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GS 2 : Polity, Governance, International Relations

1. Talking amid conflict between China and US

Issue:

Ties between China and the US have been strained over the past five years by a bruising trade war launched by former U.S President Donald Trump.

- Relations between the world's two biggest powers have been in a state of free fall despite the change in administration in Washington.
- The longstanding resentment continues even after meetings between top officials, in Alaska and then in Tianjin.

Recent Development:

- Recently, the presidents of both countries engaged in a conversation with a view to resolve the perilous state of ties.
- The Biden administration's broader approach is competing with China where required but cooperating where possible.
 - As a part of this, the U.S. has sought Chinese cooperation in Afghanistan after its disastrous exit and also on climate change.

Concerns:

- While Mr. Biden wanted to ensure competition does not veer into conflict, Mr. Xi agreed both sides needed to "get the relationship right", but underlined the repeated Chinese view that the troubles were due to the U.S. policy on China.
- Also, both sides have clashed on issues including human rights in Xinjiang, Hong Kong, Taiwan, South China Sea actions.
- The contentious inquiry into the origins of COVID-19 has also been a topic of clash between the countries.

China's Stand:

- China has made clear that it seeks concessions on some of the thorny issues before it will agree to discuss working together on others.
- In the July 2021 talks in Tianjin, Chinese officials presented two "lists" of demands to the U.S., including:
 - unconditionally revoking visa restrictions on Communist Party members.

- withdrawing an extradition request for Meng Wanzhou, the chief financial officer of tech firm Huawei who is on trial in Canada.
- changing its stance on the COVID-19 inquiry, where the US has led calls for a more transparent investigation.

Way Forward:

- With the U.S. unlikely to agree to China's preconditions, the present state of relations is likely to continue.
- If the Chinese argument is that it is unrealistic to insulate points of discord from a broader relationship with the US, it is notable that Beijing's officials have rejected that precise argument with regard to India, when India said cooperation on trade and other fronts cannot continue while the Line of Actual Control (LAC) remains in crisis.
- If cooperating while in conflict appears an unreasonable proposition for China when it comes to ties with the U.S., it is inappropriate for it to expect India to take a very different stand on bilateral relations.

2. A case for asymmetric federalism in Manipur

As a normative idea and an institutional arrangement that supports the recognition and provision of an expansive 'self-rule' for territorially concentrated minority groups, asymmetric federalism has recently received bad press in India.

India's Federalism: A backgrounder

- Nations are described as 'federal' or 'unitary', depending on the way in which governance is organised.
- In a unitary set-up, the Centre has plenary powers of administration and legislation, with its constituent units having little autonomy.
- In a federal arrangement, the constituent units are identified on the basis of region or ethnicity and conferred varying forms of autonomy or some level of administrative and legislative powers.
- In India, the residuary powers of legislation, that is the power to make law in a field not specified in the Constitution, is vested in Parliament.
- Hence India has a quasi-federal framework.

Why is it said that India has asymmetric federalism?

- The main forms of administrative units in India are the Centre and the States.
- Just as the Centre and the States do not have matching powers in all matters, there are some differences in the way some States and other constituent units of the Indian Union relate to the Centre.

- This creates a notable asymmetry in the way Indian federalism works.
- But there are other forms, too, all set up to address specific local, historical and geographical contexts.

The asymmetric structure

- Besides the Centre and the States, the country has Union Territories with a legislature, and Union Territories without a legislature.
- When the Constitution came into force, the various States and other administrative units were divided into Parts A, B, C and D.
- Part A States were the erstwhile provinces, while Part B consisted of erstwhile princely states and principalities. Part C areas were the erstwhile 'Chief Commissioner's Provinces'.
- They became Union Territories, and some of them initially got legislatures and were later upgraded into States.
- Himachal Pradesh, Manipur, Tripura, Mizoram, Arunachal Pradesh and Goa belong to this category.

Power apparatus in these asymmetries: Sixth Schedule

- The Sixth Schedule to the Constitution contains provisions for the administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram.
- These create autonomous districts and autonomous regions.
- Any autonomous district with different Scheduled Tribes will be divided into autonomous regions.
- These will be administered by District Councils and Regional Councils.
- These Councils can make laws with respect to allotment, occupation and use of land, management of forests other than reserve forests and water courses.
- Besides they can regulate social customs, marriage and divorce and property issues.

An integrationist approach adopted by the Constituent Assembly

- Post-independence, India was criticized for arguably becoming a 'homogenous Hindu nation' after Partition.
- To counter this, the Gopinath Bordoloi Committee, a sub-committee of the Constituent Assembly sought to accommodate the distinctive identity, culture and way of life of tribal groups in the NE by envisioning 'self-rule'.
- This distinctive constitutional status to territorially concentrated minorities fosters centrifugal tendencies.
- Asymmetric federalism fosters subversive institutions, political instability and breakup of States.

Curious case of Manipur: Recent developments

- Article 371 gives expansive constitutional powers to Manipur's Hill Areas Committee (Article 371C) over tribal identity, culture, development and local administration, are exemplars.
- The integrationist approach resonates powerfully in two recent attempts by Manipur's government to
 1. stall the introduction and passage of the Manipur (Hill Areas) Autonomous District Council (Amendment) Bill, 2021, and
 2. induct nine Assembly members from the valley areas into the Hill Areas Committee.
- This move is being perceived as a "malicious" and "direct assault" on the Hill Areas Committee and the constitutional protection accorded to the Hill Areas of Manipur under Article 371C.

A determined move

- These moves marks a calculated initiative to use this as a double-edged sword to simultaneously set apace electoral agenda for the upcoming Assembly elections in early 2022 and reclaim its agency to fortify state-level constitutional asymmetry.
- The attempt to increase membership of the six district councils to 31 members each and secure more powers to the councils by giving more developmental mandate are welcome.

