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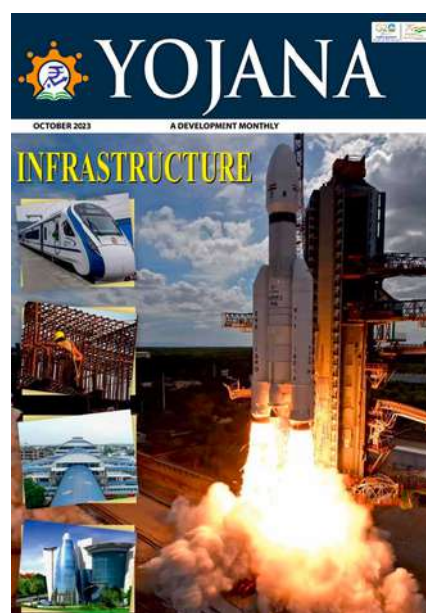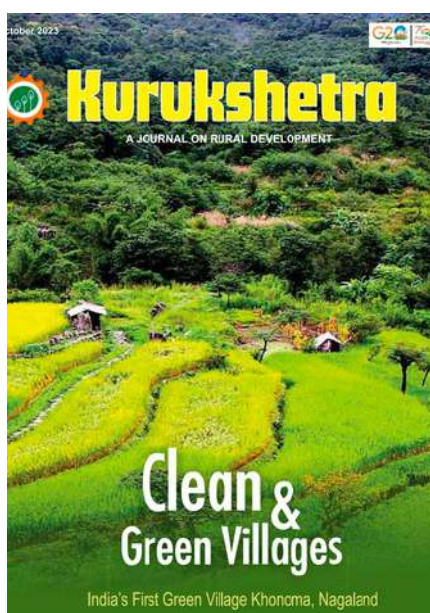
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Contents

1) Unity Malls

(GS2: Welfare Schemes for Vulnerable Sections of the population by the Centre and States)

Context

- In her Budget Speech for FY 2023-24, the Union Finance Minister unveiled the establishment of a **'Unity-Mall' in each State of the country.** These malls are envisioned to be **strategically located, preferably in the respective State capitals.**
- This initiative is an integral component of the Union Government's commitment to advancing infrastructure development throughout the country and stimulating capital investment within the States.

Objectives

- Unity Mall are designed to **foster national unity**, **expedite progress** towards the **'Make in India'** and **'Atmanirbhar Bharat'** initiatives, **offer local artisans opportunities** to showcase and sell their products, create **employment opportunities**, facilitate **skill development**, **champion local cuisine, celebrate cultural heritage, bolster tourism,** and ultimately contribute to **overall economic prosperity.**
- To showcase the rich tapestry of special products from various districts within the State, each mall will have a **dedicated shop for every district.**
- Additionally, each Unity Mall will **allocate one shop to each State** in India, enabling the **sale of their GI products, One District One Product (ODOP) offerings, and other prominent regional products.**
  - A Geographical Indication (GI) signifies the **specific country or place of origin** for a product. It provides assurance of the product's quality and unique characteristics associated with its origin in a well-defined geographical area.
  - The ODOP initiative aims to **select, brand, and promote at least one product from each District** of the country for enabling holistic socioeconomic growth across all regions.

Other Key Features

- To ensure the success of the Unity Mall, States have been urged to extend **financial assistance** to facilitate the participation of sellers from distant regions and remote districts.
- To ensure the long-term sustainability of Unity Malls, their **operation and maintenance will be structured under a Public-Private Partnership model**.
- In this arrangement, ownership of the mall will remain with the State government, while operational and maintenance responsibilities will be entrusted to a private party.

Conclusion

- The initiative to establish Unity Malls throughout the nation is poised to play pivotal roles in fostering economic development, providing citizens with recreational spaces, enhancing tourism, and celebrating the rich cultural heritage of our diverse and unique nation distinctively.

2) Crop Residue Management: Challenges & Opportunities

(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)

Context

- Ecologically sustainable and environmentally safe management

of agricultural wastes, technically called **crop residues (CR),** is one of the major challenges in India.

- **Stubbles, stalks, stover, husk, bran, bagasse, and molasses** are generally classified under CR in the Indian context.
- These residues, once thought to be waste, are now regarded as an **important natural resource** due their versatile utility.

Uses of CRs

- CRs are primarily used as **bedding material for livestock, animal feed, soil mulching, bio-gas generation, bio-manure and compost, thatching for rural homes, mushroom cultivation, biomass energy production, fuel for domestic and industrial use**, etc.
- With the help of innovative technologies, CR can be **converted into a variety of value-added products** such as papers, boards, eco-panels, etc.
- In spite of such practical and beneficial options, a large portion of CR is **burned 'on-farm',** primarily to clear the field for sowing the next crop.
- This destructive activity **deteriorates soil properties and fertility,** along with **ambient air quality.**

Problem and Perspectives

- Every year in India, about **683 million tonnes CRs** are produced, of which nearly **two thirds are contributed by cereal crops.**
- **Nearly 500 million tonnes** of residues are **recycled** in various sectors like industrial, domestic, and livestock fodder but a **surplus of 178 million tonnes is left without any single use.**
- Nearly half of it is burned in fields across the states, with **Punjab,** **Haryana, and Uttar Pradesh** being the major defaulters.
- **Soil health greatly deteriorates** due to the **loss of organic matter and other soil nutrients.**
- Frequent burning of CRs leads to a **complete loss of microbial population** and **reduces the level of nitrogen and carbon in the top 0-15 cm of the soil profile,** which is critical for the development of the root system of crops.
- The burning of CRs is a **potential source of greenhouse gases**, which are responsible for aggravating the global calamity of climate change releasing **carbon dioxide, carbon monoxide, methane, sulphur oxide, and nitrogen oxide gases.**
- Besides, burning of CRs also emits a large amount of **particulates (PM-2.5 and PM-10),** which can remain suspended in the air for a long time and travel long distances in the wind.
- The emission of particulates from the burning of CRs is **17 times higher than emissions from other sources** such as motor vehicles, waste incineration, and industrial waste.
- Besides respiratory, skin, and eye problems, inhaling particulates can aggravate existing pulmonary and cardiac conditions, which may lead to premature death.

Major Factors

- In spite of many long term damages to soil and human health, farmers in north-western India often opt for the burning of paddy stubbles, mainly due to **three factors:**
  - A **shortage of farm labour** at a critical time of field operation;
  - A **very short window** for the preparation of the field for the next wheat crop and

- o **Large-scale use of combine harvester** for the harvesting of paddy (they leave nearly 20-30 cm of stubble on the ground, which needs to be removed or incorporated into the field for sowing the next crop)
- There are implements like **rotavators, happy seeders, super seeders**, etc. that help to manage stubbles in the field. But majority of farmers are **not inclined to invest** in such machines, while **others can't afford the cost.**
- Farmers take up the burning of stubbles as a **convenient, time-saving, and cost-saving practice** to prepare fields for the next in record time.

Regulations and Solutions

- The National Green Tribunal, in 2015, **prohibited agricultural residue burning** in any part of the NCT of Delhi and the states of Punjab, Rajasthan, Uttar Pradesh, and Haryana.
- During 2018-19, a **new and comprehensive central sector scheme on CR management** was launched with a **multifaceted strategy.**
- Under this scheme, **financial assistance @50%** is provided to the farmers for **purchase of CRM machinery**, and **@80%** is provided to cooperative societies, Farmer Producer Organisations and Panchayats for the establishment of **Custom Hiring Centres** in villages. These centres provide CRM machinery to farmers on rental basis at affordable rates.
- The Indian Council of Agricultural Research has developed **Pusa Decomposer technology** to biologically decompose paddy stubbles in the farm. It's a

microbial solution available both in liquid and capsule form for accelerated decomposition of straw.
- Its application makes the field ready for wheat sowing in **25 days**, and **enhances the chemical, biological, and nutritional profile of soil**.
- Crop residues can be utilised as **animal bedding** and then placed in **dung pits to make compost.**
- A special product called **biochar** can be made from rice straw, which is a **carbon-rich material** used as a soil amendment. Its application **improves soil fertility, carbon storage, and water filtration.**

Conclusion

- In addition to technical and financial support, intensive educational campaigns and awareness camps are also required to have the best impact in addressing the issue of CR burning.

3) Retribution for the south, accolade for the north

(GS2: Issues and challenges pertaining to the federal structure)

Context

- This article tries to **analyze how changes in population geography have a lasting impact on the political and economic geography** in Indian federal democracy.
- Also it insists that the five southern States that have effectively controlled their population should not be penalized through reduced political representation.

What is delimitation?

- Delimitation is the **act of redrawing boundaries of Lok Sabha and state Assembly seats to represent changes in population.**

- The main objective of delimitation is to provide **equal representation to equal segments of a population**. It also aims at a fair division of geographical areas so that one political party doesn't have an advantage over others in an election.
- In India, delimitation is carried out by an independent **Delimitation Commission.**
- Under **Article 82**, the constitution gives power to the **Parliament of India** to enact a law for the purpose of Delimitation. The Delimitation commission, a **statutory body,** is set up under the law enacted by the parliament of India.

Delimitation and political representation

- **Article 81** of the Indian Constitution stipulates that **Lok Sabha constituencies in the country should be equal by the size of population.**
- Based on the **1971 Census**, the number of Lok Sabha constituencies for States was determined and frozen for the next 25 years through the 42nd Amendment Act 1976.
- In 2001, through the **84th Amendment Act,** the freeze on the number of constituencies for each State was further **prolonged until the first Census after 2026.**

Issues surrounding delimitation

- **Differentiate growth rate in population:** The population growth rates differ between the non-Hindi speaking southern States and the Hindi-speaking northern States.
  - Between 1971 and 2011, the proportion of the population of Bihar, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Rajasthan, Uttarakhand and Uttar Pradesh **increased from 44% to 48.2%,** whereas the proportion of population of the five southern States (Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Telangana) declined from **24.9% to 21.1%.**

Impact of delimitation on southern states

- **Decline in Lok Sabha seats:** If equal size of Lok Sabha constituencies by population is enforced according to the population projections of 2023, the proportion of political representation of **northern States will increase by 6.81% and that of southern States will decline by 4.24% (loss of 23 seats).**
- **Unbalanced political representation:** The problem of balancing the political representation of sub-central units that have lower populations arises in all federations.
- **Leads to penalizing southern states:** Reduced political representation amounts to penalisation of states that have implemented family planning and population control policies and effectively controlled their population.
- **Disincentivizes states to take up population control measures:** Reducing the proportional representation of southern States in the national Parliament is not only a disincentive for these States but also an incentive for others (northern states) not to take population control and social change as public policy seriously.

- **Reduced fiscal transfers:** The combined share of the **five southern States in the Union government's tax revenue** from 2000-05 to 2021-26 **declined from 21.1% to 15.8%.** On the contrary, the combined share of Bihar, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Rajasthan, Uttarakhand, and Uttar Pradesh increased from **51.5% to 53.2%.**
  - **Why reduction in fiscal transfers? Population** (a measure of demand for public expenditure) and **per capita income** of a State are considered to be two important indicators that are always included in the distribution formula for the horizontal distribution of the Union government's tax revenue among the States.
    - As the terms of reference of the Fifteenth Finance Commission took **2011 population in the distribution formula,** it made the southern States to face **reduced financial transfers** from the Union government as a reward for controlling population growth.
    - The higher the per capita income of a State, the lower its share in the Union tax revenue. Lower per capita income of a State may be due to higher population for a

given Gross State Domestic Product. Therefore, **the higher the current population of a State, the higher its share in the Union tax revenue.**

Conclusion

- Using the current population for delimitation of Lok Sabha constituencies by equalizing population and in the distribution formula for assignment of Union government tax revenue to States is **clear retribution for the population control efforts of the southern States** and a **transparent accolade for the higher growth rate of population in the northern States.**
- Thus **continuing with the freeze on the distribution of seats** among States as they were in 1971 till the population stabilizes in all States is the only way out.

4) Aligning higher education with the United Nations SDGs

(GS2: Government Policies and Interventions for Development in various sectors)

Context

- This article highlights that actions taken by all countries, both developed and developing, **to end poverty and other socio-economic and environmental problems** should align with **strategies that improve the standard of life and education, reduce inequality, and harness economic growth.**

What are Sustainable Development Goals (SDGs)?

- The United Nations Sustainable Development Goals (SDGs) are a **set of 17 goals** with **169 targets** that all **193 UN member states** have agreed to try to achieve by 2030.

Sustainable Development Goals Report 2023

- The **Sustainable Development Goals Report 2023:** Special Edition is the only UN official report that monitors global progress on the 2030 Agenda for Sustainable Development.
- This **annual SDG Report is prepared by the United Nations Department of Economic and Social Affairs (UN DESA),** in collaboration with the entire UN Statistical System, consisting of more than 50 international and regional agencies, based on data from over 200 countries and territories.

Findings of SDG Report, 2023

- The SDGs Report 2023 flagged **slow progress** though it has been eight years since the inception of these goals.
- **Reasons:**
  - Prolonged effects of COVID-19
  - Impacts of the climate crisis
  - The Russia-Ukraine conflict, and
  - A weak global economy.
- The lack of progress towards the goals has been more **pronounced in the Least Developed Countries.**
- India has suffered a setback in achieving these goals, despite having **managed the crises of**

the global economy and relatively succeeded in **overcoming the challenges posed by the pandemic.** However, recent actions and policies indicate that India is committed towards realizing SDGs.

What is SDG-4?
- **SDG4 pertains to access to quality education:** India, with a long-standing history of **equitable and inclusive education**, has accelerated efforts to ensure the achievement of SDGs through various reforms.
  - For instance, **National Education Policy (NEP) 2020** has been prepared in tune with most of the SDGs.

