

REGENT EDUCATION & RESEARCH FOUNDATION

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GENERAL STUDIES - I

Social Issues

Marital Rape

The issue of **marital rape** in India has become a significant topic of legal and social debate. The Indian Penal Code (IPC), specifically **Exception 2 of Section 375**, exempts husbands from being prosecuted for **non-consensual sexual acts** with their wives, provided the wife is not under 18

years of age. This exception is now being challenged in court as a violation of women's **fundamental rights**.

History and Genesis of Marital Rape Exception -

- The **Marital Rape Exception** has its roots in **English common law**, particularly in the **doctrine of coverture**, which regarded a married couple as a single legal entity.
- This effectively meant that a wife did not have the legal right to refuse her husband's sexual advances.
- The British jurist **Matthew Hale** argued in the 1700s that a husband could not be guilty of raping his wife, reasoning that by marriage, a woman gave irrevocable consent to sex.
- Though England abolished this exception in 1991, India continues to uphold this provision.
- In 2017, India raised the age of consent for marital intercourse from 15 to 18 years following the Supreme Court's ruling in **Independent Thought vs. Union of India**.
- However, the overall exception still persists in Indian law.

Current Legal Framework -

- **Section 375** of the IPC defines rape and includes provisions for when sexual intercourse qualifies as non-consensual.
- However, Exception 2 of this section provides immunity to husbands for non-consensual acts with their wives, provided they are over 18 years of age.
- Other legal provisions such as **Section 85 of the Bharatiya Nyaya Sanhita (BNS)** and the **Protection of Women from Domestic Violence Act (2005)** offer some protection for married women but are limited in scope and primarily address cruelty, not sexual violence.

Arguments against the Marital Rape Exception -

- **Violation of Fundamental Rights** —
- **Article 14** — The MRE creates two classes of victims—married and unmarried women.
- Unmarried women receive full legal protection against sexual assault, while married women do not, violating the principle of equality before the law.
- **Article 21** — The MRE infringes on a woman's right to bodily autonomy and decisional privacy.
- The Supreme Court's rulings in **Puttaswamy vs. Union of India** and **Joseph Shine vs. Union of India** emphasised that privacy includes the right to control one's body, irrespective of marital status.
- **Gender Equality** —
- Critics argue that the MRE reflects **patriarchal values** and reinforces the idea that marriage gives husbands **unconditional sexual access** to their wives, which undermines women's rights.
- **International Perspective** —
- Several countries, including the UK, USA, and Australia, have abolished the marital rape exception.
- Retaining it in India places the country out of step with modern legal standards concerning women's rights and sexual autonomy.

Judicial Precedents -

- **Karnataka High Court (2022)** —
- In **Hrishikesh Sahoo vs. State of Karnataka**, the court ruled that a husband could be prosecuted for raping his wife, marking a significant shift in addressing sexual violence within marriage.
- **Delhi High Court Split Verdict (2022)** —
- **Justice Rajiv Shakdher** declared the MRE unconstitutional, arguing it violates women's rights to bodily autonomy.
- **Justice C. Hari Shankar**, however, upheld the MRE, stating that within marriage, sexual relations constitute a "legitimate expectation."
- This split decision prompted the petitioners to take the case to the Supreme Court.

Government's Stand -

- In a recent affidavit, the **Union Government** opposed striking down the MRE, arguing that **marriage creates a “continuing expectation of reasonable sexual access”**.
- The government has expressed concerns that criminalising marital rape could disrupt the **sanctity of marriage** and lead to **false accusations**.

Conclusion -

- The debate over the **Marital Rape Exception** raises critical questions about **gender equality, bodily autonomy**, and the evolving role of marriage in Indian society.
- As the Supreme Court deliberates, the outcome will not only affect the legal status of marital rape in India but also set a significant precedent for **women’s rights** and **gender justice** in the country.

Source - **Multiple**

QUESTION - The Marital Rape Exception (MRE) in Indian law has sparked intense legal and social debates, with significant implications for women’s rights and gender equality. Discuss the origins of the MRE and its current status in Indian law. In light of evolving judicial interpretations and international precedents, critically analyse the arguments for and against retaining this exception in Indian jurisprudence. How do these debates reflect broader challenges in addressing gender justice in India?

SC Verdict on Child Marriage

Recently, the Supreme Court of India delivered a significant judgment on the persistence of child marriages in the country, despite the passage of the **Prohibition of Child Marriage Act (PCMA)** nearly two decades earlier.

A bench led by Chief Justice D Y Chandrachud, Justices J B Pardiwala and Manoj Misra highlighted the alarming scale of child marriages in India and introduced extensive guidelines for the effective enforcement of PCMA.

This **judgment represents not only a legal stance but also a broader social commentary** on a practice that continues to plague the nation, despite legislative efforts aimed at its eradication.

Historical Context of Child Marriage in India, Legislative Framework, and the Current Situation -

- **Historical Context** —
- To give an example of the continuing struggle against child marriage, **the Court cited the plea of Rukhmabai, a young woman who, in 1884, resisted the custom of early marriage.**
- Her case exemplifies the deep-rooted challenges faced by child brides, even in colonial India.
- **Rukhmabai’s refusal to live with her husband, despite societal and legal pressures, led to a significant settlement, and she eventually became one of the first practicing female doctors** in India.
- This **anecdote sets the stage for understanding the systemic nature of child marriage in the country**, which persists despite legislative attempts over centuries, from the **Age of Consent Act of 1891 to the current PCMA of 2006.**
- **Legislative Framework: The Prohibition of Child Marriage Act** —
- The **Prohibition of Child Marriage Act (PCMA) of 2006** was enacted to replace the **Child Marriage Restraint Act of 1929.**
- Under this Act, **child marriage is a punishable offence**, with penalties ranging from two years of rigorous imprisonment to a fine of up to Rs 1 lakh.
- The **Act treats child marriage as cognizable and non-bailable, making the marriage voidable** unless certain specific exceptions apply.
- **Despite the severity of the law, child marriage remains a widespread issue**, as demonstrated by the staggering figures shared in the judgment.

- Current Situation —
- Almost 150 years after the Age of Consent Act, **India continues to have one in three of the world's child brides, with 223 million child brides recorded**, 102 million of whom were married before the age of 15.
- While the prevalence of child marriages has halved since the enactment of PCMA, **certain states still report rates exceeding 40 percent**, particularly West Bengal, Bihar, and Tripura.
- This **regional variation highlights the complex interplay of poverty, cultural norms, and rural-urban divides** that perpetuate child marriage.

Socio-Economic Causes of Child Marriage -

- Poverty and Economic Hardship —
- **Families in economically disadvantaged communities** view marriage to **reduce financial burdens**.
- For many poor households, **marrying off a daughter at a young age is perceived to relieve themselves of the cost of raising and supporting her**.
- In rural and impoverished areas, **parents may struggle to afford necessities such as food, education, and healthcare for their children**.
- In such cases, **marrying off daughters early is seen as a practical solution** to reduce household expenses.
- Emphasis on Sexual Purity and Virginity —
- The strong emphasis on the sexual purity and virginity of brides ensures parents marry their daughters early.
- **The fear that young girls may be sexually abused, or worse still, engage in consensual sexual activity, is daunting**.
- **There is also the deep-rooted belief that a daughter's marriage is a religious obligation** that needs to be fulfilled above all else.
- Displacement and Vulnerability —
- **Displacement due to natural disasters, conflicts, or economic migration exacerbates the problem of child marriage**.
- **Displaced families often lose their social networks**, financial stability, and access to community support systems, leaving their daughters particularly vulnerable to child marriage.
- **In such circumstances, parents may view marriage to secure their daughters' future** and protect them from the uncertainties of displacement.
- Cultural Norms and Gender Inequality —
- **Cultural beliefs about gender roles** and the value of women **significantly contribute to the prevalence of child marriage in India**.
- In many traditional communities, **a girl's worth is often linked to her role as a wife and mother**, and her primary duty is seen as fulfilling family and societal obligations through marriage.
- **Child marriage is thus regarded as a cultural norm**, with early marriage seen as an essential rite of passage for young girls.
- **Sons are often seen as the bearers of family lineage and the ones who will support parents** in old age, while daughters are expected to leave the family upon marriage.
- **This perception leads to girls being treated as economic liabilities**, and early marriage becomes a way to transfer this perceived burden to their husbands' families.