Managing HAC: A difficult task

- If history is any guide, the task of reclaiming the Hill Areas Committee's agency is not going to be easy.
- Its members often leverage tribe/party loyalty over-commitment to protect constitutional asymmetry and common tribals' cause.
- How the HAC and various tribal groups strategically navigate their politics to offset the majoritarian impulse to manipulate the legal and political process to dilute/dissolve extant constitutional asymmetry remains to be seen.

Way forward

- There should be sincere commitment to promote tribal development, identity and culture that Article 371C seeks to bridge.
- Recognizing and institutionally accommodating tribal distinctiveness is not just as a matter of political convenience
- This valuable and enduring good will be key to promote the State's integrity, stability and peace in the long run.

3. Judicial balancing of various constitutional rights

In News

On August 14, 2021, the Tamil Nadu government appointed 24 trained archakas (priests) in temples across the State. In the weeks since, a series of writ petitions have been filed before the Madras High Court assailing these appointments.

Administration of Hindu temples in Tamil Nadu by government and challenges to it

- The Hindu Religious and Charitable Endowments (HR&CE), 1959, is the governing law on the administration of Hindu temples and religious institutions.
- In 1971, Section 55 of the HR&CE Act was amended **to abolish hereditary priesthood.**
- **Removal of caste-based discrimination:** In 2006, the amendment provided for the appointment of sufficiently trained Hindus irrespective of their caste as archakas to Hindu temples **by the government.**
- **Challenges in the Court:** Challenges to both amendments were taken to the Supreme Court, which upheld the law, as amended.
- In *Seshammal v. Union* (1972), the Supreme Court observed that the amendment to the HR&CE Act abolishing hereditary priesthood did not mean that the government intended to bring about any “change in the rituals and ceremonies”.
- **Constitutional legitimacy:** In *Adi Saiva Sivachariyargal v. Govt. of Tamil Nadu* (2015), the Supreme Court observed that “**the constitutional legitimacy, naturally, must supersede all religious beliefs or practices**”.
- The Court further went on to state that appointments should be tested on a case-by-case basis and any appointment that is not in line with the Agamas will be against the **constitutional freedoms enshrined under Articles 25 and 26 of the Constitution.**

Judicial balancing of the various rights by the Supreme Court

- In *Indian Young Lawyers’ Association v. State of Kerala* (the Sabarimala case) and *Joseph Shine v. Union of India* (2018), the Supreme Court reiterated the need to eliminate “historical discrimination which has pervaded certain identities”, “systemic discrimination against disadvantaged groups”.
- In these cases the Supreme Court **rejected stereotypical notions** used to justify such discrimination.
- In all these cases, the Court prioritised judicial balancing of various constitutional rights.
- **The constitutional order of priority:** In the Sabarimala case, it held that “in the constitutional order of priorities, the individual right to the freedom of religion was not intended to prevail over but was **subject to the overriding constitutional**

postulates of equality, liberty and personal freedoms recognised in the other provisions of Part III”.

Way forward

- **Building on the Sabrimala case:** The constitutional courts will now be called upon to build on the gains of the Sabarimala case when it comes to administration of temples, insofar as it concerns matters that are not essentially religious.
- **Dealing with the gender bias:** The Supreme Court, in Navtej Singh Johar v. Union of India (2018), interpreted Article 15 as being wide, progressive and intersectional.
- Today, while most of the debate is around whether men from all caste groups can become archakas, we have failed **to recognise the gender bias inherent in these discussions.**

Conclusion

At once, caste orthodoxy and patriarchy entrenched within the realm of the HR&CE Act can be eliminated and supplanted with a vision of a just, equal and dignified society.

4. US, India to tie up on green energy

Context:

- **Official visit of the U.S. Special Presidential Envoy for Climate** to India for the launch of the Climate Action and Finance Mobilization Dialogue (CAFMD).
 - **Climate Action and Finance Mobilization Dialogue (CAFMD)** is one of the main tracks of the **U.S.-India Agenda 2030 Partnership**. The U.S.-India Agenda 2030 Partnership was announced at the Leaders Summit on Climate in April 2021.

Details:

- Climate Action and Finance Mobilization Dialogue (CAFMD) would be based on the following three pillars.
 - **Climate action:** It would consist of joint proposals looking at ways to reduce greenhouse gases emissions in the next decade.
 - **Renewable energy:** It would set out a roadmap to **achieve the 450GW renewable energy target in transportation, buildings and industry.**
 - **Finance:** This would involve collaborating on attracting finance for renewable energy projects. It will focus on delivering climate finances primarily as **grants and concessional finance** as envisaged under the Paris Agreement.

Importance of CAFMD:

Speed up clean energy transition:

- The United States will collaborate with India to work towards installing 450 GW of renewable energy by 2030 by **helping in bringing finance, technology** and other elements needed to achieve the goal.
- This will help **speed India's clean energy transition.**

Raise global climate action:

- The visit of the U.S. Special Presidential Envoy for Climate to India is aimed at helping raise global climate ambition with support from the developed countries to developing countries in the form of finance and technology transfer. The CAFMD is a step in this direction.
- A key mission for the U.S. Special Presidential Envoy for Climate is to build **global support for 'Net Zero' or carbon neutrality by 2050.**
 - A major theme building ahead of the climate talks is Carbon Neutrality. The goal of carbon neutrality will be critical to ensuring that the earth does not heat up an additional half a degree by 2100 and will be in line with the temperature targets envisaged under the Paris climate agreement.
 - As of now a little over 120 countries have committed, with varying degrees of firmness, to reaching carbon neutrality by 2050. India however has not committed to a 2050 plan for Carbon Neutrality.

Carbon neutrality:

- **Article 4.1 of the Paris Agreement** urges nations to reach global peaking of greenhouse gas emissions as soon as possible, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century.

Concerns with respect to carbon neutrality calls:

- The authors of the article argue against the increasing demand from developed countries and global civil society organizations urging all countries including developing countries like India to declare carbon neutrality goals.

