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GS 2 : Polity, Governance, International Relations

1. Making parties constitutional

The article talks about the need for making political parties in India constitutional.

Importance and Nature of Political Parties:

A political party is an organised group of citizens who hold common views on governance and act as a political unit that seeks to obtain control of the government with a view to further the agenda and policy they profess.

- They are indispensable links between the people and the representative machinery of government.
- Political parties maintain a continuous connection between the people and those who represent them either in government or in the opposition.
- Political parties have extra-legal growth in almost every democratic country.
 - The American Constitution does not presume the existence of political parties.
 - In Britain too, political parties are still unknown to the law.

Similarly, political parties in India are extra-constitutional, but they are the breathing air of the political system.

The German Model:

- The Basic Law of the Federal Republic of Germany gives constitutional status to political parties. Its Article 21 deals with their status, rights, duties and functions.
- It provides:
 - Political parties shall participate in the formation of the political will of the people. They may be freely established. Their internal organisation must conform to democratic principles. They must publicly account for their assets and for the sources and use of their funds.
 - Parties that, by reason of their aims or the behaviour of their members, seek to undermine or abolish the free democratic basic order or to endanger the existence of the Federal Republic of Germany shall be unconstitutional.
 - The Federal Constitutional Court shall rule on the question of unconstitutionality. Details shall be regulated by federal laws.

Internal Democracy in Political Parties:

- Political parties in developed nations maintain high levels of internal democracy.
- In the U.K., the Conservative Party has the National Conservative Convention as its top body. It has a Central Council and an Executive Committee. The Central Council elects its President, a Chairman and Vice-Chairmen at its annual meeting. It also elects an Executive Committee which meets once a month.
- In the U.S., both the Democratic and the Republican parties have the National Committee as their top decision-making body. The National Committee plays an important role in the presidential election and agenda-setting.

The German Model for India:

- As compared to the U.S. and the U.K. models, the German model of constitutionalising political parties is more desirable for India.
- Section 29A(5) of the Representation of the People Act, 1951 is the only major statutory provision dealing with political parties in India.
 - It orders that a political party shall bear true faith and allegiance to the Constitution of India as by law established, and to the principles of socialism, secularism and democracy, and would uphold the sovereignty, unity and integrity of India.

Conclusion:

- The Indian Constitution is one of the longest constitutions in the world. It even elaborately deals with co-operative societies.
- The right to form co-operative societies is a fundamental right under Article 19 (1)(c), but the right to form political parties is not.
- Political parties are the agents of democracy and safety valves in the political system. They desperately need reform.
- Hence, it is high time to constitutionalise political parties to ensure in-party democracy, to impart transparency in their finances, and to de-communalise them.

2. Various terms related to Indian Monsoon

The monsoon is likely to begin withdrawing from the mainland from October 6, said the India Meteorological Department (IMD).

Let us learn all terminologies related to Monsoon.

What is Monsoon?

- Indian monsoon, the most prominent of the world's monsoon systems, which primarily affects India and its surrounding water bodies.
- It blows from the northeast during cooler months and reverses direction to blow from the southwest during the warmest months of the year.

Onset of Monsoon

- This process brings large amounts of rainfall to the region during June and July.
- As the high-sun season (that is, the Northern Hemisphere summer) moves northward during April, India becomes particularly prone to rapid heating because the highlands to the north protect it from any incursions of cold air.
- There are three distinct areas of relative upper tropospheric warmth – namely, (1) above the southern Bay of Bengal, (2) above the Plateau of Tibet, and (3) across the trunks of the various peninsulas that are relatively dry during this time.
- These three areas combine to form a vast heat-source region.
- In contrast, a heat sink appears over the southern Indian Ocean as the relatively cloud-free air cools by emitting long-wavelength radiation.
- Monsoon winds at the surface blow from heat sink to heat source.

Peak period

- The position of the easterly jet controls the location of monsoonal rains, which occur ahead and to the left of the strongest winds and also behind them and to the right.
- The surface flow, however, is a strong, south-westerly, humid, and unstable wind that brings humidities of more than 80 percent and heavy squally showers that are the “burst” of the monsoon.
- The overall pattern of the advance follows a frontal alignment, but local episodes may differ considerably.

Key areas

- Most spectacular clouds and rain occur against the Western Ghats in India, where the early monsoonal airstream piles up against the steep slopes, then recedes, and piles up again to a greater height.
- Each time it pushes thicker clouds upward until wind and clouds roll over the barrier and, after a few brief spells of absorption by the dry inland air, cascade toward the interior.
- Various factors, especially topography, combine to make up a complex regional pattern.

Break in Monsoon

- During the south-west monsoon period after having rains for a few days, if rain fails to occur for one or more weeks, it is known as break in the monsoon.
- These dry spells are quite common during the rainy season.
- In northern India rains are likely to fail if the rain-bearing storms are not very frequent along the monsoon trough or the ITCZ over this region.
- Over the west coast the dry spells are associated with days when winds blow parallel to the coast.

Withdrawal of Monsoon

- By August the intensity and duration of sunshine have decreased, temperatures begin to fall, and the surge of south-westerly air diminishes spasmodically almost to a standstill in the northwest.
- In September, dry, cool, northerly air begins to circle the west side of the highlands and spread over north-western India.
- The easterly jet weakens, and the upper tropospheric easterlies move much farther south.
- Because the moist southwesterlies at lower levels are much weaker and variable, they are soon pushed back.
- The rainfall becomes extremely variable over most of the region, but showers are still frequent in the south-eastern areas and over the Bay of Bengal.
- By early October, variable winds are very frequent everywhere.

