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The India–US 2+2 dialogue: Opportunity to move beyond Ukraine

Syllabus- India and the Global Centers of Power: **USA**, EU, Japan, China and Russia.

Context- The 2+2 dialogue between India and the United States (US) is underway in Washington DC.

- India's Defense and External Affairs Ministers are travelling to the US to meet their counterparts, Secretary of State Antony Blinken and Defense Secretary Llyod Austin on 11 April.

Importance of the latest meeting-

- **Meeting after 2 years**- The ongoing 2+2 meeting between the two countries is very important for both sides, as the last 2+2 meeting between the two countries was held in October 2020 in New Delhi.
- **Modi-Biden meeting after 2 years**- For one, the meeting is the first of its kind under the Biden–Modi governments and provides the opportunity to resume discussions at the highest level in this format, after it was disrupted and could not take place in 2021.
- **Intercessional meeting**- Although an intercessional meeting between the officials of the two countries had taken place in September 2021, the resumption of the 2+2 format sends a positive signal for the momentum of bilateral relations and the overall political mood.
  - As per **Dennis Kux**, "India and USA have come a long way from being estranged democracies to engaged democracies".
  - According to **Ashley J. Tellis**, "despite their shared affinities of constitutional democracy, liberal politics, and civic nationalism, the United States and India have not enjoyed consistently warm relations because of contrasts in worldview, differences in national priorities, and asymmetries in power capability, which lasted in their strongest form until the end of the Cold War".
  - Prime Minister **Narendra Modi** termed USA as natural global partner of India. Modi said - "Relations between India and US aren't just between two governments, but are people-centric and people-driven" and "these relations are very important for the most important relationship of the 21stcentury."

Major discussions in the meeting-

- **Ukraine crisis**- For obvious reasons, the ongoing Ukraine crisis will loom large over the dialogue, but it presents an opportunity for both sides to move beyond this crisis.

- **India and China with Russia**- Two of the biggest economies of the world, China and India, in their own ways remain connected with Russia even in the face of an unprecedented attempt by the western countries to isolate Russia.
- **European countries with Russia**- More importantly, some European countries themselves remain tied with Moscow through their energy and other imports, led by Germany.
- **Still relevant**- Despite differing perceptions on the Ukraine Crisis between the two countries that have emerged, the 2+2 format is now being projected as a health yardstick for relations between the two countries.
- **Changing relation between India and USA**- The dialogue's importance lies in the light of the differences that have emerged between the two countries over the Russia–Ukraine war. The meeting provides both sides the **opportunity to iron out these issues** at the highest level by laying out their clear positions.

✓ This would **reduce the expectations gap** that seems to exist between the two countries, particularly on India's relations with Russia.

✓ For India, a **clear enunciation of its position** on the Russia–Ukraine war at the highest level would also arrest any misunderstanding in the future.

- According to **Mr. S Jaishankar**, "India- America ties have reached to the level where the only direction to go was up". He added that, "the USA economy is largely complementary and there is no fundamental clash of interest between the two sides".

What can be the policy stance of India and USA-

- **Stance of USA**- Whilst the US is expected to keep pushing India to take a stand against Russia and decrease its dependence on Moscow, the 2+2 meeting provides an opportunity for both countries to resume bilateral priorities despite differences in some areas.
- **Good relation despite differences**- An open acknowledgement that both India and the US approach the Ukraine crisis from "different perspectives", yet the two countries have 'convergences' on the issue portends well for the ongoing 2+2 meeting, as it shows that the two countries can set aside their differences to build on the momentum of their bilateral relationship.
- **US' convergence with India**- The US will look to build on what it calls the convergences with regards to its efforts to change India's stand apropos Russia.

✓ In this regard, the US may particularly look to two strategic goals, one short term and another long term.

✓ **Short term goal**- In the immediate setting, the US is likely to propose to nudge India to reduce its nominal oil imports from Russia, which the US has officially stated.

✓ **Long term goal**- In the long run, the US would want India to gradually shift its investments in Russian defence equipment and make it more 'compatible' with the US.

What can be expected from the upcoming 2+2 meeting?

- **Indo-Pacific Economic Framework**- A major focus of the 2+2 meeting between India and the US is expected to be around ways to provide momentum to the Indo-Pacific Economic Framework

(IPEF)—a technology-reliant cooperation initiative that seeks the region's transformation through digital economy and adaptability in climate and energy transitions across the region.

✓ **Other discussions** around this issue could include resilience of supply chains, improving transparency, and information sharing—all parts of the IPEF.

- Former US defence secretary **Ashton Carter** mentioned that Indo US defence partnership was built on two important handshakes. One is "**Technological handshake**" a reference to the rapid growth in arms sales, co-development and technology sharing. Second handshake is **"strategic handshake"** representing a broad convergence of geopolitical interests as India's Act East and USAs rebalances to Asia.

- **Build Back Better**- Closing the infrastructure gap in the Indo-Pacific is an area that both India and the US are discussing seriously, as part of the 'Build Back Better' programme.
- **Indo-Pacific strategy**- The 2+2 meeting provides an opportunity to review the progress as well as plan a future roadmap on cooperation in this regard. Providing alternatives resources to building regional infrastructure is expected to strengthen the Indo-Pacific strategy and also to counter China together.
  - According to **Ashley J. Tellis**, the emergence of China as a global power fundamentally challenges both the United States and India in different, but complementary, ways
- **Defense Trade and Technology Initiative**- Furthermore, the Pentagon has claimed an 'incredible momentum' in India–US defence relationship. This high sentiment augurs well for bilateral initiatives like the Defense Trade and Technology Initiative (DTTI), which have not seen much progress in recent years.

Conclusion-

- To the extent that, India and the US don't set 'red lines' and are pushing for "**an honest dialogue**", the ongoing 2+2 dialogue is an opportunity for both India and the US.
- The US also understands that India is one of the few countries that could leverage its relationship with Russia to bring the two warring parties to the negotiating table through ceasefire and diplomatic resolution.
- For Delhi, it is a season for careful and adroit diplomacy. To that end, a follow up to their meeting in the US by another 2+2 meeting with Japan augurs well for India and its relations in the Indo-Pacific region.
  - Former US secretary of state **Mike Pompeo** said, "It's only natural that the world's most populous democracy should partner with the world's oldest democracy to maintain our shared vision throughout the Indo-Pacific."

The Indian Ocean Region needs a stable and secure Sri Lanka

Syllabus- India and South Asia: Regional Co-operation: SAARC-past performance and future prospects. + **South Asia as a Free Trade Area**.

Context- Political struggle in Sri Lanka has coupled with Economic and cultural turmoil

What is the condition in Sri Lanka?

- **Importance of SL**- Independent of the outcomes of the ongoing political tussle in Sri Lanka, continued political stability with assured economic revival in the nation is a *sine qua non* for a strong and safe Indian Ocean Region (IOR).
- **Why is SL important?** - This is due to Sri Lanka's very coastline, studded with the southern Hambantota/Dundra Point, facing the busy IOR-SLOCs.
- In the words of **Rajiv Bhatia**, "India encounters a range of reactions in Sri Lanka; appreciation, support, suspicion and opposition"
- **Politico-diplomatic tool-** This could be seen as a politico-diplomatic tool but it can also prove to be a greater burden than a strategic boon in times of economic and political crises, as has been witnessed in Sri Lanka over the past week.
- Highlighting the geostrategic significance of Sri Lanka, **Harsh V. Pant** has held that the "great game" of this century will be played in the waters of the Indian Ocean. In his own words, "**Sri Lanka matters because the Indian Ocean matters.**"

How can the problem be solved?

- **Economic and forex disaster**- The Sri Lankan political crisis is a product of the continuing economic and forex disaster, which is not going to go away overnight even if there is a change in political leadership.
- **Ending the presidency**-Seemingly capitalising on the public anger that is finding expression in nation-wide street protests, the political Opposition has shifted gears to talk about traditional constitutional issues like ending the all-powerful executive presidency.
- **How can it be done? -** This requires a two-thirds majority in the Parliament, along with a national referendum—which is both time-consuming and is diverting attention from the economic priorities that any government should be addressing first.
- **Need of a stable government**- Independent of the issues involved and the direction internal politics may take—especially of the constitutional and parliamentary varieties, whoever may be the President or Prime Minister, need to be able to head a stable government with confidence and direction, so as to address the economic issues and forex concerns in a systematic manner, after determining the course.

Economy takes a back seat due to political crisis

- **Lack of attention towards economic crisis**- All of it means that the economic crisis over which the Opposition hauled the government leadership over the coals has taken a backseat, as feared.
- **Lack of policy from opposition**- Not only has the Opposition not been able to come up with any substantive policy options through the past months of fiscal and forex crisis, but even inside the Parliament, its members, starting with the Leader of the Opposition, Sajith Premadasa, **are talking politics more than economics**.
- **Lack of action by the president**- Though early signs of anarchy had caused a clueless President to promulgate emergency and impose a curfew over the weekend, the quiet defiance of both by the political Opposition and guarded international criticism have caused their quick withdrawal.