How can education help attain other SDGs?
- **Priority to higher education:** Though NEP 2020 calls for changes at all levels of education, priority should be accorded to higher education as it **accelerates social mobility, empowers people through creativity and critical thinking, and grants them employment skills.**
  - According to the Organisation for Economic Co-operation and Development (OECD) data, people with a **higher education degree** are more employable and earn

an average of 54% more than those who only have completed senior secondary education.

- **University inclusive education:** A university-inclusive education protects people against poverty (SDG1), prevents them from hunger (SDG2), supports them for good health and well-being (SDG3), promotes gender equality (SDG5), provides them decent work, which in turn drives economic growth (SDG 8), and reduces inequalities (SDG10).
- **Multidisciplinary and interdisciplinary systems of education:** This produce multitalented people who can pursue research, and find innovative solutions to global challenges such as affordable and clean energy (SDG7), sustainable cities and communities (SDG11), climate change and global warming (SDG13), as well as studying their impact on an economy and the earth.
- Sustainable development is possible only if we radically change the way we produce and consume (SDG12).
- Innovative solutions and start-ups (SDG 9) must be developed in collaboration with private companies.
- Introducing **Value-Based Education (VBE)** will help citizens become responsible towards self, society, and the planet and help our nation achieve "Life on Land" (SDG15).

Suggestions

- Indian higher education should be **committed** to mapping its day-to-day operations with SDGs.
- To accelerate the progress towards achieving the 2030 agenda, **stakeholders of higher education should be educated and oriented** so that none of their activities leave any SDG behind.
- Universities should come out reinvigorated and play a part in the education, innovation, culture, and civic life of their local communities.
- Community health, energy-saving measures, efficient resource allocation, waste reduction, development of local skills, as well as the sharing of services, infrastructure, and facilities with other universities or external partners should become a culture in universities.

Conclusion

- Educational institutions have to rethink their approach so that it is in tune with the NEP which will be crucial in realizing the 2030 deadline for SDGs

5) UN Security Council reform is a song in a loop

(GS2: Important International Institutions, agencies and fora - their Structure, Mandate)

Context

- This article highlights the issues associated with reforming the United Nations Security Council that have resurfaced at the ongoing General Assembly session of the world body.

Why are reforms in the UNSC needed?

- The Security Council has ceased to be the guarantor of world security and has become a battleground for the **political strategies of only five countries.**
- The Security Council **reflects the geopolitical realities of 1945 and not of today**.
  - o It is irrational that the five permanent members (China, France, Russia, the

United Kingdom, and the United States) enjoy their position, and the privilege of a **veto** over any Council resolution or decision, merely by virtue of having won a war 76 years ago.

- **Very less representation:** Many countries, both in absolute numbers and as a proportion of the membership, do not feel adequately represented on the body.
  - When the UN was founded in 1945, 22% of the member states (11 out of 51) were on the Security Council. However, today there are fewer than 8% (15 out of 193 member-states of the UN) are on the council.
- **Imbalanced power:** The composition of the Council also gives **undue weightage to the balance of power of those days.**
  - Europe, for instance, which accounts for barely 5% of the world's population, still controls 33% of the seats in any given year (and that does not count Russia, another European power).
- **Japan and Germany** have for decades been the second and third largest contributors to the UN budget, while still being referred to as 'enemy states' in the United Nations Charter (since the UN was set up by the victorious Allies of the Second World War).
- **India's contribution & representation:** Opportunities are also denied to other states such as India, which by its **sheer size of population, share of the world economy, or contributions in kind to the UN** have helped shape

the evolution of world affairs in the seven decades since the organization was born.

Challenges in bringing UN reforms

- **Difficult amendment procedure:** Any amendment to the UN charter requires **a two-thirds majority** of the overall membership (129 of the 193 states in the General Assembly), and would further have to be **ratified by two-thirds** of the member states.
  - Persuading two-thirds of the UN member-states to support it and not attracting the opposition of any of the existing permanent five is the only way out.
- The proposal that suggests creating a **second category of "semi-permanent members"** for, say, 10-year electable terms has found no takers among the principal aspirants.

Conclusion

- The UN is the only global system we have that brings all countries together on a common platform & we can not afford to let it fade into ineffectiveness and irrelevance.

6) Sustainable water management
(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)

Context

- The theme for **World Food Day (October 16)**, 2023 — **'Water is Life, Water is Food'** — calls for urgent action in managing water wisely. This article highlights that sustainable water management is critical to address impending food and nutrition security threats.

About World Food Day
- World Food Day is an **international day** celebrated every year worldwide on **October 16** to commemorate the date of the **founding of the United Nations Food and Agriculture Organization in 1945.**
- It is celebrated with the aim of shedding light on the millions of people globally who lack the means to afford a nutritious diet and the crucial necessity of consistent access to wholesome food.
- This international day is **spearheaded by the Food and Agriculture Organization (FAO)** and is dedicated to raising **awareness about food security, hunger, and agricultural concerns on a global scale.**
- World Food Day provides a platform for advocating actions to combat worldwide hunger, enhance accessibility to nourishing food, endorse sustainable agricultural practices, emphasize the need to minimize food wastage, and underscore the importance of eradicating malnutrition.

How is water management related to food and nutritional security?

- **Affects food and nutrition security:** Water availability affects every aspect of human life, especially food and nutrition security.
  - For instance, about 60% of India's net sown area is rainfed, contributing to 40% of the total food production. However, rainfed agriculture depends directly on water availability, and rain and soil moisture variations can severely affect food and nutrition security.
- **Depleting freshwater resources:** Decades of **poor water management, misuse and pollution, and the climate crisis** have degraded freshwater supplies and ecosystems, adding to the vulnerability of small-scale producers to climate shocks and land degradation in some of the world's most fragile ecosystems.
  - For instance, irrigated agriculture accounts for 72% of global freshwater withdrawals.
  - About 40% of the planet's total land area is degraded, leaving farmers with less productive land.
- **Climate crisis and water availability:** Extreme weather events and variability in water availability, changes in rainfall and higher temperatures **affect crop productivity by changing agro ecological conditions, thereby reducing food availability.**

Impact of climate change

- The Government of India has assessed the **impact of climate change in 2050 and 2080** using **climate projections and crop simulation models** and found that climate change without adequate adaptation measures
  - **Reduces crop yields** and
  - **Lowers the nutritional quality of produce.**
- For instance, without adaptation measures, rainfed rice yields in India are projected to reduce by 20% in 2050, and by 47% in 2080 scenarios.

Climate change adaptation

- The UN's food agencies namely The Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD) and the

United Nations World Food Programme (WFP) lay stress on the **need to adopt innovative and collaborative approaches for improved management, conservation and availability of scarce water resources.**

- The UN's food agencies work closely with the Government of India and State governments on innovations such as **Solar 4 Resilience, Secure Fishing, and the revival of millets for renewable energy promotion,** food security and nutrition.

FAO initiatives

- **A crop forecasting framework and model:** The **Food and Agriculture Organization (FAO),** in Andhra Pradesh, Karnataka, Himachal Pradesh, and Maharashtra, is piloting a crop forecasting framework and model incorporating climate (weather), soil characteristics and market information to aid rainfed farmers in making informed decisions contributing to food security.

- **Climate smart agriculture practices:** The FAO also supports the **sustainable transformation of agrifood systems** and **climate-smart agriculture** practices to improve water-use efficiency.

- It supported the farmer water school programme in Uttar Pradesh and Andhra Pradesh Farmers Managed Groundwater Systems project (APFAMGS).
    - *APFAMGS project developed a participatory hydrological monitoring programme to build farmers' capacities by giving them the requisite knowledge, data and skills to understand the hydrology of groundwater resources.*

WFP initiatives

- The WFP supports **soil and water conservation,** the building or fixing of irrigation canals, dams, ponds, and dykes, as well as flood barriers through food assistance in exchange for labor.

- The WFP is collaborating with the Government of Odisha to develop solutions for smallholder farmers, focusing on women whose goal is to **enhance resilience through solar technologies, establish community-based climate advisory services** to help manage climate impacts and **promote a millet-value chain** that reduces water usage and improves nutrition.

IFAD initiatives

- IFAD sets ambitious targets in terms of **leveraging climate financing to mitigate climate change** by addressing the adverse impacts of agriculture and helping farmers to
    - Adapt to the increasing volatility of weather conditions,
    - By investing in the restoration and preservation of soil health, water resources and
    - Merging modern technologies with indigenous knowledge systems to build productive and resilient production systems and value chains.

- IFAD-supported projects in Maharashtra, Odisha, Uttarakhand, Nagaland and Mizoram **incorporate climate-resilient seed varieties and crops**, including millets, and train farmers in climate-sensitive

agricultural practices and soil management to cope with increased water stress.
- The IFAD supports Indian States in leveraging the Mahatma Gandhi National Rural Employment Guarantee Act scheme.
- IFAD ensures that **micro-irrigation infrastructure** is environmentally and socially sustainable and financially viable through safeguards during design and planning and encouraging participatory institutional development.

Measures to be taken
- There is an **urgent need to adapt to climate change by promoting technologies** and practices that make rainfed production more resilient and sustainable.
- To achieve global food and nutrition security, the needed **policies and investments** must promote innovative and proven technologies that allow farmers to
    o Increase their productivity, adapt to climate change and become more resilient to shocks
    o Environmentally and socially sustainable and financially viable **irrigation and water management strategies**
    o Reduce their climate footprint of agricultural production, as well as bio-hazards and environmental pollution
    o Bring sanitation and drinking water supplies closer to rural households
    o Adopt **efficient food and water recycling strategies** and strengthen institutional arrangements and capacity for

sustainable and equitable water regulations, management, access and ownership.

7) Restoring the ecological health of the Himalayas
(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)
Context
- This article discusses the meaning of carrying capacity and the way forward regarding the carrying capacity of the Indian Himalayan Region (IHR).

What is carrying capacity?
- Carrying capacity of a region is **based on the maximum population size that an ecosystem or environment can sustainably support** over a specific period without causing significant degradation or harm to its natural resources and overall health.
- It is crucial in **understanding and managing the balance between human activities and the preservation of natural ecosystems** to ensure long-term sustainability.

What's in the news?
- The **environmental devastation** caused in the Himalayan States of Himachal Pradesh, Uttarakhand and Sikkim has **reinvigorated the debate on the "carrying capacity'** of the regions.
- The Supreme Court of India, in response to a petition filed by a retired Indian Police Service officer, has asked the Union government to suggest a way forward regarding the carrying capacity of the Indian Himalayan Region (IHR), which includes its towns and cities.

Government's response

- **Assess the carrying capacity:** The Union government's affidavit filed by the **Ministry of Environment** states that the **Director of the G.B. Pant National Institute of Himalayan Environment** should be the lead in assessing carrying capacity and that the **carrying capacity of all 13 Himalayan States and Union Territories (UT) should be determined.**
- **Himalayan states to set up a committee:** The government has requested the Court to direct the Himalayan States/UTs to set up a **committee headed by the Chief Secretary** of the respective State, with its members being inducted as the Chief Secretary feels appropriate.

Government efforts in overall development of IHR

- There have been initiatives by the Union government regarding overall development in the IHR. Some of them are the
  - **National Mission for Sustaining the Himalayan Ecosystem (2010)**
    - *Aimed at protecting the Himalayas, it has mapped institutes and civil society organizations working on the Himalayan ecology for ease of coordination between governmental and non-governmental agencies.*
    - *It is the **only area-specific mission** under the National Action Plan on Climate Change.*
  - **The Indian Himalayas Climate Adaptation Programme**
    - *It aims to enhance the resilience of vulnerable communities in the Indian Himalayas by strengthening the capacities of Indian institutions in climate science, with a specific focus on glaciology and related areas.*
  - **Secure Himalaya Project**
    - *Funded by Global Environment Facility, it supports the government's efforts for conservation of snow leopard and its habitat by developing and implementing a landscape-based approach for Himalayan ecosystems, and addresses key issues of habitat degradation, threatened livelihoods and illegal trade in wildlife.*
  - **Recent guidelines on 'Carrying Capacity in the IHR'** circulated on January 30, 2020.
  - There was a reminder by the Ministry of Environment and Forests on May 19, 2023, asking all the States that if such a study had not been undertaken, then **States should submit an action plan (carrying capacity) at the earliest.**

What is the issue?

- There is **no report on the total number of States that have been**

able to prepare action plans on carrying capacity of their regions.

- Failures in the past have been on account of the following reasons.
  - The recommendations made by the Ministry in forming such groups are **flawed**.
  - The **same set of people responsible for the havoc** and devastation in the mountains are now being **made responsible in finding solutions.**

Way Forward

- **People centric process:** The focus has to be on sustainable development that encompasses the larger canvas of carrying capacity, and the process should be people-centric.
- **Include all domains in policy making:** Almost all the other institutes in the technical group are important players in their respective domains and should be equal partners in policy making.
- The emphasis should be on the **"Sustainable Population"** of the Himalayan States, and the focus of the current inquiry should be the "**carrying capacity for the sustainable populations for the different Himalayan States.**"
- **Assess sustainable capacity:** There is a need for assessing the overall sustainable capacity of the environment of the whole State (which includes all biological species, food, habitat, water including ecology and agriculture). The expert committee should be asked to **focus on the social aspects or population sustainability of the respective States.**
- **Involve the local population and grass-roots bodies** (from panchayats and other urban local bodies) in determining the carrying

capacity of the Indian Himalayan Region instead of a bureaucratic or technical group.

- In order to evaluate the social dimension of sustainability, it is necessary for the expert committee to **direct each panchayat samiti and municipality to present its recommendations** by responding to the population sustainability criteria which is well established and should be circulated immediately to each local government center.

8) Mitigating tragedies in the Himalayan region

(GS3: Disaster and Disaster management)

Context

- The recent **glacial lake outburst flood (GLOF) in Sikkim** wreaked havoc along the **Teesta river**, bringing into focus the **magnifying risk of climate change-induced GLOF across the Indian Himalayan Region(IHR).**
- The article discusses the causes and impacts of glacial lake outburst flood along with the challenges and need to evolve a system to mitigate risks and provide early warnings.