Against principles of equity:

- Notably while urging the nations to seek carbon neutrality at the earliest, Article 4.1 of the Paris agreement also recognizes the fact that peaking will take longer for developing country Parties which are also required to work towards the eradication of poverty. It recognizes the **principles of equity** while emphasizing the importance of sustainable development.

- Article 2.2 declares that the Paris Agreement “will be implemented to reflect equity and the **principle of common but differentiated responsibilities and respective capabilities**, in the light of different national circumstances”.

Global and not individual goals:

- As against the notion being created by the developed country governments and civil society outfits of carbon neutrality being an individual commitment by all countries, a correct understanding of the stated provisions of the Paris climate agreement makes it clear that the balance of emissions and removal of greenhouse gases is not sought on a country-wise basis but for the world as a whole.
- The text of the Paris Agreement clearly indicates, based on considerations of equity and differentiation, that carbon neutrality is a global goal wherein the developed world will have to take higher responsibility based on considerations of equity and differentiation.

Insufficient climate action:

- The growing popularity of carbon neutrality seems to ignore the fact that **the achievement of carbon neutrality is not compatible with achieving the 1.5°C goal.**
- The mid-century carbon neutrality goals of developed countries will not be sufficient to meet the temperature goals set out by the Paris climate agreement.
- According to The Intergovernmental Panel on Climate Change Special Report on Global Warming, of 1.5° warming what remains of the global carbon budget from 2018 onwards, for a 50% probability of restricting temperature rise to less than 1.5°C, is 480 Giga-tonnes (billion tonnes) of carbon dioxide equivalent (GtCO₂eq). At the current rate of emissions of about 42 GtCO₂eq per year, this budget would be consumed in 12 years. **To keep within the 480 Gt budget, at a steady linear rate of decline, global carbon neutrality must be reached by 2039.**
 - The global carbon budget indicates the limits on global cumulative emissions, from the pre-industrial era to the time when net emissions cease, that correspond to definite levels of global temperature rise.

Emissions in the West:

- The hollowness of nation-level carbon neutrality declarations by developed countries is brought out by a detailed understanding of the emission data.
 - Emissions in the U.S. (not considering land use and land use change and forest-related emissions) (LULUCF), peaked in 2005 and have declined at an average rate of 1.1% from then till 2017, with a maximum annual reduction of 6.3% in 2009. Even if it did reach net-

zero by 2050 at a steady linear rate of reduction, which is unprecedented, its cumulative emissions between 2018 and 2050 would be 106 GtCO₂, which is 22% of the total remaining carbon budget for the whole world. If the U.S. has to stay within its fair share of the remaining carbon budget, **it would have to reach net-zero emissions (with linear reduction) by 2025.**

- Similarly, the European Union, to keep to its fair share of the remaining carbon budget **would have to reach net-zero by 2033**, with a constant annual reduction in emissions. If the EU reaches net-zero only by 2050 it would consume at least 71 GtCO₂, well above its fair share.

Arguments against India declaring carbon neutrality goal:

- The authors argue against India committing to carbon neutrality declarations, based on the following reasons.
 - Given the **high number of poor** in the country, India has to stay focused on economic growth.
 - India continues to have a **low per capita carbon footprint**.
 - India **does not owe a carbon debt** to the world. India's emissions (non-LULUCF) are no more than 3.5% of global cumulative emissions prior to 1990 and about 5% since till 2018.
 - India's mitigation efforts are quite compatible with a 2°C target.
 - India's current annual emissions are low enough to not seriously dent the emissions gap between what the world needs and the current level of mitigation effort.
 - Any self-sacrificial declaration of carbon neutrality today in the current international scenario would be a wasted gesture reducing the burden of the developed world and transferring it to the backs of the Indian people.

Recommendations:

- The following aspects would require greater attention going forward to ensure effective climate action.
 - Adoption of **green growth strategy**
 - Low-carbon technologies and processes
 - **Adaptation to climate** impacts
 - Research into the science of **carbon capture**

Conclusion:

- The hard scientific reality is that **three-way compatibility between temperature goals, carbon neutrality, and equity would be very hard to achieve.**

- India should not join the growing calls for carbon neutrality as it has to stay focused on development as its immediate need and aspirational goal. India must reject any attempt to restrict its options and be led into a **low-development trap**.
- India's approach to eventual net-zero emissions must be contingent on deep first world emissions reductions and an adequate and unambiguous global carbon budget.

GS 3 : Economy, Science and Technology, Environment

5. 216 mn to migrate because of climate change : World Bank

In News : World Bank has recently published Groundswell report.

- The report examined how the impacts of slow-onset climate change, such as water scarcity, decreasing crop productivity and rising sea levels, could result in millions of "climate migrants" by 2050

Key findings of the report

- Climate change could push more than 200 million people to leave their homes in the next three decades and create migration hotspots unless urgent action is taken to reduce global emissions and bridge the development gap.
- The report forecasts up to 216 million people moving within their own countries across the six regions analysed.
 - Those regions are Latin America; North Africa; Sub-Saharan Africa; Eastern Europe and Central Asia; South Asia; and East Asia and the Pacific.
- In the most climate-friendly scenario, with a low level of emissions and inclusive, sustainable development, the world could still see 44 million people being forced to leave their homes.
- In South Asia, Bangladesh is particularly affected by flooding and crop failures, accounting for almost half of the predicted climate migrants.
- Findings regarding African region:
 - - Sub-Saharan Africa – the most vulnerable region due to desertification, fragile coastlines and the population's dependence on agriculture – would see the most migrants, with up to 86 million people moving within national borders.
 - North Africa is predicted to have the largest proportion of climate migrants, with 19 million people moving.
 - The northeastern Tunisia, northwestern Algeria, western and southern Morocco, and the central Atlas foothills will face increased water scarcity.