Winter rains

- At the end of the month, the entire Indian region is covered by northerly air and the winter monsoon takes shape.
- The surface flow is deflected by the Coriolis force and becomes a north-easterly flow.
- Tropical depressions and cyclones are important contributing factors.
- Most of India thus begins a sunny, dry, and dusty season.
- Conversely, the western slopes of the Karakoram Range and Himalayas are then reached by the midlatitude frontal depressions that come from the Atlantic and the Mediterranean.
- The winter rains they receive, moderate as they are, place them clearly outside the monsoonal realm.

3. A State, a 'clean sweep' and the art of sanitation

The article talks about the commendable progress made by Madhya Pradesh in implementing the Swacch Bharat Abhiyan.

Swacch Bharat Abhiyan:

- This campaign was launched by the Prime Minister on 2nd October 2014 to honour Mahatma Gandhi's vision of a clean country.
- The Swachh Bharat Abhiyan (SBA), or Clean India Mission, aimed to provide every family with sanitation facilities, including toilets, solid and liquid waste disposal systems.
- The call to achieve the goal by October 2, 2019, and make this an appropriate tribute to Mahatma Gandhi, the Father of the Nation, on his 150th birth anniversary was well-received by all Indian citizens and the international community, too.

Details:

- Madhya Pradesh (MP) Government followed a comprehensive and scientific approach in implementing the Swachh Bharat Abhiyan.
- Urban Madhya Pradesh received its ODF certification on October 2, 2017.
- Rural Madhya Pradesh received its ODF certification the following year on October 2, 2018.
- As of today, Madhya Pradesh ranks third in the country in the cleanliness survey, 2020.
- Indore has been ranked the cleanest city in the country in Swachh Survekshan (Cleanliness Survey) since 2017. It has become India's first 'Water Plus' city in Swachh Survekshan 2021.
 - It achieved this feat by treating its wastewater to a satisfactory level, before releasing it into rivers.

The capital city of Bhopal has bagged the title of the cleanest and the greenest capital of the country in the cleanliness survey of 2020.

MP's Course of Action in Implementing SBA:

- A comprehensive exercise was initiated to identify the sanitation issues people faced through a series of interactions with all identified stakeholders.
- Consequently, insights were gathered to inform the strategy to make Madhya Pradesh 100% Open Defecation Free (ODF) by 2019.
- Swachhta (cleanliness) was made an individual's responsibility, both at a personal and public level.
- People's participation was the driving force behind the success of Swachh Bharat Abhiyan in Madhya Pradesh.
- A multi-pronged strategy was designed involving the construction of toilets, implementing tough regulatory steps such as levying fines for open defecation and encouraging behavioural change through innovation.
 - This approach guaranteed the sustenance of changed behaviours and the longevity of the impact of efforts.

Good leadership encouraged a sustained change of behaviour. Right from a Collector to a local level leader at the gram panchayat level, they took the message of cleanliness to the people.

What followed was a remarkable change in the attitudes of the people as they began to own the movement.

The collective efforts of the citizens of Madhya Pradesh and the State machinery have brought about an irreversible positive transformation in sanitation, right down to the grassroots.

4. Failing on food

In News:

The Cabinet has approved a proposal to rename the 26-year-old national mid-day meal scheme and launch the PM POSHAN (Poshan Shakti Nirman) scheme.

Details:

- The Cabinet Committee on Economic Affairs has approved PM POSHAN until 2025-26.
- The approval of the PM POSHAN scheme comes at a critical time when real income declines and the economic impact of the COVID-19 pandemic have affected the ability of families to ensure good nutrition.

Data on Malnutrition:

- The findings in Phase I of the NFHS-5 for 22 States and Union Territories in December 2020:
 - childhood stunting rose in 13 States
 - there was a high prevalence of anaemia among children and women
 - wasting was a serious concern in 12 States.

The shortfall over the previous survey period exposes the worsening status of nutrition, threatening to deprive millions of children of a fully productive adult life.

Recent data on child malnutrition highlight the value of good school meals.

PM POSHAN Scheme:

- The centrally supported hot meal programme in Government and Government-aided schools, covering 11.8 crore children, will be supplemented with nutritional elements in identified aspirational districts and areas with high anaemia.
- The scheme, which is proposed to be extended to pre-primary children, provides for:
 - social audit
 - creation of school nutritional gardens to source fresh produce

- involvement of farmer-producer organisations as providers,
- emphasis on local food traditions

Way Forward:

- While there are positive features in PM POSHAN Scheme, momentum towards eradicating malnutrition depends upon annual budgetary outlays.
- The proof of its working will lie in measurable outcomes.
- This hidden crisis must be addressed effectively, backed by strong budgetary commitment.
- Support for the PM POSHAN must remain elastic.
- While some child growth metrics such as stunting require a longer window to measure, problems such as anaemia and low weight lend themselves to speedy amelioration.
- The Government must demonstrate that Saksham Anganwadi-Mission POSHAN 2.0, which amalgamates the POSHAN Abhiyan and schemes covering anganwadis, crèches and adolescent girls, is fiscally stronger than its erstwhile component parts.
- There must be a meaningful increase in the current budget estimate over the combined past outlay for the subsumed individual schemes.
- The renewed nutritional plan should introduce a greater diversity of diets that compensates for micronutrient and protein deficiency.
- Strong supplementation of nutrition at school, in the community, and at childcare centres is critical at a time when India faces food inflation and pandemic-induced income declines have depressed essential consumption.

