

9 PM Compilation

29th May to 3rd June, 2023

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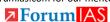
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General

Studies

Paper -1

General Studies - 1

1. Uncertain showers – on weather forecasting capabilities of India

Source: This post is created based on the article "**Uncertain showers**", Business Standard on 1st June 2023.

Syllabus Topic: GS Paper 1 – changes to the geophysical phenomenon

Context: Despite the near-certainty of an El Niño this year, the IMD maintains its prediction of a 'normal' monsoon.

Why IMD is predicting a normal rainfall?

The IMD's expectation of a normal monsoon despite El Niño is based on the Indian Ocean Dipole (IOD) phenomenon, which involves a temperature swing between the western and eastern Indian Ocean.

The IMD believes the IOD could favour rain development and offset the reduced rains from an El Niño.

However, it's important to note that IODs are not as strongly linked to plentiful rains as El Niño is to reduced rains.

Why an accurate prediction of rainfall s necessary?

The distribution of rainfall, both spatially and temporally, will be crucial. Significant deficits during July and August, particularly in central India, could impact agricultural output. More accurate assessments can be derived from the IMD's extended range forecasts that provide a fortnightly prognosis.

Therefore, States and the Centre must redouble efforts to convey accurate, timely information to farmers, using all available information channels, down to the block level.

2. Who should own the world's lithium?

Source- The post is based on the article "Who should own the world's lithium?" published in "The Hindu" on 2nd June 2023.

Syllabus: GS1- Economic geography. GS3- Economy

News- Significant reserves of lithium have been found in Jammu and Kashmir.

What is the status of India's lithium industry?

India's electric-vehicle market was valued at \$383.5 million in 2021. It is expected to expand to \$152.21 billion in 2030.

India imported 450 million units of lithium batteries valued at \$929.26 million in 2019-2020.

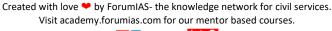
The ongoing global transition to low-carbon economies, the rapid expansion of AI, and 5G networks will greatly reshape global and regional geopolitics. The access to and control over rare minerals will play a crucial role in these changes.

Who should own these minerals?

In July 2013, Supreme Court of India ruled that the owner of the land has rights to everything beneath down to the centre of the earth.

The Supreme Court also recalled that the Union government could **ban private actors** from **mining sensitive minerals**. It is already the case with **uranium under the Atomic Energy Act** 1962.

Yet, large areas of land, including forests, hills, mountains, and revenue wasteland are **publicly owned.**





How do other countries manage lithium reserves?

In Chile, the government has designated lithium as a **strategic resource**. Its development has been made the **exclusive prerogative of the state**. The state has issued only 2 licenses to produce lithium in the country.

In April 2023, Chile's president announced a **new "National Lithium Strategy**". The new strategy calls for public-private partnerships for future lithium projects.

It will allow the state to regulate the environmental impact of lithium-mining, distribute the revenue from lithium production fairly among local communities, and promote domestic research into lithium-based green technologies.

Bolivia's new constitution gave the state the control and direction over the exploration, exploitation, industrialisation, transport, and commercialisation of natural resources.

It has **nationalised lithium** and adopted a **hard line** against private and foreign participation. This is believed to be one of the factors for the country's failure to produce any lithium at a **commercial scale**. Bolivia's current president seeks to change that.

The President wants to join hands with other Latin American countries to design a 'lithium policy' that would benefit all their economies.

Mexico's president has also nationalised lithium in February this year.

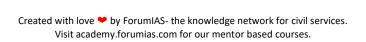
In general, the countries in Latin and South America are thinking through ways and means to pursue a multi-pronged strategy.

The actions of these governments are also a response to the **mobilisation of Indigenous Peoples** in the region who want to hold corporations and governments **accountable**.

What is the way forward for India?

The appropriate development of the lithium sector will require a very high level of effectiveness on the part of the Indian state. It is necessary to meet its multiple goals of social wellbeing, environmental safety, and national energy security.

Much of India's mineral wealth is mined from regions with very high levels of poverty, environmental degradation, and lax regulation.



Forum AS

General

Studies

Paper –2

General Studies - 2

1. 9 Years, 1 Big Footprint – on India's foreign policy

Source: The post is based on the article "9 Years, 1 Big Footprint" published in The Times

of India on 30th May 2023.

Syllabus: GS 2 - India's Foreign Policy

Relevance: achievements of India's foreign policy

News: The article explains India's foreign policy in the nine years of the current government.

How has India's foreign policy been in the last nine years?

Voice of the Global South: India has taken various initiatives like Neighbourhood First, SAGAR, Quad, I2U2 and International Solar Alliance.

With these initiatives, **India has been perceived as a voice of the Global South**. These initiatives have also made India recognisable as a responsible development partner globally.

De-risking Economy: The pandemic highlighted the need for de-risking the economy from the dependence of others. In this reference, India opted to promote domestic growth through Make in India, PLI schemes and Gati Shakti.

India with its foreign policy has also focused on exploring global opportunities, building deep strengths, absorbing technology and best practices, and expanding employment.

Digitization: The government has expanded its digital arena by collaborating with countries and exchanging knowledge and technical skills.

India's diaspora: India conducted various mobility agreements like Vande Bharat Mission, Operations Ganga and Kaveri to safeguard its professionals and students abroad.

First Responder: India has emerged as a First Responder in disaster situations of Türkiye, which shows its capabilities and diplomatic skills.

Expanding Diplomatic ties: While India is continuously expanding its diplomatic relations with strategically important countries, it is also taking efforts to expand its relation with other countries like the Pacific Islands, Caribbean, Nordic nations.

Relations with Neighbours: India has taken various projects with its neighboring countries like the development of road, rail and waterway connectivity, power grids, fuel pipelines and border crossing facilities.

This development in the infrastructure has also increased trade with the neighbouring nations. The help India provided Sri Lanka amid its economic crisis has also received a lot of attention globally.

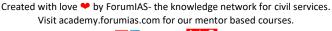
In addressing the challenges from the neighbours, India has deployed robust military in the border areas to ensure that the status quo is not unilaterally altered by China.

Along with this, various policies and actions have been taken to delegitimize and respond to cross-border terrorism from Pakistan.

Promoting India's Cultural Heritage Globally: India has taken efforts to promote its cultural heritage globally like the celebration of yoga and propagation of ayurveda.

Other Initiatives: India has also taken various initiatives in the field of climate action, counterterrorism, connectivity, maritime security, financial inclusion and food security among others.

India has also set examples for other countries in some of these fields and it has shared its expertise with other countries. Due to which, it has gained global appreciation.





2. The lack of teachers in higher education

Source: The post is based on the article "The lack of teachers in higher education" published in The Hindu on 30th May 2023.

Syllabus: GS 2 - Education

Relevance: Reasons behind shortage of faculties in higher educational institutions

News: Faculty shortages in India have become a permanent issue and obstacles remain in finding a solution to faculty shortages.

What are the obstacles in finding a solution to faculty shortages?

a)) lack of reliable data on current faculty shortages in colleges and universities and b) the partial understanding of faculty shortages as merely a quantitative issue.

Why is there no reliable data on faculty shortages?

In 2009, the task force set up by the Ministry of Human Resource Development said that there is no standing mechanism to collect the information on vacant faculty positions.

The report called for a standing mechanism to monitor the size and quality of faculty and suggested that data on faculty members should be made available on the website of every academic institution.

However, even after more than a decade, most academic institutions have incomplete websites containing only partial information about their faculties.

Moreover, the government collects data on the number of faculty members, for the annual All India Survey of Higher Education (AISHE).

However, **AISHE** is a voluntary process for various institutions and the data provided by the institutions is also not verified by any independent agency.

Most colleges also have adjunct faculty members and even ghost members. They are often counted as part of the regular faculty.

Hence, all these issues make it impossible to get a reliable estimate of faculty shortages.

Are shortages a quantitative issue?

Shortages of faculty is not only a quantitative issue. There are other factors also involved in it like:

First, there may be a **demand supply gap** of faculties in some places because the number of faculty members varies across disciplines, institutions and locations. Therefore, the gap between the demand and supply needs to be addressed.

Second, faculty shortages for most of the public institutions occur due to the **lack of funds.** Almost all state universities, despite the need for faculties, are unable to hire them because they do not have sufficient funds.

Third, many private colleges show unwillingness to hire faculties because their **motive is to earn profit**. They hire less faculties and make them do more work. They also hire less qualified people to keep costs down.

Fourth, the reservation of caste in the public institution also creates problems in hiring faculties from the specific caste. Because the reservations reduce the pool of qualified people. It also leads to vacant positions due to the unavailability of qualified applicants.

Fifth, positions also remain vacant due to the **unwillingness among faculty members** to work at select institutions due to their unfavourable location and/or the working and living conditions.

Sixth, there may also be **qualitative issues for the vacant positions**. Despite a huge number of candidates for faculty positions, only a small proportion of them may be competent for the post.

Hence, there is a need for a robust policy to address the issue of faculty shortages.





3. From Master of the Roster to Master of all Judges?

Source- The post is based on the article "From Master of the Roster to Master of all Judges?" published in "The Hindu" on 30th May 2023.

Syllabus: GS2- Functioning of judiciary

Relevance– Issues related to constitutional position of judges of SC.

News- Recently, a Division Bench of the Supreme Court, in Ritu Chhabria v. Union of India gave its decision on bail related matters.

What was the decision of the Division Bench of the Supreme Court, in Ritu Chhabria v. Union of India case?

It affirmed an undertrial's right to be released on default bail in the case of incomplete investigation and proceeding beyond the statutory time limit.

It criticised the practice of investigative agencies charge-sheeting an accused despite the unfinished investigation. It held that the right to be released on bail will not end despite the filing of a preliminary charge-sheet.

It concluded that an accused's right to seek default bail would be terminated only upon completion of the investigation within the **statutory time limit**.

What was the response of the court of CJI to recall application by the Union against Ritu Chhabria judgement?

The Court of the Chief Justice of India (CJI) entertained a **recall application** moved by the Union of India against this judgement.

It passed an **interim order** directing courts to decide bail applications without relying on the decision laid down in Ritu Chhabria for a short period of time.

The Court of the CJI indirectly stayed the decision despite not having any connection with the verdict.

What are the issues related to the interim order passed by court of CJI in the recall application filed by the Union government?

Ordinarily, the only recourse available to the Union of India was the filing of a **review petition**. It is usually decided by the same Bench. There was no scope of the **review petition** being entertained by the Court of the CJI.

A recall application cannot be filed against a judgement before a different Bench. It is equivalent to bench fishing or forum shopping.

The Court of the CJI has effectively instituted a mechanism by entertaining an intra-court appeal. The mechanism has not any legislative or constitutional backing.

The order has the effect of enlarging the powers of the CJI on the judicial side. It can create an unprecedented intra-court appellate mechanism within the Supreme Court.

What is the position of the CJI in relation to other judges of SC?

Within the **constitutional scheme of things**, all judges of the Supreme Court are equal in terms of their judicial powers. However, the CJI enjoys special administrative powers such as constituting Benches. He assigned matters and references for reconsideration of a larger Bench.

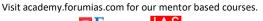
The CJI is known as the Master of the Rooster. He is regarded as 'first amongst equals' in relation to companion judges.

In any given Bench including the CJI, the **vote or power** given to the CJI is the same as that of his companion judges.

History is replete with examples of the CJI authoring a **minority opinion** of the Court.

Most Commonwealth countries such as the U.K., Australia and Canada have this system in place.

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The U.S. has a system where all the judges collectively exercise power and render decisions.

What are the issues related to the master of the roster?

The **legitimacy** of the **power of Master of the Roster** has been hotly debated. There are instances of abuse that are a **cause for concern.**

Just five years ago, four senior judges of the Supreme Court alleged **serious irregularities** in the **administration and assigning of cases** for hearing to Benches of the Court.

The powers vested in the CJI by his virtue of being the Master of the Roster are unending. It is impractical to **lay any limits** on these powers, meant for the **smooth administrative functioning** of the Court.

It is imperative that the CJI himself refrains from expanding his powers as **Master of the Roster**. The practice of constituting Benches and allocating cases should be **completely computerised** and left out of the hands of the CJI.

The CJI's powers as the Master of the Roster are meant only for **administrative decision-making**.

4. The Rural Wage Rule GOI Must Relinquish

Source: This post is created based on the article "The Rural Wage Rule GOI Must

Relinquish", published in Times of India on 30th May 2023.

Syllabus Topic: GS Paper 2, Social Issues, mechanisms, laws, institutions and Bodies

constituted for the protection and betterment of these vulnerable sections

News: The rural development ministry issued an order making Aadhaar-based payments compulsory for all NREGA wages from feb 2023. This is creating huge problems.

Before this order there were 2 wage payment options: "account-based" and "Aadhaar-based".

The Aadhaar-Based Payment System (ABPS) is supposed to find the latest Aadhaar-linked accounts.

What are the issues associated with ABPS?

ABPS has no demonstrated advantage over account-based payments. It often leads to problems like wages being redirected to Airtel wallets unknowingly, and rejection problems are harder to solve with ABPS.

Only 43% of all NREGA workers were eligible for ABPS wage payments when the order was issued. It led to a situation where a majority of workers were "unpayable".

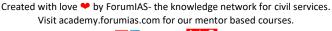
In many cases, job cards of ABPS-ineligible workers are being deleted to meet the target of 100% ABPS eligibility.

Frontline NREGA functionaries are struggling to implement the new order. They are avoiding assigning ABPS-ineligible workers work at NREGA worksites.

An impression that ABPS payments are relatively corruption-proof exists, but there is no evidence of this. Aadhaar-linked accounts are especially vulnerable to fraud. In fact, it is one of the top fraud types listed by the National Payment Corporation of India in its updated 'Fraud Liability Guidelines' for Aadhaar-enabled payments.