6. National Financial Reporting Authority (NFRA)

Audit regulator National Financial Reporting Authority (NFRA) wants to be positioned as a regulator for the entire gamut of financial reporting, covering all processes and participants in the financial reporting chain.

NFRA

- NFRA is an independent regulator to oversee the auditing profession and accounting standards in India under Companies Act 2013.
- It came into existence in October 2018.
- After the Satyam scandal took place in 2009, the Standing Committee on Finance proposed the concept of the National Financial Reporting Authority (NFRA) for the first time in its 21st report.
- Companies Act, 2013 then gave the regulatory framework for its composition and constitution.

Functions

- NFRA works to improve the transparency and reliability of financial statements and information presented by listed companies and large unlisted companies in India.

Powers & duties

- NFRA is responsible for recommending accounting and auditing policies and standards in the country.
- It may undertake investigations, and impose sanctions against defaulting auditors and audit firms in the form of monetary penalties and debarment from practice for up to 10 years.
- Since 2018, the powers of the NFRA were extended to include the governing of auditors of companies listed in any stock exchange, in India or outside of India, unlisted public companies above certain thresholds.

7. Inflation dips marginally to 5.3% in August

In News:

- **Inflation figures for the month of August** released by the **National Statistical Office (NSO)**.

About :

- **India's retail inflation has witnessed a downward trend** with it falling to 5.3% in August from 5.6% in July.

- **Core-CPI inflation has eased** to 5.5% in August 2021 from 5.7% in July.
 - Core-CPI inflation is an inflation measure that excludes transitory or temporary price volatility as in the case of some commodities such as food items, energy products, etc. Core inflation is calculated using the Consumer Price Index (CPI) by excluding such commodities.

The fall in the inflation rate is being **attributed to the fall in food price and the effect of a high base last August.**

- CPI inflation was at 6.7% in August 2020, with the Consumer Food Price Index rising 9.05%.

Significance:

- This marks the second month of marginal moderation in the Consumer Price Index (CPI), keeping **retail inflation below the central bank's upper tolerance threshold of 6%** after hitting 6.3% in May and June this year.
 - India has set an inflation target of 4 per cent (with the upper tolerance level of 6 per cent and the lower tolerance level of 2 per cent) for the 5-year period April 1, 2021, to March 31, 2026.
 - Inflation control is a legitimate objective of economic policy given the correlation between inflation and macro-economic stability.

This drop in inflation is a welcome relief given the fact that the RBI has been maintaining an accommodative stance to bring about an economic revival in the post-pandemic phase. The **rising inflation rates had given rise to concerns of stagflation and the lack of further monetary tools to revive growth.**

Inflation for clothing and footwear has risen to 6.8% in August 2021, which may be a **signal of a demand recovery** in the Indian economy.

Concerns:

- Despite a marginal dip in inflation, economists have warned that the **inflationary risks will continue to persist in the Indian economy.** They point out that the comfort level from the lower CPI inflation is not commensurate with the level of decline.
- The inflationary pressure in transport and communication, fuel and light segments could **dampen the fervour for festive spending** which would be critical to economic revival in the post-pandemic phase.
- The pace of **inflation in protein sources (eggs, meat and fish and pulses) and oils** remains a concern. This would dent the **nutritional security of the poor and vulnerable.**

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. NCLT and ITAT

In News : The government has appointed 31 people as judicial, technical and accountant members at the National Company Law Tribunal (NCLT) and the Income Tax Appellate Tribunal (ITAT).

- Recently, the Supreme Court had flagged concerns about vacancies in various tribunals.

Background:

- There are around 250 posts lying vacant at various key tribunals and appellate tribunals such as the NCLT, the DRT, the TDSAT and the SAT.

About NCLT:

- It is a quasi-judicial body in India that adjudicates issues relating to companies in India.
- Established on 1st June, 2016 (Companies Act, 2013).
- Formed based on the recommendations of the Justice Eradi Committee.
- It deals with matters mainly related to companies law and the insolvency law.
- Term of members: Appointments will be for five years from the date of assumption of charge or till attaining the age of 65 or until further orders.

About ITAT:

- It deals with income tax matters.
- It is a statutory body in the field of direct taxes and its orders are accepted as final, on findings of fact.
- ITAT was the first Tribunal to be created on 25th January, 1941 and is also known as 'Mother Tribunal'.
- With a view to ensuring the highest degree of independence of the ITAT, it functions under the Department of Legal Affairs in the Ministry of Law and Justice and is kept away from any kind of control by the Ministry of Finance.
- The orders passed by the ITAT can be subjected to appellate challenge, on substantial questions of law, before the respective High Court

2. 2+2 ministerial dialogue held by India and Australia

India and Australia held the high-level 2+2 foreign and defence ministerial dialogue in New Delhi recently.

Major Highlights:

- The dialogue is aimed at **further strengthen** the overall defence and strategic cooperation between the two countries, including in the **Indo-Pacific**.
- Both sides welcomed the elevation of India-Australia relationship to a **Comprehensive Strategic Partnership (CSP)** during the Leaders' Virtual Summit held in June 2020.
- The shared objective of an **open, free, prosperous and rules-based Indo-Pacific region** was reiterated.
 - It is in line with India's increasing engagement in the region through:
 - Indo-Pacific Oceans' Initiative
 - Australia's Indo-Pacific approach and Pacific Step-Up.
- The Ministers intended to **expand cooperation** under the 2+2 framework and to meet at **least once in every two years** to maintain the momentum.
 - The next 2+2 Ministerial Dialogue would be held in **2023**.
- The launch of the **Supply Chain Resilience Initiative** by the Trade Ministers of India, Australia and Japan was welcomed.
- It was agreed to **continue** boosting cooperation in the **maritime domain**, as encapsulated in the **Joint Declaration on a Shared Vision for Maritime Cooperation** in the Indo-Pacific, adopted in June 2020.