The Complexity of Marriage by Choice Among Minors and Void vs. Voidable Marriages -

- The Complexity of Marriage by Choice Among Minors —
- Child marriage is not limited to those forced into it by parental or societal pressure; **it also includes minors who marry of their own volition**, often against their parents' wishes.
- This **raises the question of whether such marriages should be treated the same as those where minors are coerced**.

- In cases such as **Jitender Kumar Sharma v State (2010)**, courts have grappled with this **issue**, often issuing contradictory rulings.
- In **Yunus Khan v State of Haryana (2014)**, a **16-year-old girl married of her own free will against her parents' wishes**, and the court upheld the marriage as valid.
- Conversely, in **Amrinder Kaur v State of Punjab (2015)**, the **Punjab and Haryana High Court invalidated the marriage of a minor girl** who married a boy from a different caste.
- These **contradictory rulings highlight the legal and social complexities** surrounding child marriage in India.
- Void vs. Voidable Marriages: Legal Implications —
- A **void marriage is one in which a child is married off without the consent of their lawful guardian**, effectively rendering the marriage non-existent in legal terms.
- A **voidable marriage, on the other hand, remains valid unless challenged by the child**, who has the right to nullify it up to two years after reaching adulthood.
- **States like Karnataka and Haryana have amended their laws to make all child marriages void from the outset**, but this has led to unintended consequences.
- A **study by the National Coalition for Advocating Adolescent Concerns found that such changes create legal uncertainties for child brides**, particularly regarding their rights to matrimonial property and the status of their children.
- The **issue of abandonment also looms large, as husbands can easily remarry, taking advantage of the void status** of their previous marriage.

Way forward -

- The **SC's recent guidelines for implementing PCMA** prioritise prevention over punitive measures, **recognising the damaging effects that criminalisation can have on young girls and their families**.
- This **emphasis on prevention before protection and protection before penalisation is a progressive step** toward addressing child marriage in a more sensitive and practical manner.
- However, **while the guidelines are commendable, their success will ultimately depend on how effectively they are implemented** at the grassroots level.
- **Social attitudes and economic realities continue to pose significant barriers** to ending child marriage in India, and **the law alone cannot address these deeply ingrained practices**.

Conclusion -

- **The SC's judgment on child marriage is a crucial reminder of the ongoing struggle against this practice in India**.
- **While legislative frameworks like the PCMA are essential, they must be supported by broader social reforms** and economic support systems.
- The **complexities of child marriage, particularly when it comes to marriages by choice or under coercion, require nuanced legal approaches** and compassionate solutions.

Source - [The Indian Express](#)

QUESTION - The Supreme Court of India's recent judgment on child marriage underscores the persistence of the practice despite the existence of the Prohibition of Child Marriage Act (PCMA) of 2006. Analyse the socio-economic, cultural, and legal challenges that contribute to the continued prevalence of child marriages in India. Discuss the significance of the Supreme Court's guidelines for effective enforcement of the PCMA and the way forward for addressing this issue at the grassroots level.

GENERAL STUDIES - II

Polity

An approaching milestone in Constitutional Governance

November 26, 2024, marks a significant milestone in India's history, the **75th anniversary of the adoption of the Constitution of India.**

The **Constitution of India is not just a legal document**, but a symbol of the country's deeprooted constitutional culture.

As India celebrates this Constitution Day, **it is important to examine the core values embedded in the Indian Constitution and that have withstood the test of time.**

Values that have Shaped India's Constitutional Governance -

- People's Respect for Democratic Institutions —
- The first core value that defines India's constitutional culture is the **deep respect the people have for democratic institutions.**
- **When the Constitution was adopted in 1949, life expectancy in India was around 32 years**, a reflection of the economic and social challenges of the time.
- Over the decades, **life expectancy has more than doubled to about 70 years**, marking significant improvements in living standards.
- This **progress has strengthened people's trust in the institutions** that have guided the nation's development.
- People's Consistent Participation in Elections —
- Despite frustrations with political leadership and governance, **Indians continue to participate in elections in large numbers.**
- **Voter turnout has consistently hovered around 60%** since the first general elections in 1951-52, with the 2024 election seeing a turnout of 65.79%.
- This **sustained participation reflects a deep-seated belief in the democratic process.**
- The **willingness of the electorate to engage in every level of elections**, whether local, state, or national, is a testament to their faith in democracy.
- This **respect for democratic institutions is a core constitutional value** that has withstood the test of time.
- Smooth Transition of Power —
- Another vital element of India's democratic tradition is the **smooth transition of power after elections.**
- Over the past seven decades, **India has witnessed numerous elections, resulting in different political parties** holding power at the state and national levels.
- These parties have often espoused differing ideological perspectives, **yet the fundamental principle of a peaceful transfer of power has remained sacrosanct.**
- Stability of Democratic System Irrespective of Political Rivalries —
- While elections in India are often charged with intense campaigns and divisive rhetoric, **the results bring a sense of humility**, underscoring the fact that it is the people of India who are the true victors in every election.
- **The electorate's ability to make informed choices** and enable the peaceful transfer of authority from one government to another reflects a core constitutional value.
- This **smooth transition ensures the stability of the democratic system**, irrespective of political rivalries or changing leadership.

Some Other Vital Components of India's Constitutional Culture -

- Protection of Rights and Freedoms —

- The **protection of fundamental rights and freedoms** is a cornerstone of India's Constitution.
- The **framers of the Constitution**, many of whom were deeply involved in the **Indian independence movement**, were acutely aware of the potential for state overreach.
- Despite having led the fight against colonial rule, **they remained sceptical of concentrating too much power in the hands of the state and instead prioritised the protection of individual rights.**
- This **vision is reflected in the establishment of courts as independent institutions** tasked with safeguarding citizens' rights.
- Over the years, **India's judiciary has played a crucial role in upholding these fundamental rights**, reinforcing the constitutional value of individual freedoms.
- The **foresight of the framers to limit state power and emphasise the protection of personal liberties** has only grown stronger, solidifying its place as a central pillar of India's constitutional governance.
- Federalism and Constitutional Governance —
- **India's Constitution recognises the extraordinary diversity of the country**, especially its linguistic, cultural, and regional differences.
- The **framers were mindful of the need to strike a balance between fostering a national identity and preserving the unique identities** of its various states.
- **To achieve this, they enshrined federalism as a core feature of the Constitution**, allowing for the autonomy of states while promoting unity.
- Rise of State Level Political Discourse and Grassroots Politics —
- The **rise of state-level political parties and their participation in coalition governments** at both state and national levels has **strengthened federal principles.**
- Additionally, **the 73rd and 74th Constitutional Amendments, which established local self-governing bodies** like panchayats and municipal corporations, **have further decentralised governance.**
- This **deepening of federalism has contributed to the inclusivity and equity in India's governance**, ensuring that diverse voices are heard and represented in the political process.

Role of Media and Civil Society in Shaping India's Constitutional Culture -

- **A free and robust media**, along with an active civil society, **is essential to a functioning democracy.**
- **In India, the media is diverse**, operating in multiple languages and **reflecting a wide range of perspectives.**
- The **evolution from print to broadcast media and the subsequent innovations in digital platforms** have expanded access to information, **making the media a key player in the democratic process.**
- **Despite challenges related to media independence and economic pressures** on media organisations, the **media and civil society continue to play a critical role in holding the government accountable and promoting transparency.**
- **By creating informed public discourse, the media helps instill faith in democracy**, ensuring that citizens can make well-informed decisions.
- **This interplay between the media, civil society, and the public is a vital component of India's constitutional culture.**

Importance of Freedom and Constitutional Ideals -

- Sceptics, like the **British commander Claude Auchinleck**, once doubted whether a nation as diverse as India could remain united.
- Yet, **India has proven that a shared commitment to constitutional ideals can forge a national identity** that transcends differences.

- The **Constitution has been a unifying force**, not only governing the political and social life of the country but also galvanising the collective conscience of its people.