What should be course of action?

Making Aadhaar-based payments compulsory is counterproductive. What is needed is a retraction of the January 30 order and a review of the Aadhaar-based payment option to ensure a reliable and timely payment system for NREGA workers.





5. Our DPI approach is just what the world was seeking

Source: The post is based on the article "Our DPI approach is just what the world was

seeking" published in Live Mint on 31st May 2023.

Syllabus: GS 2 – E-governance, International Relations.

Relevance: About India's digital public infrastructure (DPI) approach.

News: Recently, few global organisations have endorsed India's digital public infrastructure (DPI) approach.

What is DPI and how India is approaching it?

Must read: <u>India's Digital Public Infrastructure (DPI)</u> and associated challenges - <u>Explained</u>, <u>pointwise</u>

Which organisations have endorsed India's DPI?

The **Shanghai Cooperation Organisation (SCO)** agreed to assess, evaluate, and adopt DPI with an interoperable approach to digital inclusion to the extent possible.

India and the European Union have agreed to take steps to accelerate the development and deployment of DPI in other countries in an effort to build open, inclusive digital economies and societies around the world.

The Joint statement from the QUAD and G7 countries formally recognised the transformative power of DPI in supporting sustainable development and delivering economic and social benefits to the people of the Indo-Pacific.

How DPIs are developed generally?

Digital services can either be developed by private companies or by the government.

When private companies deliver digital services, their motive is profit and commercialization. They do not focus on a citizen-centric approach. Further, leaving these services completely to private companies denies governments necessary sovereign control over critical government services.

Whereas, **leaving digital services completely in the hands of the government**, results in a level of state surveillance that is unacceptable to most democratic nations.

Why are various international organisations taking an interest in India's DPI approach? India's DPI offers a better-balanced approach. It combines technology, markets, and governance to create large-scale digital ecosystems that are controlled by countries.

This approach allows countries to have flexibility while also benefiting from the power of markets and private enterprise. The aim is to promote inclusive and competitive services for their citizens.

Therefore, this kind of approach is usually looked at by the developing nation because they do not want to be left on the mercy of private players nor do they want to act as a surveillance government by solely taking up the responsibility.

How will DPI benefit the nations?

By adopting the DPI model, **countries can design fully interoperable solutions** that meet their specific national requirements using secure, privacy-preserving solutions that is required for large population.

The DPI approach will also enable countries to maintain control over the systems they build and have the freedom to adjust the underlying protocols according to their specific national objectives.

Finally, the spread of India's DPI approach will enable India to play an important role in leading and guiding the world and be a rule maker rather than a rule taker.





6. Universal cover - IRDAI's plans to expand risk protection levels need government backing

Source: The post is based on the article "Universal cover – IRDAI's plans to expand risk protection levels need government backing" published in The Hindu on 31st May 2023

Syllabus: GS – 2: Issues relating to the development and management of Social

Sector/Services relating to Health.

Relevance: About all-in-one insurance policy.

News: Insurance Regulatory and Development Authority (IRDA) is devising a "UPI-like moment" in the insurance sector by planning an all-in-one insurance policy.

About India's insurance sector

Earlier, the Indian insurance sector was a public sector-led industry. But now with the entry of private players, India's insurance penetration (the ratio of premium payments to GDP) has risen—from 2.7% in 2001-02 to 4.2% in 2021-22. This is a slide in the metric over the past decade from 5.2% in 2009-10. Further, non-life policies are yet to surpass 1% of the total mark.

About the all-in-one insurance policy

Must read: All--in--one policy plan to spread insurance in India

What will be the expected benefits of an all-in-one insurance policy?

- -State government's involvement and the creation of state-level insurance committees would help formulate granular district-wise strategies for raising awareness and coverage levels.
- -Industry players need to look beyond the top cities and the 'Bima Vistaar' scheme could catalyse the volumes they need to get out of their comfort zones.

What more should be done to make all-in-one insurance policy work?

India is a country where one health calamity can push a household below the poverty line. So, the Centre needs to **rethink the 18% GST levy on health and life insurance premiums**.

The IRDA underwent a nine-month vacuum before the appointment of the current chairmen. To make policies work the government should ensure a continuity of leadership in the IRDA.

7. Using Buddhism as a tool of soft power

Source: The post is based on the article "Using Buddhism as a tool of soft power" published in "The Hindu" on 31st May 2023.

Syllabus: GS2- International relations

Relevance: About Buddhist diplomacy of India and China.

News: Recently, the Global Buddhist Summit took place in New Delhi in April.

What are some facts about Shakyas after Buddha's death and its importance for Indian diplomacy?

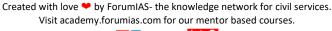
The **Shakyas who ruled Kapilavastu** after Buddha's Parinirvana did not have an army. Many were massacred. The remaining Shakyas fled to different parts of the country.

Many also went to the Kathmandu Valley. They were granted a status comparable to that of the **Vajracharya priests**, but were not permitted to practise **priesthood outside of their families.**

Therefore, in **Golden Temple** Shakyas alternate as temple caretakers and conduct all the rituals. This is one of the few temples in the Kathmandu valley where a **1,000-year-old tradition** continues.

Nepal accepted a grant from the Government of India to renovate portions of the **Golden Temple complex.** But, it has created a controversy.

Many locals believe that India was only interested in this project because it is the temple complex most **frequently visited by Chinese tourists**.





What are some facts about the Buddhist diplomacy of China?

China is home to around 245 million Buddhists, 28,000 Buddhist monasteries, 16,000 temples, and 2,40,000 Buddhist monks and nuns. This makes Buddhism an important soft power for China.

China has added **religious overtones** to China's existing portfolio of cultural and linguistic diplomacy. The **state religious system** is supporting the growing **political and economic power** of China abroad.

Beijing pursues a **multifaceted and flexible approach** to promote Chinese Buddhism abroad. Its approach varies depending on whether the **target country** is Buddhist-majority, Western, or one of China's Asian competitors.

As a source of Buddhism, the Chinese look to Nepal rather than India. The popular temples in Beijing have a connection with Nepal.

China utilised **Buddhist narratives alongside infrastructure investments** in Sri Lanka. China would prefer to use its own version of Buddhism as a **tool of soft power**.

In Nepal, a popular rumour is that China will send **five million Buddhist pilgrims** and establish hotels and other businesses through its investment arms as a big soft power push.

What are some facts about Buddhist diplomacy in India?

For India, Buddhism provided an identity of **peace and tranquillity** after independence when there was **intense violence and division** between Hinduism and Islam.

There has been usage of **Buddhist symbolism** as a means of escaping difficult times. Due to such usage and evidence, India likes to claim Buddhism as its own.

It convened the **Global Buddhist Summit** in April to promote Tibetan Buddhism and the Dalai Lama. There were no Nepal and Bhutan representatives present.

The India International Centre for Buddhist Culture and Heritage is coming up in Lumbini, Nepal. Prime Minister laid the foundation stone in May 2022. This could be seen as an attempt to counter the opening of the Gautam Buddha International Airport in Bhairahawa, Nepal. India's overtures of Buddhism in Nepal began only after 'Buddha is Born in Nepal' became a populist slogan of sovereignty in Nepal.

8. India - Switzerland relationship: Fighting together for a peaceful world

Source: The post is based on the article "Fighting together for a peaceful world" published in the "The Indian Express" on 31st May 2023.

Syllabus: GS2 – International relations.

Relevance: About India – Switzerland relationship.

News: The article explains the foreign policy priorities of Switzerland and its convergence with Indian foreign policy.

What are the foreign policies and priorities of Switzerland at UNSC?

The President of Swiss convened a UNSC open debate on the **protection of civilians** in **zones** of armed conflicts.

There are twin strands in Switzerland's foreign policy – peace promotion and the protection of civilians in zones of armed conflict. Switzerland has been active in pushing forward these principles.

The Swiss Foreign Minister chaired a high-level open debate focusing on **building mutual trust to promote sustainable peace**. It declared that it is time for the Security Council to reflect on its potential for action in the face of the increasing number of crises.





What are the historical reasons behind Switzerland's peace promotion policy?

Switzerland itself has not always been a peaceful country. It was ravaged by **several civil wars** between Catholics and Protestants for a period of up to 300 years.

The last civil war of 1847 led to **deep reflection** for the Swiss people and their political leadership. As a result of this, the Swiss people decided to set up **inclusive federal institutions** to build domestic peace.

Switzerland's history helps to explain the choice of the Swiss government's priorities for its twoyear term in the UNSC.

What are the similarities in foreign policy-related priorities of India and Switzerland?

The priorities of Switzerland are also the same ones ingrained in **ahimsa**. It is the Indian religious and ethical principle of not causing harm to other living things.

India, in whose teachings the **non-violence** values are rooted, is a **natural partner** when it comes to **Swiss foreign policy priorities**.

There are evident convergences between Swiss and Indian foreign policy priorities. Both of which aim at peace promotion. Peace and harmony are also integral to India's G20 presidency vision of Vasudhaiva Kutumbakam.

At this historic moment, Switzerland and India together can contribute greatly to world peace – Switzerland as a non-permanent member of the Security Council in New York, and India by presiding over the G20.

9. Is India missing the graphene bus?

Source– The post is based on the article "Is India missing the graphene bus?" published in "The Hindu" on 1st June 2023.

Syllabus: GS2- Science and Technology. GS3- Economy

Relevance- Issues related to soft power

News– Artificial Intelligence, quantum computing and graphene will disrupt the existing human-machine interface in the next couple of decades.

Why is graphene an important material?

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**. It has the potential to revolutionise **electricity**, **conductivity**, **energy generation**, **batteries**, **sensors** and more.

Graphene composites are used in aerospace, automotive, sports equipment and construction.

It is used for high-performance batteries and supercapacitors, 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 **defence and aerospace**. Its exceptional strength makes it promising material for **armour and ballistic protection**.

Graphene has the potential to absorb and dissipate electromagnetic waves. So, it is valuable for developing stealth coatings and materials that reduce radar signatures and electromagnetic interference.





Graphene is highly **sensitive to environmental changes**. It can be used in sensing chemical and biological agents, explosives, radiation, and other hazardous substances.

What is the status of the graphene industry?

The global graphene market size was valued at **\$175.9 million in 2022**. It is expected to grow at a **CAGR of 46.6%** between 2023 and 2030. Over 300 companies are now producing graphene or its derivatives.

Among the leading countries in **graphene research** are China, the U.S., the U.K., Japan, South Korea, Russia, and Singapore.

Till 2012, **graphene-related patent filing** was dominated by the U.S. After 2017, China surged ahead. In 2018, China filed 218 patents while the other leading countries together filed 79. India had eight filings.

China and Brazil are **global leaders** in the commercial production of graphene. India produces about **one-twentieth compared to China and one-third compared to Brazil**.

What is the progress of India in the case of graphene?

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. Tata Steel has succeeded in **growing graphene**. It has also mixed graphene with used plastic products to recycle them as new.

The IIT Roorkee-incubated Log 9 has patented a technology for graphene-based ultracapacitors, and the IIT Kanpur-incubated RF Nanocomposites has developed EMI shielding and stealth technology using graphene-based nanotubes.

The India Innovation Centre for Graphene has been set up in Kerala. It is being implemented by the Digital University Kerala in partnership with Tata Steel and C-MET, Thrissur.

What is the way forward to improve the performance of the graphene industry in India?

Governments will have to play a crucial role. China declared graphene a priority in its 13th Plan. India needs a **national graphene mission**. A **nodal Ministry** needs to be entrusted with this responsibility.

India needs to be a **leader in graphene** because we may experience the **'winner takes the most'** situation here. its production may get **concentrated in a few locations** in the world, as in the case of semiconductors.

10. A parliamentary democracy or an executive democracy

Source—The post is based on the article "A parliamentary democracy or an executive democracy" published in "The Hindu" on 1st June 2023.

Syllabus: GS2- Parliament and state legislatures

Relevance - Issues related to functioning of Parliament in India

News- The article explains the issue of executive dominance over legislature in case of Parliamentary democracy in India.

What are various safeguards in parliamentary democracies against executive dominance or abuse?

To enact its agenda, the executive must command a **majority in Parliament**. This opens the space for **intra-party dissent**. It provides an opportunity for ruling party parliamentarians other than cabinet members to exercise a **check over the executive**.

The Opposition itself is granted **certain rights** in Parliament, and certain **limited control** over parliamentary proceedings.





The interests of Parliament against the executive are meant to be **represented by the Speaker**. She is a **neutral and independent authority**.

Certain parliamentary democracies adopt bicameralism. A second "Upper House" acts as a revising chamber. The interests of minorities are represented.

How various safeguards in parliamentary democracies against executive dominance or abuse have been diluted in India?

The possibility of intra-party dissent within Parliament has been curtailed by the "anti-defection law". The Tenth Schedule penalises disobedience of the party whip with disqualification from the House.

The Tenth Schedule has failed to curb **horse-trading and unprincipled floor-crossing**. It has strengthened the hand of the party leadership. **Intra-party dissent** is far more difficult when the price is disqualification from Parliament.

The Indian Constitution did not carve out any specific space for the **political Opposition** in the House. There is no equivalent of the **Prime Minister's questions**, where the Prime Minister must face direct questioning.

The manner of proceedings in Parliament are under the complete control of the executive.

There are no **real constitutional checks** upon how that control is exercised.

Speaker, in our system, is **not independent**. The Speaker is not required to give up membership of their political party, and not **constitutionally obligated** to **act impartially**.

Speakers at central and State levels are acting in a **partisan manner** to advance the interests of the executive over the interests of the House.

This has affected the **quality of the deliberation**s in the lower house as the Speaker has control over the **conduct of the House**.