GS 3 : Economy, Science and Technology, Environment

5. Hidden debt rising for partners of China's BRI plan

In News :

- Study on the **increasing debt among countries borrowing from China.**

Details:

- A new study by AidData, a development research lab at the College of William & Mary in the U.S., has found that the **Chinese debt burdens among many countries under China's Belt and Road Initiative (BRI) are substantially larger than previously estimated.**
- Notably, **most of this debt remains hidden** from the country's accounts as an increasing number of the project deals are being struck not directly between governments but structured through often opaque arrangements with a range

of financing institutions. Hence they remain systematically under-reported to the World Bank's Debtor Reporting System (DRS).

- Currently, nearly 70% of China's overseas lending is now directed to state-owned companies, state-owned banks, special purpose vehicles, joint ventures, and private sector institutions. This leads to what experts have termed as **opaque lending practices of China**.

The study estimates that the average government is under-reporting its actual and potential repayment obligations to China by an amount that is equivalent to 5.8% of its GDP and collectively, these **under-reported debts are worth approximately \$385 billion**.

42 countries now have debt exposure to China in excess of 10% of GDP.

- India ranked 23rd in the list of top recipients of Chinese loans from 2000 to 2017, receiving \$8.86 billion.

Debt trap diplomacy:

- There has been a **surge in lending from Chinese institutions over the past two decades**.
- There are reports about China using **relatively high valued interest loans with short maturity lengths to fund mostly non-viable projects**. This invariably impacts the ability of the borrowing nations to repay the debt back to China. This sort of predatory lending has resulted in **debt distress** in many borrowing countries.
- Chinese institutions use collateralisation to mitigate repayment risk and have been able to **take over strategic assets** in some countries. Also in some cases, the borrowing countries have been forced into accepting **economic concessions in exchange for debt relief**.
 - Sri Lanka has had to hand over the Hambantota port to China over a 99-year lease due to the inability to repay back the Chinese loans.
 - China has also secured a large swathe of land in the strategic Pamir mountains from Tajikistan in exchange for debt forgiveness.

China has thus been able to use debt to establish a dominant position in the international development finance market.

The financial and economic dominance may also be converted into **political leverage** which can be used to **influence domestic and foreign policy decisions** of indebted countries.

Factors contributing to debt trap:

- **Lack of adequate financing options** for infrastructure projects for middle and low-income countries
- **Predatory lending practices of China**
- **Scandals and corruption**

- A high proportion of the BRI infrastructure project portfolio has encountered major implementation problems, such as corruption scandals or labour violations.

Implications for India:

- Debt distress and coercive tactics from China may help China increase its political influence among India's neighbouring countries like Sri Lanka, Bangladesh, Myanmar and Nepal. This could **strain the bilateral relations** with such countries.
- Also, the commercial assets being taken over by China in exchange for debt relief could be used by China for military purposes. This poses serious **security risks** for India.

Way forward:

- The international community must provide alternatives to Chinese infrastructure financing.
- Initiatives like the **Asia-Africa Growth corridor (India-Japan collaboration), Global Infrastructure facility (G-20) and Build Back Better World Partnership (G-7)** should be expanded to meet the infrastructural needs of the developing countries.

6. India, Australia to conclude free trade pact by end 2022

India and Australia have agreed to conclude a Free Trade Agreement (FTA) by the end of 2022.

Free Trade Agreement (FTA)

- A FTA is a pact between two or more nations to reduce barriers to imports and exports among them.
- Under a free trade policy, goods and services can be bought and sold across international borders with little or no government tariffs, quotas, subsidies, or prohibitions to inhibit their exchange.
- The concept of free trade is the opposite of trade protectionism or economic isolationism.

Key benefits offered by FTA

- **Reduction or elimination of tariffs on qualified:** For example, a country that normally charges a tariff of 12% of the value of the incoming product will rationalize or eliminate that tariff.

- **Intellectual Property Protection:** Protection and enforcement of intellectual property rights in the FTA partner country is upheld.
- **Product Standards:** FTA enhances the ability for domestic exporters to participate in the development of product standards in the FTA partner country.
- **Fair treatment for investors:** FTA provides treatment as favourably as the FTA partner country gives equal treatment for investments from the partner country.
- **Elimination of monopolies:** With FTAs, global monopolies are eliminated due to increased competition.

How many FTAs does India have?

- India has signed its first Free Trade Agreement (FTA) with Sri Lanka in 1998.
- Likewise, India had FTAs with: Nepal, Bhutan, Thailand, Singapore, ASEAN, Japan and Malaysia.
- India has signed Preferential Trade Agreements such as:
 1. Asia Pacific Trade Agreement (APTA) with Bangladesh, China, India, Lao PDR, Republic of Korea, and Sri Lanka
 2. Global System of Trade Preferences (GSTP)
 3. India - MERCOSUR PTA etc. with South American countries

Types of Trade Agreements

(1) Free Trade Agreement - discussed above

(2) Preferential Trade Agreement

- In this type of agreement, two or more partners give preferential right of entry to certain products.
- This is done by reducing duties on an agreed number of tariff lines.
- Here a positive list is maintained i.e. the list of the products on which the two partners have agreed to provide preferential access.
- Tariff may even be reduced to zero for some products even in a PTA.
- India signed a PTA with Afghanistan.

(3) Comprehensive Economic Partnership Agreement

- Partnership agreement or cooperation agreement are more comprehensive than an FTA.
- CECA/CEPA also looks into the regulatory aspect of trade and encompasses an agreement covering the regulatory issues.
- CECA has the widest coverage. CEPA covers negotiation on the trade in services and investment, and other areas of economic partnership.