India - Australia relations:

Economic relations:

- Trade Ministers of India, Japan and Australia formally launched **Supply Chain Resilience Initiative (SCRI)**.
- The countries have upgraded their relationship to a **Comprehensive Strategic Partnership** in 2020.

Multilateral relations:

- The countries have **signed multiple defence agreements** and co-operate in various multilateral fora.

- Both countries are **members** of the Quad, Commonwealth, Indian Ocean Rim Association, ASEAN Regional Forum, Asia Pacific Partnership on Climate and Clean Development, and participate in East Asia Summits.
- Australia supports India's membership in **Asia Pacific Economic Cooperation** (APEC).

Other Pacts/initiatives:

- **Mutual Legal Assistance Treaty** and **Extradition Treaty** between India and Australia, which were signed in June 2008.
- A **Civil Nuclear Cooperation Agreement** was signed in September 2014.
- India was sent oxygen, ventilators and Personal Protective Equipment (**PPE**) kits by Australia as part of an immediate support package during COVID-19 pandemic.
- The researchers from both countries are working jointly to **advance COVID-19 screening** and study the future health effects of the virus through projects funded by **Australia-India Strategic Research Fund**.

Defence Relations:

- The countries have increased defence cooperation.
1. AUSINDEX- Bilateral naval exercise
 2. AUSTRALIA HIND- Bilateral exercise with Army
 3. PITCH BLACK- Multilateral air combat training exercise of Australia
 4. Malabar Exercise Phase I- Multilateral exercise comprising Quad countries

3. Defence Dialogue of India-Africa

India will hold the 12th edition of India-Africa Defence Dialogue on the sidelines of DefExpo in March 2022 in Gandhinagar, Gujarat.

- **Theme of the event:** 'India-Africa: Adopting Strategy for Synergizing and Strengthening Defence and Security Cooperation'
- This will help in **building on the existing partnerships** between India and the African Continent.
- It will give both sides to **explore new areas of convergence** in areas including maritime security, cyber security, counter terrorism, capacity building and training.

Key Facts:

- It is going to held after two years of the first India-Africa Defence Ministers' Conclave held in February 2020 in Lucknow.
 - At the conclusion of the meeting a Joint Declaration, '**Lucknow Declaration**' was adopted.
- Traditionally, DefExpo was always held at **New Delhi's Pragati Maidan**.

4. Can Thawing Permafrost cause another pandemic?

The latest IPCC report has warned that increasing global warming will result in reductions in Arctic permafrost and the thawing of the ground is expected to release greenhouse gases like methane and carbon dioxide.

Permafrost

- 'Permafrost' or permanently frozen ground is land that has been frozen at or below 0 degrees Celsius for two or more consecutive years.
- A staggering 17 per cent of Earth's entire exposed land surface is comprised of permafrost.
- Composed of rock, sediments, dead plant and animal matter, soil, and varying degrees of ice, permafrost is mainly found near the poles, covering parts of Greenland, Alaska, Northern Canada, Siberia and Scandinavia.
- The Arctic region is a vast ocean, covered by thick ice on the surface (called sea ice), surrounded by land masses that are also covered with snow and ice.

Permafrost thawing

- When permafrost thaws, water from the melted ice makes its way to the caves along with ground sediments, and deposits on the rocks.
- In other words, when permafrost thaws, the rocks grow and when permafrost is stable and frozen, they do not grow.

Why thawing?

- The link between the Siberian permafrost and Arctic sea ice can be explained by two factors:
- One is heat transport from the open Arctic Ocean into Siberia, making the Siberian climate warmer.
- The second is moisture transport from open seawater into Siberia, leading to thicker snow cover that insulates the ground from cold winter air, contributing to its warming.

- This is drastically different from the situation just a couple of decades ago when the sea ice acted as a protective layer, maintaining cold temperatures in the region and shielding the permafrost from the moisture from the ocean.
- If sea ice (in the summer) is gone, permafrost start thawing.

Impact on Climate Change

- Due to relentlessly rising temperatures in the region, since the late-twentieth century, the Arctic sea ice and surrounding land ice are melting at accelerating rates.
- When permafrost thaws due to rising temperatures, the microbes in the soil decompose the dead organic matter (plants and animals) to produce methane (CH₄) and carbon dioxide (CO₂), both potent greenhouse gases.
- CH₄ is at least 80 times more powerful than CO₂ on a decadal timescale and around 25 times more powerful on a century timescale.
- The greenhouse gases produced from thawing permafrost will further increase temperatures which will, in turn, lead to more permafrost thawing, forming an unstoppable and irreversible self-reinforcing feedback loop. ★
- Experts believe this process may have already begun. Giant craters and ponds of water (called 'thermokarst lakes') formed due to thawing have been recorded in the Arctic region. Some are so big that they can be seen from space.

Why a matter of concern?

- An estimated 1,700 billion tonnes – twice the amount currently present in the atmosphere – of carbon is locked in all of the world's permafrost.
- Even if half of that were to be released to the atmosphere, it would be game over for the climate.
- Scientific estimates suggest that the Arctic Ocean could be largely sea ice-free in the summer months by as early as 2030, based on observational trends, or as late as 2050, based on climate model projections.

Potential to cause another pandemic

Ans. Permafrost has many secrets.

- When the permafrost was formed thousands of years ago, there weren't many humans who lived in that region which was necessarily very cold.
- Researchers recently found mammoths in the permafrost in Russia.
- And some of these mammoth carcasses when they begin to degrade again may reveal bacteria that were frozen thousands of years ago.
- So there will be surprises. But whether they will be lethal surprises is just not possible to say.

5. Thamirabarani Civilisation: Tamil Nadu

In News : The Thamirabarani civilisation in Tamil Nadu is at least 3,200 years old, reveals carbon dating done on organic material retrieved from archeological excavations in Sivakalai, Thoothukudi district.

- **Carbon Dating:** The determination of the age or date of organic matter from the relative proportions of the carbon isotopes carbon-12 and carbon-14 that it contains.