Conclusion -

- **India's 75-year journey of constitutional governance is a story of resilience**, progress, and a deep commitment to democratic values.
- **The respect for democratic institutions, smooth transitions of power, protection of rights and freedoms, federalism**, and the role of media and civil society have all **contributed to the country's democratic success**.
- As we commemorate this historic occasion, **it is a time to celebrate the values that have guided India's development and will continue to shape its future**.

Source - [The Hindu](#)

QUESTION - As India commemorates the 75th anniversary of the adoption of its Constitution, critically examine the core values that have shaped India's constitutional governance over the past seven decades. Discuss how these values, such as respect for democratic institutions, protection of rights and freedoms, and federalism, have contributed to India's resilience as a democracy. Additionally, evaluate the role of the media and civil society in promoting transparency and accountability within this framework.

Governance

Realising full potential of India's Digital Public Infrastructure

The adoption of the Global Digital Compact (GDC) at the United Nations Summit marks a pivotal moment in the realm of digital governance. This initiative aligns with the multi-phase Universal Safeguards for Digital Public Infrastructure (DPI) launched in 2023 by the Office of the UN Secretary-General's Envoy on Technology (OSET) and the United Nations Development Program (UNDP). As digital governance evolves, the GDC sets the stage for global cooperation, with India taking a leading role in championing the cause of DPIs, especially for the Global South.

An Analysis of India's Leadership in Promoting Digital Public Infrastructure (DPI) -

- Pioneering Initiatives: Aadhaar and UPI —
- **At the heart of India's leadership in DPIs is the Aadhaar program**, the world's largest digital identity system, which provides unique identification numbers to over 1.3 billion residents.
- **Launched in 2009, Aadhaar was designed to ensure that every Indian has a secure and verifiable identity**, which in turn facilitates access to various public services.
- Aadhaar has **enabled more efficient delivery of social welfare schemes** reducing leakages and ensuring that subsidies reach the intended beneficiaries directly.
- **In addition to Aadhaar, India's Unified Payments Interface (UPI) has revolutionised the digital payments landscape.**
- UPI, **launched in 2016, is an interoperable real-time payment system** that allows seamless transactions between banks and payment platforms.
- **As of August 2024, UPI has facilitated a staggering 14.96 billion digital transactions** in a single month, making it one of the largest digital payment systems globally.
- **By leveraging this digital identity, India has built an extensive ecosystem that connects people to services like banking, health, and education**, driving financial and social inclusion across the country.
- The Modular Open-Source Identity Platform (MOSIP) —

- India's commitment to promoting DPIs on a global scale is further **demonstrated by its development of the Modular Open-Source Identity Platform (MOSIP)**.
- **MOSIP is a not-for-profit initiative** designed to help countries build their own digital identity systems.
- **It is a customisable, open-source platform** that provides the technological infrastructure needed for digital identity programs.
- **By offering MOSIP to other nations, India has empowered governments to create secure and interoperable digital identity systems**, without the burden of high licensing costs or the need for proprietary software.
- Driving Economic Inclusion through DPIs —
- India's focus on digital public infrastructure is **deeply tied to its goal of fostering economic inclusion**.
- **By providing digital identities, promoting cashless transactions**, and creating digital ecosystems for financial services, **India has made significant strides in bringing marginalised communities into the economic fold**.
- One of the **key successes has been the rapid expansion of bank account ownership under the Pradhan Mantri Jan Dhan Yojana (PMJDY)**, which uses Aadhaar to verify identities.
- As a result, bank account ownership among Indian adults increased from 25% in 2008 to over 80% in recent years.

Existing Challenges and the Need for Impact Assessments -

- Existing Challenges —
- Despite the enthusiasm surrounding DPIs, **there are critical challenges that must be addressed**.
- The **UN's safeguard framework stresses the importance of managing and regulating the deployment of DPIs to ensure that they remain inclusive, accessible, and effective**.
- This is **especially crucial as DPI initiatives become more widespread, both in foundational areas such as digital identity and payments and in sectoral applications like healthcare and education**.
- Necessity of Impact Assessment —
- The necessity of impact assessments for DPIs is **particularly significant in India, where these infrastructures have driven notable advancements**.
- **For instance, the rate of bank account ownership among adults in India rose from 25% in 2008 to over 80% in recent years**, with women owning 56% of these accounts.
- Furthermore, **digital transactions have become a major economic driver, contributing to nearly 50% of India's nominal GDP** in the fiscal year 2022-23.
- These achievements have also **facilitated access to credit through pre-sanctioned loans on platforms like UPI**.
- However, **beneath these impressive figures lie complex questions about the true impact of DPIs on people's lives, especially regarding their livelihoods, income, and social agency**.

Necessary Measures to Overcome the Challenges Associated with Impact Assessments -

- Integration of Impact Assessment During Design Phase —
- Integrating impact assessment mechanisms during the design phase of DPIs can **ensure that data is collected systematically from the outset**.
- Much like privacy and security considerations, **data collection capabilities must be built into DPI systems to create a continuous feedback loop**.
- This approach would allow for **regular monitoring and adjustments, ensuring that DPIs remain effective and equitable**.
- Transparent and Secure Data Collection System —

- **The second pillar, data, involves making relevant information accessible** through trusted and well-governed mechanisms.
- **Government agencies often prioritise data minimisation to prevent misuse**, but this caution can hinder effective assessments.
- **By building trust with citizens** and the private sector through transparent and secure data collection systems, **higher quality assessments can be achieved**.
- Moreover, **technical advancements are necessary to enhance data discoverability and utility**, enabling more precise evaluations of DPI impacts.
- Dialogue Among Stakeholders —

- **Creating an atmosphere of dialogue among stakeholders is essential for building a community** that includes policymakers, third-party assessment agencies, the private sector, and civil society.
- **Engaging these actors in regular conversations can facilitate participative governance**, fostering accountability and encouraging shared responsibility for the success of DPIs.
- **Establishing clear protocols for such engagement will ensure that all voices are heard**, driving continuous improvement in the design and implementation of digital infrastructures.

India's Influence on Global Digital Policies, Future Role and the Path Forward -

- **India's Influence on Global Digital Policies** —
- **India's success with Aadhaar and UPI has positioned it as a thought leader** in global discussions on DPIs.
- **During its G20 presidency, India has championed the idea that DPIs can be a powerful tool** for accelerating development in low- and middle-income countries.
- By sharing its experience and best practices, **India has sought to encourage other nations to adopt similar approaches to building digital infrastructures** that are inclusive, scalable, and secure.
- **Influence Beyond Policy Advocacy** —
- **The World Bank's ID4D (Identity for Development) initiative**, which supports nearly 60 countries in building foundational identification systems, **draws on lessons from India's Aadhaar model**.
- **Similarly, the G2Px program, which focuses on digitising government-to-person payments, benefits from India's experience** with direct benefit transfer schemes that leverage digital identity.
- These **initiatives reflect a growing recognition of the need to create inclusive digital ecosystems**, where foundational infrastructure like digital identity and payment systems serve as the bedrock for broader digital transformation.
- **India's Future Role and the Path Forward** —
- **India's confidence in the transformative potential of DPIs is well-founded**, but it must also be matched with a commitment to thorough and regular impact assessments.
- **By institutionalising such assessments, India can take timely corrective actions when needed**, ensuring that the promise of DPIs is fully realised.
- **This approach will not only help in transforming economies but also in improving the lives of millions of people** across the country and beyond.

Conclusion -

- The adoption of the **Global Digital Compact represents a significant step** towards global cooperation in digital governance.
- As DPIs gain prominence, **India's leadership and experience provide a valuable blueprint for other nations**.
- **Yet, the path forward requires careful attention to the challenges** of impact assessments, data collection, and inclusive governance.

Source - [The Indian Express](#)

QUESTION - Critically examine India's role in promoting Digital Public Infrastructure (DPI) globally. Discuss the challenges associated with the deployment of DPIs and suggest measures to ensure inclusive governance and effective impact assessments.

Elimination of Kala-Azar and Trachoma

India has made significant strides in combating neglected tropical diseases (NTDs), particularly kala-azar and trachoma. The country's success in reducing the incidence of these diseases is a testament to its commitment to public health and its ability to implement effective strategies.

