesh	5.05
6.	Gujarat	5.04
7.	Haryana	5.00
8.	Kerala	4.98
9.	Madhya Pradesh	4.85

Rank	Big States	Score
10.	West Bengal	4.84
11.	Telangana	4.83
12.	Rajasthan	4.8
13.	Punjab	4.57
14.	Orissa	4.44
15.	Bihar	4.40
16.	Goa	4.29
17.	Uttar Pradesh	4.25
18.	Jharkhand	4.23

KHADI AND VILLAGE INDUSTRIES COMMISSION (KVIC)

● CONTEXT

- To commemorate 150th Birth Anniversary of Mahatma Gandhi and to support the weaker section of the society in Agartala, Khadi and Village Industries Commission (KVIC) organized a distribution of 1000 Bee Boxes, 100 Pottery Wheels and 100 Advanced Leather Tool kits 100 Farmers, 100 Potters and 100 Leather Artisans recently.

◎ **ABOUT**

- This mega equipment distribution and Capacity Building drive will create a livelihood and will provide employment to 700 people.
- The programs like Honey Mission, Empowerment of Leather Artisans and KumharSashaktikaran Mission will not only instill self-confidence but give a much required boost to strengthen the weaker section of the society.
- Tripura has a lot of potential of Bee Keeping and Pottery because of large scale cultivation of rubber plants and use of traditional terracotta products in their households.

About KVIC

- The Khadi and Village Industries Commission (KVIC) is a statutory body formed by the Government of India, under the Act of Parliament, 'Khadi and Village Industries Commission Act of 1956'.
- It is an apex organisation under the Ministry of Micro, Small and Medium Enterprises, with regard to khadi and village industries within India.
- It seeks to - "plan, promote, facilitate, organise and assist in the establishment and development of khadi and village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.
- The KVIC may also undertake directly or through other agencies studies concerning the problems of Khadi and/or village industries besides research or establishing pilot projects for the development of Khadi and village industries.
- The KVIC is authorized to establish and maintain separate organisations for the purpose of carrying out any or all of the above matters besides carrying out any other matters incidental to its activities.
- The broad objectives that the KVIC has set before it are:
 - The social objective of providing employment.
 - The economic objective of producing saleable articles.
 - The wider objective of creating self-reliance amongst the poor and building up of a strong rural community spirit.

‘NAGPUR RESOLUTION: A HOLISTIC APPROACH FOR EMPOWERING CITIZENS’

◎ **CONTEXT**

- The ‘Nagpur Resolution- A holistic approach for empowering citizens’ was adopted during the Valedictory session of the two-day Regional Conference on ‘Improving Public Service Delivery – Role of Governments’.

◎ **ABOUT**

- The conference was organised by the Department of Administrative Reforms and Public Grievances (DARPG), Government of India, in collaboration with the Government of Maharashtra and the Maharashtra State Commission for Right to Public Services.
- Positive approach, transparency, corruption-free system, fast track decision making and social sensitivity are essential to good governance.
- Performance audit of public servants should be done at regular intervals.
- The Conference also resolved to adopt a holistic approach of systemic public grievance reforms through improved mapping, formulation of monitoring matrix, data collection and evaluation in quality of grievance redressal, and to provide an enabling environment for States and Ministries/Departments of the Government of India for creating web portals and to adopt a holistic approach for improved service delivery through digital platforms.

- The Resolution focuses on dynamic policy making and strategic decisions, monitoring of implementation, appointment of key personnel, coordination and evaluation, and achieving a sense of common identity by exchange of technical expertise in the areas of Improved Service Delivery between paired States under the Ek Bharat Shreshtha Bharat Program.

Major Objectives

- To empower the citizens by policy interventions for better service delivery through timely updation of citizens charters, implementation of enactments and benchmarking standards for continuous improvement;
- To empower citizens by adopting a bottom-up approach to bring massive improvements in quality of grievance redressal and reduction in timelines of grievance redressal;
- To adopt a holistic approach of systemic public grievance reforms through improved mapping, formulation of monitoring matrix, data collection and evaluation in quality of grievance redressal;
- To provide an enabling environment for States and Ministries/ Departments of the Government of India for creating web portals and to adopt a holistic approach for improved service delivery through digital platforms;
- To focus on dynamic policy making and strategic decisions, monitoring of implementation, appointment of key personnel, coordination and evaluation;
- To achieve a sense of common identity by exchange of technical expertise in the areas of Improved Service Delivery between the paired States under the Ek Bharat – Shreshtha Bharat Program;
- To work towards long-term engagements in the areas of Improved Service Delivery for Empowering Citizens through greater cooperation between the DARPG and the participating States and,
- To ensure timely publication of Good Governance Index to identify the quality of governance in 10 sectors especially those pertaining to welfare and infrastructure at the Union, State and District levels.

QUICK REACTION SURFACE-TO-AIR MISSILES

◎ **CONTEXT**

- **DRDO successfully test-fired its Quick Reaction Surface to Air Missile (QRSAM) system, likely to be inducted into the armed forces by 2021, from a base off Odisha coast.**

◎ **ABOUT**

- The missile, developed by the Defence Research and Development Organisation (DRDO) for the Indian Army, was flight-tested from the Integrated Test Range (ITR) at Chandipur
- It has been developed to replace the 'Akash' missile defence system, and has 360-degree coverage.
- The first test firing of the missile took place on 4 June 2017. This was followed by the second successful test on 3 July 2017.
- The test flights had successfully demonstrated their aerodynamics, propulsion, structural performance and high maneuvering capabilities.

Features

- œ It uses solid fuel propellant and has a strike **range** of 25-30 km with capability of hitting multiple targets.
- œ Developed by DRDO

- œ It is capable of hitting the low flying objects.
- œ The missile is an all-weather, all-terrain surface-to-air missile equipped with electronic counter measures against jamming by aircraft radars
- œ The missile can be mounted on a truck and is stored in a canister.
- œ The missile is equipped with a midcourse inertial navigation system with a two-way data link and a DRDO-developed terminal active seeker. The system has the capability to search and track targets while moving.
- œ QRSAM is a compact weapon system and is mobile. It has a fully automated Command and Control System. The missile system comprises of two four-walled radars both of which encompass a 360-degree coverage, namely, the Active Array Battery Surveillance Radar and the Active Array Battery Multifunction Radar, apart from the launcher.

Significance

- . Towards the indigenization of technology DRDO is doing amazing job. The successfully test-firing of Quick Reaction Surface to Air Missile (QRSAM) system by DRDO will put India in a different class in its combat technologies and strengths.
- . Prime Minister Narendra Modi's Make in India initiative has helped the defence ministry save more than `1 lakh crore worth of foreign exchange.
- . In the past two years, as many as six air defence and anti-tank missile projects have been built in India by the Defence Research and Development Organisation (DRDO), even as several new ones are under its consideration.
- . The collaboration with the foreign players will lead to transfer of technology and funds.

© CONCLUSION

- Development of Quick Reaction Surface-to-Air missiles is a positive step towards the indigenization of the defence technology. It will put Indian Army at a higher pedestal to improve the security of the country against the erring neighbors.

CURRENT AFFAIRS ANALYST

Vol-4 (DECEMBER, 2019)

CONTENTS

Section - A: MAINS CURRENT AFFAIRS

Area of GS	Topics in News	Page No.
Economics	. Pharmaceutical Sector – Growth, Problems, Challenges & Solutions	134
International Relations	. In Numbers and Dimensions, the Global Refugee Crisis and India's refugee saga, from 1947 to 2017	138
	. West Asia Politics and Conflicts	141
Polity and Governance	. Criminal Justice System – Problems and Solutions	146
SCIENCE & TECH	. The link between food, nutrition, diet and non-communicable diseases	148

Section - B: PRELIMS CURRENT AFFAIRS

Area of GS	Topics in News	Page No.
Economics	. Operation Twist	152
	. Tripura gets its first SEZ	153
	. H1-B visas	154
Environment and Ecology	. Rhinos to be re-introduced in Uttarakhand	156
	. Why India needs a Project Dolphin	157
Polity and Governance	. Accessible India Campaign (Sugamya Bharat Abhiyan)	158
	. NITI Aayog to draft roadmap for achieving population stabilisation	159
	. Pradhan Mantri Matru Vandana Yojana	160
	. The Draft National Statistical Commission Bill	162
Science & Tech.	. Hydrogen-Based Cars	163
	. Indian Pharmacopoeia	165
Social Issues	. Breast Milk Banks	165

SOCIETY	. JAGA Mission	166
	. Koraga Community	167
	. 3-D Bio-printing	169

SECTION: A
(MAINS)
CURRENT AFFAIRS

PHARMACEUTICAL SECTOR – GROWTH, PROBLEMS, CHALLENGES & SOLUTIONS

CONTEXT

- Recently, National Pharmaceutical Pricing Authority (NPPA) has raised the ceiling prices of 21 essential medicines by 50%. In this context, we are bringing out an analysis of pharma sector in India.

◎ BACKGROUND

- œ India is the largest provider of generic drugs globally. Indian pharmaceutical sector industry supplies over 50 per cent of global demand for various vaccines.
- œ The pharmaceutical sector was valued at US\$ 33 billion in 2017.
- œ As per Economic Survey 2018-19 the country's pharmaceutical industry is expected to expand at a CAGR of 22.4 per cent over 2015–20 to reach US\$ 55 billion. India's pharmaceutical exports stood at US\$ 17.27 billion in FY18 and have reached US\$ 19.14 billion in FY19.
- œ Indian companies received 304 Abbreviated New Drug Application (ANDA) approvals from the US Food and Drug Administration (USFDA) in 2017.
- œ Pharmaceutical exports include bulk drugs, intermediates, drug formulations, biologicals, Ayush & herbal products and surgicals.
- œ India's biotechnology industry comprising bio-pharmaceuticals, bio-services, bio-agriculture, bio-industry and bioinformatics is expected to grow at an average growth rate of around 30 per cent a year and reach US\$ 100 billion by 2025.

◎ ANALYSIS

Problems & Challenges

- œ India is the third largest manufacturer of pharmaceutical products in terms of volume and it is growing steadily. The market has seen the entry of many foreign players as well as rise of many domestic manufacturers. However, the industry faces many speed breakers:
- œ Lack of R&D:
 - > The Indian pharma industry faces lack of research components and real time good manufacturing practices.
 - > No doubt investment (as % of sales) in research & development by Indian pharma companies increased from 5.3 per cent in FY12 to 8.5 per cent in FY18 but it is still low as compared to US counterparts that invest in R & D 15–20% of their sales.
 - > China is ascending at a great speed to a leading position worldwide in terms of Research and Development investment, scientific publications and patents. China is known for its mass-production of low-level generic drugs and as a 'world factory' of active pharmaceutical ingredients (APIs). India is importing APIs from china at large scale

- > **Why?**
 - . Simple enough answer, the lower the profits for the companies, the lower the investments. So the companies sight that due to the low income they are not able to develop products the way they want.
- œ **Compliance issues and good manufacturing practices:**
 - > This has somehow always been a problem for the Indian companies. The ongoing rumor is that the United States Food and Drug Administration is trying to block the growth of the companies.
 - > **Why is the approval of USFDA important?**
 - . The approval of USFDA is important because the largest consumer of pharma products is the USA and India is a major exporter. The opinion of the USFDA is considered to be the standard in the sector as well.
 - . The companies are trying to improve their standards and this issue can be solved by having officials who are more stringent and inspections on a regular basis can be done
- œ **Highly fragmented industry**
 - > The Indian pharma industry is highly fragmented. The market is overloaded with generic manufacturers.
 - > **Why is this a problem?**
 - . This is a cause for concern because high fragmentation causes instability, volatility and uncertainty. This is certainly not a good omen for the pharma sector.
 - . Pharmaceutical companies can review their strategies to survive in a volatile environment.
 - . Some of the actions that can be taken by the companies are they can periodically review their product portfolio and build more customer centric products.
 - . The companies need to build their organisation in such a way that will enable better operational ability and agility.
- œ **Low Margins of profits due to government pricing policies – Drug Price Control Order**
 - > Indian pharma companies are not getting proper profits; their earnings are basically very low as compared to their counterparts in other countries such as the US.
 - > Their income is not sufficient enough to invest money on research component.
 - > The companies sight that the reforms of the Government for the essential medicines has caused them to lower the price of drugs. This has been done by the Government for the betterment of the public. So the Government has to think of a way to promote the pharma companies as well.
- > Funding for the pharma companies might be a way to move forward.
- > National Pharmaceutical Pricing Authority (NPPA) has recently raised the ceiling prices of 21 essential medicines by 50% as China has increased the prices of APIs.
- œ **Stronger IP regulations**
 - > IP regulation has always been a thorn in the skin for the companies, especially the foreign companies. The companies strongly feel that the rules have to be amended and the so-called victim of the lax regulations have been the foreign entrants.
 - > The solution to this answer might be provided by the IPR Think Tank formed by the Government to draft a stronger national IP policies.
 - > The U.S. recognises and encourages secondary patents. India, however, does not. India's rejection of secondary patents has kept blockbuster medicines affordable for many.
- œ **Dependency on China**
 - > The pharma industry is dependent on China for the supply of raw material for generic medicines production.
 - > India's dependence on Chinese APIs imports makes the former vulnerable to the price mechanisms.
- œ **Lack of Policy Support**
 - > India needs user friendly government policy for the common man to establish small scale, raw material manufacturing units/ incubators in all states of the country to improve availability of raw materials to manufacture generic drugs at affordable rates.
 - > The government and industry should facilitate the pharmacist community to become entrepreneurs and promote incubators' establishment.
- œ **Lack of good quality of indigenously produced Raw Materials**
 - > Raw material produced from small scale units should be properly validated in the testing laboratory of the state to ascertain their quality specifications.
 - > There is a need for a functional testing laboratory in every state to fasten the work of specification of raw materials.
 - > Small scale produces may be re-processed in another industry or via a chain of industry for quality products that can be used for parenteral/tailor-made formulations.

