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GENERAL STUDIES 1.

GEOGRAPHY

ARE NATURAL DISASTERS MAN-MADE?

INTRODUCTION

- ❖ Torrential rains in several parts of north India, particularly Himachal Pradesh and Uttarakhand, damaged highways and buildings, and took hundreds of lives. While a warming Arctic is said to be a cause for the unusually heavy rains, years of haphazard planning and construction have multiplied the tragedy.

Natural calamities

- ❖ Every year, particularly in the monsoon, we witness extreme natural calamities.
- ❖ The scale of natural disasters that we now see across the world are definitely man-made.
- ❖ Some sections of the population are more vulnerable to them and more at risk than others.
- ❖ We need to figure out systems and solutions that can be channelised specifically towards this large pool of people. We need to build stronger systems from the bottom up and learn to do it collectively.

Role of humans

- ❖ Humans have played an important role in enhancing the risk from climate hazards.
- ❖ The frequency and intensity of hazards have increased, and anthropogenic climate change has played a major role in that.
- ❖ We have built on floodplains, encroached water bodies, and planned our cities without thinking about sustainability. So, humans are responsible.
- ❖ Not fully, but we have played a considerable part in increasing the problem. But we should find solutions and learn from our failures.

Disaster preparedness

- ❖ There are a few different ways in which the landscape of disasters in India has changed.
- ❖ We are constantly talking about the importance of urban planning and how the movement of people to urban centres has affected natural landscapes.
- ❖ Some [landscapes] have changed drastically and exceeded their carrying capacity and this has exacerbated the extent of loss and damage in these areas.
- ❖ If we consider the historical development of cities everywhere, it is the story of urbanisation.
- ❖ Increased population density means greater dependence on fossil fuel and greater climate-disruptive anthropogenic forces.

Suggestions

- ❖ Development translates to infrastructure growth. However, we don't pay enough attention to whether our development pathways are sustainable.
- ❖ Sustainability means emphasising not only economics, but also society and environment. Any sustainable development will consider the environmental implications.
- ❖ So far, we have just run behind the economics, you know, the land holdings, finding cheaper land, filling the water bodies, removing palaeochannels (deep underground stores of groundwater) and destroying natural drainage systems.
- ❖ The only solution is adopting the Sustainable Development Goals, implementing careful urban planning, and creating roads and streets keeping these in mind.
- ❖ It comes down to understanding that there are no quick-fix solutions to what we are going through; we will have to think about long-term risk assessments, vulnerability assessments, and understand how socioeconomic drivers are worsening the problem in certain communities compared to others in the city.

Way forward

- ❖ Often, we don't have a complete record that informs planners about current and upcoming disasters.
- ❖ Data sets are often pretty old and do not directly provide sufficient information about the future.

- ❖ There are excellent institutions even within the government that are constantly monitoring and understanding the scale of the climate crisis in terms of rainfall patterns, trends, and the ways in which risk is becoming more pronounced in certain regions versus others.
- ❖ We have to analyse the implications of imposing a strict carrying capacity in certain regions and not allowing for more urbanisation to happen in certain areas or restricting certain ways in which infrastructure is built.

REDOUBLE EFFORTS TO REDUCE DISASTER RISKS

Context

- ❖ The G20 Summit and India's success in disaster risk reduction are an opportunity to accelerate international cooperation and build resilience to risks.

About

- ❖ Risks are being created faster than they are being reduced.
- ❖ The aftershocks of the COVID-19 pandemic, combined with a polycrisis of war, debt, and food insecurity, are putting our collective ability to cope to the test.
- ❖ The rise in disasters is a trend, not an aberration. Headlines this year alone have brought a relentless wave of bad news across the world, from severe flooding in China to destructive wildfires in Europe and Hawaii to the hottest month ever on record in July.
- ❖ And perversely, it is the most vulnerable countries and communities which are paying the greatest price despite having contributed least to the problem.
- ❖ The majority of the 50 countries most vulnerable to climate change also suffer from severe debt issues.
- ❖ India, already among the world's most disaster-prone countries, is experiencing this new reality acutely. In 2022, the country was battered by disasters or extreme weather nearly every day, while this year's severe monsoon has caused widespread loss of livelihood and lives.

We have the solutions at hand

- ❖ First, we have the solutions for both adaptation and mitigation at hand.
- ❖ The SDGs remain our best blueprint for peace and prosperity, together with commitments made in Paris to limit global warming to 1.5°C, and the global framework for reducing disaster risks — the Sendai Framework for Disaster Risk Reduction.
- ❖ Eight years into the implementation of the Sendai Framework, progress is severely lacking.
- ❖ Many lessons are being learned from the COVID-19 pandemic, including on the importance of systems-wide disaster risk reduction, resilience, and adaptation.
- ❖ The crisis not only revealed our vulnerability to risk, but also forged new ways of working together, including through digital innovations, such as computer modelling and India's CoWIN digital vaccine system.
- ❖ Another reason for optimism is India's stewardship on disaster risk reduction.
- ❖ All the 28 States have prepared their own disaster management plans in recent years. Accordingly, mortality from extreme weather events has fallen drastically in recent years.
- ❖ India's early warning system for cyclones covers the entire coastline and has helped reduce cyclone-related mortality by 90% over the last 15 years, while heat wave action plans at the local level have reduced heat wave deaths by over 90%.
- ❖ The recent zero death toll of Cyclone Biparjoy in Gujarat demonstrates what can be achieved through effective preparedness, response, and early warning and action systems.
- ❖ The 15th Finance Commission in India introduced significant reforms to disaster risk financing.
- ❖ With a total allocation of \$28.6 billion at the national and State levels for a period of five years, the Government of India has provided sufficient resources for disaster preparedness, response, recovery, and capacity development.
- ❖ On the international stage, India is promoting disaster resilience and sustainability, including through the Coalition for Disaster Resilient Infrastructure, a global partnership for building resilience in infrastructure.
- ❖ India's National Disaster Response Force responds to domestic disasters and is also regularly deployed to disaster zones around the world.

The transformations we need

- ❖ Disaster risk must be integrated at all levels, into how we build, how we invest, and how we live.
- ❖ One of the most cost-effective risk-reduction methods is early warning systems for all, spearheaded by the UN, with India's support.
- ❖ Just a 24-hour warning of a coming storm can reduce the damage caused by 30%. Yet, over a third of the world's population, mostly in least developed countries and Small Island Developing States, do not have access to such systems.

Way forward

- ❖ The ultimate goal is a global multi-risk warning system for all kinds of hazards, whether biological, tectonic, or technological.
- ❖ Improving global data capabilities will help us predict and respond to the risks we are facing. We commend India's G20 presidency for its progress on knowledge sharing, joint data infrastructure, and risk analysis.
- ❖ Finally, we need to ensure that no one is left behind. We must enhance international cooperation in disaster prevention, response, and recovery, especially for the countries of the Global South.



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CULTURE

COURT'S ORDER AND THE ASI SURVEY ARE FLAWED

Context

- ❖ In its judgment recently a Constitution Bench of the Supreme Court of India, comprising the Chief Justice of India (CJI) and others interpreted the Places of Worship (Special Provisions) Act, 1991 and gave a binding declaration of the law interpreting the Act, which, under the constitutional scheme, becomes the law of the land and binds all courts within the territory of India under Article 141 of the Constitution of India.

Constitutional basis to an assurance

- ❖ The Preamble to the Act states: “An Act to prohibit conversion of any place of worship and to provide for the maintenance of the religious character of any place of worship as it existed on the 15th day of August 1947, and for matters connected therewith or incidental thereto.”
- ❖ The law has been enacted to fulfil two purposes. First, it prohibits the conversion of any place of worship. In doing so, it speaks to the future by mandating that the character of a place of public worship shall not be altered.
- ❖ Second, the law seeks to impose a positive obligation to maintain the religious character of every place of worship as it existed on 15 August 1947 when India achieved independence from colonial rule.

Places of worship

- ❖ “Place of worship” includes temple, mosque, gurudwara, church, monastery or any other place of public religious worship of any religious denomination or any section thereof, by whatever name called.
- ❖ Parliament determined that independence from colonial rule furnishes a constitutional basis for healing the injustices of the past by providing the confidence to every religious community that their places of worship will be preserved and that their character will not be altered.
- ❖ The law speaks to our history and to the future of the nation. Cognizant as we are of our history and of the need for the nation to confront it, Independence was a watershed moment to heal the wounds of the past.
- ❖ Historical wrongs cannot be remedied by the people taking the law in their own hands.

Issues

- ❖ The Bench has singularly failed to follow a binding precedent to which Justice Chandrachud himself was a party in the Ram Janmabhoomi temple case.
- ❖ There can be no doubt in anyone's mind that the Gyanvapi mosque has been a place of public worship for centuries for Muslims and, therefore, there is an absolute and total bar on changing its character in any manner, into a place of worship of a different religious denomination.
- ❖ The Supreme Court has completely overlooked that the obligations under the Act were upon the state as also on every citizen of the nation and those who govern the affairs of the nation at every level were bound by it.
- ❖ The Supreme Court is the ultimate custodian of constitutional values and morality.
- ❖ Applying the spirit of the judgment of Ram Janmabhoomi temple case, the three courts ought to have been extraordinarily mindful about the rights and feelings of the minority community.
- ❖ Bigotry during parts of the Islamic period has always stood condemned; in fact that led to the rise of the powerful Marathas, Rajputs and Sikhs, resulting in overthrowing the Muslim empire.

The opening of a Pandora's box

- ❖ We must remember that while injustice was done to the Hindus by Muslim rulers, democratic India cannot perpetuate them to undo them.
- ❖ One can only remember that rulers like Akbar respected Hindus and allowed religious freedom to them.

- ❖ The Bhakti movement which produced some of the greatest saints such as Chaitanya, Surdas, Tulsidas, Gopala Bhatt, Sankardeva, Eknath, Tukaram, Dadu, Meera Bai, and Guru Nanak raised the status of non-Brahmins, especially Dalits amongst Hindus. In that sense, religion was democratised.

Conclusion

- ❖ When history is written in future, there should not be any reference that the Hindus of the 21st century indulged in religious bigotry. For over 5,000 years Hinduism has been a way of life and one of the greatest religions marked by Liberalism, Tolerance and Absorption. Let us hope for peace and prosperity in our beloved India.



GENERAL STUDIES 2.

POLITY AND CONSTITUTION

ALTERING STATUS QUO

Context

- ❖ Restoring popular rule in J&K and its statehood ought to be a priority

About

- ❖ Four years after the State's status was downgraded to that of a Union Territory, all that the Union government can say about it now is that the status as a Union Territory is temporary and that it is taking steps towards making J&K a complete State.
- ❖ When queried by the Supreme Court Bench, which is hearing the challenge to the abrogation of J&K's special status under Article 370 of the Constitution, about a timeline for the return of Statehood, the Solicitor-General said he was unable to give an exact time period.
- ❖ It is true that the State had faced disturbances for decades, but whether it can still be cited as the reason for the delay in restoration of statehood is a relevant question to raise.
- ❖ Alongside the President's declaration of Article 370 as inoperative and the application of the whole of the Constitution to J&K, the State was reorganised into two Union Territories — Jammu and Kashmir, with a Legislative Assembly, and Ladakh, without an Assembly.
- ❖ The Centre favours holding of panchayat and municipal elections as well as polls to the Assembly.
- ❖ The Election Commission of India and the State's Election Commission will have to take a call soon, as even the work of updating the electoral rolls is said to be nearing completion.

Challenges

- ❖ Given the government's claim that the situation is quite normal and that terrorism, infiltration and incidents of stone-throwing have all substantially come down, it is difficult to account for any further delay in the holding of elections.
- ❖ However, the picture of normality portrayed by the government should not, and is unlikely to, influence the adjudication of the constitutional issues arising from the manner in which the abrogation of special status was achieved.
- ❖ As the Chief Justice of India, Justice D.Y. Chandrachud, observed during the proceedings, the development work the government says it has undertaken after August 2019 is not relevant to the constitutional challenge.

Conclusion

- ❖ Any positive change brought about by the administration in the ground situation should be a pointer to the need for early elections and the restoration of popular government as well as Statehood, and should not be used to demonstrate the correctness of the government's actions in 2019.

AN OVERHAUL, THE CRIMINAL LAW BILLS, AND THE BIG PICTURE

Introduction

- ❖ The central government introduced three Bills in Parliament in August. Called the Bharatiya Nyaya Sanhita (BNS), 2023, the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023 and the Bharatiya Sakshya (BS) Bill, 2023 they are to replace the existing Indian Penal Code, 1860, the Code of Criminal Procedure (CrPC), 1973 and the Indian Evidence Act, 1872, respectively.

The Bharatiya Nagarik Suraksha Sanhita

- ❖ There is an explicit provision in the BNSS on the registration of a cognisable offence in any police station, irrespective of the area where the offence is committed.

- ❖ Though this practice (known as recording first information report, or FIR at Zero) has been in use for many years now, its formal inclusion in the BNSS may help complainants get their cases registered as a matter of right without running around.
- ❖ As there does not seem to be an intelligent differentia vis-à-vis the rest of the cognisable cases with overall objective of the provision, this differentiation may not stand scrutiny in constitutional courts.
- ❖ All provisions of the CrPC on arrest have been retained in the BNSS.
- ❖ A new clause says that for offences punishable with less than three years of imprisonment, an arrest could be done only with the prior permission of Deputy Superintendent of Police if the accused person is infirm or is aged over 60. This may provide some relief to these two categories of persons provided the Deputy Superintendent of Police uses the clause judicially.
- ❖ The new Codes provide for handcuffing in at least a dozen categories of persons who are accused of serious offences inter alia such as one who commits a terrorist act, murder, rape, acid attack or offence against the state.
- ❖ This is sure to help police, who may be short staffed, to secure their custody. But the enabling section that guides handcuffing has not changed.

At the scene of crime

- ❖ The new Sanhita provides for a mandatory visit of the crime scene by a forensic expert and the collection of forensic evidence for offences punishable with more than seven years of imprisonment.
- ❖ But on realisation of the ground reality (of limited forensic infrastructure at field level), a maximum five years of leverage has been given to State governments to bring this clause into operation.
- ❖ Therefore, unless State governments commit themselves to the provision of sufficient resources for the development of forensic infrastructure (technology and manpower), the impact of this change may not be visible soon.
- ❖ The Sanhita rightly encourages the use of audio-video means in recording the various steps of investigation; this includes searches.
- ❖ However, the preferred use of smartphones (as recommended) has its limitations.
- ❖ Despite a ban on the two-finger test in a case of rape, and this test having been termed by the Supreme Court to be unscientific and violative of the dignity and privacy of a rape victim/survivor, the ban does not have a place in the Code.
- ❖ On the disclosure of identity of victim/survivor of rape, the provision of giving authorisation (to disclose identity) to the next of kin in case the victim is minor, may also be omitted as the Protection of Children from Sexual Offences Act, which exclusively deals with this issue and does not have a similar provision.

Duration of police custody

- ❖ A provision in the Sanhita that has raised the eyebrows of critics is the increase in the period of police custody exceeding 15 days, as provided in the CrPC.
- ❖ This may help the police to interrogate an accused person again if additional evidence is found during an investigation.
- ❖ The Sanhita also proposes enlarging the scope of judicial inquiry into suspicious deaths by including dowry deaths, but relaxes the provision of the mandatory recording of statement of a woman, a male under the age of 15 or above 60 (65 years in the CrPC) at the place of their residence based on their willingness.
- ❖ It is hoped that this provision is not misused by the police, especially in crimes against women and children.

Way forward

- ❖ Overall, some of the proposed changes are definitely progressive in nature, but cannot be termed as path-breaking or radical.
- ❖ What must not be forgotten is that police stations are generally under-staffed, have poor mobility, insufficient training infrastructure and poor housing facilities.
- ❖ Police personnel work under stressful conditions. Therefore, the colonial mindset will go only if police reformation is taken up in its entirety and not just by tweaking some provisions of the applicable laws.

DROP THE BAD IDEA OF SIMULTANEOUS ELECTIONS

Introduction

- ❖ In recent weeks, there has been increasing discussion about the possibility of having national and State elections at the same time, popularly known as 'one nation, one election'.

The favoured Arguments

- ❖ The primary arguments in favour of simultaneous elections are twofold: first, that it will decrease the costs of conducting elections (and of electioneering); and second, that it will free up political parties from being in 'permanent campaign mode', and allow them to focus on governance for a five-year period.

Point and counterpoint

- ❖ Against this, critics have pointed out that when you crunch the numbers, the actual financial savings are relatively minuscule.
- ❖ Furthermore, it is a relatively recent pathology of the Indian political system that central government Ministers and politicians spend a significant amount of time campaigning in State elections.
- ❖ State elections should be primarily fought by State party units, while national politicians can get on with the task of governance.
- ❖ Furthermore the logistical nightmare of conducting simultaneous elections in a country of a little over 1.4 billion people, in a context where even State elections need to take place in multiple phases.
- ❖ The graver concern, is the incompatibility of a rigid election timetable with some of the fundamentals of parliamentary democracy: as is well-known, at the time of Independence, central and State elections were conducted simultaneously.
- ❖ This arrangement broke down towards the end of the 1960s because of the use of Article 356 of the Constitution, which authorises the Union to suspend (or even dismiss) State governments in a narrowly-defined range of circumstances.
- ❖ Consequently, it is obvious that even if, legally and practically, one is able to synchronise central and State elections for one cycle, this will break down the moment a government falls.

The possibility of more 'horse-trading'

- ❖ The upshot of this is that there will be a strong push towards avoiding the fall of a government, even when it has lost the confidence of the House in the ordinary course of things.
- ❖ And, as we have seen in India, there is an almost institutionalised remedy for this: defections, or "horse-trading".
- ❖ It is, by now, clear that the Tenth Schedule's prohibition on horse-trading has been rendered more or less a dead letter, as politicians have found various ways to get around this.
- ❖ While these intractable issues speak to the implementation of simultaneous elections, at a deeper level, there are two principled and interrelated arguments against the idea: federalism and democracy.

Keeping absolute power in check

- ❖ A related point is that in our constitutional scheme, the federal structure is an important check upon the concentration of power.
- ❖ The federal structure, in turn, is sustained by a plurality of democratic contests, and a plurality of political outfits, at the State level.
- ❖ Simultaneous elections, for the reasons pointed out above, risk undermining that plurality, and risk precisely the kind of concentration of power that federalism is meant to be a bulwark against.
- ❖ Despite the ringing words with which the Preamble of the Constitution begins, the "People" have very little space in the Constitution, especially when it comes to exercising control over their representatives.
- ❖ Unlike many other Constitutions, where public participation in law-making is a guaranteed right, along with other rights such as the right to recall, in the Indian constitutional scheme, elections are the only form of public participation in the public sphere.

Way forward

- ❖ Therefore, it is clear that the administrative benefits from simultaneous elections are overstated at best, and non-existent at worst.
- ❖ However, the costs, both in the implementation and in the concept itself, are significant, and create non-trivial risks when it comes to protecting and preserving the federal and democratic design of the Constitution

UNIFORM CIVIL CODE:

- ❖ It provides for one law for the entire country, applicable to all religious communities in their personal matters such as marriage, divorce, inheritance, adoption etc.
- ❖ **Article 44:** It lays down that the state shall endeavor to secure a UCC for the citizens throughout the territory of India.

A UCC and guardian:

- ❖ The Guardians and Wards Act, 1890 considers the welfare of the child as the prime consideration in the determination of custody.
- ❖ Section 6 of the Hindu Minority and Guardianship Act, 1956 declares the father as the natural guardian and 'after him' the mother;
- ❖ The mother would ordinarily have custody till the child attains five years of age.
- ❖ The person would lose custody if she/he ceases to be Hindu.
- ❖ In Githa Hariharan (1999), the SC held that the expression 'after him' does not necessarily mean 'after life-time' of the father but, instead, 'in the absence of'.

Child custody under Islamic laws:

- ❖ Custody under Islamic law is the right of the child and not of the parents.
- ❖ The father is at number six in terms of the right to custody after the mother, mother's mother howsoever high, paternal grandmother, sister, maternal aunt and paternal aunt.
- ❖ Under the Hanafi school, the mother does not lose custody after she ceases to be a Muslim.
- ❖ Islamic law gave custody to the mother till a boy attains seven years and a daughter till she is 17, under the Hanafi school.
- ❖ The Shafii and Hanbali schools gave custody to the mother till a daughter is married.
- ❖ Under the Maliki school, the mother gets custody of even a male child till puberty and female child till her marriage.

Case studies(about children Custody):

Bombay High Court

- ❖ The custody of a child who had already been adopted to be given to the biological father (he is accused of rape which resulted in this child being born).
- ❖ Later the 17-year-old biological mother realized that she was pregnant
- ❖ Based on a complaint by the minor mother's father — under the
- ❖ The biological father was arrested but was granted bail later.
- ❖ The mother and child were sent to a home in Mumbai.
- ❖ In 2022, the biological mother got married to another person
- ❖ In the larger interests of the child, surrendered the boy to the Child Welfare Committee (CWC) for adoption.
- ❖ The child, under Section 38(3) of the Juvenile Justice (JJ) Act, being an unwanted child of a victim of sexual assault, was declared free for adoption by the CWS.
- ❖ He was handed over to his adoptive
- ❖ On the biological father's habeas corpus petition, the High Court stayed the adoption proceedings and child was returned to the shelter home.
- ❖ The CWC rejected the biological father's application for custody on the ground that:
- ❖ A biological father cannot take advantage of his own crime and giving custody to him would not be in the best interests of the child.
- ❖ The High Court handed over custody of the child to the biological father without hearing the biological mother.