- It may even consider negotiation on areas such as trade facilitation and customs cooperation, competition, and IPR.
- India has signed CEPAs with South Korea and Japan.

(4) Comprehensive Economic Cooperation Agreement

- CECA generally cover negotiation on trade tariff and Tariff rate quotas (TRQs) rates only.
- It is not as comprehensive as CEPA.
- India has signed CECA with Malaysia.

(5) Framework Agreement

- Framework agreement primarily defines the scope and provisions of orientation of the potential agreement between the trading partners.
- It provides for some new area of discussions and set the period for future liberalisation.
- India has previously signed framework agreements with the ASEAN, Japan etc.

(6) Early Harvest Scheme

- An Early Harvest Scheme (EHS) is a precursor to an FTA/CECA/CEPA between two trading partners. For example, early harvest scheme of RCEP has been rolled out.
- At this stage, the negotiating countries identify certain products for tariff liberalization pending the conclusion of actual FTA negotiations.
- An Early Harvest Scheme is thus a step towards enhanced engagement and confidence building.

7. India's Current Account Balance sees a spike

India's current account balance saw a far lower surplus of \$6.5 billion (0.9% of GDP) in the first quarter compared with a surplus of \$19.1 billion (3.7% of GDP) a year earlier.

What is External Sector?

- The external sector is the portion of a country's economy that interacts with the economies of other countries.
- In the goods market, the external sector involves exports and imports.

- In the financial market it involves capital flows.

Various terminologies related:

[A] Balance of Payment (BoP)

- BoP is the difference between all money flowing into the country in a particular period of time (e.g., a quarter or a year) and the outflow of money to the rest of the world.
- These financial transactions are made by individuals, firms and government bodies to compare receipts and payments arising out of trade of goods and services.
- It consists of two components: the current account and the capital account.
- The current account reflects a country's net income, while the capital account reflects the net change in ownership of national assets.

(1) Current Account

- Current account of BoP consists of all transactions relating to goods, services and income, it is functionally classified into merchandise and
- Current account deficit is the situation where payments on the country are more than the payments into the country.
- In current account surplus, there is a net inward payment into the country on the current.

(2) Capital Account

- The capital account records the net flow of investment transaction into an economy.
- Investments (FDI and FII) and borrowings (ECB) are part of the capital account.

[B] Balance of Trade

- Trade "balance" of a country shows the difference between what it earns from its exports and what it pays for its imports.
- If this number is in negative - that is, the total value of goods imported by a country is more than the total value of goods exported by that country - then it is referred to as a "trade deficit".
- If India has a trade deficit with China then China would necessarily have a "trade surplus" with India.



THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. Swachh Bharat Mission-Urban 2.0

The Prime Minister has launched **Swachh Bharat Mission-Urban 2.0** and **Atal Mission for Rejuvenation and Urban Transformation 2.0** on 1st October 2021 in New Delhi.

Major Highlights:

- **SBM-U 2.0 and AMRUT 2.0** have been designed to make all cities 'Garbage Free' and 'Water Secure'.
- It will address the challenges of **urbanization** and contribute towards achievement of the Sustainable Development Goals 2030.

About Swachh Bharat Mission-Urban 2.0:

- It envisions to make all cities '**Garbage Free**' and ensure grey and black water management in all cities.
- To make urban local bodies as **ODF+** and those with a population of less than 1 lakh as **ODF++**, thereby achieving the vision of safe sanitation in urban areas.
- It will focus on **source segregation** of solid waste, utilizing the principles of reduce, reuse, recycle,
- It focuses on **scientific processing** of municipal solid waste and remediation of legacy dumpsites for effective solid waste management.
- The outlay of SBM-U 2.0 is around ₹1.41 lakh crore.

Swachh Bharat Mission- Urban:

- The (SBM-U), was launched on 2nd October 2014
- **Aim:** To make urban India free from open defecation and achieving 100% scientific management of municipal solid waste in 4,041 statutory towns in the country.
- The Scheme comes under **Ministry of Housing and Urban Affairs**.

Objectives:

- Elimination of **open defecation**
- Eradication of Manual Scavenging
- Modern and Scientific Municipal Solid Waste Management
- To effect behavioral change regarding **healthy sanitation practices**
- Generate awareness about sanitation and its linkage with public health
- Participation of private sector in Capex capital expenditure, operation, and maintenance.

Targets of the Mission:

- Construction of 66.42 Lakh individual household toilets (IHHL).
- Construction of 2.52 lakh community toilet (CT) seats.
- Construction of 2.56 lakh public toilet (PT) seats.

- Achieving 100% door-to-door collection and scientific management of municipal solid waste.

About AMRUT 2.0:

- It aims to provide 100% coverage of **water supply** to all households in 4,700 urban local bodies by providing 2.68 crore tap connections.
- Focus on 100% coverage of **sewerage and septage** in 500 AMRUT cities by providing 2.64 crore sewer septage connections will benefit more than 10.5 crore people in urban areas.
- It will adopt the principles of circular economy and promote conservation of surface and groundwater bodies.
- **Promote** data led governance in water management and Technology Sub-Mission to leverage latest global technologies and skills.
- '**Pey Jal Survekshan**' will be conducted to promote progressive competition among cities.
- The outlay of AMRUT 2.0 is around ₹2.87 lakh crore.

Atal Mission for Rejuvenation and Urban Transformation:

- The Government of India launched Mission AMRUT in 2015.
- **Aim:** To provide basic amenities like water supply, sewerage, urban transport, parks to improve the quality of life for the poor and the disadvantaged.
- The focus is on infrastructure creation to provide better services to the citizens.
- The Mission covers 500 cities including cities and towns with a population of one lakh with notified Municipalities.
- It is regulated by **Ministry of Housing and Urban Affairs**.

