



9 PM

Compilation

24th to 29th October, 2022

9 PM Compilation for the Month of October, (Fourth Week) 2022

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General Studies Paper – 2

General Studies - 2

1. [What Pakistan's removal from FATF grey list signifies](#)

Source: The post is based on an article “**What Pakistan's removal from FATF grey list signifies**” published in **The Indian Express** on **26th October 2022**.

Syllabus: GS 2 – International Relations

Relevance: FATF grey list and Pakistan

News: The Financial Action Task Force (FATF) has recently decided to remove Pakistan from its grey list.

What is FATF?

It checks global money laundering and prevents the misuse of international financial channels and instruments for terrorism and criminal activities.

The US has relied on FATF along with the listing of terrorist in UNSC's designated terror list in fighting against terrorism since 1998.

However, FATF has been more influential when compared to UNSC's global terror list.

How FATF has been more influential compared to UNSC?

The UNSC maintains the global terrorist list. The member countries pass the resolution to designate the name of terrorists in the global terrorist list of UNSC.

Once listed in the global list of terrorists the UNSC requires states to implement sanctions against them.

However, this mechanism is not very effective. Although it embarrasses the states that host the terror activities, it does not put pressure on it to comply with the requirements to end terrorism. Therefore, FATF has been more effective in tackling terrorism and putting Pakistan in the grey list was one such effort towards ending terrorism. Although, the FATF also does not sanction states but being placed on its grey list has other consequences for a country.

How far FATF has been successful in handling Pakistan?

Pakistan was being monitored by FATF from the last two decades as the country saw an increase in the terror activities along with terror funding.

Pakistan was put in the grey list of FATF in 2018. This led Pakistan to comply with the directions of FATF else there were chances of being blacklisted.

The FATF monitoring requirements tightened bank regulations in Pakistan which also **affected the citizen of Pakistan**.

Further, it also impacted the **government's access to international finances** including assistance from multilateral agencies and from private lenders. It has also forced Pakistan to bring down cross-border terror activities.

However, the current decision of removing Pakistan from the grey list has raised the concern for India as terrorist like Masood Azhar and others are still free. Therefore, India needs to fight terrorism diplomatically with the goal of making itself more stable and secure.

2. [A medical student writes: What the language debate misses, and why translating MBBS books to Hindi is easier said than done](#)

Source- The post is based on the article “**A medical student writes: What the language debate misses, and why translating MBBS books to Hindi is easier said than done**” published in **The Indian Express** on **26th October 2022**.

Syllabus: GS2- Education

Relevance- Languages issues in education field

News- The article explains the issues related with the recent move of the central government to translate medical books into Hindi language.

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What are the arguments in support of translation?

There are countries like China, Japan, Russia and Norway where technical and non-technical languages are the medium of instruction in technical and non-technical courses.

Imparting education in a student's mother tongue is effective for learning.

What are the issues with translation?

Fifty-two medical colleges, out of the total 170 colleges on mainland China teach in both Chinese and English. Chinese healthcare is also self-sufficient when it comes to research and protocols. Germany has availability of primary resources available in their own language.

We can not compare the status of English with German or Chinese. There are few resources available in Hindi that can provide job opportunities.

English allows dialogue with the rest of the world. The field of medical science is continuously evolving. It requires constant learning from research papers, articles and books. A sound system of translation is needed for it.

There is a need to properly **understand the process of translation.** The medical terminology remains the same. Only sentences have been translated for easier reading. These books are to be used as bridge books and not as replacements for the English books. They are designed to address the initial problems faced by students.

There is a lack of necessary infrastructure for translation. Professors and teaching staff need to be trained.

There has been no clarity on whether these translations will be incorporated as reading materials. Translating these books only once would not suffice. Newer editions of books require constant updating.

3. [Improving access to entertainment content](#)

Source: The post is based on an article **“Improving access to entertainment content”** published in **The Hindu** on **27th October 2022**.

Syllabus: GS 2 – Social Justice

Relevance: efforts needed to make movies disabled friendly

News: The article discusses the efforts that is required to make movies disabled friendly.

Movies should be made in such a way that even disabled can watch it and enjoy it. However, the efforts taken in India have not been successful in making movies disabled friendly.

What makes movies/entertainment content disabled friendly?

There are two important tools – a) audio description and b) subtitling.

Audio description refers to description of the visual in the form of audio so that it can benefit blind whereas **subtitling** refers to displaying the textual form of the audio component of the video so that it can benefit deaf.

However, the potential of these two tools have not been used in India and there has been a need for the remedy.

How has India taken step to make entertainment videos disabled friendly?

Law: The Rights of Persons with Disabilities (RPwD) Act provides guidance towards making entertainment content disabled friendly.

- Section 29(h) of the Act provides that the government should take measures to ensure that persons with hearing impairment can have access to television programmes with sign language interpretation or sub-titles.
- Section 42(ii) requires that the government should take measures to ensure that persons with disabilities have access to electronic media by providing audio description, sign language interpretation and close captioning.

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Ministry: The Union Ministry of Information and Broadcasting (I&B Ministry) issued a letter to the Central Board for Film Certification (CBFC) in 2019.

- It requested the Board to motivate and persuade its associated members to make audio description part of the production and distribution of a film.

App: Saksham has developed **XL Cinema app** which syncs audio-described tracks with movies. It helps the disabled person to hear the audio description of the movie at the same time when the movie is being showcased.

Some of the movies that have been audio described are – Sanju, Andhadun and Romeo Akbar Walter.

However, the steps taken by these organization are not enough and there is a further need for the improvement.

What is the way forward?

First, there is a need to put pressure on the production houses to provide audio description and subtitling. This will make the movie disabled friendly.

- Further, the film studios must realize that making disabled-friendly content is morally, legally and commercially right.

Second, user organization must come up to help production houses that lack capabilities in making content disabled friendly. They must engage in capacity-building initiatives.

Third, there is a need for the engagement of the civil society through legal process of making content disabled friendly.

- Citizens with disabilities must demand accountability from the government, filmmakers, streaming platforms and others in the entertainment ecosystem through the judicial process.

Fourth, the I&B Ministry is taking efforts to notify the Accessibility Standards for Television Programmes for Hearing Impaired for three years. A similar standard must be framed for the visually impaired and a prompt action should be taken for its implementation.

4. [Pakistan's exit from FATF Grey List and India's challenge](#)

Source: The post is based on an article “Pakistan's exit from FATF Grey List and India's challenge” published in **The Indian Express** on **27th October 2022**.

Syllabus: GS 2 – International Relations

Relevance: removing Pakistan from the grey list of FATF

News: The Financial Action Task Force (FATF) has recently announced the removal of Pakistan from its “Grey List”. This announcement was unexpected and it also raises concerns for India.

[What is the Financial Action Task Force \(FATF\) and what are its objectives?](#)

How does FATF fulfil its objectives?

It draws a list of guidelines known as the “FATF Recommendations” or “FATF Standards”.

These standards include a range of regulatory and enforcement actions that states are expected to implement. More than 200 countries and jurisdictions are committed to implementing the FATF's recommendations.

The decision against a country is taken on the basis of consensus between and FATF and its associate or regional members such as the Asia Pacific Group on Money Laundering (APG).

How does FATF monitors the implementation of its recommendations and what makes country to come in the grey/black list of FATF?

It monitors by periodic evaluations of the anti-money laundering (AML), combating financing of terrorism (CFT) and proliferation financing (PF) system.

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Countries that have **strategic deficiencies** in their AML/CFT/PF regimes are placed under a scheme of **increased monitoring also known as “Grey Listing.”**

Countries placed in the grey list are expected to take the required measures to address their deficiencies on the basis of “Action Plans” drawn and evaluated by FATF.

Countries that have **serious strategic deficiencies** in their AML/CFT/ PF regimes are placed under a **“Black List” also known as “High-Risk Jurisdictions** subject to a Call for Action.”

Grey list acts as a warning to countries whereas black list have serious economic consequences by increasing check on the transaction made to the designated country.

Presently, there are 23 countries on the FATF’s “Grey List” excluding Pakistan while there are three countries on the “Black List” — North Korea, Iran and Myanmar.

How did listing in the grey list help to counter terror activities in Pakistan?

Pakistan has been pushed three times in the grey list and removed from it. It was placed for the third time in June, 2018.

The members of FATF have said that the adherence of FATF standards by a country should be judged on the basis of “effectiveness” of action taken against individuals and entities of concern, rather than pro-forma based “technical compliance”.

This approach was taken by FATF against Pakistan which increased a further threat of being black listed. These efforts made Pakistan to prosecute, convict, fine and jail, the wanted terrorists.

What are geopolitical concerns that favours Pakistan?

Although there was a threat to Pakistan of moving from grey list to black list but it could have not been possible. The decision could have been opposed by FATF members China, Malaysia, Turkey and Saudi Arabia due to their good relation with the country.

Moreover, the present listing of Pakistan in the grey list was done by the US. However, it was expected that Pakistan would be removed from the list after completion of US withdrawal from Afghanistan. It has proved to be true.