- ❖ The mother was opposed to giving the child to the biological father.

Implication:

- ❖ The requirement of consent of the rapist father in such adoptions would set the wrong precedent.
- ❖ The Bombay High Court ignored that the adoption was not valid in terms of Muslim law.
- ❖ The court in the interests of the child had refused to give custody to the biological parents as the adoptive parents were given a five-day-old child
- ❖ It was only because of their care that the child recovered from jaundice.

Allahabad High Court:(Nasrin Begum (2022):

- ❖ A two-judge Bench of the Allahabad High Court gave the custody of a girl child to her biological parents in preference to the rights of the adoptive parents.
- ❖ The family court on the basis of the testimony of the child(six years old) and in the best interests of the child, had decided in favor of the adoptive parents.
- ❖ The biological parents asserted that mere custody for sometime was given to the adoptive parents.
- ❖ Section 2(2) of the JJ Act provides that adoption completely severs the ties between the biological parents and the child.
- ❖ The court concluded that children cannot be treated as the 'chattel and property' of their biological parents
- ❖ She should not undergo the trauma of separation from her adoptive parents
- ❖ The court gave much importance to the right of the child to know her real identity and the right of her biological parents to her custody.
- ❖ The court moved on the premise that there was no legal adoption
- ❖ Therefore, the adoptive parents have no right in respect of the child.

Article 44 of the Constitution:

- ❖ The state shall endeavor to secure for the citizens a uniform civil code throughout the territory of India'.
- ❖ The language of Article 44 reveals the unambiguous intention of the framers of the Constitution and that they felt the UCC was in the national interest.
- ❖ Article 44: It requires the state to enact a UCC that applies to all citizens cutting across faiths, practices and personal laws.

Benefits of UCC:

- ❖ UCC can protect against discrimination in matters pertaining to divorce, maintenance, adoption and succession.
- ❖ The UCC seeks to establish a common set of civil laws for all citizens, regardless of their religion and culture, thereby promoting equality and ensuring justice for all.

Judicial stand:

- ❖ **Shah Bano case:** "It is a matter of regret that Article 44 has remained a dead letter."
- ❖ The Court had pointed out that a UCC would help the cause of national integration.
- ❖ In the constitutional order of priorities, the right to religious freedom is to be exercised in a manner consonant with the vision underlying the provisions of Part III (Fundamental Rights)".
- ❖ **Sarla Mudgal (1995): Court said:**
- ❖ "It appears that the rulers of the day are not in a mood to retrieve Article 44 from the cold storage where it has been lying since 1949.
- ❖ The governments have so far failed to make any effort towards unified personal law for all Indians.
- ❖ Indian Young Lawyers Association case (2018):
- ❖ In the constitutional order of priorities, the right to religious freedom is to be exercised in a manner consonant with the vision underlying the provisions of Part III (Fundamental Rights)."
- ❖ Personal laws should be constitutionally compliant and in conformity with the norms of gender equality and the right to live with dignity.
- ❖ The supremacy of fundamental rights over customary law ensures that various freedoms guaranteed to all citizens under the Constitution are safeguarded.

Arguments in favor of UCC:

- ❖ **Uniformity in cases:** India does have uniformity in most criminal and civil matters like the Criminal Procedure Code, Civil Procedure Code etc
- ❖ **Gender Justice:** If a UCC is enacted, all personal laws will cease to exist. It will do away with gender biases in existing laws.
- ❖ **Secularism:** A secular nation needs a common law for all citizens rather than differentiated rules based on religious practices.
- ❖ **Various communities in India:** Example: All Hindus are not governed by a homogenous personal law even after the enactment of the Hindu Code Bill.
- ❖ **Shariat Act:** There is no uniform applicability when it comes to the Muslim personal law or the Shariat Act 1937.
- ❖ **Hindu Marriage Act of 1955:** It prohibits marriages amongst close relatives but they are considered auspicious in the south of India.
- ❖ **Hindu Succession Act of 1956:** Wives are not coparceners(a person who shares equally with others in the inheritance of an undivided estate) nor do they have an equal share in inheritance.

Arguments against UCC:

- ❖ Plurality in already codified civil and criminal laws: So concept of 'one nation, one law' cannot be applied to diverse personal laws of various communities.
- ❖ Constitutional law experts: Framers did not intend total uniformity.
- ❖ **Example:** Personal laws were placed in Concurrent List(power to legislate being given to Parliament and State Assemblies).
- ❖ **Customary laws:** Many tribal groups in the country, regardless of their religion, follow their own customary laws.
- ❖ **Communal Politics:** The demand for a uniform civil code is considered to be framed in the context of communal politics.
- ❖ **Article 25:** It seeks to preserve the freedom to practice and propagate any religion.

Way Forward

- ❖ UCC cannot confine itself to changing the rule of the father being the natural guardian.
- ❖ It must go beyond this and provide for, in unequivocal terms, the 'best interests of child' principle in all custody disputes.
- ❖ It must deny absolute rights of biological parents vis-à-vis adoptive parents.
- ❖ A progressive UCC should not overemphasize biological ties.
- ❖ It must protect the rights of adoptive parents; otherwise people would not adopt children.
- ❖ UCC should not insist on the matrimonial bond between parents and should ideally make provision of guardianship even for a single parent, surrogate parent and queer parents.
- ❖ A UCC would eliminate discriminatory practices that deprive women of their rights and provide them with equal opportunities and protections.
- ❖ Personal laws should have a two-dimensional acceptance — they should be constitutionally compliant and consistent with the norms of gender equality and the right to live with dignity.

LEGISLATING CHANGE

Context

- ❖ The Women's Reservation Bill must be implemented without delay.

The Women's Reservation Bill

- ❖ The passage of the Women's Reservation Bill in the Lok Sabha almost three decades after it was first tabled in Parliament is a welcome move that can finally shatter a political glass ceiling.
- ❖ With women Members of Parliament comprising only about 15% of the strength of the Lok Sabha, the gender inequality in political representation is stark and disturbing.
- ❖ The 128th Constitution Amendment Bill, or the Nari Shakti Vandan Adhiniyam, seeks to amend this by reserving a third of the seats in the Lok Sabha and legislative Assemblies for women.
- ❖ It has a 15-year sunset clause for the quota, that can be extended.

- ❖ Considering the fraught history of the struggle for women's reservation, and several false starts despite the Rajya Sabha passing it in 2010, it is laudatory that the first Bill to be introduced in the new Sansad Bhavan has been passed in the Lok Sabha.
- ❖ But its implementation will be delayed as it has been tied to two factors, delimitation and the Census, and therein lies the rub.
- ❖ It is unfortunate that implementation is being linked to delimitation, for the principle of having a third of seats reserved for women has nothing to do with the territorial limits of constituencies or the number of Assembly or Lok Sabha constituencies in each State.
- ❖ Women will thus not have access to 33% reservation in the 2024 general election.
- ❖ The Bill also mandates that as nearly as one-third of the seats reserved for Scheduled Castes and Scheduled Tribes will be set aside for women.
- ❖ The Opposition is demanding an internal quota for women of Other Backward Classes, but this should not be used as a ruse to delay implementation.
- ❖ In the meantime, proposals should be fine tuned to ensure that when it becomes an Act, it is not mere tokenism for women's political representation.
- ❖ It is a fact that local bodies are better represented, with the share of women in panchayati raj institutions well above 50% in several States.

Suggestions

- ❖ Lessons must be imbibed on how women at the grassroots level have broken all sorts of barriers, from patriarchal mindsets at home to not being taken seriously in their official duties, and made a difference.
- ❖ Women struggle on so many other counts: they have uneven access to health, nutrition and education, there is a lack of safe places, women are also falling out of the workforce.
- ❖ Among the G-20 countries, India's female labour force participation is the lowest at 24%.

Conclusion

- ❖ India, which gave women voting rights at the very outset, should not falter when it comes to ensuring better political representation for women. For growth, and instituting change in key areas, women need to have their say.

TAKING INDIA BACK TO THE DRAWING BOARD

Context

- ❖ The Constitution (One Hundred and Twenty-Eighth Amendment) Bill, 2023, which promises 33% reservation for women in the Lok Sabha, and in the Legislative Assemblies of States and the National Capital Territory of Delhi, sheds the spotlight on another crucial aspect of representative democracy — the delimitation of electoral constituencies.

History

- ❖ Since the 1970s, there has been no change in the number of Lok Sabha seats. The Constitution (Forty-Second Amendment) Act, 1976 froze the delimitation of Lok Sabha constituencies as per the Census of 1971, up to the Census which was to be conducted in 2001.
- ❖ However, in 2001, the day of reckoning was pushed further to 2026. This was done through an amendment to Article 82 by the Constitution (Eighty-Fourth Amendment) Act.
- ❖ While the boundaries of electoral constituencies were redrawn in 2002, there was no change in the number of seats in the Lok Sabha.
- ❖ Only after 2026 will we consider changing the number of seats in the Lok Sabha.
- ❖ Strictly speaking, the relevant numbers as to population are expected to come from the 2031 Census, which will be the first census after 2026.

Delimitation as of now

- ❖ Article 81 of the Constitution says that each State gets seats in the Lok Sabha in proportion to its population.

- ❖ The freeze on delimitation effected in 1976 was to allay the concerns of States which took a lead in population control and which were faced with the prospect of reduction of their number of seats in the Lok Sabha.
- ❖ The practical consequences, however, of the 1976 freeze is that the allocation done on the basis of the 1971 Census continues to hold good for the present population figures.
- ❖ India's population has, of course, increased significantly since then. Using figures from 1971 to represent today's population runs contrary to the grain of the Constitution besides obviously distorting what representative democracy stands for.
- ❖ The exercise of delimitation also implicates the constitutional values of federalism and representation of States as consolidated units.
- ❖ In the preceding decades, the population of the north has increased at a faster pace as compared with the south. In practical terms, this means that MPs in States in north India represent more voters than MPs in the south.
- ❖ Given this context, the question of delimitation necessarily has serious implications for both the individual voter as well as the States.

Delimitation in the near future

- ❖ The delimitation of constituencies will need answers to certain vexed questions.
- ❖ The 2021 Census was pushed courtesy of the COVID-19 pandemic, and the Union Home Minister has indicated that the next Census and subsequent delimitation will be conducted after the 2024 Lok Sabha polls.
- ❖ Even more vexed are the qualitative concerns that will determine how boundaries of electoral constituencies will be redrawn.
- ❖ If done entirely in terms of proportion of population, the redrawing of constituencies would yield more seats to States in the north, given their higher population.
- ❖ Besides concerns around representation, this will also lead to distrust on the part of States in the south.

Way forward

- ❖ The recently concluded delimitation in Assam, ahead of the 2024 Assembly elections, witnessed widespread concerns around how altering the boundaries of certain districts and renaming certain constituencies can have a potentially acute impact on the representation of specific communities. That is all the indication needed to start a robust conversation around delimitation sooner than later.

CivilsTap Hlmachal

INTERNATIONAL

TAKING G-20 TO THE LAST MILE, LEAVING NONE BEHIND'

Introduction

- ❖ Vasudhaiva Kutumbakam — these two words capture a deep philosophy. It means 'the world is one family'. During India's G-20 Presidency, this has translated into a call for human-centric progress.

The post pandemic world

- ❖ The post-pandemic world order is very different from the world before it. There are three important changes, among others.
- ❖ First, there is a growing realisation that a shift away from a GDP-centric view of the world to a human-centric view is needed.
- ❖ Second, the world is recognising the importance of resilience and reliability in global supply chains.
- ❖ Third, there is a collective call for boosting multilateralism through the reform of global institutions.

G-20 Presidency

- ❖ Our G-20 Presidency has played the role of a catalyst in these shifts.
- ❖ In December 2022, when we took over the Presidency from Indonesia. This was especially needed in the context of mainstreaming the marginalised aspirations of developing countries, the Global South, and Africa.
- ❖ The Voice of Global South Summit, which witnessed participation from 125 countries, was one of the foremost initiatives under our Presidency.
- ❖ It was an important exercise to gather inputs and ideas from the Global South.
- ❖ Further, our Presidency has not only seen the largest-ever participation from African countries but has also pushed for the inclusion of the African Union as a permanent member of the G-20.
- ❖ The G-20 2023 Action Plan on Accelerating Progress on SDGs will spearhead the future direction of the G-20 towards implementing SDGs.
- ❖ We believe there is a need to move away from a purely restrictive attitude of what should not be done, to a more constructive attitude focusing on what can be done to fight climate change.
- ❖ The Chennai High Level Principles (HLPs) for a Sustainable and Resilient Blue Economy focus on keeping our oceans healthy.
- ❖ A global ecosystem for clean and green hydrogen will emerge from our Presidency, along with a Green Hydrogen Innovation Centre.

Global Biofuels Alliance

- ❖ In 2015, we launched the International Solar Alliance. Now, through the Global Biofuels Alliance, we will support the world to enable energy transitions in tune with the benefits of a circular economy.
- ❖ Just like Yoga became a global mass movement for wellness, we have also nudged the world with Lifestyles for Sustainable Environment (LiFE).
- ❖ Due to the impact of climate change, ensuring food and nutritional security will be crucial. Millets, or Shree Anna, can help with this while also boosting climate-smart agriculture.
- ❖ In the International Year of Millets, we have taken millets to global palates. The Deccan High Level Principles on Food Security and Nutrition is also helpful in this direction.
- ❖ Technology is transformative, but it also needs to be made inclusive. In the past, the benefits of technological advancements have not benefited all sections of society equally.
- ❖ For instance, the billions across the world that remain unbanked, or lack digital identities, can be financially included through digital public infrastructure (DPI).

Significance of G-20 Summit in India

- ❖ Our G-20 Presidency is working on bridging the gender digital divide, reducing labour force participation gaps and enabling a larger role for women in leadership and decision-making.

- ❖ For India, the G-20 Presidency is not merely a high-level diplomatic endeavour. As the Mother of Democracy and a model of diversity, we opened the doors of this experience to the world.
- ❖ The G-20 Presidency has become a people-driven movement. Over 200 meetings will have been organised in 60 Indian cities across the length and breadth of our nation.
- ❖ Our G-20 Presidency strives to bridge divides, dismantle barriers, and sow seeds of collaboration that nourish a world where unity prevails over discord, where shared destiny eclipses isolation.

Conclusion

- ❖ As the G-20 President, we had pledged to make the global table larger, ensuring that every voice is heard and every country contributes. We have matched our pledge with actions and outcomes.

EASTERN HEDGE

Context

- ❖ India needs to build closer ties with ASEAN for economic, strategic reasons.

India-ASEAN Summit 2023

- ❖ Prime Minister Narendra Modi's whistle-stop summit sojourn to the Indonesian capital of Jakarta earlier this week was primarily aimed at deepening India's engagement with the economically significant grouping of 10 Southeast Asian nations.
- ❖ Coming on the eve of India's hosting of the G-20 summit in New Delhi as the current holder of the bloc's presidency, Mr. Modi's presence at the annual ASEAN-India summit was an opportunity to cement traditional ties with the neighbouring Asian economies at a time of heightened global trade uncertainty.
- ❖ As the trade facilitation body UNCTAD noted in its June 21 'Global Trade Update', the 'outlook for global trade in the second half of 2023 is pessimistic as negative factors' including downgraded world economic forecasts, persistent inflation, financial vulnerabilities and geopolitical tensions dominate.
- ❖ Against this backdrop, the joint leaders' statement on 'Strengthening Food Security and Nutrition in Response to Crises' at the ASEAN-India summit underscores the shared vulnerability the region perceives in the face of the ongoing heightened global food insecurity, which has been exacerbated by the war in Ukraine, climate change and national policy responses to inflationary pressures.
- ❖ India's recent curbs on export of rice have triggered some alarm, with the prices of the regional staple reportedly nearing a 15-year high.
- ❖ The onset of an El Niño, which is historically associated with disruptive weather events, queers the ground further, and ASEAN leaders are justifiably wary.
- ❖ Mr. Modi's pitch, laying stress on the need for a rules-based post-COVID-19 world order and a free and open Indo-Pacific, was clearly directed at members among the Asian bloc who are increasingly disquieted by China's recent muscle flexing and claims over the South China Sea.

India's message

- ❖ The Prime Minister's not-so-veiled message to the ASEAN members is that India is a more reliable long-term strategic and economic partner, which has no territorial ambitions that could discomfit them.
- ❖ India also sought to position itself as a voice to amplify the concerns of the Global South, stressing that it would be mutually beneficial for all.
- ❖ For India, grappling as it is with an underwhelming free trade agreement (FTA) with the 10-nation grouping, trade ties with the eastern economies have grown in volume but asymmetrically, with imports far outpacing the country's exports.
- ❖ The widening trade deficit and the perception that Chinese goods are taking advantage of lower tariffs under the FTA to find their way into the Indian market, have among other factors precipitated a review of the pact that is likely to be completed in 2025.

Way forward

In the meantime, India needs to stay closely engaged with the ASEAN members both as a trade hedge against the slowdown in its main western markets and to highlight its significance as an all-weather ally.

FINDING SEOUL IN THE INDO-PACIFIC

Context

Indo-Pacific

- ❖ The Indo-Pacific is a geopolitical construct that has emerged as a substitute to the long-prevalent “Asia-Pacific.”
- ❖ Indian ocean and pacific ocean: It is an integrated theater that combines the Indian Ocean and the Pacific Ocean, and the land masses that surround them.
- ❖ Strategic and economic: It is both a strategic as well as an economic domain comprising important sea-lines of communication
- ❖ Maritime security: The Indo-Pacific is also associated with maritime security and cooperation.
- ❖ US: It describe the Indo-Pacific as a region that starts at the:
- ❖ Western shore of the Americas and ends at the shores of the Indian subcontinent.
- ❖ India and Japan: the concept is much broader in expanse, extending to the shores of the African continent.
- ❖ Major stakeholders in the Indo-Pacific include: India, U.S.A., Australia, Japan, Association of Southeast Asian Nations (ASEAN) members and other maritime nations that occupy the strategic positions in the Indian and Pacific Ocean including small island countries.

Significance of Indo-Pacific region for India:

- ❖ **Strategic significance:** The Indo-Pacific is a multipolar region that accounts for over half of global GDP and population.
- ❖ **Mineral Resources:** Maritime regions have also become important storage areas for essential resources such as fish stocks, minerals, and offshore oil and gas.
- ❖ **Economic Growth:** The Indo-Pacific area accounts for approximately 60% of world GDP, making it the most important contributor to global growth.
- ❖ **Commerce:** Many of the world’s most important choke points for global trade are located in this region, including the Straits of Malacca, which are crucial for global economic growth.

The significance of the Camp David meet

- ❖ It is the function of a recognition of the changing regional security environment by the three countries.
- ❖ It along with AUKUS (the U.S, the United Kingdom, Australia), the Quad or CHIP 4 Alliance (the U.S., Japan, Taiwan, and South Korea) lead to a strengthened U.S.-led alliance structure
- ❖ though dispersed to reflect the multipolar urges of the contemporary international system — in East Asia.
- ❖ The summit has the potential to set South Korea on a new strategic direction in the Indo-Pacific with improved relations with Tokyo
- ❖ More synergy with the American view on China, and enhanced engagement of the Indo-Pacific.
- ❖ It marks a strategic shift in Seoul’s traditional approach of not offending China at any cost.
- ❖ It indicates the view that trade dependence on China does not mean passivity towards a growing Chinese military presence in the region.
- ❖ A keen desire in ROK to join the Quad grouping: South Korea might apply for a membership in a Quad Plus next year.
- ❖ A new foreign policy enthusiasm in Seoul today: The President of South Korea has declared that the main goal of his foreign policy would be to make South Korea a “global pivotal state”.
- ❖ The country’s engagement of the U.S. and Japan, support to Ukraine, articulation of the China challenge and a desire to play a bigger role in the Indo-Pacific underline this new vision.

Reasons why ROK is a natural partner for India in the Indo-Pacific:

- ❖ ROK’s location in the Indo-Pacific, close to China, while being a U.S. ally provides India with a like-minded strategic partner.
- ❖ For both ROK and India, the rise of China and its unilateral attempts at reordering the Asian security architecture are of great concern.
- ❖ For India, Seoul can be an important regional partner at a time when India is closer to the U.S. and is concerned about Chinese intentions and power like never before in history.