Upended priorities

- **Policies not working as expected**- At the peak of the economic crisis, when the nation needs to build confidence all around, to convince friendly nations to restructure massive debts and extend further credit lines, and also convince overseas investors to help create jobs, generate incomes, and government revenues, the reverse seems to be happening.
- **Tourism also not reviving**- Likewise, the revival of tourism, severely impacted by the 2019 Easter serial blasts, followed by the global pandemic, too may suffer further if internal instability continues.
- **India's support in short term**- The Indian Neighbour's assistance, in credit lines, investments, and supplies in the form of fuel, rice, and pharma supplies, will go a long way in mitigating the people's suffering over the short and long term.
- **HARSH V. PANT:** Expecting India to bail Sri Lanka out every time there is a crisis may work for some time, but it's a recipe for disaster
- **Medium- and long-term plans**- The medium term will require the restructuring of existing loans, and also funding from the International Monetary Fund (IMF) and also the World Bank and Asian Development Bank), to shore up forex reserves in the interim.

Other areas in Sri Lanka-

- **External situation**- The external security situation looks relatively stable, especially with the **exit of the LTTE** and its **'Sea Tigers Naval Wing'**.

✓ This has since been augmented with Sri Lanka joining the bi-annual India-Maldives ***'Dosti'* Coast Guard exercises in 2011**, and the three following it up with the creation of the **'Colombo Security Conclave' (CSC) in 2020**, and upgrading the existing Maritime Security Agreement into Maritime and Security Agreement.

  - According to **Harsh V. Pant**, China views India's role in Sri Lankan affairs not only as a means to "control" Sri Lanka and achieve "regional hegemony" in South Asia but also to "expel the influence of other countries. "For China, Sri Lanka is placed at very important sea line of communications. Hence, China didn't want Indian influence in Sri Lanka.

- **Mauritius**- Mauritius, on the mouth of the 'pond' that the Indian Ocean forms in these parts, joined the CSC during this year's CSC meeting in Maldives as a full-member while Seychelles and Bangladesh have continued as 'observers.
- **Internal weakness-** However, internal weaknesses of the political and economic kind are bound to have an impact on the external security, especially centered on the shared IOR.

✓ **Delay in upgradation of CSC**- To begin with, it could delay further upgradation of the CSC, as planned, to keep extra-regional powers further away, but which may be tempted to fish in the troubled Sri Lankan, and in turn, IOR waters all over again.

- **Going beyond traditional route**- This time, it could go beyond their traditional investment routes, which is economically desirable, but could also include plans and plots for a regime change or worse, including anarchist versions of **'Arab Spring'** and '**Orange Revolution'**, where local radical groups of every shade and color may have the last laugh!

Change of regime in Pakistan: Revival of India–Pakistan relations?

Syllabus- India and South Asia:

- Regional Co-operation: SAARC-past performance and future prospects.

1. South Asia as a Free Trade Area.
2. India's "Look East" policy.
3. Impediments to regional co-operation: river water disputes; illegal cross-border migration; ethnic conflicts and insurgencies; **border disputes.**

Context- Shehbaz Sharif appointed as the new Prime minister of Pakistan.

Recent relations between India and Pakistan-

- **Revival of relations?** - Within hours after Shehbaz Sharif took over as the new Prime Minister of Pakistan, political commentators speculated about the revival of India–Pakistan diplomatic relations, starting with restoring the diplomatic offices by reinstating high commissioners in each other's countries.
- **Suspension of diplomatic relations**- Lest we forget, in **August 2019**, immediately after the Government of India led by Narendra Modi **abolished Jammu and Kashmir's special status and bifurcated the state into two Union Territories**, the diplomatic ties between the two Neighbours were suspended after Pakistan decided to downgrade its diplomatic relations with India.
- **Relations at historic low**- Consequently, relations between the two Neighbours have been at a historic low.
- According to **Atal Bihari Vajpayee**, "Friends can change but not Neighbours who have to live together".
  - **Dilip Hiro** in "***The Longest August***" writes that- Indo-Pak relation are tale of broken bloodline factual errors and mutual paranoia that has placed a bitter parting at the center of destiny of subcontinent.

Recent steps that signify revival-

- **Exchange of messages**- The speculations intensified after Pakistan's new Prime Minister, Shehbaz Sharif, and Indian Prime Minister, Narendra Modi, exchanged messages of peace, cooperative ties, and stability through social media.
- **Desire of peace**- This was followed by exchanging letters from the leaders desiring peaceful and harmonious ties between the two countries.
- **Aiming good relations**- Earlier, in his maiden press conference as the Prime Minister of Pakistan, Mr. Sharif hinted at building good relations with India.

- **Analysis**- Many regional experts even predicted a breakthrough in the resolution of Kashmir in the future in the backdrop of these statements made on each on each side of the border.
  - According to **M. K. Narayanan**, "The long-term goal of **India is to restore strategic autonomy of subcontinent**, enlarge its strategic space and enhance its security options. Whereas **Pakistan's identity is often defined by opposition and rejection of India**. It has short term goals and sees talks and negotiations as mere stratagem (plan used to outwit the opponent)".

Historic decisions aimed to improve relations-

- **Some key development steps**- Indeed, some of the critical developments vis-à-vis India–Pakistan relations took place while Pakistan Muslim League (N) was in power—

1. The annunciation of **Composite Dialogue in 1997**
2. The **Lahore Bus Yatra in 1998**, and
3. The **meeting** between Prime Minister **Modi** with his Pakistani counterpart Mian **Nawaz Sharif** after the former made a surprise visit to **Lahore**—the first visit to Pakistan by an Indian premier in more than 10 years.

- **Invitation to swear in ceremony**- Prime Minister Modi even invited Mian Nawaz Sharif, the then Prime Minister of Pakistan, to his swearing-in ceremony when he was elected in 2014.
- **Shahbaz sharif**- So being the brother of Mian Nawaz Sharif and a senior member and current president of the Pakistan Muslim League (N), Shehbaz Sharif and his key policy decision cannot be seen in isolation from his brother and party politics.

✓ Given this, **Shehbaz Sharif should be seen as an extension of Nawaz Sharif**, who, despite living in self-exile, holds an important position and is an influential member of the party.

- According to **Prof. Vinay Kaura**, Pakistan has always been an important factor in India's domestic politics and foreign policy – a position that flows as much from historical disputes as from Pakistan's continued support for terror activities against India.

Challenges before Pakistan's new government-

- **Coalition government in Pakistan**- However, the question remains how far Shehbaz Sharif representing a coalition government in Pakistan, can go to revive and improve bilateral relations with India, given the peculiar political scenario in his country.
- **Challenges**- He has to overcome multiple domestic challenges before he decides to strengthen ties with India.

1. **Elections next year**- First and foremost, the national assembly elections in Pakistan are likely to happen early next year. The national assembly is valid **till August next year**. Therefore, it will be too treacherous for Shehbaz Sharif to finalize any deal with India on critical issues like Kashmir.
2. **Assessing political behaviour over India-Pak relation among people**- Given the political hullaballoo in his **country facing a severe economic crisis**, it is too early for him and his party workers to read and assess the political behaviour of the general public over India–Pakistan relations.

3. **Rising inflation and economic distress-** People in Pakistan at the moment are primarily concerned about rising inflation and economic distress in the country. Therefore, it **will be impossible for any political party to decide the political manifesto for the upcoming elections.**
4. **No foreign policy agendas currently**- Most political parties will hesitate to underscore foreign policy agendas in public rallies. The same is the case with PML (N) and the current Prime Minister of Pakistan, Mr. Shehbaz Sharif.

Role of Army in Pakistan's politics-

- **Role of Army in Pak's politics**- The army factor in Pakistan's foreign policy has always been vital. In the past, the army in Pakistan has **sabotaged the peace process** between the two nations on many occasions.
- **Kargil War happened after peace process**- For instance, immediately after the Lahore Declaration, the Kargil War happened; this was followed by the **sacking of the then Prime Minister Mian Nawaz Sharif** which illustrated this point distinctly. It is believed that the **Pakistani Army was behind the Kargil incursion in 1999**.
- **Pathankot incident after Modi's Lahore visit**- Similarly, within days after Modi's Lahore visit, the Pathankot incident happened, followed by the Uri attack which turned bonhomie into acrimony.
- **Current Pakistan's Army chief-** The incumbent Pakistan Army Chief General Qamar Javed Bajwa's neutrality in the recent political upheaval in Pakistan doesn't mean that it has special consideration for a new coalition government.

✓ Once the dust is settled in Pakistan, the army will project itself as the country's guardian.

✓ Therefore, the government has to chalk out its foreign policy cautiously and carefully, and indeed, with the army's consultation.

> - In words of **Rajesh Basrur**, "Kashmir is more of a symptom than the cause as the main contradiction is conflict of identity. Both countries have fought 3 wars on the Kashmir issue. **It is not just a battle of territory but a battle of identities**".