Further, the US have also remained back from declaring Pakistan a “state sponsor of terrorism” under American law despite the supportive evidence.

What India should do?

Although, there has been a decline in terrorist activities across the Line of Control (LoC) in J&K. However, regular sightings of drones bearing weapon payloads and infiltration along the LAC are indications of threat that is still present for India.

Therefore, India must continue with the available opportunities to counter terrorist activities and bring global pressure on Pakistan.

Moreover, there has also been geopolitical concerns that favors Pakistan at the global level.

5. [We’ve made significant progress on poverty reduction](#)

Source: The post is based on an article “We’ve made significant progress on poverty reduction” published in **Live Mint** on **27th October 2022**.

Syllabus: GS 2 – Social Justice

News: Multidimensional Poverty Index (MPI) 2022 has been released by the United Nations Development Programme (UNDP) and the Oxford Poverty & Human Development Initiative.

What approach is followed by MPI to list a household as multidimensionally poor?

It identifies overlapping poverty indicators and captures the intensity of deprivation.

Deprivation is calculated across 10 indicators using three dimensions – health, education and standard of living.

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The weighted average score based on 10 indicators of each household is the MPI. If the deprivation score is one-third or higher, the MPI identifies the household as multidimensionally poor.

What are the findings of MPI 2022 for India?

Reduction in Poverty: India has made good progress on all 10 deprivation indicators. There has been reduction in the number of poor people (415 million people exit poverty) in India from 2005.

- This is the first time that India has shown poverty reduction performance like China. In terms of percentage, poverty fell from 55.1% of our population to 16.4% in 15 years, i.e., from 2005. Therefore, it can be said that India is no longer a poor country.

Number of Poor: India has the largest number of poor people worldwide (229 million).

Rural-Urban Gap: There is a huge gap between the people living in urban areas than those living in rural areas. Around 21.2% of rural residents are poor compared to only 5.5% of urban residents. Accord to the report, rural areas account for nearly 90% of all poor people in India.

Children-Adult Gap: More than one in five children (21.8%) are poor compared to one in seven adults (13.9%).

Deprivation indicators: The high deprivation indicators in India are access to cooking fuel, housing, nutrition and sanitation.

States: States such as Bihar, Jharkhand, Chhattisgarh, Madhya Pradesh, Rajasthan and Uttar Pradesh have made improvement still they are India's most deprived states. Odisha has also joined the list of deprived states.

What can be the course of action?

The highlights of the report help India to reorient its public policy depending upon the deprivation indicators. The measures that can be taken by India are –

1. **a)** deprivations in people's access to nutrition, cooking fuel, sanitation and housing need to be addressed on priority, **b)** the public distribution system should be oriented towards distributing nutrition from distributing basic calories, **c)** the subsidized cooking fuel benefits should be expanded further in rural areas, **d)** the central and state government should increase its effort in sanitation and affordable housing.

is it correct? [\[AS1\]](#)

The article says “global MPI complements the international \$1.90 a day poverty threshold.” [\[AS2\]](#)

Yes Sir, it is correct. MPI is the global poverty index and it uses the global poverty standard. [\[at3\]](#)

6. [Protecting competition – on CCI penalty on Google](#)

Source: The post is based on an article “Protecting competition” published in **Business Standard** on 27th October 2022.

Syllabus: GS 2 – Governance

Relevance: fines imposed on Google by CCI

News: The Competition Commission of India (CCI) has imposed two fines within seven days on Google.

What were the reasons behind imposing fine?

Fines were imposed for two reasons – a) misusing its dominant position in multiple categories related to the Android ecosystem, b) misusing its dominant market position with respect to its Play Store policies.

Multiple Categories: As per CCI, Google misused its position in the multiple categories that include misuse of android operating system, android apps, monopoly market share in search, etc.

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Play Store Policies: Google made it mandatory to use Google Play Billing System (GPBS) for paid apps and in-app purchases for app developers which is termed as unfair practices by CCI. The failure to comply with using GBPS would not permit app developers to list on Play Store.

Further, as per CCI, Google discriminated in favor of YouTube by not requiring GPBS for it and it also integrated GPay to its Play Store that gave unfair advantage to its own UPI app.

Moreover, Google entered Mobile Application Distribution Agreements (MADA) with mobile manufacturers to ensure Google's apps are pre-installed.

It gave a competitive edge to Chrome browser and YouTube and helped google to secure its exclusive position in online search.

These were the reasons for imposing fine on Google and CCI has also directed google to take certain steps.

What are the directions issued by CCI to Google?

It has **stopped Google from forcing manufacturers to pre-install its applications** and it has been prohibited to offer any monetary incentive or to enter into any arrangement for search exclusivity.

CCI also **directed google to allow app developers to use third-party billing/payment processing services.** This would ensure proper level playing field amongst the payment providers.

Google has been **asked to come up with transparent policy on the data collected**, use of data and also potential and actual sharing of data with other entities. It has also been directed that data collected through GPBS should not be misused.

Google is also instructed **to not discriminate against apps** providing payment through UPI apps other than GPay.

7. The foundational education we impart makes a huge difference

Source- The post is based on the article **"The foundational education we impart makes a huge difference"** published in the **mint** on **27th October 2022**.

Syllabus: GS2- Education

News- Recently, the National Curriculum Framework for Foundational Stage (NCF-FS) was released by India's ministry of education. It is one of the most important dimensions in the implementation of the National Education Policy (NEP) 2020.

What is the schooling system suggested by NEP, 2020?

It has created a four stage **"5+3+3+4"** curricular structure.

The first stage is the foundational stage. The second is the preparatory stage. The third and fourth stages are the middle and secondary stages.

What is the importance of the foundational stage?

It is the most critical stage for overall development of an individual- **physical, cognitive and socio-emotional**.

Neuroscience research tells that 85% of brain development occurs by the age of 6.

The Foundation addresses early childhood care and education for 3-8 ages. It includes pre-schools, kindergarten, anganwadis and nursery.

What is the curriculum?

It is the entire organised experience of students in institutional settings to achieve educational aims. It includes learning and developmental goals, syllabus, **pedagogical practices and assessment, learning environment, teaching-learning material**.

What are the main highlights of the National Curriculum Framework for the Foundational Stage?

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It addresses all domains of development called **physical, ethical, cognitive, literacy, socio-emotional and cultural aspects**.

Pedagogical approach in the new curriculum framework is **play-based**. It includes stories, music, crafts, conversation and field trips.

Teaching and learning is to be situated in the context of a child that includes local language and traditions. It caters to different needs and levels of children including children with special needs. Assessment is seen as an enabler for learning and development. It is imagined as part of everyday classroom process and largely based on systematic and careful observation of children.

It focuses upon building an **enabling ecosystem**. It includes empowering teachers and enabling a supportive academic and administrative support system.

It speaks directly to teachers. It focuses upon classroom practices with real-life illustrations.

8. [The dismal case of slashing schemes and cutting funds](#)

Source: The post is based on an article “**The dismal case of slashing schemes and cutting funds**” published in **The Hindu** on **28th October 2022**.

Syllabus: GS 2 – Government Policies

Relevance: concerns associated with the decline in the number of schemes

News: Around 50% of central government sponsored scheme have been discontinued, subsumed, revamped or rationalised into other schemes in the past three years.

This has impacted different sectors as funds are needed for the welfare of the people.

How schemes have changed in different ministries?

Union Ministry of Women and Child Development – There are just 3 schemes now (Mission Shakti, Mission Vatsalya, Saksham Anganwadi and Poshan 2.0.) out of 19 schemes.

Ministry of Animal Husbandry and Dairy – There are just 2 schemes remaining out of 12. The Ministry has also ended three schemes which include Dairying through Cooperatives, National Dairy Plan-II, etc.

Ministry of Agriculture and Farmers’ Welfare – There are three schemes now (Krishonnati Yojana, Integrated Scheme on Agricultural Cooperatives and the Rashtriya Krishi Vikas Yojana) out of 20 earlier.

However, the challenges such as funding cuts, disbursement and utilization of funds still remain despite reduction in the scheme.

As per data, around ₹1.2 lakh crore of funds meant for central government-sponsored schemes are with banks and they have not been utilized.

What is the status of active schemes?

Schemes that are active, are also facing challenges such as funding cuts, disbursement and utilization of funds.

Nirbhaya Scheme: ₹1,000 crore was allocated to the Nirbhaya fund annually between 2013-16 and out of these funds a large amount of have been unutilized.

- Further, around ₹6,214 crore was allocated to the Nirbhaya fund since its launch in 2013 but only ₹4,138 crore was disbursed till the FY21-22.
- This shows the dismal condition of the women-oriented schemes. States are also ending the schemes while women still continue to face risks in public spaces.

Agriculture: Farmers are facing problems with the cut in the subsidies of fertilizers by the government. **For example**, government spending on fertilizers in FY20-21 was ₹1,27,921 crore and it reached ₹79,529 crore in the FY21-22. There were also reductions in the allocation of NPK fertilizers.