Objectives of the Scheme:

- To **ensure** every household has access to a tap with assured supply of water and a sewerage connection.
- To increase the **amenity value** of cities by developing greenery and well-maintained open spaces.
- To **reduce pollution** by switching to public transport or constructing facilities for non-motorized transport.

2. DigiSaksham Initiative

The Ministry of Labour and Employment has launched DigiSaksham Initiative.

DigiSaksham

- It is joint initiative with Microsoft India is an extension of the Government's ongoing programs to support the youth from rural and semi-urban areas.
- Through DigiSaksham initiative, free of cost training in digital skills including basic skills as well as advance computing, will be provided to more than 3 lakh youths in the first year.
- The Jobseekers can access the training through National Career Service (NCS) Portal.
- DigiSaksham will be implemented in the field by Aga Khan Rural Support Programme India (AKRSP-I).

Training offered

- Under the initiative, there will be basically three types of training viz. Digital Skills – Self paced learning, VILT mode training (Virtual Instructor led) and ILT mode training (Instructor led).
- The ILT training which is in person training would be conducted at the Model Career Centres (MCCs) and National Career Service Centres (NCSC) for SCs/STs across the country.
- Students will be able to access training in areas like Java Script, Data Visualisation, Advance Excel, Power Bi, HTML, Programming languages, software development fundamentals, Introduction to coding etc.

3. Weddell Sea

India has extended support for protecting the Antarctic environment and for co-sponsoring the proposal of the European Union for designating East Antarctica and the Weddell Sea as Marine Protected Areas (MPAs).

About Weddell Sea

- The Weddell Sea is part of the Southern Ocean and contains the Weddell Gyre.
- Its land boundaries are defined by the bay formed from the coasts of Coats Land and the Antarctic Peninsula.
- Much of the southern part of the sea is covered by a permanent, massive ice shelf field, the Filchner-Ronne Ice Shelf.
- The sea is contained within the two overlapping Antarctic territorial claims of Argentine Antarctica, the British Antarctic Territory, and also resides partially within the Antarctic Chilean Territory.

Major ice shelves

- Various ice shelves, including the Filchner-Ronne Ice Shelf, fringe the Weddell sea.

- Some of the ice shelves on the east side of the Antarctic Peninsula, which formerly covered roughly 10,000 square kilometres of the Weddell Sea, had completely disappeared by 2002.
- The Weddell Sea has been deemed by scientists to have the clearest water of any sea.

India's support for the Antarctic

- India supports sustainability in protecting the Antarctic environment.
- The proposed MPAs are essential to regulate illegal unreported and unregulated fishing.
- India had urged the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) member countries to ensure Antarctic conservation.
- India remains associated with the formulation, adaptation and implementation mechanisms of these MPAs in future.

What is CCAMLR?

- CCAMLR is an international treaty to manage Antarctic fisheries to preserve species diversity and stability of the entire Antarctic marine ecosystem.
- CCAMLR came into force in April 1982.
- India has been a permanent member of the CCAMLR since 1986.
- Work pertaining to the CCAMLR is coordinated in India by the Ministry of Earth Sciences through its attached office, the Centre for Marine Living Resources and Ecology (CMLRE) in Kochi, Kerala.

Marine Protected Areas (MPAs)

- An MPA is a marine protected area that provides protection for all or part of its natural resources.
- Certain activities within an MPA are limited or prohibited to meet specific conservation, habitat protection, ecosystem monitoring, or fisheries management objectives.
- MPAs can be conserved for a number of reasons including economic resources, biodiversity conservation, and species protection.
- They are created by delineating zones with permitted and non-permitted uses within that zone.

GS 3 : Economy, Science and Technology, Environment

4. NASA's Lucy mission to probe Jupiter's mysterious Trojan asteroids

In News: NASA is poised to send its first spacecraft to study Jupiter's Trojan asteroids to glean new insights into the solar system's formation 4.5 billion years ago.

- The Jupiter trojans, commonly called Trojan asteroids or simply Trojans, are a large group of asteroids that share the planet Jupiter's orbit around the Sun.

Key takeaways

- The probe, called Lucy after an ancient fossil that provided insights into the evolution of human species, will launch on October 16 from Cape Canaveral Space Force Station in Florida.
- **Mission:** To investigate the group of rocky bodies circling the Sun in two swarms, one preceding Jupiter in its orbital path and the other trailing behind it.
- After receiving boosts from Earth's gravity, Lucy will embark on a 12-year journey to eight different asteroids – one in the Main Belt between Mars and Jupiter and then seven Trojans.
- Trojans are present in a very small region of space and are very physically different from one another. The differences indicate how far away from the Sun they might have formed before assuming their present trajectory.
- Trojan asteroids number more than 7,000 in total.
- It will be the first solar-powered spaceship to venture this far from the Sun, and will observe more asteroids than any other spacecraft before it.

5. Performance of District Hospitals: NITI Aayog Report

NITI Aayog Unveiled the study- 'Best Practices in the Performance of District Hospitals' on 30th September 2021.

Highlights of the Report:

- The assessment evaluated 707 district hospitals on 10 key performance indicators. It was based on data from 2017-18.
- **District hospitals** were categorised into small (up to 200 beds), medium (201-300 beds) and large (more than 300 beds).

Key Findings of the Assessment:

- A district hospital had 24 beds for 100,000 people **on an average**.