When the ruling party wishes to avoid **effective scrutiny** in the Rajya Sabha over Bills, the Speaker simply classifies the Bill as a **"money bill"**. This was seen in the case of the Aadhaar Act.

The role of the Upper House is undercut by the **ordinance making power.** An ordinance is used as a parallel process of law-making, especially when the executive wants to bypass the Upper House.

How has the constitutional design impacted the working of Parliament?

The only effective check upon the executive is **fractured mandate and coalition government**. In such a scenario, coalition partners can exercise **checks upon the executive** in Parliament. When there is a **single, majority ruling party**, Parliament has **limited powers**.

when there is a single, majority runing party, ramament has numbed powers.

The quality of **parliamentary deliberations** has declined. The situation resembles **presidential** systems with strong executives, but without the checks and balances.

Bills are passed with **minimal or no deliberation**. Parliament sits for fewer days in a year, and parliamentary sessions are **often adjourned**.

11. Getting multipolarity wrong

Source—The post is based on the article "Getting multipolarity wrong" published in the "The Indian Express" on 1st June 2023.

Syllabus: GS2- International relations

Relevance- Shape and structure of world order

News- In his article C. Raja Mohan '**India's multipolar myths**' C. Raja Mohan has dismissed the long held view that the emerging structure of power among nation-states as "multipolar". It is a myth.





What is criticism against the Raja Mohan viewpoints about multipolarity?

Raja Mohan is wrong to imply that the concept of multipolarity suggests an **"even distribution** of power between major powers". The literature on multipolarity does not talk about even distribution of power.

Multipolarity suggests that no single nation-state or two nation-states have the capacity to **exert their power globally**. Hence, they must work along with other powers.

Raja Mohan is also wrong to presume that nations that **advocate multipolarity** have **political resentment** against US power or collective West. This has certainly not been the case with Indian articulation, even during the Cold War era.

India's refusal to join any military alliance was not based on anti-westernism or anti-communism. It was based on an Indian view that was against such a division of the world.

Even American scholars have not always viewed the concept of multipolarity as "anti-American". Samuel Huntington has characterised the post-Cold War distribution of power in the 1990s as "uni-multipolar", rather than "unipolar".

Huntington proposed that global politics has now moved from a **unipolar moment** at the end of the Cold War into more **uni-multipolar decades**. It will culminate into a **multipolar twenty-first century.**

As per Raja Mohan, the world is once again "bipolar" — US and EU vs China and Russia. It underplays the space available for the articulation of national interests of "middle powers". Many nations in Europe, Latin America and Asia assert their **own national interests.**

How has India taken an independent stance in foreign policy choices?

Attempts to push India into a lonely corner, forcing it to **make choices and enter into alliances** have failed in the past. Then, it was a **weaker and less developed nation.**

A stronger and more self-confident India cannot be expected to fall in line. India's relations with the US, China, Russia or any other nation, would be defined by her interests and values.

12. The new Parliament House: More than a building

Source: The post is based on the article "The new Parliament House: More than a building" published in The Indian Express on 1st June 2023.

Syllabus: GS 2 - Parliament and State Legislatures—Structure, Functioning, Conduct of Business, Powers & Privileges and Issues Arising out of these.

Relevance: Deteriorating role of the Parliament

News: The article explains the deteriorating role of Parliament and its increasing irrelevance.

How has the function of the Parliament deteriorated?

Reduction in the **Number of Sittings:** As per the PRS data, there has been a reduction in the average of annual sitting days of the Parliament.

For instance, the 16th Lok Sabha (2014-2019) had a scheduled sitting of just 337 days over a five-year period and lost 16 percent of that time due to adjournments.

Lack of Debates and Discussion: Mostly the proceedings in the Parliament have been stalled due to the ruckus created by the opposition. There is hardly any discussions or debate done on any important bill or a current issue of national importance.

Therefore, it is the duty of the Speaker to permit the Opposition to raise and discuss matters of national importance, even if they are not liked by the ruling majority.

Increasing Role of Executives: Instead of drafting and debating bills in the Parliament by the legislatures, the nation is now governed more by rules, notifications, circulars and guidelines, drafted by the executives.





Misuse of the Majority: The ruling party has misused its majority and downgraded the role of Parliament.

Article 110 requires that money bills must contain only provisions that relate to fiscal and tax issues. A money bill needs approval only in the Lok Sabha and the Rajya Sabha has a limited, recommendatory role.

However, since the ruling party has the majority in the Lok Sabha, they label any bill as a money bill and get it approved in the Lok Sabha.

For instance, in the Aadhaar Act, amendments to several tribunals through the Finance Act, 2017 were certified as money bills and enacted without the approval of the Rajya Sabha.

Degrading Role of Parliamentary Committees: The practice of referring bills to parliamentary committees has dropped sharply in the recent past — from a high of 60 percent to just 23 percent in the current Lok Sabha.

Finance Bills: Finance Bills these days are introduced on the Budget Day itself, which is an unhealthy practice. These bills are then passed without any debate or discussions.

For instance, in 2023, an entire chapter relating to GST tribunals was added and approved on the last date without any debate or discussion. Many of these provisions are violative of decisions of the Supreme Court.

Other Issues: The mandatory requirement under Article 93 of having a Deputy Speaker has not been fulfilled in the present Lok Sabha while the entry of journalists into Parliament has also been curtailed.

Must Read: Performance review: How Parliament has functioned till now

What can be the course of action?

Every member of the Parliament takes an oath under the Third Schedule of the Constitution, which requires them to bear true faith and allegiance to the Constitution of India.

Therefore, the greatness of Parliament is determined by the manner in which their occupants discharge their constitutional obligations.

Further, the constitutional role of our Parliament is to deliberate and enact laws that shape India. Therefore, the new Parliament will not serve the purpose unless the functioning of the Parliament is improved.

13. Why India and China are stronger as partners

Source—The post is based on the article "Why India and China are stronger as partners" published in "The Indian Express" on 2nd June 2023.

Syllabus: GS2- Bilateral groupings and agreements

News- The article explains the potential of bilateral relationship between India and China.

What are the growth prospects of the Indian and Chinese economy?

India has become the **fifth-largest economy** in the world. The **UNCTAD 'World Investment Report 2022'** shows that in 2021, India ranked seventh among the top 20 recipients of foreign direct investment.

India's digital economy is growing rapidly with more than 82,000 start-ups and 107 unicorn companies.

The Chinese economy is rebounding with the first-quarter GDP growing by 4.5% year-on-year.

Employment and prices remained stable. Many international organisations and investment institutions have revised their forecasts upwards for China's economic growth this year.





What is the potential of a bilateral relationship between India and China?

China and India are the most populous developing countries and the top two developing economies in the world. The two countries account for more than 35% of the world's total population and more than 20% of the world's total economic output.

China and India have a decisive impact on human development. The strong economic growth of the two countries has a vital role to play in the global economic recovery.

China and India have also made important contributions to **world poverty alleviation**. Over the past more than 40 years, the Chinese government has lifted more than **800 million people** out of poverty.

From fiscal year 2006 to 2021, a total of **410 million people** in India have been lifted out of poverty.

According to the **forecast of the International Monetary Fund**, the contribution of China and India to world economic growth this year will be over 50.3 per cent.

What is the way forward for India and China bilateral partnership?

Emerging economies like China and India have become **important engines for the recovery** of global economic growth.

There is a need to develop a **strategic and long-term perspective** for bilateral relations. Both countries should pursue a new path of **living in harmony**, **peaceful development**.

14. On Bihar's prohibition policy: A costly ban

Source—The post is based on the article "on Bihar's prohibition policy: A costly ban" published in "Indian Express" on 2nd June 2023.

Syllabus: GS Paper 2 - Social Issues

News: Bihar government amended the stern Bihar Prohibition and Excise (Amendment) Act, which banned liquor in Bihar.

The amendment is moved to relax the rules for release of vehicles impounded for transporting liquor.

Vehicle owners were abandoning their vehicles, captured for transporting liquor, rather than paying hefty fines to retrieve them. It resulted in over 50,000 four-wheelers being parked in 800 police stations across Bihar.

The recent amendment allows the release of impounded vehicles upon payment of 10% of their insurance cover, as opposed to the earlier requirement of 50%.

What are the other changes introduced to the Bihar Liquor Law?

Now first-time drinkers will not be imprisoned. They can pay fine of Rs 2,000 to Rs 5,000 and walk free.

The government has removed community fines, reduced the term of imprisonment for drinking from 10 years to five.

Ex gratia payment in hooch deaths was restored to Rs 4 lakh compensation to the next of kin of victims.

What are the reasons behind relaxation?

It shows that Bihar's liquor policy has not been successful.

Bihar's liquor ban has led to a spike in illicit trade, hooch deaths, and arrests.

The majority of those arrested and imprisoned are from marginalized groups, including Other Backward Castes, Extremely Backward Castes, and Dalits.





15. How To Be A Pal – on India Nepal Relations

Source—The post is based on the article "How To Be A Pal" published in "The Times of India" on 2nd June 2023.

Syllabus: GS Paper 2 - India and its neighbourhood

News: Nepal PM Prachanda visited India for the first time, during his present tenure.

During Prachanda's visit, several agreements were signed, including a transit treaty, bilateral digital payments, and a long-term understanding on power trade, which are positive steps.

However, India needs to consider the changing dynamics of their relations and transform its approach towards Nepal.

What are the changing dynamics that need to be considered in India Nepal Relations?

Changing equation: Over time, the dynamics of the India-China-Nepal equation have undergone significant changes, with strained India-China ties and Chinese incursions.

Strategic battleground: Nepal is becoming a battleground for the US and China. US has entered in the Nepal's political discourse by around the \$500 million US grant. On the other hand, China is pushing for faster implementation of Belt and Road Initiative (BRI).

Awareness of power rivalry: The ongoing Ukraine conflict has made Nepal cautious about not becoming a bone of contention between major powers.

Therefore, Nepal will naturally try to maintain close relations with both India and China.

What should be India's approach towards Nepal?

Soft approach: The unresolved bilateral border issue should be addressed through diplomatic discussions rather than exacerbating tensions. For example, 2015 blockade reversed the goodwill generated by India, before that.

Economic cooperation: India should expedite pending projects in Nepal and follow a needs-based development model.

16. Here's How To Make India's Health Sector Fighting Fit

Source- The post is based on the article "Here's How To Make India's Health Sector Fighting Fit" published in the "The Times of India" on 3rd June 2023.

Syllabus: GS2- Issues related to development and management of health

Relevance- Governance structure of healthcare system in India

News- On almost all health indicators, India ranks last among G20 countries.

Why is colonial legacy responsible for poor health indicators in India?

The Government of India Acts of 1919 and 1935 established health as a state subject.

The India Act of 1919 granted provinces autonomy over health. The Act of 1935 demarcated subjects into federal, provincial, and concurrent lists. It designates health as a provincial subject. The Indian Constitution retained health as a state subject.

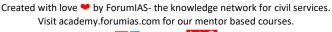
During the Constituent Assembly's debate, Hari Vishnu Kamath and Brajeshwar Prasad had opposed the inclusion of health on the state list.

Kamath argued "national health" had declined under British rule and the government's goal should be to elevate it to **A-1 standards**. Health should be a Union subject to protect the nation from diseases and epidemics. But the Assembly rejected the proposals.

What are the consequences of health being a state subject under the constitution?

The constitutional structure hampers nationwide public health strategies. It restricts Centre's ability to enforce uniform standards and guidelines.

Unequal sector development makes for a stark contrast between states. UP and Bihar have some of the world's worst health indicators. Health in states such as Tamil Nadu and Kerala is comparable to upper-middle-income countries.





The **central health budget** remained negligible since Independence, stagnating at around 2% over several Five-Year Plans. As the Constitution did not mandate an **equal role for the Centre**, the **health infrastructure gap** between states widened.

Regulations were uneven. GoI enacted the **Clinical Establishments Act in 2010** to improve quality and protect patients' rights. It has largely been ineffective as many states and UTs have not implemented it.

State-level drug and device regulations have obstructed uniform drug regulation. The Drugs and Cosmetics Act has a fragmented regulatory approach.

The Centre makes rules for manufacture of drugs but states grant the licences. States have uneven regulatory oversight, variable drug quality, inconsistent standards enforcement, and insufficient protection from unsafe drugs.

What is the way forward to reduce disparities in healthcare across the various regions in India?

The Supreme Court mandated the government implement the **right to emergency and critical care** regardless of people's ability to pay.

Rajasthan has passed a **Right to Health Act**, that provides citizens **free emergency care** at public or private hospitals. Yet Rajasthan cannot achieve the objective of this legislation on its own. The state doesn't control hospitals outside its boundaries.

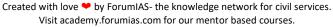
Such a basic right should be **available to all**. But individual states making such laws may not be the most efficient. A **piecemeal approach** by various states will lead to **fragmentation and confusion**.

The **right-to health approach** may increase costs and lead to **potential relocation** of private hospitals to states where their obligations with respect to emergency care are weaker.

A uniform definition of emergency care and role of hospitals countrywide is essential. It should be decided by the Centre.

Over 75 years, there have been advances in technology and innovative approaches. There is a dominant role of the private sector, and increased reliance on **third-party healthcare payment systems**. It is unfeasible for states to manage and regulate health services.

The **15th Finance Commission** also recommended health be transferred to the **concurrent list** allowing for **uniform policy formulation and implementation**.





General

Studies

Paper -3

General Studies - 3

1. <u>Is ONDC really the UPI of e-commerce?</u>

Source: The post is based on the article "Is ONDC really the UPI of e-commerce?" published in Mint on 29th May 2023.

Syllabus: GS 3 - Indian Economy - Digital Economy

Relevance: concerns associated with Open Network for Digital Commerce (ONDC) platform.