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- These budgetary cuts have led to shortage in fertilizers and the price of fertilizers have also risen up due to the ongoing Ukraine war.

Employment: The allocation for the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) went down by 25% in the FY22-23 budget compared to the FY21-22.

- This reduction has come at the time when the demand for jobs is higher than pre pandemic level as highlighted by the Economic Survey 2022-23.
- Further, there has been delay in the disbursal of the fund.
- There has also been reduction in the actual allocation of budget for the **Garib Kalyan Rojgar Abhiyaan**. This scheme subsumed 15 other schemes instead of expanding and providing jobs to the rural poor.

Health: There has been delays in the salary of Accredited Social Health Activists (ASHA) workers. They also struggle in regularization of their jobs and their wages are also very low.

Environment: Funding for wildlife habitat development under the Ministry of Environment, Forest and Climate Change has declined to almost half this year. There has also been decline in the allocation for Project Tiger. This raises doubt on meeting the climate change obligations.

9. [Bailouts and balances: Tough choices ahead for Sri Lanka](#)

Source: The post is based on an article “**Bailouts and balances: Tough choices ahead for Sri Lanka**” published in **Business Standard** on **28th October 2022**.

Syllabus: **GS 2 – International Relations**

Relevance: **measures to improve Sri Lanka’s economic crisis**

News: Sri Lanka has been witnessing food and energy shortages and political instability for a long period of time.

This has made the country to run out of the cash to survive its economy. Therefore, IMF has assisted Sri Lanka in improving its position.

How has IMF helped Sri Lanka and what are its suggestions?

Sri Lanka has finalized a staff-level agreement with the International Monetary Fund (IMF) and four-year rescue plan worth \$2.9 billion has been provided by the IMF.

The IMF agreement has laid down the following conditions for the Sri Lankan government: a) a cut in spending, b) increase in taxes, c) policies against corruption, d) autonomy for the central bank, and e) reduction in debt-to-gross domestic product ratio.

It also wants that Sri Lanka should talk to its top bilateral fund creditors (China, Japan, and India) to restructure its loans, seek debt relief and financial assurances.

How has the three countries help Sri Lanka at the time of crisis?

China: China is the largest lender of Sri Lanka. It is the only lender contributing to 10 per cent of Sri Lanka’s overall borrowings and accounting for 20 per cent of its overall debts.

- China has helped Sri Lanka in many ways such as by providing financial assistance worth \$2.5 billion in 2020 and by providing a \$1.5-billion currency swap in 2021.
- It has also offered humanitarian assistance of \$75 million and additional financial assistance worth \$4 billion.

India: India’s approach to the Sri Lankan crisis is **people-centric as well as interest-driven**. India has assisted Sri Lanka with \$3.8 billion in 2022 and Sri Lanka owes 2% of its debt to India.

- India has also provided credit lines, currency swaps, modernization, investments, and emergency humanitarian supplies to prevent the collapsing of Sri Lanka’s economy.
- Further, India has offered a free-floating dock facility, a Maritime Rescue Coordination Centre, and a Dornier reconnaissance aircraft to make Indian Ocean free of threats.

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- India's interest toward Sri Lanka has made Sri Lanka to align with India and move away from China. **For example**, Sri Lanka has cancelled the Chinese energy projects in the Jaffna peninsula and offered India the project to modernize the strategic Trincomalee oil tank farm.

Japan: Japan is the second largest bilateral lender to Sri Lanka but it has been very cautious to respond to crisis. Sri Lanka owes 9 per cent of its debt to Japan.

- However, Japan has committed to cooperate with India to help Sri Lanka in the humanitarian crisis by providing total humanitarian assistance of \$6.5 million.
- Moreover, Japan has also shown interest in defense cooperation, Sri Lankan ports and infrastructure development in Sri Lanka due to the increase in the importance of the Indo-Pacific region.
- Japan has adopted shuttle-diplomacy approach where it could coordinate or host meetings and conferences between India and China to help Sri Lanka restructure its debts.

These all show how the three countries have assisted Sri Lanka during the crisis and therefore, Sri Lanka might face challenges in debt-negotiation with these countries.

What are the challenges that Sri Lanka can face?

Sri Lanka can face challenge from China as China has **expansionist interest**. Thus, it will continue to pressurize Sri Lanka to abide by its interests especially trying to put Sri Lanka away from India.

Further, Sri Lanka might also face challenge to convince India if it increases its bilateral relation with China.

Japan and its shuttle-diplomacy attempt would also not serve its purpose if China refuses to restructure its loans.

Japan and India have security concerns while China has expansionist interest in Sri Lanka. Therefore, Sri Lanka would have to create a balanced approach towards negotiating its debt and maintaining bilateral relations.

10. Why we need to focus on nutrition, not hunger

Source: The post is based on an article "**Why we need to focus on nutrition, not hunger**" published in **The Indian Express** on **28th October 2022**.

Syllabus: GS 2 – Social Justice

Relevance: concerns associated with GHI 2002 ranking of India

News: The Global Hunger Index of 2022 has lowered India's ranking to 107 out of 121 from 101 out of 116 countries in 2021.

This has placed India below all South Asian countries except Afghanistan and also below several poor African countries such as Rwanda, Nigeria, Ethiopia and the Republic of Congo.

What is Global Hunger Index?

What are the problems with hunger calculation of GHI?

The Global Hunger Index can be viewed **at the level of theory, at the level of methodology, and at the level of Indian peculiarities.**

Theory: GHI sees hunger as a food production challenge whereas according to FAO, India is the **world's largest producer and consumer** of grain and the largest producer of milk with the increase in the per capita intake.

- India has improved so much in its food production that it offered recently to supply food to the world if permitted by WTO.

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- Further, **Amartya Sen** has said that the reasons behind poverty and hunger is not the food availability issues but it is the **improper food distribution**. He further said that India is unable to use its resources properly to fight poverty and hunger.

Therefore, putting India at 107th position in GHI 2022 and clubbing it with countries facing serious food shortages is unacceptable.

Methodology: There is also concern in the methodology of calculating GHI as the methods used by GHI calculations are about 20 years old.

- GHI uses **caloric consumption** in calculating GHI but measures of hunger and poverty are moving away from caloric consumption to nutrition.
- Further, its methodology to calculate hunger is not accurate as it focuses disproportionately on children less than five-year-old.

Indian peculiarities: Indians are mostly vegetarians whereas countries around the world are mostly non-vegetarians.

- Therefore, **child wasting and stunting** in India can possibly because of imbalanced vegetarian diets and animal protein deficiencies rather than energy deficits.
- This shows that comparing India with other countries in the world is not proper.

However, it is a well-established fact that nutrition, especially child nutrition is a problem in India and the National Family Health Survey (NFHS) provides a better picture of health and nutrition in India.

What is the National Family Health Survey (NFHS)?

What are the causes of malnutrition amongst children in India?

Breastfeeding: It is one of the biggest challenges in India as children are not properly breastfed. Breastfeeding helps the child in **acquiring antibodies** against infections, allergies and protection against several chronic conditions.

- The **WHO and UNICEF** recommend that breastfeeding should be initiated within the first hour of birth and infants should be breastfed for the **first six months**.
- According to **NFHS 5**, there has been significant **improvement** in the breastfeeding of the children. The percentage of children breastfed rose from 55 per cent in NFHS 4 to 64 per cent in NFHS 5.
- NFHS also highlights that only 42 per cent of infants are breastfed within one hour of birth.
- States such as Chhattisgarh, Jharkhand, Madhya Pradesh have seen above 70 per cent breastfeeding whereas Bihar, Punjab, Kerala are **below 50 per cent**.

Post-Breastfeeding: There are concerns that children being breastfed for the first six months after the birth continue to be breastfed even after six months without access to nutritional foods.

- **NFHS 5** shows that the improvement has been marginal over the last two reports and states like Maharashtra and Gujarat are way behind.

Unhygienic practices and Lack of awareness: According to an NGO, unhygienic practices followed at the homes are also one of the reasons behind chronic infections and malnutrition.

- Children eat unhygienic and less nutritious foods and there is also lack of awareness amongst the mothers.

Outcome of Poor nutrition: Poor nutrition in children leads to various diseases and problems such as stunting, wasting, anaemia and low weight.

11. [The death penalty and humanising criminal justice](#)

Source: The post is based on an article “**The death penalty and humanising criminal justice**” published in **The Hindu** on **29th October 2022**.

Syllabus: GS 2 – Governance

News: The three-judge bench that included the Chief Justice of India (CJI), Justice U.U. Lalit has taken constructive steps to correct issues related to the death penalty law.

The findings of the **Death Penalty India Report (2016)** and the **Deathworthy** (Project 39A of the National Law University Delhi) report helped the CJI in providing a structure for death penalty law.

What is the step taken by the three-judge bench of SC?

A three-judge bench that included CJI has focused on restructuring ‘Framing Guidelines Regarding Potential Mitigating Circumstances to be Considered While Imposing Death Sentences’.

