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(Important Current Affairs for Prelims)

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Galathea Bay – Great Nicobar Island

Why in News? A wildlife sanctuary in Galathea Bay, Great Nicobar Island, was denotified to clear the way for a transshipment port project. The area, a significant nesting site for endangered species like the giant leatherback turtle, was originally classified as a CRZ-1A zone, where large construction projects are prohibited.

About the CRZ:

- The Coastal Regulation Zone (CRZ) classification in India is part of the Coastal Regulation Zone Notification issued under the Environment Protection Act, 1986. The CRZ classification is designed to protect the coastal environment while allowing sustainable development.

CRZ Classification:

- **CRZ-I: Ecologically Sensitive Areas:**
 - **Definition:** Areas that are ecologically sensitive and vulnerable, such as mangroves, coral reefs, salt marshes, and turtle nesting sites.
 - **Restrictions:** Strict regulations are imposed on development in these areas to preserve their ecological balance.
 - **Examples:**
 - **Sundarbans (West Bengal):** Known for its mangrove forests and unique biodiversity.
 - **Gahirmatha Marine Sanctuary (Odisha):** Important for olive ridley sea turtle nesting.
- **CRZ-II: Developed Areas:**
 - **Definition:** Areas that are already developed or are designated for development, including urban areas and areas where infrastructure is already established.
 - **Restrictions:** Development is permitted with conditions to ensure it does not adversely affect the coastal environment. Regulations are less stringent compared to CRZ-I.
 - **Examples:**
 - **Mumbai (Maharashtra):** A densely populated urban area with extensive coastal development.

- **Chennai (Tamil Nadu):** An example of an urban coastal area with existing infrastructure.
- **CRZ-III: Rural and Semi-Urban Areas:**
 - **Definition:** Areas that are largely rural or semi-urban, typically characterized by low population density and limited development.
 - **Restrictions:** Development is allowed subject to conditions to minimize the impact on the coastal environment. Restrictions include maintaining a buffer zone from the high tide line.
 - **Examples:**
 - **Kochi (Kerala):** Semi-urban areas with a mix of developed and rural characteristics.
 - **Pondicherry (Union Territory):** Coastal areas with a blend of rural and semi-urban settings.
- **CRZ-IV: Coastal Waters:**
 - **Definition:** Areas in the coastal waters, including the territorial waters up to 12 nautical miles from the baseline.
 - **Restrictions:** This zone includes the sea and its adjoining water bodies, where regulations focus on controlling activities that impact marine life and coastal ecosystems.
 - **Examples:**
 - **Goa's Coastal Waters:** Includes marine areas crucial for the fishing industry and marine biodiversity.
 - **Andaman and Nicobar Islands' Waters:** Important for protecting unique marine ecosystems.

Mpox or Monkeypox

Why in news? Mpox, formerly known as monkeypox, has been in the news due to its emergence in many countries mostly affecting the Democratic Republic of Congo and neighbouring countries.

What is Mpox?

- Mpox is a viral infection caused by the mpox virus, a member of the Orthopoxvirus genus, which also includes the variola virus (which causes smallpox) and the vaccinia virus (used in smallpox vaccines). Mpox is characterized by symptoms similar to smallpox but generally less severe.

History:

First Identified: Mpox was first identified in laboratory monkeys in 1958, hence its name. The first human case was reported in the Democratic Republic of the Congo (DRC) in 1970.

Endemic Regions: Traditionally, mpox was considered endemic to Central and West Africa, with outbreaks occurring periodically in these regions.

Global Spread: In 2022, there was a significant global outbreak, with cases reported in countries outside the traditional endemic regions, including Europe, North America, and parts of Asia. This spread led to increased international concern and a global health response.

Symptoms:

Mpox symptoms are similar to smallpox but usually milder. They include:

- Fever
- Headache
- Muscle aches
- Backache
- Swollen lymph nodes
- Chills
- Exhaustion
- A rash that typically starts on the face and then spreads to other parts of the body

Variants:

Mpox has different genetic clades or variants. The two primary clades are:

1. **Central African (Congo Basin) Clade:** Generally more severe and has a higher mortality rate.
2. **West African Clade:** Typically milder and has a lower mortality rate.

The 2022 outbreak highlighted the presence of both clades in new regions, adding complexity to the response efforts.

Vaccination:

Two vaccines currently in use for small pox and Mpox namely, (JYNNEOS vaccine and ACAM2000) are recommended by WHO's Strategic Advisory Group of Experts on Immunization.

Godda Project

Why in News? India made changes to its rules about exporting electricity to other countries, in August 2024. These changes were made to protect Indian companies from political risk in countries like Bangladesh.

What is the Godda Project?

- Adani Power runs a very large power plant in **Godda, Jharkhand**, that can produce **1,496 megawatts (MW)** of electricity. This entire amount of electricity is sent to Bangladesh.
- The project began in 2017 when Adani Power signed a 25-year agreement with the Bangladesh Power Development Board (BPDB).
- This agreement, called a **Power Purchase Agreement (PPA)**, marked India's first project that sends electricity across borders to another country.

What is Power Purchase Agreement (PPA)?

- A Power Purchase Agreement (PPA) is a long-term contract between a power producer and a customer that defines the conditions for the purchase of electricity.
- PPAs can be used in a variety of situations, such as when a customer wants to secure a supply of power, or when a renewable energy project might not be viable without a guarantee of price and quantity.

- PPAs can also help to reduce market price risks, finance the construction and operation of renewable energy plants, and ensure follow-up financing for existing power plants..

Third Voice of the Global South Summit (VOGSS) 2024

Why in news? Prime Minister Narendra Modi addressed the inaugural session of the third Voice of the Global South Summit (VOGSS), which took place virtually on August 17, 2024.

Key points of PM's address:

- In his remarks, PM Modi highlighted the challenging global environment marked by war-like situations, **climate change, and crises in food and energy security**.
- He emphasized that the existing **global governance structures are inadequate** to address the complexities of the 21st century.
- The summit's theme, "**An Empowered Global South for a Sustainable Future**," reflects India's commitment to advocating for the interests of developing nations.
- PM Modi urged the **Global South to unite and strengthen their collective** voice to address shared challenges.
- He also announced the **establishment of a \$2.5 million fund** to support trade promotion among these nations and an additional \$1 million fund for capacity-building in trade policy and negotiations.

Importance of India :

- India's leadership in the Global South has been prominent, especially during its G20 presidency, where it successfully advocated for the inclusion of the African Union as a permanent member of the G20.
- This summit further solidified India's role as a leading voice for developing countries on the global stage.

What is Global South?

- The term "Global South" refers to a grouping of countries, primarily in **Asia, Africa, Latin America, and Oceania**, that are generally characterized by their lower levels of

economic development, compared to the "Global North," which includes the wealthier and more developed countries in **North America, Europe, and parts of East Asia.**

- The Global South encompasses nations that face common challenges such as poverty, economic dependency, and political instability, often due to historical and ongoing exploitation by more developed nations.

The term contrasts with the Global North, which includes countries like the **United States, Canada, European nations, Japan, South Korea, and Australia**, that dominate global economic and political systems.

Explosives Act, 1884

Why in News ? On 9 Sep, 2024 night a deliberate attempt was made to derail the Kalindi Express by placing a gas cylinder on the route. The FIR has been lodged against some unidentified people under **Bhartiya Nyaya Sanhita sections 287,125 and provisions of explosive act, 1884.**

About Explosives Act, 1884:

- The Explosives Act of 1884 is a legislation enacted by the British colonial government in India, primarily aimed at regulating the manufacture, storage, possession, use, sale, import, and export of explosives. The Act was later amended several times to accommodate technological advancements and changing safety standards.
- The Explosives Act of 1884 empowers **designated authorities to conduct inspections** of premises where explosives are stored or used to ensure compliance with safety regulations. It also outlines **penalties for violations of the Act**, which may include fines and imprisonment.
- The Act applies to various types of explosives, including gunpowder, dynamite, nitroglycerin, and other similar substances.

- It lays down **safety standards and procedures to prevent accidents** and mishaps related to explosives. This includes guidelines for handling, transportation, and storage of explosives to minimise the risk of accidents.
- Over the years, the Explosives Act has been amended to address emerging challenges and technological advancements. These amendments often focus on enhancing safety standards, improving regulatory mechanisms, and updating definitions to encompass new types of explosives.

About the draft Explosives Bill, 2024:

- The government is planning to introduce the draft Explosives Bill, 2024, as a replacement for the Explosives Act, 1884, which it aims to revoke.
- According to a report in a document open for public consultation, the Department for Promotion of Industry and Internal Trade (DPIIT) **has** proposed raising fines for violation of regulations and enhancing the efficiency of licensing procedures.
- Explosives encompass **gunpowder, nitroglycerin, nitroglycol, dinitrotoluene, and picric acid**.
- According to the proposed Explosives Bill 2024, the Union government will designate the authority responsible for granting, suspending, or revoking licences, as well as carrying out other specified functions under the new legislation.
- Currently, the **Petroleum and Explosives Safety Organisation (PESO)** operating under the DPIIT is the regulatory body responsible for issuing licences for the manufacture, possession, use, sale, import, and export of any explosive material.
- The proposed bill also suggests that the licensing authority would specify in the licence the quantity of explosives that a licensee can manufacture, possess, sell, transport, import, or export, for a specified period, as prescribed.
- Under the provisions of the draft bill, if a licensee engages in manufacturing, importing, or exporting in violation of any regulations, they may face imprisonment for up to three years, a fine of Rs 1,00,000, or both. In contrast, the current Explosives Act stipulates a prison term of **three years and a fine of Rs 50,000** for such violations.
- Under the provisions of the new bill, if someone is found in possession, using, selling, or transporting any explosive in violation of the regulations, they may face

imprisonment for up to two years, a fine of Rs 50,000, or both. In the current legislation, the fine stands at Rs 3,000.

About Petroleum & Explosives Safety Organization (PESO):

- It is an organization under Department of industrial policy and promotion (DIPP), Ministry of commerce & Industry.
- It administers the usage of explosives & petrol stations in India.
- Headquarters: Nagpur, Maharashtra.

Nature journal report on the Swachh Bharat

Why in News? A study published in the Nature journal by the International Food Policy Research Institute suggests that the Swachh Bharat Mission (SBM) has led to a significant reduction in infant deaths by improving sanitation.