- The **World Health Organization** recommends five hospital beds for every 1,000 people.
- **Puducherry** had the highest average beds in the country while Bihar had the lowest average of six beds per 100,000 citizens.
- Only 27% of the total 707 districts met the doctor-to-bed ratio of 29 doctors per 100 beds in a hospital.
 - 88 hospitals out of 707 had the required ratio of staff nurses.
- Only 399 hospitals were found to have a ratio of paramedical staff.
 - **Madhya Pradesh** had the highest proportion (14.8%) such hospitals, followed by Delhi (12.5%) and UP (11.4%).
- Every district hospital in India had 11 support services, compared to the required 14.
 - **Tamil Nadu** had the highest proportion (20.2%) followed by Rajasthan (11.2%), UP (10.1%).
- Only 21 hospitals fulfilled the criteria of having all diagnostic testing services available.
 - **Karnataka** had the highest proportion (28.6%) followed by Telangana (19%) and Gujarat (9.5%).
- **Uttar Pradesh** at (14.8%) had the highest proportion of hospitals with bed occupancy rate followed by Madhya Pradesh (10.9%), Maharashtra (8.2%).

6. Marine Protected Areas

India has extended support for protecting the **Antarctic environment** and co-sponsoring the proposal of the European Union for designating East Antarctica and the Weddell Sea as **Marine Protected Areas (MPAs)**.

Major Highlights:

- India stood in support of **sustainability** in protecting the Antarctic environment.
- The two proposed MPAs are essential to regulate **illegal** unreported and unregulated fishing.
- India will join Australia, Norway, Uruguay, and the United Kingdom in co-sponsoring the MPA proposals by the end of October 2021.
- The support is driven by conservation and sustainable utilization principles and adhering to the global cooperation frameworks like **Sustainable Development Goals**, UN Decade of Oceans, Convention on Biodiversity etc.

What are Marine Protected Areas?

- (MPAs) involve the **protective management** of natural areas according to pre-defined management objectives.
- They can be conserved for **economic resources**, biodiversity conservation, and species protection.
- They are created by **delineating zones** with permitted and non-permitted uses.
- It is vital to have in depth knowledge of the area to define ecological boundaries and set objectives for the MPA.
- It is important to have the support of the public and established techniques for surveillance and monitoring of compliance.
- IUCN engages in advocating for the expansion of the MPA network through reliable science and local stakeholders.

Marine Protected Area Agency Partnership:

- (MPAAP) is a high-level venue for senior government officials from national marine protected area (MPA) agencies to discuss common issues and explore opportunities for cooperation.

Member Countries:

- Argentina, Australia, Canada, Colombia, Finland, France, Germany, Indonesia, Italy, Malaysia, Mexico.
- New Zealand, the Philippines, the Republic of Korea, South Africa, the United Kingdom, the United States.

About CCAMLR:

- The **Convention on the Conservation of Antarctic Marine Living Resources** came into force in 1982, as part of the Antarctic Treaty System.
- It was established in response to concerns **regarding killing of fishes** in the Southern Ocean and other marine life.

Aim:

- To conserve and protect marine life.
- It defines a Commission and a Scientific Committee to manage marine living resources in the Southern Ocean.

Other Highlights:

- The (CCAMLR) has developed an '**ecosystem approach**' to the regulation of fisheries.
- It has developed management approaches that assess the status of the ecosystem and its health.

Key Facts:

- It lies between the **South Shetland Islands** and the continent of Antarctica.
- The sea is home to the largest number of penguin rookeries.
- It is famed for its huge **ice shelves** and flat-topped icebergs.
- Wildlife includes elephant seals, seabirds, and penguins.
- It was named the Weddell Sea in 1900 on a British explorer and sealer, James Weddell.

7. The many benefits of a strong GI ecosystem

This editorial discusses various economic and socio-cultural benefits offered by the Geographical Indication (GI) Tagging.

Geographical Indication

- A GI is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- India, as a member of the World Trade Organization (WTO), enacted the Geographical Indications of Goods (Registration and Protection) Act, 1999 w.e.f. September 2003.
- GIs have been defined under Article 22 (1) of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement.
- GI is granted for a term of 10 years in India. As of today, more than 300 GI tags has been allocated so far in India (*Wikipedia).

Why must we promote GI?

Several studies show that the patents and copyright protection of products under GIs result in higher economic gains, fostering quality production and better distribution of profits.

- **Lost in history:** Most GI are either assigned to the dusty pages of history books or left to rural artisans to propagate and preserve.
- **Source of income:** Today, with the emphasis on climate change and sustainability, these products can be ready revenue generators.

- **Demand in e-com market:** A modern distribution system exists in India's robust global e-commerce backbone which will propel the nascent GI industry onto the national and world stage.

Need for govt support

- GI products need the support of governments.
- The Europeans are masters at it, as seen by products such as Brie cheese and sparkling wine from Champagne. The EU has an \$87 billion GI economy.
- China has also done very well by GI, strengthening e-commerce in rural areas and actively promoting agricultural special product brands in lesser developed areas.

Role of GI in China's rise

- A 2017 UNCTAD report on inclusive growth and e-commerce deems China's e-commerce-driven growth as inclusive.
- That means China has successfully empowered micro, small and medium enterprises (MSMEs) to compete with large companies on the same stage, with no geographic boundaries.
- Likewise, despite a globally depressed market for wines, the produce from the Ningxia region of China saw exports surge 46.4 per cent in 2020, benefitting 211 wineries in Ningxia.
- The output value of GI producers in China totalled \$92.771 billion as of 2020.