What are Glacial Lake Outburst Floods?

- A GLOF is created when **large amounts of water dammed by a glacier or a moraine is released suddenly.**
- Some of the glacial lakes are **unstable and particularly moraine dammed lakes** are potentially susceptible to sudden discharge of large volumes of water and debris which causes floods downstream i.e. GLOF.
- Eg: In **2013 Kedarnath calamity,** the glacier break caused large-scale devastation in the upper reaches of the ecologically fragile Himalaya

How does a GLOF happen?

- **Heavy rainfall triggers a landslide,** which may in turn cause a glacial lake outburst and more landslides downstream, and create conditions for flash floods as in case of Kedarnath Calamity 2013.
- In case of the recent Sikkim Calamity, while the exact combination of causes of the event is yet to be ascertained, monitoring equipment had reported higher-than-normal temperatures of zero to 5°C in the four days that data was received — **exceptionally warm for Himalayan glaciers.**
- The key trigger in the process chain of the disaster was the **collapse of a huge mass of rock/moraine from the north-western bank of the South Lhonak glacial lake.**
    - Assessed to be more than a quarter million cubic meters in volume, it displaced a significant volume of melt water, widening the river mouth at the eastern end, resulting in flash floods.

Risks in IHR

- The Himalayan Region is susceptible to a range of **hydro-meteorological, tectonic, climate and human-induced mountain hazards.**
- Risks from glacial melting, slope shifting, landslides, intense precipitation, and heatwaves, among other hydro-meteorological and geo-physical hazards, are rising.

Risks associated with GLOF

- Downstream hill communities and authorities stand to suffer serious damage to life, property, and livelihood as they get a very short lead time to respond.
- GLOF events bring permanent changes in morphology, topography and stream hydrology.
- People downstream are mostly unaware of the risks posed by sudden glacier-melt and cascading hazards.

Vulnerability to GLOF

- **National Remote Sensing Centre's (NRSC) Glacial Lake Atlas of 2023** reveals that three major river basins, of the Indus, Ganga, and Brahmaputra, are host to 28,000 glacial lakes greater than 0.25 hectares in area, in five countries.
- Of these, 27% are in India, in six States and Union Territories. This region has witnessed catastrophic GLOF events in the past few decades.
- A **study published in Nature** this year indicates that 90 million people across 30 countries live in 1,089 basins containing glacial lakes.

Figure 2.3: Glaciers cover and the major river systems (the Indus, the Ganga and the Brahmaputra) over the Indian Himalayan range.

Measures to mitigate GLOF

- Many geo-technical solutions for mitigation of GLOFs have been tried globally, including **excavating channels for regulated discharge, drainage using pipes and pumps, spillway construction, and setting up small catchment dams** to cut the speed of outflow.
- NRSC's atlases have provided high-resolution data via remote sensing, which allows for monitoring spatial change.

- The **Central Water Commission** is conducting hydro-dynamic assessments of high-risk lakes, mapping water flow, height and routing simulations using digital elevation models.
- The **NDMA's national guidelines (2020)** provide States with a technical overview of the hazard and risk-zonation and suggest strategies for monitoring, risk-reduction and mitigation.

Issues associated with GLOF management

- Predicting the chain of events in GOLF is difficult.
- The multitude of glaciers and temporal variations in glacial recession makes **monitoring and estimation of the risk more difficult.**
- Conditions above 5,000 meters above mean sea level create formidable challenges such as inaccessibility, impossibilities in transporting and retaining excavation equipment, strong winds, difficulties in sourcing power and connectivity, and vandalism.
- The measures suggested for mitigation by the government are difficult to implement and are labor-intensive.

What needs to be done?

- Institutional awareness of these risks is increasing, but the challenge is to **evolve a system to mitigate risks from such hazards, and provide early warnings.**
- While meeting the development needs of hill communities, **disaster and climate resilience principles need to be assimilated into government policy** and practice as well as private investment.
- All governments and scientific institutions need to come together to integrate resources and

capacities in disaster risk reduction to create a comprehensive GLOF risk mitigation plan that includes installation of monitoring and end-to-end early warning systems at high-risk glacial lakes.
- While appropriate synergies have been created, increased **focus on prevention and mitigation** will reduce loss and damage and bring stability into the lives of hill communities.

9) Indians are choking on pollution. How can it be stopped?
(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)
Context

- In a **2022 list of the 50 most polluted cities** put out by IQAir, a Swiss air quality information platform, **39 of them are Indian.** In this context, this article discusses the sources, effects of air pollution and measures to be taken to address the same effectively.

Sources of Pollution

- The sources of emissions vary across different regions of India and between urban and rural areas.
- **Sources of ambient (outdoor) air pollution:**
  - Line sources: Vehicles
  - Point sources: power plants, factories
  - Area sources: garbage dump sites, sewage treatment plants and
  - Natural sources: forest fires, volcanic eruptions.
  - Diesel fuel emissions, and road and construction dust and stubble burning are few other sources.
- **Sources of household (indoor) air pollution**:

o Use of biomass fuels and open fire-cooking stoves.

Effects of air pollution

- The **Air Quality Life Index (AQLI) report** was published by Michael Greenstone from the **Energy Policy Institute of the University of Chicago (EPIC).**
- It estimated that Indians were **losing 5.3 years of life expectancy** on average due to the health effects of air pollution.
- The estimate for **Delhi** was worse, with life lost estimated to be **11.9 years.**
- Apart from the impact on early death, high levels of disability and chronic illness are also the consequences of air pollution.

- Effects can range from burning eyes, irritation of nose and throat, cough and feeling of choked breath to serious harm like **heart attacks and brain strokes,** which are provoked when atherosclerotic plaques in blood vessels are disrupted by the pollutants, thereby triggering blood clots.
- Long-term exposure to air pollution can raise **blood pressure** (hypertension), lead to cardiovascular, cerebrovascular and peripheral vascular disease, cause cancers, and raise the risk of **diabetes, dementia and cataracts** besides the well-recognised risks of chronic lung disease and asthma.
- Inflammation stoked by air pollution can damage many organs and **lower immunity to infections.**
- Particulate matter (PM 2.5) has been found in **maternal placenta and fetal brains.**
- Exposure to air pollution during pregnancy increases the **risk of stillbirths, neonatal deaths, low birth weight babies and birth defects.**
- Children chronically exposed to air pollution have **repeated respiratory infections, susceptibility to asthmatic attacks, lower learning ability and impaired physical growth.**

Concerns surrounding air pollution

- There is growing concern about **"ultra-fine particles"** that are smaller than 0.1 micrometers in diameter and can bypass entrapment in the lungs to enter the bloodstream.
- **National air quality standards in India are less rigorous** than the WHO's standards.
  - o For PM 2.5, the WHO sets a limit of 5 microns while India's limit is 40 microns.
- Health harms from air pollution occur at even lower levels than the national standard, with a continuum of **rising risk as pollutant levels increase.**
- Prolonged exposure to air pollution even at AQI levels declared as "satisfactory" will have adverse health effects.
- Presently, **22 states meet the national standards of AQI,** while 15 do not and none of them meet the WHO standards.
- There are **some pollutants** which have adverse health consequences but are **not monitored.**
  - o Benzene and formaldehyde from wildfire emissions can lead to cancer.

Pollutants monitored for air quality

- Pollutants that are monitored for air quality include particulate matter less than 10 and 2.5 microns per cubic meter (PM 10 and PM 2.5 respectively), nitrogen dioxide, sulfur dioxide, carbon monoxide,

ozone, ammonia and lead.
- *For details about the Air Quality Index, Refer August digest, 2023.*

Why does the Indo-Gangetic Plain have the highest levels of pollution?

- Geographically, the landlocked Indo-Gangetic plain has the highest levels of pollution as it **lacks the dispersal that sea breeze brings to coastal areas.**
- The problem is exacerbated during the harsh winter as **cold air does not flow easily to disperse pollutants.**
- When **agricultural crop residue is burnt** during this period or when **garbage is burnt by the urban poor to keep warm**, a winter of discomfort ensues with very high AQI levels.

Measures to be taken
Personal protection measures
- **Air purifiers** in a closed room may be best used to protect persons who are confined there because of severe illness or disability.
- **Masks** have to be of very high quality (N95) to offer protection against many pollutants. It is best to avoid or reduce outdoor activity during smoggy periods.
- **Breathing exercises** help to maintain lung function.

Other measures
- **Clean transport** (like electric vehicles), increased **use of public transport** in place of personal vehicles, **rapid transition to renewable energy sources** from fossil fuels, **cessation of stubble and garbage burning**, good construction practices and efficient debris disposal.
- Household air pollution is being addressed through the **substitution of biomass with natural gas** and better ventilation of kitchens.

- Emission source apportionment and population exposure assessments are important for context-relevant control strategies.
- **Proactive public policy,** effective enforcement, vigilant monitoring and adaptive innovations responsive to reliable and regular data flows are needed.

10) Farmer Producers' Organizations in UP
(GS3: Storage, Transport and Marketing of Agricultural Produce and Issues and Related Constraints)

Context
- This article highlights how Eastern Uttar Pradesh has emerged as a hub of vegetable and fruit exports in the past two years and the **role of FPOs** of the region.
- In recent years, Farmer Producers' Organizations(FPOs) have been formed to counter the challenge of fragmented holdings.

About FPOs
- An FPO is a **collective of farmers who have holdings or work in a geographical cluster.**
- It can be **registered under the Companies Act** or as a cooperative under the Societies Registration Act.
- FPOs have demonstrated their potential to trigger cluster-based farming, bringing in economies of scale in input management facilitating agri-extension, enabling technology adoption, providing quality assurance and helping farmers market their produce.
- The Centre's scheme to **form and promote 10,000 FPOs** envisages collaboration amongst farmers in activities like input management.
- Such cooperation can enhance the capacities of agriculturists, help in value addition and facilitate the creation of links with markets.

UP and FPOs

A dedicated FPO cell constituted by the UP government.	• The objective is to **ensure convergence of schemes, address compliance issues and provide continuous support to FPOs** so that they become agents of prosperity in the rural economy.
A scheme of its own (state government) to form FPOs.	• With the synergistic implementation of Central and state-sponsored schemes, **one FPO will be formed in each of the 826 blocks in UP every year** for five years, starting from 2022-23.
FPO Shakti Portal	• The FPO Shakti portal has been launched to provide a platform to all active FPOs in UP. It is a **one-stop solution for grievance redressal,** forging business partnerships and fostering convergence.
Additional subvention to FPOs	• The Centre has constituted the Agriculture Infrastructure Fund to provide interest subvention of 3 per cent for credit extended to develop post-harvest infrastructure which is available to FPOs. • The UP government provides an **additional 3 per cent subvention to FPOs** and agriculture entrepreneurs, thus reducing the overall interest on such loans to around 3 per cent. • This is in addition to the capital subsidies under various Central and state-sponsored schemes. o Such incentives could **encourage these farmer collectives to develop post-harvest facilities** like warehouses, cold storage, cold chains and ripening chambers.
Fostering convergence of various schemes	• The government is fostering the convergence of various schemes including those related to farm mechanization, seed production and processing, agri-marketing, MSP-based procurement, nutrition mission, services for the supply of inputs like seed, fertilizer, pesticides, technological interventions like agri-drones and organic farming.

Significant outcomes of the above measures

- FPOs are playing a pivotal role in **crop diversification and value addition.**
- Hundred FPOs have established seed processing units in UP.
  - Several of these units sell their seeds in the open market; others have signed MOUs with state and National Seed Corporations for buy-back arrangements.
- Many FPOs have established **Farm Machinery Banks** which provide farm mechanization services at reasonable rents which contribute to managing paddy stubble.
- **Climate resilient strategies** like direct seeding of rice are being channelised through FPOs.
- FPOs are working to **improve nutrition** by developing the value

chain of high-nutrient agri-products like millets, mushrooms, moringa and fortified cereals.

- o For example, in Rampur, the FPO collaborated with the district administration for the **"Aahaar Se Upchar Tak"** campaign to supply nutrition-rich products to anganwadi kendras. Their efforts led to an improvement in nutritive outcomes in the area.
- FPOs have entered into **dealership agreements for seeds, fertilizers and agri tech.**
- FPO outfits have **succeeded in registering local products under GI** — these include Adam Chini rice, Banarasi langra, jaggery, Ramnagar (Varanasi) Bhanta (Brinjal) and Banarasi pan.

11) Breaking the ice: How India can help save the Arctic

(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)

Context

- In an emerging multipolar world, India has shown in the G20 summit that it can **balance the competing interests of the Global North and the Global South** which is essential to protecting our global climate, including critically important ecosystems such as the Arctic.
- This article highlights how India can help save the arctic ecosystem.

Why should the Arctic be protected?

- Protection of the Arctic is crucial **to protect the world from the worst effects of the climate emergency.** Because
  - o The Arctic is warming at a rate four times faster than the global average, leading to an **unprecedented loss of sea ice, as well as the thawing of permafrost.**
  - o Continued Arctic change **releases vast quantities of stored carbon**, rivaling the cumulative emissions from the US at its current rate which can trigger multiple catastrophic and irreversible climate tipping points.
  - o The impacts of climate change including the **melting of the Arctic are disproportionately affecting the Global South.**
    - For instance, research shows an intricate correlation between the melting of Arctic sea ice and extreme rainfall events during the Indian summer monsoon.
- **Consensus-based collective action** to mitigate climate impacts in the Arctic is critical as a disproportionate impact on the Global South can affect the rest of the world.

Issues surrounding the arctic region

- Despite awareness about the importance of the Arctic, the climatic challenge is being exacerbated by **rapid development and growing geopolitical tensions.**
  - o For instance, Russia stretches over 53 percent of the Arctic Ocean coastline and is pouring resources into commercializing and expanding trade channels along the Northern Sea Route, while continuing to use and transport high-polluting heavy fuel oil through Arctic waters.

o Other Arctic countries are also planning oil and gas development endeavors.