Key Findings of the Report:

- **Infant and Child Mortality:** The post-Swachh Bharat Mission (SBM) period showed accelerated reductions in infant and under-five mortality rates.
- **Toilet Coverage:** Districts with over 30% toilet coverage under SBM saw a 5.3 lower Infant Mortality Rate (IMR) and 6.8 lower Under-Five Mortality Rate (U5MR).
- **Improved Health Outcomes:** Higher SBM coverage corresponded with greater utilization of health programs such as antenatal care (ANC) and institutional deliveries.
- **Reduced Diarrheal Deaths:** WHO reported 300,000 fewer diarrheal deaths in 2019 compared to 2014 due to improved sanitation.
- **Child Wasting:** Non-ODF areas experienced 58% higher rates of child wasting (Bill & Melinda Gates Foundation).
- **Women's Safety:** 93% of women reported feeling safer at home with improved sanitation facilities (UNICEF).

- **Education:** Poor WASH facilities hinder student attendance and enrollment, particularly for girls.

Swachh Vayu Survekshan Award, 2024

Why in News? Recently, the union Minister of Environment, Forest and Climate Change presented the Swachh Vayu Sarvekshan award 2024 on the occasion of International Day of Clean Air for Blue Skies.

About Swachh Vayu Survekshan Award:

- It is an initiative by the Ministry of Environment, Forest and Climate Change (MoEF&CC) to rank cities on the basis of implementation of activities approved under the city action plan and air quality in 130 NCAP cities.
- In September 2022, the MoEF&CC released guidelines on 'Swachh Vayu Sarvekshan-Ranking of Cities' under the **National Clean Air Programme (NCAP)**.
- The aim of launching Swachh Vayu Sarvekshan is to give a ranking to **130 cities** in the country for implementing **City Action Plans** prepared as part of NCAP for reducing air pollution up to **40% by 2025-26**.

Objectives:

- To create awareness among all sections of the society
- Inform citizens about the health impacts related due to exposure
- Comparing air quality conditions at different locations/cities
- To achieve the goal of NCAP "Clean air for all".
- All 130 cities covered under NCAP are assessed based on information submitted under ranking framework by cities/ULBs on PRANA portal (dashboard to capture progress under NCAP programme).

Swachh Vayu Survekshan Awards 2024 were presented to the best performing NCAP cities under

Category-1 (population over 10 Lakhs) to Surat, Jabalpur, and Agra;

Category-2 (population between 3 and 10 Lakhs) to Firozabad, Amravati, and Jhansi; and

Category-3 (population under 3 Lakhs) to Raebareli, Nalgonda, and Nalagarh.

Golden city' club/Swabhav Swachhata Sanskaar Swachhata (4S)

Why in News ? The government will set up a 'golden city club' to give more states a change to rank top among those with the cleanest cities.

- Indore won the title of India's cleanest city for the seventh consecutive year in 2023.
- The government also aims to clean 200,000 difficult and dirty spots during the 4S campaign, the theme of Swachh Bharat Mission this year.

About Swabhav Swachhata Sanskaar Swachhata (4S):

- In a significant move for the Swachh Bharat Mission (SBM), the government has announced a focused campaign for 2024, aiming to tackle around 200,000 of the most challenging and dirty spots across India.
- This new initiative, dubbed the "campaign", will run from September 17 to October 2, 2024, and marks the mission's 10th anniversary.
- this year's campaign is a major step forward, moving from the previous focus on 'Cleanliness is Service' to 'Cleanliness as Swabhav & Sanskaar.'
- The campaign will concentrate on **Cleanliness Target Units (CTUs)**, which include difficult and dirty spots like **tourist locations, public buildings, commercial areas, and community toilets.**
- Central Public Sector Units (PSUs), industry partners, and non-governmental organizations (NGOs) are being encouraged to adopt and clean these CTUs.
- The aim is to enhance public spaces through collaborative cleanliness drives and community involvement.
- there are approximately **2,300 dumpsites** in urban areas, holding around 22 crore metric tons of waste.

- So far, **427 dumpsites with 9 crore metric tons of waste** have been remediated, reclaiming 4,500 acres of land. The mission is now focusing on improving waste collection and processing methods.
- Over 93% of women now have access to toilets, and the mission has contributed to a reduction in infant mortality by about three lakh in the past five years.

The 2024 campaign is built around three main pillars:

1. **Swachhata Ki Bhaagidari:** Encouraging public participation and raising awareness about cleanliness.
2. **Sampoorna Swachhata:** Conducting large-scale cleanliness drives targeting the most challenging and dirty areas.
3. **SafaiMitra Suraksha Shivir:** Providing safety and welfare services for sanitation workers, including health camps and recognition programs.
 - The campaign embraces a 'Whole of Society' approach, involving citizens, businesses, NGOs, and local bodies. It also adopts a ' , with participation from all States, Union Territories, and Central Ministries.
 - The campaign will culminate on October 2, the birth anniversary of Mahatma Gandhi, marking a decade of transformative efforts under the Swachh Bharat Mission.

OpenAI's project Strawberry/OpenAI o1

Why in News? The OpenAI's project Strawberry, it is now officially called OpenAI o1. On September 12, the company fully unveiled the new AI model that thinks before responding. According to OpenAI, the model can reason through complex tasks and solve harder problems than previous models in science, coding, and math.

While it is the first of this series in ChatGPT, OpenAI expects to add regular updates and improvements. But all of this comes at a higher price.

What is it and how does it work?

- OpenAI's o1 model marks a significant stride. According to the company, the model is a progressive step toward achieving human-like AI.

- It also demonstrates tangible improvements in key areas, such as generating code and tackling complex, multistep challenges with greater proficiency than its predecessors.
- OpenAI, in the release, stated that it has trained these models to spend more time thinking through problems before it responds, much like a human would.

Through training, it learned to refine their thinking process, try different strategies, and recognise their mistakes. Adding on, it says that the model excels in math and coding. In fact, in the upcoming update, the OpenAI o1 performs similarly to PhD students in challenging benchmark tasks in physics, chemistry, and biology.

Port Blair as “Sri Vijaya Puram

Why in News? To free the nation from colonial imprints, the central government has decided to rename Port Blair the capital of the Union Territory of Andaman and Nicobar Islands as “Sri Vijaya Puram”.

It is also the place that hosted the first unfurling of our Tiranga by Netaji Subhash Chandra Bose Ji and also the cellular jail in which Veer Savarkar Ji and other freedom fighters struggled for an independent nation.”

Key facts about Port Blair:

- Port Blair, the capital city of the Andaman and Nicobar Islands, has a rich and complex history shaped by colonialism, indigenous cultures, and its strategic location in the Indian Ocean. Here's an overview of its historical development:

1. Early History:

- The Andaman and Nicobar Islands, including the area around present-day Port Blair, were inhabited by indigenous tribes for thousands of years before the arrival of outsiders. These indigenous groups, such as the Great Andamanese, Onges, and Jarwas, had little contact with the outside world.
- Due to its isolation and the hostile environment, the Andaman Islands were largely avoided by early explorers and colonial powers.

2. Colonial Period and Penal Settlement:

1789 - First British Settlement: The British first attempted to establish a settlement in the Andaman Islands in 1789, when Lieutenant Archibald Blair of the British East India

Company established a penal colony at Chatham Island, close to present-day Port Blair. This settlement was named Port Cornwallis, after Admiral William Cornwallis, but it was abandoned in 1796 due to unhealthy conditions and diseases like malaria.

1857 - Establishment of Penal Colony at Port Blair: After the Indian Rebellion of 1857 (Sepoy Mutiny), the British sought a secure location to imprison Indian revolutionaries. In 1858, a penal settlement was re-established on Ross Island, near Port Blair. The settlement expanded to accommodate thousands of prisoners, including many freedom fighters and political prisoners.

Cellular Jail (1906): The construction of the Cellular Jail, also known as "Kala Pani" (Black Water), began in 1896 and was completed in 1906.

- It became a notorious prison used to incarcerate political prisoners from India's independence movement. Many prominent freedom fighters, such as Veer Savarkar, were imprisoned here.
- The jail's name and reputation for harsh conditions symbolize the brutal repression faced by Indian freedom fighters during British rule.

3. Japanese Occupation (1942-1945):

- During World War II, the Andaman and Nicobar Islands were briefly occupied by Japanese forces from 1942 to 1945. They ousted the British and established control over the islands.
- **Netaji Subhas Chandra Bose**, leader of the **Indian National Army (INA)**, visited Port Blair in 1943 and hoisted the Indian flag, declaring the islands the first territory freed from British control, although Japan maintained military dominance.
- Japanese occupation was marked by harsh conditions for the local population, including torture and forced labor. After the war ended in 1945, the islands returned to British control.

4. Post-Independence Era (1947-Present):

- After India gained independence in 1947, the Andaman and Nicobar Islands, including Port Blair, became part of the Indian Union.
- Port Blair has since grown as the administrative center of the union territory, and its strategic location in the Indian Ocean has made it important for India's defense. The islands host naval bases and other military installations.

5. Modern Port Blair:

- Today, Port Blair is a bustling city, known for its history, scenic beauty, and importance as a gateway to the islands' tourism industry. The Cellular Jail has been converted into a national memorial to honor the sacrifices of India's freedom fighters, drawing tourists and historians alike.
- The city is also a hub for exploring the natural beauty of the Andaman and Nicobar Islands, including coral reefs, beaches, and forests.

Historical Significance of Port Blair:

- Colonial and Penal History: Port Blair's significance as a penal colony where Indian freedom fighters were imprisoned highlights the darker chapters of British colonial rule.
- Strategic Importance: Its strategic location in the Indian Ocean made it a military and trade outpost for colonial powers and continues to make it important for India's defense.

Key Sites in Port Blair:

Cellular Jail (Kala Pani): A symbol of India's freedom struggle.

Ross Island: Once the administrative center of the British in the Andamans.

Chatham Island: The site of the first British settlement.

Japanese Bunkers: Remnants of the World War II Japanese occupation.

Montreal Protocol : Advancing Climate Action

Why in News? On World Ozone Day 2024, the Ministry of Environment, Forest and Climate Change (MoEFCC), organized a dialogue on the theme of "Montreal Protocol : Advancing Climate Action."

- The World Ozone Day is celebrated on September 16.

Theme of Ozone Day:

"Montreal Protocol : Advancing Climate Action" in which reflects the Montreal Protocol's crucial role in both protecting the ozone layer and driving broader climate action initiatives globally.

Steps taken :

Vienna Convention for the Protection of the Ozone Layer (1985):

Objective: To create a framework for international cooperation in addressing the depletion of the ozone layer.

- Adoption: Signed in 1985 and entered into force in 1988.

Significance: It was the first global agreement to recognize the need to protect the ozone layer. The Convention does not contain legally binding reduction goals but provides a framework for research, monitoring, and international collaboration.

Montreal Protocol on Substances that Deplete the Ozone Layer (1987):

Objective: To phase out the production and consumption of substances responsible for ozone depletion, such as chlorofluorocarbons (CFCs), halons, and other ODS.