It has also referred the matter to the larger Bench of the SC to come up with **procedural norms** for imposing the death sentence. The direction of a larger bench will ensure **uniformity** in the death penalty decision.

The reference to larger bench will be a step towards **justice reforms** in the death penalty sentencing. It is because there are various limitations imposed by law (Section 354(3) in the Code of Criminal Procedure) and judiciary (deciding the ‘rarest of rare’ case).

How the decision of the three-judge bench is a positive step towards reform in the capital punishment?

In the ‘**Bachan Singh case**’ the SC highlighted Section 235(2) of Code of Criminal Procedure.

Section 235(2) grants a right to pre-sentence hearing after conviction but the decision of trial court and the appellate court conflict with the decision given in the ‘Bachan Singh case’.

This issue of difference in opinion is highlighted by Justice Ravindra Bhat. He has further highlighted the limitation in deciding the ‘**rarest of rare**’ case and has also asked the sentencing court to balance **aggravating and mitigating factors**.

SC in its past observation has said that the accused in a death sentence has less choice of defending itself and placing mitigating circumstances after the conviction as aggravating circumstances would always be on record.

However, the decision of the three-judge Bench has overruled the past judgment. It has said it is necessary to have clarity in the matter to ensure a uniform approach with providing **real and meaningful** opportunity to the accused.

However, the problem lies with transforming real and meaningful opportunity into reality and in its application.

Further, the three-judge bench decision has also highlighted judgment of ‘Manoj and Ors. vs State of M.P.’.

SC in ‘**Manoj and Ors. vs State of M.P**’ said that the trial court must consider the factors such as social environment, educational level, mental state, etc. of the accused when dealing with death penalty.

What is the way ahead?

The decision and initiative taken by three-judge bench will have a positive outcome but the future shape to humanise criminal justice will ultimately depend upon two things.

First, the composition of larger Bench on the death penalty matter and the inclination of the judiciary to bring reforms in the death penalty laws.

Second, the acceptance of meaningful hearing and its broader application even at the earlier guilt determination stage will depend on the society.

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Therefore, the two components (**culpability/guilt and sanction/punishment**) must be taken into account in giving a death penalty.

12. Central Asia: The new battleground for US and China

Source– The post is based on the article “**Central Asia: The new battleground for US and China**” published in **The Indian Express** on **29th October 2022**.

Syllabus: GS2- International relations

Relevance– Geopolitics across the Central Asia

News- The article explains the geopolitical game between major powers across Central Asia and its strategic implications.

What is the importance of Central Asia?

The Samarkand declaration describes Central Asia as the **core of the SCO**. This includes stabilizing Afghanistan.

The US strategy too recognizes that a “**secure and stable**” **Central Asia** would contribute directly to the US’s counterterrorism efforts.

What is happening in Afghanistan?

In Afghanistan, the Taliban is battling multiple challenges to security and stability. The killing of Ayman al Zawahiri in a US drone strike in Kabul has created fresh doubts about the Taliban’s intentions as well as capacity to go after terror networks.

A **UN Security Council report** documented the presence of 8,000 to 10,000 foreign fighters in Afghanistan. The report said such groups included hundreds of fighters of the East Turkistan Islamic Movement (ETIM) and Central Asian groups such as the Islamic Movement of Uzbekistan and Islamic Jihad Union.

What is the current situation in Pakistan?

Pakistan’s forces are facing direct attacks in tribal areas in Peshawar and the Swat Valley from Tehreek e Taliban Pakistan and Baloch groups.

Chinese interest in Pakistan has been targeted by bad Taliban and Baloch groups. These groups have upped the ante since the Taliban takeover of Afghanistan.

What is the Chinese strategy in the region?

China does not seem ready to provide a **security umbrella** to Central Asia or Afghanistan. It is closely coordinating moves with Pakistan across central Asia and beyond. China has ambitions of becoming the **pre-eminent Asiatic power** in this region. It wants to use it to weaken competition from the US across the Indian Ocean region.

After the departure of US troops from Afghanistan, China started engaging deeply with the Taliban. However, China’s direct influence in Afghanistan remains limited. It wants to limit competition from the US across the Indian Ocean region by strong presence in this region.

It is cooperating with Pakistan in this region. In alliance with Pakistan, it is trying to reverse the influence of other states in the region through proxy violence and border engagements. Aggression at Indian borders within two months of the signing of the US-Taliban agreement in February 2020 is an example.

The **joint China-Pakistan moves** include consistent hardening of the LAC with India and putting a technical hold on UN designations of Pakistan-backed terror operatives. The recent docking of Chinese-built Pakistani frigate PNS Taimur at the Colombo port and China’s ship Yuan Wang 5 at Hambantota port appears to be aimed at spreading their footprints in the Indian Ocean region.

What are security challenges in the region?

US-China competition in the region has a **nuclear dimension** because of the presence of three nuclear weapon states. China started helping Pakistan develop its military and nuclear muscle

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mainly to offset threats arising from strong Indo-Soviet cooperation. It has built Pakistan as an **“all-weather” nuclear state**.

There is rising levels of proxy violence across Af-Pak. The aggressive propaganda of new age proxies commanded by the **Pakistan deep state**, like the al Qaeda and Islamic State Khorasan Province (ISKP), are serious threats.



General Studies Paper – 3

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1. [A renewable energy revolution, rooted in agriculture](#)

Source: The post is based on an article “**A renewable energy revolution, rooted in agriculture**” published in **The Hindu** on **26th October 2022**.

Syllabus: **GS 3 – Environment**

Relevance: **efforts needed to tackle stubble burning**

News: A private company has established first bio-energy plant in Sangrur district of Punjab. The plant will produce **Compressed Bio Gas (CBG)** from paddy straw.

This will eventually provide the solution to stubble burning in Punjab and will convert agricultural waste into useful products.

The government has also taken various steps to tackle stubble burning.

What are the efforts taken by the government to tackle stubble burning?

The Commission for Air Quality Management (CAQM) had developed a framework for the effective prevention and control of stubble burning.

The framework includes both in-situ and ex-situ crop management.

In-situ management includes mixing paddy straw and stubble in the soil using heavy machinery. This machinery is subsidized and supported by crop residue management (CRM) Scheme of the Ministry of Agriculture and Farmers Welfare.

Ex-situ CRM efforts include the use of paddy straw for biomass power projects and burning in thermal power plants, as feedstock for 2G ethanol plants, feed stock in CBG plants, fuel in industrial boilers, etc.

Further measures are also taken to ban stubble burning, monitor it and generate awareness.

However, the measures have been not enough to tackle the burning issues and crop residue burning is spreading even to rabi crops and the rest of the country.

What were the recommendations of FAO?

Food and Agricultural Organization (FAO) suggested to develop a crop residue supply chain in Punjab that can allow the collection, storage and final use of rice straw for other productive services.

This would reduce greenhouse gas (GHG) emissions by about 9.7 million tonnes of CO₂ equivalent and around 66,000 tonnes of PM_{2.5}.

Further, farmers can expect to earn between ₹550 and ₹1,500 per ton of rice straw sold depending on market conditions.

A techno-economic assessment of energy technologies suggested that rice straw can be cost-effective for producing CBG and pellets.

These pellets can be used in thermal power plants as a substitute of coal and CBG as a transport fuel.

What is the target set under SATAT scheme?

The Government of India has set a 5% CBG production target under Sustainable Alternative Towards Affordable Transportation (SATAT) scheme. This target can be achieved with 30% of rice straw produced in Panjab.

The plant setup by Verbio India Private Limited in Punjab will use one lakh tonnes of paddy straw produced from approximately 16,000 hectares of paddy fields.

This will reduce up to 1.5 lakh tonnes of CO₂ emissions per year and also provide employment opportunities in Punjab.

What are the benefits of SATAT scheme?

It will increase local entrepreneurship, increase farmers' income and reduce open burning of rice straw.

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The paddy straw from one acre of crop can yield energy output (CBG) worth more than ₹17,000. It is an extra 30% income for a farmer.

The fermented organic manure from the plant (CBG) will be useful as compost to replenish soils heavily depleted of organic matter and b) reduce dependence on chemical fertilizers.

Therefore, this initiative is an example of a 'wealth from waste' approach and circular economy.

2. [Indian sugarcane fields could yield a flex-fuel bonanza](#)

Source: The post is based on an article "**Indian sugarcane fields could yield a flex-fuel bonanza**" published in **Live Mint** on **26th October 2022**.

Syllabus: GS 3 – Environment

Relevance: benefits of ethanol blending

News: The article discusses the benefits of ethanol blending in Brazil and measures that need to be adopted by India for ethanol blending fuel.

Ethanol blended petrol was first used in Brazil after the deployment of flex-fuel technology. Today, around 93% of the vehicles in Brazil are capable of running on ethanol.

What are the benefits of ethanol blending and how has it benefited Brazil?

Ethanol emits between 44% and 52% less greenhouse gas emissions as compared to petrol. So, when it is combined with petrol it significantly reduces the CO₂ emissions of a vehicle. Whereas, even new technologies like Electric Vehicles require power for charging batteries, i.e. fossil fuel-based power plants.