Socio-cultural benefits offered by GI

- GI protection has wider positive benefits, especially for local communities.
- In particular, it encourages the preservation of biodiversity, local know-how and natural resources. And this is where India can do well.
- Multiple benefits flows from a strong GI ecosystem, which can be a wellspring of economic and soft power.
- It will automatically resolve the three fraught India issues of poor pay for talent, low female participation in the labour force, and urban migration.

How can GI induce economic transformation?

(1) Promotes Entrepreneurship and 'Passion Economy'

- It will convert talent into entrepreneurship with gig workers, and create a "passion" economy, that is, a new way for individuals to monetise their skills and scale their businesses exponentially.
- It removes the hurdles associated with freelance work to earn a regular income from a source other than an employer.

(2) Employment generation

- The labour-intensive nature of GI offers the best solution to boosting the employment-to-population ratio in India.
- India presently has an abysmal 43 per cent compared with the 55 per cent global average.

(3) Women Empowerment

- GI production mostly involves artisanal work-from-home culture.
- Monetising this artisanal work done at home will increase India's low female labour force participation rate, which at 21 per cent in 2019 was half the 47 per cent global average.

(4) Prevents migration

- The hyper-localised nature of GI offers solutions to reverse urban migration and conserve India's ancient crafts, culture and food.

(5) MSME Promotion

- A rejuvenation of MSMEs, which account for 31 per cent of India's GDP and 45 per cent of exports, will follow.
- An estimated 55.80 million MSMEs employ close to 130 million people; of this, 14 per cent are women-led enterprises and 59.5 per cent are rural.

(6) GI Tourism

- Another revenue-earner, GI tourism, is typically a by-product of a strong GI ecosystem.

Hurdles in GIs progress

(1) Credit Facilities and Capacity Building

- Since GI businesses are micro, it is necessary to address the challenges of capacity-building, formal or easy access to credit.
- There is a need for forming marketing linkages, research and development, product innovation and competitiveness in both domestic and international markets.

(2) Issue of Intermediaries

- With the shift to digital platforms, the distribution margins of these gate keepers or mandi agents must be competitive.
- They often act as countervailing agents by getting into similar businesses or product lines which will erode GI producer incomes.

(3) Ensuring smoother transition

- As seen from the experience of the new farm laws, this will be a task for the central and state governments; they must ensure the transition without breaking down too many existing linkages.

Way forward

- **Control:** Guardrails like regular audits and consultations with the GI producers must be mandated.
- **Cooperative management:** Pulling it together will be local GI cooperative bodies or associations which can be nationally managed by a GI board.
- **Ministerial support:** The Department for the Promotion of Industry and Internal Trade (DPIIT) and the Ministry of Commerce department should be tasked with developing this new sector.
- **Digital literacy:** Finally, a required skill for GI producers is digital literacy. This should be a priority agenda item for NGOs and stakeholders like the DPIIT.

Conclusion

- It is an opportunity for India to redefine the future of work using automation, technology and artificial intelligence while simultaneously enhancing and adorning the country's talented local work force.
- The Indian GI economy can be a platform for India to showcase to the world a model for ethical capitalism, social entrepreneurship, de-urbanisation, and bringing women to the workforce, on the back of a robust digital system.
- It recalls and attributes of multi-cultural ethos, authenticity, and ethnic diversity are potential turbochargers for the country's economy.
- It encompasses the concept of trusteeship, as advocated by Mahatma Gandhi and more recently, by our PM at the UN. It is truly Made in India.

Prelims Practice Questions

1. SACRED Portal, sometimes seen in the news recently, refers to?

- a. Employment Exchange for Elderly
- b. Training portal for Health workers
- c. Indian Temples Information Portal
- d. National Database for Unorganised Workers

Answer : a

SACRED Portal

- The Ministry of Social Justice and Empowerment will launch the Senior Able Citizens for Re-Employment in Dignity (SACRED) Portal.
- It is a first-of-its kind dedicated employment exchange for senior citizens seeking work opportunities.
- The portal will enable those above 60 years of age to search for jobs on the virtual platform.
- The ministry, however, clarified that the portal does not guarantee jobs but will act as an enabler for those seeking employment.

Background

- This portal is being seen as the way forward against the backdrop of a steady rise in the population of elderly.
- The number of senior citizens has gone up from nearly 2 crore in 1951 to 7.6 crore in 2001 and about 10.4 crore in 2011.
- As per the report of the technical group on population projections for India (2011-2036) submitted to National Commission on Population, the population estimates of senior citizens were 13.76 crore (10.1%) in 2021, which is predicted to rise to 16.28 crore (11.4%) by 2026 and go further up to 22.74 crore (14.9%) in 2036.

2. Consider the following statements:

1. Sorghum plants can withstand high temperature and drought conditions.
2. Medium to deep black soils are predominantly suitable for growing sorghum.
3. The sorghum grain has a low glycaemic index.

Which of the statements given above is/are correct?

- A 1 and 2 only
- B 2 only
- C 3 only
- D 1, 2 and 3

Answer : D

Explanation

- **Sorghum** is a versatile grain crop used for human consumption, fodder and bioenergy generation.

- The grain is popular across the world because it **has a low glycaemic index**, is gluten-free and nutritious. **Hence, statement 3 is correct.**
 - The lower the glycemic index of a cereal, the lower is the relative rise in blood glucose level after two hours of consuming it.
- The variety of the crop found in India is called jowar. It is said to have its origin in the country and is one of its most important food and fodder crops.
 - Jowar has a dedicated All-India Coordinated Research Project since 1969.
- Sorghum plants are very hardy and can **withstand high temperature and drought conditions. Hence, statement 1 is correct.**
- It is well adapted to semiarid regions with a minimum annual precipitation of 350-400 mm. It is grown in areas that are too hot and dry for growing maize. In India, the main sorghum belt receives an annual rainfall ranging from 400-1000 mm.
- It can grow on a wide range of soils. **Medium to deep black soils** are predominantly suitable for growing sorghum. **Hence, statement 2 is correct.**

3. Ministry of Power has recently redesigned the existing Renewable Energy Certificate (REC) Mechanism. Which one of the following is not a feature proposed in revamped REC mechanism?