Areas where the two countries could focus on in order to strengthen relationship:

- ❖ **At the political and diplomatic levels:** The two sides should consider establishing an annual summit at the level of the Foreign Ministers, and a 2+2 format dialogue (India currently has 2+2 dialogues with the U.S., Japan, Australia and Russia).
- ❖ The partnership could also benefit from reciprocal visits by heads of state to each other's country.
- ❖ The two sides could be even more ambitious and explore the possibility of negotiating a South Korea-Japan-India-U.S. initiative on Critical and Emerging Technology (iCET), along the lines of the recently-concluded India-U.S. iCET.
- ❖ **Defense:** South Korea's willingness and ability to cater to India's defense needs within the ambit of India's 'Make in India' programme must be utilized.
- ❖ **The K9 Vajra:** A 155 mm self-propelled howitzer, built by L&T with technology from South Korea's Hanwha Defense is an example in this regard.
- ❖ South Korean-built K2 Black Panther tanks could also be co-produced in India for the Indian Army or third countries.

Way Forward

- ❖ Along with Japan and the U.S, ROK has the potential to emerge as a key piece in India's Indo-pacific strategy.
- ❖ It is important to view the prospects of the India-ROK strategic partnership in the broader context of the recent geopolitical developments in the East Asian region.
- ❖ Korean-built civilian nuclear reactors. Even after the India-U.S. civil nuclear deal, India-International Atomic Energy Agency (IAEA) safeguards agreement and the Nuclear Suppliers Group (NSG) waiver
- ❖ India has not been able to import any nuclear reactors due to the difficulties foreign suppliers have with India's nuclear liability law.
- ❖ Given India's growing need for clean energy and Seoul's remarkable track record in supplying cheaper and faster nuclear reactors to the United Arab Emirates, Saudi Arabia, and central European states
- ❖ India could consider purchasing Korean-built reactors so as to expand the share of nuclear energy in the country's energy basket —
- ❖ ROK, with a new strategic outlook, and along with the U.S., Japan and Australia, is uniquely placed to help India advance its interests in the Indo-Pacific.

ASSESSING OUTCOMES OF G-20 SUMMIT

Context

- ❖ The 18th G-20 Summit produced the 'New Delhi Leaders' Declaration'. Now it is time to evaluate the declaration and assess its value on the three-fold yardstick of consensus.

Driving philosophy

- ❖ Six paragraphs of the 'Preamble' and the last paragraph of the 'Conclusion' reveal the goals and driving motivations of the G-20 leaders.
- ❖ "We are One Earth, One Family, and we share One Future", they noted.
- ❖ The notion of unity and a shared destiny was aptly stressed to convey the gravity of the multiple challenges facing humankind today.
- ❖ The way out for the world is to be driven by the "the philosophy of living in harmony with our surrounding ecosystem."
- ❖ They worked on harmonising development with environment, stating that no country should have to choose between fighting poverty and fighting for our planet.
- ❖ Paragraph 5 lists 12 goals to which the members are fully committed. These range from securing inclusive growth and accelerating full implementation of the 2030 Sustainable Development Agenda to addressing debt vulnerability, reform of Multilateral Development Banks, and integrating the perspectives of the Global South into the "future G-20 agenda."
- ❖ The document's last paragraph reiterates the determination "to steer the world out of its current challenges" and build a bright future. That this will be a long-term project was evident.

- ❖ Eight paragraphs were devoted to defining the grouping's view of what the preceding ministerial meetings had called "geopolitical issues."
- ❖ A fine balance was struck between the Russian red line and the insistence by G7 on ensuring respect for territorial integrity and sovereignty or political independence.
- ❖ This middle path, crafted by Indian negotiators, with the valuable help from other countries' diplomats, was seen as the only way to save the summit.
- ❖ The first-ever expansion of G-20 membership was imbued with much significance.
- ❖ The document depicts the AU as a permanent member even though G-20 does not have permanent and non-permanent members; it has only members and guests.
- ❖ G-20's central agenda relating to economic and financial sectors, climate action and energy transitions, implementation of SDGs, technological transformation through Digital Public Infrastructure, reform of international financial institutions, trade, and taxation, and securing gender equality and empowerment of "all" women and girls is wide-ranging, ambitious, and even aspirational.

Reinvigorating multilateralism

- ❖ Paragraph 47 propounds the view that global challenges of the 21st century can only be addressed through reinvigorated multilateralism, reforms and international cooperation.
- ❖ It wants the UN institutions to be more responsive to the entire membership. The need to make the global governance more representative, effective, transparent and accountable has been stated clearly.
- ❖ The fact that these formulations have the support of the entire G-20 leadership creates a glimmer of hope of some progress in the future, even though realism demands that the proponents of reform to remain cautious.

Way forward

- ❖ On the CAI yardstick, it is obvious that the declaration is not only backed by "100%" consensus, but it also breaks new grounds and records progress in terms of concepts, goals, and objectives, as compared to the Bali Declaration.
- ❖ Meanwhile, there should be no hesitation in recognising that the summit has been a major political and diplomatic success for G-20 and its current president, India.

CORRIDOR TO A NEW WORLD

Context

- ❖ Historically, India has been the pivot of connectivity from ancient Red Sea route, Rome to Indian Ocean and Punjab that was significant from socio-culture, economic and connectivity point of view.
- ❖ And , recently, On September 10 in New Delhi, the Prime Minister of India, President of the United States, Chancellor of Germany, Crown Prince of Saudi Arabia, President of UAE, Prime Minister of Italy, and the President of the EU unanimously agreed to establish the India-Middle East-Europe Economic Corridor (IMEC).

About India-Middle East-Europe Economic Corridor (IMEC) and its

- ❖ The IMEC will be a route in the historic sense of the word (with the geopolitical and economic significance that entails), providing transport connectivity to accelerate the development and integration of Asia, the Arabian Gulf, and Europe as a new locus of global power.
- ❖ MEC is envisioned two corridors
- ❖ An eastern corridor linking India to the Arabian Gulf and a northern corridor linking the Arabian Gulf to Europe. Both ends have robust port, rail, and road infrastructure.
- ❖ India, whose connectivity infrastructure has helped it become the world's fastest-growing major economy, has a massive, well-integrated railroad network, mega ports, and highways on the eastern end of IMEC.
- ❖ Mega infra projects for augmenting capacities — dedicated rail freight corridors, highways, expressways and ports — are at various stages of development.

- ❖ On the western end of IMEC, beyond Haifa, the sea route across the Mediterranean is also a well-charted path to Greece, Italy, France, and Spain, and well served by hinterland connectivity to Europe by rail and roads.

Importance of IMEC

- ❖ Promote better connectivity: It envisions a reliable, cost-effective railway and ship-to-rail transit network to supplement maritime and road routes, enabling goods and services to move between India, the UAE, Saudi Arabia, Jordan, Israel and the EU. IMEC is India's moment.
- ❖ Development and employment generation in the region due to infrastructure development.
- ❖ It will also be the cornerstone of economic progress across the region by supercharging regional trade, and connecting Asia with Europe through a region that has never, since the ancient Red Sea route, been considered for such connectivity despite its game-changing potential in terms of shorter transits, accessibility, and multimodal connectivity.
- ❖ It will save time compare to existing one route:
- ❖ The maritime corridor between Asia and Europe currently remains rooted in the saturated Suez Canal and Mediterranean shipping routes despite being longer and involving additional logistics costs.
- ❖ It takes 11 days to sail from JNPT in Maharashtra to Suez port, and six days to Dammam. An additional 24-hour transit by railway could land consignments at Haifa, saving three to four days of transit.
- ❖ It will strengthen the supply chain among the partner nations.
- ❖ IMEC, which promises shorter routes. It links major ports of western India including JNPT, Kochi, Kandla and Mundra with major shipping ports of the Gulf, including Jebel Ali, Fujairah, Ras Al-Khair, Dammam, Duqm, and Salalah
- ❖ It will help in countering the China's hegemony of Belt and Road Initiative in the Asia and European region.

Way forward

- ❖ As commitment of resources from stakeholders and multinational financial institutions like the World Bank will not be an issue as the financial returns on investments promise to be high.
- ❖ The green and sustainable growth corridor will envisage the laying of cables for electricity and a pipeline for transporting clean hydrogen. The greening of this project will contribute to the global effort to lower greenhouse gas emissions.
- ❖ IMEC has incredible potential to integrate India, West Asia, and Europe on a collective path to growth at an unprecedented scale.
- ❖ And it is a historic moment for India as a regional leader that can bring up an entire regional economy through the combination of its technical leadership and outward-looking approach.
- ❖ As the next step, a working group of experts from the railway sector, ports and shipping, and communications needs to develop a plan of action to address physical and non-physical barriers, design, financing, legal and other regulatory requirements.

Conclusion

- ❖ A mega global initiative like IMEC is only the beginning. As a strategic catalyst for a new way of thinking about collective growth, globalisation, and connectivity — Vasudhaiva Kutumbakam in the truest sense, this new corridor will trigger regional and global cooperation initiatives for socio-economic development across continents, benefitting millions.

INDIA AND THE GREAT POWER CONTEST IN WEST ASIA

Context

- ❖ At the G-20 summit in New Delhi earlier this month, United States President Joe Biden and others unveiled a U.S.-backed infrastructure project to connect India, West Asia and Europe with shipping lanes, rail networks, pipelines and data cables.

Two-part policy

- ❖ Mr. Biden's West Asia strategy has two parts. One is the continuation of the Trump-era policy of bringing America's two pillars in the region — the Gulf Arabs and Israel — closer to meet their common geopolitical challenges such as Iran's rise.
- ❖ The second part of Mr. Biden's approach is to reassure America's friends and allies that the U.S. is not exiting West Asia.
- ❖ In 2012, leaders of India, Israel, the U.S. and the UAE held a virtual summit of what is now called the I2U2 minilateral.
- ❖ The idea behind I2U2 is to create a new platform that could expedite economic integration between West Asia and South Asia and offer economic and technological solutions to the problems faced by the Global South.
- ❖ India's presence in a grouping of the Abraham Accords countries was seen as a legitimate recognition of India's presence in the region.
- ❖ The India-Middle East-Europe Corridor, announced at the G-20 summit enhances New Delhi's standing.
- ❖ It seeks to build an economic corridor from India's western coast, through the Gulf (the UAE and Saudi Arabia), Jordan and Israel, to the Mediterranean, bringing India and Europe closer.
- ❖ If this project takes off, the U.S. hopes that it could retain its channels of influence in West Asia, control the major shipping lanes and reassure its allies of its staying capacity.
- ❖ America's answer to this challenge is to forge closer ties between its allies in the region and strengthen the U.S. security architecture, and bring India in as a bigger, stable partner to write the new rules of economic engagement and integration, competing with China. India seems willing to take this bet.

Multiple avenues for India

- ❖ For India, the U.S.-China competition in West Asia opens new avenues of engagement.
- ❖ The U.S. sees India, with its size, the size of its economy and the legacy of its historical engagement and cultural connect with the region, as an important partner in its bid to continue to shape West's Asia's geopolitics.
- ❖ India should welcome the moment but should not look at it through the prism of another Cold War — or it should not put all its eggs in one basket as it did in Afghanistan.
- ❖ It is already part of the near-functional International North-South Transport Corridor that connects India to Russia through Iran and Central Asia.
- ❖ The 'Middle East Corridor' would open another economic channel.

Way forward

- ❖ India's overall policy towards the region should stay anchored in this idea of multi-engagement — not in appeasing or containing any great power.
- ❖ With or without the U.S., or irrespective of China's presence in the region, India should strive to play a major geopolitical role in West Asia, its extended neighbourhood, without upsetting its traditional balance.

AN ECONOMIC CORRIDOR, THE ISRAEL LINK AND THE GEOPOLITICS

Context

- ❖ The 2023 summit of the G-20 under India's presidency went exceptionally well given the group's limited economic approach to the complex issues that the world faces, from climate change and underdevelopment, wealth concentration and poverty and, most critically for our times, falling democratic norms and principles of peace.

The G20 summit in India

- ❖ India's remarkable success at the summit this year, in early September, was captured by the global press, except in China, for various outcomes such as the inclusion of the African Union in the G-20, a tangible offer of clean energy through a biofuel alliance, increasing substantial aid for Asia-Africa, an economic corridor that connects India, West Asia and Europe using an ambitious rail and shipping link, and the Delhi Declaration which was a joint statement of all the group.

A candid view

- ❖ The joint statement called the Delhi Declaration is newsworthy because of the fractured international order and power struggles between India and the United States with China or the U.S. with Russia.
- ❖ Despite the absence of China's President Xi Jinping and Russian President Vladimir Putin at the summit, India still got their agreement for the declaration which sums up the achievement.
- ❖ Substantially speaking, the statement is pareve as it does not name Russia for aggression against Ukraine; but it does evoke the United Nations charter and principles of territorial sovereignty.
- ❖ But the boldest outcome, and unanticipated by many, was the announcement of the economic corridor (the "India-Middle East-Europe Economic Corridor"), of a rail-ship route, to transport goods to Europe from India via the United Arab Emirates-Saudi Arabia-Jordan-Israel.
- ❖ Such a project will change the geopolitics for the future. The fact that it challenges China's Belt and Road Initiative is beside the more significant point.

Israel's absence, possible factors

- ❖ India 'set a precedent in G20 history by inviting the most Middle Eastern countries ever to take part as guests in the group's key summit', and one wonders why Israel, India's strategic partner also from the region, was not given such an invitation.
- ❖ As a host, India invited nine non-member countries — Bangladesh, Egypt, Mauritius, Netherlands, Nigeria, Oman, Singapore, Spain, and the United Arab Emirates — to the summit.
- ❖ Perhaps factors such as a meet between Saudi Arabia's Crown Prince Mohammed bin Salman and Mr. Netanyahu may have been impossible unless there was diplomatic normalisation.

A push for peace

- ❖ Saudi Arabia is willing to end the diplomatic boycott of Israel.
- ❖ It is a historical change because such an acceptance of Israel by the most important, religiously speaking, Muslim country, will help Israel with other countries such as Pakistan (already willing), Indonesia and Malaysia.
- ❖ For such a change, Saudis demand that Israel commits to the two-state solution and the well-being of the Palestinian people, even if the occupation does not end soon.

Way forward

- ❖ Israel-Palestine peace is a very challenging aim and given the rise of extremism on both sides, it appears all the more impossible. Saudi Arabia is aware of it and is still interested in having deliberations to walk smoothly among Arabs and other Muslims while working with the Biden administration to make peace with the State of Israel. The India-Middle East-Europe Economic Corridor will have to wait until this happens.

THE G-20'S SCREEN OVER 'MAZDOORS', THEIR RIGHTS

Introduction

- ❖ On the final declaration of the G-20 Summit, India missed a great opportunity to protect worker rights and advance the welfare of workers during the G-20 summit, despite the G-20's Labour 20 (L20), a coalition of G20 leaders concerned about workers, holding two meetings in India.

An exploitative labour system

- ❖ The Indian government should have taken the opportunity to address the serious issues facing workers in India, such as forced labour, modern-day slavery, and the kafala system in the Arab Gulf where some nine million Indians are working under exploitative working conditions.
- ❖ The Arab Gulf countries follow an exploitative labour system called the kafala system, which ties migrant workers to their employers.
- ❖ This system makes it difficult for migrant workers to leave their jobs or change employers, and it increases the risk of forced labour and modern-day slavery.
- ❖ Portable insurance schemes are important, but they are not enough.

- ❖ Workers also need job creation, decent working conditions, equal pay, gender equality, the elimination of forced labour and child labour, an end to modern-day slavery, and the protection of their rights and the welfare of their families.
- ❖ It would have been a relief for the Indian working class, especially in the Arab Gulf, had these issues been prioritised and debated at the G-20.

The scenario of migrant workers in India

- ❖ India is the world's largest migrant-sending country, with an estimated 13 million workers abroad. Of these, an estimated nine million are working in exploitative conditions in the Arab Gulf.
- ❖ But the exploitation of Indian workers is not limited to the Arab Gulf.
- ❖ In India itself, workers in a number of industries, including textiles, brick kilns, shrimp farming, copper manufacturing, stone cutting, and plantations, face forced labour and modern-day slavery.
- ❖ Many would be surprised with the term forced labour and modern-day slavery. According to the International Labour Organization, forced or compulsory labour is "all work or service which is exacted from any person under the threat of a penalty and for which the person has not offered himself or herself voluntarily".
- ❖ It must be noted that India has signed and ratified the ILO's Forced Labour Convention known as C29.
- ❖ In other words, forced labour is different from substandard or exploitative working conditions.
- ❖ Various indicators can be used to ascertain when a situation amounts to forced labour, such as restrictions on workers' freedom of movement, withholding of wages or identity documents, physical or sexual violence, threats and intimidation or fraudulent debt from which workers cannot escape.

The underlying issues

- ❖ Workers who are paid less or unpaid for overtime, under the threat of being fired if they ask for it, are victims of forced labour.
- ❖ Workers who are forced to work until they have paid off a loan they took from the company are also victims of forced labour.
- ❖ Companies that withhold workers' identity documents, such as Aadhaar cards or ration cards, and deny them access to the documents when required until the work is done are also engaging in forced labour.
- ❖ Issuing threats of sexual, physical, or mental abuse in order to get the work done is also forced labour.
- ❖ In addition, we should not forget that the move by the Union government to consolidate the labour laws into four labour codes is drawing protests from trade unions, civil societies, and workers, who allege that it will have a negative impact on decent working conditions.

Conclusion

- ❖ Addressing forced labour and modern day slavery is important for India because the exploitation of workers would increase inequality, unstable social justice and threaten democracy.

Civiltap Hlmachal

SOCIAL ISSUES

FINDING PROOF FOR THE AXIOM THAT NUTRITION AIDS RECOVERY

Introduction

- ❖ It would seem that optimal nutrition, essential for all biochemical processes to function properly, is an axiom. Naturally, it will then also be an accepted truth that appropriate nutritious food will have to be consumed, in order for the body to recuperate and heal even as it is treated by medicines when under assault. Strangely though, nothing can be as far apart in practice, as this axiom and its corollary.

Appropriate diet

- ❖ The nutritional and environmental factors that influence disease and wellness are now part of a solid study of the human body.
- ❖ While conventional medicine treats and advances cure by drugs and/or surgery, the doctor seldom forgets to mention an appropriate diet to be followed.
- ❖ The problem, however, occurs when there's a piecemeal handling of the condition, with no insight into the patient's culture or food affordability.

RATIONS trial

- ❖ Latest in this trend, is the RATIONS trial by Anurag Bhargava et al, which tries to address nutrition and tuberculosis within a syndemics framework.
- ❖ The researchers studied the effect of improving nutrition with a combination of a food basket and micronutrients on recovery of patients with TB, and preventing TB in close family members of those who are infected.
- ❖ Prof. Bhargava explains that undernutrition was the leading risk factor for TB Incidence in India and addressing it could lead to substantial decline in TB incidence.

Major findings

- ❖ Prevalence of undernutrition in household members was high and one-third were undernourished, in the study.
- ❖ It is also believed that a sub-optimal diet is also an important risk factor, preventable in good measure, for non-communicable diseases, an epidemic of which seems to be holding India in its grip.
- ❖ An emerging and compelling body of research points to the potential of food and nutrition playing a prominent role in prevention, management and treatment, even reversal of disease.
- ❖ Such interventions in health care system might be associated with improved health outcomes and reduced healthcare usage and costs.
- ❖ One of every five deaths across the globe is attributable to a suboptimal diet, more than any other risk factor including tobacco.
- ❖ Another area in which the role of nutrition in recovery has been well documented is in the HIV/AIDS sector. HIV infection and poor nutritional status are interlinked.
- ❖ The impact of HIV infection on nutrition was identified early in the epidemic, with wasting one of the most visible signs of malnutrition in patients who progress to acquired immune deficiency syndrome (AIDS).
- ❖ Malnutrition impairs immune function and reduces the body's resistance to infection.
- ❖ HIV and malnutrition have a cumulative effect in damaging the immune system and worsening nutritional status.

Initiatives

- ❖ It was in response to such averments that the World Food Programme initiated a pilot phase of distribution of nutrition supplements combined with nutrition counselling for People Living with HIV (PLHIV) on Anti-retroviral Therapy (ART), in Tamil Nadu.
- ❖ In a mid term assessment, researchers found improvements in both BMI level and haemoglobin in the experiment group, versus the control group.

- ❖ Both BMI and HB were considered key indicators for comparative assessment and as impact indicators.

Way forward

- ❖ In a welfare state, the task of ensuring adequate nutritional status undoubtedly rests with the government.
- ❖ At any rate, any lapses in doing so, must be set right, if an opportunity arises, with a comprehension of the relevant political and social contexts.
- ❖ Supporting delivery of health care along with with nutritional supplements must be guaranteed, wherever necessary, in order to ensure the best chances of recovery are available for patients.

MEASURING HUNGER ACROSS STATES

Introduction

- ❖ Despite being a major food producer with extensive food security schemes and the largest public distribution system in the world, India still grapples with significant levels of food insecurity, hunger, and child malnutrition.