The ethanol blending has helped Brazil in reducing contribution of CO₂ equivalents into the atmosphere.

Further, ethanol production in Brazil is highly efficient and most facilities use residual waste from the process (bagasse) for power.

In 2020, around 5% of the total power consumption of the country was met by bio-electricity generated from bagasse.

How ethanol is produced in Brazil and what are requirements to produce ethanol?

Brazilian ethanol is produced from sugarcane. It is one of the world's leading producers of sugar ethanol and one of the world's largest producers of sugarcane.

The ethanol produced from sugarcane in Brazil has a much higher energy balance than corn-based ethanol produced by the US.

Further, very few other countries can produce sugar ethanol because sugarcane needs to be converted into ethanol within 24 hours of harvesting else it spoils.

Therefore, all sugar ethanol production plants have to be located in the centre of the fields from which they get their raw material.

So, looking at the requirements to produce ethanol, India stands at the position to produce sugar-based ethanol blending.

How India can produce ethanol?

India is a major sugarcane producer like Brazil and it is one of the very few countries in the world that can adapt its fuel supply to incorporate ethanol.

Therefore, India needs to adopt production technique like Brazil and mandate that all internal combustion engine vehicles be redesigned to **incorporate flex-fuel technology** to use ethanol blended fuel.

This will eventually help India to reduce CO₂ emissions and help achieve India to fulfil its environmental targets.

What should be done?

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India's Union minister for transport Nitin Gadkari launched the country's first flex-fuel car that was capable of running on petrol, ethanol or any mixture of the two. However, ethanol is not a complete solution to the climate challenges of the world but it is a great step towards achieving a sustainable future.

You have missed this point: [\[AS1\]](#)

as much as EVs are themselves zero emission, as long as the batteries they use are charged using electricity from the power grid, their net carbon impact is still high because a significant proportion of our power plants use fossil fuel for generation.

3. [Not a pre-election Budget, please!](#)

Source: The post is based on an article "Not a pre-election Budget, please!" published in **Business Standard** on **26th October 2022**.

Syllabus: **GS 3 – Economic Development**

Relevance: measures to tackle fiscal deficit

News: The finance Ministry has started preparing the Union Budget for 2023-24. It would be presented on February 1, 2023.

This budget will be a last full Budget of the present government in its second term. Therefore, the budget is expected to be a pre-election budget. It means it may include promises for spending to attract voters.

However, government should not make it a pre-election budget as these spending further increases burden on the government.

Instead, the budget of 2023 should focus on fiscal consolidation.

Why is there a need for fiscal consolidation?

The Union Finance Minister had set for the Centre a fiscal reduction plan to be achieved over a longer period.

Fifteenth Finance Commission has also recommended states to reduce its fiscal deficit.

Accordingly, the Centre's fiscal deficit is set to be brought down to 4.5 per cent by 2025-26 while the states should bring theirs down to 3 per cent by 2023-24.

As per revised estimated for 2021-22, the combined fiscal deficits of 18 major states would be about 3.4 per cent and is expected to decline to only 3.3 per cent in 2022-23.

Therefore, achieving 3 per cent fiscal deficit target for the states in 2023-24 looks difficult.

The Centre has brought down its fiscal deficit from 9.2 per cent of GDP in 2020-21 to 6.7 per cent in 2021-22 and is likely to bring it down to 6.4 per cent in 2022-23. However, reducing its fiscal deficit to the set target of 4.5 per cent would be difficult if finance ministry treats the budget for 2023-24 as a pre-election exercise.

Further, fiscal consolidation is also necessary to face the emerging global economic challenges, check the rising inflation along with depletion of forex reserves.

Therefore, ensuring financial stability through fiscal consolidation should be the goal rather than achieving higher growth through increased spending.

4. [A rate-and-rupee strategy could restore India external balances](#)

Source- The post is based on the article "**A rate-and-rupee strategy could restore India external balances**" published in the **mint** on **26th October 2022**.

Syllabus: GS3- Indian Economy

News- The article explains the current macroeconomic scenario in the country. It talks about the policy response to improve the external balances.

What is the situation of external macroeconomics indicators?

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Foreign exchange reserves are \$533 billion.

The Rupee has weakened by 4.5% against the US Dollar since September.

Trade and current account deficit are widening. CAD is likely to be 5% of GDP in the quarter ending September.

External balances are facing pressures from higher commodity prices, high inflation, monetary policy tightening across the world.

What is the internal economic scenario?

Investment scenario is weak. Some investment indicators are rising. It does not signal rising capital expenditure. It is mostly replacement capital expenditure from the pandemic period.

Saving rates have fallen. It has contributed to widening CAD. Higher public sector borrowing, lower household saving and lower bank deposits are responsible for low saving rates.

What can be the policy repose?

Policy rate hikes– It may check the inflation, incentive saving and discourage the household borrowings. But it could slow down income growth.

Increase public savings– It can lead to expenditure cuts. It will be negative for GDP growth and income.

Currency depreciation– It will make exports more competitive, imports more expensive and lower trade deficit.

A combination of higher interest rates and weaker Rupee is the optimal response. In September RBI moved to a two-pronged strategy of higher rates and weaker Rupee.

But there are challenges to this path. Real deposit rates are negative and trade weighted REER has not weakened since May this year.

5. [Corporate insolvency: Rethinking irregular transactions](#)

Source– The post is based on the article “**Corporate insolvency: Rethinking irregular transactions**” published in the **Business Standard** on **26th October 2022**.

Syllabus: GS3- Indian Economy

Relevance– Insolvency process

News- The article explains the impact of recent SC judgement on insolvency process.

In **Anuj Jain Vs Axis Bank Ltd**, the Supreme Court (SC) upheld the recovery of 758 acres of land valued at over Rs 5,300 crore lost through irregular transactions.

Till June this year, 786 applications have been filed to claw back Rs 2,21,104 crore allegedly lost through irregular transactions by firms undergoing the corporate insolvency resolution process.

Which are irregular transactions identified by IBC Code, 2016?

The first set is known as **avoidance transactions**. It comprises preferential transactions, undervalued transactions and extortionate transactions. **The Code mandates the liquidation process to disregard these transactions.**

The second set is known as **fraudulent transactions**. It comprises fraudulent trading or wrongful trading. **The Code requires the liquidation process to recover the loss made through these transactions.**

How reversing of avoidance transactions may promote the objectives of the Code?

Reversing avoidance transactions may be a key source of additional value in corporate insolvency over and above the existing assets of the firm.

It maximises the value of the assets of the firm. If it is not possible to get away with avoidance transactions with impunity, no one would resort to such opportunistic behaviour. The possibility of the firm getting into stress is minimised.

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The code requires resolution plans to consider the order of priority for distribution of liquidation proceeds. If someone resorts to avoidance transactions, a junior stakeholder may take precedence over a senior stakeholder. It creates a disincentive for avoidance transactions.

The insolvency code also **makes the directors of the firm liable for the loss** to creditors that arise from the time when a director knew or ought to have known that there was no reasonable prospect of avoiding CIRP. It incentivises the firm as well as directors to seek resolution in the early days of stress when the possibility of rescue is higher.

A Sizable amount has been lost by firms through irregular transactions. IBBI newsletter for December 2021 quarter, indicates that firms going through CIRP have lost at least 10% of claims admitted against them through irregular transactions during the lookback period.

Resolution processes are likely to result in liquidations of firms where relatively more value has been lost through irregular transactions. Avoiding irregular transactions will avoid the liquidation of firms and keep them alive.

6. [Ending dominance](#)

Source– The post is based on the article **“Ending dominance”** published in **The Hindu** on **26th October 2022**.

Syllabus: GS3- Science and Technology. GS2- Regulatory bodies

Relevance– Regulation of digital ecosystem

News- Recently, an order was passed by **Competition Commission of India** against use of anti-competitive practices by Google to maintain its dominance.

What are the main observations of the order?

It imposed a penalty of 1337 crore on Google for abusing its dominant position in the Android mobile device market.

It criticised Google for restrictive clauses in its agreement with original equipment manufacturers.

The court observed that through these agreements Google ensured that users continue to use its search services on mobile devices. It is against the competition in the market.

The regulator directed to Google that it can not force original equipment manufacturers to choose from its app for installation on their devices. Installing them can not be a precondition for licensing of its Play Store.

Users can not be restricted from uninstalling its pre-installed apps.

7. [The overvalued rupee: Managing exchange rate volatility and forex reserves](#)

Source– The post is based on the article **“The overvalued rupee: Managing exchange rate volatility and forex reserves”** published in the **Business Standard** on **27th October 2022**.

Syllabus: GS3- Indian Economy

Relevance– External economy

News- The article explains the need for higher foreign reserves for India.

What factors explain the need for higher foreign reserves?

To prevent any sharp appreciation/depreciation of the rupee to provide a stable environment for domestic and foreign investment.