- a. The Renewable Energy Certificate would be valid till it is sold
- b. Central Electricity Regulatory Commission is responsible to ensure that there is no hoarding of RECs
- c. Prohibition of traders and bilateral transactions in REC mechanism
- d. None of the above

Answer : c

Renewable Energy Certificate

- Ministry of Power has redesigned the existing Renewable Energy Certificate (REC) mechanism, which was introduced in 2010.
- The proposed changes will provide some flexibility to the players, additional avenues, rationalization and also addressing the RECs validity period uncertainty issues.
- Features of changes proposed in revamped REC mechanism are,
 1. Validity of REC would be perpetual i.e., till it is sold.
 2. Floor and forbearance prices are not required to be specified.
 3. Central Electricity Regulatory Commission (CERC) to have monitoring and the surveillance mechanism ensures that there is no hoarding of RECs.

4. RE generator who is eligible for REC, will be eligible for issuance of RECs for the period of PPA as per the prevailing guidelines.
 - The existing RE projects that are eligible for REC would continue to get RECs for 25 years.
 5. Technology multiplier can be introduced to promote new and high priced RE technologies.
- **Issuance** - RECs can be issued to obligated entities (including DISCOMs and open access consumers) which purchase RE Power beyond their RPO compliance notified by the Central Government.
 - No REC to be issued to the beneficiary of subsidies/concessions or waiver of any other charges. The FOR to define concessional charges uniformly for denying the RECs.
 - **Allowing traders and bilateral transactions in REC mechanism.**
 - The changes proposed in revamped REC mechanism will be implemented by CERC through regulatory process.

4. With reference to PM Poshan Scheme, consider the following statements:

1. It seeks to establish Nutritional Gardens in schools.
2. It seeks to provide supplementary nutrition for children in aspirational districts.
3. It seeks to implement the Tithi Bhojan Concept.

Which of the above statements is/are correct?

- A 1 only
- B 2 only
- C 1 and 2 only
- D 1, 2 and 3

Answer : D

Explanation

- The **Prime Minister POSHAN scheme or PM-POSHAN**, is the Government of India's flagship programme to improve nutritional outcomes for children, pregnant women and lactating mothers.
 - The scheme will replace the existing national programme for mid-day meal in schools or Mid-day Meal Scheme.
- Under this scheme, the government has launched various initiatives to tackle malnutrition. For example:
 - **Nutritional Gardens:**

- The government will **promote nutritional gardens** in schools. The gardens are being provided to offer additional micro-nutrients **to students. Hence, statement 1 is correct.**
- **Supplementary Nutrition:**
 - The new scheme has a provision for **supplementary nutrition for children in aspirational districts** and those with a high prevalence of **anaemia. Hence, statement 2 is correct.**
- **TithiBhojan Concept:**
 - The concept of **TithiBhojan** will be encouraged extensively.
 - Tithi Bhojan is a **community participation programme** in which people provide special food to children on special occasions/festivals.
 - **Hence, statement 3 is correct.**

5. Consider the following statements with respect to Indian Elephants

1. It has been recognized as National Heritage Animal of India.
2. India has the largest population of Asian Elephants.
3. It has been given the highest degree of protection under the Indian Wildlife Protection Act (1972).

Which of the statements given above are correct?

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

Answer : d

Indian Elephant (*Elephas maximus*)

- It is a keystone species and an integral component of ecosystems playing a crucial role in maintaining forest ecosystem and biodiversity.
- It has been recognized as National Heritage Animal of India and highest degree of protection has given under Indian Wildlife Protection Act (1972).
- India has the largest population of Asian Elephants with 30000 wild and about 3600 captive elephants.

6. Consider the following statements:

1. Periyar River originates from Sivagiri hills of Western Ghats.

2. Cheruthoni and Perinjankutti are the tributaries of Periyar River.

Which of the statements given above is/are correct?

- A 1 only
- B 2 only
- C Both 1 and 2
- D Neither 1 nor 2

Answer :C

Explanation

- The **Periyar River** is the longest river in the state of Kerala with a length of 244 km.
- It is also known as 'Lifeline of Kerala' as it is one of the few perennial rivers in the state.
 - A perennial river is a channel that has continuous flow in parts of its stream bed all year round.
- Periyar River originates from **Sivagiri hills of Western Ghats** and flows through the Periyar National Park. **Hence, statement 1 is correct.**
- The **main tributaries of Periyar** are Muthirapuzha, Mullayar, **Cheruthoni and Perinjankutti. Hence, statement 2 is correct.**

Mains Practice Questions

1. Climate change, overexploitation, and policy measures have combinedly turned India into a water-stressed economy. Discuss.

Approach

- Start the answer by briefly discussing about the condition of water scarcity in India.
- Discuss the reasons for water stress in India.
- Suggest some measures to address the problem of water scarcity.
- Conclude Suitably.

2. Hydrogen is being dubbed as the alternative fuel. However, there are many problems associated with the leveraging of hydrogen technology. Discuss.

Approach

- Start the answer by briefly discussing the context of using hydrogen as an alternate fuel.
- Discuss the pros and cons of hydrogen as a source of energy.
- Conclude suitably.

