Current Affairs
for Prelims

November 2021

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Current Affairs

International Relations

1. One Health Approach

- It is a **collaborative, multisectoral, coordinated, and transdisciplinary approach.** It recognizes the **interconnection between people, animals, and the environment.**
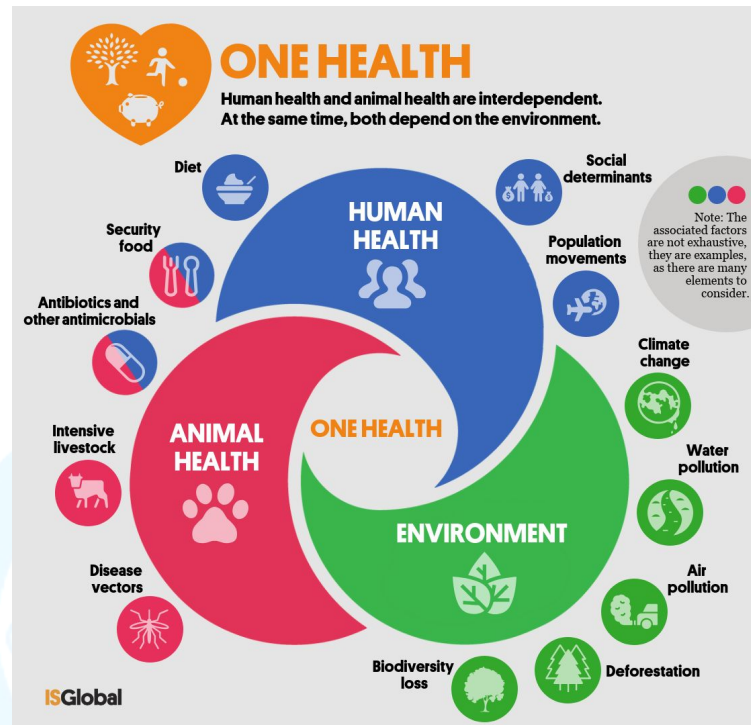
- It calls for working at **the local, regional, national, and global levels** with the goal of achieving optimal health outcomes.

- Studies indicate that more than two-thirds of existing and emerging infectious diseases are **zoonotic,** or can be transferred between animals and humans, and vice versa.

- Another category of diseases, **anthropozoonotic** infections, gets transferred from humans to animals.

- India's 'One Health' vision derives its blueprint from the agreement between the **tripartite-plus alliance** towards 'One World, One Health'.

- The alliance includes:
  - The Food and Agriculture Organization of the United Nations (FAO),
  - The World Organization for Animal Health (OIE),
  - The World Health Organization (WHO) and the United Nations Environment Program (UNEP).

- In keeping with the long-term objectives, India established a **National Standing Committee** on Zoonoses as far back as the 1980s.

- This year, funds were sanctioned for setting up a 'Centre for One Health' at Nagpur.
- Further, the **Department of Animal Husbandry and Dairying** (DAHD) has launched several schemes to mitigate the prevalence of animal diseases since 2015.
- Hence, under the **National Animal Disease Control Programme,** ₹13,343 crore have been sanctioned for **Foot and Mouth disease and Brucellosis control.**

2. BASIC Group

- The BASIC group was formed as the result of an agreement signed by the four countries on November 28, 2009.
- The Indian Environment Minister delivered a statement on behalf of the BASIC group of countries — **Brazil, South Africa, India and China**.
- These nations have common positions on **reducing greenhouse gas emissions** and raising the massive funds that are needed to fight **climate change.**
- The grouping is significant because Brazil, South Africa, India and China together have **one-third of the world's geographical area** and nearly **40% of the world's population**, and when they unitedly speak in one voice this shows their determination.
- The four committed to act jointly at the **Copenhagen climate summit**, including a possible united walk-out if their common minimum position was not met by the developed nations.
- This emerging geopolitical alliance, initiated and led by China, then brokered the final Copenhagen Accord with the United States.

3. Gulf Cooperation Council

- GCC was established by an agreement concluded in 1981 among **Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE i**n view of their special

relations, geographic proximity, similar political systems based on Islamic beliefs, joint destiny and common objectives.

- The structure of the GCC consists of the **Supreme Council (the highest authority), the Ministerial Council and the Secretariat General.** The Secretariat is located in Riyadh, Saudi Arabia.
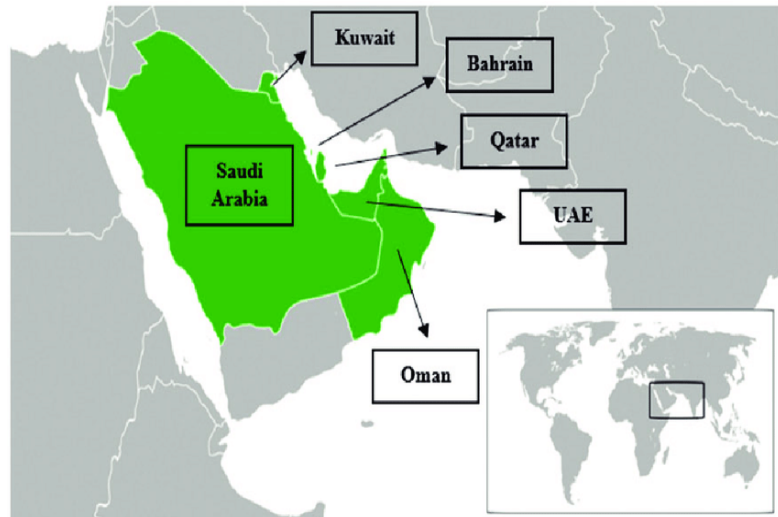
- It is a **political, economic, social, and regional organisation** according to its charter.

- India has asked the members of the GCC to facilitate the return of Indians who want to resume work with the relaxing of Covid-19-related restrictions. This can happen through sustainable travel bubble arrangements.

- Both sides affirmed their commitment to reform multilateral institutions to reflect the realities of the 21st century and work together to address contemporary challenges such as the **Covid-19 pandemic, climate change, sustainable development and terrorism.**

4. Marrakesh Agreement

- The Agreement Establishing the **World Trade Organization,** commonly known as the "Marrakesh Agreement", was signed in Marrakesh, Morocco, on April 15, 1994, at the conclusion of the **Uruguay Round of Multilateral Trade Negotiations.**

- This Agreement defines the **scope, functions and structure** of the World Trade Organization (WTO).

- The agreements previously negotiated under the **General Agreement on Tariffs and Trade (GATT)**, along with agreements concluded during the **Uruguay Round**, were incorporated as integral parts of the Marrakesh

Agreement and are included in its Annexes. These agreements are now considered to be WTO agreements.