œ **Lack of Skilled Labour**

- > Skilled manpower from academic institutions can be achieved through continuing education programmes.

œ **Pharmaceutical Marketing Malpractices**

- > The pharmaceutical industry has been accused of adopting questionable practices in relation to the marketing of their products. The main focus of attention in this respect has been the suspect interactions between pharmaceutical companies and healthcare practitioners/providers (HCPs). The unethical marketing practices comprises of:
 - **Claims made during promotional activities that are:**
 - Misleading and give rise to unjustifiable drug use leading to risks.
 - Not capable of substantiation.
 - Not in good taste.
 - Comparative with another drug, without any substantive basis for such comparison.
 - Unqualified in the use of terms such as safe.
 - An improper representation of the true nature of the drug.
 - **Interaction with HCPs comprises of following malpractices**
 - Free samples of drugs
 - Offering of gifts or monetary benefits to HCPs or family members.
 - Providing travel or lodging facilities to HCPs in relation to attending seminars, continuing medical education (CME) programmes.
 - Extension of grants or funds for medical research or clinical trials.

Suggestions

œ **Research schemes**

- > Should be initiated by the industry via direct contact with identified researcher/faculty.
- > Incentives should be paid to students contributing towards development of any research formula for the industry.

œ **Industry-Academia Tie-Up**

- > Industries should contact Indian academic institutions to get qualified students who have the knowledge and aptitude for research and development in pharma.
- > Industry should explore the availability of qualified students beyond metro cities.

œ **International Collaborations**

- > The industry and the government must collaborate with the international research organisations for research and development to invent new formulas, drugs and treatments.

œ **Internal Industrial Trainings:**

- > Every industry has its own protocol to serve the society. Therefore, the pharma industry should train students as per their need. Only a few industries are thinking in this line.
- > Adoption of user-friendly policies will help establish small scale industry and encourage students and middle class business owners with ambitions in this line. This will also help overcome the problem of unemployment for pharmacists and promote entrepreneurship in the nation.

œ **Setting Up Special Pharma Research Centers**

- > With changing times, students are getting exposure through internet about research/technology around them.
- > Indian academic institutions are full of ideas born from the young, creative brains of students.
- > Indian pharma industry can explore these ideas for future progress.
- > There are ample opportunities for industries to represent their data via academic pharma institutions.
- > Pharmacy students are highly qualified persons in handling of instruments with having good knowledge of data interpretation and data mining. The important part is that there is no significance of instrumental data without interpretation. Therefore, such knowledge of students can be explored by the industry at the cost of living wedges.

Steps by Government

œ **100% FDI in Pharma Sector**

- > The Union Cabinet has given its nod for the amendment of the existing Foreign Direct Investment (FDI) policy in the pharmaceutical sector in order to allow FDI up to 100 per cent under the automatic route for manufacturing of medical devices subject to certain conditions.
- > The drugs and pharmaceuticals sector attracted cumulative FDI inflows worth US\$ 15.98 billion between April 2000 and March 2019, according to data released by the Department of Industrial Policy and Promotion (DIPP).

œ **Setting Pharma Parks**

- > In October 2018, the Uttar Pradesh Government announced that it will set up six pharma parks in the state and has received investment commitments of more than Rs 5,000-6,000 crore (US\$ 712-855 million) for the same.

œ **National Health Protection Scheme**

- > The National Health Protection Scheme is largest government funded healthcare programme in the world, which is expected to benefit 100 million poor families in the country by providing a cover of up to Rs 5 lakh (US\$ 7,723.2) per family per year for secondary and tertiary care hospitalization. The programme was announced in Union Budget 2018-19.
- > It has the potential to turn India into the largest pharma manufacturer of the world in about three years.

œ **Ease of Doing Business**

- > In March 2018, the Drug Controller General of India (DCGI) announced its plans to start a single-window facility to provide consents, approvals and other information. The move is aimed at giving a push to the Make in India initiative.

œ **E-Pharmacies**

- > The Government of India is planning to set up an electronic platform to regulate online pharmacies under a new policy, in order to stop any misuse due to easy availability.

œ **Pharma Vision 2020**

- > The Government of India unveiled 'Pharma Vision 2020' aimed at making India a global

leader in end-to-end drug manufacture. Approval time for new facilities has been reduced to boost investments.

œ **Affordability and Availability of medicines Mechanism**

- > The government introduced mechanisms such as the Drug Price Control Order and the National Pharmaceutical Pricing Authority to deal with the issue of affordability and availability of medicines.

● **CONCLUSION**

- œ Medicine spending in India is projected to grow 9-12 per cent over the next five years, leading India to become one of the top 10 countries in terms of medicine spending.
- œ Going forward, better growth in domestic sales would also depend on the ability of companies to align their product portfolio towards chronic therapies for diseases such as such as cardiovascular, anti-diabetes, anti-depressants and anti-cancers that are on the rise.
- œ The Indian government has taken many steps to reduce costs and bring down healthcare expenses. Speedy introduction of generic drugs into the market has remained in focus and is expected to benefit the Indian pharmaceutical companies. In addition, the thrust on rural health programmes, lifesaving drugs and preventive vaccines also augurs well for the pharmaceutical companies.

IN NUMBERS AND DIMENSIONS, THE GLOBAL REFUGEE CRISIS AND INDIA'S REFUGEE SAGA, FROM 1947 TO 2017

CONTEXT

- The first Global Refugee Forum (GRF) was held in Geneva, Switzerland, jointly hosted by the United Nations High Commissioner for Refugees (UNHCR), the United Nations Refugee Agency, and the Government of Switzerland.

● **BACKGROUND/OUTCOMES OF THE REPORT**

- œ Globally, more than two-thirds of all refugees come from five countries: Syria (6.7 million), Afghanistan (2.7 million), South Sudan (2.3 million), Myanmar (1.1 million), and Somalia (0.9 million).
- œ According to the UN, by the end of 2018, there were around 70.8 million people around the world who had left their home countries because of conflict and persecution. Of these 70.8 million, roughly 30 million are refugees.
- œ Countries in the developed regions host 16 per cent of refugees; one-third of the refugee population (6.7 million people) are in the Least Developed Countries.
- œ The largest host countries are Turkey (3.7 million), Pakistan (1.4 million), Uganda (1.2 million), Sudan (1.1 million), and Germany (1.1 million).
- œ According to the UN's Global Trends report, there are 37,000 new displacements every day.
- œ In 2018, 13.6 million people were newly displaced due to conflict and or persecution.

Who is a refugee?

- œ The UN defines refugees as those individuals that have fled their own countries because of persecution, war or violence.
- œ "A refugee has a well-founded fear of persecution for reasons of race, religion, nationality, political opinion or membership in a particular social group. Most likely, they cannot return home or are afraid to do so. War and ethnic, tribal and religious violence are leading causes of refugees fleeing their countries".
- œ Refugees are defined and protected in international law. The 1951 Refugee Convention is a key legal document and defines a refugee as: "someone who is unable or unwilling to return to their country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion."

Who is an internally displaced person?

- œ An internally displaced person (IDP) is a person who has been forced to flee his or her home for the same reason as a refugee, but remains in his or her own country and has not crossed an international border. Unlike refugees, IDPs are not protected by international law or eligible to receive many types of aid.

Current refugee crises across the globe

- œ In Burundi in East Africa, a humanitarian crisis is unfolding. Economic decline, outbreak of disease, and food insecurity have led to displacements within and outside the country to neighbouring countries including Rwanda, Uganda, the Democratic Republic of Congo and Tanzania.
- œ An estimated 5.6 million people from Syria have left the country since 2011, seeking refuge in neighbouring Lebanon, Turkey, and Jordan among other countries.
- œ Turkey hosts the largest number of Syrian refugees at roughly 3.3 million. According to UNHCR, the majority of the Syrians in neighbouring countries live in the urban areas, while roughly 8 per cent live in refugee camps.
- œ Rohingya Muslims of Myanmar fled the country after violence broke out in the country's Rakhine state. An estimated 6.7 lakh crossed over to neighbouring Bangladesh.
- œ Other countries and regions facing a refugee situation include Europe, Yemen, Central America, Africa, South Sudan, Venezuela, DR Congo, and Nigeria.

Current Refugee situation in India

- œ India does not have a separate statute for refugees, and until now has been dealing with refugees on a case-by-case basis.
- œ India is not a signatory to the 1951 Convention on Refugees or the 1967 Protocol Relating to the Status of Refugees.

- œ Union government circulated to all states and Union Territories a Standard Operating Procedure to deal with foreign nationals who claimed to be refugees.
- œ Rohingya started to arrive in India's northeast following stepped-up persecution by the Myanmar armed forces.
- œ Rohingya presence in the country has serious national security ramifications and it poses national security threats.
- œ There is a serious possibility of eruption of violence against Buddhists who are Indian citizens and who stay on Indian soil by radicalised Rohingyas.

India's refugee saga, from 1947 to 2017

- œ In the seven decades since it became an independent country, India has seen and largely welcomed waves of migrants fleeing conflict in neighbouring nations.
- œ **Indo-Pakistan partition period:** It started with Partition itself, though people who crossed over the newly formed boundaries between India and Pakistan—by choice or forcibly—didn't lose their nationalities; they were still forced to live the lives of a refugee. Refugee camps across north India served as homes for those who had borne the brunt of Partition.
- œ **Tibetan refugee:** The next major movement of refugees towards India happened almost a decade after Partition, in 1959, when the Dalai Lama, along with more than 100,000 followers, fled Tibet and came to India seeking political asylum. Granting asylum to them on humanitarian grounds proved costly to India. As a result, Sino-Indian relations took a major hit. Border issues between the two countries, and Chinese encroachment on Indian Territory, began to crop up with greater

frequency.

- œ **The Bangladeshi refugee:** The next major refugee crisis happened during Bangladesh's war of independence in 1971, when millions of refugees migrated from the country to India, fleeing the conflict between the Pakistani army and Bangladeshi forces. This led to a sudden spike in population in states bordering Bangladesh. According to some estimates, more than 10 million Bangladeshi refugees escaped in 1971 and took shelter in India.

- œ **The Sri Lankan Tamil refugees:** Another sizeable group of refugees in India comprises Sri Lankan Tamils who abandoned the island nation in the wake of active discriminatory policies by successive

Sri Lankan governments, events like the Black July Riots of 1983, and the bloody Sri Lankan civil war. Mostly these refugees, who number over a million, settled in the state of Tamil Nadu.

New York Declaration for Refugees and Migrants

- . Adopted at UNGA
- . The declaration expresses the political will of world leaders to protect the rights of refugees and migrants to save lives and share responsibility for large movements on a global scale.

- œ **The Afghan refugees:** While not one of the larger refugee groups in the country, a number of Afghans also took shelter in India after the Soviet invasion of Afghanistan in 1979. Small groups of Afghan refugees kept coming to India in subsequent years. These refugees are mostly concentrated in and around Delhi, and have largely established spaces for themselves.
- œ **The Rohingya refugees:** 40,000 Rohingya Muslims escaped Myanmar to take shelter in India. However, India has categorized the Rohingya as illegal immigrants and a security threat, siding with the Burmese government. The Indian government has stated that the principle of non-refoulement, or of not forcing refugees to return to their country of origin, does not apply to India principally as it is not a signatory to the 1951 refugees convention.
- œ **The Chakma and Hejong refugees:** Many from the Chakma and Hajong communities—who once lived in the Chittagong hill tracts, most of which are located in Bangladesh—have been living as refugees in India for more than five decades, mostly in the North-East and West Bengal. According to the 2011 census, 47,471 Chakmas live in Arunachal Pradesh alone.
- œ They could be used by terrorist organisations, sex or slave trade etc., thus denial of basic human rights, disruption of global peace.
- œ It is often seen that immigrants are exploited for their cheap labour.
- œ Immigration sometimes also becomes social or political issue; racism is used to exploit feelings or as an excuse for current woes of the local population.

Some Consequences

- œ The refugees also have an impact on the economy and society of their host nations.
- œ Large number of refugees can have a devastation impact on the host nation.
- œ Large number of refugees actually loses their lives while trying to reach different countries which might take them.