About Thamirabarani River

- The shortest river in the state (Tamil Nadu), the Thamirabarani starts in Pothigai hills of the Western Ghats in the Ambasamudram taluk, flows through Tirunelveli and Thoothukudi districts and empties at Korkai (Tirunelveli district) into the Gulf of Mannar (Bay of Bengal).

Significance/Consequence of the Findings:

- It could lead to evidence that there was a city civilisation (Porunai River (Thamirabarani) civilization) in south India as long back as 3,200 years ago, the later part of the Indus Valley Civilisation.
- Also, archaeological excavations would be carried out in other States and countries in search of Tamil roots.
 - In the first phase, studies would be undertaken at the ancient port of Muziris (Pattanam) in Kerala, to establish the ancientness and culture of the Chera empire.
 - Research would be conducted at Quseir al-Qadim and Pernica Anekke in Egypt, which were once part of the Roman empire, as well as in Khor Rori in Oman, to establish the Tamils' trade relations with these countries.
 - Potsherds bearing Tamil scripts have been found in these countries.
- Studies would also be conducted in Southeast Asian countries, such as Indonesia, Thailand, Malaysia and Vietnam, where King Rajendra Chola had established supremacy.

Do you know?

- The three ruling houses of Tamil India, the Pandyas, Cheras, and Cholas, fought for supremacy of southern India and Sri Lanka.
- These dynasties promoted early literature on the Indian subcontinent and built important Hindu temples.
- Sangam literature, which was written over a period of six centuries (3rd BCE – 3rd CE) contains references to various Chola, Chera and Pandya kings.

GS 3 : Economy, Science and Technology, Environment

6. Thawing permafrost in Arctic

The latest **Intergovernmental Panel on Climate Change** report has warned that **increasing global warming** will result in **reductions in Arctic permafrost**.

- The **thawing of the ground** is expected to **release greenhouse gases** like methane and carbon dioxide.

Permafrost:

- Defined as **ground** (soil, rock and any included ice or organic material) that remains at or **below zero degree Celsius** for at least two consecutive years.
- It is **spread across** an area of over 23 million square kilometres, covering **about 15%** of the land area of the globe.

Impacts of Permafrost Thaw:

- It would affect countries where **roads or buildings** were constructed on permafrost. **Ex:** The Russian railways.
- If the permafrost begins to thaw, **organic material** will become available for **microbiota** to break down.
- The biota will **release carbon dioxide and methane** (about 25 to 30 times more potent than carbon dioxide).
- The **total quantity of carbon** buried in the permafrost is estimated at about **1500 billion tonnes** and the top three meters of the ground has about **1000 billion tonnes**.
 - The **world** currently emits approximately **10 billion tonnes** of carbon a year into the atmosphere.
 - If the permafrost thaws and releases **even only 1%** of the frozen carbon in any one year, it will exceed industrial emissions.

Thawing permafrost and microbes:

- There are concerns that the **thawing permafrost may release** new bacteria or viruses.
- Mammoths were found in the permafrost in Russia recently. When these carcasses begin to **degrade again**, it may **reveal bacteria** that were frozen thousands of years ago.
- The environment is so much more suitable than during the Ice Age for evolution or development of **viruses and bacteria**.

7. RBI's Regulatory Sandbox

The Reserve Bank of India announced the opening of the third cohort under the Regulatory Sandbox.

- The application for the third cohort may be submitted from October 1 to November 14, 2021.
- Theme for the third cohort is **MSME lending**.

Highlights of the announcement:

- RBI also selected **eight entities for the 'test phase' of the second cohort** on cross border payments.
- Six entities have already completed the 'test phase' of the first cohort on retail payments.
- The products were evaluated based on mutually agreed test scenarios and expected outcomes.
- The products found **acceptable under this cohort may be considered for adoption** by regulated entities subject to compliance with applicable regulatory requirements.

All about Regulatory Sandbox:

- A regulatory sandbox (RS) usually refers to **live testing of new products or services** in a controlled/test regulatory environment for which regulators may (or may not) permit certain regulatory relaxations for the limited purpose of the testing.
- The RS allows the regulator, the innovators, the financial service providers (as potential deployers of the technology) and the customers (as final users) to **conduct field tests to collect evidence on the benefits and risks of new financial innovations**, while carefully monitoring and containing their risks.
- It can **provide a structured avenue for the regulator to engage with the ecosystem** and to develop innovation-enabling or innovation-responsive regulations that facilitate delivery of relevant, low-cost financial products.
- The RS is potentially an important tool which enables more dynamic, evidence-based regulatory environments which learn from, and evolve with, emerging technologies.
- The proposed financial service to be launched under the RS should include **new or emerging technology, or use of existing technology in an innovative way** and should address a problem, or bring benefits to consumers.

Objectives:

- Provides an environment to **innovative technology-led entities** for limited-scale testing of a new product or service that may or may not involve some relaxation in a regulatory requirement before a wider-scale launch.
- The RS is, at its core, a **formal regulatory programme for market participants** to test new products, services or business models with customers in a live environment, subject to certain safeguards and oversight.

Benefits:

- It fosters ‘learning by doing’ on all sides. Regulators **obtain first-hand empirical evidence** on the benefits and risks of emerging technologies and their implications, enabling them to take a considered view on the regulatory changes.
- Users of an RS can **test the product’s viability without the need for a larger and more expensive roll-out**.
- The RS can go a long way in not only improving the pace of innovation and technology absorption but also in financial inclusion and in improving financial reach.
- The dependence of the regulator on industry/stakeholder consultations is correspondingly reduced by providing a structured and institutionalized environment for evidence-based regulatory decision-making.
- RS could lead to better outcomes for consumers through an increased range of products and services, reduced costs and improved access to financial services.

