

Regent Education & Research Foundation

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GENERAL STUDIES - I

Social Issues

Cost of Inequality — Global Gender Index 2024

The **2024** edition of the **Global Gender Gap Index** reveals a concerning picture for India, placing the country at 129th out of 146 surveyed countries.

This **position, near the bottom of the rankings**, reflects a **persistent gender disparity** that has seen little improvement over recent years.

Comparatively, **in 2021, India was ranked 140th out of 156 countries**, indicating that the country has remained entrenched in the bottom 20 percentile of this index.

Understanding the Global Gender Gap Index -

- **The Global Gender Gap Index**, introduced in 2006 (by World Economic Forum), **serves as a comprehensive measure of gender equality** across various dimensions.
- It **comprises four sub-indices: economic participation and opportunity, educational attainment, health and survival, and political empowerment**.
- Each sub-index aggregates multiple indicators to provide a summarised score and **the overall index ranges from 0 to 1, where 1 signifies complete gender parity**.
- It is **crucial to note that this index focuses on the relative position of women to men rather than their absolute status**, thereby highlighting gender gaps.
- **While the index does not encompass every aspect of gender equality, it offers valuable insights** into key areas that can be reliably measured and tracked over time.
- It **functions as a highlighter of significant statistics** rather than a comprehensive analysis.
- The **Centre for Economic Data and Analysis (CEDA)** has developed an **interactive tracker to monitor India's position over time** and relative to other countries across these sub-indices, further enhancing our understanding of gender parity dynamics.

India's Performance in Sub-indices -

- Health and Survival —
 - **In the Health and Survival sub-index, India's score is 0.951**, indicating that **95.1% of the gender gap in this area has been closed**.
 - Despite this high score, India ranks 142nd out of 146 countries.
 - This **paradox suggests that while India has made significant progress, other countries have advanced further**, pushing India lower in the relative rankings.
- Educational Attainment —
 - Similarly, **in the Educational Attainment sub-index, India has closed 96.4%** of the gender gap. However, the country stands at 112th position globally.
 - This **indicates that despite substantial achievements in education for women, other nations have outperformed India**, highlighting a relative lag in progress.
- Economic Participation and Opportunity —
 - The Economic Participation and Opportunity sub-index reveals a more troubling scenario.
 - **India's score here is 39.8%**, placing it at 142nd among 146 countries.
 - Although **this represents an improvement from 32.6% in 2021, it is still significantly lower than the 2012 score of 46%**.
 - This **sub-index is based on labour force participation, share in managerial positions, wage gaps, and wage parity**.
 - **India's low score underscores the persistent economic barriers women face**, including lower labour force participation and significant wage disparities.
 - **In comparison, countries with the lowest economic parity levels**, such as Bangladesh (31.1%), Sudan (33.7%), Iran (34.3%), Pakistan (36%), and Morocco (40.6%), **share similar challenges**.

- These nations exhibit less than 30% gender parity in estimated earned income and less than 50% in labour force participation.
- Political Empowerment —
 - On the Political Empowerment sub-index, **India has closed only 25.1% of the gender gap, ranking 65th globally.**
 - This is a **significant drop from the 51st position in 2021, with a score of 27.6%**. The decline is even more pronounced when compared to the 43.3% score around 2014.
 - This **indicates a regression in political participation** for women over the past decade.
 - **Despite the global advances in gender equality in economic, educational, and health spheres, progress in political participation remains sluggish**, both globally and within India.

Regional Comparison and Broader Economic Implications -

- Regional Comparison —
 - **India's position is also concerning within the regional context of South Asia**, which ranks seventh out of eight global regions, only ahead of the Middle East and North Africa (MENA).
 - **Among the seven South Asian countries, India ranks fifth**, with Bangladesh leading at the 99th position globally.
 - This **regional comparison underscores India's struggle with gender parity**, as it lags several of its immediate neighbours.
 - The **persistence of gender gaps in key indicators, despite some improvements, signals a broader issue.**
 - **A decade ago, India's gender gaps were narrower**, indicating that progress has stalled or reversed in several areas.
 - This **raises a critical question whether India should acknowledge these findings and take corrective action**, or dismiss the metrics and blame the messengers.
- Economic Implications of Gender Inequality —
 - There is substantial research highlighting the economic costs of sidelining women.
 - The **Organisation for Economic Co-operation and Development (OECD) estimates that gender-based discrimination in social institutions could cost the global economy up to \$12 trillion.**
 - Reducing gender discrimination can significantly boost GDP growth rates.
 - This **understanding necessitates the mainstreaming of gender equality into economic policy-making**, rather than treating it as a secondary issue to be addressed later.