Conclusion-

- **Less chances of relations normalising**- Considering these factors, it is unlikely that India–Pakistan relations will see any improvement in the near future.
- **Some improvements in short term**- One may witness some improvements in terms of revival in Track II dialogues and back-channel diplomacy.
- **Too early to predict**- But it is too early to predict the resumption of a structured peace process at the official level, not at least shortly.
- **Shashi Tharoor** called Pakistan "**brother enemy**"; we have pursued everything but nothing seems to work.

> - According to **Shyam Saran**, "India's Pakistan policy must be based on the recognition that India–Pakistan relations are deeply adversarial and likely to remain so for the foreseeable future"

India-Japan collaborations: Andaman and Nicobar Islands in focus

Syllabus- India and the Global Centers of Power: USA, EU, **Japan**, China and Russia.

Context- On 31 March 2022, the Japan International Cooperation Agency (JICA) signed a grant agreement with the Government of India, to provide aid of up to 4,016,000,000 Japanese Yen for a power supply project in India's **Andaman and Nicobar Islands (ANI).**

NOTE- According to **S. Jaishankar,** the peoples of India and Japan are guided by common cultural traditions including the heritage of Buddhism, and share commitment to the ideals of democracy, tolerance, pluralism and open society

What is the project?

- **Aim of the project**- The aim of this investment is to stabilise the power supply in South Andaman by utilising power generated from renewable energy sources through equipment and facilities such as storage battery system and grid interconnection cassette.
- **Project is being undertaken by**- This project is expected to be completed by **February 2024**, and is being executed by the **Andaman and Nicobar Administration** to reduce the carbon footprint in the islands by replacing diesel-based power generation with clean renewable energy.
- **How will it help A&N islands**- It can thus be expected to contribute towards ANI's power development policy plan, improve the industrial competitiveness of the island as well as enhance its the military capacity.
- **Developing A&N islands**- This development comes as India itself is keen to develop the islands and harness its strategic potential, after years of governing it with a protectionist hand.
- Highlighting the growing convergence of interests between India and Japan, **Kanwal Sibal** held that it is cherry blossom time in India Japan relations
  - The longest serving Prime minister of Japan **Shinzo Abe** in his book ***"Towards a beautiful nation"*** termed India as Japan's natural ally. Japan and India are natural allies because they have no conflict of strategic interest and share common goals to build institutionalized cooperation and stability in Asia.

Andaman and Nicobar islands

- **Location**- Separating the Bay of Bengal from the Andaman Sea, the ANI alone makes up for 30 percent of India's Exclusive Economic Zones (EEZ).
- **Tribal groups home**- The islands are also home to some of the world's most primitive and vulnerable tribal groups along with a diverse array of flora and fauna.

- **Conserving its unique culture-** It is, therefore, not surprising that after its independence in 1947, India sought to conserve the islands in their "existential setting against the pulls of exploitative enticements" Thus, treating it with 'benign neglect'.
- **Lack of development due to conservation of culture-** This orthodoxy in governance, reinforced over the years by legal pronouncements and the efforts of environmental lobbies, kept the islands away from the surge of development sweeping India's mainland.

✓ **Only 7% developed**- For many years, only 7 percent of the entire island chain had been developed, with the rest demarcated as protected areas.

- **Rising aspirations and demands in the island**- However, the rising aspirations of the ANIs residents and indeed the changing geopolitical scenario has recalled the Indian government's attention to the islands, and it has been realised that there is ample scope to rationalise economic progress with environmental conservation.

✓ A shift is, therefore, increasingly being noticed in the ANI's administration, as a more flexible approach is being adopted in its governance.

- **S. Jaishankar** in his book, ***'The India Way: Strategies for an Uncertain World',*** mentions that, though neither India nor Japan had historically focused on each other when it came to addressing their respective security situations. Yet, they both think similarly on the big issues of the day, especially in the last few years. This applies to power shifts as much as power deficits. Thus, both are working to develop the A&N islands together.

Recent development initiatives in the islands-

A number of developmental initiatives in the ANI have accordingly been undertaken in recent years, such as-

1. **Funding**- The INR100,000 million plan which was announced in 2015 to develop the ANI into India's first maritime hub.
2. **PM's visit-** Prime Minister Modi's first visit to the islands in 2018 to inaugurate several development projects.
3. **Island Coastal Regulation Zone Notification**- Promulgation of the Island Coastal Regulation Zone Notification in 2019, allowing land reclamation for ports, harbours, and jetties facilitating luxury tourism in the islands.

   ✓ **C. Raja Mohan** in his book ***'Samudra Manthan*** 'has mentioned that securing the seaborne trade through the Indian Ocean and its entry into the western Pacific through narrow choke points in Southeast Asia has also become a major strategic concern for both Japan and China. In recent years, this dependence has begun to make an impact on the strategic thinking in East Asia.

4. **Undersea internet cable**- The inauguration of the Chennai-Andaman and Nicobar undersea internet cable to provide high-speed internet connection to seven remote islands of the ANI chain in 2020.

5. **Transhipment port**- The announcement to build a transhipment port in the Great Nicobar Island in 2020.

NOTE- The investment by JICA [Japan International Cooperation Agency] to improve ANI's power supply as mentioned above is the **most recent** of such developmental initiatives. The uniqueness of this initiative lies in the fact that **it is the first time a foreign power has been allowed to invest** in these strategically important islands.

Geo-strategic importance-

- **Strategically located island chain**- Indeed, the ANI has often been referred to as one of the "most strategically located island chains of the world," as its geographical layout bestows upon its potential to maintain the freedom of navigation in its surrounding waters.
- **Location**- Located almost at the **confluence of the Indian and the Pacific Ocean**, the ANI lies **west of the Strait of Malacca** and is located in close proximity to it.
- ✓ **Malacca dilemma**- This Strait is **critical for energy requirements** of most East Asian countries, which explains China's anxiety over its 'Malacca Dilemma'.
- ✓ **Oil imports of China**- Choking this solitary strait through which China carries its oil imports would severely affect its economic development.

- **Other important passages around the islands**- That apart, the ANI also straddles the **Preparis Channel, the Duncan's Passage, the Ten Degree Channel, and the Six Degree Channel**; important shipping routes for India as well as other shipping destined for East and Southeast Asia.
- ✓ **Creates many chokepoints**- Therefore, it creates a number of chokepoints close to one of the world's busiest shipping lanes—the East–West shipping route, passing just eight nautical miles below the ANI.
- **Rising China's presence**- As China's assertive presence grows in the Bay, and India attempts to secure its own foothold in these waters as well as maintain a stable Indo-Pacific, the strategic importance of the ANI has become greater than ever before.
- **C. Raja Mohan** in his book 'Samudra Manthan' has pointed out that, India is deepening its ties with the United States and Japan in order to balance the rising power of China. According to him, this imperative is likely to get stronger in the next two decades.

Importance of Andaman and Nicobar Islands for Japan-

- **Earlier occupied the islands**- Having once occupied the Andaman and Nicobar Islands from 1942–1945, Japan is, indeed, well aware of their strategic significance in the Bay.
- **Hydrocarbon reserves**- As a part of the Indo-Pacific the Bay of Bengal is growing in its strategic importance with critical sea routes passing through it and its wealth of hydrocarbon reserves.
- **Changing geopolitical realities**- Like China, which wants to secure its position in the region, Japan too is aware of the changing geopolitical realities.
- **Link with Bay littoral countries**- To enhance its presence across the Indo-Pacific, it is, thus, increasingly trying to develop linkages with the Bay littorals and particularly other South Asian countries.

✓ This explains JICA's investments in infrastructure projects across the Bay of Bengal, providing more economically feasible and transparent alternatives to Chinese projects.

✓ According to **C. Raja Mohan**, India or Japan, on its own, is in no position to become a counterweight to China in Asia. Acting in concert with the United States and Australia and through deeper engagement with the region, India and Japan can contribute to a more stable balance of power in Asia.

- **Moving towards Japan's own security**- It is, therefore, indirectly aimed towards ascertaining Japan's own security presence in the Bay, more so as its Constitution restrains it from extending any overt military assistance to other countries.
- **S. Jaishankar** in his book, **'The India Way: Strategies for an Uncertain World',** mentions that, on the business side, there has been a **perceptible expansion in the presence of Japanese companies in India** and a stronger commitment by those already there. The enabling environment for them has been significantly improved with **specific initiatives to improve their living conditions and travel**. A noteworthy step was the **creation of an Act East Forum** to promote connectivity initiatives in India's North-East region and extend that to Bangladesh and Myanmar. This reflects the maturing of economic thinking into larger strategic policy.