About Kala Azar -

- Kala azar, or **visceral leishmaniasis**, is the **second deadliest parasitic disease** in the world after Malaria.
- It is one of the most dangerous **Neglected Tropical Diseases (NTDs)** and is **endemic in 76 countries**.
- It is also known as **black fever or Dum-Dum fever**, referring to the greyish or **blackish discoloration of the skin** during infection.
- It is caused by a **protozoan parasite** of the genus **Leishmania**, which is **transmitted by** the bite of **infected female phlebotomine sandflies**.
- **In India, Leishmania donovani** is the **only parasite causing** this disease.
- The parasite **primarily infects the reticuloendothelial system** and may be found in abundance in the bone marrow, spleen, and liver.
- **Post Kala-azar Dermal Leishmaniasis (PKDL)** is a condition **when Leishmania donovani invades skin cells, resides and develops** there, and manifests as **dermal lesions**. Some of the **kala-azar cases manifests PKDL after a few years of treatment**.
- The disease **affects some of the poorest people** and is linked to malnutrition, population displacement, poor housing, a weak immune system, and a lack of financial resources.
- Leishmaniasis is **also linked to environmental changes** such as deforestation, and urbanisation, according to the WHO.
- Symptoms —
- Kala-azar is characterised by irregular **bouts of fever**, substantial **weight loss**, **swelling of the spleen and liver**, and severe **anaemia**.
- **If the disease is not treated** early and in time, affected **individuals can die** within two years.
- Treatment —
- Treatment of Kala Azar is done through **liposomal AmB**; this is the drug of choice for immunocompetent patients.
- There are other treatment options available, such as **paromomycin, miltefosine, and multidrug therapy**.

Trachoma -

- About —
- **Trachoma** is the leading infectious cause of blindness globally.
- It caused by **Chlamydia trachomatis**, and is spread by direct or indirect contact with eye or nose discharges, especially in young children.
- In endemic areas, up to 90% of preschool-aged children can be affected, with infection declining with age.
- Symptoms —
- Repeated infections over time can lead to scarring inside the eyelid, causing the eyelashes to rub against the eye (trachomatous trichiasis), which leads to pain, corneal scarring, and ultimately blindness.
- Women are at higher risk due to frequent contact with infected children.
- Transmission factors and prevalence —
- Transmission factors include inadequate hygiene, crowded living conditions, and limited access to clean water and sanitation.
- WHO has termed Trachoma as a neglected tropical disease.
- WHO estimates suggest that 150 million people worldwide are affected by Trachoma and 6 million of them are blind or at risk of visually disabling complications.

- It remains prevalent in rural areas of Africa, Asia, Central and South America, and the Middle East, with Africa being the worst affected.
- **Efforts to eliminate trachoma —**
- Global efforts to eliminate trachoma are driven by WHO's SAFE strategy, which includes —
- Surgery for trichiasis,
- Antibiotics like azithromycin for mass treatment,
- Facial cleanliness, and
- Environmental improvements, such as better water and sanitation access.
- WHO adopted the SAFE strategy in 1993 and launched the WHO Alliance for Global Elimination of Trachoma in 1996.
- The World Health Assembly has **set 2030 as the new target date for eliminating trachoma as a public health issue globally.**
- By October 2024, 20 countries had eliminated trachoma as a public health problem.
- Economic losses from blindness and visual impairment due to trachoma are estimated at \$2.9–5.3 billion annually.

The Challenges of Kala-azar and Trachoma -

- **Neglected Tropical Diseases —** Both kala-azar and trachoma are classified as NTDs, which are often neglected by the global health community due to their disproportionate impact on marginalised populations. These diseases are typically found in low-income countries with poor sanitation and limited access to healthcare.
- **Poverty and Inadequate Sanitation —** Kala-azar and trachoma are closely linked to poverty and inadequate sanitation. People living in poverty are more likely to be exposed to the parasites and bacteria that cause these diseases, and their lack of access to clean water and sanitation facilities can create breeding grounds for disease-carrying insects.
- **Lack of Vaccines —** The absence of effective vaccines for kala-azar and trachoma has posed significant challenges to their elimination. While there have been some advancements in vaccine development, these diseases remain difficult to prevent through vaccination.

India's Achievements -

- **Reduction in Cases —** India has successfully reduced the number of cases of kala-azar to below one in 10,000 for two consecutive years, bringing it closer to elimination. This is a remarkable achievement, considering the challenges posed by this disease.
- **Elimination of Trachoma —** India has eliminated trachoma as a public health problem, contributing to global efforts to eradicate this disease. Trachoma is the leading infectious cause of blindness in the world, and India's success in eliminating it has had a significant impact on the lives of millions of people.
- **Sustained Government Efforts —** The Indian government's sustained public health campaigns and targeted interventions have been instrumental in achieving these successes. The government has invested in healthcare infrastructure, trained healthcare workers, and implemented community-based programs to address the root causes of these diseases.

The Importance of Surveillance and Prevention -

- **Post-Elimination Surveillance —** Even after achieving elimination, continued surveillance is essential to prevent the resurgence of these diseases. It is important to monitor for any new cases and to take prompt action to prevent outbreaks.
- **Search for New Interventions —** Efforts to develop better cures and vaccines for kala-azar and trachoma must continue to ensure long-term sustainability. While India has made significant progress in controlling these diseases, the development of new tools and interventions will be crucial for their complete eradication.

Conclusion -

India's achievements in combating kala-azar and trachoma are a testament to its commitment to public health and its ability to implement effective strategies. By maintaining vigilance, investing in

research, and continuing to prioritise NTDs, India can serve as a model for other countries in the fight against these neglected diseases. The lessons learned from India's experience can be applied to other countries struggling with NTDs, helping to improve the health and well-being of millions of people around the world.

Source - [The Hindu](#)

QUESTION - Critically analyse India's achievements in combating kala-azar and trachoma. Discuss the challenges posed by these neglected tropical diseases and the strategies adopted by the Indian government to address them. Evaluate the importance of continued surveillance and prevention efforts in maintaining these gains.

How South India deals with Ageing Population?

In an unexpected move, **Andhra Pradesh Chief Minister N. Chandrababu Naidu** announced that his government is working on a law to incentivise families to have more children. His concerns arise from the state's **declining young population**, with fertility rates below the **replacement level**. According to the CM, having fewer than two children is leading to a rapid decline in the younger population, and this could have long-term implications for the state.

Context and Concerns of Southern States -

- CM's remarks are part of a broader discussion regarding population trends in **Southern India**.
- Southern states, like **Tamil Nadu, Kerala, and Andhra Pradesh**, have successfully brought down their **fertility rates** over the years.
- This success has contributed to an **aging population**, creating concerns about the future representation of these states in the **Indian Parliament**.
- Tamil Nadu Chief Minister **M.K. Stalin** even raised concerns about the potential reduction of South India's share in parliamentary seats due to low population growth.

India's Ageing Population and Fertility Trends -

- With the **2021 Census** delayed, the most recent data on population projections come from a **2020 report** by the Union Ministry of Health and Family Welfare.
- The report highlights several key findings —
- Ageing Population —
- Across India, the percentage of people aged **60+** is expected to increase significantly.
- However, this trend is more pronounced in Southern states, which achieved **low fertility rates** earlier than their Northern counterparts.
- For example, **Uttar Pradesh** is projected to reach the replacement level of fertility (2.1 children per woman) only by 2025, more than two decades after Andhra Pradesh.
- Population Growth —
- Between **2011 and 2036**, India's population is expected to grow by **31.1 crore** people.
- Half of this growth will come from just five states: **Bihar, Uttar Pradesh, Maharashtra, West Bengal, and Madhya Pradesh**.
- On the other hand, the five Southern states (**AP, Karnataka, Kerala, Telangana, and Tamil Nadu**) will contribute only **2.9 crore** to the total population increase during the same period.
- Older Population Doubling —
- The number of elderly persons (aged 60+) is expected to more than double, from **10 crore in 2011 to 23 crore in 2036**.
- In **Kerala**, for example, nearly **1 in 4 people** will be over 60 by 2036. In contrast, **Uttar Pradesh** is projected to have a younger population, with only **12%** of its people in the 60+ bracket by 2036.

Why is an Ageing Population a concern?

- An ageing population and smaller overall population are two distinct issues.