Index and Report

- ❖ The Global Hunger Index (GHI), 2022, ranked India 107 among 121 countries, behind Nigeria (103) and Pakistan (99).
- ❖ The GHI provides a composite measurement and tracks undernourishment and hunger at the national level across three dimensions: calorie undernourishment, child malnutrition, and under-five mortality.
- ❖ According to the State of Food Security and Nutrition in the World report of 2022, India is home to 224.3 million undernourished people.
- ❖ Leveraging subnational data that encompasses the three dimensions of the GHI enables the development of an India-specific hunger index at the level of States and Union Territories.
- ❖ This plays a pivotal role in evaluating the extent of undernourishment at a more localised scale, which is critical for meeting the Sustainable Development Goals of eradicating hunger and malnutrition.

The State Hunger Index

- ❖ The GHI is computed using four indicators — the prevalence of calorie undernourishment; and of stunting, wasting, and mortality among children below the age of five; and under-five mortality rate.
- ❖ The State Hunger Index (SHI) is calculated using the same indicators except calorie undernourishment, which is replaced by body mass index (BMI) undernourishment among the working-age population, as data on calorie undernourishment are not available since 2012.
- ❖ Data for stunting, wasting, and mortality among children below the age of five are sourced from the fifth round of the National Family Health Survey (NFHS-5), while the prevalence of BMI undernourishment is computed using NFHS-5 (2019-21) and Wave 1 of the Longitudinal Ageing Study in India (2017-18).
- ❖ The calculation of the SHI score involves combining the normalised values of the four indicators using the techniques recommended by the GHI.
- ❖ The SHI scores range between 0 and 100, with higher scores indicating more hunger.
- ❖ Scores below 10 signify low hunger, 10-20 moderate, 20-30 serious, 30-40 alarming, and 50 or above extremely alarming.

The Data

- ❖ In the SHI, Bihar, Jharkhand, and Chhattisgarh scored 35, which places them in the 'alarming' category.
- ❖ Gujarat, Uttar Pradesh, Assam, Odisha, Madhya Pradesh, Tripura, Maharashtra, and West Bengal all scored above the national average (29).
- ❖ On the other hand, Chandigarh scored 12, and Sikkim, Puducherry, and Kerala all scored below 16.
- ❖ These States, along with Manipur, Mizoram, Punjab, Delhi, Arunachal Pradesh, Andaman and Nicobar Islands, and Tamil Nadu, fall under the 'moderate hunger' category.
- ❖ All the other States, which scored below the national average and above 20, have a problem of 'serious hunger'. No State falls under the 'low hunger' category. The impact of COVID-19 on the SHI is not captured here since post-pandemic estimates are not yet available.

Facing the reality

- ❖ While the GHI has faced significant criticism from experts regarding its conceptualisation, indicator selection, and aggregation methods, it does provide critical insight into the state of undernourishment and child nutrition.
- ❖ India's poor performance in the GHI is primarily attributed to its high prevalence of undernourishment and child malnutrition.
- ❖ India ranks unfavourably in child wasting, performing worse than many low-income African nations.
- ❖ The NFHS-5 indicated that one-third of children under the age of five are stunted and underweight, while every fifth child suffers from wasting.

Conclusion

- ❖ Despite India's notable progress in alleviating extreme poverty over the last 15 years, as indicated by the recent National Multidimensional Poverty Index, challenges persist in addressing the disparity in food insecurity, hunger, and child malnutrition.

RIDDING INDIA OF FOOD INSECURITY

Introduction

- ❖ India may be the fastest growing large economy of the world, but it is also facing accelerating food-price inflation. The rise in the price of food first accelerated sharply in 2019, and has climbed in most years thereafter. In July this year, annual inflation exceeded 11%, the highest in a decade.

State of Food Security and Nutrition in the World

- ❖ The 'State of Food Security and Nutrition in the World' of the Food and Agriculture Organization (FAO) estimates the proportion of the population across countries unable to afford a healthy diet.
- ❖ The figure for India in 2021 is devastating to note — an estimated 74% of the population cannot afford a healthy diet.
- ❖ Given a population of 1,400 million, this makes for approximately one billion Indians

Finding is plausible

- ❖ A study reported found that while the cost of preparing a thaali at home has risen by 65%, in this period, the average wage of a manual worker rose by 38% and that of a salaried worker by 28%.
- ❖ The implied reduction in purchasing power is considerable, and it would be reasonable to expect that food consumption has been impacted.
- ❖ This would be in line with the reported rise in the prevalence of anaemia, mostly induced by nutrient deficiency, in the latest National Family Health Survey undertaken over 2019-21.
- ❖ Over 50% of adult women were estimated to be anaemic. This suggests that the FAO's finding, that over half of India cannot afford a healthy diet, is plausible.
- ❖ Ensuring that Indians have access to a healthy diet is the most important task of economic policy today.
- ❖ Macroeconomic policy, relied upon to control inflation, has proved to be useless in the context.
- ❖ The Reserve Bank of India has failed in this task, with the inflation rate mostly higher than the target for four years by now. Its approach of contracting output when the inflation rate rises — misleadingly termed "inflation targeting" — does nothing to manage food inflation stemming from the supply side.
- ❖ Central banks are incapable of solving this problem, it must be said within any time frame. It is necessary to intervene on the supply side to ensure that food is produced at a steady price by raising the yield on land.

The significance of the Green Revolution

- ❖ India has rich experience in this area, having engineered a Green Revolution in the 1960s, but it is not being tapped.
- ❖ At the time, reeling under extreme food shortage following two successive droughts, the government orchestrated a supply-side response by providing farmers with high-yielding seeds, cheap credit, and assured prices through procurement.
- ❖ This succeeded spectacularly. Within a few years India was no longer dependent on food imports.

- ❖ If there was a single event that aided India's quest to be self-reliant in the highly polarised climate of the Cold War, it was this.
- ❖ However, to have engineered the Green Revolution in India at a time when it was a desperately poor country challenged by having to ensure food security to a staggeringly large number is perhaps more significant.
- ❖ With hindsight, we can see that mistakes were made, among them the rampant use of chemical fertilizer, fuelled by subsidy, which degraded the soil.
- ❖ There was also the reliance on procurement prices rather than productivity increase to ensure farm incomes, which fuelled inflation.
- ❖ We also see that the policy was almost exclusively focused on cereals rather than pulses, the main source of protein for most Indians.
- ❖ However, rather than carping about the errors made in an extraordinarily successful economic policy intervention, we should be correcting them now.
- ❖ At the same time, we should focus on the specific goal of lowering the cost of producing food.

Initiatives to work on

- ❖ Expanding on each of these proposals would be in order. It has been pointed out for some time that increased public expenditure on irrigation is not reflected in an increase in irrigated area — whether due to waste or the diversion of funds has not been established.
- ❖ The ongoing fragmentation of already small land holdings lowers the capacity for productivity-enhancing capital investment, for which leasing is a solution.
- ❖ India's network of public agricultural research institutes needs to be energised to resume the sterling role they had played in the 1960s.
- ❖ Finally, extension has now more or less vanished from where once the gram sevak was a familiar figure in the village, playing a crucial role in the dissemination of best practices. It must be revived.
- ❖ These initiatives should be dovetailed into a programme for the manifold increase of protein production, which India is severely deficient in.
- ❖ In all the areas identified above, the role of States is crucial.

Conclusion

- ❖ It was the Green Revolution that made the first dent on poverty in India. So, the poor did benefit from this strategy. Similarly, now, in order to ensure that all Indians have permanent access to a healthy diet, no approach consistent with ecological security must be off the table.

INDIA OR AFFECTING INDIA'S INTERESTS.

Context

Sustainable Development Goals(SDGs):

- ❖ The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015.
- ❖ A universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.
- ❖ It is a set of 17 SDGs which recognize that action in one area will affect outcomes in others and that development must balance social, economic, and environmental sustainability.
- ❖ Countries have committed to prioritizing progress for those who are furthest behind.
- ❖ The SDGs are designed to end poverty, hunger, AIDS, and discrimination against women.
- ❖ The SDGs framework sets targets for 231 unique indicators across 17 SDG goals related to economic development, social welfare and environmental sustainability, to be met by 2030.
- ❖ The United Nations adopted the 2030 Agenda for Sustainable Development: It consists of 17 Goals and 169 targets as a plan of action for 'people', 'the planet', and 'prosperity'.
- ❖ The resolution specifies mechanisms for the monitoring, review, and reporting of progress as a measure of accountability towards the people.
- ❖ Member-states submit a Voluntary National Review (VNR) to the UN's High Level Political Forum (HLPF)

- ❖ VLRs is a means for driving and reporting local implementation of SDGs at the sub-national and city levels.

Effects of climate change:

- ❖ They vary according to
- ❖ Location
- ❖ Socioeconomic status
- ❖ Gender

Role of women and Impact of climate change on women:

- ❖ Women across the world face severe risks to their health, safety, and quality of life.
- ❖ Women in developing and less developed countries (especially in low-income areas) are more vulnerable to climate change because of their dependence on natural resources and labour-intensive work for their livelihood.
- ❖ Women are more likely to live in poverty than men, which is just one of several social, economic, and cultural variables that makes them more susceptible to the effects of climate change.
- ❖ Women from low-income households are more at risk because they are more responsible for food, water, and other homely unpaid work.
- ❖ Due to the climate crisis, more time and effort are needed to obtain basic necessities.
- ❖ Rural women often shoulder the burden of ensuring access to clean water, adequate cooking fuel, and nutritious food for their families.
- ❖ Women may be at increased risk for health and safety because they must travel long distances every day to collect water and fuel.
- ❖ Women in low-income countries (predominantly South Asia and sub-Saharan Africa) engage in climate-vulnerable occupations such as farming and other labour-intensive work.
- ❖ According to the ILO: 60% of working women in southern Asia and sub-Saharan Africa are still in agriculture, where they are often underpaid and overworked.
- ❖ Women own only about 10% of the land used for farming.
- ❖ A McAllister (2023) study has highlighted that there could be 2(one point two) billion climate refugees by 2050.
- ❖ According to a UN study, most (80%) of those displaced by climate-related disasters are women and girls.
- ❖ Women, especially those from vulnerable communities, face particular difficulties during and after natural disasters.
- ❖ When women are uprooted, they are more susceptible to prejudice and exploitation.
- ❖ For instance, after the earthquake in Nepal in 2015, the United Nations Population Fund (UNFPA) found women were more exposed to trafficking and exploitation.
- ❖ Gender-specific issues women face:
- ❖ Separation from social networks (higher risk of gender-based violence)
- ❖ Decreased access to employment, education, and essential health services, such as sexual and reproductive health care and psychosocial support.
- ❖ Women make up a large portion of the agricultural workforce in emerging countries: Climate change impacts agricultural productivity negatively and significantly.
- ❖ Heat stress affects workers a lot in this sector, especially in South Asia and Africa.
- ❖ Women engaged in agriculture do not have access to quality inputs and possess low education and technical knowledge.
- ❖ Women farmers and labourers are vulnerable and seriously impacted.
- ❖ Various studies reflect how flooding has increased water scarcity and also violence against and the exploitation of women.

Best Practices for the effective involvement of women in climate change plans:

- ❖ Charlot Magayi is assisting Kenyan women in switching from filthy cook burners to clean ones.
- ❖ In addition to enhancing community health outcomes, this lowers greenhouse gas emissions.
- ❖ An African programme run by women called Solar Sister assists localities in creating small-scale solar systems so they can become energy independent.

- ❖ These grids also lower greenhouse gas emissions and air pollution.
- ❖ In laboratories and research departments all over Africa, female scientists are bridging gender gaps by contributing first-hand knowledge of local conditions and agriculture.
- ❖ Gender and Climate Change Development Programme(Programme in South Asia): which aims to increase women's influence in policy making by providing them with a stronger voice.
- ❖ In India, the Self-Employed Women's Association (SEWA) teaches women farmers how to respond to shifting climate patterns to support themselves better financially.

Way Forward

- ❖ Investments in women's education, training, and access to resources are essential if we are to be resilient to the impact of climate change.
- ❖ Reduce the negative impacts of climate change on people's living standards by
- ❖ Teaching them how to practice sustainable agriculture, water management, and energy generation.
- ❖ For example, in India, the Self-Employed Women's Association (SEWA) teaches women farmers how to respond to shifting climate patterns to support themselves better financially.
- ❖ It is essential to support groups that educate the public, train people to adapt to climate change and invest in women's education and training in environmentally-friendly farming methods.
- ❖ Women's participation in climate policy decision-making at all levels is crucial for effective climate change mitigation and adaptation strategies as well as getting decent employment.
- ❖ As women face greater risks in climate change, gender parity in decision-making bodies is essential.
- ❖ Gender and Climate Change Development Programme(Programme in South Asia): which aims to increase women's influence in policy making by providing them with a stronger voice.
- ❖ Globally, similar efforts are required for efficient climate change adaptation and mitigation.
- ❖ Developing and emerging countries urgently need women-led climate action.

FACILITATING DEGREES WITHIN A DEGREE

Introduction

- ❖ Even though the movement to specify frameworks for higher education qualifications had gained momentum across the world in the late 1990s, India remained without a National Higher Education Qualifications Framework (NHEQF) until recently. The idea was deliberated at the 60th meeting of the Central Advisory Board of Education in 2012, which assigned the responsibility to the University Grants Commission (UGC).

The problem of plenty

- ❖ Globally, higher education qualification frameworks include details of the definition and requirements of credits.
- ❖ The UGC has chosen to prescribe two separate frameworks — the NHEQF and the National Credit Framework.
- ❖ Higher educational institutions are separately required to implement the Academic Bank of Credits as a mandated modality for recognising, accepting, and transferring credits across courses and institutions.
- ❖ Additionally, there are many other regulations that impinge on higher education qualifications. All of these could have been integrated into the NHEQF. This defeats the purpose of prescribing a qualification framework
- ❖ After all, a qualification framework must minimise ambiguities in comprehending qualifications in a cross-cultural context.

The importance

- ❖ By definition, a national higher education qualification must encompass all disciplines and must clearly provide for the eligibility conditions for the entry into, and completion of, all programmes of studies.
- ❖ The NHEQF does provide exit requirements, but eligibility conditions and pathways through which a student can enter a programme at a particular level are alluded to vaguely.

- ❖ Besides, higher education qualifications awarded by disciplines such as agriculture, law, medicine, and pharmacy are conspicuous by their absence.
- ❖ The higher education system in India is far more diverse and complex than the European Higher Education Area.
- ❖ It warrants much wider and more intense consultations with the States. Doing this could have substantially enriched the NHEQF.
- ❖ The process of formulating the NHEQF should have duly recognised the sheer size of the higher education system and the variations in it, as well as the federal structure, constitutional provisions that put education on the Concurrent List, and the fact that States spend a lot more on education than the Centre.

Difficulties in implementation

- ❖ At a practical level, there might be some serious difficulties in implementing the NHEQF.
- ❖ The document places all higher education qualifications on a continuum of 4.5 to 10.
- ❖ The framework equates postgraduate diplomas with four-year undergraduate programmes.
- ❖ This poses a problem in determining the level of such undergraduate degrees that are pursued after another undergraduate degree, like B.Ed.
- ❖ Further, the idea that a B.Ed could be completed in one, two or four years is confusing.
- ❖ The credit framework document of the UGC mandates that each semester must have a minimum of 20 credits.
- ❖ Higher educational institutions with minimal infrastructure and meagre faculty resources may find this daunting.

Conclusion

- ❖ The mystery of the learning outcomes borrowed liberally from the Dublin descriptors remains unaddressed. Whether generic or specific to a discipline, learning outcomes may vary significantly across disciplines. Besides, they may not be measurable by the same yardstick across disciplines.

WHAT ARE THE FINDINGS OF THE PARLIAMENT PANEL ON NEP?

Context

- The Parliament Standing Committee on Education tabled a report during the special session of Parliament on the “Implementation of the National Education Policy (NEP), 2020 in Higher Education.”

About

- The panel met representatives of various State governments, Union Ministries, higher education institutions and other stakeholders to prepare the report.
- The report noted that of the 1,043 universities functioning in the country, 70% are under the State Act and that 94% of students are in State or private institutions with just 6% of students in Central higher educational institutions, stressing the importance of States in providing higher education.

The issues

- The 31-member panel tried to discuss issues such as the rigid separation of disciplines, limited access to higher education in socio-economically disadvantaged areas, lack of higher education institutes (HEIs) that teach in local languages, the limited number of faculty, lack of institutional autonomy, lesser emphasis on research, ineffective regulatory system and low standards of undergraduate education.
- The panel said that by 2030, every district in the country should have at least one multidisciplinary HEI and that the Gross Enrolment Ratio in higher education, including vocational education, should be increased from 26.3% in 2018 to 50% by 2035.

The recommendations

- The panel asked the Union Government and the State Governments to take actions such as earmarking suitable funds for the education of Socially and Economically Disadvantaged Groups (SEDGs), setting clear targets for higher Gross Enrolment Ratio for SEDGs, enhancing gender balance in admissions to HEIs,

providing more financial assistance and scholarships to SEDGs in both public and private HEIs, making admission processes and curriculum more inclusive, increasing employability potential of higher education programmes and for developing more degree courses taught in regional languages and bilingually.

- The panel also recommended specific infrastructural steps to help physically challenged students and a strict enforcement of all no-discrimination and anti-harassment rules.
- The Committee appreciated the manner in which the NEP was implemented in Jammu and Kashmir.
- It said that the Union Territory was among the first in the country to implement NEP from the academic session 2022 in all its higher educational institutions.
- The panel said it witnessed a paradigm shift in the methods of teaching, leading to lifelong learning opportunities to students.

The funding

- The Committee suggested improving the effectiveness and impact of the Higher Education Financing Agency (HEFA) in funding HEIs.
- It asked the HEFA to diversify its funding sources beyond government allocations and explore partnerships with private sector organisations, philanthropic foundations, and international financial institutions.
- It recommended reviewing and adjusting the interest rates on loans provided by HEFA “to make them more competitive and affordable” for HEIs.

The multiple entry multiple exit programme

- The panel said that Indian institutions were likely to face several issues in implementing the multiple entry and multiple exit (MEME) system.
- The panel said while the MEME looked like a flexible system, which was being operated by Western educational institutions effectively, it might not work well in the country.
- If institutions allow MEME, it would be very difficult for the institutions to predict how many students would exit and how many would join midway.
- Since institutions would not know the in- and out-traffic, it will certainly disturb the pupil-teacher ratio,” the report noted.

Conclusion

- The report looked at the salient features of the NEP’s implementation in the higher education sector and the progress made so far.

NIPAH VIRUS OUTBREAK: WHAT ARE MONOCLONAL ANTIBODIES?

Context

- ❖ Last week, India reached out to Australia to procure monoclonal antibody doses to combat the Nipah virus outbreak in Kerala. India is expecting 20 more doses soon.

Monoclonal Antibody

- ❖ Monoclonal antibodies are laboratory-made proteins that mimic the behaviour of antibodies produced by the immune system to protect against diseases and foreign substances.
- ❖ An antibody attaches itself to an antigen – a foreign substance, usually a disease-causing molecule – and helps the immune system eliminate it from the body.
- ❖ Monoclonal antibodies are specifically designed to target certain antigens.
- ❖ Niels K. Jerne, Georges J.F. Köhler and César Milstein were awarded the medicine Nobel Prize in 1984 for their work on the “the principle for production of monoclonal antibodies”.

m102.4 Antibody

- ❖ According to research published in The Lancet journal of Infectious Diseases, m102.4 is a “potent, fully human” monoclonal antibody that neutralises Hendra and Nipah viruses, both outside and inside of living organisms.
- ❖ The antibody has passed phase-one clinical trials — which means that researchers tested it with a relatively small number of people to estimate the right dose of treatment that also doesn’t cause side effects.

- ❖ As of now, the drug is used on a 'compassionate use' basis — a treatment option that allows the use of an unauthorised medicine under strict conditions among people where no other alternative and/or satisfactory authorised treatment is known to be possible and where patients cannot enter clinical trials for various reasons.

The working of Monoclonal Antibodies

- ❖ Monoclonal antibodies are specifically engineered and generated to target a disease.
- ❖ They are meant to attach themselves to the specific disease-causing antigen. An antigen is most likely to be a protein.
- ❖ For instance, most successful monoclonal antibodies during the pandemic were engineered to bind to the spike protein of the SARS-CoV-2 virus.
- ❖ The binding prevented the protein from exercising its regular functions, including its ability to infect other cells.
- ❖ Dr. Köhler and Dr. Milstein, used this principle to describe the hybridoma – a fusion cell made up of B cells (white blood cells that produce antibodies) and myeloma cells (abnormal plasma cells).
- ❖ These hybrid cells allowed the researchers to produce a single antibody clone, which came to be known as a monoclonal antibody.
- ❖ The initial technology of producing hybridoma in mice was unsustainable.
- ❖ Today, these antibodies are made using recombinant DNA technology.
- ❖ Here, the gene that codes for the monoclonal antibody's binding region — also known as the variable region — is isolated from a B cell or synthesised in the laboratory.
- ❖ This antibody is then introduced into a host cell, often a bacterium or a mammalian cell, using recombinant DNA technology (which involves manipulating DNA material outside an organism to obtain specific traits or characteristics).
- ❖ The host cells, called bioreactors, produce large quantities of the monoclonal antibodies which are extracted, purified, and readied for use as desired.
- ❖ The m102.4 monoclonal antibody binds itself to the immunodominant receptor-binding glycoprotein of the Nipah virus, potentially neutralising it.