India should be prepared **for economy-wide shocks such as the Covid-19 epidemic** and unusual interest rate and fiscal decisions of central banks and governments of large economies. This in turn means that India should have enough stock of foreign reserves.

The **overvaluation of the rupee** has been driven by the interests of Indian importers, people who remit forex abroad and Foreign Institutional Investors (FIIs). The INR tends to become

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overvalued due to higher domestic nominal interest rates. It is the reason enough to let the rupee slide by gradual accumulation of dollars whenever there were opportunities.

Total factor productivity in India had to be much higher than in the US or western Europe if the INR were not to depreciate. The reason is higher nominal interest rates in INR debt instruments compared to the lower interest rates in G7 currencies.

Interest rates by central banks of major economies have been raised.

The US dollar is appreciating against all other major currencies.

Why US dollar has gained importance?

The US government is looking with suspicion at countries which have sustained a current account surplus of 2%. It is against the excessive accumulation of foreign reserves in dollars by central banks. India is also in a list of potential currency manipulators.

Dollar is likely to be the dominant reserve currency for at least another 10 years. It should be given a dominant weighting in estimating the six-currency real effective exchange rate (REER) of the rupee against the dollar, euro, pound sterling, yen, and China's renminbi.

What should be potential forex in future?

Moody's rating for India is Baa3, which is just about investment grade. The current account deficit projection for 2022-23 is around 3.5% of GDP.

Indian consumer price inflation was at 7.4% in September 2022.

Brent crude oil price per barrel was at \$93 on October 25. It may persist around this level till uncertainties related to the conflict in Ukraine persist.

India's short-term debt, with residual maturity of less than one year, was \$267.7 billion at the end of March 2022.

All things considered, it would be prudent for India to raise its FX reserves to at least \$700 billion by December 2024.

8. [The climate crisis and the urgent need for global cooperation](#)

Source– The post is based on the article “**The climate crisis and the urgent need for global cooperation**” published in **The Indian Express** on **27th October 2022**.

Syllabus: GS3- Environment

News- The article explains steps taken by the EU to fight climate change. It also suggests solutions to fight climate change.

Global warming is fast approaching the 1.5 degrees level.

It is causing degraded ecosystems, disappearing forests, collapsing glaciers, heatwaves and floods.

What are the actions taken by the EU to fight climate change?

It has set the goal of cutting emissions by at least 55% by 2030 and reaching climate neutrality by 2050.

It is ensuring affordable and clean energy through green deal.

The EU had to postpone some of the decommissioning of coal-fired power plants as a temporary emergency measure due to the Ukraine crisis. But climate commitments for 2030 and 2050 are not endangered.

The EU continues to be the world's biggest donor of climate finance. It is providing almost \$28 billion in 2020.

What should be the way forward to tackle climate change?

We have to change the paradigm of our economic models.

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At the COP27 climate conference in November 2022, the international community and each country individually must set out what it has done and intends to do to limit the increase of global temperature to 1.5 degrees.

There is a need for global cooperation. We have to accelerate mitigation measures. Mitigation and adaptation must go hand in hand. Success must be demonstrated through actual and effective implementation.

How India and EU are cooperating to tackle climate change?

The EU and its Member States are working together with India on energy efficiency, renewable energy, smart grids and storage, green hydrogen, e-mobility and decarbonisation.

The EU has also strengthened its engagement with the India-based International Solar Alliance and the Coalition for Disaster Resilient Infrastructure

9. [Why producing CBG, LBG, hydrogen, methanol from biogas can be beneficial](#)

Source: The post is based on an article **“Why producing CBG, LBG, hydrogen, methanol from biogas can be beneficial”** published in DTE on 19th October 2022.

Syllabus: GS 3 – Environment

Relevance: Biogas and its various applications.

News: With the advancement in research and the tremendous urge to shift to greener fuels, biogas came back into the picture to supplement the rising global energy demand.

What is Biogas?

Biogas is a renewable fuel produced using the anaerobic digestion process from the organic feedstock. It is primarily composed of methane (50-65%), carbon dioxide (30-40%), hydrogen sulfide (1-2.5%) and a very small fraction of moisture.

What are the subsidiary sustainable transportation fuels one can obtain from biogas?

Biogas can be converted to produce numerous sustainable transportation fuels.

Methane

The removal of unwanted components like carbon dioxide, hydrogen sulphide and moisture from raw biogas yields pure methane (over 97% content). Some of the common methods to purify biogas include water scrubbing, membrane separation, pressure swing adsorption and adsorption.

Compressed biogas (CBG)

Upgraded or high-purity biogas compressed at 250 bar pressure results in a fuel called compressed biogas (CBG). This has properties similar to compressed natural gas (CNG) and could be directly used to power CNG engines.

However, CBG is considered more suitable to power small-sized vehicles, though heavy engines have been used for short-distance driving.

Liquefied biogas (LBG)

It is obtained by liquefying the biogas-derived methane by cooling it at -162 degrees Celsius. It has a higher energy density that lowers the storage space requirements of CBG.

At atmospheric pressure, the energy density of liquid methane is roughly 600 times more than that of gaseous methane and 2.5 times greater than that of methane at 250 bar.

Advantages of LBG: a) LBG has become a viable alternative fuel for heavy-duty road transportation since it has a comparatively high energy density (1 litre of LBG against 2.4 litres of CBG), low sulphur content and lower life cycle greenhouse gas emissions than diesel.

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Read more: [Biogas: A sustainable solution for curbing pollution, improving livelihoods & enhancing quality of life](#)

Hydrogen

Gasification of biogas is performed by limiting the amount of oxygen and steam present in the reaction and heating the bio-methane to high temperatures (usually over 600°C). As a result of this process, Syngas a mixture of hydrogen and carbon monoxide is created. The hydrogen produced after the removal of carbon monoxide could be used in fuel cells to generate power.

Methanol

Direct methanol production from biogas is done through methanotrophy or partial oxidation. Methanol is an effective fuel with an octane rating of 100. It emits less particulate matter and NO_x than gasoline and doesn't produce SO_x because it doesn't contain sulphur.

Methanol is more affordable than LNG or marine oils with virtually no SO_x or NO_x emissions.

How India is promoting biogas?

CBG is the only transportation fuel from biogas for which commercialisation efforts have been made. The government has been encouraging private businesses to set up CBG plants and provide CBG to oil marketing companies for sale as automotive and industrial fuels under the **[Sustainable Alternative Towards Affordable Transportation \(SATAT\) scheme](#)**.

The scheme has set a goal to produce 15 million tonnes of CBG from 5,000 plants by 2023–24.

What are the challenges in promoting biogas in India?

Currently, **LBG, hydrogen and methanol are not produced** from biogas in India. This is because,

a) CBG exists in the gaseous form. So, it demands bigger volumes for transportation, **b) Unavailability of biogas in bulk for such derivatives,** **c) There is an absence of infrastructure to generate and market these fuels,** **d) There is a deficiency of modified automobile engines in India,** **e) There is a lack of effective research and development push to improve process economics.**

Overall renewable sources like biogas could be used to produce numerous fuels but their potential still remains untapped.

10. [What the new UN climate report reveals](#)

Source: The post is based on the following articles

“What the new UN climate report reveals” published in **The Indian Express** on **28th October 2022.**

“The planet is counting on us to keep it liveable” published in **The Indian Express** on **28th October 2022.**

Syllabus: GS 3 – Climate change

Relevance: About the recent UN climate report and its impacts.

News: A new United Nations report warns that the efforts to limit global temperature rise are badly falling short of what's needed to save the planet. The UN report comes less than two weeks before global climate diplomats will assemble at Sharm El Sheikh in Egypt for the UNFCCC's COP-27.

What are the key highlights of the UN climate report?

An improvement over past performance: The national global warming mitigation targets will increase emissions by 10.6 per cent by 2030, compared to 2010 levels. This is an improvement over last year's assessment, which projected that emissions in 2030 will rise by nearly 14 per cent over 2010 levels.

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Emissions are not likely to increase after 2030: Annual emissions of countries are yet to peak and the IPCC can't expect a dip until the end of this decade. Further, current commitments of the countries also point to an increase of 10.6% in emissions by 2030 from their level of 2010.

Cumulative climate ambition not enough: Even if countries keep their pledges to slash greenhouse gas emissions made under the Paris Agreement, the world will still be on track for a rise of around 2.5° Celsius (not 1.5° Celsius) by the end of this century.

The report also mentioned that at least 1.1° Celsius of it has already happened. Even after 2030, the emissions curve would have taken far too long to bend.

What is the status of climate change at present?

A recent study by the World Meteorological Organization found, atmospheric levels of the three worst gases—**carbon dioxide, methane and nitrous oxide**—reached record highs in 2021.

So, missing even the outer UN target of a 2° warming cap would set us up for catastrophic weather disruptions, from droughts and heat waves to freak storms and punishing floods, with large swathes of planet Earth turning unliveable and numerous species pushed into extinction.

The most vulnerable sections of the population would be the hardest hit, despite having had almost no role in climate change.