Conclusion-

- **Are India and Japan countering China?** - However, it would be an oversimplification to assume India–Japan's partnership in the Bay as being singularly directed to counter China. Rather, it is an execution of their shared vision of maintaining a stable and prosperous Indo-Pacific, as strengthening the ANI will help in maintaining better freedom of navigation for all powers traversing this maritime space.
- **Tourism potential**- Furthermore, the ANI's pristine conditions harbours tremendous potential for the tourism industry, for which connectivity and infrastructural development is necessary.
- **Commercial promise**- Japan's investments in this front thus bear commercial promise for the country.
- **Growing trust-** Above all, India–Japan collaboration in the ANI is a testament of the growing trust between the two countries; a factor which will be critical in determining the Bay of Bengal as well as Indo-Pacific's strategic future.

- According to **C. Raja Mohan**, "The international system is undergoing transition with a weakening U.S. led liberal order challenged by contesting regional visions. A stronger, comprehensive partnership between Japan and India creates an indigenous and inclusive axis, as well as a credible and stable centre of gravity in Indo-pacific and intra-Asian relations."

Russia-Ukraine war: Is multipolarity the cause of crisis?

Syllabus- **Changing International Political Order**:
(a) **Rise of superpowers**; strategic and ideological Bipolarity, arms race and Cold War; nuclear threat;
(b) Non-aligned movement: Aims and achievements;
(c) Collapse of the Soviet Union; **Unipolarity and American hegemony**; relevance of non-alignment in the contemporary world.

Context- Russia-Ukraine war is changing the global world order from Unipolarity towards Multi-Polarity.

- In words of PM **Narendra Modi,** "India gives top priority to its relations with Russia. In this rapidly changing world, our relation has become more relevant."
- In words of Russia's Ambassador in New Delhi, **Nikolay R. Kudashev**, "The Indo-Russian cooperation that is built in mutual trust and enriching each other is a living formula for the rest of the world."

Understanding the issue of multi-Polarity-

- **Unipolarity vs Multipolarity-** The end of bipolarity ushered in an era of multipolarity, especially since the beginning of the 2000s. The **US's unipolar moment ended not only with 9/11** as many scholars remark but also with the subsequent rise of many Asian powers.
- **Current war resurfaced the issue**- The idea of multipolarity becomes particularly important when assessed in the light of the current Russo-Ukraine war.
- **What is multipolarity**- At the heart of multipolarity lies the idea of the distribution of power and co-dependency. However, this is not to say that there is equal and favorable co-dependency.
- **Hegemony of larger states can be maintained through**- In any crisis, though **smaller and middle power nations** may find themselves in a fix, they become crucial in the attempts by the bigger powers to rally for their cause. The hierarchical and anarchical world order implies that for great powers to retain their top position, they **need to be substantially aided by the smaller and weaker nations**.

- **Need of getting the rules followed**- Even though the global hegemons have set the rules, which can be restraining and not serving the national interests of the non-hegemons, such actions of setting rules **receive validity only through the observance of the same by other nations who are participants in it** and not makers of it.
- **Decline in power of west**- The declining power of the West and the further interconnectedness created due to globalisation allows many countries to strategically use their autonomy to pursue their goals in the global sphere.
  - In words of **Gaurie Dwivedi,** "Russia and China have more than just communism and a dislike for the present rule-based global order in common."
- **Scope of negotiations**- It empowers the non-hegemonic powers by widening the scope of negotiations and allowing for the reconfigurations of certain power dynamics in the global political order.
- **Role of MNCs**- What multipolarity is also coupled with is the technological prowess which has facilitated and is stimulated by the rise of multinational corporations (MNCs).

Case of Multipolarity through the prism of Russia-Ukraine war-

An application of this theoretical background of multipolarity to the current crisis of the Russian aggression against Ukraine demands attention and critical mention of certain events and actions which prove the case on point.

- **Economic sanctions on Russia**- According to the White House's Fact Sheet, "The United States and more than 30 allies and partners across the world have levied the most impactful, coordinated, and wide-ranging economic restrictions in history."
- **Alternatives to the Russian oil and gas**- Countries are now looking for alternatives to the Russian oil and gas imports. The imposition of economic sanctions is supposed to circumvent aggressive and ethically questionable actions by a country.
- **Suspension of business from MNCs**- Several multinationals from around the world have suspended business or have completely withdrawn in the wake of the crisis. Their response to crisis has been more temporary and short-term in most cases, allowing them to return in the aftermath of the crisis and removal of sanctions.
- **Effect of sanctions on Russia**- However, in Russia's case, despite heavy sanctioning, it hasn't surrendered to the global call of halting the war.
  - **Isaac Stone Fish** has argued that "Moscow has more to fear from Beijing than Washington," pointing to Russia's loss of influence in Central Asia, growing Chinese economic influence within Russia, and potential territorial disputes in Russia's Far East.

What were the reasons of a conflict aggravating to a war?

Here, the reasons for going to war may provide some ground of understanding as to why it's also not willing to stop the war.

- **Cold war rivalry**- The war, while it may be influenced by many developments of today, finds its logic in the rivalries of the Cold War even though the immediate cause was to prevent Ukraine from joining the NATO.
- ✓ **Fall of Soviet Union**- The fall of the erstwhile Soviet Union had left a deep impact on the region.
  - In words of **Shyam Saran**, 'Russia retains its position as one of the great powers of the world. It has rich natural resources, a long history of mastery over science and technology and a sense of its own civilisational uniqueness. It has also been nursing a grievous sense of loss and resentment over the loss of its Soviet empire in Eastern Europe and Central Asia.'
- ✓ **Russia and China**- Both Russia and China have joined hands in countering the West's influence and actions around the world since then.
- ✓ **Growing influence of USA**- They have particularly spoken against America's efforts to exclude nations from becoming influential and for suppressing other nations through the imbalanced power relations in the global order.
- **Russia's lost hegemony**- Russia's loss of its exclusive control of Eastern Europe, where countries have now harboured relations with the NATO nations and some have joined the NATO, has served as the reason of the current crisis.
- **Presence of NATO in eastern Europe**- The growing presence of NATO in Eastern Europe makes Russia hesitant of its political and strategic autonomy.
- ✓ It makes Russia deal with the **loss of its hegemony in Eastern Europe** due to the independence of these nations as a result of the end of the Cold War and the offerings of multipolarity.
- **Non-Surrendering of Ukraine**- What was shocking to Russia was Ukraine's response to its comparatively overpowering might and its choice to not surrender to its terms or rampant formidable acts of violence on its territory.

Impacts of the war-

- **Humanitarian disasters**- The United States has spoken vehemently against the humanitarian disasters due to the war and the infringement of a sovereign country's right to autonomy in action and decision-making.
- **Excluding Russia globally**- The war helps America rally the world in its favour by excluding Russia from global trade and multilateral organizations.
- **Relax sanctions on Venezuela**- It is also in deliberation to relax sanctions on Venezuela at this moment despite sanctioning it for the Maduro government's anti-democratic behaviour and the plight of its citizens due to the denial of basic right to life with dignity.
- ✓ The sanctions have caused greater harm to the already volatile and plummeting socio-economic situation in the country.
- **USA's stance wrt India's stand**- The fact that America has also chosen to be accepting of India's oil deal with Russia given its interest to have a major Asian power as a strong ally to counter China's expansionism in the Indo-Pacific is in contradiction with its stance on the war.
- **Strategic diplomacy**- India has also **balanced between Russia and the United States** through its strategic diplomacy while calling for peace and dialogue engagement to end the war.

- According to **Srinath Raghavan**, post-cold war, relations became transactional and centered on military technology & spares. Today their bilateral ties are heavily reliant on defence cooperation, while the economic partnership remains negligible even as the respective relations of the two with other states have grown rapidly

Conclusion-

- **Global liberal order is under threat**- Russia's invasion of Ukraine is suggestive of one thing in particular that the global liberal order is under threat and the multiple centers of power have created vulnerable interdependencies.
- **Does multipolarity created conflict?** - This poses the question of whether multipolarity is inherently ridden with the capacity to create conflict and whether multilateralism has ended up giving more space to them.
- **Need to find solutions**- If this is true, then is it possible to find solutions within the form of multipolarity and the actions as well as the theoretical objectives of multilateralism?
- **Multipolarity poses threat to multilateralism**- However, it's also imperative to consider that multipolarity in itself poses threats to multilateralism. The biggest failure of multipolarity can be seen in the ability to gather a united collective (both of countries and normative/ideological support) against Russia's aggression.

How can India make its technology policy powerful, innovative, and secure?

Syllabus- Evolution of the International Economic System: From Bretton woods to WTO; Socialist economies and the CMEA (Council for Mutual Economic Assistance); Third World demand for new international economic order; **Globalisation of the world economy.**

Context- Need of a powerful technology regulatory policy in India in midst of changing global geopolitical equations

Questions that need to be asked in Indian perspective-

1. Can we ever rein in the Big Tech firms to foster indigenous innovation, stimulate balanced growth, and protect national sovereignty?
2. Can we have a balanced set of rules and a clear framework to safeguard larger public interest?
3. Can we check the weaponisation of the internet with balanced cybersecurity and secure data governance framework to make Google (Alphabet); Apple; Facebook (Meta); Amazon; and Microsoft, besides others, more responsible and resilient?