The Arctic Council is a group of eight countries (the US, Russia, Norway, Finland, Sweden, Canada, Denmark, and Iceland) with primary capacity for protecting or exploiting the vital ecosystem.

- The **suspension of the Arctic Council due to the Russian invasion of Ukraine** has made it more difficult to hold countries accountable and to monitor wider activity contributing to changes in the Arctic.
- The Arctic Council **does not have any member from the Global South,** though some, including **India**, have **observer status.**

Way forward

- The active involvement of India as a member of the Arctic Council to voice the concerns of the Global South could help push for an end to further exploitation.
- *Why India?*
  o India holds the potential to forge a united approach to safeguarding crucial global ecosystems, especially the Arctic which is evident from its ability to traverse historical divides and develop aligned positions among the Global North and Global South.
  o The New Delhi Leader's Declaration in the recent G20 Summit demonstrated India's ability to navigate the conflicting interests of the Global North and the Global South.
  o India **can raise the Arctic as part of a constructive conversation on climate governance at its** proposed

virtual G20 Summit in November.

Conclusion

- As India takes greater steps towards leading the Global South, its future should involve **pushing for reforms and ensuring that climate protection is at the forefront of global Arctic policymaking.**

12) Climate finance needs private funding too

(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)

Context

- This article emphasizes that in order to address the overlapping challenges of poverty reduction, climate change and biodiversity protection, more and more investments are needed and the article explains how it can be secured.

The Paris Pact for People and the Planet

- Recently more than 100 countries as well as representatives from global private sector entities gathered in Paris and made the Paris Pact for People and the Planet.
- This was the result of close work with India and the outcome has been enshrined in the G20 Leaders' Declaration at the historic Delhi Summit in September.
- The achievement reflects the **spirit of the Indo-French partnership for the planet**- acting together to overcome the artificial North/South divide and seek to find tangible solutions to the greatest challenges of our times.

Guiding principles of the Paris Pact for People and the Planet

- No country should have to choose between fighting poverty and fighting for the planet.
- **Country ownership of transition strategies:** facing different needs, countries may need to pursue diverse transition paths while coming together to meet the goals of the Paris Agreement.
- We need a **financial stimulus with more resources to support vulnerable economies** lifting their population out of poverty while protecting the planet.
- An **international financial system** that delivers more: the role of private capital. Meeting global challenges will crucially depend on the scaling up of private capital flows to transform emerging and developing economies, for a net-zero and nature-positive world and to reduce inequalities more efficiently.

How can we unlock more private-sector funding to face the climate and development crises?

- Engage in a review of the **global vertical climate funds** in order to optimize the use of their resources and increase partnerships between peers and with the rest of the climate-finance architecture.
  - **Vertical funds** refer to partnerships and related initiatives whose **benefits are intended to cut across more than one region** of the world according to the World Bank.
- Providing the **right signals and labels to invest in sustainable projects,** maintaining a stable and transparent environment, and promoting investment opportunities are essential.

- **Credit-rating agencies** must be included in the reform agenda of multilateral development banks (MDBs).
- We should push further the thinking on the **"green finance" framework** to make the most of the global savings pool.
  - It simply means **harnessing the full trust of private finance to support low-carbon and resilient pathways** around the globe.
- Country-led, multi-actor partnerships such as **Just Energy Transition Partnerships** are the right way to raise the required investments which are already operative in Indonesia, Vietnam, South Africa and Senegal.
- **Climate-resilient debt clauses** should be included to address debt vulnerabilities in developing countries owing to private sector finance for the green transition.

13) India needs to go nuclear
(GS3: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.)
Context
- India's primary energy consumption which is already the third-highest globally is expected to rise with the economic growth. In this backdrop, this article explains the national nuclear strategy to be adopted to meet the climate targets before India.
Energy transition
- India aspires to have a **Human Development Index (HDI) comparable to advanced countries** of the world. The total clean energy requirement to support a developed India would work out to around 25,000 — 30,000 TWhr/yr. (TeraWatt Hour/Year) which is more than

four times our present energy consumption.

- However, making rapid strides in the deployment of renewable energy including hydro, solar plants, wind energy would still fall way short of the target.
- The only way out then is a **rapid scale-up of nuclear energy.** Based on a study done by Vivekananda International Foundation, with due analytical back-up from IIT-Bombay, it appears that **nuclear energy would need to be scaled up to a couple of thousand GWe for an optimum solution to reach net-zero** in a developed India. But this requires a proper nuclear strategy.

National strategy to be adopted for a rapid scale up of nuclear energy

- **Expansion of PHWR:** Indigenous 700 MWe Pressurised Heavy Water Reactor (PHWR), the first unit of which is already in commercial operation, should be the prime workhorse for base load electrical capacity addition. Many such fleets leveraging multiple PSUs in addition to NPCIL should be considered.
- **Build indigenous Small Modular Reactors** at a large number of sites that would be vacated by retiring coal plants in the coming decades.
- Well-proven 220 MWe Pressurised Heavy Water Reactor (PHWR) units can be offered as **partially owned captive units for electricity and hydrogen for energy-intensive industries** such as metals, chemicals, and fertilizers.
- Develop a **high temperature reactor for direct hydrogen production** without resorting to electrolysis.
  - o This would enable cheaper green hydrogen production and reduce pressure on

excessive electrification of the energy system in the country.
- **Speed up second and third stage nuclear-power programme** development to unleash thorium energy potential in accordance with the pre-existing plans for long-term sustainable energy supply.
- Rapid **deployment of new nuclear-energy capacity** is needed to credibly address the climate-change challenge at the global level, for the emerging-economy countries that expect maximum net growth in energy consumption.

Conclusion

- A national programme guided by a bold policy support that provides a level playing field for nuclear energy on par with renewable energy can help India fight the climate change challenge

14) The shape of climate justice in a warming India

(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)

Context

- The G-20 summit that was held in Delhi recently agreed on **tripling renewable energy capacity** and a **voluntary doubling of the rate of energy efficiency** improvement by 2030. However, this failed to reach consensus on the root cause of the climate crisis i.e.the **phasing out of fossil fuels.**

Ideals of energy transition

- Any energy transition initiative must embrace two normative ideals:
  - o Those **who emit greenhouse gasses should pay the social and environmental costs.**
  - o **Climate justice requires compensation for those**

who are harmed. Thus any mitigation effort must reverse this carbon injustice by making the richer countries or richer classes within a country pay for the energy transition.

At the domestic front

- India's stance on the matter has largely been framed through the lens of foreign policy and its approach to **common but differentiated responsibilities (CBDR) in international negotiations,** which allows developing countries in the global south to prioritize economic growth and development over climate mitigation.
- Given the country's historically lower emissions, focusing on economic growth has naturally taken precedence over climate concerns.
- However, such an approach evades concerns of climate justice within India, particularly its effect on inequality across levels class, caste and region.

Inequality due to climate change

- Climate change and energy transition disproportionately affect the poor.
- The climate-induced problems and droughts have compounded the agrarian crisis and allied economic activities.
- Variations in rainfall, temperature and extreme climate events directly impact agricultural productivity, compounding farmers' income loss.
- Rising temperature in the ocean ecosystem has already begun squeezing fish stocks in parts of the country, hurting fishing communities.

Challenges in green energy transition

- India's energy transition policies will affect the **livelihoods of the poor and exacerbate existing class, caste, and regional disparities.**
  - o As of 2021, coal was the major contributor to the total energy supply in India (accounting for 56.1%), followed by crude oil (it accounts for 33.4%). Thus regions heavily reliant on coal production may lose revenues and livelihoods.
- The industrial sector was the largest consumer of energy, using more than half, i.e.51% of the total final energy consumption, followed by transport (11%), residential (10%), and agriculture (3.6%) sectors.
  - o As **manufacturing is far more energy- and carbon-intensive** than agriculture and services, any increase in energy price is likely to lead to a contraction of manufacturing, which India cannot afford given its already low manufacturing level.
- The skill sets required and the jobs generated per unit of output in renewable vastly differ from fossil fuel industries. Many fossil fuel firms are in the public sector and act as a **critical avenue for creating job opportunities for Dalits** and the lower castes in India.
  - o A shift to renewable energy can potentially **halt this generational mobility achieved by these disadvantaged groups.**

Energy source divide

- Coal, the cheapest source of energy, is located in the **poorer regions in**

eastern and central India while renewable energy hubs, powered by **wind and solar photovoltaic (PV) technologies,** are located in the **relatively wealthy southern and western India.**

- Despite the pollution it causes, the **coal sector, owned by the public sector miners (85%), is the main source of revenue** via taxes, royalties, and mining fees and employment for the State governments in Odisha, Jharkhand, and Chhattisgarh.

Way forward

- India's **energy transition strategy must pay attention to the regional inequalities**, transfer funds to States dependent on coal, and carve out State-specific programmes for reskilling development and local rehabilitation needs.
- To achieve policy alignment and cooperation across the levels of government, interactions between **fiscal federalism and climate mitigation** should be understood.
  - For instance, State governments have been found to implement policies, including those related to climate justice, climate adaptation, and disaster management laid out by the Union government, that are often at **odds with the development aspirations of the States.**
- To ensure an equitable and sustainable transition, strategies must target inequality reduction and green investment simultaneously.
- Addressing both environmental and socio-economic inequalities simultaneously is essential for sustainable and equitable development.

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- Transitioning to renewables requires a deliberate focus on protecting livelihoods, offering alternative job opportunities, and ensuring that vulnerable communities are not adversely impacted.

15) Mental health and the floundering informal worker

(GS2: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources)

Context:

- **World Mental Health Day** is celebrated every year on **October 10th** and the theme for this year is **'mental health as a universal human right'.** Informal workers, despite their significant contribution to national income, are perennially exposed to various economic, physical, and mental vulnerabilities.
- This article explains the burden of mental health on the informal workers.

Relationship between work and mental health

- A study by the **International Labour Organization (ILO)** says that **15% of working-age adults, globally, live with a mental disorder.**
- While decent work influences mental health in a positive way, unemployment, workplace discrimination, or poor and unsafe working environments, can all pose a risk to a worker's mental health.
- Workers in low-paid, unrewarding or insecure jobs, or working in isolation, are more likely to be exposed to psychosocial risks, thus compromising their mental health.

Mental health of informal workers, unemployed and elderly employed

- India's **informal workforce accounts for more than 90% of the working population** and they are the worst affected when it comes to mental health and access to mental health. Because
    - These workers often operate without regulatory protection.
    - Work in unsafe working environments
    - Endure long hours and have little access to social or financial protections
    - Suffer high uncertainty and face discrimination.
    - High social security costs
- Over 95% of India's working women engaged in informal, l**ow-paying, and precarious employment, often without social protection,** in addition to suffering patriarchal structures and practices in their social and familial spaces.
- According to the **United Nations Development Programme (UNDP)**, **unemployment and poor-quality employment** have consistently been **detrimental to mental health.**
- Another study, by the ILO, found that the **absence of proper financial and health-care security among the working elderly** can severely impact their physical and mental health, aggravating their vulnerability.

Way forward

- As the World Mental Health Report 2022 observed, addressing mental health involves **strengthening community-based care**, and **people-centred, recovery-oriented and human rights-oriented care.**

- There is an urgent need for **proactive policies to improve mental health recognition** and action.
- Increasing the budgetary allocation for mental health(currently under 1% of the total health budget) is also needed.
- With the phase of demographic dividend, where half of India's population is of working age and projected to remain so for two decades, it is pertinent to think about the **quality of employment and long-term social security for them.**

Conclusion

- Upholding the basic human right to good health, including mental health, and advancing the Sustainable Development Goals (SDGs), especially **SDG 3 on 'good health and well-being'** and **SDG 8 on 'decent work for all/economic growth'** is the need of the hour.

16) The Indian Himalayan Region needs its own EIA

(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)

Context

- The recent Teesta dam breach in Sikkim and the recent floods and landslides in Himachal Pradesh makes it imperative to assess the worthiness of any significant human development endeavor in terms of its impact on the environment particularly the mountainous regions.

What is an EIA?

- **Environment Impact Assessment (EIA)** is a process defined by the **United Nations Environment Programme (UNEP)** as a tool to identify the environmental, social, and economic impacts of a project before it is implemented.

- This tool compares various alternatives for the proposed project, predicts and analyses all possible environmental repercussions in various scenarios.
- The EIA also helps decide appropriate mitigation strategies.

Development of EIA

- On January 27, 1994, the Union Ministry of Environment, Forests and Climate Change under the **Environment (Protection) Act 1986 (EPA),** promulgated the first EIA notification making **Environmental Clearance (EC) mandatory for setting up some specified new projects** and also for expansion or modernisation of some specific activities.
- The notification of 1994 saw 12 amendments in 11 years before it was replaced by the EIA 2006 notification.
- The hallmark of the **2006** notification was the **decentralization of the process of EC.** State governments were also given powers to issue EC in certain cases.
- The 2006 notification has also been amended, in the name of fine-tuning the process several times.
- The Union Ministry of Environment, Forests and Climate Change floated a **draft EIA in 2020** for public comments which was perceived to be pro industry and compromising the ecological concerns.

Procedure for EIA notification

- The EIA 2006 notification lays down the procedure as well as institutional set-up to give environmental clearance for the projects that need such clearance as per this notification.
- Only projects enumerated in the schedule attached to the notification require prior EC.

- An EIA is not required for many projects as they do not fall within the ambit of this notification.
- This notification has categorised projects under various heads such as mining, extraction of natural resources and power generation, and physical infrastructure.