WEST ASIA POLITICS AND CONFLICTS

CONTEXT

- . The regional dynamics of West Asia is rapidly changing. Saudi Arabia, Iran, and Turkey are contending each other's views and are divided on the basis of their deep vested interests. Recently, United States announced its pull-out from Syria. The complicated and multifaceted nature of West Asia politics and conflict has roots in the region's history, which warrants an in-depth assessment.

◎ BACKGROUND:

- œ **Strategic location:** Geopolitically, West Asia occupies an important position in international relations due to its geographical location and proximity to continents and countries –
 - > South Asia, China, Central Asia, Europe, and Africa.
- œ **Trade routes and birthplace of Abrahamic religions:** The region is strategically significant due to its enormous energy resources, trade route links to different parts of the world and for fact that it is the place of origin for the Abrahamic religions.
- œ **Energy resources:** It is the world largest oil-producing region accounting for 34% of world production, 45% of crude oil exports and 48% of oil proven reserves.
 - > All powers seek a stake in the affairs of the region due to the abundance of natural resources.
- œ **Instability and conflicts:** It is also a region plagued with instability largely due to the involvement of external forces, and sometimes due to internal conflicts.
- œ **Geography:** West Asia is the westernmost sub region of Asia. It includes Anatolia, the Arabian Peninsula, Iran, the Levant, Mesopotamia, the Sinai Peninsula, and Transcaucasia.
 - > The region is considered to be separated from Africa by the Isthmus of Suez, and separated from Europe by the waterways of Turkish Straits and the drainage divide of the Caucasus Mountains.
- œ **Population:** 20 countries are located fully or partly in Western Asia, out of which 13 are part of the Arab world.
 - > The most populous countries in Western Asia are Turkey (partly in Southeast Europe), Iran, Iraq, Saudi Arabia, and Yemen.
 - > The total population of Western Asia is estimated to be 300 million (as of 2015).

◎ ANALYSIS

Political history of the region – A time line

- œ **McMahon–Hussein Correspondence 1915 –16:** Under this correspondence the Britain offered Arabs across the Middle East self-rule in exchange for their aid in defeating the **Ottoman Empire** during the First World War.
- œ **Sykes-Picot Agreement 1916:** Britain and France sign a secret pact outlining their spheres of control in Middle East after the First World War. Palestine is designated for international administration pending consultations with Russia and other powers. The agreement is **seen by Arabs as a betrayal** of the Hussein-McMahon correspondence.
- œ **Balfour Declaration 1917:** It was a public statement issued by the British government during the First World War announcing support for the establishment of a "**national home for the Jewish people**" in Palestine, then an Ottoman region with a small minority Jewish population.
 - > Later in the period, many Jews arrived in Palestine.
- œ **Arab-Israeli wars:** After the arrival of Jews, many wars took place between the Arab and Israeli coalitions, in which sides were often changed depending on changing scenarios.
 - > **The Palestine Liberation Organisation (PLO)**, which would later play a significant role in Arab politics, was founded in Cairo by the **Arab League** in 1964.
 - > In 1967 Israeli strikes against Egypt and Syria launched the **Six Day War**. Israel has occupied the West Bank, Arab East Jerusalem, and Syria's Golan Heights ever since.
 - > The **Yom Kippur War of 1973** was also one of the Arab-Israeli wars.
- œ **Camp David Accord 1979:** In 1956, **Egypt nationalised the Suez Canal** and took control over the Sinai Peninsula. This led to further confrontation between Egypt and Israel.
 - > Finally, in 1979, a peace deal was reached between Egypt and Israel through the Camp David Accord. **Egypt became the first Arab country to recognise Israel.**

- > Following Egypt's peace agreement with Israel, Arab League suspended Egypt's membership to the league.
- œ **Iranian Revolution 1979:** The Iranian Revolution was a series of events that involved overthrow of the last monarch of Iran, and replacement of his government with an Islamic republic under **Ayatollah Rohullah Khomeini**, a leader of one of the factions in the revolt.
 - > This movement against the **United States-backed monarchy in Iran** was supported by various leftist and Islamist organizations and student movements.
 - > Since the establishment of Iran as an Islamic Republic, governments of United States and Iran have been at odds.
 - > Iran is also the **largest Shia majority** country in the Arab region, which often brings it at **odds with Saudi Arabia** and other Sunni states in the region.
- œ **First Intifada 1987:** The First Intifada (uprising) was a **Palestinian uprising** against the Israeli occupation of West Bank and Gaza. The uprising lasted from December 1987 until the **Madrid Conference in 1991**, though some date its conclusion to 1993, with the signing of the **Oslo Accords**.
 - > It is during this time that **Hamas was created** from the Gaza wing of Muslim Brotherhood.
 - > **Muslim Brotherhood** was a Sunni Islamist religious, political, and social movement founded in Egypt in 1928.
- œ **Iraq-Iran war, 1980 – 88:** Iraq invaded Iran in 1980 because it was worried that the 1979 Iranian Revolution would cause Iraq's Shi'ite majority to **rebel against its Ba'athist Sunni government, led by Saddam Hussein**. Roots of the war also lay in a number of **territorial and political disputes** between Iraq and Iran.
 - > Iraq wanted to seize control of the oil-rich **Iranian border region of Khūzestān**.
 - > Iraq also wanted to assert its sovereignty over **both banks of Shaṭṭ al-'Arab** (Arvand Rud), which formed a historical border between the two countries.
 - > Iraq's war effort were openly **financed by Saudi Arabia, Kuwait**, and other neighbouring Arab states and was **tacitly supported by US and Soviet Union**, while **Iran's only major allies were Syria and Libya**.
 - > Iraq was said to have used Chemical weapons in the war, while **Iran counter** attacked using **revolutionary militia (Revolutionary Guards)**.
- > Iraq made many attempts to sue for peace, but it was finally in **1988** when Iran accepted the **UN-brokered ceasefire**.
- œ **Iraq invades Kuwait 1990:** Kuwait became an independent **nation in 1961**, a move that the Iraqi government did not support. **Iraq claimed** that Kuwait was created by British imperialism and it was actually an **extension of Iraq**.
 - > **Kuwait financed Iraq's war on Iran:** Fearing Iranian Revolution would move within its borders, Kuwait provided financial support to Iraq during the Iran-Iraq War. Later Iraq was unable to repay Kuwait and asked for loan forgiveness which the country denied.
 - > **Kuwait did not reduce oil production:** Iraq-Kuwait relations were also strained because Kuwait did not comply with Iraq's suggestion of reducing its oil production in order to increase prices. Furthermore, Iraq accused Kuwait of slant-drilling in the Rumaila field in Iraq.
 - > This finally culminated into Iraq's attack on Kuwait in 1990.
 - > **Operation Desert Storm**, an international coalition, led primarily by US forces, launched air strikes and ground invasion into Iraq. The Iraqi military was unable to defend itself. US established an air base within the country.
 - > Conflict ended through a **formal resolution passed by the UNSC** in 1991. Since then US has maintained a military presence in Kuwait.
- œ **Middle East peace conference and Oslo Declaration:** In 1991, Israeli, Syrian, Lebanese, Jordanian and Palestinian delegations attend the Middle East peace conference, which opens dialogues on Arab-Israeli and Israeli-Palestinian relations.
 - > In the Oslo declaration of principles 1993, **PLO and Israel agree to recognise each other**.
 - > In 1995, an Interim agreement on the future of Israeli-occupied Gaza and West Bank was signed by Israel and PLO. This agreement recognised the formation of a Palestinian Interim Self-Government Authority - an elected council.
- œ **Second Intifada 2000:** Over a period of time, many instances happened that **stalled reaching of a "final status" agreement** between Israel and Palestine **at the 2000 Camp David Summit** of which US was also a part.
 - > **Ariel Sharon's visit:** Finally, Second Intifada began in 2000 when Palestinians rioted after Ariel Sharon, of the Likud party in Israel, visited the contended site of Temple Mount (Noble Sanctuary) in Jerusalem.
 - > In 2005, leaders from Israel, Palestinian Authority (PA), Jordan and Egypt met in Sharm

el-Sheikh to discuss ways towards **ending the four year intifada.**

- > **Fatah and Hamas conflict:** 2006 was witness to an inside conflict between the two main Palestinian political parties, Fatah and Hamas, resulting in split of PA in 2007. The reconciliation process and unification of Hamas and Fatah administrations remains un-finalized even today.

œ **Lebanon war 2006:** In 2006, Hezbollah conducted a cross-border raid on Israeli border towns. This led to conflicts between the two nations, with unprecedented **Iranian military support to Hezbollah.** Later in the year, a UN-brokered ceasefire was reached.

Hezbollah

- . Hezbollah is a Shia Islamist political party and militant group based in Lebanon. It was founded in the early 1980s as part of an Iranian effort to aggregate a variety of militant Lebanese Shia groups into a unified organization. Hezbollah acts as a proxy for Iran in the on-going Iran–Israel proxy conflict. Iran also supported Hezbollah during the South Lebanon conflict (1985–2000).

Arab Spring – Arab Spring 2.0

œ **Tunisian Revolution 2010:** Also called the **Jasmine Revolution**, this was a campaign of civil resistance. It led to the ousting of long-time president Zine El Abidine Ben Ali in 2011. It eventually led to a thorough **democratisation of the country.**

- > The effect of Tunisian Revolution **spread strongly to five other countries:** Libya, Egypt, Yemen, Syria and Bahrain; where either the regime was toppled or major uprisings or social violence took place, including riots, civil wars or insurgencies.

œ **Egyptian revolution 2011:** In 2011, a mass protest movement took place in Egypt which ultimately **forced long time president Hosni Mubarak from office.** After this a political crisis ensued, with Supreme Council of the Armed Forces taking control of the country until after a series of popular elections, **Muslim Brotherhood came to power in 2012.**

- > However, disputes between elected Islamist president Mohamed Morsi and secularists continued until **Morsi was overthrown in 2013.**
- > **Abdel Fattah el-Sisi**, who announced the overthrow of Morsi, **won the 2014 elections** with a landslide victory and became the

president of Egypt.

œ **Yemeni crisis:** Yemeni Crisis **began with the 2011–12 revolution** against President Ali Abdullah Saleh, who had led Yemen for more than three decades. The opposition groups **charged Saleh with financial corruption and criticized him** for being backed by Saudi Arabia and United States. After a mediated agreement between the Yemeni government and opposition groups, President **Saleh left office in 2012**, and former vice president, **Abdrabbuh Mansur Hadi acquired office.**

- > However, the new government struggled to unite the fractious political landscape of the country, especially facing **threats from the Houthi rebels.**

> **Changing stance of Houthi rebels:** Houthis were initially one among the many oppositions groups against President Saleh, but later in 2014-15, with Saleh's help, Houthis announced the fall of President Hadi's government and took control of most northern parts of Yemen. Later Houthis also executed Saleh on charges of treason.

> **Houthi in power but not recognised:** Since then, Houthi's are in power and enjoy support. But they have been resisting **Saudi-led military intervention** in Yemen (with intelligence and logistical support of the US), which doesn't recognise the Houthi government and seeks to restore previous government to power. **Houthis are supported by Iran** in their fight against the Saudi coalition.

- > This conflict for power between the two factions has led to the **on-going Yemeni civil war.**

Houthi Rebels

- . The Houthi movement is an Islamic, political and armed movement that emerged in 1990s from the Sa'dah region in northern Yemen. The movement acquired its name because its founder is from the Houthi tribe. They are of Zaidi sect, which is a sub-sect under the Shia sect of Islam.

œ **Iraqi civil war:** In 2014 the **Iraqi insurgency escalated into a civil war.** The **insurgency was a direct continuation of events following the U.S.-led invasion of Iraq in 2003.** At the time of insurgency, Iraq was led by a Shia-led government which was constantly under attack by Sunni militant groups who targeted Iraq's majority Shia population to undermine confidence in the Shia-led government.

- > **Rise of ISIS:** In 2014, the insurgency escalated dramatically following the conquest of Mosul and major areas in northern Iraq by the Islamic State in Iraq and Syria (ISIS), a Salafi jihadist

militant group and an unrecognised proto-state that follows a fundamentalist, Wahhabi doctrine of Sunni Islam.

- > **Extension of conflict:** After this, in 2014, the conflict merged with the Syrian Civil War, and became a far deadlier conflict. At its height, ISIS held large parts of Iraqi territory. This resulted in forced resignation of the then Iraqi Prime Minister.
- > **Yazidi genocide by ISIS:** ISIS is also the perpetrator of genocide of Yazidis in Iraq. This genocide led to expulsion, flight and effective exile of Yazidis from their ancestral lands in Northern Iraq whose women and girls were forced into sexual slavery by ISIS and whose men were killed by thousands. They were also subjected to forced conversions.
- > **Controlling ISIS:** Finally, United States, along with Canada, Iran, Russia and many other countries launched massive air and ground combat operations to control ISIS. Iraqi Security Forces was provided military and logistical support for this purpose. The civil war ended when victory over ISIS was finally announced in 2017.
- > **Insurgency starting 2017:** After ISIS lost territorial control in the Iraqi civil war began another round of Iraqi insurgency starting late 2017. Several rebel groups, including ISIS and White Flags have since then been fighting the Iraqi military (backed by US).
- > **Note:** A combined force of troops from US, UK, Australia and Poland invaded Iraq in 2003 with an aim to end Saddam Hussein's support for terrorism, whom they **claimed**, had armed **Iraq with chemical weapons of mass destruction**.