Social Implications and Long-term Benefits of Gender Equality -

- **Achieving gender equality is not only an economic imperative but also a social one** and empowering women leads to better outcomes in health, education, and social stability.
- For instance, **women who are economically empowered are more likely to invest in their children's education and health**, creating a positive intergenerational impact.
- Furthermore, **when women are included in decision-making processes, both in corporate and political spheres, policies tend to be more inclusive** and address a broader range of social issues.
- This **inclusiveness leads to more equitable societies** where everyone can thrive.

Key strategies to Address the Gender Inequality -

- Educational Investments —
 - Ensuring equal access to education for girls and women is fundamental.
 - **Education empowers women with the skills and knowledge needed to participate fully in the economy.**
 - Policies that promote STEM education for girls can help bridge gender gaps in high-paying and in-demand fields.
- Supportive Work Environments — Implementing policies that support work-life balance, such as **maternity and paternity leave, affordable childcare, and flexible working hours, can encourage more women to enter and remain in the workforce.**
- Equal Pay Legislation —

- Enforcing laws that mandate equal pay for equal work can help reduce wage disparities.
- **Transparent pay structures and regular pay audits can ensure compliance** and highlight areas needing improvement.
- Entrepreneurship Support —
 - **Providing access to capital, training, and mentorship** for women entrepreneurs can **stimulate economic growth**.
 - Women-owned businesses contribute significantly to job creation and economic diversification.

Conclusion -

- **India's position in the 2024 Global Gender Gap Index highlights significant challenges** and areas requiring urgent attention.
- Despite progress in health and education, **economic participation and political empowerment remain areas of concern**.
- Recognising the economic benefits of gender equality, **it is imperative that India integrates gender considerations into its core economic strategies and creates a societal environment that treats women as equal stakeholders in all aspects of life**.

Source - [The Hindu](#)

QUESTION - Critically analyse India's performance in the Global Gender Gap Index, focusing on the sub-indices of Health and Survival, Educational Attainment, Economic Participation and Opportunity, and Political Empowerment. Discuss the implications of these disparities for India's socio-economic development and suggest comprehensive strategies to address gender inequality.

Why caste should inform debates on inequality?

A recent working paper from the World Inequality Lab has rekindled discussions on the persistent and widening gap between the rich and poor globally.

Utilising metrics such as the Gini coefficient and percentile ratios, an examination of consumption inequality for the years 2017-18 and 2022-23 reveals critical insights into the socioeconomic landscape of India.

Therefore, it is important to study and focus on the disparities among different social groups, namely the Scheduled Tribes (ST), Scheduled Castes (SC), Other Backward Classes (OBC), and the General category.

An Analysis of Consumption Patterns, Caste Disparities and Changes in Gini Coefficient -

- Consumption Patterns, Caste Disparities —
 - In **2022-23**, the **STs**, accounting for 9% of the population, had a consumption share of only 7%. **SCs**, comprising 20% of the population, held a 16% consumption share.
 - **OBCs**, representing 43% of the population, had a consumption share of 41%, indicating a more conservative consumption pattern within this group.
 - Conversely, the **General category**, despite constituting 28% of the population, commanded a consumption share of 36%.
 - These figures highlight persistent disparities in consumption distribution across various social groups, with SCs and STs consistently lagging the General and OBC categories.
- Changes in the Gini Coefficient —
 - The overall Gini coefficient, a measure of income inequality, decreased from 0.359 in 2017-18 to 0.309 in 2022-23, signifying a reduction in income inequality by 0.050.
 - Among the STs, the Gini coefficient fell from 0.322 to 0.268, a 0.054-point drop, indicating improved equitable consumption distribution within this community.
 - The **SC category** saw a decrease from 0.312 to 0.273, while the **OBC category's** Gini coefficient declined from 0.336 to 0.288, a 0.048-point decrease.

- The **General category** experienced the most significant reduction, from 0.379 to 0.306, amounting to a 0.073-point drop.
- This **substantial decrease may reflect various socioeconomic changes**, including social mobility and effective policy interventions.