- All WTO members are parties to the Marrakesh Agreement, including countries that have joined the WTO since it was signed.
- This Agreement entered into force on January 1, 1995. It has no expiration date.
- The objective of the countries that signed the Marrakesh Agreement was to create an **integrated multilateral trading system** encompassing the **General Agreement on Tariffs and Trade (GATT)** and the results of all the trade rounds (including the Uruguay Round) that had been conducted since the GATT was signed in 1947.

5. Ministerial Declaration on Global Electronic Commerce

- Recent WTO estimates show that global trade volumes could expand by almost 11% in 2021, and by nearly 5% in 2022, and could stabilise at a level higher than the pre-COVID-19 trend.
- The MC12 needs to consider how in these good times for trade, the economically weaker countries "can secure a share in the growth in international trade commensurate with the needs of their economic development', an objective that is mandated by the **Marrakesh Agreement** Establishing the **World Trade Organisation**.
- Some of the areas are currently witnessing **intense negotiations, these include adoption of WTO rules on electronic commerce, investment facilitation, and fisheries subsidies.**
- The topmost decision-making body of the WTO is the **Ministerial Conference,** which usually meets every two years. It brings together all members of the WTO, all of which are countries or customs unions.
- The Ministerial Conference can take decisions on all matters under any of the **multilateral trade agreements**.

6. Emergency Use Listing WHO

- The approval has been given by the **Technical Advisory Group (TAG)**, an independent advisory panel of the WHO.

- The WHO has already approved six vaccines for emergency use: **AstraZeneca's Covishield, Moderna's mRNA-1273, Sinopharm's BBIBP-CorV, Sinovac's CoronaVac, Pfizer/BioNTech's Comirnaty, and Johnson & Johnson's vaccine.**
- It has been granted **EUL for use in persons 18 years and above,** over two doses spaced four weeks apart.
- The EUL is a special procedure intended to provide a time-limited listing for unlicensed products in an emergency context when limited data are available and the products are not yet ready for application for prequalification.
- The manufacturer will complete the development of the product and submit for licensure and WHO prequalification.
- The EUL is not intended to interfere with ongoing clinical trials.
- However, no recommendation has been made for use in children, and available data for use on pregnant women is insufficient to assess safety or efficacy.
- The move is expected to **ease international travel for Indians** who have opted for the vaccine but experts say that this would be subjected to countries clearing Covaxin through their regulatory processes.
- Covaxin is a whole **virion-inactivated vaccine against SARS-CoV-2**, developed in partnership with the **Indian Council of Medical Research and the National Institute of Virology, Pune**.
- The EUL is a prerequisite for the **COVAX initiative in vaccine supply**, and allows countries to expedite their own regulatory approval to import and administer COVID-19 vaccines.
- It is a risk-based procedure for assessing and listing unlicensed vaccines, therapeutics and in vitro diagnostics with the ultimate aim of expediting the availability of these products to people affected by a public health emergency.

7. Information Fusion Center for IOR (IFC-IOR)

- The IFC for the Indian Ocean Region has the primary objective of **jointly monitoring the vast Indian Ocean Region.**

- The Indian Ocean which is increasingly becoming the bone of contention between different countries, also suffers threats from natural disasters, piracy, terrorism and trafficking.
- IFC-IOR will provide a way to tackle these challenges through collaborative and cooperative efforts.
- Internationally, **India has White Shipping Agreements with 36 countries, and three multinational agencies which provide details of all commercial ships passing through the ports in their region.**
- India also gathers information inputs from long range identification and tracking mechanisms under the International Maritime Organization.
- Such diverse and complex data is fused together by a software to produce a "common operating picture".
- The fact that more than 75% of the world's maritime trade and 50% of global oil consumption passes through the Indian Ocean Region proves the significance of guarding the IOR.

8. Delhi Regional Security Dialogue on Afghanistan

- The Delhi Regional Security Dialogue on Afghanistan was held. The meeting was composed of **National Security Advisors' (NSA)** of regional countries and chaired by the Indian NSA.
- This is the first meeting of the security heads of the participating countries that India has hosted since the Taliban took power in August after dislodging the government of President Ashraf Ghani.
- Invitations were sent to Afghanistan's neighbors such as **Pakistan, Iran, Tajikistan, and Uzbekistan,** and other key players including **Russia, and China.**
- Pakistan and China too were invited to participate in the consultation but both stayed away.
- India's top security establishment, the **National Security Council Secretariat,** has taken the lead in organizing the in-person meeting.
- A joint statement titled the **'Delhi Declaration'** issued after the meeting called for "collective cooperation" against terrorism and drug trafficking in

the region and "expressed concern over the deteriorating socio-economic and humanitarian situation in Afghanistan.

- These have important implications not only for the people of Afghanistan but also for its neighbors and the region.
- They reiterated strong support for a peaceful, secure and stable Afghanistan while emphasizing the respect for sovereignty, unity and territorial integrity and non-interference in its internal affairs.
- The meeting, however, did not have any representation from the erstwhile Afghan government or the Taliban, which has not been recognised by India as a legitimate political player in Afghanistan.
- Afghanistan retains its important potential because of the broad participation of the stakeholders.

9. Summit for Democracy

- The Summit for Democracy was hosted by the United States "to renew democracy at home and confront autocracies abroad".
- It aims to show how open, **rights-respecting societies can work together to effectively tackle the challenges of present time, such as the Covid-19 pandemic, the climate crisis, and inequality.**
- The Summit was centered around three principal themes:
    - Defending against authoritarianism
    - Addressing and fighting corruption
    - Advancing respect for human rights

10. U.S.-India Trade Policy Forum (TPF)

- The Trade Policy Forum (TPF) was **convened between the United States and India.** The Forum resolved to take economic ties between the two countries to the 'next high level' and exchanged views on 'potential targeted tariff reductions'.

- The Forum has decided to forge an agreement to facilitate U.S. market access from India, and reciprocate with similar access in the Indian market to many agriculture and animal products.
- India has sought restoration of the GSP (Generalized System of Preferences) benefits by the U.S.
- The Forum also agreed on the **significance of negotiating a Social Security Totalization Agreement in the interest of workers from both sides.**
- India and the U.S. also discussed engagement in various multilateral trade bodies including the **World Trade Organization (WTO) and the G20** for achieving a shared vision of a transparent, rules-based global trading system among market economies and democracies.

Society

1. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

- The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), also known as **Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS)** is Indian legislation enacted on August 25, 2005.
- The MGNREGA provides a **legal guarantee for one hundred days of employment** in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage.
- The **Ministry of Rural Development (MRD)**, Govt of India is monitoring the entire implementation of this scheme in association with state governments.
- The **objective of the Act** is to enhance livelihood security in rural areas by providing at least 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work.