Yazidis

- . Yazidis are an endogamous, mostly Kurmanji-speaking group of predominantly Kurdish ethnicity, indigenous to Iraq, Syria, and Turkey.
- Yazidi practices have roots tracing back to the ancient Mesopotamian religions, but it has mixed elements of Christianity (baptism), Islam (circumcision) and Zoroastrianism (reverence of fire as a manifestation from God). Yazidis have been denounced as infidels by fundamentalists like Al-Qaida and ISIS. Despite many years of oppression and attempts to exterminate them, Yazidis have kept alive their syncretic religion for centuries.

government with protests **demanding President Bashar al Assad's removal**; protesters were violently suppressed.

- > The on-going conflict in Syria is the second deadliest of the 21st century and widely described as a series of **overlapping proxy wars** between the regional and world powers, primarily between US and Russia, as well as between Iran and Saudi Arabia. The war is fought between several factions. (**Refer to mains article "Syrian civil war" for detailed analysis**)

Proxy wars between regional heavyweights

- œ **Saudi Arabia – Iran:** Saudi Arabia is the major **Sunni power** in the region, Iran is the major **Shia power**, and both represent a fairly extreme version of their respective sects. While Saudi Arabia is the ultraconservative Wahhabi monarchy, Iran is a theocratic near-autocracy. Even though they don't engage in direct conflict, they fight elsewhere, through **supporting opposing sides in nearby conflicts**, including the civil wars in Syria, Yemen, and Iraq.
- > **Battle for energy resources** exacerbates the situation—Saudi Arabia has the largest oil reserves of any nation, and advocates for moderate prices, while Iran's economic situation dictates that they pursue higher prices worldwide for more immediate gain.
- > **No diplomatic ties:** Iranian revolution of 1979 had threatened Saudi's influence over the region and it later supported Iraq's invasion of Iran. A 2016 attack on Saudi embassy in Teheran closed all diplomatic ties.
- > **United States factor:** United States has always been Saudi Arabia's secure ally, where it also has several military bases. United States' concern with Iran is its ability to produce nuclear weapons. But after America's 'pivot to Asia' policy, its lessening reliance on Saudi oil, and potential rapprochement with Iran, Saudi foreign policy had become more assertive.
- > **Isolating Iran:** In 2015 Saudi Arabia formed the intergovernmental Islamic Military Alliance to Fight Terrorism (IMAF) with the stated goal of combating terrorism. But this coalition excluded Shia-led Iran, Iraq, and Syria; mostly seen as Saudi effort to isolate Iran.
- > **Isolating nations engaging with Iran:** In 2017, Saudi Arabia imposed a blockade on Qatar, principally to punish it for its cordial relationship with Iran.
- > **Houthi rebels:** Saudi Arabia, US, and Hadi's Yemeni government have repeatedly accused Iran of supporting Yemen's Houthi rebels with money and arms.

- œ **Syrian civil war:** The unrest in Syria started as part of a **wider wave of the Arab Spring**. It began in 2011 out of **discontent with the Syrian Ba'athist**

- > **Iran's Shia crescent:** Iran has tried to take advantage of regional instability by expanding its presence in the Shia crescent and creating a land corridor of influence stretching from Iraq to Lebanon, done in part by supporting Shia militias in the war against ISIS.
- œ **Saudi Arabia – Turkey:** Turkey and Saudi Arabia always shared an uneasy relationship. Saudi is wary of was **Turkey's constitutionalism and moderate Islam** as it directly challenges **Saudis' absolutist Islamism**. After recent rise of Saudi's Crown Prince, Mohammed bin Salman and adoption of aggressive foreign policies flaunting Saudi power, **Turkish anxiety** is that Saudis intend to dominate the Arab world to the **exclusion not only of Iran but of Turkey as well**.
- > Turkey has long conceived itself not just a bridge between Asia and Europe but also a central player in regional and global affairs.
- > **Turkey support for Arab Spring:** During the 2011 Arab Spring, Turkey enthusiastically welcomed the overthrow of authoritarian governments, while Saudi regime, feeling vulnerable itself, strongly opposed it.
- > **Opposing stand in Egypt:** During the Egyptian crisis, Turkey has supported President Morsi who belonged to the Muslim Brotherhood and represented a constitutionalist Islamist model like Turkey. Saudis however, embraced General Abdel Fattah el-Sisi and granted him aid.
- > **United States factor:** United States' increasing Saudi importance, and its growing differences with Turkey in the approach towards Syrian Kurds, also sent a signal that Saudi Arabia is the kingpin of America's policy toward West Asia.
- > **Qatar factor:** Qatar also has close relations with Turkey and hosts a Turkish military base. The Emir of Qatar had sent a contingent of soldiers to provide security to Mr. Erdoğan during his failed military coup in 2016. Saudi Arabia has not well taken this relationship.

- > **Jamal Khashoggi case:** Saudi dissident journalist Jamal Khashoggi's murder in the Saudi Consulate in Istanbul, Turkey, exposed the brutal nature of Saudi regime. Turkey used the Khashoggi murder to sharpen the battle lines with Saudi Arabia.

The Israel Factor

- œ Israel is a **Jewish state**, and a **huge American ally, in the midst of a Muslim region**. Israel's relationship with any Arab country comes down to whether or not they support the Palestinian independence movements.
- > **Opposition:** Currently, Israel is not even recognized as a country by, and has no official diplomatic relations with, Iran, Iraq, Kuwait, Lebanon, Saudi Arabia, Syria, and the U.A.E.
- > **Support:** Israel has its strongest regional alliance with Egypt. It has a peace treaty and a \$500 million natural gas supply deal with Jordan. It trades with Qatar (even though Qatar has been accused of supporting Hamas). And it maintains a back-channel relationship with Saudi Arabia.
- > **Political enemies:** Israel's primary political enemies are groups like Hezbollah and Hamas.

CONCLUSION

- œ West Asia politics and conflicts is a complicated and multifaceted affair. The dynamics of West Asia politics keep changing and must be viewed through an appropriate historical lens. It cannot be viewed independent of the international players in the region. Presently, the Syrian conflict is the hotspot of West Asia politics. It can be best understood only after a thorough understanding of the many other facets of the region and its history (**Refer to mains article "Syrian civil war"**).

CRIMINAL JUSTICE SYSTEM – PROBLEMS AND SOLUTIONS

CONTEXT

- Recently, Andhra Pradesh cabinet has approved a bill which proposes death penalty in cases of sexual abuse of women and seeks completion of the entire trial along with judgment within 21 days of filing of FIR.

◎ BACKGROUND

- œ The Criminal Justice System in India is an age-old system primarily based upon the Penal legal system that was established by the British Rule in India.
- œ The system has still not undergone any substantial changes even after 70 years of Independence. The biggest example could be Section 124A of the Indian Penal Code (IPC) that defines sedition and provides for its punishment.
- œ The entire Code of Criminal Procedure (Cr.P.C.) was amended in 1973.
- œ The appointment of the **Vohra Committee** was the very first attempt towards reforming the Criminal Justice System in India. Vohra Committee report (1993) made an observation on the criminalisation of politics and of the nexus among criminals, politicians and bureaucrats in India.
- œ In 2000, the government formed a panel headed by Justice V.S. Malimath, the former Chief Justice of Kerala and Karnataka, to suggest reform in the century-old criminal justice system.
- œ The **Malimath Committee** submitted its report in 2003 with 158 recommendations but these were never implemented.
- œ The Committee felt that the existing system "weighed in favour of the accused and did not adequately focus on justice to the victims of crime."

◎ ANALYSIS

Issues in Criminal Judicial System

œ Multiplicity of Laws:

- > **Andhra Pradesh cabinet's approval to** a bill which proposes death penalty in cases of sexual abuse of women and that seeks completion of the entire trial along with judgment within 21 days of filing of FIR is just another attempt to make another stringent rape laws that will undermine the authority of law.
- > After 2012 gang rape amendments to criminal laws were pitched. In 2013, POCSO and CrPc

dealing with rape were made more stringent.

- > But in practice we have many stringent rape laws and the only problem is lack of implementation.

œ Criminal Justice is suffering from Inertia

- > **Ineffectiveness:** The purpose of the criminal justice system was to protect the rights of the innocents and punish the guilty, but now-a-days system has become a tool of harassment of common people.
- > **Pendency of Cases:** According to Economic Survey 2018-19, there are about 3.5 crore cases pending in the judicial system, especially in district and subordinate courts, which leads to actualisation of the maxim "Justice delayed is justice denied."
- > **Huge Undertrials:** India has one of the world's largest number of undertrial prisoners.
 - According to NCRB -Prison Statistics India (2015), 67.2% of our total prison population comprises of under trial prisoners.
- > **Investigation:** Police is being a front line of the criminal judiciary system, which played a vital role in the administration of justice. Corruption, huge workload and accountability of police is a major hurdle in speedy and transparent delivery of justice.
- > India has failed to bring a single meaningful change by which justice can be given in a proper order.
- > Parliament passes laws and then it forgets about them
- > They don't care about the interpretation of the laws
- > Judiciary is not prioritizing the criminal cases
- > Executive is not active about filing FIRs and doing investigation

œ Lack of Infrastructure:

- > Every outgoing CJI has raised concerns about the lack of infrastructure in the Indian judiciary system
- > There are lot of vacancies in lower judiciary.
- > There is huge work load on lower judiciary

as many new laws have been implemented putting more work pressure on them

- > There is a complete mismatch between the number of cases court system has been asked to handle and the human resources (in the form of judges, para-legal personnel, infrastructure, etc.) given.

œ **Long delays in Trials**

- > In normal criminal cases it takes 30-40 years to complete the trial.
- > People remain in jails for 10-12 years and then they are absolved of all the charges.

œ **Lack of Intention**

- > Lack of intention from executive, legislative and judiciary to create an effective and efficient system for the speedy delivery of justice of rape and aggravated sexual assaults.

Suggestions to Improve the Criminal Justice System

œ **Create Specialization of Judges**

- > We can't make separate laws offence wise rather we must reform judicial system to respond to each and every offence in a reasonable time.
- > Give training to judges in criminal laws

œ **Create Specialized Criminal Benches**

- > The way we have created special commercial benches we must create special criminal benches in HC and SC for the speedy justice to rape victims and accused.
- > Research studies have shown that 90% of time is given to rich people and only 10% of time is given to poor people.

œ **Create Infrastructure**

- > Creating infrastructure is indispensable to the speedy disposal of justice in rape cases
- > **What sort of Infrastructure**
 - . Number of judges to be increased
 - . Technological aids and solutions for filling cases and other judicial processes
 - . Vacancies to be filled on time
 - . Increasing Human Resources in the form of para-legal resources

œ **Sensitization of people**

- > People must be sensitized to the gender issues
- > Rape and sexual assaults on women should not be tolerated
- > They should be sensitized about the ill effects of mob justice or retributive justice

© **CONCLUSION**

- œ Our legal system does not permit police officers to kill an accused merely because he is a dreaded criminal, rapist or terrorist. Undoubtedly, the police have to arrest the accused and make them face trial. The right thing to do in rape cases is to appoint senior judges in fast track courts; no adjournments should be permitted, and rape courts should be put under the direct control of High Courts; the district judge should not have any power to interfere, and the trial must be completed within three months.

THE LINK BETWEEN FOOD, NUTRITION, DIET AND NON-COMMUNICABLE DISEASES

CONTEXT

- Delays and dilutions have derailed regulations of packaged and fast foods. Is it time to press the panic button?

● BACKGROUND

- œ The test results of the Environment Monitoring Laboratory at Delhi-based non-profit Centre for Science and Environment (CSE) have unmasked two anomalies:
 - > First, food manufacturers blatantly sell products that have unhealthy levels of nutrients.
 - > Second, a nexus between the industry and regulating agencies backs this brazen act.

● ANALYSIS

- œ India urgently needs a robust law on labelling and disclosure of nutritional information on food packs.

- œ The existing Food Safety Standards (Packaging and Labelling) Regulations, 2011, is too weak and ineffective.
- œ Even something as basic as salt is not mandatorily disclosed.
- œ But the statutory framework is just not coming along, clearly due to pressure from the powerful junk food industry and the resultant red tape.
- œ In 2013, Food Safety and Standards Authority of India (FSSAI), the country's food regulator, set up an expert committee to regulate junk food available in schools following an order of the Delhi High Court.
- œ In 2014, the expert committee, comprising doctors, nutritionists, public health experts, civil society and industry, suggested labelling of calories, sugar, fat, saturated fat and salt on the front of food packs as

this would help people make an informed choice about the food they eat.

- œ **D Prabhakaran committee** suggested resolving ambiguities on the correct serving size of packed and fast foods and the exact nutritional information people need.