- An ageing population raises concerns about the **dependency ratio**—the percentage of the population that is not working (those below 15 and above 60).
- A high dependency ratio means that a larger portion of the population relies on the working-age group for economic support.
- As a result, the state may have to invest more in **healthcare** and **social security** for the elderly.
- On the other hand, a **smaller population** compared to other states could impact political representation in the **Lok Sabha** (House of the People).
- Southern states, which achieved demographic transitions earlier, fear they could be penalised during **electoral delimitation**, losing seats in Parliament to Northern states like **Bihar**, **Uttar Pradesh**, and **Madhya Pradesh**, where population growth continues to be higher.

Do Pro-Natalist policies work?

- CM cited examples from countries like **Japan**, **China**, and **Europe**, where governments have attempted to boost fertility rates to counter ageing populations.
- However, **experts** argue that **pro-natalist policies**—policies encouraging families to have more children—have had limited success.
- According to these experts, these policies generally fail, particularly in societies that have achieved a certain level of prosperity and education.
- While **Scandinavian countries** have managed to stabilise fertility rates to some extent through **family support systems**, **childcare services**, and **gender equality measures**, countries like **Japan** and **China** have not seen significant success.
- Even offering financial incentives is not enough to encourage families to have more children, as shown in the case of countries like **France** and **South Korea**.

Why CM Naidu's comments matter?

- CM's remarks mark a **significant shift** in the political discourse surrounding population. Several decades ago, India faced concerns about **overpopulation**, with high fertility rates leading to rapid population growth.
- Back then, politicians and policymakers were focused on controlling population growth to avoid potential crises.
- Southern states, like **Andhra Pradesh**, played a crucial role in achieving **Replacement Level of Fertility**.
- Andhra Pradesh, for instance, reached the fertility rate of 2.1 children per woman in 2004.
- In fact, Andhra Pradesh once had a law that barred individuals with more than two children from contesting local elections—a law that the CM repealed.
- However, with declining fertility rates and India now being the **world's most populous country**, the political conversation is evolving.
- The challenge now is **balancing population control** with ensuring there are enough young people to support economic growth.

What is the Way Forward?

- While **pro-natalist policies** have proven largely ineffective, experts suggest that **migration** could help address demographic imbalances. Internal migration from Northern to Southern states could alleviate the issue of a shrinking workforce in the South.
- Southern states can benefit from this by absorbing migrants who are already of working age, thus bypassing the costs associated with raising and educating a young population.
- This is similar to the model employed by the **United States**, where immigration has helped sustain the country's **economic dominance** by providing a steady flow of working-age individuals.
- Economists also argue that India's focus should be on **improving the productivity** of its labor force, rather than simply increasing the population.
- By ensuring that India capitalises on its ongoing **demographic dividend**—a large share of the population being of working age—the country can maximise economic growth.

Conclusion -

- As **Andhra Pradesh** considers incentivising larger families, the broader debate around **fertility rates, ageing populations, and political representation** comes to the fore.
- While the state faces real challenges related to its declining young population, global evidence suggests that **pro-natalist policies** may not be the answer.
- Instead, a combination of **migration, labour productivity improvements**, and a focus on the **demographic dividend** could help balance India's population and economic needs.

Source - [The Indian Express](#)

QUESTION - The Southern states of India are witnessing declining fertility rates, leading to an ageing population and potential political marginalisation due to the redistribution of parliamentary seats. Discuss the demographic, political, and economic implications of this trend in the context of Andhra Pradesh's proposal to incentivise larger families. Critically evaluate whether pro-natalist policies are a viable solution to address this challenge, drawing from global examples. Suggest alternative approaches for balancing demographic and economic needs.

India's SDG and human development focus

Last year India hosted the G-20 Summit, focusing on accelerating the implementation of the UN Agenda 2030 for Sustainable Development and soon after, an SDG Summit at the United Nations headquarters reviewed progress toward the 17 Sustainable Development Goals (SDGs). In this global context, examining India's progress in human development since 1990, particularly through the lens of the UNDP's Human Development Report (HDR), is both timely and relevant.

Moreover, it is important to explore India's human development trajectory, the intertwined nature of development and SDGs, and the country's pressing challenges in gender equality and income inequality.

India's Progress in Human Development -

- Historical Perspective —
- From 1990 to 2022, India's Human Development Index (HDI) value increased from 0.434 to 0.644, reflecting an overall improvement of 48.4%.
- Life expectancy in India has increased significantly over the decades, indicating better healthcare access and improvements in living conditions.
- Similarly, educational indicators have shown progress, with increased school enrolment rates and expanded access to higher education.
- These advancements are partly due to policy initiatives like the Sarva Shiksha Abhiyan (Universal Education Campaign) and schemes aimed at enhancing healthcare access, such as Ayushman Bharat.
- Recent Trends —
- Recent trends show a more complex picture as the HDI value was stagnant at 0.638 in 2019-20, dipped slightly to 0.633 in 2021, and then rose again to 0.644 in 2022.
- This fluctuation reflects the impacts of external shocks, notably the COVID-19 pandemic, which disrupted India's progress across various dimensions of human development.
- The pandemic led to widespread job losses, economic slowdown, and a significant setback in educational access due to school closures and a digital divide, especially in rural areas.
- These challenges caused temporary regressions in HDI values, underscoring the fragility of developmental gains when confronted with global crises.

Comparative analysis with Neighbouring Countries -

- While India has made strides in improving its HDI over the decades, its progress has been slower when compared to some neighbouring countries.

- India **currently ranks 134 out of 193 countries in the HDR 2023-24**, placing it within the medium human development category.
- This ranking, though an improvement, is modest **compared to the rapid advancements made by several countries in the region.**
- For instance, **Malaysia (63), Thailand (66), and China (75) have achieved significantly higher HDI ranks.**
- Even countries facing similar socio-economic challenges, **such as Sri Lanka (78), Indonesia (112), Bhutan (125), and Bangladesh (129), have performed better in recent years.**
- The **faster progress of these countries is partly attributed to targeted investments in health and education** and more inclusive growth policies.
- This **comparative lag highlights areas where India needs to focus on structural reforms and policy interventions** to boost human development indicators further.

Factors Contributing to India's Progress in Human Development -

- Economic Liberalisation —
- **Several key factors have driven India's progress** in human development since the 1990s

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These include economic liberalisation, government welfare programs, and increased investment in human capital.

- The liberalisation reforms of the early 1990s opened up the Indian economy, leading to rapid economic growth, job creation, and a substantial rise in income levels for many segments of society.
- This economic growth has been critical in elevating millions of people out of poverty and providing them with better access to healthcare, education, and other essential services.
- Government Initiatives in Key Sectors —
- Programs like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) have provided a safety net for rural populations, ensuring a minimum standard of living through guaranteed employment.
- Additionally, the Pradhan Mantri Awas Yojana (PMAY) and other housing schemes have contributed to improving living standards by providing affordable housing to low-income families.
- In the education sector, initiatives like the Right to Education (RTE) Act have made primary education a fundamental right, thereby increasing enrolment rates and reducing dropout rates among children, especially from marginalised communities.
- The National Health Mission (NHM) has similarly focused on improving maternal and child health services, contributing to a decline in child mortality rates and an overall increase in life expectancy.

Challenges to Further Progress -

- Uneven Distribution of Development Benefits —
- One significant barrier is the uneven distribution of development benefits across different regions and social groups.
- While metropolitan areas and some southern states like Kerala and Tamil Nadu have witnessed remarkable improvements in health, education, and living standards, other regions, particularly in the northern and eastern parts of the country, lag behind.
- This disparity is evident in state-level HDI rankings, with states like Bihar and Uttar Pradesh consistently showing lower human development outcomes compared to their southern counterparts.
- Rising Income Inequality —
- According to the HDR, India's income distribution is skewed, with the top 1% holding 21.7% of the country's total income.
- This is notably higher than in neighbouring countries like Bangladesh (11.6%), China (15.7%), and Bhutan (18.1%), as well as the world average of 17.5% and the South Asia average of 19.6%.
- Comparatively, income inequality in India exceeds that of regional groups like East Asia and the Pacific (16.5%) and Europe and Central Asia (15.7%).
- Quality of Education and Healthcare —
- Although access has increased, there remain concerns about the quality of services provided.
- For example, a significant portion of rural schools face shortages of teachers and infrastructure, which hampers educational outcomes.
- Similarly, healthcare access, while improved, is still inadequate in remote areas where facilities are often understaffed and under-resourced.
- Gender Inequality: Low Female Labour Force Participation —
- There is a 47.8 percentage point difference between the participation rates of women (28.3%) and men (76.1%).
- This gap is strikingly large compared to neighbouring countries like China (53.6%), Bhutan (53.5%), and Bangladesh (39.2%).