MGNREGA Goals

- Strong social safety net for the vulnerable groups by providing a fall-back employment source, when other employment alternatives are scarce or inadequate.
- Growth engine for sustainable development of an agricultural economy.
- Through the process of providing employment on works that address causes of chronic poverty such as **drought, deforestation and soil erosion,** the Act seeks to strengthen the natural resource base of rural livelihood and create durable assets in rural areas.
- Effectively implemented, **MGNREGA** has the potential to transform the geography of poverty.
- Empowerment of rural poor through the processes of a rights-based Law.
- New ways of doing business, as a model of governance reform anchored on the principles of transparency and grass root democracy Thus, MGNREGA fosters conditions for inclusive growth ranging from basic wage security and recharging rural economy to a transformative empowerment process of democracy.

2. Pradhan Mantri Poshan Shakti Nirman Yojana (PM POSHAN)

- The Union Cabinet has approved the Prime Minister POSHAN scheme or PM-POSHAN for providing one hot cooked meal in **Government and Government-aided schools.**

- The scheme will replace the existing national programme for **mid-day meal in schools or Mid-day Meal Scheme.**

- It has been launched for an initial period of five years (2021-22 to 2025-26).

- The scheme will cover 11.8 crore students enrolled in classes 1 to 8 in over 11.2 lakh schools across the country.

- **Primary (1-5) and upper primary (6-8) schoolchildren** are currently entitled to 100 grams and 150 grams of food grains per working day each, to ensure a minimum of 700 calories.

- The scheme will be extended to students studying in **pre-primary or Balvatikas running in government and government aided primary schools.**

- Balvatika is the pre-school that was started in government schools last year to include **children aged younger than six years** in the formal education system.

- The government will promote nutritional gardens in schools. The gardens are being provided to offer additional micro-nutrients to students.

- The new scheme has a provision for supplementary nutrition for children in aspirational districts and those with **high prevalence of anaemia.**

- A nutrition expert is to be appointed in each school whose responsibility is to ensure that health aspects such as **Body Mass Index (BMI), weight and haemoglobin** levels are addressed.

- A social audit of the scheme has also been mandated for each school in each state to study the implementation of the scheme, which was so far not being done by all states.

- **The Ministry of Education** will also engage college and university students to monitor the scheme at a local level.

- The Centre will bear Rs. 54,061 crore of the total estimated cost of Rs 1.3 lakh crore, with the states paying Rs 31,733 crore (Rs 45,000 crore will be released by the Centre as subsidies for food grains).

Economics

1. Exchange Traded Funds

- An exchange traded fund (ETF) is a **basket of securities that trade on an exchange just like a stock does.**

- ETF share prices fluctuate all day as the ETF is bought and sold; this is different from mutual funds that only trade once a day after the market closes.1

- ETFs can contain **all types of investments including stocks, commodities, or bonds;** some offer U.S.-only holdings, while others are international.

- ETFs offer low expense ratios and fewer broker commissions than buying the stocks individually does.

- ETFs are cost efficient. Given that they don't make any stock (or security choices), they don't use the services of star fund managers.

- They allow investors to avoid the risk of poor security selection by the fund manager, while offering a diversified investment portfolio.

- The stocks in the indices are carefully selected by index providers and are rebalanced periodically.

- They offer anytime liquidity through the exchanges.

2. National Bank for Financing Infrastructure and Development (NaBFID)

- The Parliament had passed a bill to set up NaBFID, a development financial institution (DFI).
- **K V Kamath** has been appointed by the government to head the **National Bank for Financing Infrastructure and Development (NaBFID)**.
- NaBFID has been set up to boost infrastructure financing in the country like development of bonds and derivatives markets needed for infrastructure financing.

Functions of NaBFID:

- Extending loans and advances for infrastructure projects,
- Taking over or refinancing such existing loans,
- Attracting investment from private sector investors and institutional investors for infrastructure projects,
- Organizing and facilitating foreign participation in infrastructure projects,
- Facilitating negotiations with various government authorities for dispute resolution in the field of infrastructure financing,
- Providing consultancy services in infrastructure financing.

3. RBI REtail Direct Scheme

- The RBI has announced proposals for the Retail Direct Scheme for **investors in government securities and the Integrated Ombudsman Scheme.**
- Under the scheme, **small investors can buy or sell government securities (G-Secs), or bonds, directly without an intermediary like a mutual fund.**
- It is similar to placing funds in debt instruments such as fixed deposits in banks.
- However, the same tax rules apply to income from G-Secs.

- The government being the borrower, there is a sovereign guarantee for the funds and hence zero risk of default.
- Also, government securities may offer better interest rates than bank fixed deposits, depending on prevailing interest rate trends.
- For example, the latest yield on the benchmark 10-year government securities is 6.366%.

4. Prompt Corrective Action (PCA)

- The Reserve Bank of India (RBI) has announced a revised Prompt Corrective Action (PCA) framework.
- PCA is a framework under which banks with weak financial metrics are put under watch by the RBI.
- The RBI introduced the PCA framework in 2002 as a structured early-intervention mechanism for banks that become undercapitalised due to poor asset quality, or vulnerable due to loss of profitability.
- The framework was reviewed in 2017 based on the recommendations of the working group of the **Financial Stability and Development Council** on Resolution Regimes for Financial Institutions in India and the Financial Sector Legislative Reforms Commission.
- The objective of the PCA framework is to **enable supervisory intervention at an appropriate time and require the supervised entity to initiate and implement remedial measures in a timely manner, so as to restore its financial health.**
- It aims to check the **problem of Non-Performing Assets (NPAs) in the Indian banking sector.**
- It is intended to help alert the regulator as well as investors and depositors if a bank is heading for trouble.
- The idea is to head off problems before they attain crisis proportions.
- A bank will generally be placed under the PCA framework based on the audited annual financial results and the ongoing supervisory assessment made by the RBI.

5. Capital adequacy ratio

- CRAR also known as Capital Adequacy Ratio (CAR) is the **ratio of a bank's capital to its risk.**
- CRAR is decided by central banks and bank regulators to prevent commercial banks from taking excess leverage and becoming insolvent in the process.
- The **Basel III norms stipulated a capital to risk-weighted assets of 8%.**
- In India, scheduled commercial banks are required to maintain a CAR of 9% while Indian public sector banks are emphasized to maintain a CAR of 12% as per RBI norms.
- It is arrived at by dividing the capital of the bank with aggregated risk-weighted assets for credit risk, market risk, and operational risk.
- RBI tracks CRAR of a bank to ensure that the bank can absorb a reasonable amount of loss and complies with statutory Capital requirements.
- The higher the CRAR of a bank the better capitalized it is.

6. Capital conservation buffer

- CCB is a relatively new concept, introduced under the **international Basel III norms.**
- The concept says that during good times, banks must build up a capital buffer that can be drawn from when there is stress.
- In India, **the minimum capital requirement is 9 per cent.**
- The CCB would be 2.5 percentage points over and above the minimum capital requirement
- In simple terms, this is savings for the future as this capital can be drawn when a bank is incurring losses.
- Since it is a buffer, or extra capital, banks' minimum capital is not violated.
- The CCB is being implemented in a phased manner of 0.625 percent per year from January 1, 2016.
- The final phase is now delayed by a year, till March 31, 2020.