Persistent Economic Disparities -

• **Consumption Inequality Among Different Deciles —**

- An examination of the consumption levels among the **bottom 20% decile of various social groups from 2017-18 to 2022-23 reveals marginal decreases for the ST, SC, and OBC**
- This **slight decline indicates that these communities have not experienced significant improvements** in their economic conditions despite broader economic growth.
- **For the ST and SC communities, this trend is particularly concerning** as it underscores their continued vulnerability and marginalization within the Indian economy.
- In stark contrast, **the General category witnessed a more pronounced decline** in consumption levels among its poorest segment.
- This indicates that while there might be a general reduction in inequality, **the poorest individuals within the General category are experiencing relative economic declines.**
- This **could be due to several factors, including the lack of targeted welfare schemes that effectively reach the most disadvantaged in this group**, or broader economic policies that disproportionately benefit the already affluent.

• **Disproportionate Wealth Accumulation —**

- Conversely, **consumption patterns among the top 20% decile of all social groups show slight increases**, with the General category experiencing a significant 10-percentage-point surge.
- This **substantial rise among the wealthiest segment of the General category suggests a concentration of wealth** and resources among high-caste elites.
- **Such a trend implies that economic gains in the country are not evenly distributed** but are instead disproportionately accruing to those already at the top of the socioeconomic hierarchy.
- The **substantial increase in consumption among the top decile of the General category highlights the potential for wealth accumulation** and the perpetuation of economic advantages within this group.
- This **phenomenon can be attributed to several factors, including access to better educational and employment opportunities**, social networks that facilitate economic advancement, and policies that, while ostensibly universal, effectively favour those with existing advantages.

• **Caste-Based Economic Exclusion —**

- The **economic exclusion of the ST and SC communities is further evidenced by their lower consumption** shares relative to their population proportions.
- **Despite constituting 9% of the population, the STs account for only 7% of total consumption.**
- Similarly, **the SCs, making up 20% of the population, have a consumption share of just 16%.**
- This discrepancy is indicative of systemic barriers that limit the economic opportunities available to these groups.
- **Factors such as limited access to quality education, employment discrimination, and geographical marginalisation** (many ST communities reside in remote, less developed areas) contribute to these ongoing disparities.

• **Intergenerational Transmission of Inequality —**

- The **persistence of these disparities also highlights the intergenerational transmission** of inequality.
- **Economic disadvantages faced by one generation in the ST and SC communities are often passed down to the next**, creating a cycle of poverty and marginalisation.
- This **cycle is reinforced by limited social mobility and the lack of effective affirmative action** in practice, despite constitutional guarantees.

- Impact of Policy Interventions —
 - While various policy interventions have aimed to address these disparities, **their impact has been uneven.**
 - For instance, reservation policies in education and employment have provided some **upward mobility** for members of the SC and ST communities.
 - However, **these policies have not sufficiently addressed the broader economic inequities that affect daily consumption** and living standards.
 - Additionally, **rural development initiatives and direct benefit transfers, while beneficial, have not fully reached the most disadvantaged** due to implementation challenges and inefficiencies.
- Implications of Economic Disparities on Social Stability —
 - The **underlying economic disparities among India's social groups have broader implications for social stability and cohesion.**
 - **Persistent inequality can lead to social unrest**, as marginalised communities become increasingly aware of the gaps in wealth and opportunity.
 - This **can undermine the broader goals of economic development** and social harmony.
 - Therefore, addressing these disparities is not only a matter of economic policy but also one of social justice and national stability.

Strategies for Addressing Economic Disparities -

- To effectively address these disparities, **it is essential to implement comprehensive and targeted strategies.**
- This includes **enhancing access to quality education and healthcare for marginalised communities, creating economic opportunities** through skill development and employment programs, and ensuring that welfare schemes are effectively reaching those in need.
- Additionally, **there should be a focus on creating an inclusive economic environment that enables social mobility** and reduces systemic barriers to economic participation for all social groups.

Conclusion -

- **While India has made significant strides in reducing overall income inequality** and lifting millions out of poverty, **the persistent caste-based disparities** in consumption and economic status **underscore the need for continued and focused policy interventions.**
- **By addressing the unique challenges** faced by different social groups, particularly the ST and SC communities, **India can move closer to achieving a more equitable and harmonious society.**
- **The reduction in the Gini coefficient and improvements in consumption patterns are promising, but sustained efforts are necessary** to ensure that these gains are broadly shared across all segments of society.