Adoption: Signed in 1987 and entered into force in 1989. It has been amended multiple times (notably in 1990, 1992, 1997, 1999, and 2016).

Legally Binding: The Protocol sets specific reduction targets for ODS, which countries are required to meet.

Kigali Amendment (2016):

Phase-Down of HFCs: While hydrofluorocarbons (HFCs) don't directly deplete the ozone layer, they are potent greenhouse gases.

The Kigali Amendment to the Montreal Protocol mandates a global reduction in HFCs, which will mitigate climate change and protect both the ozone layer and global temperatures.

Climate Co-Benefits: By phasing down HFCs, countries are addressing climate change. HFC reductions are expected to prevent up to 0.4°C of global warming by 2100.

Operation Sadbhav /Typhoon Yagi

Why in News? India has launched Operation Sadbhav to provide humanitarian assistance to Southeast Asian countries affected by Typhoon Yagi, including **Vietnam, Laos and Myanmar**.

About Typhoon Yagi:

- It began as a tropical storm in the western Philippine Sea on September 1, 2024.

- Yagi, which means goat or the constellation of Capricornus in Japanese.
- It made landfall in the Philippines but intensified again due to warm waters in the South China Sea, reaching Category 3 winds by September 4.

Yagi further strengthened to a Category 5 typhoon with peak winds of 260 kmph, making it one of only four **Category 5 storms recorded in the South China Sea**.

Other Major Cyclones in Asia:

Cyclone Amphan (2020):

Formation: Formed in the Bay of Bengal in May 2020.

Impact: One of the most powerful cyclones to hit the region in recent years, Amphan caused widespread destruction in **India and Bangladesh**. It brought heavy rains, high winds, and significant flooding, resulting in extensive damage to infrastructure and agriculture.

Cyclone Idai (2019):

Formation: Developed in the Indian Ocean and struck Mozambique in March 2019.

Impact: Idai was one of the most devastating cyclones to hit southern Africa in recent history. It caused catastrophic flooding, displaced thousands of people, and resulted in significant loss of life and property.

Cyclone Hudhud (2014):

Formation: Originated in the Bay of Bengal in October 2014.

Impact: Hudhud struck the eastern coast of India, particularly affecting Andhra Pradesh and Odisha. It caused extensive damage, with strong winds and heavy rain leading to flooding and infrastructure damage.

Cyclone Nargis (2008):

Formation: Formed in the Bay of Bengal and made landfall in Myanmar in May 2008.

Impact: Nargis was one of the deadliest cyclones to hit Myanmar, causing widespread devastation. The cyclone resulted in thousands of deaths and significant damage to infrastructure and agricultural land.

Typhoon Haiyan (Yolanda) (2013):

Formation: Developed in the Western Pacific Ocean in November 2013.

What is soft landing & hard Landing?

Why in News? American consumers and home buyers, business people and political leaders have been waiting for months for what the Federal Reserve is poised to announce this week: That it's cutting its key interest rate from a two-decade peak.

Will the Federal Reserve cut interest rates fast enough to deliver a 'soft landing'?

What is soft Landingg?

When the Federal Reserve is concerned about inflation, it raises interest rates to slow the pace of economic growth. If the Fed raises interest rates a lot, it may cause a recession – known as a hard landing. However, if the Fed can raise interest rates just enough to slow the economy and reduce inflation without causing a recession, it has achieved what is known as a soft landing.

1. Soft Landing:

- A soft landing occurs when an economy slows down after a period of rapid growth or high inflation without falling into a recession.
- Central banks, like the Reserve Bank of India (RBI) or the Federal Reserve (Fed), raise interest rates or tighten monetary policy to control inflation or prevent overheating.
- In a soft landing, economic growth moderates, inflation stabilizes, but unemployment remains relatively low, and output continues growing, albeit at a slower pace.
- It's a delicate balancing act where policy adjustments curb inflation and excesses without significant negative impacts on employment or GDP.

Example of Soft Landing:

- The U.S. economy in the mid-1990s is often cited as an example, when the Federal Reserve increased interest rates to control inflation, yet the economy continued to grow without entering a recession.

2. Hard Landing:

- A hard landing refers to a more abrupt and severe economic slowdown, often leading to a recession.

- This occurs when central banks tighten monetary policy too aggressively, causing a sharp contraction in economic activity.
- A hard landing is characterized by falling GDP, higher unemployment, declining consumer demand, and often a recession.
- It can happen if the measures to control inflation or curb excessive growth are too strong or mistimed, leading to a sudden halt in economic momentum.

Example of Hard Landing:

The Global Financial Crisis of 2008 saw many economies experience a hard landing due to the collapse of financial markets, leading to a severe economic recession.

Article 172(2)(b) of the Indian Constitution

Why in News? The Delhi government wants to early assembly election.

What does the law say ?

- The **Section 15(2) of the Representation of the People Act, 1950** says that the election can not be notified less than 6 months before the end of term of assembly unless it is dissolved before it completes its term.
- **Article 172(2)(b) of the Indian Constitution** pertains to the tenure of the members of the State Legislative Assemblies and relates to provisions regarding their extension in special circumstances.

Article 172(2)(b) (in context of Article 172):

Article 172(1) specifies that the term of a State Legislative Assembly is five years from the date of its first meeting, unless dissolved earlier.

Article 172(2) provides for an extension of this five-year term in exceptional situations, specifically:

Clause (b) allows the term to be extended by Parliament for one year at a time during a national emergency proclaimed under Article 352 of the Constitution. This extension can continue while the emergency is in effect, but it cannot exceed six months after the emergency has ended.

Key points of Article 172(2)(b):

Extension of Legislative Assembly's tenure: The normal five-year term of a Legislative Assembly can be extended beyond five years during a national emergency.

Limitations: Each extension can only be for one year at a time.

Post-emergency limit: Once the national emergency is over, the extension cannot exceed six months.

Precision Farming

Why in News? The Indian government plans to invest Rs 6,000 crore in promoting precision farming. This includes smart technologies like AI, IoT, and drones to optimize agricultural inputs and increase productivity while reducing environmental impact.

About Precision farming:

- Precision farming (also known as precision agriculture) is a modern agricultural technique that uses advanced technology and data-driven approaches to optimize crop production and farming practices.
- The goal of precision farming is to increase efficiency, reduce waste, and improve crop yields by making precise decisions based on the specific needs of different areas within a farm.

Key Features of Precision Farming:

Data Collection:

- Precision farming relies on gathering real-time data from various sources like satellites, sensors, drones, GPS systems, and field monitors.
- This data includes soil conditions, moisture levels, crop health, and weather patterns, providing detailed insights into the farm's environment.

Site-Specific Management:

- Farmers can manage crops at a micro level rather than applying the same practices uniformly across large fields.

- This includes variable rate applications of inputs like water, fertilizers, pesticides, and seeds based on the specific requirements of different areas.

Use of Technology:

- GPS-guided equipment helps in precision planting, tilling, and harvesting.
- Remote sensing and drones are used to monitor crop health, detect diseases, and assess plant growth.
- IoT sensors can be placed in fields to monitor soil conditions, water usage, and plant needs in real-time.

Decision Support Systems:

- Data analysis and machine learning algorithms are used to predict outcomes, manage risks, and optimize farming strategies.
- Farmers can make informed decisions about planting times, irrigation schedules, pest control, and harvesting.

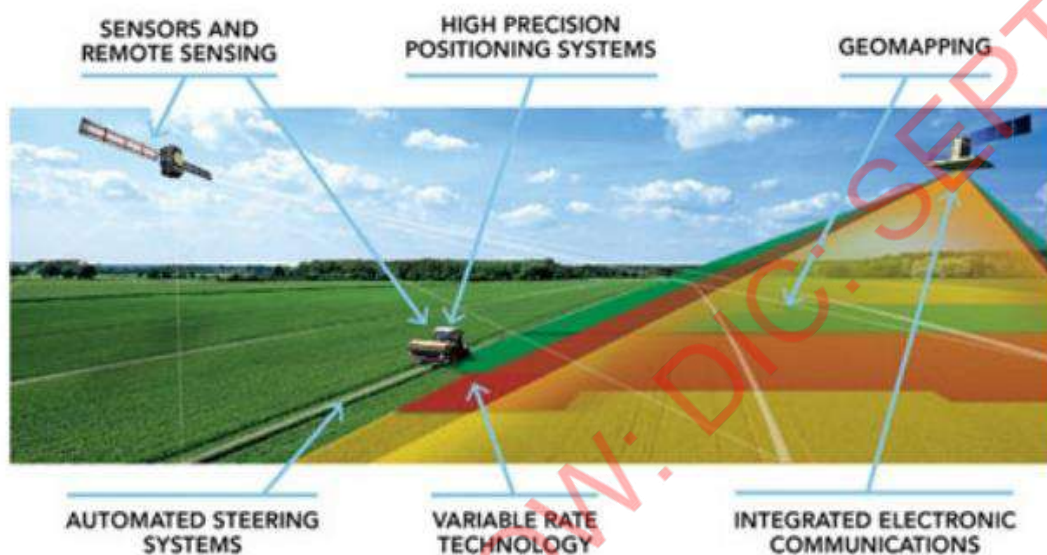
Benefits of Precision Farming:

- **Increased productivity:** Precision farming helps in optimizing the use of resources, leading to higher crop yields.
- **Reduced input costs:** By applying the exact amount of fertilizers, water, and pesticides only where needed, input costs are reduced.
- **Sustainability:** Precision farming promotes the efficient use of natural resources, reducing environmental impact and encouraging sustainable agricultural practices.
- **Minimized environmental footprint:** Reduced use of chemicals and water helps in lowering pollution and conserving natural resources.
- **Real-time monitoring:** Continuous monitoring of crops and soil allows early detection of problems like pest infestations or nutrient deficiencies.

Steps taken:

- The National Mission on Sustainable Agriculture (NMSA) and Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), which focus on water-use efficiency and soil health monitoring.
- The government has also promoted the use of drones, soil health cards, and satellite-based monitoring.

- The government has also announced a **Digital Public Infrastructure (DPI)** for agriculture that will provide farmers with access to technology and information.
- PF technology is being developed and disseminated through the 22 Precision Farming Development Centres in the country.
- The **Agriculture Infrastructure Fund (AIF)**, launched during Covid-19, has provisions for financing infrastructure projects for smart and precision agriculture.