Conclusion

- ❖ Despite their significant benefits, monoclonal antibodies can have limitations, such as high production costs and the potential for immune responses. Advances in technology, such as the development of humanized antibodies (antibodies with human components to reduce immune reactions), have addressed some of these challenges.

CivilsTap Hlmachal

GENERAL STUDIES 3.

ECONOMY

AN UNEVEN REBOUND

Context

- ❖ Inflation, monsoon pose fresh risks even as residual stress lingers in economy

Growth of Indian economy

- ❖ India's economy, as measured by the Gross Domestic Product (GDP) as well as the Gross Value Added (GVA), grew 7.8% in the first quarter (Q1) of the year.
- ❖ This is the highest GDP uptick in four quarters, but slightly underwhelming relative to the 8% growth estimated by the Reserve Bank of India (RBI).
- ❖ The central bank's 6.5% growth projection for 2023-24 factors in a decline in the uptick rate in each of the subsequent quarters of this year, culminating at 5.7% in the final quarter.
- ❖ One will have to wait till October's meeting of the RBI's Monetary Policy Committee (MPC) to assess how this math is reworked, although the Chief Economic Adviser V. Anantha Nageswaran believes these GDP numbers do not signal any discomfort in hitting the 6.5% mark for the full year.
- ❖ India remains the fastest growing major economy by a comfortable margin, with China recording a 6.3% rise in the same quarter and facing a fresh slowdown.

The sectors

- ❖ Farm sector GVA maintained its growth pace to rise 3.5% in Q1, but may taper off thanks to the monsoon's tepid progress and the fear that low reservoir levels may also hurt the rabi crop.
- ❖ The headline growth rates for the services sectors were robust.
- ❖ Trade, hotels and transport rose 9.2%, but in absolute terms, the employment-intensive segment remained 1.9% below pre-COVID-19 levels, indicating the recovery is still incomplete.
- ❖ While the government has been asserting that the private investment cycle has finally taken off, the gross fixed capital formation trends indicate it is still government capital spending that is doing the heavy lifting.
- ❖ Manufacturing GVA grew for the second successive quarter after six months of contraction, but only accelerated slightly so a broader rebound in consumption demand is likely still awaited.
- ❖ Private consumption spending rose 6% but economists believe this is still dominated by demand from high income earners.
- ❖ Depending on how long the current streak of spiked inflation, especially in food items, persists, demand from lower income segments would be dented afresh.
- ❖ A feeble recovery in rural demand could also come undone if farm incomes take a hit. Interventions to counter inflation, such as export curbs on rice and onions, will hurt growth and the external trade balance, while relief measures, such as the ₹200 cut in LPG cylinder prices, that may proliferate ahead of the general election, also pose risks to the fiscal math and growth.

Conclusion

- ❖ The months ahead could prove to be more challenging with global headwinds that have hit goods exports and manufacturing already, combining with domestic pressures from the renewed spurt in inflation and the likelihood of a weak monsoon playing truant with crop yields and farm incomes.

HOW UNEMPLOYMENT IS MEASURED

Context

- ❖ When the Periodic Labour Force Survey (PLFS) was released in 2017, it revealed the unemployment rate of India to be 6.1%, the highest ever recorded in India. The PLFS of 2021-22 showed unemployment reducing to 4.1%, much lower than before, but higher than some developed economies.

Defining unemployment

- ❖ Unemployment is not synonymous with joblessness.
- ❖ The International Labour Organization (ILO) defines unemployment as being out of a job; being available to take a job; and actively engaged in searching for work.
- ❖ Therefore, an individual who has lost work but does not look for another job is not unemployed.
- ❖ The labour force is defined as the sum of the employed and the unemployed.
- ❖ Those neither employed nor unemployed — such as students and those engaged in unpaid domestic work — are considered out of the labour force.
- ❖ The unemployment rate is measured as the ratio of the unemployed to the labour force.
- ❖ The unemployment rate could also fall if an economy is not generating enough jobs, or if people decide not to search for work.

Measuring unemployment in India

- ❖ The situation is complicated in a developing economy, because decisions to search for work are constrained by social norms.
- ❖ According to a 2009-10 survey undertaken by the National Sample Survey Organisation (NSSO), 33.3% of rural women and 27.2% of urban women aged 15 and above who were engaged in domestic work reported willingness to work if it were made available within the premises of the household.
- ❖ Measuring unemployment in India is difficult due to the informal nature of jobs.
- ❖ Unlike developed economies, individuals do not hold one job year-round. An individual may be unemployed this week, but may have worked as a casual labourer last month, and as a farmer for most of the year.
- ❖ The NSSO adopts two major measures for classifying the working status of individuals in India — the Usual Principal and Subsidiary Status (UPSS) and the Current Weekly Status (CWS).
- ❖ An individual's principal status, whether employed, unemployed or out of the labour force, is based on the activity in which they spent relatively long time in the previous year.
- ❖ A person who is not a worker, according to the principal status, would still be counted as employed according to the UPSS if they were engaged in some economic activity in a subsidiary role for a period not less than 30 days.
- ❖ The CWS adopts a shorter reference period of a week. An individual is counted as being employed if they have worked for at least one hour on at least one day during the seven days preceding the date of survey.
- ❖ UPSS unemployment rates will always be lower than CWS rates because there is a greater probability that an individual would find work over a year as compared to a week.

The lockdown effect

- ❖ The lockdown announced in March 2020 was a profound disruption to the Indian economy.
- ❖ But this wasn't reflected in the PLFS unemployment rates, which covers a period between July of one year to June of the next.
- ❖ The lockdown would have been covered in the last quarter of the 2019-20 PLFS, its after-effects seen in the 2020-21 PLFS.
- ❖ However, unemployment rates — measured both by the UPSS and CWS standards — fell in 2019-20 and 2020-21.
- ❖ Unemployment spiked during the lockdown quarter, but reduced thereafter. The CWS unemployment over the year would not show such a high rise.

Conclusion

- ❖ Unemployment is shaping up to be an important factor in the upcoming election. In order to successfully tackle it, it is important to understand how it is defined and measured in a developing economy.

IMPACT OF RBI'S LENDING GUIDELINES

Context

- ❖ On August 18, apex banking regulator the Reserve Bank of India (RBI) issued guidelines enabling a borrower to transition from a floating interest rate-based loan to one with a fixed interest rate.

About

- ❖ According to RBI, the endeavour was to address borrowers' grievances pertaining to the elongation of loan tenure and/or an increase in the EMI amount in the event of an increase in the benchmark interest rate.
- ❖ A lack of proper communication along with the absence of consent formed part of the concerns.
- ❖ The provisions would be extended to existing as well as new loans by the end of the current calendar year.

The instructions

- ❖ The apex banking regulator has given borrowers the option to switch over to a fixed (interest) rate mechanism for their loans from floating rates.
- ❖ This would be based on a board-approved policy drafted by the lending entity.
- ❖ The policy must also specify the number of times such a switch would be allowed during the tenure.
- ❖ The lender must also transparently communicate to the borrower all relevant charges alongside service charges or administrative costs associated with the transition.
- ❖ The responsibility would rest with the lender to communicate clearly, at the time of loan sanction, the impact emanating from the change in regime (floating to fixed), such as the change in EMI and/or tenure of the loan or both.
- ❖ The borrower would now also have the option to choose between enhancement of the EMI or elongation of the tenure or a combination of both.
- ❖ S/he might also opt to prepay the loan, either in part or full, at any point during the tenure.
- ❖ This would, however, still invite foreclosure charges or pre-payment penalty.
- ❖ Further, the regulator has sought that lending entities provide borrowers, through appropriate channels, a statement at the end of each quarter enumerating the principal and interest recovered till date, EMI amount, number of EMIs left and annualised rate of interest/ Annual Percentage Rate (APR) — for the entire tenure of the loan.
- ❖ The instructions would apply to all equated instalment-based loans of different periodicities albeit with certain changes based on the nature of the loan.

Differences between a fixed and floating interest rate

- ❖ Fixed interest rates are those that do not change during the tenure of the loan.
- ❖ On the other hand, floating interest rates are subject to market dynamics and the base rate — therefore, the risk differentiation.
- ❖ As also contended by several lending entities, floating interest rates are generally lower than fixed interest rates.
- ❖ It has been widely argued that their preference for the floating rate-based regime is to better adjust their positions as per the evolving market dynamics.
- ❖ The advantages are transmitted onto the borrower's savings pool, but the opposite also holds true in a rising benchmark rate regime.
- ❖ Also noteworthy is the fact that floating interest rate loans do not draw any prepayment penalty— unlike fixed rate loans.
- ❖ However, the fixed rate-based regime endows a borrower with greater certainty and security.
- ❖ This also helps in better planning and structuring of individual budgets. Thus, prospective borrowers should note broader evolving economic dynamics and accordingly decide the tenure they seek.

Way forward

- ❖ About parameters for assessment, Governor Shaktikanta Das had earlier stated that banks would have to consider the payment capacity of the borrower and how long payment capacity would last (the age factor).
- ❖ He cautioned that it would be necessary to avoid unduly long elongation which sometime may going forward camouflage the underlying stress in a particular loan.

GRESHAM'S LAW: WHAT HAPPENS WHEN GOVERNMENTS FIX CURRENCY EXCHANGE RATES

Introduction

- ❖ Gresham's law refers to the dictum that "bad money drives out good." Gresham's law comes into play when the exchange rate between two moneys or currencies is fixed by the government at a certain ratio that is different from the market exchange rate. Such price fixing causes the undervalued currency — that is, the

currency whose price is fixed at a level below the market rate — to go out of circulation. The overvalued currency, on the other hand, remains in circulation but it does not find enough buyers.

Market exchange rate

- ❖ It should be noted that the market exchange rate is essentially an equilibrium price at which the supply of a currency is equal to the demand for the currency.
- ❖ Also, the supply of a currency in the market rises as its price rises and falls as its price falls; while, on the other hand, the demand for a currency falls as its price rises and rises as its price falls.
- ❖ So, when the price of a currency is fixed by the government at a level below the market exchange rate, the currency's supply drops while demand for the currency rises.
- ❖ Thus a price cap can lead to a currency shortage with demand for the currency outpacing supply.

Origins of the term

- ❖ Gresham's law is named after English financier Thomas Gresham who advised the English monarchy on financial matters.
- ❖ It applies not just to paper currencies but also to commodity currencies and other goods.
- ❖ In fact, whenever the price of any commodity — whether it is used as money or not — is fixed arbitrarily such that it becomes undervalued when compared to the market exchange rate, this causes the commodity to disappear from the formal market.
- ❖ The only way to get hold of an undervalued commodity in such cases would be through the black market. Sometimes, countries can even witness the outflow of certain goods through their borders when they are forcibly undervalued by governments.
- ❖ Gresham's law can be seen at play whenever a government fixes the exchange rate (or price) of a commodity money (such as gold and silver coins) far below than the market price of the commodity backing them.
- ❖ In such cases, people who hold the commodity money would stop offering the money at the price fixed by the government. They may even melt such commodity money to derive pure gold and silver that they can sell at the market price, which is higher than the rate fixed by the government.

Significance

- ❖ Gresham's law, however, holds true only when the exchange rate between currencies is fixed under law by the government and the law is implemented effectively by authorities.
- ❖ In the absence of any government decree fixing the exchange rate between currencies, it is good money that eventually drives bad money out of the market and not the other way round.
- ❖ This phenomenon wherein "good money drives out bad" is called Thiers' law (named after French politician Adolphe Thiers) and it is seen as a complement to Gresham's law.
- ❖ The rise of private cryptocurrencies in recent years has been cited by many analysts as an example of good money issued by private money producers driving out bad money issued by governments.

Conclusion

- ❖ When the exchange rate between currencies is not fixed and people have the choice to freely choose between currencies, people gradually stop using currencies that they consider to be of poor quality and adopt currencies that are found to be of better quality.

TRACKING INDIA'S GROWTH TRAJECTORY

Introduction

- ❖ The conventional way to assess a country's economic situation is to look at the quarterly (three-month) and annual (12-month) GDP (gross-domestic-product) growth rate and compare it to previous quarters as well as years. In the quarterly release of GDP figures by the NSO (National Statistical Office), the country's performance is likened to reviewing a report card of its economic performance.

GDP growth rate

- ❖ The Q1 data covering the GDP growth rate from April to June of FY24 boasts a nominal growth rate of 8% and a real growth rate of 7.8%.

- ❖ The growth story currently posits that the numbers reflect an uptick in the agriculture sector growing at 3.5%, unlikely to be sustained due to pressure from the El Niño phenomenon, and the services industry, with financial, real estate and professional services growing at 12.2%.

Calculating GDP

- ❖ The first factor to consider is that calculating the GDP growth rate involves many complex statistical choices and sophisticated statistical operations.
- ❖ One such decision the NSO made while conducting their research was to use the income approach of calculating GDP rather than the expenditure approach.
- ❖ The income approach involves summing up all national incomes from the factors of production and accounting for other elements such as taxes, depreciation, and net foreign factor income.
- ❖ However, the expenditure approach dictates headline growth to be 4.5% rather than 7.8% which is a large discrepancy.
- ❖ Moreover, another essential statistical operation is the adjusting for inflation using the price deflator.
- ❖ Typically, the deflator is meant to adjust growth figures when they are overstated by inflation.
- ❖ In this case, deflation due to falling commodity prices, reflected in the wholesale price index, has worked to overstate the real growth.
- ❖ Furthermore, there is a base effect from the COVID-19 degrowth period, which continues to plague India's growth figures.
- ❖ Although less pronounced in FY24, the base effect has a role in comparative statistics due to sporadic growth in the years following FY20-21.
- ❖ Additionally, one must consider whether the proposed, supposedly cooled, inflation rate calculated through the consumer price index can be sustained at current levels with the impending depreciation of the Indian rupee against the dollar due to capital outflow pressures resulting from the RBI's reluctance to raise interest rates.

Revenue from taxes

- ❖ Moreover, the government's tax revenue from direct taxes has weakened over the previous quarter while the indirect tax revenue remained strong, indicating a K-shaped pattern.
- ❖ The income streams from progressive taxation seem to be a laggard compared to its regressive counterpart.
- ❖ A muted growth of direct tax collected in an economy boosted by the services industry is a statistical discrepancy which remains unexplained in the proposed GDP growth story.

A nuanced approach

- ❖ In conclusion, after a meticulous analysis of India's Q1 FY24 economic transcript, it becomes palpable that the reported growth narrative might be somewhat over embellished.
- ❖ The divergence in growth figures brought forth by the income and expenditure approaches manifest a significant disparity, raising fundamental questions about the veracity of the promulgated optimistic narrative.
- ❖ Moreover, the underpinnings of this growth story, nuanced by inflationary adjustments and conspicuous fluctuations in tax revenue streams, signal a cautious trajectory.
- ❖ Additionally, the apprehensive outlook on the agriculture sector and potential fiscal constraints paint an arguably more restrained picture than initially portrayed.

Conclusion

- ❖ Therefore, it seems prudent to assert that India's economic performance, although showing signs of resilience, does not quite emerge as the unequivocal success story depicted in initial observations, urging a more nuanced and critical approach in assessing the trajectory ahead.

TRACKING INDIA'S GROWTH TRAJECTORY

Context

- ❖ The lessons from India's LED revolution can help the country's growing ceiling fan market.

The LED bulb story

- ❖ Even in the humid weather of August and September, as in the dry heat of May, the ceiling fan continues to provide comfort to many in India.
- ❖ The ceiling fan market is undergoing a churn too, driven by policy imperatives and a regulation change.
- ❖ But the fan market must learn from the successes and hiccups of the light-emitting diode (LED) bulb story.
- ❖ The policy imperative driving the change in the fan market is energy transition in a world that must grow sustainably with changing climate.
- ❖ India's goal of reducing harmful emissions per unit of GDP, by 45% by 2030, relative to 2005, requires a sharp reduction in the energy consumed for economic activity.
- ❖ Households account for nearly a third of all electricity consumed in India, and ceiling fans, used by 90% of households, as per a Council on Energy, Environment and Water (CEEW) survey of 2020.
- ❖ The India Cooling Action Plan projects that the number of fans in use in India could grow to a billion by 2038, from about 500 million now, as incomes grow along with average temperatures.

The 'star rating' programme

- ❖ Given the importance of fans, the Bureau of Energy Efficiency (BEE), India's energy efficiency regulator under the Union Ministry of Power, made the Standards and Labelling (S&L) programme, popularly known as the 'star-rating' programme, mandatory for ceiling fans in May 2022.
- ❖ But '5-star' fans (the star rating) cost twice as much as typical unrated fans — not a small barrier to adoption in India's price-sensitive market.
- ❖ To tackle this, Energy Efficiency Services Limited (EESL) is planning a demand aggregation programme to sell 10 million '5-star' ceiling fans.
- ❖ The programme hopes to transform the fans market much like it did for LED lamps under the famous Unnat Jyoti by Affordable LEDs for All (UJALA) programme.
- ❖ The UJALA programme, launched in 2015, helped reduce the price of LED lamps from ₹400 to ₹90 in a span of three to four years.

Steps to a transformation

First is to maintain a technology-agnostic policy.

- ❖ Demand aggregation is most effective when a single technology specification is procured in bulk.
- ❖ In the case of LEDs, it was the nine-watt white light LED bulb. But fans have a wider spectrum of technology, each with its own trade-offs.
- ❖ A policy that covers more than one specification would be more cost-effective in the long run.
- ❖ A typical ceiling fan uses the time-tested induction motor, which is rugged but may have limits on energy performance.
- ❖ The newer kid on the block, the brushless DC (BLDC) motor, is the only commercially available technology so far that meets the '5-star' performance benchmark.

Second, manage the balance between price reduction and quality.

- ❖ The intense pressure on price on LEDs during the UJALA programme led to lower-quality products entering the market, with higher failure rates.
- ❖ While replacing a bulb is easy and cheap, replacing a ceiling fan is inconvenient and costly.
- ❖ Low-quality products could lead to a deficit of consumers' trust in the new technology, prompting them to revert to the old.

Third, foster high-quality domestic manufacturing capacity for high-efficiency fans.

- ❖ While the growth of the LED market spawned new manufacturers and brands, India arguably missed the bus on maintaining the quality of local manufacturing and reducing import dependence for components.
- ❖ India can leverage its massive domestic market to achieve economies of scale for finished products and components, and expand into the export market.
- ❖ Indian quality and performance standards must be updated to align with international ones to ensure that manufacturers are competitive.
- ❖ **And, finally, dedicate resources to strengthening the standard and labelling programme.**

Conclusion

- ❖ Fans are undergoing their first major phase of disruption in decades. Energy-efficient fans can not only help the vulnerable population get access to a critical service for coping with events of extreme heat with lower electricity bills, but are also central to India's clean energy transition and can play a part in its economic growth.

A CLEAR MESSAGE TO INDUSTRY ON DISPUTE RESOLUTION

Introduction

- ❖ Alternative Dispute Resolution (ADR) refers to a bouquet of mechanisms that enables disputing parties to resolve their differences amicably, without the intervention of courts. Given the delays in Indian court proceedings and increasing cost of litigation, the significance of ADR in India cannot be understated.

About

- ❖ In the recent monsoon session of Parliament, both Houses passed The Mediation Bill, 2023, and upon receiving the assent of the President of India, is referred to as the Mediation Act, 2023 ("the Act").
- ❖ The Indian legal framework already encourages courts to refer the disputing parties to ADR procedures, including mediation, if there were elements of settlement which the parties may accept.
- ❖ The Act will take this encouragement a step forward. Irrespective of a prior mediation agreement, it will obligate each party to take steps to settle their dispute through pre-litigation mediation before approaching an Indian court.
- ❖ To facilitate this process, the Act will also require courts and relevant institutions to maintain a panel of mediators.

Many benefits

- ❖ This requirement is expected to reduce the filing of frivolous claims before Indian courts.
- ❖ Owing to the confidentiality of a mediation, it may also mitigate the risk of deterioration of the parties' relationship due to a publicly fought dispute.
- ❖ Yet, at the same time, concerns are raised about the feasibility of a mediation conducted under the sword of an obligation as opposed to a sincere desire to arrive at an amicable resolution.
- ❖ In the latter scenario, this may empower a recalcitrant defendant to delay a genuine claim.
- ❖ Subject to an extension by the parties, they must also complete the mediation within 180 days from the parties' first appearance.
- ❖ On the other hand, the Act will not remove the refuge of Indian courts entirely.
- ❖ A party may, in exceptional circumstances, seek urgent interim reliefs from a court before the commencement or during the continuation of a mediation.
- ❖ These provisions prioritise expertise and efficiency, while ensuring that the obligation of pre-litigation mediation is not weaponised.
- ❖ The aim is to create a balanced framework which encourages the parties to focus more on their commercial dealings and less on their disputes.