Must read: [LIFE, or Lifestyle for Environment brings a fresh and much-needed perspective to tackle climate change.](#)

How vulnerable is the Indian subcontinent to climate change?

In India, heat waves have damaged essential food crops even as rainfall patterns turn unstable. If the scale of destruction from this year's floods in Pakistan—1,300 dead, 30 million displaced—will be a regular impact then the subcontinent may be an early casualty.

Why do countries neglect climate targets?

At the COP-27 in Glasgow last year, 194 countries agreed to upscale their Paris Pact targets. However, only 24 of them — including India — have updated their plans. This is because,

a) Raising climate ambition requires countries to take difficult decisions in diverse areas such as agriculture, forest management, transport, and urban planning. These issues relate to people's livelihoods and well-being and demand that policymakers balance sustainability with developmental goals.

b) Inadequate technology transfer from the developed world remains a persistent grouse of developing countries. There are fears that the ambitious targets of several countries could remain on paper if they are not matched by **adequate financing**.

Read more: [Impact of Climate Change on Monetary Policy – Explained, pointwise](#)

What needs to be done to mitigate the climate threat?

Rich countries should give their share: In 2009, wealthy nations said they would give \$100 billion a year by 2020 to help others out. But they have largely failed to provide.

However, considering the economic turbulence and the West is currently in a war, energy crisis and inflation issues the fund is not expected to be available sooner. What's needed is the political will to live up to our collective responsibility.

Transform the necessary things: The world needs to transform industrial, energy and transport systems. Further, the world needs to utilise technological advances.

The principles of equity and climate justice should be acknowledged in letter and spirit.

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11. [GM crops – on approval to GM Mustard](#)

Source– The post is based on the article “**That it has taken so long for India’s farmers to plant a genetically modified food crop shows an approach that is neither scientific nor swadeshi**” published in **The Indian Express** and “**Keen as mustard: GM crops need quick regulatory okays, Indian farming & Indian science will hugely benefit**” in **The Times of India** on **28th October 2022**.

Syllabus: GS3- Science and Technology

Relevance– Application of biotechnology

News- The article explains the need for commercial cultivation and seed production of GM mustard.

What are some facts about GM mustard?

The **Genetic Engineering Appraisal Committee** has recommended the “environmental release” of the transgenic hybrid mustard DMH-11 for seed production and commercial cultivation.

It contains three alien bacterial genes that enable hybridisation.

It would also be the first GM food crop after its original version that contains a single insect pest-resistant gene, released in 2002 and an improved double-gene product in 2006.

Why is there a need to approve GM Mustard for commercial cultivation?

Multi-location field trials of DMH-11 have shown that its **average grain yield** is 2.4-3 tonnes per hectare. While the yield for the present best grain variety Varuna is 1.9-2.2 tonnes and the all-India average yield is 1.2-1.3 tonnes.

GEAC has approved not just the product but also the **hybridisation platform**. GM parent lines can be shared with others, including private seed companies. They can breed mustard hybrids giving higher yields than DMH-11 or possessing other traits such as better oil quality and disease resistance.

India imports about 60% of its edible oil. It was valued at \$19 billion last financial year. This level of **import dependency** undermines food security. For years, Indians have also been consuming imported GM soybean oil. Given these factors, GM mustard can be a better alternative.

What has been the experience of GM crops till now?

Bt cotton has increased the yields. It has turned India from an importer to the world’s second largest exporter. ICAR study on the impact of Bt-cotton in Maharashtra has found that the average seed cotton yield increased after the adoption of GM technology. Also, no adverse outcomes have been reported from the consumption of its oil and seed cake fed to cattle over the last 20 years.

There’s no scientific **evidence demonstrating the harmful effects** of any GM crop like maize, soyabean or mustard’s cousin canola on human and animal health and environment.

GoI representatives told a parliamentary committee in 2017 that Indian regulators had assessed Bt-cotton, Bt-brinjal and GM mustard, and found them to be safe as feed to animals.

12. [Preparing For Wars of Tomorrow – on advance weapons](#)

Source– The post is based on the article “**Preparing For Wars of Tomorrow**” published in **The Times of India** on **28th October 2022**.

Syllabus: GS3- Security

Relevance– Changing nature of warfare

News- The article explains the need for re-assessing war doctrines in context changing nature of warfare.

Why is there a need to re-assess war-fighting doctrines and techniques?

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New Developments in Russia-Ukraine war like attacks on strategic infrastructure like the Nord Stream pipeline and the Kerch bridge, are emphasising the need to reassess.

Earlier military needs and doctrines were drivers of innovation. For example, the requirement of detecting aircraft led to development of radar.

Things have reversed now. Tech-driven products are coming first. Doctrines are re-aligned by assessing how these products fit into overall military capability.

Importance of drones has increased. The 21st century will witness the see-saw battle between drone and counter-drone systems. Military across the world are evolving doctrines that incorporate drone warfare.

Use of drones and cutting-edge technologies in the Ukraine conflict shows the changing character of war.

What should be the approach of the defence establishment?

Complex weapons systems take decades of R&D. Once introduced into service, they continue for three to four decades. The platforms now included should be relevant beyond 2050 and beyond. There is a need for a **transformative approach** with **dynamic interplay between doctrine and technology**.

Primaevial nature of war has not changed. There is **centricity of land** in all formulations. Technology cannot supplant the boots on ground. Sovereignty and integrity of territory can only be achieved by physical presence of troops.

13. [Should governments sell liquor and run lotteries?](#)

Source– The post is based on the article “**Should governments sell liquor and run lotteries?**” published in **The Hindu** on **28th October 2022**.

Syllabus: GS3- Economy GS2- Government policies and interventions

Relevance– Government intervention in market

News- The article explains the government involvement in selling of sin goods.

What are different viewpoints about the role of states in the sale of sin goods?

Government should not be in sin business. **The role of the state is to provide public goods.**

The consumption of sin goods is instead linked with ‘public bad’. The negative effects of these sin goods disproportionately impact the weaker sections of society.

Role of the state needs to be considered not just from the supply side, but from the demand side as well. **The rising demand for alcohol is a public health concern.**

The state can **play a positive role in regulating the sale and consumption of sin goods**. An important instrument is taxes. Studies have shown that raising the tax rates on sin goods will discourage people from consuming them. The taxes collected can be used for development programmes.

What is the reason behind the state government’s involvement in selling sin goods?

State’s involvement in sin goods has been motivated by the desire **to raise revenue**. Revenue-maximising objective takes precedence over public interest.

But this situation must be viewed against the larger context of Centre-State financial resources and responsibilities. In 2019-20, tax collected by states accounted for only 43.5% of the total revenues of all States and Union Territories combined.

State governments are heavily **dependent on the financial devolutions** from the Centre. They also have a greater responsibility for expenditure on social sectors. With the introduction of GST, there are only a limited number of goods and services, mainly alcohol and petroleum products on which the State governments can independently set tax rates.

What are the impacts of state monopoly in sin goods?

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When there is government monopoly and the intention is to restrict supply, it leads to increase in Prices. Quality products are also discouraged.

When liquor is privatised prices come down . But they don't not come down by much because price also depends on other factors such as indirect controls like licensing policies and taxes and consumer demand.

What is the role of special interest groups in the case of sin goods?

Role of special interest groups needs to be considered. Legislators, politicians, bureaucrats, regulators, experts in the enforcement side each of them has their own interests. Like in the case of toddy, you could have special interest groups coming together in a way that goes against true public interest.

The concerns of all stakeholders must be looked into while formulating policy interventions to restrict the consumption of sin goods. Consider the example of the tobacco industry. In 2017-18, it provided employment to 3.4 million Indians, 3 million of whom were women. We should provide alternative livelihood opportunities for those engaged in tobacco farming and processing along with measures to limit tobacco consumption.

What are the impacts of the government control over sin goods on poor people?

There are limitations to using taxes or high prices as the only instrument to restrict the consumption of sin goods. If a person addicted to alcohol is unable to let go of that habit despite high prices, his household will suffer.

Sin tax may have an income effect on poors. They may shift to consumption of illicit liquor. So, it becomes important to deploy other instruments like public campaigns.

Is alcohol consumption becoming more socially acceptable?

There is an increase in consumption among women, and the middle and upper-middle classes. The rising aspiration of the middle class is behind the rise in alcohol consumption. Cultural and religious norms are no longer as effective as they may have been earlier.

14. [Why spectrum needs a change in approach](#)

Source: The post is based on an article “**Why spectrum needs a change in approach**” published in **The Indian Express** on **29th October 2022**.

Syllabus: GS 3 – Growth and Development

News: The government has recently released the draft Indian Telecommunication Bill, 2022. It will replace the colonial era Indian Telegraph Act, 1885. The draft bill includes spectrum policy. The spectrum policy in India is not up to the mark and it has failed to provide meaningful connectivity to all citizens.

What draft Indian Telecommunication Bill, 2022 say?

The bill aims to improve the **accessibility** of the spectrum and enhance its **benefits**. This will ensure better connectivity to all Indians and will help in reducing the **digital divides**.