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- Although the **Periodic Labour Force Survey (PLFS) for 2022-23 shows some improvement in female participation, from 23.3% in 2017-18 to 37% in 2022-23**, there remains a stark urban-rural divide.
- **Female participation in rural areas rose from 24.6% to 41.5% during this period**, while urban areas saw only a marginal increase from 20.4% to 25.4%.
This **disparity calls for targeted policies to bridge the rural-urban divide** and boost female participation in the workforce.

Way forward -

- **Targeted measures to reduce income concentration at the top**, alongside policies that promote equitable access to resources, **are essential for achieving sustainable development**.
- For India, **the path to sustainable development involves addressing critical issues in human development, including gender inequality, income disparity, and the long-term impacts of the COVID-19 pandemic**.

Conclusion -

- **Sustainable development is not just about economic growth but also about expanding the freedoms and capabilities of every individual**, ensuring that no one is left behind in the journey of progress.
- The **recent international summits on sustainable development underscore the importance of a collective global effort to achieve the SDGs by 2030**.
- **By aligning its development strategies with the objectives of the SDGs, India can work towards creating a more equitable and prosperous future for its population**.

Source - [The Hindu](#)

QUESTION - India has made significant progress in human development since 1990, as reflected in its Human Development Index (HDI) improvement. However, challenges such as income inequality, uneven regional development, and gender disparity persist. In the context of India's progress in human development, critically examine the factors that have contributed to this progress since the 1990s. Additionally, discuss the major obstacles that hinder further improvement, especially in relation to the Sustainable Development Goals (SDGs) and how India can address these challenges to achieve equitable and inclusive development by 2030.

GENERAL STUDIES - III

Economy

Rising dependence on agriculture for livelihoods in India

The landscape of rural India is undergoing a significant transformation, as indicated by the recent All India Rural Financial Inclusion Survey for 2021-22.

This survey (commissioned by NABARD) reveals a noteworthy increase in the proportion of rural households reliant on agriculture for their livelihoods, signifying a break from a decades-long pattern of dwindling rural agricultural links.

Growing Agricultural Households in India -

- **Statistical insights —**

- - According to survey, **57% of rural households were classified as "agricultural" in 2021-22**, a considerable rise from 48% in 2016-17.
 - The survey defines **an agricultural household** as one that produces crops or livestock worth more than Rs 6,500 (Rs 5,000 in the earlier survey) and has at least one member engaged in self-employment in agricultural activities.
 - **Income comparison —**
 - The average monthly income for agricultural households stood at **Rs 13,661 in 2021-22**, surpassing the Rs 11,438 for non-agricultural rural households.
 - Notably, agricultural households have seen their income from farming rise to over 45% of their total income, an increase from 43.1% in 2016-17.
- This trend spans across various land sizes, illustrating a broad-based rise in agricultural income.**

How the COVID-19 impacted this Trend of Rising Agricultural Households and Income?

- **Lockdown effects —**
- The survey period coincided with the aftermath of COVID-19 lockdowns, which significantly impacted economic activities across sectors.
- **Agriculture was exempt from many restrictions**, potentially leading to an overestimation of its share in rural livelihoods.
- **The favourable monsoon seasons from 2019** further supported agricultural productivity, suggesting a complex interplay between external factors and survey results.
- **Labour force dynamics —**
- According to the National Sample Survey Office's (NSSO) Periodic Labour Force Surveys (PLFS), agriculture engaged 64.6% of the country's workforce in 1993-94.
- That share fell to 58.5% in 2004-05, 48.9% in 2011-12, and a low of 42.5% in 2018-19.
- However, post-2019, **the farm sector's share of the employed labour force rebounded**, with figures rising to 45.6% and 46.5% in the pandemic years.

Rising Agricultural Dependency Amid Economic Growth -

- **The paradox —**
- Despite the Indian economy experiencing robust growth, with an annual GDP increase of 8.3% in recent years, agricultural dependency has persisted.
- The proportion of the rural workforce engaged in agriculture rose from 57.8% in 2018-19 to 59.8% in 2023-24.
- This trend presents a paradox: **why is a growing economy relying more on agriculture?**
- **Structural employment issues —**
- This paradox can be partly explained by the **stagnation in manufacturing employment**, which accounted for only 11.4% of the workforce in 2023-24, down from previous years.
- **The movement of surplus labour** does not appear to be transitioning from agriculture to manufacturing; instead, **it is shifting to informal sectors** with similar low productivity and wage characteristics.
- **Regional disparities in agricultural employment —**
- According to the PLFS data for 2023-24, States like Chhattisgarh (63.8%), MP (61.6%), and UP (55.9%) have high agricultural workforce shares, while states like Goa (8.1%) and Kerala (27%) exhibit much lower dependence on agriculture.
- **These variations highlight regional economic conditions and the effectiveness of rural development initiatives.**

Way forward -

- The rising dependence on agriculture for livelihoods in India **necessitates a thorough examination of underlying causes.**

- - As the economy grows, the challenge remains to **create sustainable employment opportunities outside of agriculture.**
 - Policymakers need to focus on **strengthening the agricultural sector while simultaneously promoting diversification into higher productivity sectors.**
 - Understanding this paradox is crucial for **crafting effective strategies** that ensure balanced economic growth and improved livelihoods in rural India.

Source - [The Indian Express](#)

QUESTION - Discuss the underlying causes of the increased agricultural dependency among rural households in India, and evaluate the impact of the COVID-19 pandemic on this trend. What are the key challenges and policy measures required to ensure balanced economic growth and sustainable employment opportunities beyond agriculture?

Science and Technology

Forecasting better in India

According to a 2021 study by the Council on Energy, Environment and Water (CEEW), **around 40% of districts in India experience alternating climatic hazards**, meaning that regions vulnerable to flooding during the monsoon are also at risk of droughts during the dry season.

The **Mission Mausam**, a government initiative launched in **2024**, aims to address these challenges by expanding India's weather observation capabilities, enhancing forecasting models, and investigating innovative approaches.

Therefore, **it is important to explore the importance of better forecasting systems and the role of Mission Mausam** in mitigating the risks posed by extreme weather events.

The Need for Enhanced Weather Forecasting -

- The **increasing complexity of India's weather patterns necessitates a robust forecasting**
- While two-thirds of the population is exposed to flood risks, **only a third of those residing in flood-prone areas are covered by early warning systems.**
- In contrast, **cyclone-prone regions benefit from more comprehensive early warning systems.**
- **This gap in coverage underscores the urgent need for technological investments and innovative solutions** to provide timely and accurate forecasts for extreme weather events.
- **Investing in improved forecasting is essential for safeguarding lives and property** in the face of such unpredictable weather patterns.