Relative Economic Performance of Indian States: Report -1960-61 to 2023-24

Why in News ? It was recently presented by Economic Advisory Council to the Prime Minister(EAC-PM):

Key facts about the Performance Report:

- The development of eastern part of the country remains a concern.
- The maritime states have clearly outperformed other states, with the exception of West Bengal.
- Although Bihar's relative position has stabilized in the last two decades, it remains significantly behind other states and requires much faster growth to catch up.
- Conversely, Odisha, traditionally a laggard, has shown a marked improvement in recent years.

- **"West Bengal**, which held the third-largest share of national **GDP at 10.5 per cent** in **1960-61**, **now accounts for only 5.6 per cent** in 2023-24. It has seen a consistent decline throughout this period.
- West Bengal's per capita income was above the national average in **1960-61 at 127.5 per cent**, but its growth failed to keep pace with national trends. As a result, its relative per capita income declined to **83.7 per cent in 2023-24**, falling below that of even traditionally laggard states like **Rajasthan and Odisha**.
- The western and southern regions of India have performed notably better than other parts of the country from **1960-61 to 2023-24**.
- Southern states have significantly outpaced others after economic liberalization in 1991, with the five states -- **Karnataka, Andhra Pradesh, Telangana, Kerala and Tamil Nadu** -- collectively accounting for approximately 30 per cent of India's GDP in 2023-24.
- **"Before 1991, southern states did not show** exceptional performance. However, since the economic liberalization of 1991, southern states have emerged as the **leading performers**.
- In addition, per capita income of all southern states became higher than the **national average after 1991**.
- The paper also noted that in the north, states **like Delhi and Haryana** also stood out. "Delhi has one of the highest per capita incomes throughout the study period."
- As per the paper, **Maharashtra, West Bengal and Tamil Nadu** were home to **India's 3 largest industrial clusters in the 1960s**.
- "Their fortunes subsequently diverged- Maharashtra showed broadly steady performance throughout, West Bengal's share has been in continuous decline. After a decline, Tamil Nadu picked up post-1991.
- All data used are in current prices and the analysis spans 1960-61 to 2023- 24, providing insights into how individual states have performed in response to changes in national and state-specific.

What's White Paper?

Why in News ? The Delhi BJP president has recently demanded White Paper in scrapped excise policy>

What's White Paper?

In contrast, a White Paper provides comprehensive information, analysis, and proposals on a specific topic or issue. It aims to inform decision-making processes, propose solutions, or present recommendations for action. It's often produced by governments, organizations, or experts to shape the policy.

- A White Paper serves as a crucial tool for informing policymakers, stakeholders, and the public about the government's policies, initiatives, and their intended impact on the economy. It offers a detailed assessment of economic indicators, reforms, and their implications for various sectors.

Characteristics of White Papers:

Comprehensive Information: Offers detailed and comprehensive information on a particular topic, issue, or policy.

Objective Tone: Maintains an objective and neutral tone, presenting information and analysis without strong opinions or biases.

Policy Recommendations: May include proposals or recommendations for policy changes, initiatives, or reforms based on thorough analysis and research.

Authoritative Sources: Often cites authoritative sources, research findings, and expert opinions to support arguments and recommendations.

Educational and Informative: Aims to educate stakeholders, policymakers, and the public about complex issues, providing insights and analysis to facilitate informed decision-making.

What's Black Paper?

A Black Paper presents a critical or dissenting viewpoint on a particular topic, issue, or policy. It challenges prevailing narratives, policies, or viewpoints through critical analysis, addressing controversial subjects, providing evidence, and proposing alternative approaches.

Characteristics of Black Papers:

Critical Analysis: Involves critical analysis and evaluation of existing policies, practices, or viewpoints.

Oppositional Stance: Expresses opposition or dissent, challenging prevailing narratives or perspectives.

Controversial Topics: Often addresses contentious or controversial topics, offering alternative viewpoints or interpretations.

Evidence-Based Arguments: Relies on evidence, data, and logical arguments to support critical assessment and perspective.

Advocacy for Change: May advocate for policy changes, reforms, or alternative approaches to address perceived deficiencies or injustices.

- The U.S. economy in the mid-1990s is often cited as an example, when the Federal Reserve increased interest rates to control inflation, yet the economy continued to grow without entering a recession.

Hard Landing:

- A hard landing refers to a more abrupt and severe economic slowdown, often leading to a recession.
- This occurs when central banks tighten monetary policy too aggressively, causing a sharp contraction in economic activity.
- A hard landing is characterized by falling GDP, higher unemployment, declining consumer demand, and often a recession.
- It can happen if the measures to control inflation or curb excessive growth are too strong or mistimed, leading to a sudden halt in economic momentum.

Example of Hard Landing:

The Global Financial Crisis of 2008 saw many economies experience a hard landing due to the collapse of financial markets, leading to a severe economic recession.

COP29 : Climate Action Fund

Why in News? COP29 host Azerbaijan has called on nations to commit to a six-fold increase in global energy storage capacity from 2022 levels, aiming for 1,500 gigawatts by 2030.

- This proposal was outlined in a letter by President-Designate Mukhtar Babayev to all participating countries ahead of the UN climate conference in Baku in November.

- Babayev also suggested the creation of a climate action fund which would be supported through voluntary contributions from fossil fuel-producing countries and companies.
- The COP29 Presidency said that these pledges and other commitments packaged as a non-negotiated "action agenda" will supplement the formal negotiated agenda at this year's UN climate summit.
- These non-binding pledges are distinct from the formal agreements negotiated under the United Nations Framework Convention on Climate Change (UNFCCC), which require extensive consensus.

At COP29 in Baku this November, countries are required to reach an agreement on the New Collective Quantified Goal (NCQG) -- the new amount developed nations must mobilise every year starting in 2025 to support climate action in developing countries.

About the New Collective Quantified Goal (NCQG):

- It is a key element of the **Paris Agreement**, designed to set a new financial target to support developing countries in their climate **actions post-2025**.
- The NCQG seeks to fill persistent gaps in climate finance, building on the **\$100 billion target set in 2009** and aiming to provide a more realistic and ambitious financial framework.
- The NCQG aims to foster global partnerships and enhance trust and cooperation among nations, which is crucial for successfully implementing the Paris Agreement.

About the Global Climate Action Agenda (GCAA):

- It is also known as the Marrakech Partnership for Global Climate Action, was established at COP22 (the 22nd Conference of the Parties to the UNFCCC) in Marrakech, 2016.
- The Marrakech Partnership aims to enhance collaboration between governments and non-state actors, including businesses, cities, regions, investors, and civil society, to support the implementation of the Paris Agreement and to accelerate climate action.

Key Objectives of the Marrakech Partnership:

Scaling Up Climate Action: The primary goal is to boost efforts to achieve the global climate goals, particularly the Paris Agreement targets, which include limiting global warming to well below 2°C and striving for 1.5°C.

Bridging Government and Non-Government Action: The Marrakech Partnership brings together diverse stakeholders to work alongside governments in implementing climate solutions. It ensures that non-state actors play a crucial role in achieving climate goals.

Mitigation, Adaptation, and Resilience: The initiative focuses on enhancing efforts in both mitigation (reducing greenhouse gas emissions) and adaptation (helping communities and ecosystems cope with the effects of climate change), while promoting resilience in the face of climate impacts.

Sectoral and Thematic Focus: The partnership is structured around key areas like:

- Energy
- Industry
- Water
- Agriculture and food systems
- Oceans and coastal zones
- Human settlements
- Transport
- Finance

Tracking and Reporting: The Marrakech Partnership helps track progress by non-state actors toward climate goals, reporting their contributions through platforms such as the NAZCA (Non-State Actor Zone for Climate Action) portal. This transparency helps hold actors accountable and showcase effective initiatives.

Catalyzing Finance: It also promotes the mobilization of climate finance, particularly to support vulnerable and developing countries in achieving their climate goals.

What is Urban Farming?

Why in News ? The term has been frequently used in news papers.

Urban farming is the practice of cultivating plants and raising animals within urban areas. It's a sustainable approach to food production that can provide fresh, local produce, reduce food miles, and create green spaces in cities.

In India, urban farming has gained significant momentum in recent years due to several factors:

Rapid urbanization: With a growing population and increasing urbanization, there's a need for sustainable food sources within cities.

Food security: Urban farming can help address food security concerns by reducing reliance on long-distance transportation of produce.

Environmental benefits: It can contribute to environmental sustainability by reducing carbon emissions, conserving water, and improving air quality.

Community engagement: Urban farming projects can foster community spirit and provide opportunities for people to connect with nature and each other.

Examples of urban farming in India:

Rooftop gardens: Many individuals and communities are utilizing rooftops to grow vegetables, herbs, and flowers.

Community gardens: Shared spaces within urban areas are transformed into community gardens, where residents can cultivate crops together.

Vertical farming: Innovative techniques like vertical farming are being explored to maximize production in limited spaces.

Hydroponics and aquaponics: These methods use nutrient-rich water and fish waste to grow plants, respectively, offering efficient and sustainable options.

****A recent example of urban farming gaining prominence in India is the "Grow Your Own Food" initiative launched by the government.** This campaign encourages citizens to cultivate their own food, especially during the COVID-19 pandemic, to ensure food security and promote self-sufficiency.

Recent Examples in India:

Mumbai's Rooftop Farms: Several buildings in Mumbai have adopted rooftop farming initiatives. For instance, the **Grow Your Own Food movement** encourages residents to grow their vegetables on rooftops. The initiative is spreading across other urban areas, offering an alternative to traditional markets and helping to combat food inflation.

Delhi's Organic Terrace Gardening: In Delhi, individuals and housing societies have started terrace gardening to grow organic vegetables. NGOs and government initiatives like Mission

Organic Development support these efforts by providing training and seeds to urban dwellers.

Kerala's "Haritha Nagaram" Project: Kerala launched a unique urban farming project, "Haritha Nagaram" (Green City), encouraging people to cultivate vegetables in urban spaces. The state government provided subsidies and guidance for hydroponics and kitchen gardening in urban households.

Hyderabad's Vertical Farming Projects: Hyderabad has seen innovations like vertical farming, where crops are grown in stacked layers in a controlled environment. This method saves space and water and is ideal for high-density urban areas.

Urban farming in India is a promising solution to the challenges of food security, environmental sustainability, and community engagement. As cities continue to grow, this practice is likely to play an increasingly important role in shaping the future of urban living.

Project 200

Why in News ? A Bengaluru-based space-sector start-up has recently unveiled an ultra low earth orbit satellite with the capability to operate at an altitude of 200 km with the help of propulsion systems developed in-house.

The **Project 200, the satellite developed by Bellatrix Aerospace**, was unveiled by Indian National Space Promotion and Authorization Centre (IN-SPACe) Chairman Pawan Kumar Goenka.