Junk food monster: Communicating diseases

- œ A lab study by the Centre for Science and Environment has found extremely high levels of salt, fat and trans fat in junk foods responsible for obesity and non-communicable diseases like hypertension, diabetes and heart ailments.
- œ Trans fats are deadly. Their intake must be avoided to prevent heart diseases.
- œ The new trend of unhealthy food habits among the youth in India has put them at a risk of developing obesity, diabetes, heart attack -basically non-communicable diseases (NCDs) accentuated by unhealthy lifestyles.
- œ NCDs are those diseases that are not caused by an infection and not spread through contact with another person. They are the silent killers of our generation. Nearly two out of three deaths in India are due to NCDs, with heart diseases and chronic obstructive pulmonary disease (COPD) becoming the leading causes of death in the country.

How is Behavioural change possible?

- œ This behaviour can be changed through socio-ecological approach, which involves influencing both personal and environmental factors of an individual to bring behaviour change.
- œ Sensitisation programmes to popularise healthy eating among the youth should aim at improving the environment where they spend most of their time.
- œ Displaying educational posters about healthy eating in the canteen and replacing unhealthy food items offered there with nutritious ones, along with access to clean water, will help instil healthy eating habits among students.
- œ Group educational sessions about healthy eating help target a larger cohort in the community rather than one-on-one counselling
- œ Social and digital interventions via internet-based coaching and self-management programmes and introducing mass media campaigns can also encourage youngsters to choose healthy foods.
- œ The best way to tackle this growing epidemic of NCDs is to focus on creating an environment that supports positive knowledge, attitude and behaviour change around healthy eating habits.

Regulation is crucial

- œ Along with these programmes targeted at individuals, there needs to be a strong regulation on food labelling that will push the private players in the domestic food industry to show their social responsibility towards the youth of the country.
- œ Laws and policies to ensure that meals in school follow nutritional guidelines, offering healthy snacks at work meetings and regulating the marketing of unhealthy foods and beverages, could go a long way in supporting and sustaining healthy behaviours.
- œ The government of India has taken cognizance of this situation and the Safe and Nutritious Food campaign by the Food Safety and Standards Authority of India (FSSAI) that is helping people adopt the habit of eating safe and eating right.

Why NCDs need to be considered when addressing major nutritional challenges

- œ **Foods, diets and nutritional status are important determinants of non-communicable diseases:** What we eat and our nutritional status can affect cardiovascular diseases, some types of cancer and diabetes. Foods, diet and nutritional status, including overweight and obesity, are also associated with elevated blood pressure and blood cholesterol, and resistance to the action of insulin.
- œ **NCDs affect people in every corner of the world:** Of 52.8 million deaths worldwide, 34.5 million were due to NCDs, including cardiovascular diseases (coronary heart disease, cerebrovascular diseases such as strokes, and peripheral vascular diseases), diabetes, cancers and chronic respiratory diseases.
- œ **Populations around the world are increasingly exposed to foods and diets that influence the risk of developing NCDs:** Globally, calories obtained from meat, sugars and oils and fats have been increasing during recent decades, and those from fibre-rich foods such as whole grains, pulses and roots have been declining. Consumption of processed and convenience foods continue to rise rapidly.
- œ **Under nutrition places people at risk of developing NCDs:** Under nutrition, and its effects on growth, development and maturation, has numerous detrimental outcomes, including the potential to increase risk of developing an NCD later in life.
- œ **Food systems present challenges to the prevention and control of NCDs as well as under nutrition:** Food systems have undergone dramatic changes in past decades. Global food system changes have also had dramatic implications for NCDs by influencing the nutritional quality of

foods that are available, affordable and acceptable to consumers.

- œ **A more concerted response is needed for policy actions, governance and monitoring and evaluation:** The World Health Organization (WHO) has led the way in developing this global response to NCDs. They have put into place a global architecture for addressing NCDs, including recommendations on population-based actions and monitoring frameworks with targets and indicators. Greater coordination is needed between this process and actions being taken to address under nutrition and challenges in the food system at the global, regional and national levels.

Recommendations for priority actions

- œ **Key actions for national governments:** Develop and implement a comprehensive range of well-targeted policy actions to provide an environment conducive to nutritious, healthy diets. This should

professionals, and advocacy in civil society organisations.

œ **Key actions for civil society:** Civil society should act as advocates and watchdogs, by monitoring include the options set out in WHO and UN documents and take a coordinated approach to under nutrition, obesity and NCDs.

- œ **Key actions for international health, food and development agencies:** The institutional architecture for NCDs and nutrition should be strengthened to ensure different UN agencies and programmes work more effectively together, engage in constructive dialogue, and agree on common objectives.

- œ **Key actions for researchers:** Researchers should engage proactively with the monitoring and evaluation of policy actions in order to build the evidence base, and communicate the full range of available evidence clearly and consistently to policymakers.

œ Key actions for donors and research funders:

Support capacity building for effective policy development in governments, the development of a trained workforce of public health nutrition and assessing policy actions being taken by government agencies and commercial operators and their impact on nutrition and NCDs.

CONCLUSION

œ Reports present alarming figures for the prevalence of obesity and non-communicable diseases. Overweight and obesity are potent risk factors for cardiovascular diseases and type 2 diabetes and are major contributors to premature death.

œ The escalating level of overweight and obesity among children and adolescents is of particular concern, given the recent evidence linking childhood and adolescent obesity to increased risk of obesity and morbidity in adulthood.

SECTION: B

(PRELIMS)

CURRENT AFFAIRS

OPERATION TWIST

◎ CONTEXT

- The Central Bank announced that it will conduct simultaneous sale and purchase of 10,000 crore of government securities of varying tenor. This move is on the lines of US Federal Reserve's Operation Twist.

◎ ABOUT

- The Reserve Bank of India (RBI) announced simultaneous sale and purchase of government bonds. RBI will sell short-term bonds of 10,000 crore, it will also purchase long-term securities of the same value.
- **Operation Twist of United States:** RBI's move resembles the 2011 Operation Twist of the US Federal Reserve Bank. It was intended to make long-term borrowing cheaper and spur bank lending. The Fed had swapped short-term bonds for longer-term debt.
- **Difference with the US version:** US version of the Operation Twist had started mid-2011 and lasted till late-2012. In case of RBI it is not clear if this is a one-time exercise or part of continuing operations.
- **Aim:** The hope is that with yields coming down, banks will cut lending rates given that lending to the government is deemed to be the safest, and if that comes down, so should the remaining rates as well.

How does Operation Twist get its name?

- The **US Federal Reserve was the first central bank** that attempted such an exercise of buying and selling government securities at the same time. This happened in 1961.
- At that time, **the "twist" was a new dance craze sparked by singer Chubby Checker**. Since then the name for such an exercise carried out by a central bank has stuck.
- **Used as a measure in the financial crisis:** Much later, Operation Twist was tried in the US in the aftermath of the financial crisis. In this case, the Federal Reserve purchased government securities with maturities varying from six years to 30 years and sold government securities with maturities of three years or less.
- **The idea is to twist the yield curve:** The yield curve is a graph that plots the yields of government securities (or other financial securities) of different maturities.
 - œ The yield is the per-year return an investor can earn on a financial security by staying invested in it till maturity.
 - œ When a central bank buys government securities, the prices go up. At a higher price, the yields or the returns come down as the interest paid on the securities stays the same.
 - œ Vice versa, when the bank sells government securities, the prices fall and the return or the yield on the security goes up.
 - œ This creates a visual effect of a twist in the yield curve.

Why did long term yields increase?

- **No response to monetary easing:** Over the past few months, long-term bonds failed to respond to RBI monetary easing. In fact, the long term 10-year premium widened against the repo rate to 140-150 basis points (bps).
- **Widening yield gap:** While the term premium for long term bonds touched around 150 bps, the short term yields had fallen below RBI's benchmark repo rate of 5.15%, making the yield curve steeper.
- **Fears of fiscal slippage:** There have been fears of fiscal slippage. There are concerns that the government's borrowing programme will be exceeded because there are problems on the fiscal side; i.e. it might borrow more to meet its fiscal deficit target.

- . **Pause on rate cuts:** After lowering its repo rate by 135bps in five consecutive rate cuts in 2019, the central bank's monetary policy committee (MPC) decided to keep rates on hold for the meanwhile.
 - œ The MPC wants to wait for further government measures in the forthcoming budget and take a note of the effects of future policy actions before taking a decision to cut rates.

Benefits of RBI's Operation Twist

- . **Yield anomaly corrected:** With RBI's Operation Twist the net liquidity in the system will remain unchanged, but the anomaly between the yields of short and long-term bonds will be corrected.
 - œ As RBI will buy long-term bonds, its demand will go up and yields will go down and the opposite will happen when it sells bonds.
 - œ Through this, the central bank is narrowing out the differential between the short- and long-term yields, and will flatten the yield curve.
- . **Spur private borrowing:** The simultaneous sale and purchase of government bonds may aid governments borrowing plan by making it cheaper. It is expected to dampen term premium to stimulate private sector borrowing.
 - œ With the long-term yields coming down, government will be able to borrow money cheaper against its bonds, as well as induce demand for private sector loans.

Will money supply increase because of RBI's move?

- . If the central bank buys government securities a few times, it will increase the money supply in the economy, which is likely to lead to higher inflation, with a greater amount of money chasing the same amount of goods and services.
- . But by selling securities worth a similar amount, RBI will not end up increasing the money supply because of this operation.

How can this be made to have an effective impact?

- . **A one-off operation will not help:** The idea is to drive down the yields on 10-year government securities. This can happen if the government continues with Operation Twist. A one-off operation will not help and yields will climb back soon.

TRIPURA GETS ITS FIRST SEZ

◎ CONTEXT

- . The Ministry of Commerce and Industry has notified the setting up of the first ever Special Economic Zone (SEZ) in Tripura.
- . It will be developed by Tripura Industrial Development Corporation (TIDC) Ltd.

◎ ABOUT

- . The SEZ is being set-up at Paschim Jalefa, Sabroom, South Tripura District, which is 130 km away from Agartala.
- . It will be a Sector Specific Economic Zone for Agro-Based Food Processing.
- . The estimated investment in the project will be around 1550 Crore.
- . The SEZ is estimated to generate 12,000 skilled jobs.
- . Rubber based industries, textile and Apparel Industries, bamboo and Agri-food Processing Industries will be set-up in the SEZ.
- . Setting up of the SEZ in Sabroom will open up new avenues to attract private investment considering the proximity of the Chittagong Port and construction of the bridge across Feni River in South Tripura which is underway.

- After it is set up, 100 percent Income Tax exemption will be provided on export income for SEZ units under Section 10AA of the Income Tax Act for the first 5 years.
- Also 50 percent exemption will be provided for the next 5 years and 50 percent of the ploughed back export profit for another 5 years.

SEZs-

- A special economic zone (SEZ) is an area in which the business and trade laws are different from the rest of the country.
- SEZs are located within a country's national borders, and their aims include increased trade balance, employment, increased investment, job creation and effective administration.
- To encourage businesses to set up in the zone, financial policies are introduced. These policies typically encompass investing, taxation, trading, quotas, customs and labour regulations.
- Additionally, companies may be offered tax holidays, where upon establishing themselves in a zone, they are granted a period of lower taxation.
- The benefits a company gains by being in a special economic zone may mean that it can produce and trade goods at a lower price, aimed at being globally competitive.

Special Economic Zones in India-

- India was one of the first in Asia to recognize the effectiveness of the Export Processing Zone (EPZ) model in promoting exports, with Asia's first EPZ set up in Kandla in 1965.
- The second EPZ, SEEPZ (Santa Cruz Electronics Export processing Zone) was set up in Maharashtra in 1974.
- In April 2000, the Government of India adopted a new policy framework titled 'Export and Import Policy 2000' for the establishment of public, private or joint public-private SEZs.
- India witnessed remarkable growth in number of formal, notified and operational approvals post enactment of SEZ Act in 2005. The spread of SEZs within the States is to achieve balanced growth across all regions of the country.
- The sector wise distribution of SEZ's clearly shows that majority of the formal approvals granted have been in IT/ITES sector which comprises nearly 64% of the total formal approvals granted till date.
- The SEZ scheme in India has shown a tremendous growth in infrastructure investment, employment and exports.

Conclusion-

- SEZs policy in India with respect to frequent changes in the policy environment is one of the major reasons of slackening the confidence of investors to continue and make fresh investments in SEZs. Therefore, to build a strong confidence amongst the potential/ existing investors, it is imperative to frame a stable, favourable and highly transparent SEZs policy with long term perspectives.

H1-B VISAS

◎ CONTEXT

- United States government has said that it is planning to curb the distribution of H-1B visa to Indians. While the final decision is yet to be taken, Government of India has expressed concerns to the US over the proposal.**

◎ ABOUT

- The US government had recently said that it is planning to curb the distribution of H-1B visa to Indians. Hence, at the 2+2 dialogue with the US, India pitched its stand for H-1B visa holders.