Issues surrounding EIA

- **No IHR specific EIA criteria:** Despite knowing the special needs of the Indian Himalayan Region (IHR), the region's vulnerabilities and fragility have not been considered separately.
  - For instance, the **threshold limits** beyond which EIA is warranted for all the above mentioned projects is the **same across the country.**
  - Even the draft 2020 notification which was floated for public discussion does not treat the IHR differently than the rest of the country and is not cognisant of the special developmental needs of IHR.
- **Graded approach:** The Indian regulatory system uses a graded approach, a differentiated risk management approach depending on whether a project is coming up within a protected forest, a reserved forest, a national park, or a critical tiger habitat. However, IHR is missed from this approach.
- **No national level regulator:** There is no regulator at the national level to carry out an independent, objective and transparent appraisal and approval of the projects for ECs and to monitor the implementation of the conditions laid down in the EC as suggested by the Supreme Court of India in 2011 in **Lafarge Umiam Mining (P) Ltd.; T.N. Godavarman Thirumulpad vs Union of India**.

- In many cases, the EIA is done in a 'box ticking approach' manner, as a mere formality that needs to be done for EC before a project can be started.

Why should IHR be treated separately?

- Himalayas are **inherently vulnerable to extreme weather conditions** such as heavy rains, flash floods, and landslides and are seismically active.
- **Climate change** has added another layer of vulnerability to this ecosystem.
- The **increasing frequency with which the Himalayan States are witnessing devastation** every year after extreme weather conditions shows that the region is already paying a heavy price for this indifference.

Way forward

- While categorizing projects it is important that the **impacts of all such projects and activities are seen in the IHR in the context of this region's fragility and vulnerability** vis-à-vis ecology and environment.
- A **different set of environmental standards** should be proposed if the project is located in the IHR.
- Policymakers should do well to **explore other tools such as the strategic environmental assessment** which takes into account the cumulative impact of development in an area to address the needs of the IHR as a fundamental policy.

Conclusion

- The EIA could be the **most potent regulatory tool** in the arsenal of environmental governance to further the vision of sustainable development in the country if used carefully.

17) Women, marriage and labor market participation

(GS3: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment)

Context

- Despite the remarkable advancements observed in the global economies, there has been a **persistent decline in the labor force participation rate (LFPR) of women** in developing nations. This article emphasizes that the diminished level of women's labor force participation rate (LFPR) has **significant consequences on the overall economic progress of the nation.**

Claudia Goldin and Labour market outcomes

- **Claudia Goldin,** was awarded this year's **Economics Nobel** "for having advanced our **understanding of women's labor market outcomes**".
- Goldin's comprehensive analysis of the economic history of women has presented new insights into the many **aspects of gender disparities in the labor market.**
- Also her research has shown the **underlying factors** that have contributed to these gaps throughout history, and the persisting inequalities that exist in contemporary times.

Data shows low labor participation

- The level of female labor force participation remains relatively low globally.
  - **Global estimates:** World Bank estimates (2022) show that the worldwide **LFPR for women was 47.3% in 2022.**
  - **Indian scenario:** The estimations also indicate that female labor force

participation in India between 1990 and 2022 has decreased from 28% to 24%.

- In 2022-23, there has been a notable decrease of 5% in the female labor force participation rate among married women aged 25 to 49 years, with a decline from 50% in 2004-05 to 45% in 2022-23.
- The decline in the female labor force participation rate (LFPR) is primarily concentrated within the age group of 25-29.

Factors responsible for low LFPR in women

- **Religious and caste affiliations**, geographical location, the wealth of their household, and prevailing **societal norms** surrounding women's employment outside the house, marital status etc., have a profound impact in contributing to the decline in LFPR in women.
- The **absence of adequate day-care services** frequently acts as a disincentive for female labour force participation.

Marriage and low LFPR in women

- **Married women exhibit the lowest levels of labor market participation** as compared to widowed, divorced and unmarried women.
- After marriage, there is a tendency for women's LFPR to decrease due to many variables.
  - These factors encompass **women's limited educational attainment, less mobility as a result of increasing family**

obligations, and **societal disapproval associated with women in employment outside the domestic sphere.**

- The institution of marriage amplifies domestic obligations for women while concurrently imposing many social and cultural impediments that affect their participation in the workforce.
- The examination of the influence of educational achievement on the rate of married women's involvement in the labor force shows that **women lacking literacy skills demonstrate a greater inclination to participate in the labor force** after getting married, as opposed to their well-educated counterparts.
- Analysis that relates to the allocation of female labor across diverse industry sectors in India demonstrates that **agriculture remains the prevailing sector in terms of female employment.**

Solutions to pursue

- It is imperative to **enhance the quality and accessibility of day-care services**/crèches for employed women across various socio-economic strata, encompassing both formal and informal sectors.
  - The government has enacted initiatives such as the **National Creche Scheme for The Children of Working Mothers.**
- To increase the involvement of married women in the labor field, implementation of such schemes is imperative in both the **public and private sectors.**
- The implementation of **work settings that prioritize the needs**

and **well-being of women**, the provision of **secure transportation options**, and the **expansion of part-time job possibilities** would serve as catalysts for the greater participation of women in the labor market within India.

18) An opportunity to recast India's food system
(GS2: Issues relating to Poverty and Hunger)
Context
- **World Food Day** is celebrated every year on **October 16.** In this backdrop, this article explains the **challenges associated with the Indian food system,** interconnectedness of nutrition security with livelihood and environmental security and the essential steps to make our food system truly sustainable.

Interconnectedness between nutrition, livelihoods, environment security
- While the **primary goal of a food system is to ensure nutrition security** for all, it can only be achieved sustainably if the **producers producing the food make reasonable economic returns** that are resilient over time.
- This in turn, is **intricately linked with the resilience of our natural ecosystem** because the largest inputs to agriculture soil, water and climatic conditions are all but natural resources.

Challenges of food system in India
- **Nutrition challenge:** India faces a double burden of malnutrition.
  - **Nutrient deficiencies:** As in the National Family Health Survey, 2019-21, 35% of children are stunted, and 57% of women and 25% of men are anemic.

  - **Obesity**: Due to imbalanced diets and sedentary lifestyles, 24% of adult women and 23% of adult men are obese in India.
- **Livelihood challenge:** On the production side, **farm incomes are insufficient** to meet the ends of marginal and small farmers.
  - According to a report by the Transforming Rural India Foundation, more than 68% of marginal farmers **supplement their incomes with non-farm activities.**
  - Getting employed under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and other forms of casual labor indicate a **lack of skills or opportunities for income diversification.**
- **Environment challenge:** Depleting natural resources and changing climate are making India's food production highly vulnerable.
  - As in the 2023 soil health survey, almost half the cultivable land in India has become **deficient in organic carbon**, which is an essential indicator of soil health.
  - **Groundwater**, the largest source of irrigation, is rapidly declining. In States such as Punjab, more than 75% of the groundwater assessment locations are over-exploited, threatening the resilience of farm incomes.

Way forward
- To solve these interconnected challenges, we need a triad approach that engages all three sides of the food system:

consumers, producers, and middlemen.

- **Consumers**: Consumer demand needs to be shifted towards **healthy and sustainable diets.**
  - **Civil society and the health community** could partner with **social media influencers** who can shape healthier and sustainable consumption.
  - The **public sector,** through the Public Distribution System, mid-day meals, railways catering, urban canteens, and public and institutional procurement, can help improve what at least 70% of Indians are consuming.
  - Even religious institutions can shape food choices.
    - For instance, the **Tirumala Tirupati Devasthanam**, which serves nearly 70,000 people daily, has **started procuring naturally-farmed produce.**
- **Producers:** To ensure resilient incomes, farmers' should be supported for their transition towards remunerative and regenerative agricultural practices.
  - The **National Mission on Natural Farming** is a step in this direction.
  - Scaling up such initiatives to various agro-ecological practices such as agroforestry, conservation agriculture, precision farming are needed.
  - Agriculture support should move from input subsidies to **direct cash support to farmers** per hectare of cultivation. It would

promote efficient use of inputs, while enabling a level playing field for agroecological practices to thrive.
  - **Agricultural research and extension services** should also be made a proportion of their respective budgets to focus on sustainable agricultural practices.
- **Middlemen:** Shift farm-to-fork value chains towards more sustainable and inclusive ones.
  - Middlemen, such as corporations supplying raw and processed food to consumers, should **prioritize direct procurement from farmers, incentivise procurement of sustainably harvested produce**, and implement well-established approaches such as fair trade.
  - Various young agri-tech enterprises such as **DeHaat and Ninjacart** are enabling such farm-to-buyer linkages.

Conclusion
- India, feeding the largest population in the world has a unique opportunity to showcase to the rest of the world how to get its food system right by acting promptly.

19) Issues with Global Biodiversity framework fund
(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)
Context
- The Biodiversity framework fund is without any real financial commitment to meet conservation targets.

About Global Biodiversity Framework Fund

- The fund was established at the 7th Assembly of the **Global Environment Facility** in Vancouver, Canada.
- The fund will support global efforts to halt and reverse biodiversity loss by 2030, a goal agreed to by 196 countries as part of the **Global Biodiversity Framework** established at **COP15** *(Refer Pulse @ a glance December 2022 edition for details about COP15).*
- Governments, non-profits, and the private sector can contribute their funds to GBFF.
- **Funding Allocations**
    - It is said that **20%** of the funds will be allocated to **Indigenous Peoples and local communities**
    - **36%** of the fund's resources are aimed to support **small island developing states**.
    - **3%** of funds will be allocated to **Least Developed Countries**
    - About **25%** of the fund will be delivered through GEF agencies to increase resources through **private sector involvement**.

Scope of the fund

- The GBFF received initial contributions from two countries- **Canada** and the **United Kingdom.** These contributions provide a significant boost to global efforts to halt and **reverse biodiversity loss** by 2030.
- The fund offers a chance to **secure funding** from various channels, and ensures improved accessibility for **indigenous peoples** and **local communities.**
- The **GBF Fund** also enables a significantly increased engagement of **Multilateral Development Banks** and **Development Finance Institutions for executing the Framework.**
- The fund contributes to the effective implementation of biodiversity frameworks by mobilizing additional resources from **domestic sources,** spanning governments at all levels, the **private sector**, and innovative funding mechanisms.

Issues associated with the fund

- **Inadequacy of funds** allocated to the Global Biodiversity Framework Fund may limit the fund's ability to effectively support biodiversity conservation initiatives on a global scale.
- If the **procedures** for accessing and disbursing funds are overly **complex**, it may lead to delays and inefficiencies in implementing biodiversity projects.
- Coordinating efforts with **Multilateral Development Banks** and **Development Finance Institutions** may present challenges due to differing **priorities and approaches**.
- The success of the fund relies on the **commitment** of governments, private sectors, and other stakeholders. Political will may vary, affecting the overall effectiveness of the fund.
- The GBF Fund is part of a broader effort to achieve the **UN Sustainable Development Goals** and the vision of living in harmony with nature by 2050. Balancing the needs of development and conservation is a significant challenge.

About GEF

- GEF was established on the eve of the **1992 Rio Earth Summit** to help tackle our planet's most pressing environmental problems.

- The GEF's primary mandate is to tackle **global environmental issues** by providing financial resources to developing countries.
- It aims to promote **sustainable development** while addressing challenges such as **biodiversity loss, climate change, land degradation, chemicals** and **waste managemen**t.
- It provides financial assistance for five major international environmental conventions:
  - The Minamata Convention on Mercury.
  - The Stockholm Convention on Persistent Organic Pollutants (POPs).
  - The United Nations Convention on Biological Diversity (UNCBD)
  - The United Nations Convention to Combat Desertification (UNCCD).
  - The United Nations Framework Convention on Climate Change (UNFCCC).

Conclusion
- The GBF Fund marks a significant stride in global initiatives aimed at preserving biodiversity. The existing gaps in the GBF fund needs to be addressed so that it serves as a crucial financial mechanism to drive efforts towards a more sustainable future.

20) Security in Recycling
(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)
Context
- Electric vehicles are key to decarbonise mobility. India's ambitious electrification programme supported by upscaled domestic battery manufacturing will require a secured supply of battery materials.

Indian Scenario
- India plans to achieve **100% electrification** of two and three wheelers and 65-70% electrification of buses by 2030.
- India is also one of the 130 signatories to the **Zero Emissions Vehicle Declaration** made at a side event at the **UN Climate Conference (COP 26)** in Glasgow in 2021.
- **NITI Aayog** in its 2022 report, **'Advanced Chemistry Cell Battery Reuse and Recycling Market in India'**, estimates that the cumulative potential of lithium-ion batteries in India during 2022-30 will be around **600 GWh** across all segments. Of this, **128 GWh** will be available for recycling by 2030 with **46% (59 GWh)** coming from electric vehicles alone. Thus retired batteries have enormous potential to power India's clean energy transition.

Battery waste management Rules 2022
- Battery waste management Rules 2022 cover all types of batteries –
  - Electric Vehicle batteries,
  - Portable batteries,
  - Automotive batteries and
  - Industrial batteries.
- The rules function based on the concept of **Extended Producer Responsibility (EPR)**. The producers (including importers) of batteries are responsible for the collection and recycling or refurbishment of waste batteries. They are also responsible for the use of recovered materials from wastes for new batteries.
- On the basis of **Polluter Pays Principle**, environmental compensation will be imposed for non-fulfilment of Extended Producer Responsibility obligations.

- The rules promote setting up of new industries for recycling and refurbishment of waste batteries.
- The rules will also enable the setting up of a **centralized online portal** for the exchange of **EPR certificates** between producers and recyclers/refurbishers.

Lacunae in existing rules

- The existing rules **lack specificity** regarding the **labeling** of **lithium-ion batteries. Proper knowledge of battery chemistry is essential to ensure** efficient assembly, separation, and recovery in the recycling process
- The existing rules need to promote **recycling-friendly design** of cells and batteries.

- Materials could also be designed for easier **end-of-life management**.
- The **Extended Producer Responsibility** fails to specify the budget that battery manufacturers should allocate for the collection and recycling of used batteries. The price that producers might end up paying to recyclers under EPR might be too low.
- There are also concerns over the **lack of rules for storage, transport and handling of electric vehicle batteries** that may lead to serious safety issues.