Source - [The Indian Express](#)

QUESTION - Discuss the trends and implications of consumption inequality and changes in the Gini coefficient among different social groups in India recently. Evaluate the effectiveness of policy interventions in addressing these disparities and propose strategies to promote a more equitable economic environment.

GENERAL STUDIES - II

Governance

Why Centre should not junk arbitration?

On June 3, the Finance Ministry of India unveiled a policy decision that marks a significant departure from decades of promoting the country as an arbitration hub. The government has now decided to exclude arbitration clauses from future contracts involving government or government-controlled entities, with some exceptions. It is important to analyse this policy shift because it raises several concerns and appears fundamentally flawed for several reasons.

The Government's New Policy on Arbitration -

- The new policy is set out in the form of an Office Memorandum and provides that the government departments/ entities/ agencies should amicably settle as many disputes as possible.
- These entities will solve disputes in overall long-term public interest, keeping legal and practical realities in view, without shirking or avoiding responsibility or denying genuine claims of the other party.
- To facilitate amicable settlement, the government agencies will constitute high-level committees composed of former judges/retired senior officials to vet or approve such settlements.
- If settlement efforts do not work out, the dispute will be left to the courts for adjudication.

Major Reason behind the Policy Shift -

- The core rationale behind this policy change is the government's perception that arbitrators often lack integrity and collude with private parties, leading to unfavourable awards that are difficult to challenge legally.
- However, this distrust overlooks the foundational principles of arbitration, where arbitrators are expected to be independent and impartial, resolving disputes based on merits rather than government preferences.
- The assumption that adverse decisions indicate compromised tribunals fails to acknowledge the possibility that governmental agencies might simply be failing to meet their legal obligations.

Why the Government's Policy change argument is fundamentally flawed?

- Lack of Accountability and Transparency in the New Policy —
 - If the government does not trust arbitrators as such (though it usually nominates former Supreme Court or High Court judges as arbitrators), why would it repose greater trust in its officials in negotiating a settlement?
 - It matters little that the settlement is approved by a high-level committee (comprising inter alia of former judges) as it is and will remain a voluntary, administrative decision.
 - A mediator (if involved) cannot advocate any particular position and they can only facilitate (and not recommend) any settlement.
 - In terms of transparency and accountability, a settlement can never rest on an equal footing with an award which is issued following a judicial process and by a process known to law.
- Underestimation of Complexities Involving a Dispute Settlement —
 - The policy's reliance on amicable settlements underestimates the complexities involved in negotiating substantial disputes.
 - Government officials are bound by stringent rules and answerable to multiple authorities, including courts and investigative agencies.
 - The fear of potential scrutiny or allegations of arbitrariness and discrimination may deter officials from agreeing to significant liabilities, thereby hindering effective settlement of disputes.
 - The 2023 Vivad se Vishwas – II scheme exemplifies this issue, where the government proposed a substantial discount on awarded sums rather than honouring arbitral decisions, indicating a lack of commitment to fair and equitable settlements.
- Courts' Inadequacy for Commercial Disputes —
 - According to the new policy if settlement negotiations fail, the policy leaves disputes to the courts.

- However, **Indian courts are notoriously overburdened and ill-equipped** to handle complex commercial disputes efficiently.
- The **2015 Amendment to the Arbitration Act** aimed to expedite award challenges within a year, yet in practice, **these challenges can linger for about five years.**
- **Original suits involving substantial stakes**, extensive documentation, intricate facts, and expert testimony would exacerbate this problem, **leading to prolonged litigation and further burdening the judicial system.**