- . **Objective:** The reason H-1B visas may see changes is **to better protect US workers and wages**, and **save them from competition** from workers arriving from outside countries like India and China.
- . **H-1B visa:** The H-1B is a United States visa under the Immigration and Nationality Act. It has roots in the earlier issued H-1 visa which was later split between H-1A (for nurses) and H-1B. H-1B is one of the most popular visas for foreigners visiting the US for business or trade purpose.
 - œ It is a **non-immigrant visa** that allows US companies to employ foreign workers in speciality occupations that require **theoretical or technical expertise**.
 - œ Speciality occupations include specialized fields like IT, finance, accounting, architecture, engineering, mathematics, science, medicine, etc. which usually require a **bachelor's degree or higher**.
 - œ US employers wishing to bring in staff for long-term assignment prefer H1B visa because its application is **quicker than applying for a US Green Card**.
 - œ H-1B visa has its **roots in the H1 visa** of the Immigration and Nationality Act; which **split between H-1A (for nurses) and H-1B** in 1990.
- . **Who will be worst hit:** Worst hit by the new H1B bill will be Indian companies such as Infosys, TCS, and Wipro, as well as US tech giants like Apple, Facebook and Google, who use the H1B visa to fill positions that cannot be filled by American workers.

How is H-1B visa important to India?

- . **Majority H-1B visa holder:** India has been the only country that takes **70 per cent** of the 85,000 H-1B visas applied annually. The H-1B visa is crucial for the IT sector in India.
- . **IT professionals:** The technology companies of US depend on it to hire tens of thousands of employees each year from countries like India and China. Hence, a cancellation of H-1B visas will most adversely affect Indian IT professionals.
- . **Talent flow:** The US should not obstruct the flow of talent from India as it is an important part of the **economic cooperation** and almost acts as a strategic bridge between the two countries, and is important for the bilateral ties.

Problems that Indians face with current H-1B rules

- . **Recent changes in H-1B visa rules:** Recently, US proposed **revision of "specialty occupations" definition** for the H1B visa. H1B visas will be issued to only the most-skilled foreigners or highest-paid beneficiaries.
 - œ USCIS **can reject** H1B applications that do not provide the necessary required information when submitted.
 - œ New rules require H-1B petitioners to **first electronically register with USCIS**.
 - œ US can initiate **deportation** of expired H1-B holders.
 - œ US Department of Homeland Security (DHS) is also **considering ban on work authorization for spouses** of H-1B visa holders.
- . **Problem in job switch:** H-1B visa holders in the US face problems in switching jobs even if the new job requires the exact same skill set as before. The US citizenship and Immigration Services (USCIS) has denied several applications by new employers citing that the new position does not constitute a 'specialty occupation'.
 - œ If the H-1B holder starts working elsewhere and the transfer is denied, the person could be 'out of status' with a bar on entry into the US, unless the old employer is willing to take him/her back.
- . **Removing country-cap on green cards:** Recently, US also **removed 7% country-cap** on issue of Green Cards. This too will agonise the wait of many skilled professionals from India who had sought permanent residency in USA.

RHINOS TO BE RE-INTRODUCED IN UTTARAKHAND

◎ **CONTEXT**

- The Uttarakhand State Wildlife Board has cleared a proposal by the Wildlife Institute of India (WII) to introduce rhinoceroses in the Corbett Tiger Reserve (CTR) to boost tourism and revive the habits of species that survive on low-height grass.

◎ **ABOUT**

- According to officials, around 10 rhinos will be brought in CTR in the first phase and subsequently, 10 more would be added.
- Experts claim that protecting these rhinos from poaching will be the only challenge for the state's forest department staff after the move.
- The geographical terrain and environmental conditions in CTR are suitable for rhinos.
- The ideal sites chosen in Corbett are valley habitats bounded on either side by the lower Himalayas (north), Shivalik Hills (south) and the Ramganga Reservoir (east), which would also act as natural barriers to rhino movement outside these area, thereby minimising conflict with people.

Benefits from this move-

- According to wildlife experts, rhinos reduce the size of elephant grass by eating it.
- This would mean that species that thrive on lower-height grass — Hog Deer, Cheetal, Sambar and Swamp Deer, among others — would also be encouraged.
- According to WII experts, the rhino's range was once continuous across the flood plains of the Indus, Ganges and the Brahmaputra, but today, it is limited to small fragmented pockets in India and Nepal as a result of anthropogenic pressures.
- Re-introduction into habitats in its historic range would not only create safety-net populations for the species but also restore their ecological role in these faunally-degraded habitats.

About One-horn Rhino-

- The Indian rhinoceros also called the greater one-horned rhinoceros and great Indian rhinoceros, is a rhinoceros species native to the Indian subcontinent.
- It is listed as Vulnerable on the IUCN Red List.
- The Indian rhinoceros once ranged throughout the entire stretch of the Indo-Gangetic Plain, but excessive hunting and agricultural development reduced its range drastically to 11 sites in northern India and southern Nepal.
- It inhabits the alluvial grasslands of the Terai and the Brahmaputra basin.
- The Indian rhinoceros is regionally extinct in Pakistan.
- There are about 2,600 rhinos in India, with more than 90% of the population concentrated in Assam's Kaziranga National Park. Outside Kaziranga, rhinos are found in West Bengal, Uttar Pradesh, and Bihar.
- Kaziranga National Park in Assam, India, holds about 70% of the world population. This is worrisome for two reasons – the park may have reached its carrying capacity and might not be able to support any more rhinos; and the entire species' population could decimated because by a disease outbreak, natural disaster, or another acute threat.

About Jim Corbett National Park-

- It is the oldest national park in India and was established in 1936 as Hailey National Park to protect the endangered Bengal tiger.
- It is located in Nainital district and Pauri Garhwal district of Uttarakhand and was named after Jim Corbett, a well known hunter and naturalist.
- The park was the first to come under the Project Tiger initiative in 1973.

Indian Rhino Vision 2020-

- . It is an ambitious effort to attain a wild population of at least 3,000 greater one-horned rhinos spread over seven protected areas in the Indian state of Assam by the year 2020.
- . IRF has partnered with the Assam Forest Department, the Bodoland Territorial Council, the World Wide Fund for Nature (WWF), and the US Fish & Wildlife Service to address the threats facing Indian rhinos.

WHY INDIA NEEDS A PROJECT DOLPHIN

◎ **CONTEXT**

- The government is planning to launch a programme called “Project Dolphin”, along the lines of “Project Tiger” to enhance the population of these dolphins.

◎ **ABOUT**

- The Gangetic river dolphins can only live in freshwater, are blind and catch their prey in a unique manner, using ultrasonic sound waves.
- The Gangetic river dolphins were officially discovered in 1801 and are one of the oldest creatures in the world along with some species of turtles, crocodiles and sharks, according to the World Wildlife Fund (WWF).
- They once lived in the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh, but are now mostly extinct from many of its early distribution ranges, as per WWF.
- In 2009, the Gangetic dolphin was declared India’s National Aquatic animal. Gangetic dolphin has been notified by the Assam as the state aquatic animal too.
- It is placed under the “endangered” category by the International Union for Conservation of Nature (IUCN).
- They are distributed across seven states in India: Assam, Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, Jharkhand and West Bengal.
- Their numbers have dwindled in the last few decades mainly because of direct killing, habitat fragmentation by dams and barrages and indiscriminate fishing.

Efforts made in India to protect the dolphins?

- Setting up of the Conservation Action Plan for the Gangetic Dolphin (2010-2020), which has identified threats to Gangetic dolphins and impact of river traffic, irrigation canals and depletion of prey-base on dolphin populations.
- Gangetic dolphins have been included in Schedule -I of the Wildlife Protection Act, 1972, which means they have the highest degree of protection against hunting.
- They are also one among the 21 species identified under the centrally sponsored scheme, “Development of Wildlife Habitat”.

Threats to Gangetic river dolphin

- **Pollution:** It faces a number of threats such as dumping of single-use plastics in water bodies, industrial pollution, and fishing.
- **Restrictive Flow of Water:** The increase in the number of barrages and dams is also affecting their growth as such structures impede the flow of water.
- **Poaching:** Dolphins are also poached for their flesh, fat, and oil, which is used as a prey to catch fish, as an ointment and as a supposed aphrodisiac.
- **Shipping & Dredging:** It is also called a blind dolphin because it doesn’t have an eye lens and uses echolocation to navigate and hunt.

Project Tiger

- . Its aim is to protect tigers from extinction by ensuring a viable population in their natural habitats.
- . The project was launched in Jim Corbett National Park of Uttarakhand in 1973.
- . India has more than 80 national parks and 441 Sanctuaries of which some have been declared as Tiger reserves.
- . Tiger reserves are governed by the Project Tiger (1973).
- . It is a Centrally Sponsored Scheme of the Ministry of Environment and Forests.
- . It is administered by the National Tiger Conservation Authority.

ACCESSIBLE INDIA CAMPAIGN (SUGAMYA BHARAT ABHIYAN)

◎ **CONTEXT**

- The Accessible India Campaign also known as the Sugamya Bharat Abhiyan was launched in 2015 by Prime Minister. The project that aimed to make the country accessible for people with disabilities is yet to meet its target. The government has announced that deadline of Accessible India campaign has been extended.

◎ **ABOUT**

- Accessible India Campaign (Sugamya Bharat Abhiyan) is a nation-wide Campaign launched by Department of Empowerment of Persons with Disabilities (DEPwD) of Ministry of Social Justice & Empowerment to provide universal accessibility to persons with disabilities.
- . The campaign aims at providing equal opportunity to persons with disabilities to participate in all the aspects of life and live independently. The Sugamya Bharat Abhiyan focuses on developing accessible physical environment, transportation system and Information & communication ecosystem.
- . The Government of India with firm commitment towards socio-economic transformation of the persons with disabilities is making efforts to create mass awareness for universal accessibility.
- . India is a signatory to the UN Convention on the Rights of Persons with Disabilities (UNCRPD).

Components of Accessible India Campaign

- . Accessible India Campaign (Sugamya Bharat Abhiyan) has the following three important components
- . Built Environment Accessibility
- . Transportation System Accessibility
- . Information and Communication Eco-System Accessibility

United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)

- . To develop, promulgate and monitor the implementation of minimum standards and guidelines for the accessibility of facilities and services open or provided to the public;
- . To ensure that private entities that offer facilities and services which are open or provided to the public take into account all aspects of accessibility for persons with disabilities;
- . To provide training for stakeholders on accessibility issues facing persons with disabilities;

- . To provide in buildings and other facilities open to the public signage in Braille and in easy to read and understand forms;
- . To provide forms of live assistance and intermediaries, including guidelines, readers and professional sign language interpreters, to facilitate accessibility to buildings and other facilities open to the public;
- . To promote other appropriate forms of assistance and support to persons with disabilities to ensure their access to information;
- . To promote access for persons with disabilities to new information and communications technologies and systems, including the Internet.

Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995

- . Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 under Sections 44, 45 and 46 categorically provides for non-discrimination in transport, non-discrimination on the road and non-discrimination in built environment respectively.
- . As per Section 46 of the PwD Act, the States are required to provide for –
 - œ Ramps in public buildings;
 - œ Adaptation of toilets for wheel chair users;
 - œ Braille symbols and auditory signals in elevators or lifts;
 - œ Ramps in hospitals, primary health centres and other medical care and rehabilitation institutions
- . Section 44 and 45 of the said Act cast responsibility on the States to take measures to make public transport accessible for PwDs and also make provision for auditory signals at red lights in public roads, curb cuts and slopes in pavements, engraving on the surface at zebra crossings etc.

NITI AAYOG TO DRAFT ROADMAP FOR ACHIEVING POPULATION STABILISATION

◎ CONTEXT

- . The NITI Aayog is going to draft a roadmap for achieving population stabilisation in collaboration with the Population Foundation of India (PFI).
- . It is organising a National Consultation titled “Realizing the vision of population stabilization: leaving no one behind”.

◎ ABOUT

- . The working paper is expected to address key gaps in India’s family planning programmes. India, with a current population size of 1.37 billion, has the second largest population in the world.
- . It will offer constructive recommendations to address regional disparities in outcomes by focusing on adolescents and youths, inter-departmental convergence, demand generation, access to contraceptive services and quality of care.
- . The Aayog said that India is at a stage where birth rates are falling but the population continues to grow due to the fact that more than 30 per cent of the population is young and in the reproductive age group.

Key Recommendations-

- . Increasing the basket of contraceptive choices, with greater focus on spacing methods and helping women make informed choices about delaying pregnancy and spacing between children.

- . Addressing social determinants of health such as age at marriage and sex-selective practices.
- . Strengthening quality of care, including counselling services, managing side effects and family planning support.
- . Increasing budgetary allocations for family planning, to align with the unmet needs of India's young people who constitute nearly 30 per cent of our population.
- . Addressing existing socio-cultural barriers towards contraception by investing extensively in innovative behaviour-change communication strategies.
- . Treating population stabilisation and family planning as a national priority, fostering inter-departmental convergence and ensuring multi sectoral participation and integration.

Need for such move-

- . India, with a current population size of 1.37 billion, has the second largest population in the world.
- . Nearly 30 million currently married women in the age group of 15-49 years within this critical cohort of young people have unmet needs in family planning, which limit their ability to delay or avoid pregnancy by not having access or the agency to use contraception.
- . Family planning is considered universally as the smartest development investment.
- . For India to realize its sustainable development goals and economic aspirations, it is important to ensure that people have informed access to contraception and quality family planning services.