- Usually, Low Earth Orbit satellites are deployed at an altitude of 450 km to minimize the impact of atmospheric interference. Placing satellites in lower orbits could send them hurtling towards the earth due to atmospheric drag.
- It would allow satellites to operate from this **(200 km) orbit** for years instead of deorbiting within a few days due to drag.
- Bellatrix has been working on propulsion technology for the past four years to keep satellites in 200 km orbits where the performance of the spacecraft increases significantly.

- The company claimed that, at a 200 km altitude, a satellite's capability would improve significantly as the communication latency is reduced by half, image resolution improved by three times. The cost of the satellite is also less when compared to spacecraft placed in 450 km orbits.

About Low Earth Orbit (LEO) Satellites:

Altitude: Typically orbit between 160 and 2,000 kilometers above the Earth's surface.

Characteristics:

- Lower latency due to shorter signal travel distances.
- Higher bandwidth for data transmission.
- More frequent passes over a specific location.
- Require more frequent orbital adjustments due to atmospheric drag.

Applications:

- Global positioning systems (GPS):
- Remote sensing (Earth observation, weather monitoring)
- Communication (mobile phone networks, internet connectivity)
- Scientific research

About High Earth Orbit (HEO) Satellites:

Altitude: Orbit at altitudes above 35,786 kilometers, including geosynchronous orbit (GEO) and geostationary orbit (GSO).

Characteristics:

- Longer orbital periods, often matching the Earth's rotation.
- Stationary position relative to the Earth's surface (for GEO/GSO satellites).
- Higher signal strength due to greater distance from the Earth's surface.
- Lower bandwidth compared to LEO satellites.

Applications:

- Communication (satellite TV, radio broadcasting)
- Weather forecasting
- Navigation
- Scientific research
-

About The Indian National Space Promotion and Authorization Centre (IN-SPACe) :

It is a government agency under the Department of Space in India. It was established in 2020 with the aim of promoting, facilitating, and regulating the space activities of private entities in India.

Key functions of IN-SPACe include:

Granting licenses: IN-SPACe grants licenses to private entities for various space activities, such as launching satellites, providing space-based services, and conducting space research.

Providing guidance: The agency provides guidance and support to private entities in navigating the regulatory framework and obtaining necessary approvals.

Promoting private space industry: IN-SPACe actively promotes the growth and development of the private space industry in India, fostering innovation and entrepreneurship.

Facilitating collaboration: It facilitates collaboration between private entities and government organizations involved in space activities.

Sustainable Aviation Fuels (SAF)

Why in News ? India and Brazil have recently decided to collaborate on production and use of Sustainable Aviation Fuels (SAF).

About Sustainable Aviation Fuels (SAF):

Sustainable Aviation Fuels (SAF) are biofuels designed to reduce the environmental impact of aviation by offering a low-carbon alternative to conventional fossil-based jet fuels.

1. What are Sustainable Aviation Fuels (SAF)?

- SAFs are renewable or waste-derived aviation fuels that can significantly reduce the carbon footprint of air travel. They are produced from a variety of feedstocks, such as:

Biomass: e.g., plant oils, agricultural residues, forest waste.

Waste materials: e.g., used cooking oil, municipal solid waste, and industrial waste gases.

Non-biomass sources: e.g., carbon capture from air combined with hydrogen (Power-to-Liquid technology).

2. How is SAF Produced?

SAFs are produced through different pathways, including:

Hydroprocessed Esters and Fatty Acids (HEFA): The most commercially available pathway, using oils and fats.

Fischer-Tropsch Process: Converts solid biomass or waste into liquid fuel.

Alcohol-to-Jet (AtJ): Converts alcohol (ethanol, butanol) into jet fuel.

Power-to-Liquid (PtL): Synthesizes fuel from captured carbon dioxide and hydrogen.

3. Environmental Benefits:

Carbon Reduction: SAF can reduce life-cycle CO₂ emissions by up to 80% compared to conventional jet fuel, depending on the feedstock and production process.

Lower Particulate Matter and SO_x Emissions: SAF also emits less particulate matter and sulfur oxides, improving air quality around airports.

Sustainability: SAF production promotes the use of waste materials and avoids competition with food crops, unlike some first-generation biofuels.

Labour Force Survey Annual Report-2024 : What is Worker Population Ratio (WPR)?

Why in News? Unemployment rate for persons aged 15 years and above has remained unchanged at **3.2 per cent in July 2023 to June 2024**, according to the labour force survey annual report released recently.

Key points of the report:

- The report stated that while the UR for male has shown a marginal decline from 3.3 per cent during July 2022 June 2023 to 3.2 per per cent during July 2023 June 2024, among female it has increased from 2.9 per cent to **3.2 per cent during the same time span.**
- Labour Force Participation Rate (LFPR) in usual status for persons of age 15 years and above was 60.1 per cent during July 2023 - June 2024 higher than **57.9 per cent in the previous year.**
- The same for male and female was **78.8 per cent and 41.7 per cent**, respectively.
- LFPR is defined as the percentage of persons in labour force (i.e. working or seeking or available for work) in the population.
- **LFPR for female of age 15 years** above in usual status has increased from 37.0 per cent during July 2022 June 2023 to **41.7 per cent during July 2023 June 2024.**

- For male of the same age group LFPR in usual status increased from 78.5 per cent to 78.8 per cent during the same time span.
- **Worker Population Ratio (WPR)** in usual status was **58.2 per cent during July 2023** June 2024 up from **56.0 per cent in the year ago**. The same for male and female was 76.3 per cent and **40.3 per cent respectively**.
- The WPR in usual status among female of age 15 years and above has shown an increase from 35.9 per cent during **July 2022 June 2023** to **40.3 per cent during July 2023 June 2024**.

About Worker Population Ratio (WPR):

- The **Worker Population Ratio (WPR)** is the proportion of the working population (employed individuals) to the total population of a specific age group, often those aged 15 and above.

About Labour Force Participation Rate (LFPR):

- The **Labour Force Participation Rate (LFPR)** measures the proportion of the working-age population that is either employed or actively seeking employment (the labour force).

About Unemployment Rate:

- The **Unemployment Rate** represents the percentage of people in the labour force who are unemployed but are actively seeking employment.

Pact for the Future : United Nations

Why in News ? The World leaders recently adopted a Pact for the Future that includes a Global Digital Compact and a Declaration on Future Generations. The Pact covers a broad range of issues including peace and security, sustainable development, climate change, digital cooperation, human rights, gender, youth and future generations, and the transformation of global governance.

Significance of the pact:

- The Pact for the Future, the Global Digital Compact, and the Declaration on Future Generations will open the door to new opportunities and untapped possibilities.

- The Pact would lay the foundations for a sustainable, just and peaceful global order for all peoples and nations.

Key Pacts:

In the area of peace and security:

- The most progressive and concrete commitment to Security Council reform since the 1960s, with plans to improve the **effectiveness and representativeness of the Council**, including by redressing the historical under-representation of Africa as a priority.
- The first multilateral recommitment to **nuclear disarmament in more than a decade**, with a clear commitment to the goal of totally eliminating nuclear weapons.
- Agreement to strengthen international frameworks that govern **outer space, including a clear commitment to prevent an arms race in outer space** and the need to ensure all countries can benefit from the safe and sustainable exploration of outer space.
- Steps to avoid the **weaponization and misuse of new technologies**, such as **lethal autonomous weapons**, and **affirmation** that the laws of war should apply to many of these new technologies.

On sustainable development, climate and financing for development:

The entire Pact is designed to turbo-charge implementation of the Sustainable Development Goals.

- The most detailed agreement ever at the United Nations on the need for reform of the international financial architecture so that it better represents and serves developing countries, including:
- Giving **developing countries a greater say** in how decisions are taken at international financial institutions;
- Mobilizing more financing from multilateral development banks to help developing countries meet their development needs;
- Reviewing the sovereign debt architecture to ensure that developing countries can borrow sustainably to invest in their future, with the **IMF, UN, G20 and other key players working together**;
- Strengthening the **global financial safety net to protect the poorest** in the event of financial and economic shocks, through concrete actions by the IMF and Member States;

- On climate change, confirmation of the need to keep global temperature rise to **1.5 °C above pre-industrial levels** and to transition away from fossil fuels in energy systems to achieve **net zero emissions by 2050**.

The Global Digital Compact:

The Global Digital Compact, annexed to the Pact, is the first comprehensive global framework for digital cooperation and AI governance.

- At the heart of the Compact is a commitment to design, use and govern technology for the benefit of all.

This **includes commitments by world leaders to:**

- Connect all people, schools and hospitals to the Internet;
- Anchor digital cooperation in human rights and international law;
- Make the online space safe for all, especially children, through actions by governments, tech companies and social media;
- Govern Artificial Intelligence, with a roadmap that includes an International **Scientific Panel and a Global Policy Dialogue** on AI;
- Make data more open and accessible, with agreements on open-source data, models, and standards;
- This is also the **first global commitment to data governance, placing it on the UN agenda and requiring countries to take concrete actions by 2030**.

Youth and future generations: Declaration on Future Generations:

- The first ever Declaration on Future Generations, with concrete steps to take account of future generations in our decision-making, including a possible envoy for future generations.
- A commitment to more meaningful opportunities for young people to participate in the decisions that shape their **lives, especially at the global level**.

Human rights and gender:

- A strengthening of our work on human rights, gender equality and the empowerment of women.
- A clear call on the need to protect human rights defenders.

- Strong signals on the importance of engagement of other stakeholders in global governance, including local and regional governments, civil society, private sector and others.

Clause 6 of the Assam Accord

Why in News ? Assam Chief Minister Himanta Biswa Sarma recently chaired a meeting with All Assam Students Union (AASU) leadership to discuss the recommendations of Justice (Retd) Biplab Sarma Committee on the implementation of Clause 6 of the Assam Accord. Speaking to the media after the meeting Chief minister Sarma said that the state government will not implement Assam accord clause 6 without consent in Barak Valley and 6th schedule areas.

About the Assam Accord :

- It is a tripartite agreement signed in **1985** between the **Government of India, the Government of Assam, and the All Assam Students' Union (AASU)**.
- It was a major step towards resolving the long-standing Assam agitation, which was primarily centered around the issue of illegal immigration from Bangladesh.

Key provisions of the Assam Accord:

Cut-off date: The Accord established March 25, 1971, as the cut-off date for determining the citizenship status of individuals residing in Assam. Those who entered Assam before or on this date would be considered Indian citizens, while those who entered after this date would be considered illegal immigrants.

Deportation: The Accord called for the deportation of all illegal immigrants identified after the cut-off date.

Voter list revision: It mandated the revision of the electoral rolls to remove the names of illegal immigrants.

Language protection: The Accord also addressed the issue of language protection, ensuring the use of Assamese as the official language of the state.