Impact of Big tech in our daily lives-

- **Control daily life-** Look around, Big Tech run most of the digital services that are integral and ubiquitous to our life. Our minds, economy, national security, democracy, and progress are invisibly controlled by a few technology firms.
- **More powerful than governments-** they wield immense power. **For example**, Alphabet (Google), Meta (Facebook), and Amazon platforms dominate global digital advertising with 74 percent mindshare and influence.
- **Monopoly and threat**- Such monopoly in search, advertising-intermediation, the duopoly of mobile OS (Apple and Google), and controls threaten sovereignty.
- **Dominance of data control**- The dominance of data and services by Big Tech leads to the concentration of excessive power, making economies heavily dependent, disrupting the financial systems, the economy, and geopolitics. Often, this also stifles fair business conduct, competition, data protection, and data-sharing.
- According to **John Xavier**, Lawmakers and regulators in the U.S., E.U., Australia and U.K. are going after Big Tech firms' anticompetitive practices. Last July, U.S. lawmakers probed Facebook's Instagram acquisition, Apple's App Store dominance, Google's advertising practices and Amazon's treatment of small sellers, because they are impacting the day-to-day activities hugely.

- As per **Ishan Patra**, "Social media giant Facebook, which rebranded itself as Meta, with a focus to bring the metaverse to life, is also under scrutiny for endorsing Instagram to children and young adults despite possible harms".

Contemporary changes in the Big-Tech-

- **Internet sanctions-** An interesting case is Internet sanctions, intimidation, and emergence of splinternet by the Big Tech during the Russia-Ukraine conflict.
- **Retreat of globalisation**- For sure, globalisation is in retreat, as digital walls are erected around race, religion, nationality, or linguistic affinities, fragmenting the internet to control tech-mediated processes.
- **Growing trust deficit**- The growing trust deficit is evident as the US-based Big Tech firms accuse Russia's sovereign internet (Runet) to control people, elections, and society, whilst **Russia blames the US for its aggressive, national, cybersecurity strategy**—and seeks to stay immune. **In response, Russia blocked access to Meta's Facebook and Instagram, and Twitter**. Apple, Microsoft, and Netflix have also limited their presence in the country.
- **Self-contained ecosystem with market dominance**- A case in point is Apple or Google duopoly which lock-in people in a self-contained ecosystem with market dominance. This is **detrimental to consumers, competition, and innovation across sectors and devices**. Internet gatekeepers must nurture open, fair, and collaborative digital markets and citizen-centric initiatives.

NOTE- It is important to note that **regulatory gaps must not allow lax governance of digital markets and allow personal data to be traded transnationally**, hurting citizens' rights and choices. Limiting the market power of Big Tech requires indigenous alternatives. Addressing systematic issues that mar digital platform services can help make our browsers, virtual assistants, and messaging or social media apps stay neutral and unbiased.

Data protection regulations

- **Large open internet market in India**- As one of the largest open internet markets, India is working on a comprehensive data privacy framework to boost the digital economy whilst keeping personal data secure.
- **Need of strict rules**- On 16 December, 2021, post two years of discussion on the Personal Data Protection Bill, the Joint Parliamentary Committee submitted its report. The upcoming rules are aimed at implementing stringent security safeguards. This is a welcome step, as **India's rules are weak, as compared to 'gold standard' data protection legislation** like General Data Protection Regulation (GDPR).
- **Safeguarding illegally accessed data**- To ensure greater fairness in the allocation of value created by data, it is imperative to safeguard illegal access to Indian data by foreign governments.
- **Obligation on consumer**- India must lay out the rights and obligations on the use of consumer and corporate data generated in smart gadgets, goods, and machinery.
- **Ease to access data**- Users of smarter, connected devices must be able to access data generated by them, and share it with other companies, if they want.

- According to **Rishab Bailey**, "there does not appear to be sufficient reason for government agencies to be exempted in toto from basic provisions of the Bill such as the need to put in place data retention norms, appoint data protection officers, or ensure security safeguards, etc. This is particularly relevant when one considers that not all processing by law enforcement entities needs directly concern their law enforcement functions".
    - As per **Vikramjit Banerjee**, "The biggest question is that of freedom of speech. Social media companies enjoy an immunity — they are not considered responsible for the contents posted on them, on the ground that social media is merely a platform or a sort of a glorified postbox".

What is the need of the hour?

- **Need of transparent AI**- As artificial intelligence (AI) and deep analytics continue to replace human decision-making in our society, concerns are being raised about the openness, ethics, purpose, and accountability of the machine learning algorithms, rules and regulations. To make automated decision-making unbiased and free from discriminatory outcomes, algorithms must become transparent.
- **Algorithmic transparency**- Algorithmic transparency is a must to tame Big Tech platforms. The rankings they generate, such as news featured on top or products recommended must be explainable. Removing barriers to data sharing and developing cross-sector interoperability standards for data is vital.
- In the words of **Bhaskar Chakravorti**, "Big Tech has seen the writing on the wall. Motivated by the harms done by the "infodemic" of COVID untruths, misinformation during elections and the fallout from the siege of the US Capitol, the major platforms have tightened their rules. Their message: Even US presidents can be de-platformed for bad behaviour: Exhibit A: Donald Trump, banished from Twitter and Facebook"

Role of AI and opportunity for India-

- **Rise of AI**- Artificial intelligence (AI) has already become the dominant form of intelligence on Earth and impacting the future of the human race. Winning the battle for the supremacy of the world in economic competitiveness and national security call for AI supremacy.
- **Need of national vision for AI**- To become a dominant, self-reliant, global force in technology, India must act on a national vision to produce a team of National Champions in Technology and Innovation by 2025 who would lead us in AI.
- **Govt must fund these firms-** To become self-reliant, the government should fund and support these firms to advance sophisticated apps of AI.
- **Global examples**- There is something to learn from China's Baidu, Alibaba, Tencent, iFlytek and WeChat; or from Russia's Yandex (Russian Google), VK (Russian Facebook), or Runet (Russian Internet). Benchmarking against the global best is the only way to excel.
- **Need of political consensus**- Without political consensus, it won't be possible. As the platforms control access to the internet, be it through monopolies of search engines, duopolies of app

stores, or devices, India must encourage indigenous technology innovations by start-ups, build resilient architecture, and open-APIs and a cybersecurity command centre.

- As per **Abhishek Singh**, "India's **"AI for All" strategy** focuses on responsible AI, building AI solutions at scale with an intent to make India the AI garage of the world — a trusted nation to which the world can outsource AI-related work. AI solutions built in India will serve the world".

Conclusion

- **Need of strict laws in cyberspace**- We must act now to reimagine the jurisprudence of Cyberspace and quickly look into how laws can help India gain legitimacy in cyberspace and plug in the legal loopholes in this space.
- Relegating this to rhetoric will pose an existential national threat that will impact our ability to think.
- **Opportunities**- Opportunity beckons India to make its technology policy powerful, innovative, and secure to protect national sovereignty, fair competition, inclusive innovation diffusion, consumer rights, privacy, market efficiency, economic growth, and human progress.

India's oil imports: Trends in diversification

Syllabus- Recent developments in Indian Foreign policy: India's position on the recent crisis in Afghanistan, **Iraq and West Asia**, **growing relations with US** and Israel; the **vision of new world order**.

Context- In the pandemic year 2020-21, over 84 percent of India's petroleum product demand (crude oil and petroleum products) was met with imports. Gross petroleum imports of about 239 million tones (MT) of value US$77 billion accounted for over 19 percent of India's total imports in 2020-21.

DATA-

- In **2019-20**, over 85 percent of petroleum product demand was met with imports.
- **Gross petroleum imports** of over 270 MT of value US$119 billion accounted for 25 percent of India's total imports.
- **Trend**- This is a substantial increase compared to 2006-07, when oil imports of about 145 MT accounted for about 77 percent of consumption.

Risks associated with growing imports

In the **early 2000s**, the growing volume of crude oil imports was seen to be associated with two key external risks for India's energy security.

1. **Volume risk-** The first was the volume risk, which originated from the fact that most of the global conventional oil reserves and most of India's oil imports were concentrated in the Persian Gulf.

✓ It was assumed that the political and social volatility in the Persian Gulf region increased the possibility of deliberate oil supply disruptions by state or non-state actors.

2. **Price risk**- The second was the price risk, which was the probability of a dramatic increase in the price of oil in the international market on account of, amongst other things

a) instability in oil producing regions
b) reduction in supply on account of policies adopted in producing countries
c) international sanctions against oil procurement from specific countries.

NOTE- **Volume risk in oil supply was prioritized** over the price risk and addressed with strategies such as diversification of oil import basket and acquisition of equity oil assets around the world.

- The **Economic Survey** had projected growth for 2022-23 at 8-8.5 per cent assuming crude oil prices to range between $70-75 per barrel. Elevated crude prices will not only be inflationary but also pose risks on the fiscal front and the external sector.