Ideal loop of circularity
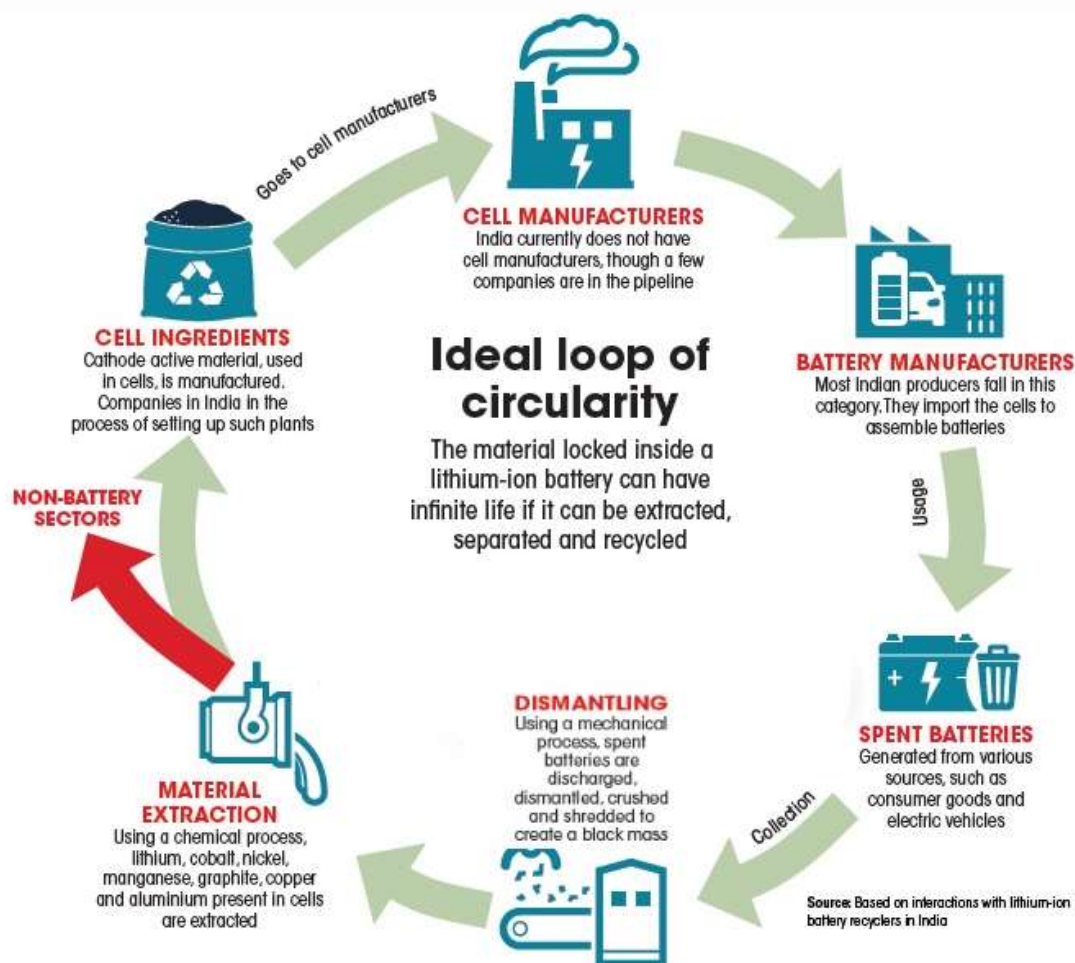
Passport for batteries

- The **European Parliament** adopted the **Digital Battery**

Passport that mandates battery passport deployment by 2027.

- A **battery passport** is an **electronic record** for each battery in the market which carries information such as **supplier information, material composition, manufacturer information, performance** and **information regarding recycling**. The information is collected all along the battery's life cycle.
- It envisions a **multi-stakeholder consensus** on scope of data collection, access rights and data ownership.
- The batteries can be stamped with a **QR code** which can lead users to this information.
- It improves material sourcing decisions and reliable verification of environment, social and governance credentials of suppliers.
- For recyclers it will allow for more efficient disassembly and higher material recovery through better process control.

Conclusion

- As domestic electric vehicle manufacturing and market grow, more spent batteries will flood the recycling market. Recovering the valuable material locked inside the batteries is essential to improve **material security, minimise waste** and **control environmental** hazards.

21) Universal Basic Income: Blessing in Disguise

(GS2: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation)

Context

- Localized experiments with universal basic income have shown mostly positive outcomes across states, strengthening calls in favor of social policy.

Universal basic Income

- **Universal basic income** is the concept under which all citizens of a country receive **a legally stipulated and equally set financial grant** paid by the government.

Potential advantages of UBI

- **Poverty Alleviation**: UBI has the potential to significantly reduce poverty by providing a basic income floor to all individuals, regardless of their employment status or income level. It ensures that everyone has access to a minimum level of economic security, meeting their basic needs for food, shelter, and healthcare.
- **Reduced Inequality**: UBI can help reduce income and wealth inequality by providing a more equal distribution of resources. It offers financial support to those who are economically disadvantaged, helping to bridge the wealth gap and create a more equitable society.
- **Economic Stimulus**: UBI can act as an economic stimulus by injecting money directly into the hands of individuals. This money is likely to be spent on essential goods and services, thereby increasing consumer demand and stimulating economic activity. This can have positive effects on local businesses and contribute to economic growth.
- **Increased Entrepreneurship and Innovation**: With a guaranteed basic income, individuals have a greater ability to take risks, pursue entrepreneurial ventures, or engage in creative pursuits. UBI provides a safety net that reduces the fear of failure and allows people to explore new ideas, or invest in their education or skills development.

- **Simplified Social Welfare Systems**: UBI has the potential to streamline and simplify existing social welfare programs. By providing a universal cash transfer, it reduces bureaucracy and administrative costs associated with means-testing and monitoring eligibility for various social assistance programs.
- **Adaptability to Changing Labor Markets**: As automation and technological advancements continue to reshape the job market, UBI can provide a safety net for individuals whose livelihoods are disrupted by these changes.

Disadvantages of UBI

- **Financial Feasibility**: Implementing UBI on a large scale in a country as populous as India would require substantial financial resources. The cost of providing a basic income to every citizen could strain government budgets and potentially lead to increased taxes or reduced funding for other essential public services.
- **Inflationary Pressure**: Introducing UBI without appropriate economic safeguards could lead to increased inflation. If everyone receives a basic income, there may be a surge in demand for goods and services, potentially driving up prices and reducing the purchasing power of the basic income itself.
- **Dependency and Work Incentives**: If individuals receive a basic income regardless of their employment status, some may choose not to seek employment. This could have negative consequences for economic productivity and growth.
- **Targeting and Equity Concerns:** Implementing a universal cash transfer may not effectively target those who are most in need of support. Certain vulnerable groups, such as those living in extreme poverty or with specific needs, may require more targeted and tailored social welfare interventions.
- **Regional Disparities**: India has significant regional disparities in terms of income levels, cost of living, and access to resources. Providing a uniform basic income across the country may not adequately address these regional variations and could exacerbate existing inequalities.

State led initiatives

- In 2019, the Congress proposed **Nyuntam Aay Yojana (minimum income scheme)** that guaranteed Rs.6,000 per month for poor families and offered Rs. 72,000 annually for 20 per cent of the poorest families.
- In 2019, Odisha implemented its own cash support scheme— **Krushak Assistance for Livelihood and Income Augmentation** for farm families, landless farmers and agricultural laborers to reduce costs and invest in income generation activities.
- In 2023, Madhya Pradesh also implemented cash transfer schemes for women.

Conclusion

- Automation, unemployment, climate crises, pandemics, declining female labour force participation and growing inequality are among the crises that make people, especially the underserved and marginalized, more vulnerable.
- UBI and better government services are perhaps the best way to provide control, benefits and freedom to the poorest and weakest sections.

22) Due Credit
(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)
Context
- As per the assessment of Centre for Science and Environment (CSE), India generates one-fifth of the world's carbon credits and is at the forefront of carbon investment.

Origin of carbon credits
- The idea of carbon credit began in the first decade of the 2000s, after the **Kyoto Protocol**, set up under the UN Framework Convention on Climate Change (UNFCCC), came into force.
- Countries agreed to set up the **Clean Development Mechanism** (CDM) for the purchase of carbon credits from developing countries. But with the end of the Kyoto Protocol, this market dried up.
- It was replaced by an unregulated global market of buyers and sellers, called the voluntary carbon market.

Carbon credits
- A **carbon credit** serves as a permit, granting its owner the authorization to release a specific quantity of CO2 or other greenhouse gases.
- Each credit corresponds to the emission of **one tonne of CO2 or its equivalent in other greenhouse gases.**
- The carbon credit is one component of a "**cap-and-trade**" programme. Polluters are given credits that allow them to continue polluting up to a certain limit. This limit is reduced on a regular basis. In the meantime, the company may sell any unsold credits to another company that requires them.
- This system creates a dual incentive for private companies to mitigate greenhouse gas emissions. Firstly, if their emissions surpass the established cap, they are obliged to invest in **additional credits**. Secondly, these companies stand to gain financially by reducing their emissions and selling any excess allowances.

Indian Scenario
- India's lucrative carbon market is worth over **$1.2 billion** . It will only grow as the crisis of climate change becomes more urgent and companies strive to attain net-zero emission goals.
- The global average price is $4 per credit.
- Carbon credits issued to Indian entities are worth 11% of India's annual greenhouse gas emissions in 2021.

Prevailing issues
- **Accessing international carbon markets** and buyers for carbon credits can be challenging for Indian companies. Improving **market access** could enhance the effectiveness of the carbon credit mechanism.
- The prices of carbon credits in international markets have been **relatively low** in recent years. This can impact the financial incentives for companies to invest in emission reduction projects, as the returns may not be substantial.
- The process of getting emission reduction projects approved and registered under mechanisms like the **Clean Development Mechanism (CDM)** can be **complex and time-consuming**. This bureaucratic challenge may hinder the participation of companies
- **Lack of accurate monitoring, reporting**, and **verification** of emission can affect the **credibility** of carbon credit projects.

Conclusion

- Changes in national and international climate change policies and regulations can create uncertainty for businesses investing in emission reduction projects. A stable and supportive policy environment is crucial for the success of carbon credit mechanisms.

In-Focus

1) Legality of same sex marriages

(GS2: Indian Constitution—Historical Underpinnings, Evolution, Features, Amendments, Significant Provisions and Basic Structure)

Context

- The recent Supreme Court verdict in the case of Supriyo vs Union of India has stirred widespread disappointment by denying LGBTQIA+ individuals the legal right to marry.

What is Section 377 of IPC?

- **Section 377 of Indian Penal Code (IPC)** is a law made by the British, that criminalized **sex between non-heterosexual couples** was **punishable with 10 years imprisonment.**
- As a result, the LGBTQI communities suffered blackmail, torture, violence, harassment at the hands of the police, their lovers and families.

Decriminalizing homosexuality and the Court rulings

- **Naz Foundation Trust Vs Delhi High Court,2009:**
    - **Naz Foundation (India) Trust challenged the constitutionality of Section 377** of the Indian Penal Code under **Articles 14, 15, 19 and 21** before the Delhi High Court.
    - The **Delhi High Court ruled in 2009 that Section 377 cannot be used to punish sex between two consenting adults**.
        - This violates the right to privacy and personal liberty under Article 21 of the Constitution.
        - The Court held that classifying and

targeting homosexuals violates the equal protection guarantee under Article 14 of the Constitution.
        - Section 377 thus violated human dignity which forms the core of the Indian Constitution.

- Several organizations and individuals challenged the Delhi High Court judgment in the Supreme Court. They argued that the right to privacy does not include the right to commit any offense, and decriminalizing homosexuality would be detrimental to the institution of marriage and would lure young people towards homosexual activities.
- **Suresh Koushal Vs Supreme Court,2013:**
    - The Supreme Court reversed the Delhi High Court verdict in 2013 in Suresh Koushal and held that the **decision to decriminalize homosexuality could only be made by Parliament and not the Court.**
    - It also held that Section 377 criminalizes certain acts and not any particular class of people.
    - Several curative petitions were filed challenging the Supreme Court judgment.
- **Navtej Singh Johar and others Vs Supreme Court, 2018:**
    - While the curative petitions against Suresh Koushal were pending, five individuals from the LGBTQ communities filed a fresh

writ petition for scrapping Section 377 IPC insofar as it criminalized consensual sex between same-sex individuals.

o The Supreme Court on January 5th, 2018, formed a **Constitution Bench to hear the challenge to Section 377 in a comprehensive manner**, even though the curative petitions were pending before the Court.

o On September 6th, 2018 the five-judge Bench **partially struck down Section 377 of the Indian Penal Code,** decriminalizing same-sex relations between consenting adults. **LGBT individuals are now legally allowed to engage in consensual intercourse.** The Court has **upheld provisions in Section 377 that criminalise non-consensual acts or sexual acts performed on animals.**

Fundamental rights and Section 377

- Section 377 discriminates against individuals on the basis of their sexual orientation and/or gender identity, violating **Articles 14 and 15** of the Constitution.
- Section 377 violates the rights to life, dignity and autonomy of personal choice under **Article 21.**
- It inhibits an LGBT individual's ability to fully realize their identity, by violating the right to freedom of expression under **Article 19(1)(a).**

What is the issue now?

- LGBTQI communities are stigmatized as any relationship less than marriage is not considered by society to have legitimacy. Consequently, LGBTQI communities began making strong demands for their right to marry.
- Petitions were filed in the Delhi and the Kerala High Courts which were all transferred to the Supreme Court.
- It is in this background that **the Court, in Supriyo Chakraborty Vs Union of India, was asked to decide the right of recognition to marriage by the state of non-heterosexual couples.**
- The fundamental core decision of the Supreme Court in Supriyo Chakraborty is that there is **no fundamental right to marry in India** and the court cannot intervene.
- The court declined to legalise same-sex marriage, leaving it to Parliament to legislate on the subject.