The aspect of mediation and arbitration

- ❖ The Act will effectively position mediation similar to commercial arbitration in India. The similarities between their respective supporting pieces of legislation are obvious.
- ❖ Both pieces of legislation impose stringent timelines for the conduct of proceedings, mandate confidentiality, obligate Indian courts to refer the parties to mediation or arbitration, provide a default mechanism for the appointment of a mediator or arbitrator, and prescribe the procedure for the termination of their mandate.
- ❖ Likewise, both ensure the enforceability of a mediated settlement agreement and an arbitral award, respectively.
- ❖ The establishment of a Mediation Council of India equally mirrors the proposal in 2019 to establish an Arbitration Council of India.

- ❖ Parliament's message to Indian industry is clear — in commercial matters, courts must no longer be the default venue for dispute resolution.
- ❖ Parties are expected to resolve their dispute amicably through mediation, and, alternatively, through commercial arbitration.
- ❖ While the doors of Indian courts are open if required, this access must be perceived as a matter of last resort.

Way forward

- ❖ Similar to how the recent amendments to the A&C Act prioritised institutional arbitration of disputes, the Act also places emphasis on institutional mediation in India.
- ❖ It envisages “mediation service providers” to provide not only the services of a mediator but also all the facilities, secretarial assistance, and infrastructure for the efficient conduct of mediation.
- ❖ India is already home to experienced arbitration institutions, some of which provide mediation services that are on a par with global best practices.
- ❖ Only then would India become a global hub not only for arbitration but also for all aspects of commercial dispute resolution.

INDIA IS RUNNING OUT OF PHOSPHORUS; DOES THE ANSWER LIE IN OUR SEWAGE?

Introduction

- ❖ The problem with the fertilisation of land is as old as agriculture itself. When early humans first began to engage in settled agriculture, they quickly realised that while crops require nutrients for their growth, repeated cycles of cultivation and harvest depleted these nutrients, reducing yield over time.

The change in practices

- ❖ This observation led to practices to restore essential nutrients in the soil necessary for plant and crop growth.
- ❖ Indigenous communities around the world developed methods of fertilisation, for example, using fish remnants and bird droppings (guano) as fertilisers.
- ❖ This changed in the 19th century, which saw significant advancements in chemistry, leading to the creation of synthetic fertilisers as well as the identification of nitrogen, phosphorus, and potassium.
- ❖ The Green Revolution of the mid-20th century accelerated the adoption of high-yield crop varieties and intensive use of these fertilisers, and today these substances are crucial to sustain global food production.

The issues with Phosphorus

- ❖ Phosphorus is scarce and exists only in limited quantities, in certain geological formations.
- ❖ Not only are we running out of it, it also pollutes the environment.
- ❖ It doesn't exist as a gas, which means it can only move from land to water, where it leads to algal blooms and eutrophication.

Geopolitics and phosphorus

- ❖ The history of phosphorus spans its discovery in guano to current global supply chains.
- ❖ The world's largest reserves are in Morocco and the Western Sahara region.
- ❖ But here, phosphorus coexists with cadmium, a heavy metal that can accumulate in animal and human kidneys when ingested.
- ❖ Removing cadmium is also an expensive process.
- ❖ As a result, cadmium-laden fertilisers are often applied to the soil, absorbed by crops, and consumed, bioaccumulating in our bodies.
- ❖ Studies have found that this accelerates heart disease.
- ❖ Only six countries have substantial cadmium-free phosphorous reserves.
- ❖ Of them, China restricted exports in 2020 and many EU countries no longer buy from Russia. So the market for safe phosphorus has suddenly exploded.
- ❖ This is one reason why Sri Lanka banned the import of synthetic fertilisers and went organic in 2021, later experiencing a sudden drop in crop yield that precipitated a political crisis.

- ❖ Today, India is the world's largest importer of phosphorus, most of it from the cadmium-laden deposits of West Africa.
- ❖ Not all crops absorb cadmium at the same rate, but paddy, a staple crop in India, is particularly susceptible; Indian farmers also apply a lot of fertilisers to paddy.
- ❖ Other grains, such as wheat, barley, and maize also absorb cadmium, just less.

The phosphorus disposal problem

- ❖ First, only about a fifth of the phosphorus mined is actually consumed through food. Much of it is lost directly to water bodies as agricultural run-off, due to the excessive application of fertilisers.
- ❖ Second, most of the phosphorus that people consume ends up in the sewage. Most sewage in India is still not treated or treated only up to the secondary level.
- ❖ So even if the organic matter is digested, the effluent discharged from STPs still contains nitrates and phosphates.
- ❖ Of these, nitrates can be digested by denitrifying bacteria and released safely as nitrogen gas into the atmosphere, while phosphorus remains trapped in the sediments and water column.
- ❖ It is then absorbed by the algal blooms that grow in response to the high nutrient supply, and when they decompose, the bacteria that feed on them consume the dissolved oxygen.
- ❖ The result: water bodies become oxygen-starved, leading to fish deaths. The algal blooms are also toxic, causing respiratory issues, nausea, and other ailments to people exposed to them.

Finding phosphorus elsewhere

- ❖ Since much of the phosphorus is not actually taken up by crops, one way to ameliorate the phosphorus paucity is to reduce the use of chemical fertilisers through precision agriculture.
- ❖ Low-input agro-ecological approaches are increasingly proving to be a viable alternative.
- ❖ But there is increasing interest in closing the phosphorous loop by mining urban sewage to produce high quality phosphorus.
- ❖ Interest in 'circular water economies' has in fact prompted the European Union – which has almost no phosphorus reserves of its own – to rethink the urban water cycle.
- ❖ First, source separating toilets – almost two thirds of the phosphorus we consume leaves in our urine and the rest in faeces.
- ❖ Urine also contains large amounts of nitrogen and potassium. If we can collect this safe and concentrated waste stream, we could generate a local fertiliser source.
- ❖ Second, recycling wastewater and sludge – Sewage recycling already occurs in some form in India today.

Way forward

- ❖ The best way is to create a circular water economy. If the technology is cheap enough, can we give a concession to set up STPs with phosphorus mining plants and allow them to sell the fertiliser.
- ❖ And such changes, India can become less dependent on uncertain geopolitical crises; farmers can procure fertilisers at affordable rates; water bodies will have some hope of becoming swimmable and public health can gain from the consumption of food grown in cadmium-free soils.

SCIENCED AND TECHNOLOGY

ADITYA L1: ITS FUNCTIONING AND PURPOSE

Context

- ❖ Observations from Aditya L1 will help us understand the dynamics of the Sun and how solar variability impacts the climate on Earth and affects the space weather.

Monitoring the Sun

- ❖ Discovered by mathematician Joseph Louis Lagrange, L1 is one of the five points located approximately 1.5 million kilometres away, where the gravitational forces of the Sun and the Earth are in equilibrium.
- ❖ Hence, a spacecraft placed at L1 orbits the Sun at the same rate as Earth and affords an uninterrupted view of the Sun, making it an ideal observation post for space-based solar observatories.
- ❖ The L1 is currently home to the European Space Agency (ESA)- National Aeronautics and Space Administration (NASA) Solar and Heliospheric Observatory (SOHO) observing the Sun and its dynamics.
- ❖ Aditya L1 will join this observatory to unravel the mysteries of the dynamics of the Sun.
- ❖ Launched on September 2, the craft will undergo five orbit-raising manoeuvres before being slingshot to the L1 point.
- ❖ The ship will coast for about four months before it reaches L1. At that stage, the thrusters will be fired to make the craft circle around the L1, placing it in what is known as a halo orbit around L1.
- ❖ From this vantage point, Aditya L1 can observe the Sun 24X7 using its four remote sensing payloads, and measure in-situ the various parameters of space weather.

To understand climate variability

- ❖ Like a heartbeat, solar activity is measured in terms of the number of sunspots.
- ❖ Sunspots are cooler regions on the Sun's surface which increase and decrease in a cycle of 11 years.
- ❖ When the Sun is active, the number of sunspots is in the hundreds, and at solar minimum, the numbers are nearly zero.
- ❖ Whatever changes we observe in the solar radiation, nearly 80% occur in the ultraviolet range.
- ❖ The Earth's upper atmosphere absorbs most of the solar UV rays. The absorbed energy affects the atmosphere's composition, temperature and other parameters.
- ❖ The Solar Ultraviolet Imaging Telescope (SUIT) developed by the Inter-University Centre for Astronomy & Astrophysics, will observe the UV radiation from different zones of the solar atmosphere.
- ❖ The onboard intelligence system will detect any sudden appearance of bright spots, such as solar flares on the disc.
- ❖ Observing the Sun using the SUIT will enable us to better understand climate variation on Earth.

Looking deeper

- ❖ At times, the Sun sneezes. Like a tongue of fire, a chunk of the corona suddenly accelerates and leaps into interplanetary space.
- ❖ Called Coronal Mass ejection (CME), this cloud consisting of billion tonnes of energetic plasma mixed with a solar magnetic field is hurled at 250 kilometres per second to 3,000 km/s.
- ❖ Usually, the corona is not visible in the glare of the radiant Sun, except during the brief moment of a total solar eclipse.
- ❖ However, solar physicists can create artificial eclipses in the solar telescope, called coronagraph, to observe the corona.
- ❖ The Visible Emission Line Coronagraph (VELC) developed by the Bengaluru-based Indian Institute of Astrophysics in close collaboration with the ISRO can peek as close as 1.05 solar radii, a region never imaged by any solar telescope.

Conclusion

- ❖ Earth's climate has definitely changed. Global warming is real. The data from SUIT and other papers of Aditya L1 will help us resolve the contribution of natural and anthropogenic factors driving climate change.

THE VARIOUS STRATEGIES OF VACCINE DIPLOMACY

Introduction

- ❖ Traditionally, Western powers have been the major donors of health aid while non-western nations have been the recipients. Aid of this kind has been a part of a country's diplomatic toolkit, to be deployed judiciously in pursuit of geopolitical goals. During the Cold War, for instance, the two big powers, the U.S. and the Soviet Union, both developed and delivered vaccines against small pox and polio, in what came to be known as 'vaccine diplomacy'.

Vaccine diplomacy

- ❖ During the COVID-19 pandemic, for the first time in history, three non-Western powers — Russia, China and India — dominated international vaccine diplomacy.
- ❖ These countries, which had long been recipients of health aid, finally made their debut on the world stage as vaccine inventors.
- ❖ Not only were they more proactive than Western powers in distributing vaccines to emerging markets, they did so at a time that was remarkable for two reasons — one, many countries were in desperate need of vaccines; and two, Western nations were hoarding vaccines.
- ❖ This provided an opening for non-Western powers to step in.
- ❖ Countries with an advantage in vaccine R&D would be more open to technology transfer; countries with greater manufacturing capability would be more likely to keep vaccine production within their borders than outsourcing it overseas; and countries with expansive distribution networks would prefer bilateral to multilateral distribution.

India's massive donations

- ❖ As for India, the paper notes that the country was producing 60% of the world's vaccines even before the pandemic.
- ❖ So India's vaccine diplomacy was characterised by mass-production of Western-invented vaccines, prompt bilateral donations, and large-scale sales to bilateral buyers and multilateral COVAX initiative.
- ❖ The "Western-invented" Covishield was the major currency of India's vaccine diplomacy, as it leveraged the massive capacity of SII, the world's largest vaccine producer.
- ❖ India quickly rolled out large scale bilateral programs called 'Vacciner Maitri' (Vaccine Friendship).
- ❖ With more than 90 countries swiftly approaching India, neighbouring countries got priority access to India's donations.
- ❖ One of India's largest donations was to Nepal (1.1 million doses), where India and China are competing over influence.
- ❖ Myanmar, which also shares a border with both India and China, was another big beneficiary of India's vaccine diplomacy.
- ❖ The paper notes two broad patterns in India's vaccine diplomacy: a 'neighbourhood first' policy, and a preference for a range of Caribbean and African states with sizeable populations of Indian diaspora.
- ❖ But geopolitical interest was not India's only consideration. Also important was the need to cover the cost of manufacturing.
- ❖ So, the sales versus donation conundrum was resolved. Thus India concentrated donations on countries with which it has strong geopolitical and economic ties, but it sold a much larger sum to relatively wealthy countries beyond its geopolitical reach.
- ❖ India's vaccine diplomacy, however, was interrupted by the second wave of COVID-19, which hit India in early April 2021.
- ❖ Facing skyrocketing domestic demand amid spiralling infection rates, India banned all vaccine exports starting mid-April. This provided an opportunity for Chinese manufacturers to step up and fill the gap,

Suggestions

- ❖ Governmental support for industry could be a game-changer — both in enhancing vaccine R&D capability and increasing production capacity.
- ❖ Both Russian and Chinese governments poured vast resources into vaccine R&D, but the Indian government did not.
- ❖ Similarly, though China's vaccine manufacturing capacity was initially moderate, the government poured in resources to help vaccine developers expand production and backed their marketing strategies abroad. In contrast, in India, SII and Bharat Biotech had to finance their own production without support from the Indian government.
- ❖ It was only in April 2021, amid the Delta wave, that the Indian government agreed to provide \$600 million to these two companies to expand production

Conclusion

- ❖ The slow and limited governmental support made it unavoidable for India to delay its promised vaccine delivery to COVAX and bilateral buyers by half a year. This has affected India's reputation as a reliable vaccine supplier.

CHANDRAYAAN-3 MISSION

- ❖ Chandrayaan-3 is India's third lunar mission and second attempt at achieving a soft landing on the moon's surface.
- ❖ The mission took off from the Satish Dhawan Space Center (SDSC) in Sriharikota on July 14, 2023, at 2:35 pm.
- ❖ It consists of an indigenous Lander module (LM), Propulsion module (PM) and a Rover
- ❖ **Objective:** developing and demonstrating new technologies required for Interplanetary missions.
- ❖ **Mission Objectives of Chandrayaan-3:**
 - ❖ To demonstrate Safe and Soft Landing on Lunar Surface
 - ❖ To demonstrate Rover roving on the moon
 - ❖ To conduct in-situ scientific experiments.

Recent Achievements by India:

- ❖ **India is a signatory to the US Artemis Accords:** A non-binding arrangement with NASA
- ❖ It explores the implementation of provisions of the Outer Space Treaty, 1967 and other international instruments.
- ❖ It establishes a political understanding regarding mutually beneficial practices for future use of outer space.
- ❖ The deepening of US-India engagements, particularly iCET — establishment of the US-India Civil Space and Commercial Space Working Groups

Global common:

- ❖ It is used to define those parts of the planet that fall outside the sovereignty of any state.
- ❖ It is a concept built upon the legacy of Grotius's idea of mare liberum (free sea)
- ❖ The term is used to describe supra-national and global resource domains in which common-pool resources are found.
- ❖ The UN identifies four "global commons", namely
 - ❖ High seas
 - ❖ Atmosphere
 - ❖ Antarctica
 - ❖ Outer space.

How is global common seen?

- ❖ When rooted in geopolitical or military relevance, it is generally viewed as an enabling concept.
- ❖ Security establishments across the world recognise domains beyond the national jurisdictions, including
 - ❖ high seas air space outside territorial bodies of a state outer space

- ❖ Others recognise outer space as a vital operational domain for keeping their nation safe while upholding international law.
- ❖ Global common” is viewed as a constraining concept based on the economic and commercial implications of shared resources
- ❖ It can be overused by some at the expense of others, regardless of national jurisdiction. “
- ❖ Commons” is seen as constraining because it is associated with notions of shared ownership, public governance or limitations on use.

Common heritage of mankind” (CHM):

- ❖ “Commons” is associated with the “**common heritage of mankind**” (CHM) concept as expressed in Article 11(3) Moon Agreement, 1979.
- ❖ CHM created a territorial status in which the Moon and celestial bodies are themselves not subject to national appropriation
- ❖ The fruits and resources of which are also deemed to be the property of mankind at large.
- ❖ CHM is not limited to outer space.

Agreements and disagreements:

- ❖ **The Moon Agreement:** This principle was codified as Article 136 of the United Convention on Law of the Seas, 1982.
- ❖ To some, the high seas beyond territorial waters is a “**global common**” allowing freedom of navigation and access to all (an enabling concept)
- ❖ Others refer to the deep sea bed as a “global common” (in a constraining sense).
- ❖ **Sputnik launch in 1957:** The US and the USSR ensured the adoption of UN General Assembly Resolutions 1721 A&B (XVI).

Way Forward

- ❖ **Outer space is a democratized domain:** Over 80 countries access outer space
- ❖ They derive benefits from space-based satellite services for every aspect of their national life
- ❖ **India is at a threshold it has never reached before:** This would be the time to play a significant part in determining the content and contours of a future international framework for the management of space resources.
- ❖ India must necessarily involve a close examination of the Moon Agreement 1979 (MA) which came into force in 1984.
- ❖ 18 states have ratified the MA (reduced to 17 after Saudi Arabia’s withdrawal comes into effect).
- ❖ Australia and Mexico have ratified MA and are signatories to the Artemis Accords.
- ❖ France and India are signatories to MA (not yet ratified) and also to the Artemis Accords.
- ❖ It will require a comprehensive understanding of the range of directly and indirectly applicable international law and other frameworks.
- ❖ It will require the participation of all government institutions.
- ❖ India has had and continues to have robust international cooperation space programmes, including multilateral and bilateral engagements with advanced space powers, and with those looking forward to advancing theirs.
- ❖ India must now contribute towards drawing up an international space resource management framework that balances competing objectives in pursuit of the use of outer space for peaceful purposes.
- ❖ India’s modest entry into the First Space Age followed by its many gains should be used to help the country tap the vast potential in the Second Space Age

WHY IS THE GOVERNMENT PUSHING FOR REGULATORY MECHANISMS FOR OTT SERVICES?

Context

- ❖ On July 7, the Telecom Regulatory Authority of India (TRAI) invited responses to a consultation paper it released on a regulatory mechanism for over-the-top (OTT) communication services. The paper also mentions selective banning of these services.

The underlying issue

- ❖ The discussion on the selective banning of OTT services came after a Parliamentary Standing Committee issued a notice to the Department of Telecom (DoT) to explore this option due to the unrest caused by these platforms which have mass reach and impact.
- ❖ It is important to note that only OTT communication services like WhatsApp, Signal, Meta, Google Meet, Zoom, X, etc. were discussed in the consultation paper and not the 'content' OTTs such as Netflix, Amazon Prime etc.
- ❖ Content regulation is an altogether different subject and it comes under the ambit of the Ministry of Information and Broadcasting (MIB) and not the TRAI.
- ❖ The TRAI has also asked stake holders to define OTT, and a proposal on cost-sharing mechanisms between Telecom Service Providers (TSPs) and OTT services.

The conflict between TSPs and OTTs

- ❖ Telecom Service Providers are of the opinion that OTTs should be regulated and charged because they use and thrive on the infrastructure built by operators over the years. Currently, they aren't.
- ❖ OTT communications services have led to erosion of revenues for the telcos.
- ❖ These platforms offer users an array of services, sending of Multimedia Messaging Services (MMS), instant messaging to voice and video calls, delivered over the internet.
- ❖ This circumvents the need for traditional telecom services, particularly voice calls and text messages, leading to a significant reduction in the revenue streams of telecom companies.
- ❖ OTT communication service providers neither contribute to the exchequer nor make investments like the TSPs in spread of network infrastructure in the country.
- ❖ The OTT communication service providers take a free ride on TSP funded networks without contributing to the setting up and maintaining digital infrastructure for access networks.

The demand

- ❖ There should be a policy framework to enable fair share contribution from large OTT service providers to telecommunication network operators based on assessable criteria like number of subscribers or data usage.
- ❖ To ensure fairness and compensate for the increased data demands, it is justifiable for OTTs to pay a fair and reasonable fair share charge to TSPs.
- ❖ The funds received by TSPs from OTTs will support the expansion of networks and enhance contribution to the exchequer, the COAI added.
- ❖ That is, all such OTT services should be governed by the same set of rules irrespective of whether they are provided by an operator on its own network or through the internet.

The argument for banning OTT services

- ❖ OTTs obtain the location of the customers and can easily bar access.
- ❖ Once the OTT communication services are under license this barring will be much easier to implement.
- ❖ TSP's networks are capable of selectively blocking the OTT subject to details like IP addresses provided by the Competent Authority.
- ❖ Government should consider source-level blocking so that the desired outcome may be achieved without any significant difficulties.

Way forward

- ❖ OTT providers should implement IT solutions that would allow them to swiftly suspend their services in case of an internet outage.

A WIN-WIN FOR ALL

Context

- ❖ The Digital India Programme had three main vision areas:
- ❖ Connectivity,
- ❖ Software and services on demand and

- ❖ Digital empowerment of citizens.
- ❖ Fortunately, the connectivity landscape has been transformed in the last seven years due to multiple factors like the boom in mobile telephony, 4G coverage, significant reduction in tariffs and increased smartphone penetration.

Recent rise in digitisation across different sector and concern

- ❖ Along with significant rise in digital connectivity and technologies, government's enabling policies like Net Neutrality and focus on building Digital Public Infrastructure (DPI), particularly Digital ID and UPI, have further contributed to the Digital India vision, resulting in a massive increase in digital transactions.
- ❖ However, this growth has also been accompanied by a huge surge in demand for data.
- ❖ Today, India's per capita data consumption stands at a whopping 19.5 GB per month and the total data volume transported by mobile networks is more than the mobile networks of US and China combined
- ❖ Thus, the gap between demand and affordable supply still remains quite wide, especially for poor households and rural India.