- India follows the international Basel III norms, and the CCB is an integral part of those norms.
- After the credit crisis of 2008 the CCB concept gained attention, when large banks witnessed their capital eroding at a fast phase.
- The CCB was aimed to cover for their losses on risky investments.
- The Basel Committee on Banking Supervision released its capital buffer norms wherein two kinds of structures were introduced — one, the CCB, and the other was countercyclical capital buffers.
- The Reserve Bank of India (RBI) has decided to implement both.
- Basel norms are a standard set of rules, and it is left to the individual country to implement the norms at a pace that is suitable to it.
- However there won't be any penalty for not attaining CCB norms.
- However, in a connected world, the sooner a bank becomes internationally norm compliant, the better it is poised to raise funds and expand operations overseas.

7. FPIs can invest in debt issued by InvITs, REITS

- The Reserve Bank of India (RBI) has given a **go-ahead to Foreign Portfolio Investors (FPIs) acquiring debt securities issued by Infrastructure investment Trusts (InvITs) and Real Estate Investment Trusts (REITs).**
- Investments by FPIs in debt papers of InvITs and REITs can be made under the Medium-Term Framework (MTF) or the Voluntary Retention Route (VRR).
- Such investments will be subject to limits and the terms and conditions for investments by Foreign Portfolio Investors in debt securities under the respective regulations of MTF and VRR.

8. Central bank digital currency (CBDC)

- **The Reserve Bank of India (RBI) has proposed amendments to the Reserve Bank of India Act, 1934**, which would enable it to launch a **Central Bank Digital Currency (CBDC),** thus enhancing the scope of the definition of 'bank note' to include currency in digital form.

- The move has come amid the government's plans to introduce a Bill on cryptocurrencies in the current Parliament session that seeks to prohibit all private cryptocurrencies in India with certain exceptions.
- **CBDC is a digital form of Fiat Currency which can be transacted using wallets backed by blockchain and is regulated by the central bank. It is a legal tender issued by a central bank in a digital form.**
- Though the concept of **CBDCs was directly inspired by bitcoin,** it is different from decentralized virtual currencies and crypto assets, which are not issued by the state and lack the 'legal tender' status.
- It would reduce the cost of currency management while **enabling real-time payments without any inter-bank settlement.**
- India's fairly high currency-to-GDP ratio holds out another benefit of CBDC to the extent large cash usage can be replaced by (CBDC), the cost of printing, transporting and storing paper currency can be substantially reduced.
- It will also **minimize the damage to the public from the usage of private virtual currencies.**
- It will enable the user to conduct both domestic and cross border transactions which do not require a third party or a bank.
- It has the potential to provide significant benefits, such as reduced dependency on cash, higher seigniorage due to lower transaction costs, and reduced settlement risk.
- It would also possibly lead to a more robust, efficient, trusted, regulated and legal tender-based payments option.

9. Off-Budget borrowings

- **The loans that are taken by any public institution and not by the Center directly** are called the "Off-Budget Borrowings". The public institution borrows on the directions of the central government.
- These borrowings are used to fulfill the expenditure needs of the government.
- Under such borrowing norms, the Center used to finance its expenditures while keeping the debt off the books. Thus, the debt is not counted while calculating the fiscal deficit.

- The liability of the loan is not formally on the Center and is not included in the national fiscal deficit. Thus, it helps in keeping the fiscal deficit of the country within acceptable limits.
- Government can raise the borrowings by asking the implementing agency to raise the required funds from the market by loans or by issuing bonds.
- The borrowings can also be raised through the **Public Sector Banks (PSBs)** where the PSBs can be asked to **fund off-budget expenses.** For example, loans from PSBs were utilized for meeting the shortfall in releasing the fertilizer subsidy.
- The fiscal deficit in the Union Budget is the most wanted detail. Fiscal deficit is the gap between what the central government spends and what it earns. It helps in understanding the financial health of the government.
- This figure is highly watched by the rating agencies across the world. As a result, the government always wants to restrict the fiscal deficit by a certain number. This can be restricted by "off-budget borrowings".

10.   Certificates of Origin (CoO)

- It was put in place in late 2019 for exports to countries with whom India had a preferential trade pact.
- It was expanded to cover all merchandise exports from November.
- It was initiated by the **Directorate General of Foreign Trade (DGFT).**
- This online facility provides 'ease of doing business' to the exporting community
- It gives a v**erifiable authentication mechanism to the partner countries to confirm the genuineness of the issued CoOs through a QR code which adds credibility to the issued e-CoO**.
- Several exporters across States had reported difficulties in registering on the e-CoO platform on the Directorate General of Foreign Trade (DGFT) portal with the stipulated high-quality digital signature certificates and obtaining the certificates for their shipments.
- Customs house agents had not been able to share data on exporters' behalf, as the DGFT had not shared the API (Application Programming Interface) for the new platform.
- India's monthly merchandise exports have crossed $30 billion for seven months in a row.

- It is largely on course to reach the government's target of a record $400 billion in 2021-22.

Ecology and Environment

1. Build Back Better:

- The Build Back Better Plan is a **Covid-19 relief, future economic, and infrastructure package** proposed by G-7 countries for developing and lower-income countries.
- Through B3W, the G7 and other like-minded partners will coordinate in mobilizing private-sector capital in four areas of focus:
  - Climate,
  - Health and health security,
  - Digital technology,
  - Gender equity and equality.
- Infrastructure development carried out in a **transparent and sustainable manner—financially, environmentally, and socially —will lead to a better** outcome for recipient countries and communities.
- B3W to infuse investment by complying with the standards promoted by the Blue Dot Network, relating to the environment and climate, labor and social safeguards, transparency, financing, construction, anti-corruption, and other areas.
- The investments will be made in a manner consistent with achieving the goals of the **Paris Climate Agreement.**
- The investments will be made in a manner consistent with achieving the goals of the Paris Climate Agreement.

2. Climate Equity Monitor:

- India has officially endorsed a website, Climate Equity Monitor, made by Indian climate experts.
- The website lists the historical **carbon dioxide emissions of developed countries.**

- The website was conceptualized and developed by the Climate Change Group at the **M.S. Swaminathan Research Foundation, Chennai, and the Natural Sciences and Engineering Department at the National Institute of Advanced Studies, Bengaluru, with other independent researchers.**
- It is aimed at monitoring the performance of **Annex-I Parties under the UNFCCC (developed countries)** based on the "foundational principles" of the Climate Convention.
- It aims to highlight the **disparity between the emissions of developed and developing countries.**
- Countries such as the **USA, Canada and Australia and those in Western Europe** are shown as having a net carbon debt while developing countries such as India and China have net credit.
- It highlights that it is only fair that developed countries must commit to steeper targets towards curbing emissions than developing countries.
- Its focus on **equity & climate action** from a data and evidence-based perspective will encourage vigorous discussion on the crucial issue and engage experts from all nations.
- The website shall debunk the narrative provided by many developed countries, and global NGOs that focus attention continually on what developing countries must do, constantly demanding greater commitment and action from them.