PRADHAN MANTRI MATRU VANDANAYOJANA

◎ CONTEXT

- Three years after a pan-India maternity benefit programme promising 6,000 to new mothers was first announced, the chorus on its many exclusions is growing louder leading to a demand for a scheme that is truly universal.

◎ ABOUT

- Pradhan Mantri Matru Vandana Yojana (PMMVY) is a Maternity Benefit Programme that is implemented in all the districts of the country in accordance with the provision of the National Food Security Act, 2013.
- . It is a conditional Maternity Benefit Programme launched by the Ministry of Women and Child Development.
- . Providing partial compensation for the wage loss in terms of cash incentive s so that the woman can take adequate rest before and after delivery of the first living child.
- . All Pregnant Women and Lactating Mothers, excluding PW&LM who are in regular employment with the Central Government or the State Governments or PSUs or those who are in receipt of similar benefits under any law for the time being in force are eligible.
- . A beneficiary is eligible to receive benefits under the scheme only once.
- . In case of miscarriage/still birth, the beneficiary would be eligible to claim the remaining instalment(s) in event of any future pregnancy.

Objectives of the scheme

- . Providing partial compensation for the wage loss in terms of cash incentives so that the woman can take adequate rest before and after delivery of the first living child.
- . The cash incentive provided would lead to improved health seeking behaviour amongst the Pregnant Women and Lactating Mothers (PW& LM).

Target beneficiaries of the scheme

- . All Pregnant Women and Lactating Mothers, excluding PW&LM who are in regular employment with the Central Government or the State Governments or PSUs or those who are in receipt of similar benefits under any law for the time being in force.
- . All eligible Pregnant Women and Lactating Mothers who have their pregnancy for first child in family.
- . The date and stage of pregnancy for a beneficiary would be counted with respect to her LMP date as mentioned in the MCP card.
- . Case of Miscarriage/Still Birth :
 - œ A beneficiary is eligible to receive benefits under the scheme only once.
 - œ In case of miscarriage/still birth, the beneficiary would be eligible to claim the remaining instalment(s) in event of any future pregnancy.
 - œ Thus, after receiving the 1st instalment, if the beneficiary has a miscarriage, she would only be eligible for receiving 2nd and 3rd instalment in event of future pregnancy subject to fulfilment of eligibility criterion and conditionalities of the scheme. Similarly, if the beneficiary has a miscarriage or still birth after receiving 1st and 2nd instalments, she would only be eligible for receiving 3rd instalment in event of future pregnancy subject to fulfilment of eligibility criterion and conditionalities of the scheme.
- . Case of Infant Mortality: A beneficiary is eligible to receive benefits under the scheme only once. That is, in case of infant mortality, she will not be eligible for claiming benefits under the scheme, if she has already received all the instalments of the maternity benefit under PMMVY earlier.
- . Pregnant and Lactating AWWs/ AWHs/ ASHA may also avail the benefits under the PMMVY subject to fulfilment of scheme conditionalities.

Benefits under PMMVY

- . Cash incentive of Rs 5000 in three instalments i.e. first instalment of Rs 1000/- on early registration of pregnancy at the Anganwadi Centre (AWC) / approved Health facility as may be identified by the respective administering State / UT, second instalment of Rs 2000/- after six months of pregnancy on receiving at least one ante-natal check-up (ANC) and third instalment of Rs 2000/- after child birth is registered and the child has received the first cycle of BCG, OPV, DPT and Hepatitis - B, or its equivalent/ substitute.
- . The eligible beneficiaries would receive the incentive given under the Janani Suraksha Yojana (JSY) for Institutional delivery and the incentive received under JSY would be accounted towards maternity benefits so that on an average a woman gets Rs 6000.

THE DRAFT NATIONAL STATISTICAL COMMISSION BILL

◎ **CONTEXT**

- Draft Bill proposes autonomy for National Statistical Commission which gives government power to make final decision.
- It is put out by Ministry of Statistics & Programme Implementation and is open for public suggestions until 19 January.

◎ **ABOUT**

- The draft bill is aimed at empowering the National Statistical Commission (NSC) to become the nodal body for all core statistics in the country.
- Core statistics include national income statistics like GDP, jobs data, industry data and budgetary transactions data.

Features of the Bill-

- As per the draft Bill, the NSC will have a Chairperson, five whole time members along with Deputy Governor of Reserve Bank of India (RBI), Chief Statistician of India (CSI) as other members and Chief Economic Advisor, Ministry of Finance, as the ex-officio member.
- The Chairman and the members of the Commission shall be appointed by the central government on the recommendation of a search committee.
- Along with retaining the advisory nature of NSC, the draft Bill states that the decision of the central government, whether a question is of policy or not, shall be final.
- As per the experts, this proposal goes against the long pending demand to grant more powers to the NSC.
- The draft Bill also seeks to change the composition of the Commission by replacing NITI Aayog Chief Executive Officer with the Finance Ministry's Chief Economic Advisor as the ex-officio member along with giving member status to Chief Statistician of India from the current status of secretary to the NSC.
- As per the draft Bill the central government may, from time to time, issue directions to the Commission as it may think "necessary in the interest of the sovereignty and integrity of India, the security of the State, friendly relations with foreign states, public order, decency or morality".
- The draft also specifies that the Commission "shall in exercise of its powers or the performance of its functions, be bound by such directions or questions as the Central Government may give in writing to it from time to time".
- The draft Bill states that the government shall seek advice from the Commission on any matter relating to official statistics.
- However, central government or a state government may issue directions as necessary to any government agency under its administrative control along with a report on reasons for not accepting any advice to the commission.
- A report on reasons for not accepting any advice of the commission shall be laid before Parliament or a state legislature for a total period of thirty days.
- The draft Bill states that the NSC shall have power to review the statistical system of any government agency in the light of concepts, definitions, standards, methodologies and established policies, and recommend measures for enhanced performance; to prescribe a code of practice.
- Also, the Commission shall participate in consultation with the central government and coordinate with national statistical organisations on matters of statistical standards, methodologies and classifications.

Timing of the Draft bill-

- The draft bill has been released at a time when the government has been facing criticism from several quarters over interference in the release of crucial data unfavourable to it.
- For example, the government withheld jobs data that showed the unemployment rate at a 45-year high, releasing it only six months later, after the general elections.
- The Bill comes at a time when several statistical reports such as the unemployment survey were withheld and consumption expenditure survey was decided to be not released by the government.

About NSC:

- The National Statistical Commission (NSC) of India is an autonomous body which was formed in July 2005.
- The objective of its commission is to reduce the problems faced by statistical agencies in the country in relation to collection of data.

HYDROGEN-BASED CARS

◎ **CONTEXT**

- **Recently, Supreme Court has asked government to look into the feasibility of hydrogen-based technology to deal with vehicular air pollution in capital.**

◎ **ABOUT**

- A hydrogen car is a vehicle that uses hydrogen fuel for motive power (energy used to drive machinery).
- Hydrogen vehicles include hydrogen-fueled space rockets, as well as automobiles and other transportation vehicles.
- The power plants of such vehicles convert the chemical energy of hydrogen to mechanical energy either by burning hydrogen in an internal combustion engine, or by reacting hydrogen with oxygen in a fuel cell to run electric motors.
- Widespread **use of hydrogen for fueling transportation is a key element of a proposed hydrogen economy.**
- India is looking closely at Japan, **which has made progress in this field.**

How does the hydrogen fuel cell work?

- The advantage is the wide availability of resources for producing hydrogen fuel cells.

What are the advantages and disadvantages of fuel cells?

Advantages

- They produce much smaller quantities of greenhouse gases and none of the air pollutants that cause health problems.
- Pure hydrogen fuel cells emit only heat and water as a byproduct. Such cells are also far more energy efficient than traditional combustion technologies.
- Unlike battery-powered electric vehicles, fuel cell vehicles do not need to be plugged in.

Disadvantages

- The process of making hydrogen needs energy — often from fossil fuel sources that has raised questions over hydrogen's green credentials.
- Questions of safety are of great concern as hydrogen is more explosive than petrol.

- . The vehicles are expensive, and fuel dispensing pumps are scarce. But this should get better as scale and distribution improves.

What is the progress in India?

- . In India, so far, the definition of EV only covers BEVs; the government has lowered taxes to 12%. At 43%, hybrid electric vehicles and hydrogen FCEVs attract the same tax as IC vehicles.
- . The Ministry of New and Renewable Energy, under its Research, Development and Demonstration (RD&D) programme, has been supporting various such projects in academic institutions, research and development organisations and industry for development. Fourteen RD&D projects on hydrogen and fuel cells are currently under implementation with the support of the Ministry. Between 2016-17 and 2018-19, eight projects were sanctioned and 18 completed.
- . The Ministry of Science and Technology has supported two networked centres on hydrogen storage led by IIT Bombay and Nonferrous Materials Technology Development Centre, Hyderabad. These involve 10 institutions, including IITs, and IISc, Bangalore.

Electric Vehicles V. Hydrogen Vehicles

Electric Vehicles	Hydrogen Vehicles
Whereas conventional vehicles burn fuel in an internal combustion engine, battery-powered electric vehicles don't have an engine. Instead, they use energy stored in batteries to power one or more electric motors.	Fuel cell vehicles are also driven by an electric motor, but instead of being powered by a battery, they create the electricity in an onboard fuel cell, usually using oxygen from the air and stored hydrogen.
They are also capable of producing instant torque and smoother acceleration than conventional cars.	The main disadvantages of today's hydrogen fuel cell vehicles are the lack of sufficient infrastructure for hydrogen refueling, and the cost of the catalysts
But they are not environment friendly if the electricity used to charge the electric vehicle comes from a coal power plant.	Pure hydrogen fuel cells emit only heat and water as a byproduct. Such cells are also far more energy efficient than traditional combustion technologies.
Electric vehicles are also limited by the range they can travel on a single battery charge. For short-distance commuting, this isn't a problem, but longer trips require lengthy periods of recharging.	Fuel cell vehicles don't have the same range limitations as battery-powered vehicles because they can simply store more (hydrogen) fuel.

Conclusion

- . Hydrogen's proponents point to how clean it is as an energy source as water and heat are the only byproducts and how it can be made from a number of sources, including

methane, coal, water, even garbage. However, lack of refuelling stations, which are costly to build, is usually cited as the biggest obstacle to widespread adoption of FCVs. On the other hand, electric vehicles provide a satisfactory alternative to the problems of internal combustion.

- While battery-powered electric vehicles may have a head start on fuel cell vehicles, both technologies are advancing rapidly. It will be interesting to see where they are five years from now

INDIAN PHARMACOPOEIA

◎ **CONTEXT**

- The Indian Pharmacopoeia (IP) has been recognised formally by the National Department of Regulation of Medicines and Health Products of the Ministry of Public Health of Islamic Republic of Afghanistan.

◎ **ABOUT**

- It will also be used based on the requirement as reputable pharmacopoeia in the laboratory of medicines and health products quality.
- With this, a new beginning has been made and Afghanistan has become the first country to recognize IP pursuant to the efforts of Department of Commerce and Ministry of Health and Family Welfare.
- IP is an officially recognized book of standards as per the Drugs and Cosmetics Act, 1940 and Rules 1945 thereunder.

About Indian Pharmacopoeia

- The IP specifies the standards of drugs manufactured and marketed in India in terms of their identity, purity and strength.
- The quality, efficacy and safety of the medicines are important from healthcare perspective. In order to ensure the quality of medicinal products, the legal and scientific standards are provided by Indian Pharmacopoeia Commission (IPC) in the form of Indian Pharmacopoeia (IP).
- As per, the Second Schedule of the Drugs and Cosmetics Act, IP is designated as the official book of standards for drugs imported and/or manufactured for sale, stock or exhibition for sale or distribution in India.
- The IP Commission's mission is to promote public and animal health in India by bringing out authoritative and officially accepted standards for quality of drugs including active pharmaceutical ingredients, excipients and dosage forms, used by health professionals, patients and consumers.

BREAST MILK BANKS

◎ **CONTEXT**

- Human milk banks are sourcing and supplying donated milk to babies whose mothers cannot breastfeed.

◎ **ABOUT**

- Breast Milk Banks are established under "National Guidelines on Establishment of Lactation Management Centres in Public Health Facilities" by the Ministry of Health and Family Welfare.
- It is established for the purpose of collecting, screening, processing, storing and distributing donor human milk at Government Medical Colleges or District Hospitals with high delivery load and availability of newborn treatment units.

- It has a collection and storage facility of mother's own milk in District Hospital/Sub- district Hospital with at least 12 beds.
- These are established at all delivery points to provide breastfeeding support, lactation counselling and Kangaroo Mother Care (KMC) support to mothers.
- The first Breast Milk Bank of India was established in 1989 at Mumbai.
- MAA - "Mothers Absolute Affection" is a nationwide programme of the Ministry of Health and Family Welfare to promote breastfeeding.