News: The article explains the concerns associated with Open Network for Digital Commerce (ONDC).

What is ONDC?

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After the success of UPI, a hype is being created for ONDC that it will revolutionize e-commerce like UPI did with the payment system. However, the situation is different for both.

Why is it inappropriate to compare ONDC to UPI?

Before the launch of the UPI, all debit-based transactions were through a combination of cash exchange, online bank transfers, debit cards, etc. Even before UPI, people hardly used credit cards for payments.

Therefore, the launch of UPI made debit-based transactions easier by leveraging technology. UPI did not compete with any such big players in the market. It only made the existing payment system technology driven.

So, comparing ONDC with the UPI that it will democratize e-commerce by providing technology to the small players, which then will be able to compete with the big e-commerce companies is inappropriate.

What are the challenges with ONDC?

Making Profit: It is argued that ONDC will ensure competitiveness in the market by ending the monopoly of the big e-commerce companies. However, in reality even these big companies suffer in being a profitable.

For instance, it is viewed that platforms like Swiggy and Zomato are exploiting their duopoly power to create super-profits for themselves. However, for the fiscal year 2022, both reported losses.

Hence, even for the ONDC, it cannot be said that it will make huge profits by eliminating monopoly from the market.

Relying on Marketplace Model: One of the aims of ONDC is to create several new vertical marketplaces. However, large e-commerce companies like Amazon have shifted from the marketplace model to a 'full-stack model' or into a platform.

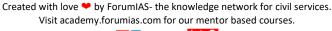
This is because the **marketplace lacks standardization** of pricing, payment terms, logistics, packaging, service levels, returns, resolution of customer complaints, etc.

Therefore, for ONDC, reversal to a marketplace model will bring back all the problems that were inherent in that model.

Ensuring a level playing field: It is argued that ONDC will ensure a level playing field by allowing small sellers to sell their products online.

However, **concerns remain over the efficiency of the ONDC** that how it will make the economic chain efficient while also offering a small player the opportunity to deliver their products to customers in their locality.

Moreover, some people still prefer shopping offline and most small players do not even target customers who care for the convenience of home delivery.





So, any solution that focuses on home delivery is unlikely to benefit smaller players because they can never beat the e-commerce companies on this.

Therefore, imitating the models of the bigger players is probably not the answer because what has worked for them may not work for others.

What can be the way ahead?

Any such new idea that aims to revolutionize requires fundamental change rather than following the same pattern. Else, similar problems will exist like other e-commerce companies.

2. India needs to fill the vacuum of its mid-sized enterprises space

Source: The post is based on the article "India needs to fill the vacuum of its mid-sized enterprises space" published in Live Mint on 29th May 2023.

Syllabus: GS 3 - Changes in Industrial Policy and their effects on Industrial Growth Relevance: concerns with MSMEs

News: India has recently focused more on encouraging entrepreneurship through a variety of programmes and initiatives.

What are some of the initiatives that encourage entrepreneurship?

The government of India launched **a Startup India** in 2016. This increased the recognised startups from 442 in 2016 to 92,683 in 2023. The **Startup India Seed Fund Scheme** has also funded many businesses.

However, along with these initiatives, there is also a need to scale-up the firms.

Why is there a need to scale-up firms?

As per the MSME Annual Report of Government of India (2022-23), the micro sector makes up for over 99% of the total estimated number of MSMEs. The small sector has 0.33 million enterprises and the medium sector has only 5,000 firms.

Therefore, **India needs policies that transform firms from a micro to mid-size stage because** it is the mid-sized firms which hold greater potential to grow into a large firm.

According to a Mckinsey report, India is home to over 600 large firms that are 11 times more productive than average and contribute around 40% to total exports.

Therefore, to utilize this potential, India needs to promote micro firms and overcome its challenges.

What are the challenges faced by micro firms?

Click Here to Read

Hence, scaling up is required for micro firms. **This is because scaling-up enables** firms to adopt newer technology, get access to different markets, and streamline production processes, along with boosting productivity.

What measures have been taken to scale up micro firms?

There are two major areas to focus for improving the ease of doing business and transitioning to larger firms – a) to simplify as well as streamline the regulatory framework, and b) promote access to capital.

In the context of streamlining the regulatory framework, finance minister Nirmala Sitharaman stated that there has been reduction in compliances along with decriminalizing various legal provisions.

This is important because a high regulatory burden disincentivizes firms to grow and firms prefer to stay small in size and outside the ambit of the formal system.

Additionally, various schemes have attempted to ease access to credit, especially for firms that have remained outside the formal credit system.





For instance, the **Udyam Assist Platform**, functions with the goal of bringing informal micro enterprises under the formal ambit to help them avail benefits under India's priority sector lending rules.

Another notable scheme is **PM SVANidhi (Prime Minister Street Vendor's Atmanirbhar Nidhi)** that provides credit to small entrepreneurs such as hawkers and street vendors.

Must Read: MSMEs: Significance, Challenges and Solutions - Explained

What can be the way ahead?

MSMEs form the backbone of the economy. Therefore, it is a huge responsibility to ensure that the schemes initiated for aiding growth among micro and small firms are implemented effectively.

3. Save The Summit – on ecological threats of mountaineering

Source: The post is based on the article "Save The Summit" published in Live Mint on 29th May 2023.

Syllabus Topic: GS Paper 3 -Environmental Degradation

Context: Commercialization of Himalayan expedition has become an ecological threat for the mountain.

The first official ascent of Mt Everest was made by Tenzing Norgay and Edmund Hillary 70 years ago. Over the decades, many others, including Junko Tabei (1975, Japan) and Bachendri Pal (1984, India) achieved this feat. However, with the rise of commercial expeditions in the 1990s, these expeditions became a threat to the mountains.

What are threats associated with commercialization of the Himalayan Expedition? It has resulted in issues like 'traffic jams' and 'garbage mountains' on the mountains. Mountaineering has become an ecological threat.

Over-commercialization and overcrowding are resulting in events like Joshimath flood.

What should be done?

Countries need to recalibrate their approach to mountain tourism and climbing to ensure the long-term preservation of the Everest region.

4. Why is the 1.5 degree Celsius target critical?

Source: The post is based on the article

"Why is the 1.5 degree Celsius target critical?" Published in The Hindu on 29th May 2023. "Fighting climate change" in Business Standard on 29th Mat 2023.

Syllabus Topic: GS Paper 3 -Environmental Degradation and Climate Change

Context: The article discusses the importance of the 1.5-degree Celsius target.

World Meteorological Organization's (WMO) recently released reports indicate that by 2027, the average global temperature will exceed 1.5 degrees, a critical point beyond which there may be no return.

The report has also predicted that 1.5 degree Celsius temperature rise will happen over the next five years rather than the originally predicted timeline of 2033-37, due to el-nino factors.

Initially, for decades 2 degrees was an acceptable level of warming. However, Small Island countries opposed it as it threatened their survival. The 1.5°C target was officially recognized by the Intergovernmental Panel on Climate Change (IPCC) in 2018.

1.5°C target implies average planetary warming to 1.5 degree.

What is the significance of a 1.5-degree target?

The IPCC's 2018 report outlined the consequences of crossing 1.5-degree threshold. The report outlined potential outcomes, including more frequent and intense heat waves, droughts, heavy rainfall, a rise in sea levels, and destruction of ecosystems.





What are the causes behind crossing the threshold?

Developed G7 nations, responsible for a significant share of greenhouse gas emissions, have largely failed to fulfill their climate action pledges.

Countries such as Australia, the U.S., Japan, Russia, and Canada have made little progress, while China, Iran, and Saudi Arabia also rank low in climate performance.

The recent cyclone "Mocha", which hit Myanmar and Bangladesh earlier this month, exemplified these heightened risks.

Now, Covid Pandemic and Ukraine crisis have added to the rising threat.

How recent G7 summit is trying to tackle the climate change?

At leaders' summit in Hiroshima, the G7 claimed that its own emissions have peaked. It means the bulk of the responsibility now lies with major emerging powers such as China and India. The final communique asked all major economies to ensure that their individual emissions do not continue to rise after 2025 and reiterated claims to hit net zero by 2050. However, G7 country's claim is not rightful, because:

- 1. First, the cut-off year of 2025 has not been mandated by any international agreement.
- 2. Second, it is difficult to understand the G7 claims of reaching peak emissions when major powers such as Germany, struggling with lower gas supplies from Russia.
- 3. Third, developed countries have committed to spending just \$100 billion per year in support of climate action in developing countries.

What are the impacts of rising temperatures on the Weather Events?

There is a mass loss of glaciers in High-mountain Asia, Western North America, and South America.

The WMO's reports suggest an increase in precipitation anomalies and marine heat waves relative to marine cold spells.

Climate change exacerbates food insecurity, displacement, and mortality while negatively affecting crop yields and increasing the risks posed by agricultural pests and diseases.

How does it impact India?

India has been experiencing increased impacts of climate change, including extreme weather events, hotter temperatures, and unpredictable monsoons.

As per India Meteorological Department, India saw 573 climate disasters, causing 138,377 deaths, between 1970 and 2021.

However, India has performed better on Climate Change Performance Index 2023 than many developed nations. India's performance has been a result of Green Hydrogen Mission and the introduction of green bonds.

5. Better numbers in private projects

Source- The post is based on the article "Better numbers in private projects" published in the "Business Standard" on 29th May 2023.

Syllabus: GS3- Indian economy and growth

Relevance- Investment in the Indian economy

News– The article explains the recent trend of investment growth in the Indian economy and its implications for the economy.

What is the role of the state and financial entity in the economy?

State is a small part of the economy. Almost **all output and jobs** are made in the private sector. State actions **create incentives** for private people to invest.





In this fundamental sense, **public policy** is not a game of muscular action in the economy. It is the game of **establishing conditions** in which the private sector will engage in **investment in the economy.**

Similarly, the financial system should best be seen as **creating conditions for non-financial firms** to build the economy. **Policy and finance** are the means to achieve vibrant growth.

What are indicators for measuring investment in the economy?

One measure of investment activity is the year-on-year growth of **net fixed assets (NFAs)** of large non-financial firms. This is data about the **annual flow of investment** by large firms. NFA growth has declined steadily from about 25% real in 2007-08 to about 0% real in 2021-22.

A good leading indicator of investment is found using the **CMIE capex database**. It tracks all large investment projects. The methods for the database have been consistently in place from 1995 onwards.

All clear projects with a distinct name are measured in the database. It shows up in various disclosures by the firm and by the state.

What is shown by investment indicators related to the stock of value of private projects under implementation?

It has declined from 2011-12 onwards. Things have now changed.

It was at its **bottom in 2020** at a value of about 47 trillion. There was a **slow recovery from 2020** and a **sharp gain in early 2023**. The latest value is at around 55 trillion. It is 17% real above the bottom. The **long decline** has reversed.

This is an important positive change in Indian economic conditions. The present value of the **stock of private investment** is far low as compared to the **peak value of 2011**. But, it is back to the levels last seen in 2018.

What do macroeconomics say about multiplier impacts of demand generation?

A demand impulse generates a **multiplier effect**. Increased private investment impacts the entire economy. **Increased purchases and employment** generate **greater demand**.

This triggers many **good responses**. These are **greater borrowing, greater purchases** of durable goods, greater investments in business plans, and non-workers transitioning into unemployment.

Could the present optimism related to high investment can lead to significant recovery? Under the macroeconomics aggregate lies a lot of things. Some firms are faring well and some firms are collapsing.

The **limitations of firm resolution** in India have led to the **excessive survival of impaired organisations.** The rising investment of recent quarters may lift all the firms.

The upsurge in private projects under implementation should reflect an upsurge in investment in the NFA data.

The upsurge in the flow of investment expenses should trigger a significant scale of the "multiplier effect" gains in demand and employment?

The modest macroeconomic recovery should lead to broad-based investment and high growth rate.





6. Manipur violence: SOS from Imphal

 $\textbf{Source: } \textbf{The post is based on the article "Manipur violence: SOS from Imphal"} \ \textbf{published in}$

the Indian Express on 30th May 2023

Syllabus: GS 3: Security issues – Internal Security.

Relevance: About Manipur violence.

News: The Union Home Minister has pitched for dialogue and promised to deal a fair hand to all stakeholders in resolving the Manipur violenceManipur violence. Ahead of Union Home Minister's visit to Manipur violence has once again erupted.

What are the reasons behind the unrest in Manipur?

Must read: What is behind Manipur's widespread unrest?

What is the present state of Manipur violence?

The breakdown of trust between the Meiteis and Kukis only seems to have widened over the days. There have been reports of mobs attacking the houses of legislators, police stations and looting armouries.

The case in courts over the granting of tribal status to the Meiteis is yet to be settled through the Supreme Court. All evidence points to a crisis of governance, with mobs controlling the street and the administration missing from the scene.

Even legislative units seem divided along communal lines, with community/tribe affiliations proceeding over party loyalties. Overall, the crisis made peace in the entire region at stake.

What will be the impact of Manipur violence on regional security?

Must read: Manipur unrest and its impact on regional security - Explained, pointwise

What is the role of Myanmar in the Manipur unrest?

Read here: Junta Connection - For Manipur, India must revisit its Myanmar Policy

What the Center and States should do to address Manipur violence?

a) The first task before the government is to step in, to restore law and order and gain public trust. For that the central forces should be deployed adequately, **b)** A strong political leadership is necessary to get the warring parties, who have a long history of distrust, to sit across the table and start talking, **c)** The political leadership needs to address the legal conundrum. This should address questions about development, employment and educational opportunities, land ownership and usage and so on.

To counter multiple factors in play in Manipur, the government needs a multi-layered approach which involves judicial, political, and social levels.