Implications of India's Shift from Arbitration to Court Adjudication -

- Diminished Investor Confidence —
 - **Investors**, both domestic and international, **seek predictable and reliable legal frameworks** to safeguard their investments.
 - **Arbitration, with its structured yet flexible procedures, provides a relatively quick and efficient means** to resolve disputes.
 - **By moving away** from arbitration, **India risks eroding investor confidence** as the legal process becomes more uncertain and protracted.
 - **The potential for lengthy and unpredictable court battles may deter investors**, who might perceive the legal environment as increasingly hostile or unreliable.
- Slowdown in Infrastructure Development —
 - **India has ambitious plans for infrastructure development** to support its growing economy and meet the needs of its population.
 - **Major infrastructure projects often involve complex contracts and significant financial stakes**, making disputes almost inevitable.
 - **Arbitration has been a preferred method for resolving such disputes** due to its efficiency and the expertise of arbitrators familiar with commercial and technical aspects.
 - **The shift to court adjudication could delay the resolution of disputes**, leading to stalled projects, increased costs, and missed deadlines.
- Increased Costs and Resource Allocation —
 - The judicial system in India is already burdened with a backlog of cases.
 - **Introducing a large volume of commercial disputes into this system will exacerbate the problem**, leading to longer resolution times and increased costs for all parties involved.
 - **Companies may need to allocate more resources to legal battles, diverting funds that could have been used for expansion, innovation, or other productive activities.**
 - **The increased litigation costs can also make India a less attractive destination** for businesses, further hampering economic growth.
- Impact on Contractual Relationships —
 - Contracts are the foundation of commercial relationships. **The predictability and enforceability of contractual terms are crucial for businesses.**
 - Arbitration clauses in contracts provide a clear and reliable mechanism for dispute resolution.
 - **By removing arbitration clauses, the government introduces uncertainty** into contractual relationships.
 - Businesses may become more cautious in their dealings with government entities, potentially leading to less collaboration and innovation.
 - **The trust deficit can result in higher risk premiums**, making projects more expensive and less viable.
- Potential for Increased Corruption —
 - **The reliance on court adjudication** and settlement negotiations conducted by government officials **may inadvertently increase the potential for corruption.**
 - Settlement processes lack the transparency and structured oversight inherent in arbitration.
 - **Decisions made behind closed doors without the rigor of judicial or arbitral scrutiny can lead to perceptions**, or even instances, of bias and unfair practices.
 - This can **further damage the business environment**, making it less attractive to honest investors and entrepreneurs.
- Stifling Innovation and Entrepreneurship —
 - A slow and unpredictable dispute resolution system can stifle innovation and entrepreneurship.

- **Startups and innovative enterprises often operate with limited resources** and cannot afford prolonged legal battles.
- The **efficiency of arbitration can be crucial for these entities**, allowing them to resolve disputes swiftly and focus on growth and development.
- **By removing arbitration, the government risks creating a hostile environment for startups, potentially stifling the innovation** that is essential for economic dynamism and competitiveness.

Conclusion -

- **The government's decision to abandon arbitration in favour of amicable settlements and court adjudication is misguided and counterproductive.**
- **This policy not only fails to address the root concerns but also introduces new challenges** that will hinder India's economic and infrastructural development.
- **A swift reversal of this short-sighted policy is imperative to ensure a robust and reliable dispute resolution framework** that supports the country's growth ambitions.

Source - [The Indian Express](#)

QUESTION - Discuss the recent policy shift by the Finance Ministry of India to exclude arbitration clauses from future government contracts. Critically analyse the reasons behind this change and its potential implications on India's investment climate, infrastructure development, and legal system.

Three New Criminal Laws

The recent announcement by the Minister for Law and Justice about a **National Litigation Policy aims to transform the government into an efficient and responsible entity.**

Simultaneously, **the Home Minister has revealed that three new criminal laws will come into effect on July 1, 2024.**

These developments present a significant overhaul of India's criminal justice system, raising questions about their impact on the legal landscape, particularly concerning citizens' rights and the judiciary's efficiency.

Essence of Criminal Law and its compliance -

- Criminal law's **primary purpose is to comply with established procedures**, as it has the potential to deprive individuals of life and liberty.
- **Article 21 of the Indian Constitution emphasises that no person shall be deprived of life and liberty except by the procedure established by law.**
- Traditionally, **this procedure has been governed by the Criminal Procedure Code (CrPC)**, which has now been replaced by the new laws.
- **The Indian Penal Code (IPC), which defines criminal behaviour, has also been revised**, introducing new crimes, and altering existing definitions.

Potential Impact of Three New Criminal Laws -

- **Increased Complexity and Legal Uncertainty —**
 - The **primary objective of the National Litigation Policy is to streamline governmental litigation**, reducing costs and the number of cases involving the government.
 - However, **the simultaneous implementation of three new criminal laws**, revising almost every section of the IPC, CrPC, and Indian Evidence Act, **complicates this goal.**
 - The **established legal framework provided by these laws has offered predictability and certainty**, essential for citizens and legal practitioners to navigate the judicial system effectively.
 - **With the introduction of the new laws, there is an inherent period of adjustment** where lawyers, judges, and law enforcement officers must familiarise themselves with the new provisions.
 - **This transition period will likely involve increased legal disputes** as interpretations of the new laws are contested in court.