Risks and Limitations:

- Innovators **may lose some flexibility and time** in going through the RS process.
- Running the sandbox program in a time-bound manner at each of its stages can mitigate this risk.
- Case-by-case bespoke authorizations and regulatory relaxations can involve time and discretionary judgements.
- May be addressed by handling applications in a transparent manner and following well-defined principles in decision-making.
- The RBI or its RS cannot provide any legal waivers.
- Post-sandbox testing, a successful experimenter **may still require regulatory approvals** before the product/services/technology can be permitted for wider application.
- Regulators can potentially face some legal issues, such as those relating to consumer losses in case of failed experimentation or from competitors who are outside the RS, especially those whose applications have been/may be rejected.

Eligibility Criteria:

- The target applicants for entry to the RS are **FinTech firms which meet the eligibility conditions** prescribed for start-ups by the government.
- RS will encourage innovations where:
 - There is absence of governing regulations;
 - There is a need to temporarily ease regulations for enabling the proposed innovation;
 - The proposed innovation shows promise of easing/effecting delivery of financial services in a significant way.

8. Women Self-Help Groups

Despite COVID-19-induced difficulties and socio-political pressure, women-run SHGs successfully established social well-being in their communities.

Major Highlights:

- Women-run self-help groups (SHG) from **backward districts** of India fought the pandemic with innovation.
- They manufactured **essential medical products** such as masks, sanitisers, protective equipment and ran community kitchens, provided financial support to the vulnerable and communities.
- These SHGs also fight **against gender discrimination** in rural India. As many as 67 million Indian women are members in six million SHGs.

Efforts to support SHGs:

- World Bank gave **\$750 million** in financial support to **National Rural Livelihoods Mission**.
- The government of India announced **financial support** to over **0.4 million SHGs** through Rs 1,625 crore in funds August 12, 2021, under the Atma Nirbhar Bharat (self-reliant India) programme.
- Central government has provided **financial support** to Micro Food Processing Enterprises (PMFME) and Farmer Producer Organizations (FPOs).
- Government initiatives have **encouraged women citizens** to have a bank account, which has made it easier to **procure loans** for SHGs.
 - SHGs have shown satisfactory results by **bringing down** banks' non-performing assets.
- New reforms have been incorporated in the **sustainable development model** by creating self-reliant economy and inspiring women to explore the global market.

Existing Challenges:

Despite scopes and capability, some SHGs are **unable to develop** into full-fledged organisations because of the following reasons:

1. Lack of understanding about core values of business
2. A loss of interest in doing business due to socio-cultural pressure
3. Poor presentation skills and zero knowledge transfer
4. Poor financial knowledge and lack of management
5. Poor marketing and promotional skills
6. Short-term orientations and lack of proper road map for the next phase
7. Lack of well-defined policies for SHGs
8. Lack of understanding on importance of UN mandated Sustainable Development Goals.
9. Roadblocks compounded by traditional malpractices.

Way Forward:

- **Proper Policy design** focussed on the challenges faced by women SHGs
- Providing funds and successful **pilot implementation** of large-scale projects
- Creating a **gender-neutral ecosystem** for women entrepreneurs, develop adequate infrastructure, provide training, destroy red-tapism, omit the role of middle-man, establish a platform for knowledge transfer, financial assurance, create innovative mentorship programs, connect various stakeholders such as non-profits, government bodies & institutes.
- **Specialised training** should be given on climate change, clean energy, disaster management, water, etc.
- SHGs should be **inspired to explore** other sectors as agriculture, handicrafts, renewables, watershed development, alternative tourism, finance, education
- **Development activities** should be conducted keeping in mind **socio-geographical factors** and designed according to the requirements of end-implementers.
- Mechanism of **monitoring and evaluation** of the projects as per the global standards.
- **CSR support**, international funding, multilateral bank support should be given to SHGs.
- Innovative ideas should be incubated and relaxations and **special assistance** should be given to SHGs for tenders and expression of interest.
- A dedicated **grievance resolving mechanism** and **Integrated common facility centre** will help promote activities.
- A **multidisciplinary committee** should be instituted to improve the condition of women SHGs in India, with a mentorship programme to guide SHGs to survive in the hard, competitive market.

9. SEBI introduces T+1 Settlement System

The Capital markets regulator Securities and Exchange Board of India (SEBI) has introduced T+1 settlement cycle for completion of share transactions on optional basis in a move to enhance market liquidity.

T+1 Settlement System

- T+1 means that settlements will have to be cleared within one day of the actual transactions taking place.
- Currently, trades on the Indian stock exchanges are settled in two working days after the transaction is done (T+2).
- In April 2002, stock exchanges had introduced a T+3 rolling settlement cycle. This was shortened to T+2 from April 1, 2003.

What has Sebi allowed?

- SEBI has allowed stock exchanges to start the T+1 system as an option in place of T+2.
- If it opts for the T+1 settlement cycle for a scrip, the stock exchange will have to mandatorily continue with it for a minimum 6 months.
- Thereafter, if it intends to switch back to T+2, it will do so by giving one month's advance notice to the market.
- Any subsequent switch (from T+1 to T+2 or vice versa) will be subject to a minimum period.
- A stock exchange may choose to offer the T+1 settlement cycle on any of the scrips, after giving at least one month's advance notice to all stakeholders, including the public at large.

Why T+1 settlement?

- **Reduced settlement time:** A shortened cycle not only reduces settlement time but also reduces and frees up the capital required to collateralize that risk.
- **Quick settlement:** T+1 also reduces the number of outstanding unsettled trades at any instant, and thus decreases the unsettled exposure to Clearing Corporation by 50%.
- **Speedy recovery of assets:** The narrower the settlement cycle, the narrower the time window for a counterparty insolvency/bankruptcy to impact the settlement of a trade.
- **Risk reduction:** Systemic risk depends on the number of outstanding trades and concentration of risk at critical institutions such as clearing corporations, and becomes critical when the magnitude of outstanding transactions increases.

How does T+2 work?