7. Why reduction in manpower is bad for the Indian Army

Source- The post is based on the article "Why reduction in manpower is bad for the Indian Army" published in "The Indian express" on 30th May 2023.

Syllabus: GS3- Security

Relevance- Issues related to armed forces

News- Two big ideas are being pushed by politicians and bureaucrats masked as initiatives of the Armed Forces — right-sizing and Atmanirbharta.

Why the ideas of right-sizing and Atmanirbharta pushed by the Armed Forces are consequences of the OROP?

OROP was not a **well thought-out decision**. It was adopted for **short-term electoral gains**. Its long-term cost is staggering. OROP's annual bill exceeds funds allotted for **modernisation**. Last year, the five-year equaliser in OROP led to an **increase of Rs 25,000 crore**.





The **revenue accoun**t is much larger as compared to capital account. So, the government had to **reduce manpower**. Ironically, Covid19 became a government ally in the mission.

What are some facts related to deficiency of manpower in armed forces?

For a full two-and-a-half years till June 2022, **no recruitment** was done. The government was working on the much-maligned **Agniveer scheme**. The aim was to **reduce manpower and pension bills.**

No recruitment in the last three years has created the **deficiency of 1,80,000 personnel**. The savings on salary bills as well as pensions are significant.

Agniveer recruitment commenced in June 2022 with the intake of 40,000 soldiers. 70,000 soldiers continued to retire.

2023 is the year of transformation in the Army. An **additional 1,00,000 personnel** will be reduced on top of the 1,80,000 existing shortfall. Last month, the Headquarters Integrated Defence Staff ordered a **10% cut in manpower** across the force.

One reason for the dilution of manpower in the Army is the considerably improved **insurgency situation** in Jammu and Kashmir, particularly south of Banihal. At least two Rashtriya Rifles sectors were redeployed from Jammu to Ladakh.

In the Northeast, two mountain divisions fighting insurgency have been relieved and the **counter-insurgency mission** is now with the Assam Rifles. The **Manipur ethnic conflict** is a warning.

What are the impacts of low recruitment in recent years?

The adverse impact of **zero recruitment** for nearly three years on combat units was very serious. Many of the soldiers were deployed against the Chinese PLA in Ladakh. But no one **raised a voice**.

Manpower deficiency has hurt **Gorkha regiments** the most. No recruitment has taken place this year. The government in Nepal is unable to decide on the **Agniveer scheme**. It prefers the **old system of 15 years recruitment plus pension**.

A suspension or termination of Gorkha recruitment from Nepal will have **profound strategic** consequences.

8. Unstable policy regimes discourage foreign portfolio investors

Source- The post is based on the article "Unstable policy regimes discourage foreign portfolio investors" published in the "The Indian Express" on 30th May 2023.

Syllabus: GS3- Economy

Relevance- Issues related to financial markets

News- The article explains the regularly issues related to financial markets and

What are characteristics of today's global financial ecosystem?

It is characterised by cross-border capital flows, and a global investor base.

Countries offer **multiple incentives** to attract the best companies to list their shares, and foreign investors to invest and create vibrant capital markets.

Issuers prefer jurisdictions having simpler compliance requirements. Foreign investors prefer countries allowing free flow of capital.

Take the recent example of Softbank-owned ARM Ltd. The London-based company chose a primary New York listing despite intense efforts by the UK prime minister. As per the Financial Times, this decision was due to the complex regulatory landscape in the UK.

What are issues related to regulation of financial markets? [Text Wrapping Break] Conflicts or disagreements between regulatory bodies and legislative intent or government policy can occur in any regulatory environment.





Governments set policies and legislative frameworks. Regulatory bodies often operate independently to enforce and interpret the laws.

Differences in interpretation, evolving market conditions or emerging challenges can lead to conflicts between regulations and the original intent or policy direction.

What are the suggestions of the report submitted by the Supreme Court-appointed Committee to probe certain allegations against the Adani Group?

It suggests changes in the **legal framework**. It provides insight into the **dichotomy between the legislative intent and the actions of the SEBI.**

The Committee has stated that the SEBI regulations have contradicted the **stated position.** The **legislative intent** was altogether different.

Take the case of the norms governing the **minimum public shareholding**. Once a disclosure of ultimate beneficial ownership is made, there is **sufficient compliance**. Despite this, the SEBI has taken a different stance.

The Committee notes that 13 foreign portfolio investors, investing in the Adani Group entities made beneficial ownership declarations by identifying natural persons controlling their decisions. It is in line with the requirements under the PMLA, 2002.

This declaration is as per the **compliance stipulated under the SEBI's FPI regulations**. Information on the 42 investors in these FPIs, who have invested their monies in these funds under the control of the beneficial owner identified and declared under the PMLA rules, is also available.

The requirement to disclose the **last natural person** above every person owning any economic interest in the FPI was discontinued in 2018.

Similarly, the **"opaque structure" provisions** in the regulations were deleted in 2019 as declarations made under the PMLA constitute **sufficient compliance**.

As per the Committee, if every FPI was required to provide information about **beneficial owners** in respect of owners holding more than 10%, there was no need to know the **ultimate beneficial owner** of every owner of the FPI.

Yet in 2020, the SEBI moved the **investigation and enforcement** in the opposite direction. It stated that the **ultimate owner of every piece of economic interest** in an FPI must be capable of being ascertained.

The Committee has suggested the need for a **coherent enforcement policy**. There have also been other instances where SEBI's regulations or enforcement have clashed with legislative intent.

What impacts the FPI decision related to investment?

FPIs assess risks such as changes in taxation policies, capital controls, repatriation restrictions or shifts in regulatory frameworks to make their investment decisions. They rely on stable and transparent regulatory frameworks for investment decisions.

In case of uncertainty, they may become **cautious and hesitant** to commit their funds. FPIs prefer India over countries with unstable governments or **opaque capital market regimes** for this exact reason.

Businesses and investors prefer stable policy regimes. Frequent changes in law and policy raises the perceived risk. It deterres FPIs with lower risk tolerance to either postpone or cancel investment plans.

What is the way forward for regulation of FPIS?

Even if the legislative intent or spirit of the law is subjective, we cannot have an **uncertain regime.**





There is a need to recognise the **contribution of FPIs** to the Indian markets. This can be addressed by **reducing the dichotomy between the legislative intent and SEBI regulations** to a bare minimum.

9. We need innovative ways to fill the climate funding gap

Source: This post is created based on the article "We need innovative ways to fill the climate funding gap", published in Live mint on 30th May 2023.

Syllabus Topic: GS Paper 3, Climate Change

Context: Rising carbon emissions and biodiversity losses is posing a grave threat to mankind, especially vulnerable sections. Handling it requires an innovative financing solution.

Financing of climate solutions is must for achieving SDG targets. SDG 13 (which covers climate action) calls upon states to take urgent action to combat climate change. SDG 15.5 calls for taking urgent action to reduce the degradation of natural habitats.

What are the initiatives launched for financing solutions for climate change?

At the 27th Conference of Parties (CoP17), a **Loss and Damage (L&D) Fund** was proposed to assist developing countries particularly vulnerable to the adverse effects of climate change.

It was especially established to assist developing countries that have been harmed and are 'particularly vulnerable' to the adverse effects of climate change.

15th Conference of Parties to Convention on Biodiversity resulted in a global commitment to raise international financial flows from developed to developing countries to at least \$30 billion per year by 2030.

Some countries also committed to mobilise at least **\$200 billion every year** from public and private sources for biodiversity related funding by 2030.

The **G20 Bali Leaders' declaration** called for unlocking innovative sources of financing to support Sustainable Development Goals (SDGs).

A number of funds have been created over the last 30 years: like **the Green Climate Fund**, **Adaptation Fund**, **and Special Climate Change Fund**. However, there is a significant gap between requirements and commitments.

Many proposals have been moved to create Global Carbon Tax, Digital Services Tax, Property Tax, Airplane Tax, cesses on carbon emissions, biodiversity, climate resilience and climate adaptation, Financial Transactions Tax etc.

However, as usual, there is very little hope, due to past failures of rich countries in meeting commitments.

Role of private investment in climate financing

Private capital financing can play a significant role in plugging the gaps for global sustainable financing, particularly in emerging markets and developing economies.

Therefore, creation of an ecosystem that incentivises the creation of financial assets for emission reduction and biodiversity conservation, is necessary.

Private capital financing has increased over the last decade but needs to be scaled up significantly to meet agreed targets.





10. Faster, stronger - on supercomputers in India

Source: This post is created based on the article **"Faster, stronger"**, published in **The Hindu** on 30th May 2023.

Syllabus Topic: GS paper 3 – indigenization of technology and developing new technology

Context: India is set to receive a new high-performance computing (HPC) system, often referred to as a 'supercomputer', from the French corporation, Atos. This system is expected to be the fastest in India.

The HPC will be part of deal with France, signed in December 2018 to procure high-performance computers worth ₹4,500 crore by 2025.

The HPC systems will be hosted by two institutions: the Indian Institute of Tropical Meteorology, Pune, and the National Centre for Medium Range Weather Forecasting, Noida. These institutions currently house two of India's most powerful machines, Mihir and Pratyush.

How HPCs are being used and what are their potential uses?

While the possession of powerful supercomputers provides Indian scientists the tools to tackle complex problems, it's unclear whether these machines have led to significant breakthroughs in fundamental science or engineered commercial products.

The use of such machines has improved short-term weather forecasts and cyclone predictions in India. But there should be greater evaluation of their value in other fields, beyond their speed and power.

11. Recycling permanent magnets for rare earths

Source: The post is based on the article "Recycling permanent magnets for rare earths" published in the Business Standard on 31st May 2023.

Syllabus: GS 3 – Changes in industrial policy and their effects on industrial growth.

Relevance: About rare earth permanent magnets.

News: Recently, the PM has inaugurated India's first facility to produce rare earth permanent magnets in Visakhapatnam. The plant is based on **indigenous reduction-diffusion technology** and produces samarium-cobalt (SaCo) rare earth permanent magnets and neodymium-iron-boron (NdFeB) permanent magnets.

What is the significance of the Vishakapatnam rare earth permanent magnets plant for India?

The supply chain of rare earths is one of the biggest concerns because China has the highest concentration of rare earth metals which gives it a huge strategic leverage. Therefore, setting up a production facility for permanent magnets in India is a significant step as it will safeguard India from any supply chain disruption.

Moreover, India's Make in India initiative has given a boost in the electronics, defence, and aerospace sectors, which has led to an increase in the demand for rare earth permanent magnets. Since India is an importer of these metals, setting up such kinds of plants will cater India's domestic demand while reducing its reliance on China.

Why is the production of rare earth permanent magnets important?

Rare earth permanent magnets have a wide-range applications in electronics, automobiles, the military, etc. These are also used in new technologies like hypersonic weapons and directed energy systems.

Compared to ordinary ferrous magnets, rare earth permanent magnets generate a very high magnetic field strength and large amounts of torque. This makes them ideal for applications requiring high-performance, compact and light-weight motors.





Moreover, a rare earth permanent magnet also has nearly 30 percent of rare earth metals **by weight**. Recycling them can further benefit India in catering rare earth metal demand.

How will recycling rare earth permanent magnets benefit India?

According to a report of the United Nations, India was the third-largest country in e-waste generation in 2019. The e-waste generation is expected to increase further in the coming years. As these permanent magnets contain rare earth metals, recycling them would help in catering to domestic rare earth metal demand in India.

Given the large amount of e-waste generated in India, recycling them would provide rare earth metals much more than the quantities imported currently.

Must Read: Rare Earth Elements: Strategic Importance and Reducing Import Dependence - Explained

What are the concerns present with e-waste collection and recycling?

E-waste collection and recycling in India suffer from several institutional and management weaknesses.

Only about 22% of the e-waste generated is collected while the recycling technology employed is primitive and it is mostly about scavenging precious metals like gold and silver. Therefore, improving e-waste collection requires a behavioural change in society.

Must read: India's e-waste challenge - Explained, pointwise

What can be the way ahead?

India does not have a recycling plant for permanent magnets. To address this issue, companies from friendly nations can be incentivised to set up recycling facilities in India while efforts can be taken to develop indigenous technology simultaneously. Moreover, recycling plants should adhere to environmental norms as well.

Note: Neodymium and Dysprosium are two elements required to make permanent magnets, which also contain rare earth metals in it.

12. Withdrawal of Rs 2000 notes: The short history of a large note

Source: The post is based on the article "The short history of a large note" published in The Hindu on 31st May 2023

Syllabus: GS – 3: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

Relevance: About RBI's decision to withdraw Rs 2,000 notes.

News: The Reserve Bank of India (RBI) has decided to withdraw the Rs 2000 denomination banknotes from circulation.

Why has the RBI withdrawn Rs 2,000 notes?

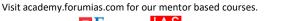
Must read: Why has the RBI withdrawn Rs 2,000 notes?

What are the issues faced in the economy with Rs 2,000 notes?

The credibility of the monetary system: India's monetary system has taken a serious credibility hit due to frequent changes and U-turns in currency management.

Automated Teller Machine (ATM) Recalibration: During demonetisation, the 2000 notes had to be printed in larger numbers. The RBI printed the new ₹2,000 notes in a new size. Normally, an ATM contained four cassettes; two cassettes held ₹500 notes and the other two cassettes held ₹1,000 and ₹100 notes. The new ₹2,000 note would not fit into any of these cassettes. Consequently, every one of the 2.2 lakh ATMs in India had to be "re-calibrated".

Re-calibration was a massive and complex exercise that required coordination across banks, ATM manufacturers, the National Payments Corporation of India, and switch operators.





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Engineers had to personally visit each ATM and spend between two to four hours with an ATM to complete the re-calibration.