Diversification of oil import sources

- **Diverse sources**- In 2006-07, India sourced crude oil from 27 countries and in 2020-21 India sourced crude oil from 42 countries. However, this cannot be interpreted as an increase in diversification of oil import sources.
- **Top 20 accounted for 95% imports**- The top 20 sources of India's oil imports consistently accounted for over 95% of India's oil imports and the top 10 countries accounted for over 80% in the last 15 years.
- **Share of Persian Gulf-** The share of Persian Gulf countries in India's crude imports has remained at around 60% over the last 15 years.
- **Share of Africa**- The share of imports from Africa has decreased from about 17% in 2009-10 to about 13% in 2019-20, and the share of South American countries has increased from about 6% to about 12% in 2019-20.
- **DATA**- Countries from the Persian Gulf, Africa, and the South America have accounted for over 80% of India's top 10 oil importers.
- **Crude sourcing decision optimization-** The dominance of relatively cheaper suppliers from these regions indicates that crude sourcing decisions are optimized at the refinery level rather than at the country level.
- As per **Ameya Pimpalkhare**, "India's domestic production of natural gas can only partially fulfil the expected increase in demand in the coming years, and the country will have to increase its imports to fill the gap. Such dependence on external sources makes the country's energy security vulnerable to regional and global events".

NOTE- Essentially, refinery economics rather than geopolitics influenced decisions on sourcing crude.

Recent trends in India's crude import basket

- **Iraq and Saudi**- The top oil exporter to India in 2020-21 was Iraq followed by Saudi Arabia. **Iraq's share in India's imports increased** from about 9% in 2009-10 to over 22% in 2020-21. Though Saudi Arabia lost its long-held position as the largest source of India's oil imports to Iraq in 2017-18, **Saudi Arabia's share has remained steady between 17-18% of India's imports over a decade.**
- **USA**- Interestingly, the USA that was not among the top 20 oil exporters to India a decade ago, it was the 18th largest exporter in 2017-18, ninth largest in 2018-19, seventh largest in 2019-20, and **fourth largest in 2020-21**.
- **Illegality of crude oil export from USA**- Apart from the fact that **crude oil exports from the USA were illegal until 2015,** USA was also a large net importer of crude oil. With the growth in production of shale oil, the USA is now not only a net exporter of crude oil but also the **world's largest producer**.
- **Impact of USA as India's exporter**- The entry of the USA as India's 4th largest source of oil imports breaks the trend of Saudi Arabia, Iraq, Iran, Kuwait, the UAE, Nigeria, and Venezuela dominating India's top five oil import sources for over two decades.
- **Russia**- Russia, the country to come under Western sanctions in 2022, is not a large source of India's oil imports but it has remained in India's long portfolio of oil importers for over a decade. Russia's share in India's crude imports was **less than 1% until 2017-18** when Russia started

featuring among India's top 20 oil import sources with a share of about 1.4%. In **2021-22** (April to January), Russia's share in India's oil importers was **2.3%,** which put Russia **among India's top 10** sources of oil imports.

- As per **P S Raghavan**, "In any conflict- Europe worries Russia will turn down gas and oil supplies- driving energy prices up. Already tensions have pushed oil prices up 14% in a month past $90 and analyst say they could hit $125 a barrel if the situation is not resolved".

Issues

- **Supply insecurity**- The context that called for diversification of oil import sources was one of supply insecurity. Supply disruptions in the Persian Gulf was a high-impact event to which high-probability was attached and diversification of supply sources was seen as the rational response, given that countries in the region account for over 60% of India's oil imports.
- **Less chances of oil supply disruptions-** Though oil supply disruptions in the Persian Gulf is a high-impact event even today, the probability of occurrence is not as high as it was assumed to be in the era of the war against terrorism.
- **Demand insecurity**- More importantly 'demand insecurity' and the consequent competition amongst oil exporters to gain market share in India, one of the few large growth markets for oil around the world, is influencing diversification more than supply-insecurity.

Conclusion

- The competition for oil markets has been introduced for the first time in several decades, oil exporters from the western hemisphere notably the USA and Russia, amongst the top 10 oil exporters to India.
- Geopolitical sanctions may introduce minor short-term aberrations in India's oil import basket, but this cannot alter longer-term economic trends.

The 2022 IPCC Climate Mitigation Report: Our final chance to reach 1.5 degrees

Syllabus- Contemporary Global Concerns: Democracy, human rights, **environment**, gender justice, terrorism, nuclear proliferation.

Context- The latest instalment of the IPCC Sixth Assessment Report, titled 'Climate Change 2022: Mitigation of Climate Change' was released on 4 April 2022.

What does the report signify?

- **Progress made in climate mitigation**- This report paints a broad picture of the progress made in achieving climate mitigation targets and presents a comprehensive discussion on the effectiveness of and challenges confronting the climate mitigation enterprise.
- **Window of opportunity is closing**- Despite the growing cognizance that the window of opportunity to fight climate change is fast closing, the recent **decade of 2010–2019 registered the highest Greenhouse Gas (GHG) emissions** in human history, notwithstanding that the average annual growth in GHG emissions (1.3 percent) during this decade was lower than the previous one (2.1 percent, 2000-2019).
- **What needs to be done now?** - This implies that the average annual growth rate would have had to decline even further to have averted this decade recording the highest GHG emissions.
- **What is the status of NDCs**- Even the updated Nationally Determined Contributions (NDCs) are expected to fall short of what is required to bend the temperature curve to 1.5°Celsius.
- **Can we limit the temperature rise to 1.5 degrees?** - Although executing these updated NDCs would lead to decline in GHG emissions, the global emissions by 2030 implicated by such execution would breach pathways compatible with 1.5°Celsius by a large margin.
- As per the **IPCC report**, "Globally, heat and humidity will create conditions beyond human tolerance if emissions are not rapidly eliminated; India is among the places that will experience these intolerable conditions"
- As per **Jignesh Mevani**, "Although the IPCC does not prescribe policy decisions. But the near inevitability of climate emergencies has pushed the expert panel to underline building people's resilience, especially that of the most vulnerable."
- In words of **Amitabh Sinha**, "We have the clearest picture of how the Earth's climate functions, and how human activities affect it. We know, better than ever, how the climate has changed in the past, how it is changing now, and how it will change in the future".

Data on rising temperature-

- **2010-19-decade emission**- The 2010–2019 decade also recorded the highest average annual emission levels for all GHG gases.
- **Rising CO2 in 2019-** A remarkable increase in current 2019 emission levels compared to 1990 was demonstrated by CO_2 from fossil fuel and industry rising by 15 GtCO2-eq yr^{-1} and by 67 percent, highest amongst all GHG gases in absolute terms and second highest in percentage terms.
- **Major sources of CO2 emissions**- At the global level, GDP per capita and population growth have been identified as the main sources of CO_2 emissions resulting from fossil fuel combustion in 2010–2019.
- **Increasing demand of CO2 despite deteriorating environment-** Increase in aggregate demand following population growth and the need to increase incomes, in certain cases for achieving a decent standard of living and in others, in pursuit of untenable prosperity are driving the main culprit of climate change, CO_2 emissions.

Who is responsible for GHG emissions?

- **Households**- Households belonging to the top income decile are responsible for 36–45 percent of global GHG emissions.
- **Middle and the poorest income groups**- From the perspective of a sustainable lifestyle, the emissions generated by the consumption patterns of those belonging to the middle and the poorest income groups in emerging economies is 5–15 times lower than those belonging to the same group in the high-income countries.
- **Inequality in distribution of the carbon budget-** This inequality in distribution of the carbon budget amongst the various income groups is glaring and unfair. If this continues, the use of the remaining carbon budget will not be aligned with achieving the Sustainable Development Goals.
- **Need of a clear roadmap**- It is critical that a clear roadmap is articulated, one that emphasises the utilisation of this remaining carbon budget for uplifting the poor and the marginalised, minimising income, gender and other inequalities, boosting expenditure on improving health and educational outcomes, and overcoming impediments that affect the achievements of other SDGs.
- As per **Amitabh Sinha**, "Based on increased observations and a better understanding of processes, we now know that the extent and magnitude of climate change impacts on nature are greater than previously assessed. The impacts we see today are appearing much faster, they are more disruptive and more widespread than we expected 20 years ago".

Takeaways from 6th IPCC report-

- **Limiting to 1.5 degrees is possible**- A key takeaway of the IPCC report is that while bending the temperature curve to 1.5 degrees Celsius is very difficult, it is possible.
- ✓ **Needs immediate action**- It demands immediate action which implies that nations including India will have to revisit their NDCs and net-zero targets if the globe is to peak before 2025, nearly halve the GHG emissions by 2030, and reach net-zero carbon emissions by 2050.

- **Challenge for India-** This is going to be extremely challenging for a nation like India which requires to increase its per capita GDP and will witness population growth till 2050, both strong drivers of CO_2 emissions.