Constitutional safeguards: It provided for constitutional safeguards to protect the interests of the indigenous people of Assam.

About clause 6 of Assam accord :

- **Clause 6 of the Assam Accord (1985)** is a key provision designed to safeguard the identity, culture, and rights of the indigenous Assamese people.
- The Assam Accord was signed on August 15, 1985, between the Government of India and the leaders of the Assam Movement, which aimed to address the concerns of illegal immigration from Bangladesh into Assam.

Main Provisions of Clause 6:

Clause 6 of the Assam Accord specifically states:

- Constitutional, legislative, and administrative safeguards, as may be appropriate, shall be provided to protect, preserve and promote the cultural, social, linguistic identity and heritage of the Assamese people.

Key Objectives:

Protecting Assamese Identity: The main goal is to ensure that the cultural, linguistic, and social rights of the indigenous people of Assam are protected.

Legislative and Administrative Safeguards: The clause envisions that the Government of India will take legislative or administrative measures to protect the rights of Assamese people. However, specific provisions on what these safeguards would entail were not detailed in the Accord itself, leaving it open for future action.

Mineral Security Finance Network

Why in News? India recently joined US-led Mineral Security Finance Network.

India has officially joined the US-led minerals security finance network, which is designed to enhance cooperation and facilitate information sharing and co-financing among institutions in the Indo-Pacific region and Europe.

Objectives:

- To promote diverse, secure, and sustainable supply chains for critical minerals..
- to diversify the supply chains which are concentrated in just one or two countries
- China's increasing influence over global critical mineral supply.

This initiative is part of the Minerals Security Partnership.

About the Minerals Security Partnership:

- The Minerals Security Partnership (MSP) is an international initiative aimed at strengthening the supply chains of critical minerals essential for clean energy technologies, high-tech manufacturing, and national security.
- It was **launched in 2022 by the United States**, alongside a coalition of like-minded countries (EU) and regions, in response to growing concerns over the supply chain vulnerabilities of key minerals such as **lithium, cobalt, nickel, and rare earth elements (REEs)**.

Objectives of the MSP:

Secure Access to Critical Minerals: The partnership focuses on securing a stable and reliable supply of critical minerals that are essential for the production of electric vehicles, renewable energy infrastructure, semiconductors, and other strategic industries.

Diversify Supply Chains: One of the key goals is to reduce dependency on a few countries (especially China) that currently dominate the production and processing of many critical minerals. The MSP seeks to create diversified, transparent, and sustainable global supply chains.

Sustainability and Environmental Standards: The partnership emphasizes sustainable mining practices and the importance of ensuring that environmental, social, and governance (ESG) standards are met in the extraction, processing, and distribution of critical minerals.

Boosting Investments: MSP aims to catalyze investment in mining and mineral processing projects in different regions, especially in developing countries rich in mineral resources. By pooling financial resources and expertise, the partners seek to ensure the development of new mineral extraction and processing facilities.

Key Minerals of Interest:

Lithium: Used in batteries for electric vehicles and renewable energy storage.

Cobalt: Critical for battery production.

Nickel: Essential for stainless steel and battery production.

Rare Earth Elements (REEs): Important for electronics, magnets, and military technologies.

Graphite, Manganese, and Copper: Key components for battery technologies and electrical infrastructure.

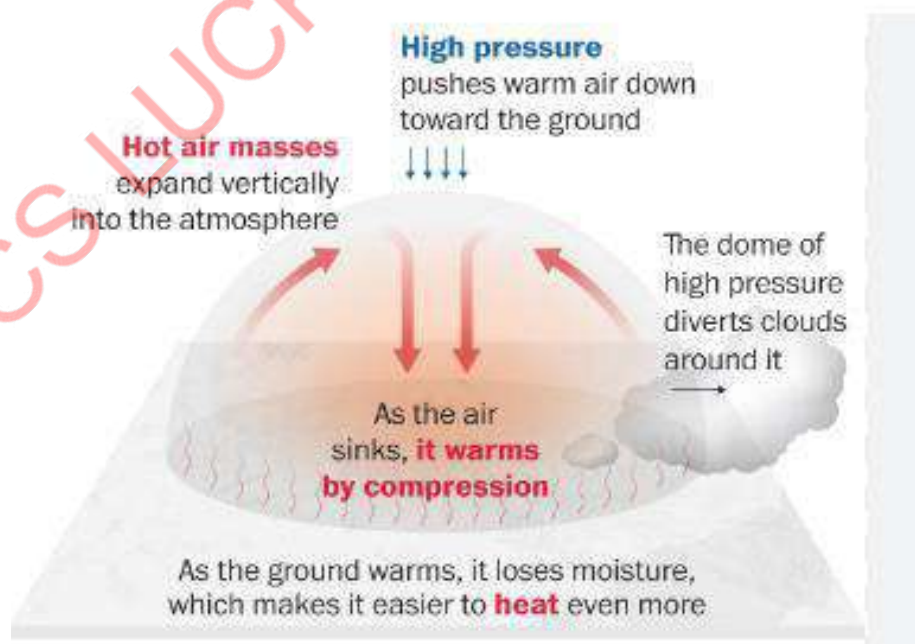
Participating Countries:

As of 2023, the MSP includes the following countries:

- United States
- Canada
- Australia
- Japan
- South Korea
- United Kingdom
- European Union (represented collectively)
- Germany
- Finland
- Sweden

Heat Dome Effect:

Why in news? The state of Assam has recently experienced unprecedented temperatures nearing **40°C in September**, unusual for the region, which may be attributed to the **Heat Dome Effect**.



About the Heat Dome Effect:

- It is a meteorological phenomenon where a high-pressure system traps a mass of hot air over a particular region for an extended period.
- This causes extremely high temperatures, often resulting in prolonged heatwaves.
- The trapped heat cannot escape, and as the high-pressure system persists, the area beneath it experiences rising temperatures, creating a "dome" of heat.

Key Features of the Heat Dome Effect:

High-Pressure System:

- A heat dome is formed when a high-pressure system in the upper atmosphere (typically in the troposphere) becomes stationary over a region.
- This high-pressure "dome" compresses air downwards, which heats the air as it descends due to compression (known as adiabatic warming).

Stagnant Weather Conditions:

- The high-pressure system blocks cooler air from entering the region and prevents clouds from forming, leading to clear skies and continuous sunlight, which further intensifies the heat.

The hot air remains trapped near the surface because there is little atmospheric circulation to displace it.

Worsening of Heat over Time:

- As heat builds up day after day under the dome, ground temperatures rise, sometimes reaching dangerous levels, especially during the peak summer months.

Prolonged Duration:

- Heat domes can persist for several days or even weeks, making it challenging for affected regions to cool down, especially at night, since the heat is trapped beneath the pressure dome.

Causes of the Heat Dome Effect:

Jet Stream Patterns:

- The heat dome is often related to patterns in the jet stream, which are fast-flowing air currents in the upper levels of the atmosphere.

- When the jet stream weakens or becomes wavy, it can create a ridge of high pressure, allowing the heat dome to form.

Ocean-Atmosphere Interactions:

- There is evidence that changes in ocean surface temperatures (e.g., La Niña conditions) may influence the formation of heat domes by affecting atmospheric circulation patterns.
- Warmer ocean temperatures can cause more heat and moisture to rise into the atmosphere, contributing to high-pressure ridges.

Impacts of the Heat Dome Effect:

Health Risks:

- Extreme temperatures can lead to heat-related illnesses, such as heat stroke, dehydration, and heat exhaustion. Vulnerable populations, such as the elderly, children, and those with pre-existing conditions, are at higher risk.

Agricultural Damage:

- Prolonged heat can stress crops, leading to reduced yields or complete crop failures. In extreme cases, it can also lead to wildfires due to dry conditions.

Increased Energy Demand:

- During a heat dome, energy demand spikes due to increased use of air conditioning, often leading to power outages or grid overload.

Environmental and Ecological Impact:

- Heat domes can exacerbate drought conditions, dry up water sources, and affect ecosystems, endangering wildlife and plant species.

Recent Examples:

- In June 2021, a significant heat dome occurred over the **Pacific Northwest** of the **United States and western Canada**, leading to record-breaking temperatures. Some regions experienced temperatures as high as **49.6°C (121.3°F)**, causing widespread wildfires and hundreds of heat-related deaths.

L-69 and C-10 groupings of nations

Why in News ? Ministers from the L.69, a group of over 30 countries from across Asia, Latin America, and Africa, and C10, an influential group of African nations, were of the view that delaying Security Council reform “directly impacts the credibility and legitimacy” of the UN, according to a press release from India’s Ministry of External Affairs (MEA).

About L-69 Grouping:

Composition: The L-69 group consists of 42 developing countries from Africa, Asia, the Caribbean, and the Pacific. Key members include India, Brazil, South Africa, and several Caribbean nations.

Formation: It was established in 2013 as a coalition to represent the collective interests of developing nations, particularly in discussions on reforming global governance, including the United Nations Security Council (UNSC).

Objectives:

- Advocate for equitable representation of developing countries in global decision-making bodies.
- Promote issues such as climate change, sustainable development, and global trade that are crucial for the development of member nations.

About C-10 Grouping:

Composition: The C-10 group is a coalition of 10 countries from the Caribbean and the African continent. Notable members include Algeria, Angola, and Nigeria.

Formation: It was established to push for reforms in the United Nations Security Council and to advocate for the inclusion of African representation in a reformed UNSC.

Objectives:

- Strengthen the voice of African countries in global governance.
- Address issues related to peace and security in Africa and the broader global context.
- Push for a more democratic and representative UN system.

Fund Facility Arrangement (EFF)

Why in News ? IMF has recently officially approved \$ 7 billion Extended Fund Facility Arrangement (EFF) to Pakistan .

What is Extended Fund Facility?

- The Extended Fund Facility (EFF) is intended for countries facing longer-term structural economic problems, requiring more sustained reforms over a longer period to address deep-rooted balance of payments issues.

Key Features:

Duration: An EFF program typically lasts three to four years (up to 10 years for repayments), reflecting the time required to implement structural economic reforms.

Purpose: To provide financial support to countries that need to make significant policy adjustments, often involving complex structural reforms to correct economic imbalances.

Conditionality: Similar to the SBA, but the reforms under the EFF tend to focus more on long-term structural issues, such as labor market reforms, financial sector restructuring, and governance improvements.

Access to Funds: The EFF provides larger and longer-term financing compared to the SBA, with the disbursements spread over the program duration based on the country's adherence to agreed-upon reforms.

Example of Use:

- Countries like Egypt and Pakistan have turned to the EFF to address persistent economic issues, such as fiscal deficits, inflation, and structural economic weaknesses.