Government's initiatives to promote digital data availability (PM-WANI)

- ❖ The creation of inter-operable public Wi-Fi hotspots was one such idea proposed by TRAI in which would foster a shared infrastructure as a last-mile distribution of broadband in sachet-sized packages of Rs 5-10.
- ❖ The idea was successfully piloted and submitted to the Department of Telecom (DOT) as Wi-Fi Access Network Interface (WANI), in March 2017.
- ❖ As a result, government launched PM-WANI scheme. In this No licence or permit was needed for operations to start.
- ❖ Start-ups who had participated in the initial pilot started work. Then Covid brought everything to a grinding halt. Now, the operators, called Public Data Office Aggregators (PDOAs), have started work again.
- ❖ It has been a game changer as In the last year alone, more than 1.5 lakh Wi-Fi hotspot have been installed by Public Data Office Aggregators (PDOAs) and more than a million people are getting unlimited internet daily by paying just Rs 5-10.

PM-WANI is going to strengthen the India's digital infrastructure

- ❖ By introducing various entities such as PDO, PDOA, app providers, and a central registry, an open and scalable framework has been created.
- ❖ In the way UPI transformed the financial space in India, PM WANI is going to become a unique Digital Public Infrastructure in connectivity.
- ❖ This framework offers a compelling business opportunity for aggregators as it allows unbundling of internet distribution at the last mile, eliminating the need for additional licensing fees.
- ❖ It provides a robust foundation for delivering affordable internet access to a significant portion of society. Currently, India's home broadband penetration is one of the lowest in the world.
- ❖ PM-WANI presents a golden opportunity to accelerate high-speed unlimited internet penetration, bridging the digital divide and empowering communities nationwide.
- ❖ Moreover, many large Internet Service Providers are hesitant to enter underserved areas. This presents a golden opportunity for the PM-WANI framework to flourish. It also benefits ISPs and Telcos as they end up selling more bandwidth by making their end customers retailers.
- ❖ Therefore, by creating a win-win situation for all key stakeholders, PM-WANI also nurtures the growth of local nano entrepreneurs. These last-mile providers, found in small shops, local establishments, and even households, augment their monthly earnings while promoting internet usage.

Conclusion

- ❖ Therefore, PM-WANI needs to be promoted by all stakeholders. It is uniquely Indian in its approach of interoperability, openness, and scalability. Hopefully, it will accelerate like UPI and the other DPIs being built in our country.

Context

- ❖ India is to host the first-ever global summit on Artificial Intelligence (AI) this October. Additionally, as the Chair of the Global Partnership on Artificial Intelligence (GPAI), India will also be hosting the GPAI global summit in December. These events suggest the strategic importance of AI, as it is projected to add \$500 billion to India's economy by 2025, accounting for 10% of the country's target GDP.

The issue

- ❖ One area where India can assume leadership is how regulators address children and adolescents who are a critical (yet less understood) demographic in this context.
- ❖ The nature of digital services means that many cutting-edge AI deployments are not designed specifically for children but are nevertheless accessed by them.

The governance challenge

- ❖ Regulation will have to align incentives to reduce issues of addiction, mental health, and overall safety.
- ❖ In absence of that, data hungry AI-based digital services can readily deploy opaque algorithms and dark patterns to exploit impressionable young people.
- ❖ Among other things this can lead to tech-based distortions of ideal physical appearance(s) which can trigger body image issues.
- ❖ Other malicious threats emerging from AI include misinformation, radicalisation, cyberbullying, sexual grooming, and doxxing.
- ❖ The next generation of digital nagriks must also grapple with the indirect effects of their families' online activities.
- ❖ While moving into adolescence we must equip young people with tools to manage the unintended consequences.
- ❖ For instance, AI-powered deep fake capabilities can be misused to target young people wherein bad actors create morphed sexually explicit depictions and distribute them online.
- ❖ Beyond this, India is a melting pot of intersectional identities across gender, caste, tribal identity, religion, and linguistic heritage.
- ❖ Internationally, AI is known to transpose real world biases and inequities into the digital world.
- ❖ Such issues of bias and discrimination can impact children and adolescents who belong to marginalised communities.
- ❖ AI regulation must improve upon India's approach to children under India's newly minted data protection law.
- ❖ The data protection framework's current approach to children is misaligned with India's digital realities.
- ❖ It transfers an inordinate burden on parents to protect their children's interests and does not facilitate safe platform operations and/or platform design.
- ❖ Confusingly, it inverts the well-known dynamic where a significant percentage of parents rely on the assistance of their children to navigate otherwise inaccessible user interface and user experience (UI/UX) interfaces online.
- ❖ It also bans tracking of children's data by default, which can potentially cut them away from the benefits of personalisation that we experience online.

Shifting the emphasis

- ❖ International best practices can assist Indian regulation to identify standards and principles that facilitate safer AI deployments.
- ❖ UNICEF's guidance for policymakers on AI and children identifies nine requirements for child-centred AI which draws on the UN Convention on the Rights of the Child (India is a signatory).
- ❖ The guidance aims to create an enabling environment which promotes children's well-being, inclusion, fairness, non-discrimination, safety, transparency, explainability and accountability.
- ❖ Another key feature of successful regulation will be the ability to adapt to the varying developmental stages of children from different age groups.
- ❖ California's Age Appropriate Design Code Act serves as an interesting template.

- ❖ The Californian code pushes for transparency to ensure that digital services configure default privacy settings; assess whether algorithms, data collection, or targeted advertising systems harm children; and use clear, age-appropriate language for user-facing information.
- ❖ Indian authorities should encourage research which collects evidence on the benefits and risks of AI for India's children and adolescents.
- ❖ This should serve as a baseline to work towards an Indian Age Appropriate Design Code for AI.
- ❖ Lastly, better institutions will help shift regulation away from top-down safety protocols which place undue burdens on parents.

Conclusion

- ❖ As we move towards a new law to regulate harms on the Internet, and look to establish our thought leadership on global AI regulation, the interests of our young citizens must be front and centre.

REFORM CAN ADDRESS INDIA'S KIDNEY TRANSPLANT DEFICIT

Context

- ❖ India's organ shortage when it comes to kidneys is alarming. In 2022, over two lakh patients needed a transplant, but there were only about 7,500 transplants (about 3.4%).

The Need

- ❖ Due to the prevalence of diabetes, malnourishment, overcrowding and poor sanitation, there is a high prevalence of Chronic Kidney Disease (CKD) in India, affecting about 17% of the population.
- ❖ CKD often leads to end-stage renal disease (ESRD). A kidney transplant is often the best treatment for ESRD.
- ❖ Specifically, transplant is often better than alternatives on almost all dimensions that matter: quality of life, patient convenience, life expectancy, as well as cost-effectiveness.
- ❖ These are four main ways a patient can obtain a kidney. The first is to get a kidney from a deceased person. This is constrained due to a lack of donations, the particular conditions required on the nature of death, and the infrastructure needed to collect and store kidneys.
- ❖ The second is to request a relative or friend to donate. However, donor and recipient have to be compatible in terms of blood type and tissue type; such relative/friend donors are often incompatible.

A case for changes

- ❖ Thus, regulations for kidney exchange are needed as kidney exchange must often occur across family units.
- ❖ But the argument is that these regulations need urgent reform to unshackle two innovative kidney exchange methods: kidney 'swaps' and kidney 'chains'.
- ❖ Our research shows that there are barely any swaps and almost no chains in India. This is because of legal roadblocks. And this is a significant opportunity missed with terrible consequences.
- ❖ Consider swaps. Swap transplants are legally allowed in India with due permission, but only near-relatives are allowed as donor-recipient pairs.
- ❖ Exceptions to this restriction are Kerala, Punjab and Haryana, where High Court judgments have recently allowed non-near-relative donor-recipient pairs after verification.
- ❖ Further, unlike national, regional, and State lists for direct transplant from cadavers, there is no national coordinating authority for swaps. This is again a huge lost opportunity, since larger and more diverse pools make it easier to find compatible swaps.
- ❖ While there are occasional swaps in India, there are almost no kidney chains.
- ❖ The lack of kidney chains is possibly an even bigger opportunity missed than swaps.
- ❖ While participating in swaps, families demand nearly simultaneous operations of all donors and recipients since no one wants to lose a kidney without gaining one.
- ❖ But in chains, each patient first receives a kidney and only then does their relative donate.
- ❖ Thus, chains, compared to swaps, involve significantly lower hospital resources and uncertainty for participants.
- ❖ Needless harsh laws regulating swaps and chains have contributed to a proliferation of black markets for kidneys.

- ❖ These black markets endanger all their desperate participants since these operations are conducted 'off the books', without due legal and medical safeguards.

At a slow pace

- ❖ Reforms of kidney exchange laws have been slow.
- ❖ The Transplantation of Human Organs and Tissues Act 1994 set the ball rolling by recognising transplant possibility from brain-stem death.
- ❖ In the 2011 amendment, swap transplants were legalised, and a national organ transplant programme was initiated.
- ❖ The government's recent reforms (February 2023) allow more flexibility in age and domicile requirements while registering to obtain an organ.
- ❖ But these reforms leave the fundamental issue of inadequate kidney supply largely unaddressed.
- ❖ This is why it is beneficial to allow and encourage altruistic donation, non-near relative donation for swaps, and to improve the kidney-exchange infrastructure.

Conclusion

- ❖ India does not need to innovate in order to reform chains and swaps. Sufficient precedents have been set globally. India's real challenge, therefore, is to learn from and replicate such existing successful regulations to improve the lives of several thousands of citizens.



CivilsTap Himachal

ENVIRONMENT

EMERGING COUNTRIES NEED WOMEN-LED CLIMATE ACTION

Context

- ❖ Gender equality and environmental goals are mutually reinforcing and create a virtuous circle that will help accelerate the achievement of the SDGs [Sustainable Development Goals].

Impacts of climate change

- ❖ The impact of climate change is one that has profound consequences for humans and has emerged as one of the biggest global challenges in recent decades.
- ❖ The effects of climate change vary according to location, socioeconomic status, and gender.
- ❖ An International Labour Organization study (2019) said that in 2030, 2.2 percent of total working hours worldwide will be lost to high temperatures, a productivity loss equivalent to 80 million full-time jobs.
- ❖ The United Nations (2009) highlighted that across genders, women are considered to be highly vulnerable and disproportionately affected by climate change than men to the impact of climate change.

Felt more in low-income countries

- ❖ However, women in developing and less developed countries (especially in low-income areas) are more vulnerable to climate change because of their dependence on natural resources and labour-intensive work for their livelihood.
- ❖ Women are more likely to live in poverty than men, which is just one of several social, economic, and cultural variables that makes them more susceptible to the effects of climate change.
- ❖ Women from low-income households are more at risk because they are more responsible for food, water, and other homely unpaid work.
- ❖ Women may be at increased risk for health and safety because they must travel long distances every day to collect water and fuel.
- ❖ This is why climate change has a disproportionate effect on rural women.
- ❖ Women in low-income countries (predominantly South Asia and sub-Saharan Africa) engage in climate-vulnerable occupations such as farming and other labour-intensive work.
- ❖ According to the ILO, over 60% of working women in southern Asia and sub-Saharan Africa are still in agriculture, where they are often underpaid and overworked.
- ❖ Despite being the backbone of the food production system, women own only about 10% of the land used for farming.

Gender-specific issues

- ❖ According to a UN study, most (80%) of those displaced by climate-related disasters are women and girls.
- ❖ When women are uprooted, they are more susceptible to prejudice and exploitation.
- ❖ For instance, after the earthquake in Nepal in 2015, the United Nations Population Fund (UNFPA) found women were more exposed to trafficking and exploitation.
- ❖ Separation from social networks, a higher risk of gender-based violence, and decreased access to employment, education, and essential health services, such as sexual and reproductive health care and psychosocial support, are just some gender-specific issues women face.

Impacts on agriculture and food security

- ❖ Climate change impacts agricultural productivity negatively and significantly.
- ❖ Heat stress affects workers a lot in this sector, especially in South Asia and Africa.
- ❖ Changing precipitation patterns and more frequent extreme weather events are just the beginning of the problems.
- ❖ Their effects on crop production and food security fall disproportionately on these people, who already face significant challenges in obtaining resources, expertise, and technology.
- ❖ Women engaged in agriculture do not have access to quality inputs and possess low education and technical knowledge.

- ❖ Various studies also reflect how flooding has increased water scarcity and also violence against and the exploitation of women.

Invest in women's education, training

- ❖ According to estimates, 130 million people could be pushed into poverty by 2050 due to climate change risks, natural disasters, and food inflation, impacting women's inequality.
- ❖ Investments in women's education, training, and access to resources are essential if we are to be resilient to the impact of climate change.
- ❖ Reduce the negative impacts of climate change on people's living standards by teaching them how to practise sustainable agriculture, water management, and energy generation.
- ❖ For example, in India, the Self-Employed Women's Association (SEWA) teaches women farmers how to respond to shifting climate patterns to support themselves better financially.

Conclusion

- ❖ Women's participation in climate policy decision-making at all levels is crucial for effective climate change mitigation and adaptation strategies as well as getting decent employment. As women face greater risks in climate change, gender parity in decision-making bodies is essential.

CRIMINALISING WILFUL ENVIRONMENTAL DAMAGE IS HARDER THAN IT SOUNDS

Context

- ❖ While many countries are mulling incorporating ecocide into their respective legal frameworks, debate continues on how it can be criminalised, identifying the burden of proof, and – especially in India – how it will sit with other laws that keep the door open for environmental harm on various grounds.

Defining Ecocide and Ecocide

- ❖ Ecocide, derived from Greek and Latin, translates to “killing one's home” or “environment”.
- ❖ Such ‘killing’ could include port expansion projects that destroy fragile marine life and local livelihoods; deforestation; illegal sand-mining; and polluting rivers with untreated sewage.
- ❖ Ecocide constitutes the unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.

Ecocide – A crime

- ❖ Ecocide is a crime in 11 countries, with 27 others considering laws to criminalise environmental damage that is wilfully caused and harms humans, animals, and plants.
- ❖ The European Parliament voted unanimously this year to enshrine ecocide in law.
- ❖ Most national definitions penalise “mass destruction of flora and fauna”, “poisoning the atmosphere or water resources” or “deliberate actions capable of causing an ecological disaster.”
- ❖ None of the existing international criminal laws protect the environment as an end in itself, and that's what the crime of ecocide does.
- ❖ The movement also responds to harsh climate realities. Over a third of the earth's animal and plant species could be extinct by 2050. Unprecedented heat waves have broken records worldwide. Changing rainfall schemes have disrupted flood and drought patterns.

The purpose

- ❖ The purpose of ecocide laws is to define the “significant harm” of environmental damage, together with accountability and liability.
- ❖ Deforestation of the Amazon, deep-sea trawling or even the catastrophic 1984 Bhopal gas disaster could have been avoided with ecocide laws in place, according to Stop Ecocide International.
- ❖ These laws could also hold individuals at the helms of corporations accountable.
- ❖ That something is morally questionable usually doesn't hinder investment.
- ❖ Laws provide boundaries and sanctions for investment, as no company or organisation – such as the World Bank – would want to invest in something potentially criminal.

- ❖ Ecocide laws could also double up as calls for justice for low- and middle-income countries disproportionately affected by climate change.

India's stance

- ❖ Some Indian judgments have affirmed the legal personhood of nature by recognising rivers as legal entities with the right to maintain their spirit, identity, and integrity.
- ❖ More importantly, some others have used the term 'ecocide' in passing but the concept hasn't fully materialised in law.
- ❖ India's legislative framework vis-à-vis environmental and ecological governance includes the Environmental (Protection) Act 1986, the Wildlife (Protection) Act 1972, and the Compensatory Afforestation Fund Act (CAMPA) 2016, as well as separate Rules to prevent air and water pollution.
- ❖ According to Prof. Siddiqui, these separate laws have to be consolidated into a unified code and institutions have to be streamlined so that debates like the one about ecocide and rights of nature find "their proper way through legal channels.
- ❖ Notably, the National Green Tribunal, India's apex environmental statutory body, does not have the jurisdiction to hear matters related to the Wildlife (Protection) Act 1972, the Indian Forest Act 1927, and other State-enacted laws.
- ❖ As a result, mining of sand on the banks of the Chambal river or the Himachal floods would qualify as being environmental crimes under the current articulation

Way forward

- ❖ Even before ecocide laws come up internationally, India needs to first bring its [environmental] laws in tune with the idea of ecocide.

WHAT IS HEAT INDEX AND WHY IS IT IMPORTANT TO MEASURE?

Context

- ❖ Earlier in August, Iran recorded a scorching heat index of 70 degrees Celsius (°C) in the coastal part of the country, a metric at which survival of life is unfathomable, if not impossible. The country had also declared public holidays on account of "unprecedented heat,"

Heat index

- ❖ Heat index, also known as apparent temperature, is a measure of how the temperature feels to humans.
- ❖ Relative humidity is an important factor that determines heat index, along with air temperature.
- ❖ A complex formula to calculate heat index was published by Dr. Robert Steadman, a professor published two papers titled The Assessment of Sultriness – Part I: A Temperature-Humidity Index Based on Human Physiology and Clothing Science, and Part II: Effects of Wind, Extra Radiation and Barometric Pressure on Apparent Temperature, both describing his calculations of heat index.
- ❖ Dr. Steadman's study considers a typical adult human of either sex, with a height of 1.7 metres and a weight of 67 kg.
- ❖ Dew point, which is the temperature at which gas is transformed into a liquid state, is an important factor in the calculation of heat index.
- ❖ In terms of atmospheric moisture, it's the temperature at which air cannot hold any more water vapour, and droplets of water begin to form.
- ❖ Dr. Steadman used 14 °C as the dew point in his calculations

Importance to measure the heat index

- ❖ Hot air can hold more moisture than cold air.
- ❖ Therefore, when temperature rises, the air's capacity to hold moisture also increases, thus affecting the apparent temperature or heat index.
- ❖ Humidity is typically higher during heat waves — which is why the heat index at the time is usually higher than just the temperature because humid air can feel hotter to humans.

Impacts of high humidity on human body

- ❖ High humidity can lead to heat stress, meaning the body is unable to get rid of excess heat.
- ❖ Humans usually maintain a core temperature in the range of 36.1 to 37.2 °C.
- ❖ When the body is unable to get rid of excess heat, the heart rate increases due to a rise in core temperature, leading to heat-related exhaustion and rashes, among other symptoms.
- ❖ It can also be fatal if not addressed promptly.
- ❖ At high temperatures, the human body can lose excess heat through perspiration and cool itself.
- ❖ But when humidity is high as well, it is difficult to sweat and then for that sweat to evaporate because the air around is already saturated with moisture. This makes it difficult for the body to lose heat.
- ❖ On the other hand, if the humidity is low, evaporation of sweat is easier, thus making the apparent temperature feel close to the actual air temperature.
- ❖ This is why a measure of heat index is more useful than just the temperature to gauge the impact of heat on humans.

Way forward

- ❖ A heat index value of 67°C or above can be extremely dangerous for people and animals who have direct and prolonged exposure,
- ❖ With climate change, it is likely that we will continue to witness record-breaking heat index values across the world.
- ❖ We will need to prepare and adapt to such extreme conditions by investing in early warning, making changes to work timings, and finding sustainable cooling solutions.

CLIMATE PHENOMENA AND FOOD SECURITY

Context

- ❖ There has been a series of disruptive weather and climate phenomena in India this year, demonstrating the complexity of our precipitation system.

About

- ❖ There was the Western disturbance, which usually brings much-needed moisture from European seas to the western Himalaya and parts of northern India in the winter and spring.
- ❖ But this year, the Western disturbance lived up to its name and remained active late into the summer, snapping at the heels of the southwest monsoon.
- ❖ The widespread destruction of infrastructure and loss of life due to landslides and flooding in the western Himalaya and northern India raised concerns about the sustainability and resilience of our development projects in the mountains and floodplains.

An El Niño phase

- ❖ Climate-linked warming is likely to weaken winter precipitation from the Western disturbance and shift it to more intense rain events. If this happens later into the summer, its consequences will be of great concern.
- ❖ Moreover, then came evidence that an El Niño phase of the quasi-periodic El Niño Southern Oscillation (ENSO) — a phenomenon in the eastern and central tropical Pacific Ocean — was intensifying and likely to affect the southwest monsoon.
- ❖ When an El Niño affects the southwest monsoon, another ocean-atmosphere phenomenon in the Indian Ocean — called the positive-phase Indian Ocean Dipole (IOD) — could balance the consequences.
- ❖ Dynamic regression models have suggested that 65% of the inter-annual variability of the southwest monsoon, over many decades, can be attributed to the combined effects of ENSO and the IOD.

El Niño and food security

- ❖ **Agriculture depends on two types of water** — green water which is rain-fed soil moisture tapped by food and cash crops, eventually transpiring into the atmosphere and blue water which is the water in rivers, lakes, reservoirs, and groundwater.