Limited funds during demonetisation: Most of the banks packed all four ATM cassettes with available notes of ₹100. This limited the ATM's access to citizens. (One ATM could, at the maximum, meet the needs of only 105 people per day as ATM could store currency worth ₹2.1 lakh in ₹100 notes).

When the stock of ₹100 notes was quickly exhausted, banks demanded more from the RBI. The RBI had no option but to supply old and soiled notes that banks had returned to the RBI earlier. Soiled notes often jammed the ATMs and further complicated the issue.

The quality of Rs 2000 notes: According to Ramakumar, many notes were poorly printed; some notes had a shadow of Mahatma Gandhi's face in addition to the photograph of his face; some others had uneven borders; while others were of varying colour shades and sizes.

The issue of change: There locals in villages do not offer change or a balance payment over transactions in Rs 2000 even today. In effect, the problem of a short supply of notes was exacerbated by the release of the ₹2,000 note.

Must read: Withdrawal of currencies: need and challenges

Can a growing economy have the ₹500 note as the highest denomination?

The highest denomination note in an economy serves as a store of value and is scarcely used in day-to-day transactions. As per capita incomes and inflation rise, the highest denomination note sheds value and becomes a note for day-to-day transactions. The economy would need a new higher denomination note to act as a store of value. This is the reason the RBI had requested the government to let it issue ₹5,000 and ₹10,000 notes in 2014.

The cash-to-GDP ratio in India was 12% in 2015-16 but it rose to 14.5% in 2020-21 and 13.3% in 2021-22. This highlights the value of notes is eroding with inflation, and real interest rates are falling. So, the demand for higher denominations will increase.

Read more: RBI's Demonetization data report

Would an e-rupee be a perfect substitute for a larger denomination note?

For that, the digital currency must meet the properties such as anonymity, general purpose use, exchangeability and etc. The RBI has stated that anonymity can be assured only "to a certain degree." The other properties are still evolving. So, it is hard for a digital currency will emerge as a new store of value in shorter time.

13. Economics of biofuels - Food and feed must be given priority

Source: The post is based on the article "Economics of biofuels – Food and feed must be given priority" published in the Business Standard on 31st May 2023

Syllabus: GS – 3: Energy. **Relevance**: About E20 target.

News: The government said to achieve the level of ethanol blending in petrol to 20% (E20) by 2025, instead of 2030. But a recent report rules out the availability of enough raw material to reach E20.

About the recent Amendments to the National Policy on Biofuels

Read more: Cabinet approves Amendments to the National Policy on Biofuels -2018

Why does India need to revisit its E20 target?

Non-availability of land and low production capability: Brazil, the world's leading sugar and ethanol producer, are able to grow crops exclusively for biofuel production because they have





abundant land. Further, the productivity of these crops in India is lower than the global averages and their use for food and feed has to be given priority.

Not easy to divert food grains: Last year, the Food Corporation of India gave about one million tonnes of subsidised rice to distilleries for ethanol production. But diverting food grains like rice and corn for ethanol production often is not feasible as malnutrition is rampant, and India's ranking on the global hunger index is low.

Vehicles need modifications: Most of the existing vehicles are, typically, not made to run on high ethanol doped fuels. They would require modifications, even if minor ones.

The level of emission reduction is low: The level of emission reduction achieved by replacing a small part of petrol with ethanol is too meagre to justify additional investment in engine modifications and creating fresh capacities to manufacture E20-compliant autos. According to a NITI Aayog report, the extra cost would be Rs 3,000-5,000 for every four-wheeler and Rs 1,000-2,000 for a two-wheeler.

Must read: Amendments to the National Policy on Biofuels - Explained, pointwise

What should be done to achieve the E20 target?

At present, the bulk of the ethanol is produced by the sugar industry, which has been permitted to utilise all products of sugarcane, including cane juice and finished sugar, for this purpose. To achieve E20 target, India should explore ways to produce ethanol by deploying second-generation (2G) technology. At least four such 2G ethanol plants are already coming up. India needs to set up more such plants.

14. Indian toy industry: Unboxing the 'export turnaround' in India's toy story

Source: The post is based on the article "Unboxing the 'export turnaround' in India's toy story" published in "The Hindu" on 31st May 2023.

Syllabus: GS3- Indian economy

Relevance: About Indian toy industry.

News: India has recently turned a net exporter of toys, during 2020-21 and 2021-22. Between 2018-19 and 2021-22, toy exports increased from ₹812 crore to 1,237 crore. Imports declined from \$371 2,593 crore to ₹819 crore.

How has been the performance of the Indian toy industry?

India's toy industry is minuscule. In 2015-16, the industry had about **15,000 enterprises.** They produced toys valued at ₹**1,688 crores and employed 35,000 workers.**

Registered factories accounted for 1% of the number of factories and enterprises. They employed 20% of workers and produced 77% of the value of output.

Between 2000 and 2016, industry output was **halved in real terms** with job losses. Imports accounted for up to **80% of domestic sales** until recently. Between 2000 and 2018-19, imports rose by nearly three times as much as exports.

India hardly figures in the **global toy trade**. Its exports are merely a half-percentage point of total global export.

What explains the sharp turnaround in the toy trade in just three years?

Imports contracted as the **basic customs duty** on toys tripled from 20% to 60% in February 2020.

Numerous **non-tariff barriers** were imposed as well such as **production registration orders** and safety regulation codes. It contributed to import contraction.





How is the scenario of the Indian toy industry different from other countries in Asia?

Historically, Asia's successful industrialising nations promoted **toy exports for job creation**. For example, Japan started about a century ago, China since the 1980s, and currently Vietnam is following in their footsteps.

India followed an **inward-oriented industrial policy** in the planning era. It provided a **"double protection" by import tariffs and reservation of the product** for the small-scale sector. As a result, toy manufacturing remained **stagnant**, **archaic and fragmented**.

In 1997, the **reservation policy** was abolished. New firms entered the organised sector, but only for a while. **Productivity growth** improved. But the unorganised sector languished with job losses.

How do more recent policy initiatives, such as 'Make in India', have a bearing on the Indian toy industry?

There is no evidence of 'Make in India' positively affecting the toy industry on a sustained basis. The output of the informal or unorganised sector shrank. But, it continues to account for the majority of establishments and employment.

Industry de-reservation failed to sustain output, investment, and productivity growth after 2007-08.

What is the way forward for the growth of the toy industry?

Neither the reservation policy nor its abolition after the liberal reforms boosted the industry's performance.

One should perhaps look beyond **simplistic binaries of planning versus reforms**. There is a need to examine the **ground reality of industrial locations and clusters** to make policies and institutions to nurture such industries.

15. Biodiversity is us and we are biodiversity

Source- The post is based on the article "Biodiversity is us and we are biodiversity"

Published in the "The Hindu" on 1st June 2023.

Syllabus: GS3 – Environment

Relevance- Issues related to biodiversity

News- The International Biodiversity Day was observed on May 22.

What is the importance of biodiversity?

Biodiversity is everywhere. It is inside our bodies, in villages, towns, and cities, and in **well-organised ecological communities and ecosystems.**

Biodiversity conservation can help to **sequester carbon dioxide** from the atmosphere. Biodiversity helps in **mitigation of climate change.**

It also fulfils our **basic needs** for food, shelter, medicines, mental health, recreation, and spiritual enrichment.

There will be a need to rely more on solutions that draw upon biodiversity or nature to face the continuing decline in the quality of our environment. These are called **nature-based solutions**.

Biodiversity will restore our degraded lands and polluted rivers and oceans. It will sustain our agriculture in the face of climate change. Biodiversity forms the basis of a new sustainable green economy.

What is the way forward to preserve biodiversity?

Civil society must play a critical role in sustaining our biodiversity.

There is a need to change the way we **manage our biodiversity**. Currently, the main custodian of the natural world is the I**ndian Forest Service**. But the **term "Forest"** to describe natural heritage is flawed.





India's biodiversity is not only on land but also in water bodies, rivers, deltas, and oceans. Our ecosystems exist in the form of grasslands, savannas, alpine pastures, deserts, and other types of ecological communities.

In the 21st century, the **basic terms "forests" and "wildlife"** have limited meaning or usefulness.

There is a need for multifunctional landscapes, where aspirations, beliefs, traditional knowledge, and direct participation of local communities are central to the conserving and sustaining life on earth.

In 2006, India enacted the **Forest Rights Act.** It called for an increase in the s**take of indigenous groups** in ownership as well as management of biodiversity. However, the Act largely remains on paper.

It is time to **move beyond the Acts** to fundamentally alter the management of biodiversity. Biodiversity must be mainstreamed into our daily actions, in every development programme, in every government department, in every public and private institution.

It is time to **decentralise the management of biodiversity** by bringing together **multiple stakeholders**, especially local communities, through gram sabhas and biodiversity management committees.

What are some facts about the proposed National Mission on Biodiversity and Human Wellbeing?

The **mainstreaming of biodiversity** is the goal of the proposed Mission. India's Biodiversity Collaborative based in Bengaluru, conceptualised the idea.

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.

The ultimate goal is to **enhance and conserve biodiversity** to foster **human well-being**, and to **meet the Sustainable Development Goals**. It will support an era of a **new green economy**.

People will be at the **centre of the Mission**. The goal of the Mission is to **engage all citizens** in the **conservation and sustainable use** of biodiversity. The Mission will **integrate biodiversity** in every **development-oriented programme** of the public and private sectors

16. India sourcing: From hurdle to ambition

Source: This post is created based on the article "India sourcing: From hurdle to ambition", Business Standard on 1st June 2023.

Syllabus Topic: GS Paper 3 – Changes to industrial policies

Context: global brands are now finding it lucrative to produce in India. The article focusses on the factors that are contributing to this success.

Over the last decade, brands like Walmart, Amazon, Apple, and Ikea have increased sourcing of goods from India and have even set ambitious export targets.

What are the contributing factors?

In the past, industries were finding it challenging to comply with strict sourcing rules that mandated 30% sourcing of Indian products for any company with more than 51% FDI, from 1st day. The rules have been updated, now companies need to comply with this norm within five years of setting up a single-brand retail business, instead of from day one of the earlier rules.

The 'Make in India' campaign, along with the production-linked incentive scheme, has strengthened the sourcing movement.

The conditions for FDI in single-brand retail were changed to include manufacturing as part of the 30 per cent mandatory sourcing.





What are the examples of success of government effort?

Walmart CEO Doug McMillon expressed the company's goal to meet \$10 billion worth of exports annually from India by 2027, up from about \$3 billion currently.

Amazon is also increasing its sourcing from India through a scheme called Amazon Global Selling in India.

What are the remaining challenges in attracting companies to India?

India must address the challenges associated with supply chain logistics and wide infrastructure gaps.

17. Making India's National Security 21st Century Compatible

Source: This post is created based on the article "Making India's National Security 21st

Century Compatible", Business Standard on 1st June 2023.

Syllabus Topic: GS Paper 3 – Internal Security

Context: The article discusses the need for reform in India's national security structures

National security structures worldwide, including India, are typically hierarchical, resistant to change, and only moderately accountable to the public. However, national security structures are needed to evolve with the changing global dynamics and rising multi-dimensional threats.

What are the factors that are necessitating the changes in security structure in India?

- 1) Multi-dimensional threats across land and maritime fronts from China, with Pakistan as a collusive proxy.
- 2) The need for full-spectrum security capability across multiple fronts and domains.
- 3) The urgent need to balance speedy indigenization of defense capability with the utilization of existing platforms and selective imports to ensure that capability gaps do not widen too much.
- 4) The blurring of lines between different instruments of statecraft necessitating a 'whole of government approach'.
- 5) There is existing hesitancy in India to work with consultants from various disciplines due to 'secrecy and security issues'.
- 6) Future conflicts will involve traditional warfare as well as new-age warfare waged in knowledge domains, social media, space, and cyberspace.

What should be done?

Traditional forms of planning, and execution should be used along with newer forms of cognitive thinking enabled by technologies like cloud computing, Internet of Military Things (IOMT), and AI.

A collaboration with outside experts from academia, industry, and the corporate sector, can be considered.

18. BIN: Build, Inaugurate, Neglect

Source: This post is created based on the article "BIN: Build, Inaugurate, Neglect", published in The Times of India on 1st June 2023.

Syllabus Topic: GS Paper 3 – Infrastructure

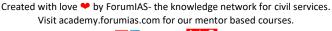
Context: The article critically analyze the politics behind creating 'edifice complexes'.

The term edifice complex was coined initially to describe the tendency of politicians to build physical structures for electoral gains. However, it is not always bad.

It can bring huge benefits to people as well.

What are the criticisms associated with building edifice complexes?

The edifice complex diverts attention away from priorities that contribute to a nation's long-term growth and prosperity.





Investments in education and health are avoided due to long gestation projects, which is not feasible for one electoral cycle.

Politicians often prioritize new structures as they offer higher political payoffs than maintaining existing ones. It results in wastage of resources.

Why edifice complexes are not always bad?

The structures such as Nagarjuna Sagar dam are beneficial for the people in the long run. It provided livelihood to millions of farmers.

New 'Ambedkar Bhavan' in Hyderabad ss an example that invokes a collective sense of pride and unity.

19. Mapping the climate transition by identifying policy interventions

Source: The post is based on the article "Mapping the climate transition by identifying policy interventions" published in Mint on 1st June 2023.

Syllabus: GS 3 - Environment, Growth & Development

Relevance: measures needed by India to align its growth rate with its net zero emission goals

News: In the **Report on Currency and Finance**, the RBI has highlighted various concerns associated with achieving desired growth rate while controlling the emission targets.

As per the report, **if India wants to become a developed country by 2047-48**, its GDP growth rate should be 9.6% per annum up to 2047-48.

