

China IN ASEAN

- Due to its intensifying geopolitical competition with the U.S. and its own security interests in the region, China is expanding its military outreach to Southeast Asian countries.

What is the People's Liberation Army (PLA) currently undertaking?

- The PLA and the Laotian People's Armed Forces (LPAF) have recently concluded their bilateral military exercise, Friendship Shield 2023.
- in 2023, the PLA STC conducted the 'Golden Dragon' drills with Cambodia
- , in late April, the PLA STC conducted a joint exercise with the Singaporean Navy.
- Firstly, Xi Jinping has put excessive emphasis on defense diplomacy under his flagship Global Security Initiative (GSI).
- Second, China's threat perception of expanding the United States' military engagement with countries in the Asia-Pacific region, especially those countries that China has disputes with within the South and East China Seas region.
- China building a surveillance military base on Great Coco Islands in Myanmar.

- This also impacts India because the Great Coco Islands lie just 55 km north of the Andaman and Nicobar Islands, and their militarisation by China poses a strategic threat to India's national security
- The increasing proximity of the U.S. with the Philippines, with whom China shares a disputed maritime border in the Luzon Strait in the South China Sea, is worrisome for China.
- What has perhaps recently irked China the most is the Philippines' decision to provide the U.S. with access to four military bases in addition to the five bases the U.S. already had access to, under the 2014 Enhanced Defence Cooperation Agreement between the two sides
- Despite China's military and economic inroads in the region, it needs to prove to ASEAN countries sitting on the fence that it has the capability to exercise restraint and act in accordance with the provisions of a Code of Conduct in the South China Sea (which is yet to come into force)

THE HINDU

Graphene

- Graphene is the world's thinnest, strongest, and most conductive material of both electricity and heat.

- It conducts electricity better than copper.
- It is 200 times stronger than steel but six times lighter. It is almost perfectly transparent as it absorbs only 2% of light.
- It is impermeable to gases, even those as light as hydrogen and helium. It has the potential to revolutionize electricity, conductivity, energy generation, batteries, sensors, and more.
- Also, when added to other materials, graphene even in small quantities produces composite materials with dramatically transformed qualities.
- Graphene composites are used in aerospace, automotive, sports equipment, and construction.
- It is used for high- performance batteries and super-capacitors, touchscreens, and conductive inks.
- Graphene- based sensors are used for environmental monitoring, healthcare, and wearable devices.
- Graphene oxide membranes are used for water purification and desalination. Graphene- based masks were made during COVID.
- Graphene is important for defense and aerospace as well.
- Its exceptional strength makes it a promising material for armor and ballistic protection.
- Graphene has the potential to absorb and dissipate electromagnetic waves, making it valuable for developing stealth coatings and materials that reduce radar signatures and electromagnetic interference.
- Graphene is highly sensitive to environmental changes, which makes it an excellent candidate for sensing chemical and biological agents, explosives, radiation, and other hazardous substances.
- Besides, graphene-based materials can also protect us against chemical and biological attacks.
- Better energy storage and electronics properties make graphene attractive in defense and aerospace as well as in civil and commercial application
- Materials define an age the Stone Age, Iron Age, plastic age, and silicon age.
- There are reasons to believe that we are entering the graphene age
- China and Brazil are global leaders in the commercial production of graphene.
- At the Beijing Graphene Institute, set up in 2018, several companies produce industry-grade graphene products. India produces about one-twentieth compared to China and one-third compared to Brazil.

India's progress

- The Centre for Nano Science and Engineering at IISc Bangalore along with KAS Tech produced a graphene-based system several years ago.
- Some start-ups and foreign subsidiaries have started graphene or graphene derivatives in India
- It figured out how graphene oxide-based wrappers loaded with preservatives can increase the shelf life of fruits and vegetables.
- The IIT Roorkee-incubated Log 9 has patented a technology for graphene-based ultra-capacitors, and the IIT Kanpur incubated RF Nanocomposites has developed EMI shielding and stealth technology using graphene-based nanotubes
- Governments have a crucial role to play. China declared graphene a priority in its 13th Plan. Europe set up the Graphene Flagship, with a budget of €1 billion in 2013
- India missed the semiconductor bus in the mid-1990s. The time to step on the graphene pedal is now.

THE HINDU

Parliamentary democracy

- Various safeguards that parliamentary democracies generally tend to put in place against executive dominance or abuse. First,

in order to enact its agenda, the executive must command a majority in Parliament.

- Second, the Opposition itself is granted certain rights in Parliament, and certain limited control over parliamentary proceedings, in order to publicly hold the executive to account.
- Third, the interests of Parliament against the executive are meant to be represented by the Speaker, a neutral and independent authority.
- And fourth, certain parliamentary democracies embrace bicameralism: i.e., a second "Upper House" that acts as a revising chamber, where interests other than those of the brute majority are represented

Analysis

- First, the possibility of intra-party dissent within Parliament has been stamped out by virtue of the Tenth Schedule to the Constitution, popularly known as the "anti-defection law". Introduced through a constitutional amendment in 1985, the Tenth Schedule penalizes disobedience of the party whip with disqualification from the House altogether
- Right from its inception, the Indian Constitution did not carve out any specific space for the political Opposition in the House.

- There is no equivalent, for example, of Prime Minister's questions, where the Prime Minister has to face direct questioning of their record from the Leader of the Opposition as well as by other politicians
- Speaker, in our system, is not independent. The Speaker is not required to give up membership in their political party and is not constitutionally obligated to act impartially
- Fourth, the role of the Upper House is undercut not only by the Speaker's misclassified cation of Bills but also by the constitutionally sanctioned ordinance-making power.

THE HINDU

Biodiversity day

- International Biodiversity Day (May 22)
 - Mitigation of climate change is but one of the several benefits we derive from biodiversity.
 - It also fulfils our basic needs for food, shelter, medicines, mental health, recreation, and spiritual enrichment
 - Currently, the main custodian of the natural world is the Indian Forest Service.
 - But the term "Forest" to describe our immense and unique natural heritage is flawed.
 - India's biodiversity is not only on land but also in waterbodies, rivers, deltas, and oceans.
 - A rich array of our ecosystems is in the form of grasslands, savannas, alpine pastures, deserts, and other types of ecological communities.
- In 2006, policymakers in India enacted the Forest Rights Act that called for an increase in the stake of indigenous groups in ownership as well as management of biodiversity.
- If biodiversity is everywhere, as it is, we must mainstream it into our daily actions in every development program, in every government department, in every public and private institution
 - National Mission on Biodiversity and Human Well-being, an idea this writer has referred to in earlier columns.
 - India's leading conservation biologists, working under the umbrella of the Biodiversity Collaborative based in Bengaluru, conceptualized the idea and developed a road map for the Mission approved in principle by the Prime Minister's Science, Technology, and Innovation Council.
 - The Mission will enable our country to meet critical challenges in climate change, natural and regenerative agriculture, and ecosystem and public health using biodiversity and

ecosystem services usually referred to as nature based solutions.

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