3. Indus river dolphin

- The Indus river dolphin was declared the **State aquatic animal of Punjab** in 2019.
- According to a recent study of South Asian river dolphins, Indus and Ganges River dolphins are not one, but two separate species. Currently, they are classified as two subspecies under **Platanista gangetica.**
- Like other freshwater dolphins (such as Ganges river dolphins) , the Indus river dolphin is an important indicator of the health of a river.

- They can only be found in the **lower parts of the Indus River in Pakistan and in River Beas, a tributary of the Indus River in Punjab, India.**
- **Conservation Status:**
    - International Union for the Conservation of Nature (IUCN): Endangered.
    - Convention on International Trade in Endangered Species(CITES): Appendix I
    - Indian Wildlife (Protection), Act 1972: Schedule I

4. Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC)

- Common but Differentiated Responsibilities and Respective Capabilities (CBDR–RC) is a principle within the **United Nations Framework Convention on Climate Change (UNFCCC)** that acknowledges the different capabilities and differing responsibilities of individual countries in addressing climate change.
- It means that while all countries should do their best to fight global warming, developed countries – with deeper pockets, which were primarily responsible for the climate mess – should take a bigger share of the burden than the developing and under-developed countries.

5. Ganges river dolphin

- The Ganges River Dolphin was officially discovered in 1801.

- Ganges river dolphins live in the **Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh.**

The Ganges river dolphin can only live in freshwater and is essentially blind.

- They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to "see" an image in their mind. They are also called 'susu'.

- Killing the Gangetic River Dolphin is a punishable offence under the **Wildlife Protection Act, 1972.**

- It is a reliable indicator of the health of the entire river ecosystem.

- It was recognised as the **National Aquatic Animal in 2009, by the Government of India.**

  - ## Conservation Status:

    - **Indian Wildlife (Protection), Act 1972: Schedule I.**

    - International Union for the Conservation of Nature (IUCN): Endangered.

    - Convention on International Trade in Endangered Species (CITES): Appendix I (most endangered).

    - Convention on Migratory Species (CMS): Appendix II (migratory species that need conservation and management or would significantly benefit from international co-operation).

6. Global Methane Pledge

- The Global Methane Pledge was launched at the **UN COP26 climate conference in Glasgow**.

- It is an effort led jointly by the **United States and the European Union.**

- So far, over 90 countries have signed this pledge.
- The pledge was first announced in September by the **US and EU, and is essentially an agreement to reduce global methane emissions.**
- One of the central aims of this agreement is to **cut down methane emissions by up to 30 per cent from 2020 levels by the year 2030.**
- According to the **International Energy Agency (IEA),** while methane has a much shorter atmospheric lifetime (12 years as compared to centuries for CO2), it is a much more potent greenhouse gas simply because it absorbs more energy while it is in the atmosphere.
- In its factsheet on methane, the UN notes that methane is a powerful pollutant and has a global warming potential that is 80 times greater than carbon dioxide, about 20 years after it has been released into the atmosphere.
- Significantly, the average methane leak rate of 2.3 per cent "erodes much of the climate advantage gas has over coal".
- The IEA has also said that more than 75 percent of methane emissions can be mitigated with the technology that exists today, and that up to 40 per cent of this can be done at no additional costs.

7. New York Declaration on Forests.

- The New York Declaration on Forests was released at the **UN Climate Summit in New York, US.**
- The New York Declaration on Forests calls for the restoration of more than 350 million hectares of forests and croplands. New York Declaration on Forests is a non-legally binding political agreement.
- The New York Declaration aims to **reduce more climate pollution each year than the United States emits annually.**
- In support of the Declaration, 20 global food companies announced their **pledges to deforestation-free sourcing policies of palm oil.**
- Among other announcements, 26 governors from **Peru and Liberia** presented new forest policies and pledged to cut deforestation by 80 per cent.
- Meanwhile, the Democratic Republic of the Congo (DRC), Ethiopia, Guatemala, Uganda and several other countries are set to make national pledges to restore more than 30 million hectares of degraded lands.

- Also, the Consumer Goods Forum, a coalition of 400 companies, called on Governments to pass a legally binding climate deal in Paris in 2015 that includes REDD+, including large-scale payments to countries that reduces deforestation

8. Climate and Clean Energy Agenda Partnership

- The **Ministry of Petroleum and Natural Gas and the U.S. Secretary of Energy** launched the revamped **U.S.-India Strategic Clean Energy Partnership (SCEP).**
- The SCEP was launched in accordance with the **U.S.-India Climate and Clean Energy Agenda 2030** Partnership announced by both the countries at the Leaders' Summit on Climate. held in April this year.
- The aim is to create **stronger bilateral cooperation on actions in the current decade to meet the goals of the Paris Agreement.**
- The Partnership will proceed along two main tracks: **the Strategic Clean Energy Partnership and the Climate Action and Finance Mobilization Dialogue.**
- India elevated the India-US energy dialogue to a strategic energy partnership in 2018.
- India and the United States are natural partners with shared values and our agenda encompasses all major pillars of our strategic priorities - **including defence, security, energy, technology, education and healthcare.**
- The US Climate envoy lauded India's leadership role in demonstrating how economic development and clean energy can go hand in hand and stated that urgent Global Climate Action is the need of the hour.
- India and the US are working towards speedier deployment of clean energy.

9. Carbon border adjustment mechanisms

- At the G-20 ministerial meeting on environment and climate change in Italy, developing countries, **including India**, are expected to raise their concerns over the European Union's recent proposal on the first of its kind **carbon border tax.**

- Under this proposal, the 27 EU nations will impose border tax on imports of carbon-intensive goods.
- Yet to be legally formalised, the tax plan could come into force from 2026.On similar lines, Democratic lawmakers, introduced a legislation establishing a carbon tariff on certain imports like steel as a means to fight climate change.
- 'Carbon border tax' can be defined as a **penalty tax to discourage import of carbon-intensive goods such as steel, aluminium, cement, fertilizers and electricity via the carbon border adjustment mechanism (CBAM).**
- The aim is to help slash the **EU's overall greenhouse gas emissions 55% below 1990 levels by 2030.**
- The EU Commission is pushing for the world's first carbon border tax on imported goods. It plans to levy the tax in a phased manner from 2026.
- It avoids the problems related to choosing a baseline. In a price approach, the natural baseline is a zero carbon tax.
- A carbon tax policy will be better able to adapt to the element of uncertainty which pervades the science of climate change.
- Quantity limits on emissions are related to the stocks of greenhouse gas emissions, while the price limits are related to the flow of emissions.
- Carbon tax primarily discourages environmentally unfriendly production and consumer practices by making the 'polluting sources' costlier.
- It works on the principle of 'the polluter pays'. The carbon tax will essentially be a Pigovian Tax which balances the marginal social costs and benefits of additional emissions, thereby internalising the costs of environmental damage.
- It can act as an incentive for consumers and producers to shift to more energy-efficient sources and products.