- ❖ The latter is the basis for irrigation in agriculture, apart from drinking and industry use supply, and maintains ecological flows in rivers.
- ❖ The El Niño and other climate phenomena affect rainfed agriculture in many ways, from delaying the start of rains, and affecting sowing, to hot temperatures that may negatively influence plant growth and soil moisture.
- ❖ Despite investments in dams, reservoirs, and irrigation systems, around half of the cultivated area in India depends on green water, not blue water.
- ❖ Even in irrigated areas, many dominant crops require green water for different extents.
- ❖ Many staple crops like tur dal, soybean, groundnut, and maize also rely considerably on green water at this time.

The Response

- ❖ In terms of agriculture and food security, there is now an emphasis on reducing dependence on water-intensive crops, with millets being the crops of choice.
- ❖ Shifting to less water-intensive crops may reduce vulnerability of our food systems to phenomena like El Niño.
- ❖ There are several adaptations and alternative crop strategies available which include shifting to millets and alternative varieties of dominant cereals and advisories to farmers to switch to crops with shorter growing cycles.
- ❖ The government, both at the Centre and in the States, along with farmers, benefit from forecasts of phenomena like El Niño and their impact on the monsoon, and improvements in short-term weather forecasts and early warning systems for both intense rain and dry spells.
- ❖ Based on decades of experience, it is clear that alternative short-term and long-term management of our dams and reservoirs is required to reduce the risk of dam-based flood disasters and ecological damage to aquatic ecosystems.

Conclusion

- ❖ We should base our adaptation plans on the idea that current trends will continue. It's possible that as warming increases, total rainfall in parts of India may increase but the share of extreme rain events may go up.

DISENTANGLING THE 2030 GLOBAL RENEWABLE ENERGY TARGET

Context

Renewable energy:

- ❖ They are natural and self-replenishing, and usually have a low- or zero-carbon footprint.
- ❖ Examples of renewable energy sources:
 - ❖ Wind power
 - ❖ Solar power
 - ❖ Bioenergy (organic matter burned as a fuel)
 - ❖ Hydroelectric including tidal energy.

Renewable energy current status:

- ❖ Global installed capacity of renewable energy sources (RES)(2021)for electricity generation: It was 3026 GigaWatts (GW), or 39% of the total capacity from all sources.
- ❖ In total electricity generation the contribution by RES was only 28%.
- ❖ More than half the RE generation was from hydropower, while solar (13%) and wind (23%).
- ❖ It accounted for about 36% of RE generation, that is 10% of generation from all sources.

Target of Tripling RE capacity by 2030:

- ❖ It implies a target of about 9000 GW, which is more than the total installed capacity from all sources in 2021
- ❖ Adding about 6000 GW of RE capacity between 2022 and 2030.
- ❖ Most of this capacity is expected to come from solar and wind.

- ❖ Capacity utilization factor of 25% for solar and wind combined: It implies the generation of about 13,000 TWh of electricity from RES.
- ❖ If growth in global electricity demand is at the pre-COVID-19 decade average of 2.6%: The target of tripling RE capacity implies 38% of total global electricity production from RES.

Regionally differentiated energy needs:

- ❖ Electricity demand across countries is highly differentiated.
- ❖ The rates of growth vary for countries at different stages of development.
- ❖ Electricity consumption between 2010 and 2019 in China and India grew annually at 6(six point six)% and 6.3(six point three)%, respectively
- ❖ A 3(zero point three)% decline in the European Union (EU) and a minimal 0.12(zero point one two)% growth in the United States.
- ❖ Any substantial RE addition in the EU and the U.S. must come from an accelerated phaseout of their fossil fuel use by 2030.
- ❖ US and EU: Only 21% of the electricity in the U.S. and 37% in the EU comes from RES (including hydro and biomass).

How different countries will fulfill Energy demands?

- ❖ US: If the U.S. does not phase out its existing fossil fuel capacity
- ❖ It will need only about 26 GW of new RE capacity to meet additional demand,
- ❖ Its share of the tripling target of an additional 6000 GW by 2030, would be only a measly 4(zero point four)%.
- ❖ India would need about 717 GW of RE capacity to meet additional demand.
- ❖ Its share of the tripling target would be 12%.
- ❖ If all the fossil fuel-based electricity production of the U.S. and the EU is phased out: They would need to add about 1565 GW and 538 GW of additional RE capacity, respectively.
- ❖ with a full phase-out of fossil fuel-based capacity: S. and the EU would account for more than a third of the new capacity.
- ❖ It will allow developing countries a less onerous transition in the energy sector.

International Renewable Energy Agency (IRENA) report:

- ❖ It calls for **“total renewable power capacity to more than triple by 2030, compared to 2022 levels, to over 11 TW globally”**.
- ❖ IRENA’s scenario, underlying the proposed COP28 target, is very close to the first, highly inequitable scenario.
- ❖ **IRENA report:** Most of the non-RE capacity to be added by 2030 is in developing regions.
- ❖ By 2030, 80% of power generation capacity in Sub-Saharan Africa is to be from RE sources, as compared to only 70% for the EU.
- ❖ The EU and Sub-Saharan Africa are projected to add about the same amount of RE capacity by 2050.
- ❖ The non-RE capacity in the EU continues to be more than four times that of Sub-Saharan Africa.
- ❖ **India:** India needs to exceed even the very ambitious 500 GW mark by 2030.

Issues with the report:

- ❖ **Equity:** Lack of equity apart
- ❖ Such absolute projections of installed capacity suffer from the fundamental problem of divorcing capacity addition from growth in energy demand.
- ❖ IRENA itself recognises that relative targets are inherently less risky as they are less dependent on demand growth matching expectations.
- ❖ The entire burden is on developing countries.
- ❖ The enormous increase in RE capacity is not possible without matching non-RE capacity for stability of supply
- ❖ The availability of viable storage options that are as yet nowhere near the scale envisaged by such ambitious targets.
- ❖ Finding the resources to build national grids adequate for their development needs at such levels of scaling up of RE capacity

- ❖ It will pose additional challenges, given the inability to reach even the minimal annual target of \$100 billion of climate finance covering all sectors.

Way Forward

- ❖ When the Prime Minister announced at COP26 that India would increase its ambition to 500GW from non-fossil fuel sources by 2030. President made no such promise or declared any renewable energy target.
- ❖ Apart from a general announcement (not committed under the Paris Agreement) to decarbonise the energy sector by 2035.
- ❖ The EU too has only a relative target, though an ambitious sounding goal of 40% of final energy consumption from renewable sources by 2030, but certainly not absolute.
- ❖ For both the U.S. and the EU: The targets are essentially market signals, which the governments will promote, but are not guaranteed by government intervention as in the developing countries.
- ❖ Developing countries at COP28, especially India, should consider the tripling global RE capacity target only if the North commits to absolute targets domestically, that are equitable and commensurate with their responsibility.
- ❖ An update of their Nationally Determined Contributions under the Paris Agreement.

THE COMPLEX PATH TO BIOFUEL SUSTAINABILITY

Biofuels

- ❖ Any hydrocarbon fuel that is produced from an organic matter (living or once living material) in a short period of time (days, weeks, or even months) is considered a biofuel.
- ❖ Biofuels may be solid, liquid or gaseous in nature.
- ❖ **Solid:** Wood, dried plant material, and manure
- ❖ **Liquid:** Bioethanol and Biodiesel
- ❖ **Gaseous:** Biogas
- ❖ These can be used to replace or can be used in addition to diesel, petrol or other fossil fuels for transport, stationary, portable and other applications.
- ❖ They can be used to generate heat and electricity.
- ❖ Some of the main reasons for shifting to biofuels are the rising prices of oil, emission of greenhouse gases from fossil fuels and the interest in obtaining fuel from agricultural crops for the benefit of farmers.

Different Categories of Biofuels:

Biofuels in India:

- ❖ In India, biofuel is synonymous with first-generation (1G) ethanol, which is primarily sourced from food crops.
- ❖ The policy target in India of achieving 20% ethanol blending with petrol (E20) by 2025-26 is expected to be met almost entirely by 1G ethanol made from sugar cane and foodgrains.
- ❖ Second-generation (2G) ethanol made from crop wastes and residues.
- ❖ It is unlikely to contribute much to achieving this target due to several challenges related to the feedstock supply chain and scaling up.

Growing a crop for energy may not be a sustainable strategy for India:

- ❖ India's crop yields have already stagnated, and global warming is expected to reduce yields
- ❖ The same area under cultivation (arable land) will produce less with time but will need to suffice for a growing population.
- ❖ Strategy to meet blending targets cannot depend on surplus crop production.
- ❖ University of Michigan Study: It projected that the rates of groundwater depletion could triple during 2040-81 compared with the current rate.
- ❖ This is attributable to temperature rise and the resultant increase in crop water requirements.
- ❖ With such limited resources, food production should be prioritized over fuel.
- ❖ The agriculture sector is one of the hardest-to-abate in terms of direct greenhouse gas (GHG) emissions.

- ❖ Increasing GHG emissions from this sector for motor fuel production in order to decrease GHG emissions from the transport sector.
- ❖ It is an unnecessary balancing loop that would achieve little net benefit.

Steps that need to be taken:

- ❖ The ethanol blending policy has been a good strategy to deal with the surplus sugar production.
- ❖ For Surplus sugar production: reduce surplus sugarcane cultivation.
- ❖ Increasing farmer income is often waved as a white flag but sugarcane being a remunerative crop has more to do with government intervention.
- ❖ Any unassuming crop could be made as remunerative as sugar cane if so desired.
- ❖ 'Sustainable' biofuels need to be produced from crop residues and other wastes, with low water and GHG footprint.
- ❖ The Global Biofuels Alliance that was formed at the G-20 Summit in New Delhi is expected to strengthen the development of sustainable biofuels, in addition to promoting ethanol uptake.

ENVIRONMENTAL HUMANITIES: THE NEED TO EXPAND OUR UNDERSTANDING OF NATURE

Introduction

- ❖ The environment, from an academic point of view, has for centuries been understood from the lens of science. Scholars and experts have explored issues related to ecology and the environment through a utilitarian understanding of nature. While studies around the relationship between humans and nature have been more forthcoming in the last few decades, the field of environmental humanities is relatively recent.

Bias against 'soft sciences'

- ❖ Positioning themselves as scholars working on environmental humanities in a science and technology institute where the discipline of humanities and social sciences is part of their coursework.
- ❖ The authors explain how the mere introduction of humanities as a chapter would not help remove the dichotomy between the sciences and the bias against the **"soft sciences"**.
- ❖ The authors explain that instead of looking at science as the only solace to providing solutions to environmental issues, disciplines of humanities and social sciences must also be taken seriously to understand indigenous epistemologies that broaden our understanding of nature.
- ❖ The nationalist project such as the Indian Knowledge Systems is dangerous as it is a mere replacement for the Western understanding of nature.
- ❖ It lacks the multitude of narratives and perspectives from various social and marginalised groups that discuss the entanglement of human beings with the environment.

The nation and nature

- ❖ In India, nature has been considered intrinsically connected to society and culture.
- ❖ The nation is seen through the lens of nature, ecology or as a sense of place.
- ❖ There are two dominant understandings of a nation. The first one considers the nation as one place where nature is universal to its citizens as an ecological reality.
- ❖ Ecological nationalism is used to justify the utilisation or restriction of nature.
- ❖ The second understanding goes beyond the unitary sense of nation or nationalism and finds multiple perspectives that define the nation in connection to nature — as the affiliation to a piece of land and to its people who have various cultural identities. It is a sense of belonging, despite diverse notions about the ecology and environment.
- ❖ In looking at the environment as a physical entity meant to be exploited according to man's wishes, neo-liberal establishments have separated people's indigenous experiences and narratives from our understanding of nature.
- ❖ The dominant understanding of the environment while using gender, caste and tribal experiences as case studies, still largely remains androcentric and Brahminical, according to the authors.

Indigenous narratives on nature

- ❖ The relationship that Dalits or tribal communities have with the environment is complex and much deeper than dominant narratives.
- ❖ While they have been given limited access to space, land and water due to the exclusionary practices that persist, owing to the caste system, they have a stronger connection with nature as they consider the environment to have agency and influence.
- ❖ Such narratives reject the reductionist attitude towards ecology/ environment that exists among mainstream understandings of the concept.
- ❖ Therefore, it is essential to incorporate the perspectives of different marginalised communities, such as those based on gender, caste, and tribal identities, into discussions within academic and policymaking circles to challenge the monopolistic understanding of the environment.

Way forward

- ❖ Environmental humanities is an open-ended discipline that constantly evolves and continually redefines the perception of the environment.
- ❖ In incorporating narratives about the interplay between nature and diverse communities through stories of rivers, landscapes, plants, animals, and the communities' perspectives and ecological wisdom, the discipline enriches our understanding of the environment and helps us re-evaluate conventional notions of nature.

KEEP CALM

Context

- ❖ Enormity of climate change is no excuse to resort to risky mitigation strategies.

About

- ❖ India had its rain-wise driest August in a century this year.
- ❖ While scientists are yet to link this anomaly with the chaotic effects of climate change, it underscores the constant threat of disrupted weather, the resulting consequences for the economy, and the importance of climate mitigation.
- ❖ One of the more desperate, and dangerous, ideas to have emerged from this impetus is solar radiation management (SRM)

SRM

- ❖ It is to block some of the incoming solar radiation to cool the earth's surface.
- ❖ SRM's dangers emerge from the fact that it interferes with natural mechanisms with unavoidable planet-wide effects.
- ❖ For example, if an SRM experiment by one country leads to more rain over the Horn of Africa than expected, it could trigger a locust swarm that eventually destroys crops in Pakistan and India.
- ❖ There is currently no mechanism that holds a geoengineering government accountable to consequences beyond its borders nor through which affected countries can appeal for restitution.
- ❖ There has also been little research on understanding how the world's myriad weather systems affect each other and their relative sensitivities to interventions such as SRM.

The issues

- ❖ This is why the report of the Climate Overshoot Commission, released last week, calls for more research to close crucial scientific and governance gaps before any deliberations on the implementation of SRM-like technologies.
- ❖ The commission was constituted by geoengineering researchers to assess ways to accelerate emission cuts.
- ❖ But while the report is careful to acknowledge that the scientific community does not understand SRM enough to attempt a deployment, even in experimental fashion, it also argues for retaining SRM in the mix of potential climate mitigation solutions.
- ❖ This is buttressed by appeals to lack of time as the earth's surface is poised to warm past the 1.5°C threshold enshrined in the Paris Agreement in the next decade.

- ❖ This is a precarious suggestion because even less controversial, but nonetheless problematic, mitigation technologies such as carbon capture take resources, focus, and political will away from the most effective strategy — cutting emissions — and increase emissions limits.
- ❖ SRM will only amplify this dilution. The commission also errs by claiming to act for the interests of developing countries at a time when corporate and political actors have hijacked their 'room to develop' to pursue economic growth at the expense of climate justice.

Way forward

- ❖ The enormity of climate change requires quick and decisive action, but when better solutions have not been implemented as well as they can be, and while there is still time to do so, it is disingenuous to contend that more high-risk solutions should remain on the table.

WITH CLIMATE CHANGE, TACKLING NEW DISEASE SCENARIOS

Context

- ❖ In its latest report released this March, the Intergovernmental Panel on Climate Change (IPCC) delivers a **stark warning**: climate change heightens the global risk of infectious diseases.

Climate change, more infections

- ❖ Habitat loss forces disease-carrying animals to encroach upon human territory, increasing the risk of human-animal interaction and the transfer of pathogens from wildlife to humans.
- ❖ Viruses which do not harm animals can be fatal for humans.
- ❖ Nipah virus, which has been causing outbreaks in Kerala for many years now, is a good example.
- ❖ Over half of all-known infectious diseases threatening humans worsen with changing climate patterns.
- ❖ Diseases often find new transmission routes, including environmental sources, medical tourism, and contaminated food and water from once-reliable sources.
- ❖ This dynamic introduces invasive species and extends the range of existing life forms.
- ❖ Both these trigger upheavals in ecosystems that are complex and confound ecologists and epidemiologists to predict outbreaks.
- ❖ Human-induced climate change is unleashing an unprecedented health vulnerability crisis.
- ❖ India, in particular, has felt the ominous impact, with early summers and erratic monsoons causing water scarcity across the Gangetic plains and Kerala.
- ❖ These climatic shifts are manifesting in severe health crises, including a dengue epidemic in Dhaka (Bangladesh) and Kolkata and the Nipah outbreak in Kerala.

Surveillance and reporting

- ❖ Changed disease scenarios require a revision of strategies to detect and deal with them.
- ❖ The Integrated Disease Surveillance Programme (IDSP) was rolled out in a few States in 2007.
- ❖ From reporting 553 outbreaks in 2008, it last reported 1,714 in 2017.
- ❖ It was phased out in favour of a new, a web-enabled, near-real-time electronic information system called Integrated Health Information Platform (IHIP).
- ❖ The current design of surveillance is not adequate for the emerging disease scenario.
- ❖ Mitigating the spread of climate change-induced diseases requires safeguarding ecosystems, curbing greenhouse gas emissions, and implementing active pathogen surveillance.
- ❖ A unified approach, termed One Health which integrates monitoring human, animal, plant, and environmental health, recognises this interconnectedness.
- ❖ This approach is pivotal in preventing outbreaks, especially those that originate from animals.
- ❖ It encompasses zoonotic diseases, neglected tropical diseases, vector-borne diseases, antimicrobial resistance, and environmental contamination.
- ❖ India must launch One Health and infectious disease control programmes by building greater synergies between the Centre and States and their varied specialised agencies.
- ❖ Animal husbandry, forest and wildlife, municipal corporations, and public health departments need to converge and set up robust surveillance systems.

- ❖ More importantly, they will need to build trust and confidence, share data, and devise logical lines of responsibility and work with a coordinating agency.
- ❖ So far, the Office of the Principal Scientific Adviser to the Prime Minister has been taking this lead but with new World Bank and other large funding in place, this will need greater coordination and management.

'Disease x' and beyond

- ❖ Globally, there is an obsession with the enigmatic "disease X," but it is the familiar annual cycles of known agents such as influenza, measles, Japanese encephalitis, dengue, diarrhoea among others that will continue to test the public health system.
- ❖ Climate change is not limited to infectious diseases. It also exacerbates injuries and deaths from extreme weather events, respiratory and cardiovascular diseases, and mental health issues.

Conclusion

- ❖ The re-emergence of Nipah in Kerala is a wake-up call, that mere biomedical response to diseases is inadequate. In the face of a changing climate and the growing threat of infectious diseases, protecting ecosystems, fostering collaboration, and embracing the One Health paradigm are our best defences.

WHY ARE TIGERS DYING IN NILGIRIS DISTRICT

Context

- ❖ A total of 10 tigers (six cubs and four adults) have died in the Nilgiris since the middle of August. The inability of the state forest department to trace the whereabouts of the two mother tigresses has raised concerns among conservationists about the welfare of the animals.

The instances

- ❖ The first reported tiger deaths occurred on August 16 in the buffer zone of the Mudumalai Tiger Reserve (MTR) in Siriyur.
- ❖ After conducting a postmortem on the remains, forest department officials said that they suspect that the cubs, believed to be only two weeks old, could have died due to starvation or umbilical infection.
- ❖ The second death was suspected by the officials due to injuries after fighting with another animal. Another suspected incident of the tigers, a sub-adult, was found with injury marks, indicating that it too died due to a fight with another animal.
- ❖ After an investigation, a man was arrested for poisoning the carcass of the cow in retaliation for the tiger hunting the animal.

The concern

- ❖ In February this year, the forest department arrested four poachers from Rajasthan who had allegedly poached a tiger in the areas surrounding a few kilometres away from where the two tigers were found dead.
- ❖ In addition, the inability of the forest department to track down the two mothers of the six tiger cubs that died in Siriyur and Kadanad has raised concerns over their well-being.
- ❖ Camera traps and tiger trackers continue to look for the animals, but with little luck.
- ❖ One of the theories put forward by senior forest department officials is that the high density of tigers in the Mudumalai-Bandipur-Nagarhole complex of the Nilgiri Biosphere Reserve is pushing populations into the surrounding habitats in the Mukurthi National Park, Nilgiris and Gudalur forest divisions.
- ❖ This leads to increased competition between animals and more fighting, resulting in more deaths.
- ❖ Conservationists worry that this increase in population could lead to more negative human-animal interactions in the near future.
- ❖ They emphasise the need to regenerate degraded habitats that can be re-colonised by the tigers' prey such as Sambar, spotted deer and the Indian gaur.

The response

- ❖ To allay fears that poachers could be targeting tigers, the forest department plans to set up anti-poaching camps in six forest ranges surrounding the Mukurthi National Park.

- ❖ There are also plans to begin annual monitoring of tiger populations in the Nilgiris Forest Division, with the population size, range of each individual animal and other parameters to be recorded for better management.
- ❖ They have also increased perambulation of areas surrounding key tiger habitats in Mukurthi and Mudumalai.

Conclusion

- ❖ The process of tiger conservation should be more dynamic and compatible with the future possibilities of climatic changes as well.





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