What is Stand-By Arrangement (SBA)?

- The Stand-By Arrangement (SBA) is the IMF's primary lending tool for short- to medium-term financial support. It is designed to help countries that are facing temporary balance of payments problems or short-term crises.

Key Features:

Duration: Typically, an SBA lasts for 12 to 24 months, though it can be extended up to 36 months in some cases.

Purpose: To provide short-term financial assistance to countries to address imbalances and prevent larger economic crises.

Conditionality: Countries receiving an SBA must implement policy reforms to restore economic stability, which can include fiscal austerity, monetary tightening, and structural reforms.

Access to Funds: The amount of financial assistance depends on the country's needs and the severity of its economic situation. The funds are disbursed in phases based on the completion of specific policy benchmarks.

Example of Use:

- Countries that experience sudden currency devaluation or external shocks (e.g., commodity price drops) may seek SBA support. **Argentina and Greece** have used SBAs in the past during economic crises.

Key Differences:

Time Horizon: SBA is for short- to medium-term challenges, while EFF targets long-term structural reforms.

Loan Repayment: SBA loans typically have shorter repayment periods (3 to 5 years), while EFF loans have longer repayment terms (4.5 to 10 years).

Focus: SBA focuses on immediate stabilization, while EFF is more concerned with deep, systemic changes in the economy.

What is Keffiyeh?

Why in news? Pulitzer Prize-winning author Jhumpa Lahiri has recently declined to accept an award from New York City's Noguchi Museum after it fired three employees for wearing keffiyeh head scarves, an emblem of Palestinian solidarity.

About keffiyeh:

- The keffiyeh (also known as kufiya, ghutra, or shemagh) is a traditional Middle Eastern headdress with deep cultural, historical, and political significance. It is

commonly worn by men, particularly in Arab countries, but has also gained global recognition as a symbol of identity and resistance.

Key Features of the Keffiyeh:

Material: Traditionally, the keffiyeh is made of cotton or a cotton-wool blend, designed to be lightweight and breathable, making it suitable for the hot, arid desert climates.

Design: The most recognizable feature of the keffiyeh is its checkered pattern, typically in black and white, although variations in colors (such as red or green) exist depending on the region or country.

Wearing Style: It is usually folded into a triangle and draped over the head, with the two ends wrapped around the head or neck. It can also be secured with an agal (a black cord) to keep it in place.

Origins and Cultural Importance:

Historical Roots: The keffiyeh has been worn for centuries by people in the Arabian Peninsula and Mesopotamia. It was traditionally used by farmers and desert dwellers for practical purposes, such as protection from the sun, sand, and wind.

Regional Variations:

Palestine: The black-and-white keffiyeh is particularly associated with Palestinian identity. It became an iconic symbol of Palestinian nationalism and resistance, especially after being popularized by leaders like Yasser Arafat.

Jordan: The red-and-white keffiyeh, called the shemagh in Jordan, is often associated with Bedouin culture and is worn by the Jordanian royal family and the general population.

Iraq and the Gulf: In these regions, the keffiyeh is often referred to as the ghutra and is worn in white or with a more subtle pattern.

Symbolism:

Nationalism and Resistance: In Palestine, the keffiyeh is a symbol of resistance against occupation, struggle for independence, and solidarity with the Palestinian cause. Over time, it has become a symbol of resistance and solidarity globally.

Cultural Pride: In other parts of the Arab world, the keffiyeh represents cultural heritage, pride, and regional identity.

Global Fashion: In recent years, the keffiyeh has been adopted globally as a fashion statement, with people wearing it as a scarf or accessory. However, its political and cultural significance remains intact, especially in Middle Eastern contexts.

Political and Social Impact:

Palestinian Struggle: The keffiyeh gained widespread recognition as a symbol of the Palestinian struggle for self-determination during the 20th century, particularly in the 1960s and 1970s. Yasser Arafat, the leader of the Palestine Liberation Organization (PLO), was known for always wearing a black-and-white keffiyeh, which came to symbolize the Palestinian identity and cause.

Global Solidarity: In various protests and movements around the world, the keffiyeh has been worn to show solidarity with Palestine or as a broader symbol of anti-imperialist and anti-colonial movements.

'Jal Saheli'

Why in News ? Prime Minister Narendra Modi, while calling for water conservation in his monthly address in the 114th episode of 'Mann Ki Baat', praised the efforts of Uttar Pradesh **women's group 'Jal Saheli'** and women of Madhya Pradesh and said that water saved during rainy days helps a lot in the months of water crisis. Water saved during rainy days helps a lot in the months of water crisis.

- An effort towards water conservation has been seen in Jhansi, Uttar Pradesh. Its identity is linked to water scarcity. **Here some women have given new life to the Ghurari river.** "
- These women are associated with the Sales Help Group and have **led this campaign by becoming 'Jal Saheli'**. These women prepared check dams by filling sand in sacks. They prevented rain water from getting wasted and filled the Ghurari river with water.
- These women have also participated enthusiastically in the construction and revival of hundreds of reservoirs. This has not only solved the water problem of the people of this region but has also brought happiness back on their faces. The Prime Minister said, "Whereas Nari Shakti enhances Jal Shakti, Jal Shakti also strengthens Nari Shakti."
- The **efforts made by women from self-help groups of Jhansi district to become 'Jal Sahelis' and conserve and revive the dying Ghurari river is a matter of pride for the entire Uttar**

Pradesh. This will certainly give new energy to the work of water conservation. These 'Jal Saheli' women, who have become a wonderful symbol of women empowerment by helping in the construction of hundreds of water reservoirs, have presented an excellent example of water conservation and promotion while facing many challenges.

Status of Rhino 2024 : Report

Why in News- International Rhino Foundation (IRF) released the Status of Rhino 2024 report.

Key findings of the report-

- About **28,000 rhinos** are left in the world combining **all five species**.
- Rhino **poaching in Africa increased by 4%** from 2022 to 2023.
- The number of **white rhinos increased** but the number of **larger one-horned rhinos (Indian rhinos) remained the same**.
- White rhinoceros population is increasing in South Africa despite poaching.

About Rhino-

- **Five species of rhinoceros:** 2 African (white rhinoceros, black rhinoceros) and 3 Asian (Indian rhinoceros, Sumatran rhinoceros, and Javan rhinoceros).
- **Rhino Conservation Initiatives:** National Rhino Conservation Strategy 2019 for the conservation of Indian rhinoceros; New Delhi Declaration on Asian Rhinos 2019; Indian Rhino Vision 2020 etc.

Difference between African Rhinoceros and Asian Rhinoceros-

Characteristics	African Rhino	Asiatic Rhino
Size	The white rhino is the second largest terrestrial mammal after elephants.	The Indian rhino is the largest of all Asian rhino species.
Appearance and behavior	Less armored More aggressive	More armored Less aggressive

	<p>2 horns</p> <p>They are not good swimmers and can drown in deep water (so they wallow in mud)</p> <p>Fights with its horns.</p> <p>Forages close to the ground.</p>	<p>2 horns (Sumatran rhino) and 1 horn (Indian rhino and Javan rhino)</p> <p>Good swimmer</p> <p>Fights with its lower tusks</p> <p>Eats tall grasses, shrubs, and leaves.</p>
Habitat	Grasslands, savannas, and shrub lands; deserts	Tropical and subtropical grasslands and savannas, tropical moist forests
Conservation status (IUCN)	<p>White Rhino: Near Threatened</p> <p>Black Rhino: Critically Endangered</p>	<p>Indian Rhino: Vulnerable; Schedule I (Wildlife Protection Act, 1972)</p> <p>Sumatran Rhinoceros: Critically Endangered</p> <p>Javan Rhinoceros: Critically Endangered</p>

Asia Power Index 2024

Why in News- India has recently achieved a significant milestone in the Asia Power Index, surpassing Japan to become the third most powerful country. This shift is a sign of India's growing geopolitical status, active development and rapidly growing economy.

Key factors for India's rise:

1. Economic growth-

- India made rapid economic reforms after the pandemic, which increased its economic potential by 4.2 points.
- India has been recognized as the third largest economy in the world in terms of GDP and purchasing power parity (PPP).

- Due to its large and young population, India's economic growth prospects may increase even more in the coming decades.

2. Future prospects-

- India's future resource score has seen an increase of 8.2 points, which is a result of its young demographic dividend.
- India's young population puts it ahead of other major Asian countries, such as China and Japan. This population will continue to boost the labor force in the years to come.

3. Diplomatic influence-

- Under the leadership of Prime Minister Narendra Modi, India has done effective diplomacy on international forums, under which the non-alignment strategy has given it global recognition.
- India ranked sixth in diplomatic dialogues in 2023, which reflects its increasing participation in multilateral forums.
- India has played an important role in security initiatives like Quad, which has further increased its contribution to the regional security system.

• Defense cooperation and economic reach-

- India signed a BrahMos missile deal with the Philippines, which symbolizes its growing steps in defense capabilities and defense exports in the region.
- Although India stays away from formal military alliances, it has focused on strengthening its defense policy and increasing its power in the neighboring countries.

• India's role in Asia-

- With India's growing economic and diplomatic strength, it is being seen as a major power in the Indo-Pacific region.
- The Asia Power Index has reflected India's growing power, and it is expected that India will increase its influence even more in the future.
- India's strategic autonomy and its participation in multilateral diplomacy make it an important country in global politics.

Facts for Prelims

Gross Environment Product Index

Why in News? Uttarakhand has become the first Indian state to launch a Gross Environment Product Index .

Components of the GEP Index:

The GEP Index is based on four key pillars: air, soil, trees, and water.

These pillars represent essential components of the environment that are crucial for maintaining ecological balance and human well-being.

The formula used to calculate GEP is as follows:

GEP Index = (Air-GEP Index + Water-GEP Index + Soil-GEP Index + Forest-GEP Index)

- This formula allows for a comprehensive evaluation of the environment's overall health by integrating various environmental factors into a single index.

Air:

- The air component of GEP assesses air quality and the impact of human activities on atmospheric health.
- It considers both pollution levels and efforts to reduce emissions or enhance air purification through natural or engineered processes.

Soil:

- Soil health is a critical indicator in the GEP Index.
- It measures the quality of soil, considering factors such as fertility, contamination levels, and soil conservation practices.
- The aim is to ensure that the soil remains productive and capable of supporting agriculture and natural vegetation.

Trees (Forest):

- The forest component of GEP goes beyond simply counting the number of trees.
- It evaluates the types of trees planted, their survival rates, and their ecological value.

- For instance, broad-leafed trees, which are more beneficial for the environment, receive greater weightage in the index compared to less preferred species like pine.
- This approach encourages the planting of more ecologically valuable trees and ensures sustainable forest management practices.