10. Nationally Determined Contributions (NDCs)

- The INDCs will largely determine whether the world achieves an ambitious 2015 agreement and is put on a path toward a low-carbon, climate-resilient future.

- India has submitted its Intended Nationally Determined Contribution (INDC) to the United Nations Framework Convention on Climate Change.

Features of India's INDC:

- To put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation.
- To adopt a climate-friendly and a cleaner path than the one followed hitherto by others at corresponding level of economic development.
- To reduce the emissions intensity of its GDP by 33 to 35 per cent by 2030 from 2005 level.
- To achieve about 40 per cent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030, with the help of transfer of technology and low cost international finance, including from Green Climate Fund.
- To create an additional carbon sink of 2.5 to 3 billion tonnes of CO_2 equivalent through additional forest and tree cover by 2030.
- To better adapt to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, Himalayan region, coastal regions, health and disaster management.
- To mobilize domestic and new and additional funds from developed countries to implement the above mitigation and adaptation actions in view of the resource required and the resource gap.
- To build capacities, create domestic framework and international architecture for quick diffusion of cutting-edge climate technology in India and for joint collaborative R&D for such future technologies.

11. Infrastructure for Resilient Island States (IRIS)

- The Small Island Developing States or SIDS face the biggest threat from climate change.
- To mitigate this, India's space agency ISRO will build a special data window for them to provide them timely information about cyclones, coral-reef monitoring, coast-line monitoring etc. through satellite.
- IRIS will be a part of the **India-UK Coalition for Disaster Resilient Infrastructure (CDRI).**

- CDRI's initial focus is on developing disaster-resilience in ecological, social, and economic infrastructure.
- It aims to achieve substantial changes in member countries' policy frameworks and future infrastructure investments, along with a major decrease in the economic losses suffered due to disasters.

12. One Sun, One World, One Grid

- The mega plan of OSOWOG calls for **trans-national electricity grid supplying solar power across the globe.**
- It will connect 140 countries through a common grid that will be used to transfer solar power.
- The idea was first floated by PM Modi in 2018 during the first assembly of the International Solar Alliance (ISA).
- The vision behind the OSOWOG mantra is "the Sun never sets" and is a constant at some geographical location, globally, at any given point of time.
- It is obviously a very grand and ambitious project with a looming success.
- It is also clear that a new energy sector paradigm is needed as we are facing a huge inflection point in electricity generation and consumption.
- Potential benefits include widespread scale up in energy access, abatement in carbon emissions, lower cost and improved livelihoods.
- With battery and storage technology becoming cheaper, electricity consumption at source end is a more feasible idea for solar power.

13. Coalition for Disaster Resilient Infrastructure (CDRI)

- CDRI was launched by Prime Minister Narendra Modi in 2019.
- It was set up with the objective of promoting resilience of new and existing infrastructure systems to climate and disaster risks to support sustainable development.
- Prime minister launched the CDRI on September 23, 2019 during his speech at the UN Climate Action Summit.

- It is an international coalition of countries, United Nations (UN) agencies, private sector, multilateral development banks and academic institutions.
- Its primary objective is to promote research and knowledge sharing in fields of infrastructure risk management, financing, standards and recovery mechanisms.
- Coalition for Disaster Resilient Infrastructure (CDRI) has been joined by 25 countries and seven international organizations as members till date. Bangladesh is the new entrant to CDRI

14.   Panchamrit Plans

- Prime minister Modi termed his scheme as 'Panchamrita', which means 'five ambrosia'.
- Traditionally, 'Panchamrita' is a method of mixing five natural foods namely, milk, curd, ghee, honey and jaggery.
- Panchamrita is used as a technique in Ayurveda. It is also used in Hindu and Jain worship rituals.

Panchamrita:

- India will increase its non-fossil energy capacity to 500 gigawatts by 2030.
- India will meet 50 per cent of its energy requirements, with renewable energy, till 2030.
- India will reduce carbon emission by one billion tonnes by 2030.
- India will reduce its carbon intensity by 45 per cent by 2030.
- India will achieve net zero emissions by 2070.

- India accounts for 17 per cent of the world's population. However, it only contributes five per cent of emissions. In terms of renewable energy capacity, India stands at fourth position.

15.   .Glasgow Leaders' Declaration on Forests and Land Use

- It recognises that to meet our land use, climate, biodiversity and sustainable development goals, both globally and nationally.

- It will require transformative further action in the interconnected areas of sustainable production and consumption; infrastructure development; trade; finance and investment; and support for smallholders, Indigenous Peoples, and local communities, who depend on forests for their livelihoods and have a key role in their stewardship.
- The **declaration interlinks trade to climate change and forest issues.**
- Twenty eight governments have also committed to remove deforestation from the global trade of food and other agricultural products such as palm oil, soya and cocoa.
- Governments representing 75% of global trade in key commodities that can threaten forests – such as palm oil, cocoa and soya – will commit to a common set of actions to deliver sustainable trade and reduce pressure on forests, including support for smallholder farmers and improving the transparency of supply chains.
- India did not sign the Glasgow Leaders' Declaration on Forests and Land Use.
- **It is an ambitious declaration initiated by the United Kingdom to "halt deforestation" and land degradation by 2030.**
- India objected to "trade" being interlinked to climate change and forest issues in the agreement.
- The declaration has over 105 signatories including the **UK, US, Russia and China.**
- **India, Argentina, Mexico, Saudi Arabia and South Africa are the only G20 countries that did not sign the declaration.**

16.   Coringa Wildlife Sanctuary (CWS)

- Conservation biologists of the **Wildlife Institute of India (WII)**, Dehradun, will begin collaring 10 fishing cats (Prionailurus Viverrinus)

MANGROVES MAP OF ANDHRA PRADESH AS OF MARCH 2018

in the **Coringa Wildlife Sanctuary (CWS) in Andhra Pradesh.**

- The project involves the fishing cat estimate and collaring, and how it survives in the sanctuary.
- The three-year project will also study its habitat, feeding habits, threats and movements.
- The 2018 census had recorded the existence of 115 fishing cats.
- A significant portion of the Coringa mangrove ecosystem had recently been disturbed because of the clandestine manufacturing of ID liquor in the Godavari estuary.
- The sanctuary is yet to be declared as a Ramsar site despite facing various threats to its ecology.