What did the petitioners want?

- The petitioners had sought a ruling by which the **Special Marriage Act (SMA), 1954, which provides for a civil marriage for couples who cannot marry under their personal law**, should be interpreted as gender-neutral, thus allowing same-sex couples to marry under it.
- The SMA, they argued **violated Articles 14, 15, 19, 21 and 25** by not allowing marriage between same-sex, gender non-conforming, LBGTQIA+ couples, and sought the words "husband" and "wife" as well as any other gender-specific term to be substituted by the word "party" or "spouse".
- They also **sought joint adoption rights,** nominee rights with respect to healthcare decisions, "preventative, remedial, protective and punitive measures" by all State governments to **guarantee their safety and security,** and directions to the Union and State

governments, district and police authorities to **provide protection to adult, consenting LGBTQIA+ couples from their families.**

Reasons for strong demands for LGBTQI community's right to marry

- **T**he Court in diverse decisions had held that in India a person is entitled to autonomy, dignity, privacy and the **right to choose their own partners to live with or in marriage.**
- After Navtej Johar, when one can have intimate relations with a person of any gender or sexual orientation, it is logical to assume that in that situation when a couple are having a physical relationship, they may prefer to develop a long-term relationship, including that of marriage.
- Marriage brings along with it a host of advantages for the couple, including succession in the field of inheritance, adoption of children, taking decisions in case of hospitalization, and benefits from employers.

Arguments against SC verdict

- **Ignorance of UDHR:** The verdict did not engage with the legal position of marriage under international human rights treaties and covenants, even though the top Court in the past has relied upon international laws multiple times to interpret domestic legislation and to identify unenumerated fundamental rights.
    - o The Court ignored the fact that India was an original signatory to the Universal Declaration of Human Rights (UDHR)and hence legislation by Parliament and State Legislatures in India must be in accord with the UDHR. **Under the**

    UDHR, the right to marry is a human right.
    - o Also the Supreme Court has used the provisions of UDHR to elaborate rights under the Constitution. **Eg: Right against handcuffing and consequential torture** was placed in Article 21 referring to Article 5 of the UDHR
- **Ignores the Indian constitutional jurisprudence:** Although the Indian Constitution does not provide for the right to marry explicitly, this verdict ignores the Indian constitutional jurisprudence where the courts have interpreted constitutional provisions and enunciated new penumbral rights in a liberal and expansive manner. For instance, Right to be treated with dignity, rights to education, food, environment are placed into Article 21 by the supreme court.
- **Ironical ruling for transgender persons:** The Supreme Court held that **transgender persons in heterosexual relationships have the right to marry** under existing law, including personal laws which regulate marriage. Giving transgender persons marriage rights and not to the others, still keeps gays, lesbians and others outside mainstream society, and thus outside the ambit of rights they deserve.

Why did SC refuse to read down the SMA?

- The Court felt that if the SMA was held void for excluding same-sex couples, it would mean going back to a time when two persons of different castes and religions could not marry.
- Adding or deleting words in the provision of SMA would mean to venture into the realm of the legislature.

Court's directions to the government

- The Court has said the state must take "**remedial action**" because if it regulates marriage only for heterosexual couples, it "adversely impacts" the LGBTQIA+ community, resulting in their exclusion, and "denial of entitlements/benefits," and that "this injustice and inequity results in discrimination."
- It has set down a set of guidelines, from **setting up a committee chaired by the Cabinet Secretary** for the purpose of defining the scope of entitlements of queer couples who are in unions, to directing police stations to not harass the community.

Can States make their own laws?

- The verdict poses the marriage equality question for the legislature. In the absence of any central law, the judgment holds that State legislatures can enact laws recognising and regulating same-sex marriages; the Constitution under **Articles 245 and 246 empowers both the Parliament and the State to enact marriage regulations.**
- The Court said the state may choose from a number of policy outcomes:
  o They may **make all marriage and family related laws gender-neutral**, or
  o They may **create a separate SMA-like statute** in gender-neutral terms.
  o They may **pass an Act creating civil unions**, or a domestic partnership legislation, among many other alternatives.
- Tamil Nadu amended the Hindu Marriage Act in 1968 through Section 7(A) to allow self-respect or

'Suyamariyathai' marriages; the amended Act "questioned the Brahmanic interpretations of Hindu marriage".
- However, States such as Andhra Pradesh, Assam, Gujarat, Madhya Pradesh and Rajasthan have opposed outright the legal recognition of same-sex marriages in the past.

What do prior verdicts of the Supreme Court say about the fundamental right to marry?

- The right to marry is **not expressly recognised as a fundamental right** under the Indian Constitution. Although the institution of marriage is regulated by various statutes in India, its recognition as a fundamental right or a constitutional right has only **developed through various decisions of the Supreme Court.**

Lata Singh v. State of UP (2006): concerning an inter-caste marriage.
- The Supreme Court held that since the petitioner was a major (above 18 years of age), she had the freedom to choose whomever she wanted to marry and that no law prohibits an inter-caste marriage. Although the ratio specifically applied to the facts of the case, the Court expressly recognised the right to choose a partner of one's choice.

In 2014:
- The Supreme Court ruled that an inherent aspect of Article 21 of the Constitution (right to life and personal liberty) would be the freedom of choice in marriage.

Justice KS Puttaswamy (retd) and another v. Union of India
- A nine-judge Constitution Bench in Justice KS Puttaswamy (retd) and another v. Union of India and others (2017), unanimously upheld

the fundamental right to privacy under Article 21.

- It was noted that the **right to privacy extends to an individual's autonomy over fundamental personal choices.**
- Justice Nariman in his concurring opinion specified that the **right to privacy includes within its ambit vital personal choices such as the right to abort a fetus, and the right of same sex couples to marry.**

Shafin Jahan v. K.M. Asokan, (popularly known as the "Hadiya case"):

- The Court, while referring to Puttaswamy, outlined that the right to marry a person of one's choice is integral to Article 21 and that such a right cannot be taken away except through a law that is just and reasonable.

What do international precedents say?

- Article 16(1) of the Universal Declaration of Human Rights to which India is a signatory stipulates "Men and women of full age, without any limitation due to race, nationality or religion, have the right to marry and to found a family. They are entitled to equal rights as to marriage, during marriage and at its dissolution."
- Similarly, Article 23(2) of the International Covenant on Civil and Political Rights (ICCPR), which has been ratified by India, affirms the right of men and women of marriageable age to marry and establish a family.
- In 2015, in American jurisprudence, the **US Supreme Court ruled that same-sex couples had the same basic right to marry as heterosexual couples.**

Conclusion

- There is an urgent need for a law which inter alia prohibits discrimination on the basis of

sexual orientation and gives full effect to the other civil and social rights of LGBTQ persons.

2) The speaker: The impartial constitutional office

(GS2: Parliament and State Legislatures—Structure, Functioning, Conduct of Business, Powers & Privileges and Issues Arising out of these)

Context

- The **Speaker's role has been questioned on the allegation of bias** and the office has been criticized for being an **agent of partisan politics** on several occasions.

Who is a speaker?

- The speaker refers to the **presiding officer of a legislative body** i.e. Lok Sabha at the Centre and the Legislative Assembly in the States.
- Under the Indian Constitution, the Lok Sabha (**Article 93**) and Legislative Assemblies (**Article 178**) elect two of its members to be the Speaker and Deputy Speaker, respectively.

Origin of the Office of the Speaker

- The institutions of Speaker and Deputy Speaker originated in India in **1921 under the provisions of the Government of India Act of 1919 (Montague-Chelmsford Reforms).**
- At that time, the Speaker and the Deputy Speaker were called the President and Deputy President respectively.
- The Government of India Act of 1935 changed the **nomenclatures of President and Deputy President to the Speaker and Deputy Speaker respectively.**
- **Ganesh Vasudev Mavalankar became the first Speaker of the Lok Sabha** after the first general elections in 1952.

Role of a speaker

- While **facilitating the business of the House** and to **maintain decorum in the House,** the Speaker has 'extensive functions to perform in matters regulatory, administrative and judicial, falling under his/her domain.
- The Speaker is the '**ultimate interpreter and arbiter of those provisions which relate to the functioning of the House**. His/Her decisions are **final and binding** and ordinarily cannot be easily challenged.
- He/She decides the duration of debates, can **discipline members** and even override decisions by committees.
- The Speaker is the **custodian of the rights and privileges of the House, its committees and its members.**
- He/She **represents the collective voice of the House** and is the sole representative of the House in the international arena.
- The Speaker **presides over the House proceedings and joint sittings** of the two Houses of Parliament.
- Apart from the traditional roles with respect to the conduct of business, the Speakers perform two important functions:
  - Of **certifying a Bill to be a Money Bill** (over which the Rajya Sabha/Legislative Council have a limited role), and
  - **Deciding on disqualification under the Tenth Schedule for defection.**

Impartiality of the office is questionable

- As the presiding officer of the Lok Sabha and the Legislative Assembly, the Speaker is required to act in an impartial manner. However, the functioning of this institution over the years **has been questioned on the allegation of bias**. Some of these instances include
  - The provision for **suspension of members for misconduct in the House provided by the** Lok Sabha and Legislative Assembly rules has been misused by the Speakers and the Houses against the Opposition members.
    - Example: Maharashtra Assembly suspended 12 BJP MLAs unconstitutionally for a year in July 2021.
    - In a recent instance, the leader of the Congress party in the Lok Sabha was swiftly suspended for his remarks against the Prime Minister (which was later revoked), but no action was taken against a member of the ruling BJP, for passing communal slurs against the Bahujan Samaj Party Member of Parliament.
  - The Speaker is the authority to refer Bills introduced to the Parliamentary Standing Committees. However, even **significant Bills that require detailed scrutiny are not referred to such committees.**
    - As against more than 60% of Bills referred to committees in the

Lok Sabha during 2004-14, less than **25% have been referred during 2014-2023.**
o The authority to decide on the disqualification of members under the Tenth Schedule is vested in the Speaker of the House. However, past instances indicate that the constitutional role is not performed in a neutral manner.
  ▪ **Example**: Maharashtra Assembly Speaker's inaction with respect to the disqualification petitions of its members that has been pending before him since July 2022.
o Additionally, there have also been challenges in the Court in recent years against certification of certain Bills as a Money Bill by the Speaker of the Lok Sabha.
  ▪ **Example**: Adhar Bill was introduced in the LokSabha as a money bill.
o In the Indian Constitution, the Tenth Schedule allows a Speaker (or Deputy Speaker) to resign from their political party on being elected to their office. However, it is not being followed, making it more of a **political liability on the speaker to favor his party.**
o With **no security in the continuity of office,** the Speaker is dependent on his or her political party for reelection. This makes the Speaker susceptible to pulls and pressures from her/his political party in the conduct of the proceedings of the Lok Sabha.

Supreme Court rulings related to Speaker
- **Kihoto Hollohan vs Zachillhu And Others (1992):** Vesting the power to decide on defections with the Speaker violates the basic democratic principles.
- **Keisham Meghachandra Singh vs The Hon'ble Speaker Manipur (2020):** Parliament may seriously consider a Constitutional amendment to substitute the Speaker of the Lok Sabha and Legislative Assemblies with a 'permanent Tribunal headed by a retired Supreme Court judge or a retired Chief Justice of a High Court, or some other outside independent mechanism. This is to ensure that such disputes are decided both swiftly and impartially, thus giving teeth to the provisions contained in the Tenth Schedule, which are so vital in the proper functioning of India's democracy.

Measures to Strengthen the Impartiality and Autonomy of the Speaker:
- **Adopt global practices-Resignation from Political Affiliations:** India should adopt the Practice of Britain, where the Speaker once elected to his/her office, resigns from the political party to which he/she belonged which ensures impartiality while presiding over the House.
- **Code of Conduct:** Develop and adhere to a comprehensive code of conduct for the Speaker. This code should outline ethical guidelines and expectations regarding the Speaker's behavior, decisions, and

interactions with members of parliament.

- **Training and Education:** Provide training to the Speaker on parliamentary rules, procedures, and the importance of impartiality. This can help the Speaker better understand the nuances of their role and reinforce the need for neutrality.
- **Regular Review Mechanism:** Establish a mechanism for periodic reviews of the Speaker's performance in terms of impartiality. This can involve input from parliamentary committees or independent bodies to assess the Speaker's adherence to ethical standards.

- **Consultation with Former Speakers:** Encourage the current Speaker to consult with former Speakers who have a reputation for impartiality. Their insights and guidance can be valuable in navigating challenging situations while maintaining fairness.
- Power to decide on anti-defection disqualifications should be given to the President in case of the Parliament and Governor for the state legislatures

Conclusion

- Impartiality in the office of speaker is crucial for the smooth functioning of the parliamentary system and for ensuring that all members have a fair opportunity to express their views.

Polity Basics

- **Article 93** of the Constitution provides for the election of both the Speaker and the Deputy Speaker.
- **Election**: The Constitution neither sets a time limit nor specifies the process for these elections. It leaves it to the legislatures to decide how to hold these elections.
- In Lok Sabha and state legislatures, the President/Governor sets a date for the election of the Speaker, and it is the Speaker who decides the date for the election of the Deputy Speaker. The legislators of the respective Houses vote to elect one among themselves to these offices.
- The Speaker (along with the Deputy Speaker) is elected from among the Lok Sabha members by a simple majority of members present and voting in the House.
- **Term and office of the speaker:** The Speaker holds Office from the date of his/her election till immediately before the first meeting of the next Lok Sabha (for 5 years).
    o The speaker once elected is eligible for re-election.
    o Whenever the Lok Sabha is dissolved, the Speaker does not vacate his office and continues till the newly-elected Lok Sabha meets.

3) The case for caste census in India

(GS2: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation)

Context

- The **government of Bihar** has conducted what amounts to a caste census (despite the legal nomenclature of a survey) and made public the population numbers associated with different caste groups.
- The **caste survey in Bihar** found that **63% of Bihar's 13 crore population belong to castes listed under the Extremely Backward Classes (EBC) and Other Backward Classes (OBC) categories.**.