1. **Availability of climate finance**- One facet of this challenge is in terms of the availability of climate finance and the nation's absorptive capacity to utilize this finance effectively.
2. **Required pace of transition**- Another worry associated with the required pace of transition is how compatible will such a swift transition be with being just.
3. **Sustaining SDGs-** It is also critical that while investments are climate friendly, they have to cater to achieving the Sustainable Development Goals.

- ✓ Hence, the investments will have to simultaneously chase both environmental and social goals which makes fetching such finance even more difficult.
- ✓ India will have to address all of these concerns in a plan that holistically caters to both the Paris Agreement and the 2030 Agenda.

- According to **Alok Sharma**, UK minister who presided over Glasgow summit, "The science is clear, the impacts of the climate crisis can be seen around the world and if we don't act now, we will continue to see the worst effects impact lives, livelihoods and natural habitats".

Obstacles and solutions in achieving emission reduction-

Certain obstacles have been identified for the strategies of emissions reduction.

- **Fossil fuel is less expensive-** Fossil fuel-based energy carriers and feedstocks are relatively less expensive than biomass or electricity-based alternatives.
- **Cost-benefit ratio**- The report acknowledges that while technologies for enabling low to zero emissions in all industry sectors do exist, leveraging them for cost and emission reductions demands '5 -15 years of intensive innovation, commercialization and policy.'
- **Boosting interventions-** This can boost the scaling up of interventions required to reduce the emissions intensity of the primary production and reduce the need for primary production itself.
- **Rising production cost**- This will nevertheless significantly raise production costs of basic materials like steel, cement, plastic, pulp and paper, and chemicals.
- **Role of government**- Here, the government can play an important role in encouraging R&D, providing tax concessions and production linked incentives to support production and commercialization of these technologies and interventions, and formulate other favorable policies that will help the producers and adopters of these technologies and interventions to thrive in the market.
- **Need to upgrade R&D**- To leverage these transformational changes better, it is critical to invest in and engage more with them. There is a need to direct focused research on understanding these transformational interventions better and more appropriately estimate their costs.

Conclusion

- While the general spotlight in terms of GHG emissions has been on the energy sector, the net-zero targets necessitate that some of this spotlight be shifted to industrial emissions.

- The IPCC report has thrown light on the challenges involved in mitigating industrial emissions and in doing so provided the clue for the way forward. This article has built on this clue to delineate solutions to these challenges.
- As per **UN climate change**, "All nations that have not yet done so, still have the opportunity to submit ambitious NDCs. Nations that have already submitted new or updated NDCs still have the opportunity to review and enhance their level of ambition".

Can India shape the global policy for Web 3.0?

Syllabus- Recent developments in Indian Foreign policy: India's position on the recent crisis in Afghanistan, Iraq and West Asia, growing relations with US and Israel; **the vision of new world order**.

Context- When the Indian economy was liberalised and opened up for global participation in the early 1990s, the Indian technology companies, primarily were offshore service providers to the developed economies.

- The rise of the Indian Information Technology Enabled Services (ITES) sector in the subsequent decade was also boosted by the Y2K opportunities.

What factors led to the rise in digital business globally?

- **Rise of internet**- During this time period, the rise of the internet and internet-enabled technology or digital businesses globally were largely captured by the companies from the developed nations.
- ✓ **Web 1 and Web 2**- So, the genesis of the Web 1 and Web 2 phases of the internet businesses were largely western-led and even influenced by them.
- **Rising influence**- Some of these large global platforms have even influenced the global social and political narratives.
- **Case of India**- India did not have the necessary economic or consumption heft in the initial years of the internet, to be able to participate in the policy development around internet governance and the internet possibilities.
- According to **Ravi Shankar Prasad**, "Electronics manufacturing in India has doubled in last few years. India was home to only two mobile phone manufacturing units in 2014. But today, it stands tall in the global community as the second largest mobile phone manufacturer, with 268 mobile handset and accessories manufacturing units having started functioning in last five years".

The phases of Web

- **Web 1** - When the internet was conceptualised, the Web 1 version as it is now seen, had very little opportunity for its users to interact.
  - ✓ The web pages were static, essentially only readable without possibilities for interactivity, and was terribly slow, thanks to internet connectivity speeds available then.
- **Web 2**- Web 2 powered the users to use content including text, video, hosted services, web applications.
  - ✓ However, we also saw the emergence of large internet platforms, **owned by few corporations f**rom the developed economies, primarily the US.
  - ✓ These entities, in effect, 'control' the narratives across these platforms, be it what the world sees or reads, and at times even what and how the world consumes as digital commerce.
- **Web 3**- With the emergence of Web 3, it simply is built on the concept of decentralization of the nature of how the Internet is controlled or influenced, and to redirect equal power to the actual content creators.
  - ✓ Its basis is the blockchain philosophy (distributed ledger platforms).
  - ✓ While this is getting popular in the Web 3 developer communities globally, the widespread commercial usage of blockchain is still on the rise.
  - ✓ Web 3 is becoming popular amongst the Indian startup space, and it has been able to secure investments to the tune of over US $500 million in the past few months alone.
  - ✓ As per **George Mathew**, "Given the rapid rise of digital banking, digital payments, and FinTech innovation, it is very critical to develop digital infrastructure to support digital banking, which has enormous potential in India".
  - ✓ In the words of **TV Mohandas Pai**, "Even China, with its larger digital population, has not emulated India's commitment to supporting a fair and open local market for global companies across industry segments, especially those that are digital. These guidelines have been intentionally designed so that India's next-gen digital media innovators can propel the acceleration of value generation and inclusive empowerment of their local users, while global companies that have large user bases in the country can also align with a common framework that protects creators and consumers alike."

Rise of Metaverse-

- **What is metaverse?** -The other not-yet-understood fast-shaping Web 3 space is the Metaverse. This concept of an 'alternate digital universe', that would exist alongside of our nature-made universe, is already catching up fast with celebrities and global consumer brands alike.
- **Issues related**- Especially since this idea is palatable to the youngsters. Therein lies the issue of comprehension to the older humans, including the regulators and policymakers globally.
- **Funding from private sector-** On the other hand, the private investors and technology investors are pumping in large funding for these Web 3 ideas.
- In words of **Rinku Ghosh**, "The problem with creating another sphere of reality is just that — it is created. It's a man-made extension of wish fulfillment, where things are valued according to mutually-agreed-upon covenants and assessment over actual utility and purpose. Simply put,

what you can't get in the here and now, you can get in a parallel universe by willfully surrendering to a myth of your own making".

Policymakers and Big Techs

- **Anti-trust problems with the Big Tech companies**- At least over the past decade, governments predominantly in the Americas and Europe, have had anti-trust problems with the Big Tech companies and platforms.
- ✓ Billions of dollars of such regulatory fines have been levied.
- ✓ **Example**- For example, recently the European Union (EU) agreed to sign off on a new anti-trust regulation ("Digital Markets Act") that would curb the market dominance on the internet economy.
- **Worries for government-** The governments have had mix of rightful concerns, as well as worries that emerge from fear of 'losing political control'.
- ✓ **Issue of safety and privacy**- The issues of a safe society that plague the policymakers include intrusiveness of emerging digital technologies that could test the sovereignty of the State, consumer data misuse, privacy issues, spreading of false narratives and any bias in the algorithms that could influence unfair means.

Opportunity for India

- **Right opportunity for India**- It is precisely the right opportunity for the governments globally, and especially the Indian policymakers to make a diverse list of technologies that they want to adopt in their policy decisions formally.
- **Rise of India in technological field**- India has shown gumption in using technology for the past many years, as a path-breaking innovator—be it in E-governance or inclusive low cost high innovation-led access to financial markets, etc.
- **Opportunity to be among the rule setters**- This is the opportunity for India to also decide if it wants to be at the head of the global table in setting how the standards, protocols, policy thinking around Web3 should be formulated for the global society to follow.
- In the words of **Mark Zuckerberg**, "We're thinking about what the next generation is going to look like in terms of where these creators and developers are going to come from who are going to build the foundation of the metaverse. **I think it's obvious India is going to be a huge part of that"**.

Concerns for India-

- **Need to take quick decisions**- But here lies the need for speed in polity decision and policy thinking.
- ✓ Unlike Indian crypto policy debate, which has swung wider more than a pendulum, and taken long time without any outcome (yet). We are still worried about other Web 3 usage like NFT or crypto tokens.
- **Governance structure**- With Metaverse, the concerns also revolve around governance structures of these entities and how their IP would be governed.

- **EULA** - Also, the usually adopted EULA (End User License Agreement) will create concerns as to which national jurisdiction those are enforceable.
- **Privacy concerns**- And more importantly, the privacy concerns still continue to haunt this sector, and the policymakers equally.