Click Here to Read More About the Report

What are the commitments made by the countries towards achieving net zero target? Click Here to Read

How can India align its growth with its net zero emission target?

As per the RBI report, India can -a) increase the level of energy efficiency i.e., reduce the energy used per unit of GDP and b) increase the greenness of energy i.e., reduce emissions per unit of energy.

At present, **India's energy efficiency** has been improving at 2.3% per annum over the last 10 years. However, it needs to be accelerated to 5%.

Similarly, **the share of green energy** in primary energy has to be increased to 70% – 82% of the total by 2070.

How can India achieve these targets?

Prioritizing Areas: As per the RBI report, India needs to intervene in some major areas which needs to be implemented over the next 10 years.

Shifting power generation away from coal-based thermal power towards solar, wind and other green sources is the one of the priority areas because this will lead to almost half of the reduction in emissions.

Phasing down coal-based power plants: As per the RBI report, the govt. should ensure that no new coal-based thermal power plants will be set up after a certain period.

Phasing down coal-based power plants may also lead to phasing out coal mines, which can have implications on employment and state finances. India needs to prepare itself for such challenges.

Investments: Raising the share of green energy to 70% or 82% of total energy by 2070 will involve massive investments in building electricity generation, storage and transmission capacity and also in developing infrastructure for green hydrogen.

Since a large part of investments will be taken by the private sector, there is a need for a policy environment that will encourage such investment.



Carbon tax or cap-and-trade system: The RBI report highlights the issue of imposing such a system. The Electricity Amendment Act makes provision for introducing a cap-and-trade system. However, whether an explicit carbon tax would be better needs to be carefully examined. Moreover, either option would raise the cost of coal to users and this would be reflected in the price of coal-based electricity.

Such mechanisms might enhance the competitiveness of green electricity without implementing mandatory renewable purchase obligations on discoms.

However, despite such concerns, **a big advantage of carbon taxation is that it raises revenue.** Since both the central and state governments do not have enough fiscal space for the transitions, carbon taxation will provide required resources.

What can be the way ahead?

Improvements in energy efficiency are critical to reduce emissions. Therefore, there is a need to switch to more energy-efficient systems and implement more energy-efficient building designs.

20. Coordinating in the battlefield

Source—The post is based on the article "Coordinating in the battlefield" published in the "Business Standard" on 2nd June 2023.

Syllabus: GS3 – Internal Security

News- Speaking at an annual gathering of the Confederation of Indian Industry (CII) in New Delhi last week, Defence Minister Rajnath Singh asked defence forces to innovate in futuristic technologies "to transform India from a follower to a leader".

How has the nature of warfare changed in recent times?

Azerbaijan's rout of Armenia in 2020 and Russia's failure to subdue Ukraine signal a major change in interstate **warfare**.

In the battlefield of today, survival faces a **different set of challenges**. Systems like the Switchblade, Kamikaze drone, are used by Ukrainians against the Russians.

Switchblade flies to its target and crashes into it. It detonates itself in a suicidal manner.

Kamikaze drone attacks force adversaries to change their **patterns of operations.** It reduces the effectiveness of the field force.

What are the challenges faced by India from the defence capabilities of China?

China is a key player in **autonomous weapons**. The PLA has been developing **unmanned** systems since 2013. It has incorporated them into their **theatre planning**.

China has a sophisticated understanding of **India's cyber vulnerabilities**. The PLA is believed to have mapped the **strategic vulnerabilities in our critical infrastructure**.

These systems include hardware that is full of **Chinese components**. They maintain **complete control** over it even after it has been installed in Indian servers.

What is the way forward for Indian defence forces to tackle the Chinese challenge?

There is a need to rethink the hardware realm. Swift decisions are needed.

Banning Chinese hardware such as 5G networks would serve little purpose. There is a need to replace the major systems and networks.

India **needs creativity**. Our **acquisitions processes** are focused on buying military hardware, rather than **creating new capabilities**.

The **synergistic integration** of the shortened BrahMos cruise missile into the Sukhoi-30MKI fighter has been successful. This has given the BrahMos a **deep strike capabilit**y cheaply and with available Indian technology.





The Indian Air Force's requirement of 42 combat aircraft squadrons includes many MiG-21 squadrons, especially for air defense. But the induction of force multipliers and platforms that perform the same job is overlooked.

For example, S-400 surface-to-air missiles and airborne warning and control systems (AWACS) have enormously boosted our air-defence capability. Yet, the IAF's stated requirement remains 42 fighter squadrons.

The Indian Navy has not revised its requirement of 200 warships, stated in its Maritime Capability Perspective Plan. But, its capability as a fighting force is more potent today than ever before.

It has a **heavily armed fleet**. The navy is planning for six more **conventional submarines and six nuclear-propelled submarines (SSNs)** for the deep waters of the Bay of Bengal. There is ample scope to reduce the **surface fleet**.

There is inadequate discussion of the **Indian Army's manpower policies**. These include beefing up our defences against China by **three new mountain divisions** into Eastern Ladakh and **two new mountain divisions** in Arunachal Pradesh in 2007-09.

Indian army is planning for the conversion of India's plains strike corps into a **mountain strike** corps. This involves shifting **two infantry and one armoured division** from the Pakistan frontier and **re-tasking**, **re-training**, **and re-equipping** them for offensive operations on the China border.

Some key projects of three services have not achieved much progress. Since 2009, work has not progressed much on the **Future Infantry Combat Vehicle**.

The Advanced Towed Artillery Gun System is high in priority. The Tactical Communications System is also being neglected.

For all these weapons, the military must obtain **strike platforms and fighting tools** to serve an **operational plan.**

India's military can no longer afford to create a patchwork of small and relatively inconsequential systems, purchased from here and there.

21. At the root of India's manufacturing challenge

Source—The post is based on the article "At the root of India's manufacturing challenge" published in "The Hindu" on 2nd June 2023.

Syllabus: GS3- Economy

Relevance- Issues related to manufacturing sector

News– The article explains the steps taken by successive governments for manufacturing sector and the reason behind weak performance of manufacturing sector despite government initiatives

What are various steps taken by governments in India for the manufacturing sector and their impacts?

The economic reforms of 1991 had almost exclusively focused on manufacturing. But the reforms did not lead to an increase in the share of manufacturing in the economy.

There has been a qualitative change after 1991. The range and quality of products manufactured in India have undergone an impressive increase.

In 2014, the manufacturing sector was given a push through the 'Make in India initiative'. There was emphasis on foreign direct investment. The **Production-Linked Incentive scheme** was launched recently.

The tax rate had been lowered substantially in 2019. Government is **pushing public investment.** In the last Union Budget, **capital expenditure** was raised by 18.5%.





But, the record of these schemes has not been impressive. In 2022-23, manufacturing growth is 1.3%. The persistence of **low rates of growth** despite policy initiatives in manufacturing points to **structural issues** with the sector in India.

Why is demand side weakness a major factor behind lack of growth in the manufacturing sector?

There is a need to look at the **demand side**. This is largely independent of the **supply side**.

Household demand for manufactures follows the satisfaction of its **demand for the necessities of life** like food, housing, health and education. For a substantial section of India's households, food occupies a large share. This impacts the growth of **demand for manufactures**.

The relationship between **per capita income and the share of food in household expenditure** is strongly negative globally. Countries such as the United States and Singapore, have a low share of food.

The **share of food** is the largest in India, among major economies and its GDP per capita the lowest. Industry leaders have no control over the **demand side of the equation**.

What can India learn from East Asian countries?

Exports can sidestep a narrow domestic market. **East Asian countries** were able to grow their manufacturing base despite the low **scale of domestic markets**. It requires that manufacturers are **globally competitive**.

Infrastructure and skill level of the workforce are important contributors to manufacturing growth of East Asian economies. These determine the **cost of production and the type of products** that a country can produce.

Indian exporters face a **competitive disadvantage** related to **higher turnaround time** for ships in India's ports. **Inexpensive power, space and industrial waste disposal** services all matter.

Why neglect of education in India is impacting the manufacturing sector in India?

India has fallen most behind the countries that are the manufacturing successes of the world in the **education field.**

The ranking of countries by the **Programme for International Student Assessmen**t reveals this directly. In a group of about 75 countries, India barely manages not to be the last.

Pratham findings point to the very **low reading ability and numeracy** of Indian children in their early years.

There are issues related to **employability of Indian graduates**. The skilled workers, ranging from carpenters to plumbers and mechanics have been neglected in **economic policy-making** in India

There is **no formal assessment** available of the state of the vocational training institutes in India. The **Planning Commission data** shows that only about **5% of Indian youth** have had any kind of **technical training**. The figure for **South Korea** was **over 85%**.

22. India stands to gain from the trading of carbon credits

Source: The post is based on the article "India stands to gain from the trading of carbon credits" published in Mint on 2nd June 2023.

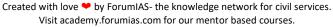
Syllabus: GS 3 - Environment

Relevance: benefit and challenges associated with carbon credit market

News: The article explains measures taken by India to combat climate change and benefit and challenges associated with carbon credit market.

What are the measures taken by India to tackle climate change?

Click Here to Read





India, despite having 17% of the global population, has the lowest per capita emissions among major economies, accounting only 5% of the global total emissions.

However, projections indicate that India's emissions would increase. Therefore, India has called on the developed nationals to fulfill their promise of climate financing.

Further, the government is also taking measures to establish a <u>carbon credit market</u> to achieve the Nationally Determined Contributions (NDC) goals.

Read More: Carbon Markets: Benefits and Challenges - Explained

How can the carbon credit market benefit India?

Extra carbon credits may be sold globally, allowing other countries to receive significant amounts of carbon credits from India.

This can generate revenue to finance climate change mitigation projects and help in transitioning to a low-carbon economy.

What are the challenges with the carbon credit market?

Competition: In 2021, the global carbon credits market experienced a significant growth of 164%. It is projected to surpass \$100 billion by 2030. This growth has implications for India's domestic carbon market, as increased competition for carbon credits may result in higher prices within the country.

However, due to the international cooperation promoted by the Paris Agreement, this is unlikely to happen.

Instead, the establishment of a global carbon market could potentially create a more balanced playing field, which could be advantageous for developing countries like India.

Edge for Developed Nation: Developed nations hold an advantage due to their technical and financial capabilities, allowing them to generate and sell carbon credits at a lower cost.

Hence, a standardized system within a global carbon market is needed to address this imbalance.

Lack of Centralized Regulatory Body: Currently, trading carbon credits between countries involves complex bilateral agreements, additional reporting requirements, and country authorizations.

Therefore, a centralized registry and regulatory body is needed that would facilitate smoother international trading for India, reducing administrative burdens.

What more steps can be taken by India to achieve transition to a low-carbon economy?

a)) achieve the target of building 175GW of installed renewable energy capacity by 2022 and 450GW by 2030, **b)** India would need to increase its total installed solar power capacity to over 5,600GW to attain net-zero by 2070, **c)** the use of coal, particularly in power generation, would have to decrease by 99% by 2060, **d)** consumption of crude oil across different sectors would need to reach its peak by 2050 and then significantly decrease by 90% between 2050 and 2070, **e)** the industrial sector could potentially meet 19% of its total energy requirements through the use of green hydrogen.

What can be the way ahead?

India can position itself as a key player in the global carbon market and achieve its climate goals while promoting sustainable development by following the 5 Es formula.

5 Es formula—Enhancing carbon reduction efforts, Establishing robust monitoring and reporting systems, Encouraging international cooperation, Exploring technology and Innovation, and Empowering local stakeholders.





23. Concentration concerns – Sebi's proposal will make FPIs more transparent

Source: The post is based on the article "Concentration concerns - Sebi's proposal will make FPIs more transparent" published in Business Standard on 2nd June 2023.

Syllabus: GS 3 - Indian Economy - Capital Markets

Relevance: About new additional disclosure requirements for FPIs.

News: The Securities and Exchange Board of India (**Sebi**) has published a consultation paper that proposes new additional disclosure requirements for foreign portfolio investors (**FPIs**).

What is the current requirement for additional disclosures for FPIs?

Currently, Sebi proposes that high-risk FPIs holding more than 50 percent of assets under management (AUM) in a single corporate group would be required to comply with requirements for additional disclosures, if such concentration exceeds a temporary window of 10 days.

Such FPIs would have to provide the granular data of all entities with any ownership, economic interest, or control rights.

However, this requirement is qualified by exempting newly registered FPIs for the first six months and FPIs that are currently undergoing the winding-up process.

What are the new additional disclosure requirements for FPIs proposed by Sebi?

The new additional disclosure requirements primarily focus on identifying the true beneficial owners of shares held by concentrated FPIs.

The aim is to prevent potential evasion of minimum public shareholding (**MPS**) regulations and misuse of the FPI route to bypass Press Note 3 (**PN3**) guidelines.

The paper is likely a response to the Hindenburg Research incident, where a US-based short seller accused the Adani Group of using FPIs as proxies to hold shares in listed companies, exceeding the maximum promoter shareholding limit of 75%.

What is PN3 guidelines and why has Sebi come up with new additional disclosure requirements?

The PN3 mandates that entities of nations sharing land borders with India, or where the beneficial owner of an investment in India is situated, or is a citizen of any such country, can invest only via the government route.

Sebi is concerned that entities of these nations may use FPIs as a means to hide their ownership of Indian shares.

The consultation paper also highlights that some FPIs concentrate a significant portion of their equity portfolio in a single company or a group of companies.

Such concentrated investments raise suspicions that promoters or other investors acting together may exploit the FPI route to evade regulations. This could increase the risk of price manipulation.

What can be done to prevent evasion?

In order to investigate if concentrated holdings exist, it will be necessary to compile a list of FPIs with such patterns along with obtaining detailed information about the ownership, economic interest, and control of these FPIs.