Mission Mausam and its Objectives -

- Mission Mausam —
- **Mission Mausam is a strategic initiative by the Indian government** aimed at significantly improving the country's capacity to deal with the increasing challenges of climate change and extreme weather events.
- The **initiative focuses on three core objectives**: expanding India's weather observation network, enhancing weather forecasting models, and investigating weather modification techniques.
- These **objectives are designed to address gaps in current weather monitoring capabilities and to provide more accurate, timely, and actionable weather data** to help mitigate the effects of extreme weather.
- Expanding the Weather Observation Network —
- This **includes the installation of additional Doppler Weather Radars (DWRs), wind profilers, radiometers, and automated weather stations.**
- **Doppler Weather Radars are crucial for monitoring rainfall** and forecasting short-term weather changes, particularly for tracking severe weather events like thunderstorms and cyclones.
- **These additional instruments will be deployed in strategic locations**, including coastal areas prone to cyclones, urban centres facing recurrent flooding, and regions that currently have insufficient coverage.
- **By expanding the network of weather observation instruments, 'Mission Mausam' aims to provide more localised and accurate weather data**, allowing for better short-term forecasts and real-time monitoring of extreme weather events.
- Enhancing Weather Forecasting Model —
- **A major challenge in weather prediction is understanding the complex interactions within the atmosphere.**

- The **mission aims to deepen the understanding of atmospheric physics** through research and by leveraging advanced technologies such as machine learning and artificial intelligence (AI).
- **Machine learning algorithms, for example, can analyse large datasets to identify patterns** that might not be immediately evident using traditional forecasting methods.
- **Integrating these technologies with existing models can help to refine predictions**, making them more precise and reliable.
- **Improved models can better capture the dynamic changes in weather systems**, such as shifts in monsoon patterns or the intensification of cyclonic activities, which are increasingly influenced by climate change.
- Investigating Weather Modification Techniques —
- The **third objective of ‘Mission Mausam’ involves exploring weather modification techniques**, such as cloud seeding, to mitigate the effects of extreme weather.
- Cloud seeding is a **process where substances like silver iodide or salt are dispersed into the atmosphere to encourage rainfall**.
- This **technique could be particularly beneficial in drought-prone areas** or regions facing irregular rainfall patterns due to climate change.
- **While such methods are not new, ‘Mission Mausam’ emphasises a scientific approach to evaluating their effectiveness** under India’s specific climatic conditions.
- By investing in research on weather modification, **the mission aims to develop strategies that can be employed during emergencies, such as severe droughts, to alleviate water scarcity**.

Implementation Roadmap of Mission Mausam: Key Phases and Expected Outcomes -

- Collaboration and Resource Allocation —
- To implement these objectives, **the mission allocates significant financial and technological resources, with a budget of ₹2,000 crore**.
- The **funding supports the procurement of new equipment**, the development of advanced forecasting systems, and the expansion of research facilities.
- The **collaboration between the IMD, NCMRWF, and IITM is central to achieving the mission’s goals**.
- **The IMD, being the primary weather forecasting agency, focuses on expanding observational networks** and disseminating weather information to the public.
- Technological Integration for a Future-Ready Forecasting System —
- The mission **aims to deploy machine-learning-based weather models that can process massive amounts of meteorological data** to identify trends and make predictions with higher accuracy.
- This **includes utilising satellite data, radar readings, and real-time ground observations**, all of which are processed through sophisticated algorithms.
- The **data is then integrated into predictive models that can simulate different climate scenarios**, helping policymakers to plan for potential weather events well in advance.
- This **advanced forecasting system is intended to serve not only governmental agencies but also various sectors like agriculture**, which heavily depends on accurate weather predictions for crop planning and yield optimisation.

Necessary Measures to Make Mission Mausam Effective -

- Addressing Gaps in Radar Coverage —
- One of the key challenges in improving weather forecasting is the **inadequate coverage of weather observation platforms**, particularly along India’s western coast and in urban centres at high risk of flooding.
- **India currently operates 39 DWRs** with the capacity to monitor rainfall within a 250kilometer radius.

- However, **the distribution of these radars is uneven**, with just five located on the west coast, despite the increasing frequency and intensity of cyclones in the Arabian Sea.
- **'Mission Mausam' aims to address these gaps by prioritising the installation of additional radars** in high-risk areas.
- This **will provide more accurate short-term forecasts**, essential for managing extreme rainfall events and improving disaster preparedness.
- Promoting Open Access to Weather Data —
- Another important aspect of 'Mission Mausam' is **the emphasis on making weather data openly accessible to researchers and entrepreneurs**.
- **Open access to data fosters innovation by enabling the development of localised early warning tools** and analytical solutions for extreme weather events.
- **For instance, the US, the UK, France, and the European Union have made their weather data available on cloud platforms**, leading to the creation of tools that support local governance and disaster management.
- **In contrast, while the IMD offers data through its portal**, access remains restricted, especially for academic institutions and think tanks.
- **By providing open access to data generated by new weather instruments and forecasting models**, 'Mission Mausam' can facilitate **greater transparency**, innovation, and collaboration, ultimately strengthening India's ability to respond to climate risks.

Conclusion -

- **Mission Mausam represents a timely and strategic initiative by the Indian government to bolster the country's ability to navigate the challenges posed by extreme weather.**
- **By expanding the weather observation network**, improving forecasting models, and fostering open access to data, **the mission can transform how weather information is collected, analysed, and disseminated.**

Source - [The Hindu](#)

QUESTION - India's vulnerability to alternating climatic hazards, such as floods and droughts, underscores the need for improved weather forecasting systems. Discuss the significance of enhanced weather forecasting in mitigating the risks posed by extreme weather events. Explain the objectives and potential impact of 'Mission Mausam' in addressing these challenges and improving India's weather observation and prediction capabilities.

End the Science Nobel Drought of India

The Nobel Prize season highlights a stark reality: since its inception in 1901, only 12 individuals of Indian origin have been awarded the Prize, with just five being Indian citizens. Notably, **Dr. C.V. Raman stands out as the only Indian laureate in the science category**, receiving the Nobel in Physics in 1930 for the discovery of the Raman Effect. The 94-year gap since this achievement **raises concerns about India's scientific recognition on the global stage.**

India's Nobel Prize Journey -

Abhijit Vinayak Banerjee — an Indian-born American economist, was awarded (along with Esther Duflo and Michael Kremer) **2019 Nobel Prize for Economics** for helping to develop an innovative experimental approach to alleviating global poverty.

Reasons Behind India's Poor Performance in the Nobel Prize Science Category -

- **Limitations in research** —
- **Inadequate basic research** — There is insufficient focus on fundamental research, hindering innovation.

- **Low public funding** — Public funding for R&D in India is **~0.7% of its GDP**, which is significantly lower than countries like the US (which spends ~3% of its GDP on R&D), and even behind other BRICS nations.
- **Excessive bureaucracy** — A bureaucratic framework stifles creativity and slows down the research process.
- **Decay of university research capabilities** — Many universities struggle to maintain research standards, further limiting potential breakthroughs.
- **Diminished pool of researchers** — India has approximately five times fewer researchers per capita compared to the global average, significantly reducing its chances of producing Nobelworthy candidates.
- **Selection process is highly selective** —
 - While India has produced several notable scientists who were nominated for Nobel Prizes, many have been overlooked.
 - Among the publicly disclosed nominations, six Indian scientists stand out: Meghnad Saha, **Homi Bhabha**, SN Bose (Physics), GN Ramachandran, T Seshadri (Chemistry), and Upendranath Brahmachari (Medicine).
 - All were nominated multiple times, yet none secured the award.
 - Several prominent scientists have been overlooked entirely. **For example, Jagadish Chandra Bose** (who pioneered wireless communication) and KS Krishnan (a co-discoverer of the Raman scattering effect).
- **Western dominance** —
 - The overwhelming majority of Nobel Prizes in sciences have been awarded to researchers from the **US and Europe**.
 - Out of the 1,100+ laureates in these categories, a mere handful hail from Asia, Africa, or South America, with Japan leading the non-Western countries.

Strategies to Enhance India's Scientific Landscape -

- **Emphasise upon STEM education** —
 - To foster groundbreaking research, India must redirect its focus from the current engineering rush to **fundamental scientific education**.
 - **Early identification and nurturing of talent** through scholarships and mentorship can cultivate gifted minds.
 - Reviving initiatives like the **Kishore Vaigyanik Protsahan Yojana (KVPY)** will encourage students to pursue careers in pure sciences, supporting long-term scientific innovation.
- **Address brain drain** —
 - India's scientific community remains relatively small, with **only 260 scientists per million people** compared to over 4,000 in the US and UK.
 - Indian-origin scientists, such as **Hargovind Khorana, Subrahmanyan Chandrasekhar, and Venkatraman Ramakrishnan**, received Nobel prizes in their respective fields.
 - **However, they conducted their groundbreaking work abroad and were not Indian citizens at the time of their awards.**
 - To retain talent and prevent brain drain, India must improve infrastructure, salaries, and career prospects.
- **Bolster research capabilities** —
 - For the next generation of Nobel laureates to be produced, systemic support is just as important as individual genius.
 - Therefore, **increased investment** (both public and private) in scientific research and infrastructure, and creating a supportive ecosystem for innovative research, are crucial for fostering Nobel-worthy discoveries.
- **Foster international collaborations** —
 - Many Nobel-winning discoveries arise from interdisciplinary and international collaborations.
 - India should promote global partnerships by encouraging young scientists to intern with top research groups worldwide.