Recent developments-

- **NASSCOM report**- A NASSCOM Industry report on Crypto Tech has estimated that over 8 lakh new jobs could be created by the year 2030 in the Indian Web 3 industry.
- ✓ Industry analysts worry that this may be impaired by the lack of regulatory clarity, and in the absence of proactive policy formation around Web 3.
- **Migration to Dubai and Singapore**- Already Indian Web 3 entrepreneurs have started moving to Dubai and Singapore which offer better regulatory space to setup and scale such ventures.
- ✓ While these numbers might seem tiny now, it should not avalanche into large interests (talent and capital) moving along or the local industry segment becoming mere back-end talent providers (like ITES).

Conclusion-

- If we can establish what we want as a nation from technology, and participate in the global policy conversations, India can be a significant leader in the Web 3 economy.
- We have the brain power, talent, but now need to bring our policy capabilities to the fore. After all, as part of the Indian trust-based policy impetus, Web 3 policies would be an acid test.
- For we can now shape Web 3 as our strategic economic moat for the 21st century digital economy.

The geopolitics of the green mobility transition

Syllabus- Contemporary Global Concerns: Democracy, human rights, **environment**, gender justice, terrorism, nuclear proliferation.

Context- In the immediate aftermath of the Russian invasion of Ukraine and the sanctions imposed on Russia by western nations, trading on the Moscow Stock Exchanges was halted for several days. But curiously, trading in a particular commodity was halted on the London Metal Exchange also.

- The said commodity was **Nickel** whose price quadrupled as the invasion began and before trading was halted.

IMPORTANCE OF NICKEL

- Nickel is an important metal in lots of areas, most importantly **steel**, where nickel is a vital ingredient of stainless steel, particularly grades that are used in construction and automotive manufacturing.
- But nickel is also a vital element used in **batteries**.
- In fact, **Nickel-Metal Hydride (Ni-MH)** batteries were the first mass-scale rechargeable batteries made.
- Even though lithium has replaced nickel as the 'core' element used in most large rechargeable battery systems today, from consumer electronics such as laptops and smartphones to electric vehicles, the primary battery technology used in the space is something called **Lithium-Nickel, Manganese and Cobalt (Lithium-NMC).**
- Given the differences in elemental weight between lithium and nickel, the **amount of nickel by weight in an average electric vehicle battery is significant.**
- A recent study by the International Energy Agency (IEA) estimates that in a sustainable development scenario, **battery demand from EVs will grow 40 times between 2020 and 2040**, leading to a staggering **41-fold increase in the demand for nickel**.

What are the consequences of the price rise of Nickel?

- **Dependency on Russia**- The massive rise in the price of nickel has sent shockwaves through the global steel industry but it is forcing manufacturers of electric cars to figure out alternative sources of finished nickel other than **Russia**, where almost 12 percent of the annual yield of nickel comes from, however, it is **Indonesia** that is the world's largest nickel extractor accounting for a third of the world's production.
- And it is not just nickel that creates a problem, lithium itself poses a significant issue.

- **Environmental concerns regarding the extraction of lithium**- The four largest proven reserves of lithium are in **Argentina, Chile, Australia, and China**. Significant reserves have been prospected in **Bolivia, Peru, and even the United States** (US) but **environmental concerns regarding the extraction of lithium** have hampered mining efforts.
- **Future prospects in India-** It is believed that more reserves of lithium can potentially be discovered going forward in other parts of the world, including **India**.
- **Growing demands of Lithium**- However, given the immense demand for lithium, not just in cars but also for the billions of devices that use lithium-Ion batteries, without significant new mining operations, a **lithium-crunch** will be upon us sooner rather than later.
- **Adverse impact of China**- And this is without factoring in the elephant in the room, **China** whose companies control much of the global lithium supply.
- The largest lithium ore mines in the world in **Western Australia** are controlled by Chinese companies. Chinese firms have also made inroads into the **Atacama Desert** for lithium extraction.
- **Extraction of cobalt**- However, it is in the **Congo**, where the most problematic aspect of Lithium-NMC batteries lie—the extraction of cobalt. **Chinese firms** have made deep inroads into the cobalt mining industry in the Congo, and this is in addition to a significant 'cottage' industry of mining cobalt that takes place in one of the poorest regions in the world with little or no monitoring of safety let alone human rights.
- Cobalt is the dirty issue that the global automotive industry and even celebrity teenage environmentalists deliberately choose to ignore.

What can India learn from China in this aspect?

- **Rising EV in India**- However, India which wants to rush headlong into electric vehicles and give up its dependance on importing billions of dollars of crude oil would do well to notice how China is mopping up the lithium supply chain extremely efficiently.
- **Lithium refining inside China**- In addition to mopping up resources, China refines much of the lithium inside their borders and while 'battery packs' are often produced at large 'giga factories'—to use the term coined by Tesla's Elon Musk—the cells are produced in China.
- **IPR in EV Batteries**- Chinese firms, especially CATL and BYD have accelerated their development of intellectual property in the battery space.

What is the state of India in Nickel?

- **Has prospect but is failing**- India will be one of the largest markets in the world for battery-powered vehicles, but has failed miserably at either acquiring the material resources required for this transition across the world or significantly prospecting for it.
- **Example**- The **closure** of the **Sterlite Copper plant in Tamil Nadu** due to misguided protests has led India to become a net importer of copper.
- **Importance of Copper for India**- Indeed, more than lithium or nickel, the largest metal component required in the battery, drive system of electric cars is copper.

- **Problems for India**- Mining in India is hampered by environmental concerns and rent-seekers. This is a policy that desperately needs to change, India should not transition from being dependent on Arabian petro-states to being dependent on China to power its transition to green mobility.
- **Need of LFP in automobile industry**- Without sufficient resources of any of the metals required in Li-NMC batteries, India should encourage its automotive industry to explore LFP systems more aggressively.

✓ This will have the added benefit of being **more environmentally sustainable** as well.

- **Why will Li-NMC be still preferred**- There is little doubt that the energy density and weight advantages of Li-NMC batteries will remain, which is why their continued use in very high-end automotive applications where weight and power are critical such as performance cars and motorcycles will likely continue.
- **Li-NMC in 2-wheelers**- Weight being critical in two-wheeler applications, there could also be Li-NMC use in 'high-power' commuter electric two-wheelers. But as the spate of thermal runaway incidents has proven, India might need to take a relook at which types of electric two-wheelers, it promotes.
- **What can be the area of production for India**- Promotion of smaller 'medium' power and range electric two-wheelers would be more appropriate for India from both a cost and usage perspective.
- In words of PM **Narendra Modi**, as Russia is an importat player in Nickel production, "India gives top priority to its relations with Russia. In this rapidly changing world, our relation has become more relevant."

India-Russia relations-

- In words of **Shyam Saran**, 'Russia retains its position as one of the great powers of the world. It has rich natural resources, a long history of mastery over science and technology and a sense of its own civilisational uniqueness. It has also been nursing a grievous sense of loss and resentment over the loss of its Soviet empire in Eastern Europe and Central Asia.'
- While France and the United States have not yet been able to implement their nuclear power plant projects in India, Russia has been developing the **Kudankulam site** in Indian Far South
- The **International Energy Agency's World Energy Outlook** projects that India will account for almost 30 percent of global energy demand growth, and for 11 percent of global energy use by 2040

✓ Russia has one of the world's largest reserves of natural gas. India has begun its shift toward natural gas while Russia has been keen to expand its gas markets away from Europe

  - **Shyam Saran** in his book **'How Ind Sees the world'** has pointed out that for India, the Ukraine crisis has introduced a new element of discomfort as it seeks to maintain its traditional relationship with Russia without spoiling its growing partnership with the US. It is also uncomfortable over the tightening embrace between Russia and China, which can only work to India's disadvantage.

- According to **Nivedita Menon**, current period of geopolitical flux is exactly the time for the two sides to bank on their 'special and privileged strategic partnership' to pursue a multi-vector foreign policy.

✓ The most important, critical takeaway from the relationship for both countries is the **strategic space they provide each other** to deal with the US, China and other great powers.

Conclusion

- **Examples of Suzuki and Toyota**- However, the positive moves being made by Suzuki and Toyota with regards to using LFP battery systems on their upcoming vehicles should be applauded, and when the country's largest carmaker goes down this route, others will likely follow.
- **Need of Mineral survey of Lithium in India**- If indeed, LFP becomes the dominant technology used in electric vehicles in India, we would also need an urgent mineral survey to see whether India has commercially-viable lithium resources.
- **India's automotive sales**- India's automotive sales peak pre-COVID stood at around 3 million passenger cars, and this is expected to touch 5 million passenger cars by the end of 2030, even if 30 percent of all passenger cars sold by 2030 are electric, India will need, just for passenger cars alone over 15MT of refined lithium.
- **Global opportunities**- Indian companies looking to explore cell manufacturing should explore global opportunities to secure lithium resources just for India's immediate needs alone.
    - According to **Nivedita Menon**, current period of geopolitical flux is exactly the time for the two sides to bank on their 'special and privileged strategic partnership' to pursue a multi-vector foreign policy. The most important, critical takeaway from the relationship for both countries is the strategic space they provide each other to deal with the US, China and other great powers.