- If an investor sells shares, settlement of the trade takes place in two working days (T+2).
- The broker who handles the trade will get the money, but will credit the amount in the investor's account only.
- In effect, the investor will get the money only after three days.
- In T+1, settlement of the trade takes place in one working day and the investor will get the money on the following day.
- The move to T+1 will not require large operational or technical changes by market participants, nor will it cause fragmentation and risk to the core clearance and settlement ecosystem.

Why are foreign investors opposing it?

- Foreign investors operating from different geographies would face time zones, information flow process, and foreign exchange problems.
- Foreign investors will also find it difficult to hedge their net India exposure in dollar terms at the end of the day under the T+1 system.
- In 2020, SEBI had deferred the plan to halve the trade settlement cycle to one day (T+1) following opposition from foreign investors.

Prelims Practice Questions

1. With reference to NATGRID, which of the following statements is/are correct?

1. NATGRID as an idea was mooted after the 2008 Mumbai attacks.
2. Initially, State agencies won't have direct access to NATGRID.

Options:

- a. 1 only
- b. 2 only
- c. Both
- d. None

Answer: c

Explanation:

- NATGRID or the National Intelligence Grid is a part of the radical revamp of the intelligence and security framework of India.
- NATGRID as an idea was mooted after the 2008 - 26/11 Mumbai attacks.
- Initially, State agencies won't have direct access to NATGRID. 10 Central agencies will be able to access the information gathered by NATGRID. They are Intelligence Bureau (IB), Research & Analysis Wing (R&AW), Central Bureau of Investigation (CBI), Enforcement Directorate (ED), Directorate of Revenue Intelligence (DRI), Financial Intelligence Unit (FIU), Central Board of Direct Taxes (CBDT), Central Board of Excise and Customs (CBEC), Directorate General of Central Excise and Intelligence (DGCEI) and Narcotics Control Bureau (NCB).
- However, the state agencies can extract the information by contacting these 10 central agencies that have direct access to NATGRID.

2. With reference to the Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) technique, consider the following statements:

1. It depends on the natural tendency of a DNA strand to repair itself, when broken.
2. Its development has led to a Nobel science prize being awarded to a women-only team for the first time.

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

- CRISPR-Cas9 technology behaves like a cut-and-paste mechanism on DNA strands that contain genetic information. A **DNA strand, when broken, has a natural tendency to repair itself**. Scientists intervene during this auto-repair process, supplying the desired sequence of genetic codes that binds itself with the broken DNA strand. **Hence, statement 1 is correct.**
- Recently, **Emmanuelle Charpentier of France and Jennifer A Doudna of the USA** have been awarded the 2020 Nobel Prize in Chemistry for developing CRISPR/Cas9 genetic scissors, one of gene technology's sharpest tools. It is for the first time a Nobel science prize has gone to a women-only team. **Hence, statement 2 is correct.**

3. Which of the following statements about National Commission for Women is/are correct?

1. National Commission for Women was set up as a statutory body during the emergency period.
2. The Chairperson, Members and Member Secretary nominated by the Central Government should only be women.

Options:

- a. 1 only
- b. 2 only
- c. Both
- d. None

Answer: d

Explanation:

- National Commission for Women was set up as a statutory body in 1992.
- The Chairperson, Members and Member Secretary nominated by the Central Government are not necessarily women.

4. Recently in the news, the "Partnership to Advance Clean Energy (PACE)" is a bilateral agreement of India with which of the following countries/grouping?

- A Australia
- B European Union
- C United States of America
- D Japan

Answer : C

Explanation

- **Partnership to Advance Clean Energy (PACE)** is the flagship program on clean energy between the **U.S. and India** to jointly work on a range of issues related to energy security, clean energy and climate change. It includes **three** key components: Research (PACE-R), Deployment (PACE-D), and Off-Grid Energy Access (PEACE).

5. Which one of the following is the last-stand battle fought between the British Raj and Afghan tribesmen in 1897?

- a. Battle of Chanderi
- b. Battle of Purandar
- c. Battle of Saragarhi
- d. Battle of Haldighati

Answer : c

Battle of Saragarhi

- September 12, 2021 marks the 124th anniversary of the Battle of Saragarhi that has inspired a host of armies, books and films, both at home and abroad.
- Saragarhi was the communication tower between Fort Lockhart and Fort Gulistan in the North West Frontier Province (NWFP).
- Two forts, now in Pakistan, were built by Maharaja Ranjit Singh but renamed by the British.
- Battle of Saragarhi was a last-stand battle fought between the British Raj and Afghan tribesmen (Afridi and Orakzai) in 1897.
- During the Battle, 21 soldiers of 36th Sikhs (now 4 Sikh), led by Havildar Ishar Singh, along with a non-combatant called Daad were pitted against over 8,000 tribals but they managed to hold the fort for 7 hours.
- Queen Victoria awarded to these 21 soldiers the Indian Order of Merit posthumously along with 2 'marabas' (50 acres) and Rs 500 each.

6. Swaraj Sastra is a book, which deals with the principles of a non-violent political order, written by?

- a. Sarala Devi

- b. Mahadev Desai
- c. Jamnalal Bajaj
- d. Acharya Vinoba Bhave

Answer : d

Acharya Vinoba Bhave wrote the Swaraj Shastra or A Grammar of Politics, which is ranked among the very few original treatises on politics.

Mains Practice Questions

1Q. Discuss how the policies of Jawaharlal Nehru helped in the nation-building and post-independence consolidation of India.

Approach

- Start the answer by briefly explaining the challenges faced by the newly independent India.
- Discuss Nehru's role in post independence consolidation and nation building.
- Conclude Suitably.

2Q. Citizen initiatives to fight corruption come from an active social consciousness. Discuss.

Approach

- Start the answer by mentioning the ethical dimension of corruption.
- Mention measures that can promote public participation in anti-corruption drives.
- Conclude Suitably.