Coringa Wildlife Sanctuary:

- It is a wildlife sanctuary and estuary **situated in Andhra Pradesh.**
- It is 18 km from the port city of Kakinada, nestling on the deltaic branches of **Gouthami and Godavari Rivers at Kakinada Bay.**
- The sanctuary is a part of the **Godavari estuary.**
- It has extensive mangrove and dry deciduous tropical forest. It is the second largest stretch of mangrove forests in India.
- It is home to **the critically endangered white-backed vulture and the long-billed vulture.**

17. Emission Intensity

- **India announced that it will reach carbon neutrality by 2070** as part of a five-point action plan that included **reducing emissions to 50% by 2030.**
- India made this pledge at the **Conference of the Parties (COP) 26 climate summit in Glasgow**, where it also urged developed countries to deliver on their promise of climate financing.
- However, India hasn't submitted an updated **Nationally Determined Contribution (NDCs) with these commitments to the United Nations Framework Convention on Climate Change (UNFCCC) yet.**
- Net Zero is a state in which a country's total emissions are offset by absorptions of carbon dioxide from the atmosphere, like that done by trees

and forests, and physical removal of carbon dioxide through futuristic technologies.

- More than 70 countries have promised to become Net Zero by the middle of the century, and this is being considered vital for meeting the Paris Agreement goal of keeping global temperatures within 2 degrees Celsius from pre-industrial times.

- India's Net Zero target of 2070 silences its critics but it is along expected lines.

- India has the lowest per capita emissions of the world's major economies -- **emitting 5% of the total, despite accounting for 17% of the world's population.**

- According to the World Resources Institute, India's total greenhouse gas emissions were about 3.3 billion tonnes in 2018.

- That would mean between now and 2030, India could be emitting anywhere between 35 to 40 billion tonnes at the current rates of growth.

- Cutting 1 billion tonnes would, therefore, represent a reduction of 2.5 to 3% in its absolute emissions in the business-as-usual scenario in the next nine years.

18.   Infrastructure for Resilient Island States (IRIS)

- The PM has launched the Initiative for the Resilient Island States (IRIS) for **developing infrastructure of small island nations.**

- The Small Island Developing States or **SIDS face the biggest threat from climate change.**

- To mitigate this, India's space agency ISRO will build a special data window for them to **provide them timely information about cyclones, coral-reef monitoring, coast-line monitoring etc. through satellite.**

- IRIS will be a part of the India-UK Coalition for Disaster Resilient Infrastructure (CDRI).

19.   Kaiser-i-Hind is Arunachal's State butterfly

- Arunachal Pradesh has approved the large, brightly coloured Kaiser-i-Hind as the State butterfly.

Kaiser-i-Hind literally means Emperor of India.

- It is one of the very rare and elusive **swallowtail butterflies which are found at medium and higher elevations.**
- It **flies high in the canopy of broad leaved temperate evergreen forests.**
- This butterfly with a 90-120 mm wingspan **is found in (West Bengal, Meghalaya, Assam, Sikkim and Manipur) along the Eastern Himalayas.**
- The butterfly also flutters in **Nepal, Bhutan, Myanmar, Laos, Vietnam and southern China.**

Protection Status:

- IUCN: Near Threatened
- CITES: Appendix II
- Wildlife (Protection) Act, 1972: Schedule II

Science and Technology

1. Immune Memory

- A huge number of adults are exposed to four different coronaviruses that cause common colds and studies have shown that 20-50% of healthy people display **SARS-CoV-2-specific memory T cells.**
- It is thought that SARS-CoV-2-specific T cell responses seen in healthy people might arise from **memory T cells** derived from exposure to 'common cold' coronaviruses.
- However, it is not known that the presence of pre-existing immunity from memory T cells offers clinical relevance, when exposed to SARS-CoV-2.
- Measuring pre-existing immunity and correlating it with infection and severity of disease is the only way to find out its role in protection against SARS-CoV-2.

- However, the relationship between the infections by and immunity from common cold coronavirus and age is not well established. That is why it is unclear why children do not show severe symptoms, while older people do.

- These considerations underline how multiple variables may be involved in potential pre-existing partial immunity to Covid-19.

2. Coronal Mass Ejection (CME)

- Coronal Mass Ejection (CME) is one of the **biggest eruptions from the Sun's surface** that can contain a billion tons of matter accelerated to several million miles per hour into space.

- The Sun is an extremely active object, spewing out vast quantities of gas and plasma in many violent events.

- The underlying cause of CMEs is not well understood. Astronomers agree, however, that the sun's magnetic field plays a major role.

- Though CMEs can occur anywhere on the Sun, it is primarily those which originate from regions near the centre of the visible solar surface (called the photosphere) that are important for study, since they may propagate directly towards the Earth.

- When a really strong CME blows past the Earth, it can damage the electronics in satellites and disrupt radio communication networks on Earth.

- When the plasma cloud hits **our planet, a geomagnetic storm follows.**

- A geomagnetic storm is a major disturbance of **Earth's magnetosphere** (space controlled by earth's magnetic field) that occurs when there is a very efficient exchange of energy from the solar wind into the space environment surrounding Earth.

- They can trigger intense light in the **sky on Earth, called auroras.**

3. INSACOG

- It aims to **ensure the status of Variants of Concern and Variants of Interest.** Also, it aims to establish the surge surveillance and sentinel surveillance mechanisms. These mechanisms help in early detection of the virus.
- The labs will find out the presence of variants in the areas reporting higher infection.
- The samples collected from different places are sent to the INSACOG labs. These labs conduct genome sequencing. Identify the variants.
- The information is then passed on to the health ministry. Required actions are taken to address the concerns. It mainly works to understand the severity of the diseases.
- The labs identify and expand the genome sequences of COVID-19 virus. Through this they understand how the virus evolves and spreads.
- It was established by the **Health Ministry. The other founding partners of INSACOG are CSIR (Council of Scientific and Industrial Research), Department of Biotechnology and Indian Council of Medical Research (ICMR).**
- The genome sequencing is essential because **it helps to understand the immune escape of the virus and how its infection increases.**

4. National Hydrogen Mission

- The proposal for the National Hydrogen Mission was made in the Budget 2021 to launch NHM that would **enable the generation of hydrogen "from green power sources".**
- The aim is to **make India a global hub for the production and export of green hydrogen.**
- Hydrogen is the lightest and first element on the periodic table. Since the weight of hydrogen is less than air, it rises in the atmosphere and is therefore rarely found in its pure form, H_2.
- At standard temperature and pressure, hydrogen is a nontoxic, nonmetallic, odorless, tasteless, colorless, and highly combustible diatomic gas.
- Hydrogen fuel is a zero-emission fuel burned with oxygen. **It can be used in fuel cells or internal combustion engines. It is also used as a fuel for spacecraft propulsion.**

5. National Technical Advisory Group on Immunization (NTAGI)

- It was established by an order of the **Ministry of Health and Family Welfare (MoHFW) in 2001.**

- As India's apex advisory body on immunization, the NTAGI provides guidance and advice to the MoHFW on provision of vaccination and immunization services for the effective control of vaccine preventable diseases in the country.