- Initiatives like a "1000 Scholar Programme" could facilitate knowledge exchange and innovation.
- **Cultivate a culture of risk-taking** —
- A significant barrier to Nobel-level research in India is the reluctance to pursue high-risk, innovative projects.
- **Reducing bureaucratic constraints** and promoting a culture of bold experimentation is vital for unlocking transformative discoveries.

Source - [The Times of India](#)

QUESTION - India has produced several distinguished scientists, yet only a few have been recognised with the Nobel Prize, particularly in the field of sciences. Examine the key factors that have contributed to India's underperformance in receiving Nobel Prizes in scientific categories. Suggest measures to enhance India's global standing in scientific research and innovation, and discuss the importance of retaining and nurturing talent within the country.

Security

Dealing with the Manipur Crisis

The recent surge in violence in Manipur has spotlighted constitutional challenges in managing internal conflicts, especially regarding the state's governance and security.

Reports indicate that the Chief Minister of Manipur has been sidelined from critical security operations and the invocation of Article 355, a constitutional provision that mandates the Union to protect states from internal disturbances and external threats, further emphasises the gravity of the situation.

These developments bring into focus the failure of constitutional mechanisms in addressing the underlying identitarian tensions, thus questioning the document's capacity to manage diversity effectively.

The Role of Constitution's Special Provisions in Managing Diversity -

- Unique Provisions for Various States —
- India's Constitution is **designed with unique provisions to manage its vast diversity**.
- **Various states**, such as Jammu and Kashmir, Nagaland, and Sikkim, **have been accorded special provisions under the Constitution**.
- These provisions aim to **balance equitable development and safeguard cultural identities**, particularly in regions with significant tribal populations or socio-political complexities.
- In a country as diverse as India, **federalism is not merely a governance model but a necessity to ensure unity** while respecting differences.
- Institutionalisation of Power Sharing Mechanism —
- The **Constitution has evolved over time to accommodate the distinct needs of India's northeastern states**, characterised by complex ethnic compositions and competing identities.
- These **special provisions often institutionalise power-sharing mechanisms, representation in governance, and cultural autonomy**, helping to promote political stability.
- However, **the rising tensions and discontent in Manipur suggest that these measures are either insufficient or inadequately implemented** in the state.

Case Studies of Constitutional Accommodation and Peace Building through Special Provisions -

- **The Case of Constitutional Accommodation in Sikkim -**
- Inclusion of Article 371F —

- **Sikkim's accession to India in 1975 brought about the inclusion of Article 371F**, which provided special constitutional safeguards to the state.
- One of the key features of this article was **the empowerment of Parliament to protect the rights and interests of different sections of Sikkim's population**.
- By recognising the unique socio-political history of Sikkim, **this provision allowed for power-sharing arrangements that catered to the distinct cultural identities** of communities like the Bhutia-Lepcha.
- For example, **the Representation of Peoples Act of 1951 was amended to reserve seats for different communities in the state legislature**, ensuring their voices were adequately represented.
- SC Judgement on Constitutionality of Article 371F —
- **In the landmark R.C. Poudyal case (1993), the constitutionality of Article 371F was challenged**, with arguments that the increased representation of certain communities went against the principle of proportional reservation.
- The **Supreme Court, however, upheld the provision, reasoning that historical and cultural considerations** justified the arrangement.
- This **judgment was significant because it recognised that reconciling diversity sometimes requires deviations** from strict proportionality, allowing for greater flexibility in governance structures to maintain stability.
- **The Case of Constitution Peace Building in Tripura —**
- Extension of Sixth Schedule to Tripura and Introduction of Tripura Accord —
- The **state of Tripura offers another instructive example of how constitutional frameworks can be used to broker peace** in conflict-ridden areas.
- The **Sixth Schedule of the Constitution, which provides for tribal autonomy, was extended to Tripura through the 49th Constitutional Amendment in 1984**.
- The **implementation of this schedule allowed the tribal population greater legislative autonomy**, particularly concerning education, social customs, and land rights.
- This **power-sharing arrangement, cemented by the Tripura Accord of 1988, helped to bring an end to the insurgency movement** led by the Tripura National Volunteers (TNV).
- SC Judgement on Disproportionate Reservation Through Tripura Accord —
- The **disproportionate reservation of seats for Scheduled Tribes in Tripura's State Assembly, enacted under Article 332(3B), was challenged** in the Subrata Acharjee case (2002).
- The **SC upheld the reservation scheme**, emphasising that the political stability achieved through the Tripura Accord justified the deviation from strict proportional representation.
- This **case reinforced the idea that constitutional accommodations, tailored to the specific historical and socio-political contexts of states, can play a vital role in conflict resolution**.

An Analysis of Manipur's Constitutional Dilemmas -

- Lack of Sixth Schedule Autonomy —
- Manipur is **governed under Article 371C, which provides for the creation of a Hill Area Committee (HAC)** to represent the interests of the tribal areas.
- However, **the powers granted to this committee are significantly weaker than those provided under the Sixth Schedule**.
- The **Sixth Schedule offers tribal regions a degree of legislative and administrative autonomy**.
- It **establishes Autonomous District Councils (ADCs) with powers to make laws on land use, management of forests, regulation of social customs, and even village administration**.
- The **HAC can provide recommendations on matters related to tribal areas, but its approval is not required for decisions** affecting these regions.

- This **limited autonomy creates a feeling of disenfranchisement among the tribal population in Manipur**, who view the lack of robust constitutional safeguards as evidence of neglect.
- The Manipur Hill Areas Autonomous District Council Act, 2000: Inadequate Representation —
- Unlike the Sixth Schedule provisions in other northeastern states, **this act does not grant the councils significant legislative or executive authority.**
- Although membership in the district councils is based on tribal classification, **these councils lack the power to make substantial decisions** concerning governance, resource allocation, and development in their areas.
- This **limitation is in stark contrast to states like Nagaland and Mizoram, where tribal councils have more comprehensive control** over local governance and development.
- Inefficiencies in the Current Governing Framework: Power Imbalance —
- The **underlying issue is that the current framework fails to adequately address the complex ethnic divisions in Manipur.**
- The **state's population is divided primarily between the Meitei, who live in the Imphal valley, and various Naga and Kuki tribes**, who inhabit the surrounding hill areas.
- The **valley comprises about 10% of the state's land area but holds a majority of the population**, while the hill areas, which make up 90% of the state's territory, are **predominantly inhabited by the tribal communities.**
- This **geographical and demographic divide has significant political implications, as it exacerbates existing tensions** over land ownership, resource distribution, and political representation.

Possible solutions to address Manipur's Constitution Dilemmas -

- In the context of Manipur, **constitutional mechanisms need to be revisited and strengthened** to address the state's complex identity-based conflicts.
- One possible solution for Manipur lies in **extending the provisions of the Sixth Schedule**, which has successfully facilitated peace in Tripura and other northeastern states.
- Additionally, **greater political autonomy for tribal communities, including enhanced powers for the Hill Area Committee and District Councils**, could help address long-standing grievances over governance and representation.
- **Ensuring equitable resource allocation and developing a more inclusive political framework are essential** steps toward building lasting peace.

Conclusion -

- **The recent unrest in Manipur highlights the limitations of the current constitutional framework** in managing the state's deep-rooted identity conflicts.
- While the Indian Constitution has successfully reconciled diversity in states like Sikkim and Tripura through special provisions, **Manipur's experience shows that these accommodations must be continuously reassessed and adapted.**
- The **ultimate challenge for India is to ensure that its federal structure, strengthened by constitutional safeguards, is flexible enough to address the specific needs** of its most diverse regions.

Source - [The Hindu](#)

QUESTION - The recent violence in Manipur has exposed significant challenges in India's constitutional mechanisms, particularly the limitations of Article 371C and the state's governance framework. With reference to the Manipur crisis, critically examine the role of constitutional provisions in managing internal conflicts and addressing identity-based tensions. How can these mechanisms be strengthened to ensure equitable representation and lasting peace in India's northeastern states?