The draft bill refers to the spectrum as a **public good** and an **inexhaustible resource**. However, spectrum being an inexhaustible resource has some technical limitation and its recent cost in auction has also raised concerns.

What are the concerns associated with spectrum?

The **cost of spectrum** is one of the major concerns.

Since 2010, the government has consistently used auctions for spectrum allocation and except the 2010 auction all other auctions saw a grim response from the buyer due to the high cost.

According to one estimate, at **7.6 per cent of the aggregate revenue** of the network operators, spectrum cost in India is amongst the most expensive in the world.

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This impacts the investment in network upgradation and infrastructure of the network operators which finally result in poor quality services.

The recent auction of the spectrum was sold at **reserve price** due to bring down the cost of the spectrum but this also has issues.

There are chances of unsold spectrum due to the high reserve price which will affect the revenue of the government and in turn it will affect the quality and quantity of the services in certain areas.

Moreover, the licences and spectrum are assigned for specific service areas which are mostly identified by the state boundaries.

But the operators mostly focus on urban markets and the spectrum in remote areas remains unutilised due to a **lack of investment** in infrastructure by the network operators.

How does draft bill provide the solution to problems of spectrum?

The draft bill includes the provision on the spectrum such as **use it, share it, or lose it**. However, it needs innovative support to be successful.

The draft bill also provides solution to unsold spectrum by supplementing auctions by **administrative allocation**, and any other manner as may be prescribed by the government. Thus, ending the process of auction.

What steps can be taken by the government?

First, Government should come up with a different approach towards bridging the digital divide between the rural and urban areas as the **cost to revenue ratio** is low in the rural areas.

Second, the unutilized spectrum of the licensed operators can be given to **local entrepreneurs** who are better in understanding the local needs. This will ensure better services along with development of local entrepreneurs.

Third, the government can explore innovative methods of spectrum access such as a **non-competitive licensing framework** for certain specific cases.

Fourth, the idea of niche operators providing services to telecom operators and manufacturers needs revival and spectrum should be combined with other infrastructure to enable better service delivery.

Fifth, the government should build an ecosystem that enables transparency in moving away from auction along with a reasonable price for operators and strict service obligations.

Sixth, there should be no unsold spectrum and niche operators should be encouraged to get involved in the auction.

15. [Desi dil, global lifesaver](#)

Source– The post is based on the article “**Desi dil, global lifesaver**” published in the **The Times of India** on **29th October 2022**.

Syllabus: GS3- Science and Technology

Relevance– Technological advances in medical science in India

News- The article explains the project of developing artificial heart by IIT Kanpur.

What is the importance of the artificial heart being built by IIT Kanpur?

32% of global deaths are due to cardiovascular diseases.

Artificial heart is a **logical solution**. Earlier it was meant to be a bridge to heart transplant. But now there is no need for a transplant. Patients with artificial hearts are leading active life.

But it is not affordable. It cost around 1 crore rupee in India.

The artificial heart built by IIT Kanpur is the **cheapest and the most advanced**. It will be beneficial for the common man.

What is the model strategy by IIT Kanpur to develop this product?

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A team of engineers from IIT Kanpur is executing the project.

The mentorship is provided by alumni having knowledge of building machines to support failing hearts.

Initial capital is being provided by the alumni. The future capital will come from government and private funding agencies.

Leading heart specialists from India with domain knowledge are acting as advisors to the project.

What are some facts related to the technological potential of our country?

We have made phenomenal progress in space and defence technology.

Vital healthcare equipment like MRIs, Ultrasounds and lasers are products of defence research.

Today platforms for defence and healthcare on software where we are undisputed leaders.

16. [CBIC seeks details on digital assets from India's top crypto bourses](#)

Source– The post is based on the article “**CBIC seeks details on digital assets from India's top crypto bourses**” published in the **Business Standard** on **29th October 2022**.

Syllabus: GS3- Economy

Relevance– Regulation of digital currencies

News- The article explains the taxation related provisions on cryptocurrencies.

The CBIC wants to bring crypto assets within the ambit of GST. It is working on the definition and classification of the crypto asset class to determine taxability on the value of each transaction.

What is the rationale behind this move by CBIC?

Clarity on the value of these crypto products being traded and their mode of transaction would give a fair idea of how it could fit into the GST regime and tax rate applicable to them.

There are various interpretations by different authorities on the taxability and classification of various crypto transactions. These need to be harmonised.

What are some facts related to cryptocurrencies?

There are several types of tokens of all cryptocurrencies. The most common are **utility and payment tokens**.

These do not have their investment backed or guaranteed by regulation.

What is the government stand on cryptocurrencies?

India is yet to clear its stand on whether to ban or legalise digital tokens. The Reserve Bank of India has time and again said they are a threat to the nation's financial stability.

The government is pitching for **global cooperation** on regulating such assets.

The Organisation for Economic Co-operation and Development has developed the **Crypto Asset Reporting Framework (CARF)**.

What are taxation provisions related to cryptocurrencies?

Currently 18% is levied on the service provided by crypto exchanges and is categorised as financial services.

The Centre has defined cryptocurrencies as **virtual digital assets** under the direct tax regime.

India's tax provisions define virtual digital assets as any information, code, number or token generated through cryptographic means or otherwise.

The government in this year's Budget imposed a 30% tax on income from crypto assets. There will be 1% tax deducted at source on payment of virtual assets of more than Rs 10,000 in a year.

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17. [At COP27, move the needle on climate action](#)

Source– The post is based on the article “**At COP27, move the needle on climate action**” published in **The Hindu** on **29th October 2022**.

Syllabus: GS3- Environment

Relevance– Climate change

News- The article explains the issues related to climate change. It suggests the way forward to the low carbon path.

What are the core issues related to fighting against climate change?

The climate action plans of countries are inadequate for reaching **carbon neutrality** by 2050. Developed economies are not taking responsibility for their past emissions. They are not willing to extend financial help to developing economies.

There is still heavy burning of fossil fuels by the top five emitters — China, the United States, India, Russia, and Japan as well as Southeast Asian countries taken together.

What is the scenario with India and China?

Both India and China have high reliance on fossil fuels. In China, Coal and gas contribute 70% to energy production.

India has announced **net zero** for 2070 and China for 2070. This is not sufficient to fight climate change.

There is a need to advance their date for net zero to 2050.

What is the way forward?

There should be extensive use of markets to help shift the global economy to a **low-carbon path**. Radical shift in countries adopting carbon pricing is needed. For example, significant **carbon tax** on the source of pollution.

It should reiterate the need for all countries to eliminate fossil fuel subsidies.

For climate financing, something similar could be done to what was achieved during the COVID-19 pandemic. Rich countries raised vast amounts of financing during the crisis. Climate projects can be vastly scaled up by multilateral development banks, such as the World Bank and Asian Development Bank.

Massive investment in clean energy is needed. Energy is responsible for three-fourth of GHG emissions in air.

18. [The UK or Korea: What is the ideal benchmark for the size of India's govts?](#)

Source: This post is based on the article “**The UK or Korea: What is the ideal benchmark for the size of India's govts?**” published in the **Business Standard** on **28th October 2022**.

Syllabus: GS3 – Indian Economy

Relevance: About government expenditure and low taxes.

News: The last UK PM has given the “low taxes, high growth” framework a bad name. This shows that there is no clear relationship between income-tax rates and economic growth. However, lower taxes might result in smaller welfare budgets (such as a lower health service budget) which will reduce the popularity of the existing government.

What is the average tax rate of global economies?

In general, the advanced economies have higher tax rates than the rising economies of East Asia, where tax rates peak around the 35 per cent level. This is because of their ambitious welfare programmes. Britain's peak income-tax rate of 45 per cent is not very different from the average for the euro area.

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Among the advanced economies (leaving out places like Singapore), only Canada has a markedly lower peak rate (33 per cent). The higher-income countries in East Asia (South Korea and Taiwan) have peak rates closer to the euro average.

What is the government expenditure status of middle-income economies?

Rising economies without comparable social-safety nets have smaller government expenditure in relation to GDP. The successful middle-income economies of East Asia tends to have smaller budgets and lower levels of a deficit than other economies.

Even the super-successful South Korea has government expenditure that is equal to only a quarter of GDP (for instance, France has it over 60 per cent), and a deficit of just 2.8 per cent. Malaysia, Thailand, the Philippines, and Vietnam reflect broadly the South Korean example.

What is the government expenditure status of India?

India's government expenditure is about a third of GDP, with much higher deficits (about 10 per cent for the Centre and states combined). South Korea's debt is less than half its GDP, whereas for India it is over 85 per cent.

India's government sector is large, relative to GDP when compared to East Asia (excluding Japan and China). Yet, India has poor-quality public services in every direction and under-spending on defence.

What India needs to do?

Some of the most problem-ridden middle-income economies have big governments, big deficits, high levels of debt, and large-scale corruption. Two prominent examples are Brazil and South Africa. So, India has to avoid that path.

The finance ministry or NITI Aayog must look into ways to improve and expand services, save money, provide more roles to private sector, and others.