- For instance, changes in definitions of crimes and procedures will necessitate numerous legal challenges, each requiring time and resources to resolve.
- This increased complexity directly translates to higher legal costs for all parties involved, including the government.
- Burden on Legal Practitioners and the Judiciary —
 - Legal practitioners will face a significant learning curve as they adapt to the revised laws.
 - The need for extensive training and the drafting of new legal strategies will place additional demands on their time and resources.
 - Moreover, the judiciary will encounter a surge in cases as old and new legal frameworks coexist, leading to disputes over which laws and procedures apply to specific cases.
 - This duality not only confuses but also lengthens the legal process, further straining an already overburdened judiciary.
- Increased Litigation and Case Backlogs —
 - The National Judicial Data Grid highlights a severe backlog of over 83,000 criminal cases pending in Indian courts.
 - The introduction of new laws without thorough evaluation and preparedness could exacerbate this backlog by an estimated 30%.
 - As legal practitioners and the judiciary grapple with the new laws, the number of pending cases is likely to surge.
 - Each new legal challenge regarding the interpretation and application of the new laws will contribute to this backlog, causing interminable delays.
- Financial Implications for the Accused —
 - For individuals accused of crimes under the new laws, the financial implications are significant.
 - Legal representation will become more costly as lawyers invest additional time in understanding and arguing the nuances of the new legal framework.
 - Furthermore, prolonged legal battles due to disputes over procedural and substantive changes will increase legal fees.
 - This situation disproportionately affects those from lower socio-economic backgrounds, who may struggle to afford extended legal services, thereby impacting their right to a fair trial.
- Additional Legal Costs for the Government —
 - As the state is the primary litigant in criminal cases, increased litigation due to the new laws will require more resources for legal representation and court proceedings.
 - The government will need to allocate additional funds to manage the increased caseload, which could otherwise be used for public welfare programs.
 - This scenario contradicts the National Litigation Policy's goal of reducing governmental legal expenditure.
- Infrastructure Upgrades and Resource Allocation —
 - The judiciary's infrastructure will need significant upgrades to handle the increased burden.
 - This includes hiring additional judges, expanding court facilities, and implementing advanced case management systems.
 - Without these upgrades, the existing judicial infrastructure will be overwhelmed, leading to further delays and inefficiencies.
 - The financial and logistical resources required for these upgrades are substantial, and without a clear audit and plan, the implementation of the new laws risks overwhelming the system.

Areas of Concern regarding Three New Criminal Laws -

- Dual Systems of Criminal Justice —
 - From July 1, the coexistence of old and new criminal justice systems will complicate legal proceedings.
 - Substantive laws, which define crimes, cannot be applied retrospectively, while procedural laws can be, unless they adversely affect the accused.

- This **duality will likely lead to disputes about which procedures apply, causing further delays** as these issues reach the Supreme Court.
- This **uncertainty compromises citizens' rights**, as they navigate an unpredictable legal environment.
- **Disrespect for Judicial Precedents** —
 - The **Bharatiya Nagarik Suraksha Sanhita, 2023**, mandates preliminary inquiries in every **cognizable offense** punishable by three to seven years of imprisonment.
 - It **contradicts the Supreme Court's ruling in Lalita Kumari vs Government of Uttar Pradesh (2013)**, which limited such inquiries to exceptional cases.
 - This **undermines judicial authority and heralds an era where legislative actions can override judicial protections** of liberties.
- **The Risk of Dual Prosecution** —
 - **Incorporating stringent provisions from the Unlawful Activities (Prevention) Act (UAPA) into the new laws allows for dual prosecution** for the same offence under different agencies, such as the NIA and local police.
 - This **duality increases the complexity and potential for abuse within the legal system**, threatening citizens' hard-won rights and liberties.

Potential Solutions and Recommendations -

- To mitigate these impacts, **it is crucial to conduct a comprehensive judicial audit** before the new laws come into force.
- **This audit should assess the potential increase in litigation**, the necessary infrastructural upgrades, and the financial implications for both the government and private citizens.
- **Additionally, phased implementation and extensive training for legal practitioners and judiciary members can help ease the transition.**
- **Adequate support for lower-income individuals**, possibly through enhanced legal aid services, **will ensure that access to justice is not compromised.**

Conclusion -

- **The introduction of the National Litigation Policy**, alongside the Bharatiya Nagarik Suraksha Sanhita 2023, Bharatiya Nyaya Sanhita 2023, and Bharatiya Sakshya Adhinyam 2023, **presents a paradox.**
- **Without a comprehensive judicial audit** to assess their impact, implementing these laws **could undermine fundamental rights and access to justice.**
- Therefore, **it is imperative to delay their enforcement until their implications are thoroughly evaluated and addressed** to ensure they contribute positively to India's legal landscape.