Water:

- The water component examines both natural and human-made water bodies, assessing their quantity and quality.
- It includes the evaluation of water conservation efforts, such as the creation of man-made reservoirs like Amrit Sarovars, and compares them with natural water sources like rain-fed lakes and rivers.
- The index aims to reflect the overall water availability and the effectiveness of conservation initiatives.

Green Tug Transition Program (GTTP)

Why in News? Recently, the Union Minister of Port Shipping and Waterways officially launched the Standard Operating Procedure (SOP) for **Green Tug Transition Program (GTTP)**.

About GTTP:

- The **Green Tug Transition Programme** is an initiative aimed at reducing the environmental impact of maritime activities, specifically focusing on the decarbonization of tugboats, which are essential for port operations and maritime logistics.

Tugboats traditionally rely on diesel engines, contributing to significant greenhouse gas emissions.

The **Green Tug Transition Programme** seeks to transition these vessels to more sustainable energy sources, such as hybrid or fully electric propulsion systems.

- The program is part of broader efforts to promote green shipping and reduce carbon emissions in the maritime sector.

- It typically involves retrofitting **existing tugboats with cleaner technologies** or building new tugs designed with sustainability in mind.
- These initiatives are often supported by government policies, international regulations, and **collaborations between maritime industries** and environmental organizations.

About Standard Operating Procedure (SOP):

- It is a set of step-by-step instructions or guidelines that are created by an organization to help workers carry out routine operations.
- SOPs aim to ensure **consistency, efficiency, quality, and safety** in the execution of specific tasks. They are used across various industries, including manufacturing, healthcare, government, and service sectors.

Teal carbon

India's first study on 'teal carbon', undertaken at Keoladeo National Park (KNP) in Rajasthan's Bharatpur district, has highlighted the significance of wetland conservation to address the challenges of climate adaptation and resilience.

About it:

- Teal carbon refers to the carbon stored in aquatic ecosystems, particularly in freshwater bodies such as lakes, rivers, wetlands, and streams. It complements other types of carbon storage such as:

Blue carbon: Found in marine and coastal ecosystems like mangroves, salt marshes, and seagrasses.

Green carbon: Stored in terrestrial ecosystems, primarily forests and grasslands.

Key Points about Teal Carbon:

Carbon Sequestration: Aquatic ecosystems can capture and store carbon from the atmosphere, thereby helping mitigate climate change.

Sources of Carbon: Organic matter such as dead plant material and soil erosion that enters freshwater bodies plays a significant role in carbon cycling.

Threats: Teal carbon reserves are under threat from pollution, damming of rivers, land use changes, and climate change, which can cause the release of stored carbon into the atmosphere.

Importance: The recognition of teal carbon emphasizes the broader role of all aquatic ecosystems in the global carbon cycle, not just marine ones.

INDUS-X Summit 2024

The third edition of the INDUS-X Summit recently concluded in the United States, marking a progress in the advancement of a joint defence innovation ecosystem in India and the USA.

About INDUS-X Summit:

- The INDUS-X Summit is a bilateral initiative between India and the United States aimed at fostering defense innovation collaboration.
- Launched in June 2023, it brings together stakeholders from the defense, technology, and innovation sectors of both nations to strengthen cooperation in defense manufacturing, research, and development, particularly in emerging technologies.

Key Highlights of INDUS-X Summit:

Objective: To promote innovation and joint development of critical defense technologies through partnerships between Indian and U.S. defense startups, government agencies, and private industries.

Focus Areas: Artificial intelligence (AI), cyber security, space technology, quantum computing, drones, and advanced military systems.

Strategic Importance: Part of a larger framework of India-U.S. defense cooperation under the broader umbrella of the U.S.-India Initiative on Critical and Emerging Technology (iCET), which was established to advance mutual interests in defense and technological domains.

Government Involvement: Organized by the U.S. Department of Defense and India's Ministry of Defence, with support from agencies like the U.S. Defense Innovation Unit (DIU) and Indian defence bodies such as DRDO (Defence Research and Development Organisation).

Industry Participation: The summit sees involvement from major defense companies and startups in both countries, fostering joint research, manufacturing, and supply chain collaboration.

Employment-linked incentive (ELI) Scheme

Why in News ? Labour and employment minister Mansukh Mandaviya has recently said that his ministry will soon move a Cabinet note on the **employment-linked incentive (ELI)** scheme that was announced in the budget.

About The Employment-Linked Incentive (ELI) scheme :

- It is a policy mechanism aimed at encouraging businesses and industries to create jobs and boost employment by offering financial or non-financial incentives.
- ELI programs are typically designed to address unemployment, support labor-intensive industries, and promote economic growth by linking government support directly to the creation of new jobs.

Key Features of Employment-Linked Incentive (ELI) Schemes:

Job Creation Focus: The primary objective is to incentivize employers to hire more workers, particularly in sectors that have high potential for employment generation, such as manufacturing, infrastructure, IT, textiles, and agriculture.

Financial Incentives: Under ELI schemes, businesses may receive direct financial support or subsidies, such as wage subsidies, tax breaks, or other forms of monetary incentives. These incentives are typically tied to the number of new jobs created, with the amount increasing based on the number of hires.

Skilling and Training Support: Many ELI schemes also provide incentives for businesses to invest in employee training and skill development, ensuring that new workers are adequately prepared for their roles. This aligns with the government's broader goal of improving the employability of the workforce.

Targeted Sectors: ELIs often focus on specific sectors of the economy that have the potential to absorb large numbers of workers. For example, labor-intensive industries like manufacturing, construction, or textiles may be prioritized in an ELI scheme.

Employment Conditions: To qualify for the incentives, businesses often have to meet certain conditions, such as ensuring fair wages, providing formal contracts, adhering to labor laws, and creating long-term, sustainable employment.

Regional Focus: ELI schemes may also focus on specific regions or states, particularly those that are economically lagging or have high unemployment rates. This helps in balancing regional disparities in employment opportunities.

Example of ELI in India:

In India, while Production Linked Incentive (PLI) schemes are more prominent, some sectoral initiatives have elements of employment-linked incentives. For instance:

Atmanirbhar Bharat Rozgar Yojana (ABRY): Launched during the COVID-19 pandemic, ABRY aimed to incentivize businesses to create new jobs and rehire workers who lost their jobs during the pandemic. The scheme offered subsidies to cover part of the employer's contribution to the Employee Provident Fund (EPF) for newly hired employees.

PLI with Employment Linkage: Although primarily designed to boost production, some PLI schemes for sectors like textiles and electronics have employment-linked incentives. Companies that expand production capacity and, in turn, generate more jobs may receive additional benefits.

Indo-Pacific Economic Framework (IPEF)

Why in News ? India has signed two more agreements under the Indo-Pacific Economic Framework (IPEF), focusing on clean energy, anti-corruption, and trade transparency, during prime minister Narendra Modi's three-day US visit for the Quad summit 2024.

- These agreements, aimed at creating a “**clean**” and a “**fair economy**”, are expected to enhance India's sustainability efforts and strengthen its collaboration with other IPEF members including the US, Australia, Brunei Darussalam, Fiji, Indonesia, Japan.

About The Indo-Pacific Economic Framework :

- It was launched in Tokyo by the US and other Indo-Pacific countries on 23 May 2022. The group consists of 14 partner countries: Australia, Brunei Darussalam, Fiji, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, Thailand, and Vietnam. Structured around four pillars—trade, supply-chain

resilience, clean economy, and fair economy—the IPEF aims to foster economic growth and stability in the Indo-Pacific region

TRISHNA Mission

Why in News ? The 60 years of French-India space cooperation to the Gaganyaan and the TRISHNA mission was recently in news.

- TRISHNA (Thermal Infrared Imaging Satellite for High-resolution Natural resource Assessment) is a collaborative satellite mission between the Indian Space Research Organisation (ISRO) and the French Space Agency (CNES).
- The TRISHNA mission is currently scheduled for launch in 2026. The mission is a collaboration between the Indian Space Research Organisation (ISRO) and the French Space Agency (CNES). The satellite will be launched from the Satish Dhawan Space Centre by an Indian Polar Satellite Launch Vehicle (PSLV).

Key Features and Objectives of the TRISHNA Mission:

Thermal Infrared Imaging:

- TRISHNA will provide high-resolution thermal infrared images of Earth. These images will capture surface temperatures with unprecedented accuracy, allowing detailed monitoring of water stress, irrigation, urban heat islands, and other temperature-related phenomena.

Collaboration:

- This is a joint mission between India and France, with ISRO contributing to the satellite platform and CNES taking charge of the thermal infrared imaging instrument.
- This partnership continues the successful history of joint missions between the two space agencies, including Megha-Tropiques and SARAL.

Applications:

- **Agriculture and Water Management:** TRISHNA's thermal imaging will help in tracking water consumption and stress in crops, leading to better irrigation management and understanding of drought conditions.

- **Urban Planning:** It will provide data on urban heat islands, helping to improve city planning and mitigate the impacts of heatwaves.
- **Climate Change Monitoring:** The satellite will be used to monitor and model the impact of global warming, including the changes in vegetation, glaciers, and water bodies.
- **Disaster Management:** TRISHNA's ability to monitor temperature variations can help in forecasting natural disasters like heatwaves, wildfires, and other temperature-driven phenomena.

High-Resolution and Revisit Time:

TRISHNA will offer both high spatial resolution and a high revisit frequency (likely 3-4 days), making it one of the most capable missions for tracking temperature dynamics and thermal patterns globally.

Garpiya-3 (G3)

Why in News ? Russia and China are engaged in a secret weapons programme to produce long-range drones against Ukraine, a report claims.

A subsidiary of Russian state-owned weapons company Almaz-Antey, IEMZ Kupol, has allegedly developed a new drone model called Garpiya-3 (G3) in China.

- The G3 UAV can travel about **1,243 miles (2,000 km) with a payload of 50kg**,

Philadelphia Corridor)

Why in News?-The Philadelphia Corridor is a key issue in ceasefire talks as Israel's war on Gaza continues, killing nearly 41,000 Palestinians.

About the Philadelphia Corridor-

- The Philadelphia Corridor is a strategically important land strip between the Gaza-Egypt border.
- It is approximately 14 kilometers long and 100 meters wide.

- The region plays a key role in regional security and geopolitics around Gaza, Israel and Egypt.



- It stretches from the Mediterranean Sea in the north to the Kerem Shalom crossing with Israel in the south.
- It also includes the Rafah Crossing, which is the main border point between Gaza and Egypt.
- It serves as a buffer zone between Egypt and Gaza, and control over it has an impact on security and smuggling activities in the region.