Findings of the survey

- The survey shows that the **EBCs with 112 castes comprise the largest chunk of the population in the State with a 36.01% share**; with 29 castes and a 27.12% share, the OBCs are the second largest contingent of the population.
- The Yadavs, with a 14.26% share, are the dominant caste in the OBC group.
- The Scheduled Castes population is pegged at 19.65% while the number of the general unreserved population is 15.52%.

What do socio-economic data indicate?

- The intersection between class and caste-based deprivation in Indian society is evident from the socio-economic statistics.

Average monthly per capita consumption expenditures as per the National Sample Survey (NSS), 2011-12	• The average monthly per capita consumption expenditures (MPCE) of Scheduled Tribes (ST), Scheduled Castes (SC) and OBC households in rural areas were, respectively **65%, 73% and 84% of the MPCE of the 'Others',** i.e. the general category. • In urban areas the average MPCE of ST, SC and OBC households were 68%, 63% and 70% of the general category in 2011-12.
Multidimensional poverty estimates based on the National Family Health Survey (NFHS-4/2015-16)	• Estimates by scholars from the Oxford Poverty and Human Development Initiative (OPHI) show that while almost 28% of all Indians were multidimensionally poor in 2015-16, the poverty headcount ratio among STs was 50.6%, SCs 33.3%, OBCs 27.2% and Others 15.6%. • The Sachar Committee report (2006) had estimated that 31% of Muslims were 'Below Poverty Line' on the basis of the NSS 61st round, 2004-05, while the poverty headcount ratio among SCs & STs together was 35%, Hindu OBCs 21% and other Hindus (general category) 8.7%.

- These estimates clearly indicate that discrimination and exclusion based on caste via-a-vis STs, SCs and OBCs as well as religion, particularly with regard to Muslims, have a causal relationship with poverty and deprivation.

Education & Employment Indicators by Social Group

The table shows the Percentage distribution of persons by general education level, workers in usual status by broad status in employment, and employees in posts and services of the Central government

	ST	SC	OBC	General	Data sources
Percentage distribution of persons of age 7 years and above by general education level					
Literacy rate	69.6	72.4	76.9	85.9	Household Social Consumption on Education in India, NSS 75th Round (July 2017 - June 2018), NSO, MoSPI, GoI
Secondary Education	9.9	11.5	13.5	15.8	
Higher Secondary Education	6	7.7	9.4	12.8	
Graduate	3.3	4.1	5.9	12.3	
Post Graduate and above	0.7	0.9	1.2	3.4	
Percentage distribution of workers in usual status (ps+ss) by broad status in employment					
Regular wage/ Salaried	12.3	19.8	20.1	30.6	Periodic Labour Force Survey 2021-22, NSSO, MoSPI, GoI
Casual Labour	28.9	38.2	20	11.2	
Self-employed	58.8	42.1	59.9	58.2	
Percentage distribution of employees in posts and services of the Central Government					
Group A	5.9	13.0	16.6	64.6	Annual Report 2021-22, Ministry of Personnel, Public Grievances and Pensions, GoI
Group B	7.1	16.8	16.7	59.5	
Group C	7.8	17.7	22.8	51.7	
Total	7.7	17.5	22.1	52.7	

What about education and employment?

- The pattern of caste-based deprivation can be clearly seen in official data on education and employment indicators.
  - The general category has a much higher proportion of literates, secondary and high school pass outs, graduates and postgraduates than OBCs, SCs and STs.
  - The informal sector is largely populated with STs, SCs and OBCs while the general category has a disproportionately large share of formal employment.
  - The proportion of employees in the general category is much greater at over 64% in the most qualified and highest paid cohort, i.e. Group A employees which indicates that the **persistence of caste-inequality in educational outcomes is reproducing a similar pattern of caste-inequality in skilled, formal employment,** even three decades after the official implementation of the Mandal Commission recommendations.
- The demand for a nationwide caste census has gathered momentum in this backdrop.

When did caste surveys begin?

- Caste wise enumeration of the population was introduced under the **British colonial administration in 1881 and continued till the 1931 census.**
- Independent India's governments abandoned full caste enumeration on the apprehension that it would **strengthen caste divisions and perpetuate the caste system.**
- However, the caste system has persisted and flourished in independent India even without the caste census along with its

discriminatory and exclusionary consequences, as revealed by official surveys and statistics.

- o The report of the Backward Classes Commission headed by B.P. Mandal had extrapolated from the caste/community-wise population figures of the 1931 census and estimated the combined population of Hindu and non-Hindu OBCs to be **52% of India's population.**
- o The commission had also arrived upon a crucial conclusion that "**caste is also a class of citizens and if the caste as a whole is socially and educationally backward, reservation can be made in favor of such a caste on the ground that it is a socially and educationally backward class of citizens within the meaning of Article 15(4)**."
  - ▪ *Article 15(4) of the Constitution enables the State to make special provisions for the advancement of "socially and educationally backward classes of citizens."*
- While the **population share of OBCs was estimated at 52%, only 27% reservation for OBCs in all government services, technical and professional institutions** was recommended by the Mandal commission, in order to keep the overall reservation for SCs, STs and OBCs together below the 50% ceiling set by the Supreme Court.
- With the Supreme Court ruling in Indra Sawhney & Others v. Union of India (1992) that caste was an

acceptable indicator of backwardness, the recommendations of the Mandal Commission were finally implemented.

Why is there opposition to a caste census?

- **Demand to enhance 27% reservation:** The revelation of the exact population share of OBCs greater than or equal to 52%, as estimated by the Mandal commission, would trigger demands for enhancing the 27% reservation quota for OBCs.
- It is also predicted that if the Bihar caste census is successful, then other States will also demand it.

Why has it been challenged in the Supreme Court?

- Multiple petitions have been filed in the Supreme Court challenging the survey, claiming that
  - o It is an attempt by the Bihar government to **usurp the Centre's powers.**
  - o **Notifying the survey is unconstitutional** since the **Union government is exclusively authorized to conduct a census** under the Constitution owing to the operation of **Entry 69 of the Seventh Schedule's Union List**; the Census Act, 1948; and the Census Rules, 1990.
  - o The **State Government does not have any independent power** to appoint District Magistrates and local authorities for collating data for the census, without a notification under Section 3 of the Census Act, 1948 by the Central government.
  - o It **violates the Puttaswamy judgment** as it permits the collection of personal data

by the State under an executive order contrary to the law on data collection laid down by the Supreme Court.

  o The **imposition of a caste identity** on all the citizens irrespective of whether they seek to avail of the State benefit or not is constitutionally impermissible being contrary to the **a) right to identity b) right to dignity c) right to informational privacy and d) right of choice of a citizen under Article 21.**

Efficacy of caste surveys

- Caste census is **pivotal in battling caste discrimination** in India and that 'caste blindness' furthers the perpetuation of caste hierarchies.
- Caste surveys help in **mapping out socio-economic deprivations, fundamental in the creation of an egalitarian society.**
- A caste-based census would provide accurate and up-to-date data on the distribution and socio-economic status of the various castes and communities in India which can help policymakers **identify marginalized and disadvantaged groups and design targeted interventions to uplift them.**
- Regular caste-based census data **can help track the progress of different caste groups** over time. This allows for the evaluation of the effectiveness of policies and programmes aimed at social justice and affirmative action.
- Caste-based data can help **ensure fair representation of marginalized communities** in government, education, and employment.

- Reservations and affirmative action policies are often based on caste, and accurate data is crucial to **determine the appropriate level of representation** required.
- A caste-based census **promotes transparency and accountability in government efforts** to promote social justice. It allows citizens to hold the government accountable for the equitable distribution of resources and opportunities.
- A caste-based census **can help verify and authenticate the caste status of individuals**, reducing the likelihood of fraud and ensuring that benefits are directed to those who genuinely need them.

Way forward

- **Only a full caste enumeration can help in ascertaining an accurate number,** given the wide divergence of the OBC population thrown up by various official sample surveys ranging from 41% to 46%, between 2015-16 to 2021-22.
- Ascertaining the numbers and proportions of individual castes within the OBC category have assumed much significance in the light of concerns regarding reservations and other benefits for OBCs getting concentrated among certain dominant caste groups.
  o The Bihar caste survey for instance, shows that **112 small caste groups combined together in the EBC category, accounted for 36% of the State's population**, which was the largest share among social categories.
- A **nationwide socio-economic caste census** is necessary to evolve scientific criteria for such sub-categorisation and for all States, which have their own State-level OBC lists.

- o **Justice Rohini Commission,** which was constituted in 2017 to examine the **sub-categorisation of OBCs in the Central list,** submitted its report in August 2023.

Key Takeaways From Other Editorials

S.No	Topics	Content
1.	**Religious extremism**	• Religious extremism refers to the **belief in and advocacy for extreme, uncompromising, and often violent interpretations of a religious faith.** • It can manifest in various forms and across different religions. o For instance, **religious extremism** has played a significant role in the **Israeli-Palestinian conflict**, which is a complex and deeply rooted geopolitical and territorial dispute.
2.	**Justice Malimath Committee report**	• The **Malimath Committee Report** is officially known as the **"Report of the Committee on Reforms of Criminal Justice System".** • The report was authored by **Justice V.S. Malimath, a former Chief Justice of the Karnataka** and Kerala High Courts, and it was submitted to the Indian government in 2003. • The main objective of the Justice Malimath Committee was to **comprehensively review and suggest reforms for the criminal justice system** in India. • Some of the key recommendations included **Police Reforms, Judicial Reforms, Reforms in Criminal Laws, Victim Compensation, Witness Protection** etc.,
4.	**Vertical and Horizontal Reservation**	**Vertical Reservation:** • Vertical reservation refers to the allocation of reserved seats or quotas for specific categories or groups of people based on **social or economic criteria.** • These reserved seats are typically earmarked for individuals belonging to socially and economically disadvantaged groups, such as **Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBC).** • The objective of vertical reservation is to **address historical social injustices, discrimination, and economic disadvantages** faced by these marginalized communities. **Horizontal Reservation:** • Horizontal reservation involves the allocation of reserved seats or quotas for specific categories or groups of people based on factors other than social or economic criteria. These factors could include gender, physical disabilities, or other special considerations. • For example, a certain percentage of seats may be **reserved for women, people with disabilities, or**

			other underrepresented groups. • The purpose of horizontal reservation is to **ensure equal opportunities and representation** for various segments of the population, promoting diversity and inclusivity in different spheres.
5.	**Abraham Accords**		• The Abraham Accords is a collaboration between **Israel, the United Arab Emirates and Bahrain mediated by the USA.** • It was signed in 2020 to normalize diplomatic relations among Israel, UAE and Bahrain. • The accords were the **first deal any Arab country had signed with Israel in 26 years.** • Until that day, the countries did not have any official economic or personal relationship with Israel.
6.	**Ethnic groups of Sikkim**		• The **Lepchas, Bhutia and Nepalese** are the three main ethnic groups of Sikkim.

Model Questions

1. Discuss the concept of unity malls and explain how they can contribute to overall economic prosperity of the country.

2. Crop residue management in India necessitates a multifaceted strategy to turn the challenge of crop residue into significant natural resource. Discuss.

3. Analyze how changes in population geography have a lasting impact on the political and economic geography in Indian federal democracy.

4. Apart from National Education Policy-2020 being in conformity with Sustainable Development Goal (SDG)-4, it helps to achieve all other SDGs. Critically examine.

5. Reforms in the United Nations Security Council are needed to strengthen its effectiveness as a multilateral organization. Discuss.

6. Sustainable water management is critical to address impending food and nutrition security threats. Analyze.

7. What is meant by carrying capacity of an ecosystem? Discuss the need for assessing the carrying capacity with respect to the Indian Himalayan Region (IHR) in the backdrop of recent environmental devastations in the Himalayan states.

8. What are Glacial Lake Outburst Floods (GLOFs)? Discuss the vulnerability of the Himalayan Regions to GLOFs. Suggest measures to mitigate them.

9. Discuss the causes and effects of air pollution. Suggest measures to address the same effectively.

10. Farmer Producer Organizations have become the engines of agri innovation. Discuss.

11. Balancing the competing interests of the Global North and the Global South is essential to protect critically important ecosystems such as the Arctic. In this backdrop discuss how India can help save the arctic.

12. Meeting global climatic challenges will crucially depend on the scaling up of private capital flows to transform developing economies for a net-zero world. Analyze.

13. Rapid scale up of nuclear energy would be an optimum solution for India to attain Net Zero. Comment.

14. India's energy transition policies will exacerbate existing class, caste, and regional disparities. Analyze.

15. Upholding the basic human right to good health, including mental health is the need of the hour. Discuss with respect to the burden of mental health issues on informal workers.

16. The EIA could be the most potent regulatory tool in the arsenal of environmental governance. In this context, discuss the need for a separate EIA in the Indian Himalayan Region (IHR).

17. Discuss the factors responsible for low Labour Force Participation Rate (LFPR) among women with particular focus on marriage.

18. India has a unique opportunity to showcase to the rest of the world how to get its food system right by acting promptly. Discuss.

19. The global biodiversity framework fund lacks financial commitment to meet conservation targets. Critically Analyse.

20. Recycling of batteries can help promote the ideal loop of circularity in the economy. Discuss

21. Analyse the merits and demerits of universal basic income. Also comment on its feasibility and effectiveness in a country like India.

22. Pledge for net zero emissions must be taken keeping the interests of the poorest and most vulnerable population at the centre. Comment

23. Is the right to marry a fundamental right in India? Analyze by citing recent Supreme Court verdicts in this regard.

24. Impartiality in the office of speaker is crucial for the smooth functioning of the parliamentary system. Discuss with recent instances where the office has been criticized for being an agent of partisan politics.

25. Caste census is pivotal in battling caste discrimination in India. Critically examine.