Source - [The Indian Express](#)

QUESTION - The recent introduction of three new criminal laws—Bharatiya Nagarik Suraksha Sanhita 2023, Bharatiya Nyaya Sanhita 2023, and Bharatiya Sakshya Adhinyam 2023 — alongside the National Litigation Policy, aims to overhaul India's criminal justice system. Critically examine the potential impacts of these new laws on the judicial system, particularly in terms of legal complexity, the burden on legal practitioners, increased litigation, financial implications, and citizens' rights. Suggest measures to ensure a smooth transition and effective implementation of these laws.

West Bengal Train Accident

The recent collision near Siliguri in West Bengal, which resulted in nine fatalities and over 40 injuries, **underscores the chronic problems plaguing this essential transport system.**

Despite its significance in a densely populated and developing country, **Indian Railways has seen seven major accidents since 1995, claiming over 1,600 lives.**

Indian Railways, a critical lifeline for millions, is grappling with severe systemic issues that threaten its viability and safety and **these tragedies highlight the urgent need for a comprehensive overhaul of the railway system.**

An Analysis of Declining Performance, Market Share and Other Systematic Issues of Indian Railways -

- Stagnation in Freight and Passenger Volumes —
 - **Since 2010-12, the total volume of both freight and passenger traffic has either stagnated or declined.**
 - **This stagnation is particularly stark when compared to the growth rates of road and air transport, which have seen annual increases of 6-12%.**
 - **Between 2014-15 and 2019-20, passenger traffic decreased from 995 billion pass-km to 914 billion pass-km.**
 - **During the same period, freight traffic remained between 682 and 739 billion net tonne-km.**
 - **These figures highlight a failure to attract new business and retain existing customers, undermining the railways' role as a major transport provider.**
- Loss of Competitiveness to Road and Air Transport —
 - **The stagnation in railway traffic volumes stands in sharp contrast to the dynamic growth seen in road and air transport.**
 - **The road transport sector has benefited from significant investments in highway infrastructure, leading to improved connectivity and reduced travel times.**
 - **Similarly, the aviation sector has expanded rapidly, with new airports, increased flight frequencies, and competitive pricing making air travel more accessible to the masses.**
 - **As a result, both passengers and freight shippers are increasingly opting for road and air transport over rail, which they perceive as more reliable, faster, and often more cost-effective.**
 - **The shift to road and air transport is also a reflection of broader economic and demographic changes.**
 - **As incomes rise and urbanisation accelerates, there is greater demand for faster and more convenient travel options.**
 - **Indian Railways has struggled to keep pace with these changing preferences, resulting in a significant loss of market share.**
- Failure to Meet Modernisation and Efficiency Targets —
 - **Indian Railways' inability to modernise and improve efficiency has further exacerbated its declining performance.**
 - **Despite numerous announcements and plans to increase train speeds and improve safety, tangible progress has been minimal.**
 - **The average speed of mail and express trains has remained stagnant at 50-51 kmph, far below the ambitious target of 75 kmph set under various initiatives like Mission Raftar.**
 - **This failure to increase speeds not only affects passenger satisfaction but also impacts the efficiency of freight operations.**
- Major Punctuality Issues —
 - **The railways have struggled with chronic punctuality issues, with trains frequently running late.**
 - **This lack of reliability is a major deterrent for both passengers and freight shippers who require timely delivery of goods.**
 - **The Comptroller and Auditor General (CAG) of India's report on speed and punctuality highlights these deficiencies, noting that there has been no significant improvement in train speeds or punctuality over the past several years.**

Highlights of CAG Report on Indian Railways and Other Administrative Failures -

- Inconsistent Policies and Lack of Strategic Direction —
 - **Over the past two decades, the Railway Board, the highest administrative body of Indian Railways, has been characterised by abrupt changes in policies and a lack of coherent strategic direction.**
 - **This inconsistency has led to a fragmented approach to modernisation and improvement efforts.**
 - **Frequent leadership changes and shifting priorities have prevented the implementation of long-term plans that are essential for sustainable development.**