- NTAGI of India fulfills a need for informing decision-making concerning the introduction of **new vaccines and strengthening the Universal Immunization Programme (UIP).**

- The role and membership of NTAGI have expanded over the years in tune with the emerging needs and priorities of the Government of India.

- The NTAGI includes a **Standing Technical Sub-Committee (STSC).**

- The STSC is tasked with undertaking technical review of scientific evidence on matters related to immunization policy and programmes.

- Final recommendations are drafted by the NTAGI taking into account the scientific review by the STSC and any other relevant evidence.

6. Commission for Air Quality Management (CAQM)

- Formed by an ordinance, "Commission for Air Quality Management (CAQM) in National Capital Region and Adjoining Areas Ordinance 2020", in October 2020.

- The Commission will be **a statutory authority.** It will supersede bodies such as the **central and state pollution control boards of Delhi, Punjab, Haryana, UP and Rajasthan.**

- The new 18-member Commission brings together the Centre, states, and other stakeholders on one collaborative platform.

- Chaired by a government official of the rank of Secretary or Chief Secretary. The chairperson will hold the post for three years or until s/he attains the age of 70 years.
- It will also have five ex officio members who are either Chief Secretaries, or Secretaries in charge of the department dealing with environment protection in the States of Delhi, Punjab, Haryana, Rajasthan, and Uttar Pradesh.
- Three full time technical members.
- It will have the powers to issue directions to these state governments on issues pertaining to air pollution.
- Exclusive jurisdiction over the NCR, including areas in Haryana, Punjab, Uttar Pradesh and Rajasthan, in matters of air pollution, and will be working along with CPCB and ISRO, apart from the respective state governments.
- The Commission will have the power to **impose a fine of up to Rs 1 crore and imprisonment of up to 5 years in case its directions are contravened.**

7. Facial recognition technology (FRT)

- Face detection technology can evaluate whether or not there is a face in the image.
- The face analysis technique attempts **to determine various qualities, such as gender, age, or mood, from the identified faces.**
- Facial recognition technology uses pictures of a person's face to verify or identify them.
- **Authentication services, such as unlocking a smartphone or validating a passport, rely on "one-to-one" verification.**
- To find the individual in the photo, perform an identifying or "one-to-many" search.
- FRT software vendors **include both domestic firms and global companies.**
- The systems seek to achieve a range of objectives: better identification of criminals, law enforcement use at railway stations, passenger check-ins at airports, biometric attendance at companies, and even student authentication mechanisms.

Art and Culture

1. Bharat Gaurav' scheme

- Under this Scheme, theme-based tourist circuit trains, on the lines of the **Ramayana Express, can be run either by private or State-owned operators.**
- These trains will help realize India's rich cultural heritage and magnificent historical places to the people of India and the world. They will also help in tapping the vast tourism potential of India.
- Service providers, who can be an **individual, company, society, trust, joint venture or consortium will be free to decide themes/circuits.**
- They will offer an all-inclusive package to tourists including rail travel, hotel accommodation and sightseeing arrangement, visit to historical/heritage sites, tour guides etc.
- They have full flexibility to decide the package cost.
- The service providers will also be able to design/furnish the interior of the coaches based on the theme and put branding or advertising inside and outside of the train.

2. Creative city network

- The UNESCO Creative Cities Network (UCCN) was created in 2004 to **promote cooperation with and among cities that have identified creativity as a strategic factor for sustainable urban development.**
- placing creativity and cultural industries at the heart of their development plans at the local level and cooperating actively at the international level.
- Joining the Network, cities commit to sharing their best practices and developing partnerships involving the public and private sectors as well as civil society in order to:
    - Strengthen the creation, production, distribution and dissemination of cultural activities, goods and services;
    - Develop hubs of creativity and innovation and broaden opportunities for creators and professionals in the cultural sector;

- Improve access to and participation in cultural life, in particular for marginalized or vulnerable groups and individuals;
- Fully integrate culture and creativity into sustainable development plans.

Geography

1. Chumbi Valley:

- Chumbi Valley is also called Dromo, Tromo or Chomo.
- It is a valley in the Himalayas that projects southwards from the Tibetan plateau, intervening between Sikkim and Bhutan.
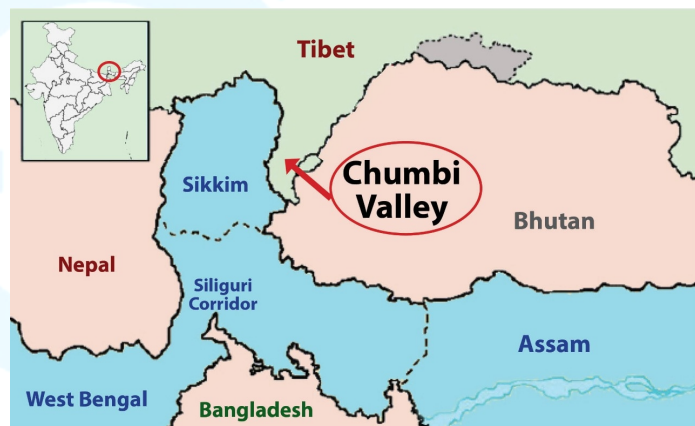
- It is coextensive with the administrative unit Yadong County in the Tibet region of China.
- The Chumbi Valley is connected to Sikkim to the southwest via the mountain passes of Nathu La and Jelep La.
- The valley is at an altitude of 3,000 m (9,800 ft), and being on the south side of the Himalayas, enjoys a wetter and more temperate climate than most of Tibet.
- The valley supports some vegetation in the form of the Eastern Himalayan broadleaf forests and transitions to the Eastern Himalayan alpine shrub and meadows in the north.
- The plant Pedicularis chumbica is named after the valley.
- Chumbi Valley is a 100-km protrusion of Chinese territory located between Bhutan in the east and Sikkim in the west.

2. Tigray Region

- Tigray is the **northernmost regional state in Ethiopia.** Capital and largest city is Mekelle.

- Tigray is bordered by **Eritrea to the north, Sudan to the west, the Amhara Region to the south and the Afar Region to the east and southeast.**

- Tigray region is known for its mountainous terrains that have often helped the people protect their territory from invaders, such as the Greeks, the Turkish, and the Italians.

- The Tigray Region is the homeland of the **Tigrayan, Irob and Kunama peoples.**