Existing legislation, such as the Prevention of Money Laundering Act, 2002, and the Prevention of Money Laundering (Maintenance of Records Rules), 2005, provides a framework for identifying beneficial owners.

However, in practice, it is challenging to apply these regulations due to the complex ownership structures often employed by such entities.





24. A critical juncture in Manipur

Source: The post is based on the articles

"A critical juncture in Manipur" published in The Hindu and

"Express View on Amit Shah in Manipur: Rebuilding peace" published in The Indian

Express on 3rd June 2023.

Syllabus: GS 3 - Internal Security

Relevance: About the demand of Kuki-Zo group of Manipur and its implications

News: A group of Kuki-Zo legislators have called for a "separate administration" in Manipur. In response, a Meitei committee organized a rally to demand the protection of Manipur's territorial integrity.

What is the ongoing conflict in Manipur?

Read Here: Manipur unrest and its impact on regional security - Explained

What can be the implication of the demand on Manipur?

The demand for the separate administration by Kuki-Zo groups may alter the state's border.

This is because unlike the previous demands, the current demands enjoy unprecedented popular support among the Kuki-Zo groups and their position is unlikely to change in the future.

Moreover, with the widespread loss of lives and property along with growth mistrust, returning to the status quo seems impossible. Hence, the demand for separate administration seems inevitable.

Note: The power to change a state's borders lies with the central government under Article 3 of the Constitution.

What can be the probable solution if the demand for separate administration is met?

First, a separate administration in the hill areas of Manipur can be established for the Kuki-Zos as well as for Nagas. However, resistance may come from some Naga groups who are unwilling to compromise on their vision of an expansive territory known as "Nagalim", and also from the Meitei groups and the state governments.

Second, a separate administration can be granted for the Kuki-Zo in districts where they are dominant. **Administrative convenience and economic viability** may be given as reasons in granting separate administrations. However, these reasons may not be effective.

This is because the current sub-State constitutional arrangements under the Manipur (Hill Areas) District Councils Act of 1971 have already established institutional and administrative frameworks where the territorial boundaries of District Councils broadly overlap with ethnic boundaries. Thus, creating tensions amongst various ethnic groups.

Moreover, some of the Kuki-Zo-dominated districts are located on a valuable natural gas reserve known as the Assam-Arakan basin while others serve as strategic gateways to Southeast Asia. These reasons may act against the favouring the demand on administrative and economic reasons.

Third, efforts can be taken to maintain the status quo and secure the integrity of Manipur. However, given the rigid position of state government and frontal Meitei groups, this would likely involve dissolving the existing sub-State constitutional arrangements under Article 371C, which include the district councils and tribal land rights.

Further, the Kuki-Zo groups have made it clear that they no longer accept the powerless sub-State constitutional arrangements or any political solution.

This suggests that the current deadlock is likely to persist, resulting in a deeply divided society.





What measures can likely be taken in resolving the conflict?

After the visit of the Union Home Minister Amit Shah to Manipur, several measures have been announced to restore peace.

This includes the establishment of a judicial panel to investigate the riots, the formation of a peace committee to facilitate dialogue between conflicting communities, and the creation of an inter-agency unified command to coordinate security operations.

The following measures can also be adopted - **a)** local political leaders must promote fraternity and advocate for the interests of the entire state, and **b)** instead of solely focusing on creating new administrative structures, reconciliation and trust-building efforts should be prioritized to achieve sustainable peace.

25. The world that awaits us – on technological developments

Source: This post is created based on the article "**The world that awaits us**", published in Business Standard on 3rd June 2023.

Syllabus Topic: GS Paper 3 – Awareness about the technologies

Context: Nuclear fusion, hydrogen fuel cells, quantum computing, and Artificial Intelligence (AI) are considered transformative technologies. However, only AI has become usable as of now.

While AI is making extraordinary progress, the other three technologies may be years away from commercial viability.

Big technical problems need to be solved before nuclear fusion, fuels cells, and quantum computing can be used at a large scale.

What are the Challenges of Hydrogen Fuel Cells?

Hydrogen is difficult to store in large quantities due to its lightness.

Liquefaction of hydrogen requires extremely low temperatures, making it expensive and energy intensive.

Designing storage tanks that can safely contain hydrogen is challenging and costly.

What are the Challenges of Nuclear Fusion?

Nuclear fusion requires heating the fuel, usually plasma, to extremely high temperatures (e.g., 20 million degrees Celsius). Generating and controlling a fusion reaction requires more energy than the fusion reaction generates.

What are the Challenges of Quantum Computing?

Quantum computers require ultra-cool and stable conditions, often operating near absolute zero. Connecting quantum machines to "normal machines" for meaningful work is difficult because conventional equipment doesn't function at such low temperatures.

Software for quantum computing differs significantly from conventional programming.

What are the future prospects of these technologies?

The next five years may witness the development of quantum machines operating in less exotic conditions.

Once achieved, the financial aspects of implementing quantum computing and AI may help make fusion reactors financially viable or find affordable storage solutions for hydrogen.





26. Good and bad - on generative AI

Source: This post is created based on the article "**Good and bad**", published in **The Hindu** on 3rd June 2023.

Syllabus Topic: GS Paper 3 – Awareness about the technologies

Context: The widespread adoption of generative AI has led to both awe and worry, as it can falsify data and raise ethical concerns.

What are the concerns associated with generative AI?

Al pioneers have expressed alarm about the risks associated with AI, comparing them to global-scale risks like pandemics and nuclear war.

It can create data that appears real, making it challenging to distinguish between authentic and falsified information.

AI models may use copyrighted data without proper authorization.

Human dignity, privacy, and protection from falsified information need to be considered in the development and use of AI models.

What should be done by government?

The Indian government should proactively address AI risks by:

- Launching and maintaining an open-source AI risk profile.
- Creating sandboxed research and development environments to test potentially high-risk AI models.
- Maintaining vigilance and monitoring the use of AI technologies.
- Defining scenarios for intervention and establishing policies that allow democratic institutions to respond to dangerous AI enterprises.

27. Post-pandemic, climate change will drive investments

Source- The post is based on the article "Post-pandemic, climate change will drive investments" published in "The Indian Express" on 3rd June 2023.

Syllabus: GS3- Economy

Relevance- Investment related issues

News-Three years after the pandemic and despite 8% average growth over the last two years, the level of India's GDP is still running 5% below its pre-pandemic trajectory.

Many would argue that, as in the aftermath of the 2008 global financial crisis (GFC), the post-pandemic trend growth is likely to be lower, and thus, this is an artificially high benchmark.

What are the facts and figures related to growth and investment of the Indian economy prior to the global financial crisis and its aftermath?

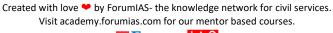
In the five years prior to the GFC, India's average growth rate was 8%. Rapid globalisation boosted exports and private investment increased to set up the needed supply chains. Since the GFC, global trade and investment are languishing.

Corporate investment was 14.5% in 2007-08. But after the GFC, corporate investment has stabilised around 10.5% of GDP.

Household investment rose to 15.7% of GDP by 2011-12. It declined to 9.4% of GDP by 2015-16 and has recovered to just over 11.5% of the GDP today. A large part is due to falling **SME investment**, which is subsumed in this category.

Overall **public sector investment** has remained broadly unchanged at 7% of GDP since the GFC. It is 1% lower than its peak before the crisis.

The rise in central government capital spending has been offset by **lower PSU investments.**State government investment has remained roughly unchanged.





The 4-5% of GDP decline in overall investment since 2011-12 is reflected in **growth outcomes.** GDP growth has **averaged 6%** since the GFC. It is slightly better at 6.7% if the post-pandemic years are excluded. These outcomes are similar across other economies.

The last two years' average growth of 8% does not indicate the **medium term trajectory** of growth. It's just a recovery from the around **6% contraction in 2020.**

What are the various reasons to believe that investment will be boosted in the near future despite pandemic related disruptions?

The first relates to the **relocation of global supply chains**. One type of relocation is the **"China"** + **One" shift**. Firms are locating part of their **new supply chains** outside China as an **insurance** against pandemic-type disruptions.

In this type of relocation, economies such as India, Mexico, and Vietnam will benefit from more FDI and expansion of manufacturing exports. But, these economies do not have the **capacity to absorb** more than a limited scale of **relocation investments**.

For example, despite all concerns China, get inward FDI flows of **\$524 billion over 2021-22**. It is about \$100 billion more than in the two years prior to the pandemic. Over the same period, total FDI into India was **\$95 billion**.

Thus, "China + One" relocation will be beneficial to some. But, it is unlikely to be "game changing".

The second type of relocation is related to **re-shoring**, **near-shoring**, **or friend-shoring**. This is based on security concerns of the West in locating supply chains related to emergent technologies. It will be in countries in their "circle of trust".

Even if EM economies have the ecosystem to establish the **advanced supply chains**, only a few such as Korea, Mexico, and Poland Would belong in the **circle-of-trust**. **Security-driven relocation** will be firmly set within the developed world.

The other reason for more investment in the post-pandemic world is **climate change**. The world is moving towards a **lower carbon way of life**.

The investments required to achieve this will be massive. The private sector will necessarily have to play a big role.[Text Wrapping Break]

28. International trade has a carbon problem

Source- The post is based on the article "International trade has a carbon problem" published in "The Hindu" on 3rd June 2023.

Syllabus: GS3- Economy. GS3- Environment

Relevance- Issue related to green economy

News- The European Union has introduced the Carbon Border Adjustment Mechanism (CBAM).

Why has the EU introduced CBAM?

In 2005, the EU adopted the Emissions Trading System (ETS). ETS is a market-based mechanism. It aims at reducing greenhouse gas emissions by allowing bodies emitting GHG to buy and sell these emissions.

The EU is concerned that **emissions embedded in products** imported from other countries may not be priced in a similar way due to **less stringent policies** in those countries. This would put its industries at a disadvantage.

To tackle this, the impacted industries in the EU had so far been receiving **free allowances or permits** under the ETS.

The EU has issues regarding 'carbon leakage'. Due to the application of ETS, European firms operating in carbon-intensive sectors might possibly shift to countries having less stringent GHG emission norms.





CBAM is aimed at addressing these issues, and ensuring a **level playing field** for the EU industries.

What is CBAM?

Under the CBAM, imports of certain **carbon-intensive products** like cement, iron and steel, electricity will have to bear the same **economic costs** borne by EU producers under the ETS. The price will be linked to the weekly average of the emissions priced under the ETS. However, where a **carbon price** has been paid for the imported products in their country of origin, a reduction can be claimed.

What are legal issues related to CBAM?

A cornerstone principle of WTO law is **non-discrimination**. Countries have to give **equal treatmen**t to products irrespective of their **country of origin** and to treat foreign-made products as they treat domestic ones.

CBAM's may discriminate between goods from different countries on account of an **inadequate** carbon pricing policy, or due to reporting requirements for importers.

However, even if the EU's CBAM is discriminatory, it can be justified under the General Exceptions clause given in Article XX of the GATT.

Under Article XX, measures can be taken by countries that **violate GATT obligations**. They Should fall under one of the **listed policy grounds**.

One of the **listed policy grounds** in Article XX is 'conservation of exhaustible natural resources'. CBAM would fall under this category.

29. Criticism of government's attempt to combat fake news is premature and misguided

Source- The post is based on the article "Criticism of government's attempt to combat fake news is premature and misguided" published in "The Indian Express" on 3rd June 2023.

Syllabus: GS3- Role of Media and Social Networking Sites in Internal Security Challenges **Relevance**- Issues related to fake news

News- On April 6, MeitY announced the IT (Intermediary Guidelines and Digital Media Ethics Code) Amendment Rules, 2023.

What are provisions contained in these rules?

The rules introduce "fact-checking units" to tackle the menace of fake news. These fact-check units have been tasked with the duty of identifying false, fake or misleading information pertaining to the central government's business.

What are dangers associated with false news?

In the last half-decade, governments across the have begun to recognise the threat posed by **fake** or **false information**.

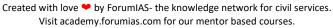
The hazards of fake information were released during the Covid-19 crisis. The pace at which false information began to spread was **unprecedented**.

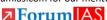
Fake or misleading news can spread like wildfire on social media. Scholars at the **Massachusetts Institute of Technolog**y even found that falsified content spreads **six times faster** than factual content on online platforms.

People are more likely to spread fake and misleading news than verified truthful information. A study conducted by the International Federation of Library Associations and Institutions found that India was a hot-bed for Covid-related fake news. Such misleading information ranged from the vaccine drive to the symptoms and aftermath of the virus itself.

What are issues related to deep fakes?

It is important for governments to prepare themselves for the dangerous interplay of fake news and AI-related technologies such as deepfakes in the digital world.





In February, **deep fakes of news anchors** praising China's role in geopolitical relations were spread across Twitter and <u>Facebook</u> by pro-China accounts. **Deepfakes of the Ukrainian President** announcing a surrender were also circulated across platforms last year.

This **convincing ability** of deep fakes, and the inability of people to separate them from **truthful content**, makes them prone to being used to spread false information.

Why does the government need to act against false news?

Falsified information can have **detrimental impact** on the government's ability to **manage emergencies**.

For instance, carrying out **essential vaccination initiatives**. Any roadblock in the **easy and quick implementation** of such initiatives could be life-threatening.

Further, such falsified information purpose is to create a **state of alarm amongst the public**. This can have dangerous **law and order consequences**.

Why criticism against the rules having a "chilling effect" on the public is wholly unsubstantiated?

The **fact-checking units** are still to be notified by the government. Even the Bombay High Court, orally remarked that at this stage they are presently **"inoperable" due to non-notification** of the fact-checking units.

It is only upon the notification of the units that **further nuances** will be known. Thus, any arguments against the rules right now would be **premature**.