Importance of Breast Milk

- Breast milk is the optimum source of nutrition for the first six months of life of an infant.
- It prevents infections like diarrhoea and acute respiratory infections in early infancy and thus reduces infant mortality.
- It decreases the risk of mothers developing breast cancer, ovarian cancer, type 2 diabetes, and heart disease.
- Breast Milk Contains Important Antibodies.
- Breast Milk Promotes a Healthy Weight.
- Breastfeeding May Make Children Smarter.
- Breastfeeding May Help You Lose Weight.
- Breastfeeding Helps the Uterus Contract.
- Mothers Who Breastfeed Have a Lower Risk of Depression.
- Breastfeeding May Prevent Menstruation.

JAGA MISSION

◎ **CONTEXT**

◎ **ABOUT**

- **Odisha was awarded the 2019 World Habitat Award for its 'Jaga Mission'.**
- Government of Odisha won the 'World Habitat Award' for its ambitious initiative - Jaga Mission.
 - œ It is the **first of its kind** project in the country, to give **land titles to slum dwellers.**
 - œ **Odisha Liveable Habitat Mission "JAGA"** is a society under **Housing & Urban Development Department.**
- **Objective:** Jaga Mission promises to provide slum dwellers "self-respect and freedom from the perpetual fear of eviction".
- **Tag line of the mission:** "Transforming Slums to Liveable Habitats"
- **Partners:** The Housing and Urban Development Department of Odisha, Tata Trusts, and Norman Foster Foundation.
- **Other recognitions:** Recently, this project was also awarded the '**India Geospatial Excellence Award**' for technological innovation in transforming the lives of urban poor.
- **World Habitat:** This award is given by World Habitat, a UK-based organization, in partnership with United Nation (UN)-Habitat, every year, in recognition of innovative, outstanding, and revolutionary ideas, projects, and programmes from across the world.

Jaga Mission

- **Jaga Mission** is the World's largest slum land titling project, benefiting a million urban-poor living in the slums of Odisha. Under the Mission, 52,682 urban poor families living in slums have been granted **land rights certificate.**
- **Slum land titling project:** Jaga Mission is a land titling initiative by the Odisha government that works towards turning slums into liveable habitat with all necessary

civic infrastructure and services at par with the better off areas within the same urban local body (ULB).

œ It aims to improve the standards of the infrastructure and services as well as access to livelihood opportunities.

œ The mission also aims at leveraging and converging various schemes, programs, and funding opportunities.

- . **Implementation:** So far, 1725 slums have been surveyed under the project using drones and GIS technology. Besides, transformation of 255 slums into liveable habitat is also under implementation.

œ **Use of technology:** Adoption of state-of-art technology combined with extensive community participation has resulted in dispute and litigation-free implementation in a time bound manner.

- . **Stakeholders:** The mission aims to strengthen collaboration among various Departments/ Urban Bodies/ Non-Government Organisations/ Financial Institutions/ International Agencies/ Trusts/ Communities and other Stakeholders.

- . **Policy suggestions:** The mission will also provide advisory support to Government of Odisha to examine options for policy reforms required for the sustainable transformation of lives of urban poor.

KORAGA COMMUNITY

◎ **CONTEXT**

- **Karnataka's Koraga community is the Gold Award Winner of 2019 World Habitat Awards.**

◎ **ABOUT**

- **Initiative:** 'Restoration of Dignity and Human Rights of Indigenous Tribal Community in Karnataka'.
 - œ The transformative initiative supporting the **Koraga people and nine other tribal communities** in Karnataka has been named a **Gold Award Winner** for **2019 World Habitat Awards**.
- **Objective:** The initiative helps Indigenous Tribal Community to **access land for the first time**.
 - œ It has helped secure nearly 49,000 acres of forest land and 1,000 acres of agricultural land for tribal communities. Besides, 19,000 families have obtained grants to build houses
- **Partners:** Koraga Federation, Samagra Grameena Ashrama and ActionAid India.
- **World Habitat:** This award is given by World Habitat, a UK-based organization, in partnership with United Nation (UN)-Habitat, every year, in recognition of innovative, outstanding, and revolutionary ideas, projects, and programmes from across the world.

The Initiative

- **Ending caste based oppression:** The Action Aid initiative aims to break the cycle of caste-based oppression through social and economic empowerment.
- **Access to government schemes:** The main focus of the project is to support indigenous communities in accessing government schemes to which they are entitled.
 - œ Enhanced access to **state-sponsored nutrition programmes** has improved food security and health among the Koraga community.
 - œ More children attend school and have **access to scholarships**.

- . **Secured lands:** Under the initiative, thousands of acres of land have been secured for tribal communities and have been given access to grants to build homes. This has acted as a foundation for them to rebuild their lives.
- . **Empowering women:** More than 1,000 Koraga women have been supported to become self-sufficient. Many Koraga women now hold leadership positions within the community.

Koraga community

- . **Geographical presence:** The Koragas are a **tribal community** found mainly in Dakshina Kannada, Udupi districts of Karnataka and Kasaragod district of Kerala, South India. These areas in Karnataka, are together often referred to as Tulu Nadu.
 - œ They are also found in small numbers in adjoining districts of Uttara Kannada, Shimoga and Kodagu.
 - œ The Koragas numbered 16,071, according to the 2001 census of India.
- . **Way of life:** The area in which Koragas live comprise mostly of **agricultural land and forest**. The tribe continue to **make use of the forest produce**—principally, bamboo and creepers—for the manufacture of baskets.
 - œ Traditionally, they lived in structures made of leaves, called **koppus** and also **dressed in leaves**.
 - œ Around at the beginning of 21st century, they started to live in **simple free houses** constructed and sanctioned by Government agencies.
 - œ However, some of them continue to remain either homeless or live on government-owned lands.
- . **Practice of drum beating:** Koraga people are known for drum beating (**dollu or dolu beating**) and it is one of their important cultural contributions. They used to beat dolu during events such as Kambala, village fairs or just for fun in their living places.
 - œ Traditional belief was that Koraga drum-beating had special powers and that the sound of drum-beating drives away evil spirits.
 - œ However, the practice declined as the **drum beaters** were looked down upon by society.
 - œ **Flute music and dance** involving both men and women are also important parts of Koraga culture and are apparent at celebrations such as Bhoomi Habba (worshipping earth).
- . **Language:** Koragas have their **own language**, classified as an independent Dravidian language, which is strongly influenced by Tulu, Kannada, Malayalam, languages commonly found in their area.
 - œ **Social Status:** The 1901 census report noted the Koraga as a lowly tribe of **basket-makers and labourers**, some of whom were employed as scavengers. The Koraga tribal community suffered **centuries of oppression** under India's historic caste system.
 - œ In past they **were claimed to be of Chandala origin**, considered **untouchables** among Hindus.
 - œ Presently, Koragas are classified by the Government of India as a **Scheduled Tribe**.
 - œ The Koraga people are an **educationally disadvantaged** tribe. The first PhD to be awarded to a member of the community was reported in 2010.
- . **Practice of Ajalu:** The Koraga people have been subjected to a practice known as Ajalu, which the Government of Karnataka defined as "differentiating Koraga people and persons belonging to other communities, **treating them as inferior human beings, mixing hair, nails and other inedible obnoxious substances in the food** and asking them to eat that food and to **make them to run** like buffaloes before the beginning of Kambala."

- . Ajalu has been considered inhuman and was prohibited in 2000 by the **Karnataka Koragas (Prohibition of Ajalu Practice) Act, 2000**.
- . Contravention of the Act is **punishable** by a term of imprisonment of between six months and five years, as well as a cash penalty.
- . Nonetheless, Ajalu has been **occasionally witnessed** during Nemotsava or temple fairs at places such as Inna (Karkala) and Saligrama, Udupi, leading to Koraga people demanding action against the culprits and the police who failed to prevent it.
- . **Note: Kambala is an annual buffalo race held in Karnataka.**

3-D BIO-PRINTING

◎ CONTEXT

- . Bangalore based start-up Next Big Innovation Lab has made human skin with its own 3D bio-printer using 3D bio-printing with a secret bio-ink. The development of 3D bio-printers has raised the prospects of making tissues and organs in a more affordable way and consistent way.

◎ ABOUT

- . Bio-printing is an additive manufacturing process where biomaterials such as cells and growth factors are combined to create tissue-like structures that imitate natural tissues.
 - œ A material known as **bio-ink** is used to create these structures in a layer-by-layer manner.
- . **Bio-ink:** Bio-ink is a combination of living cells and a compatible base, like **collagen, gelatine, hyaluronan, silk, alginate or nanocellulose**. A compatible base provides cells with scaffolding to grow on and nutriment to survive on. The complete substance is based on the patient and is function-specific.
- . **Next Big Innovation Lab (NBIL) case:** The NBIL has made human skin with its own 3D bio-printer using 3D bio-printing with a secret bio-ink. It has filed for patents related to its 3D bio-printing process and its bio-ink formulation is a trade secret. Using its internally developed 3D bio-printer gives NBIL a cost advantage.
- . **History of bio-printing:** Creation of human skin in a lab for commercial use dates back to 1993 when MatTek, a company founded by two chemical engineering professors at MIT, launched **EpiDerm**.
 - œ They took live tissue cells from cosmetic surgeries and circumcisions, and then cultured them in petri dishes to produce skin.
 - œ EpiDerm is a proven in vitro model system for chemical, pharmaceutical and skin care product testing.

The process of bio-printing

- . **Similar to conventional 3D printing:** Here a digital model becomes a physical 3D object layer-by-layer. However, a living cell suspension is utilized instead of a thermoplastic or a resin.
- . **Caution:** In order to optimize cell viability and achieve a printing resolution adequate for a correct cell-matrix structure, it's necessary to **maintain sterile printing conditions**. This ensures accuracy in complex tissues, requisite cell-to-cell distances, and correct output.
- . **Key steps in bio-printing:** Several bio-printing methods exist, based on extrusion, inkjet, acoustic, or laser technologies. But the process principally involves **preparation, printing, maturation, and application** which can essentially be summarized into **three key steps**:
 - œ **Pre bio-printing** involves creating the digital model that the printer will produce. The technologies used are computed tomography (CT) and magnetic resonance imaging (MRI) scans. The 3D imaging should provide a perfect fit of the tissue. Further, 3D modelling is done where the blueprint includes a layer-by-layer instruction in high detail.

- œ **Bio-printing** is the actual printing process, where bio-ink is placed in a printer cartridge and deposition takes place based on the digital model. This process involves depositing the bio-ink layer-by-layer, where each layer has a thickness of 0.5 mm or less.
- œ **Post bio-printing** is the mechanical and chemical stimulation of printed parts so as to create stable structures for the biological material. As deposition takes place, the layer starts as a viscous liquid and solidifies to hold its shape. This happens as more layers are continuously deposited. The process of blending and solidification is known as crosslinking and may be aided by UV light, specific chemicals, or heat (also typically delivered via a UV light source).

Application

- . **Medicine and Bio-engineering:** The technique is widely applicable in fields of medicine and bioengineering. Recently, the technology has even made advancements in the production of cartilage tissue for use in reconstruction and regeneration.
 - œ The process can eradicate the need of organ donation and transplantation.
 - œ While **organ replacement** is the main objective, but **tissue repair** is also possible in the meantime.
 - œ With bio-ink, it's much easier to **solve problems on a patient-specific level**, promoting simpler operations.
 - œ Bone tissue regeneration as well as prosthetics and dental applications.
- . **Pharmaceutical testing and reduced need for animal trials:** The bio-printed tissue-like structures mimic the actual micro- and macro-environment of human tissues and organs. This is critical in drug testing and clinical trials, with potential, for example, to drastically reduce the need for animal trials.
 - œ Treatment for diseases can be tested using artificially affected tissues.
 - œ This is a more cost-effective and ethical option.
- . **Cosmetic surgery:** Cosmetic surgery, particularly plastic surgery and skin grafting, also benefits from this technology. Victims of burns and other wounds could get relief from its commercial availability, once it is developed further to be good enough for grafting.

Concerns

- . **Hype:** Many new developments are over-hyped as the ultimate and ready-to-use breakthroughs in the field of 3D bio-printing, when in fact there are many unsolved problems in tissue engineering before complex organs like the heart, kidney and liver can be bio-printed.
- . **Vasculature:** The vasculature—network of blood vessels that feeds the organ—is still a challenge. The vasculature still has to be developed to allow lab skin to integrate with the human body's blood vessels.
 - œ Stem cell engineering to grow all the cells of an organ in a personalised way to avoid rejection by the recipient's immune system is another challenge.
 - œ Researchers still have to ensure that a lab organ will work with all the other organs in a human body.
 - œ **Regulatory concerns:** The future of 3D bio-printed tissues and organs depend on regulatory clearances and getting the technology right.
 - œ **Moral and ethical concern:** The entire process is also criticized from a moral and ethical perspective.



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Madhusmita Singh



Manaranjan Suna



Prachi



Tapan Ku. Malik



Manoj Ku. Behera



Manaswee Sethi



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D. Satyabhusan



Prem Chand Jani



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Meera Naik



Deepak Bera



Debasish Patra



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Sandeep Singh



Prafulla Muduli



Smrutiranjana Tudu



Lalit Ku. Naik



Phalguni Sebar



Sunita Panda