- For instance, **initiatives to increase train speeds and enhance safety have been announced multiple times but have failed to materialise effectively.**
- **The Mission Raftar project, aimed at increasing the average speed of trains to 75 kmph, has been reintroduced in various forms since 2005.**
- Inefficiencies in Operational Management —
 - **Operational inefficiencies further exacerbate the administrative failures** within Indian Railways.
 - **The punctuality of trains remains a major issue**, with delays being a common occurrence.
 - This lack of reliability undermines public confidence and reduces the attractiveness of rail travel compared to road and air alternatives.
 - **The inability to adhere to schedules disrupts both passenger and freight services**, leading to economic losses and inconvenience.
 - **Despite acquiring advanced technology to build faster coaches and locomotives, Indian Railways has failed to operationalise these capabilities effectively.**
 - **The continued reliance on outdated infrastructure and practices hampers efforts to improve overall efficiency and service quality.**
- Persistent Safety Issues —
 - **The high incidence of accidents, including derailments and collisions, highlights serious flaws in safety management and infrastructure maintenance.**
 - **The recent collision near Siliguri and the tragic multiple train collision in Balasore are stark reminders of the ongoing safety issues.**
 - **The CAG's report on accidents reveals that while there has been some reduction in the number of accidents due to the manning of unmanned railroad crossings, the rate of derailments and collisions remains high.**
 - **These accidents are often caused by asset failures** such as signal malfunctions and rail fractures.
 - **The Balasore collision, for instance, was attributed to a signal failure**, illustrating the severe consequences of inadequate maintenance and monitoring.

Required reforms to Revitalise Indian Railways -

- Prioritising Safety —
 - **Improving safety should be the foremost priority** and this involves significant investment in track upgrades, modern signalling systems, and robust maintenance protocols.
 - **Regular safety audits, adherence to international safety standards, and continuous training for railway staff are essential** components of a comprehensive safety strategy.
- Enhancing Efficiency and Reliability —
 - **Increasing the average speed of trains, improving punctuality, and reducing delays are critical** for enhancing the efficiency and reliability of the rail network.
 - **This can be achieved through targeted investments in infrastructure upgrades**, such as replacing outdated tracks and enhancing station facilities.
 - **Implementing advanced traffic management systems can also optimise train operations** and reduce bottlenecks.
- Innovation and Modernisation —
 - While high-profile projects like bullet trains and semi-high-speed services have their place, **innovation should extend to the entire network.**
 - **Introducing more efficient locomotives, adopting green technologies, and leveraging data analytics for predictive maintenance can drive modernisation** across the rail system.
 - **These efforts should be integrated with a broader strategy** to improve the core network's performance.

Conclusion -

- **The current state of Indian Railways reflects the consequences of misplaced priorities and the urgent need for comprehensive reforms.**
- **By focusing on safety, efficiency, and modernisation, Indian Railways can reverse its decline and reclaim its position** as a vital component of India's transportation infrastructure.

- This requires a strategic shift away from high-profile, costly projects towards targeted investments in core infrastructure and operations.

Source - [The Indian Express](#)

QUESTION - Examine the systemic issues and challenges faced by Indian Railways, as highlighted by recent accidents and declining performance metrics. Critically analyze the impact of these challenges on safety, efficiency, and competitiveness in the context of the broader transport sector. Discuss the key reforms necessary to revitalise Indian Railways and ensure its long-term viability and reliability.

International Relations

Strategic imperatives of Great Nicobar Project

The main opposition party has called the proposed Rs 72,000-crore infrastructure upgrade at Great Nicobar Island a grave threat to the island's indigenous people and fragile ecosystem. They demanded an immediate halt to all project clearances and a thorough, impartial review by relevant Parliamentary committees.

Great Nicobar Island -

• Geographical location —

- Great Nicobar, the southernmost of the Andaman and Nicobar Islands.
 - The Andaman and Nicobar Islands are a cluster of about 836 islands in the eastern Bay of Bengal.
 - The two groups of which are separated by the 150-km wide **Ten Degree Channel**.
 - The Andaman Islands lie to the north of the channel, and the Nicobar Islands to the south.
- Indira Point on the southern tip of Great Nicobar Island is India's southernmost point, less than 150 km from the northernmost island of the Indonesian archipelago.

• Ecosystem —

- The Great Nicobar Island has tropical wet evergreen forests, mountain ranges reaching almost 650 m above sea level, and coastal plains.
- The Island has two national parks and a biosphere reserve.
- Many endangered species are found at the Island. The leatherback sea turtle is the island's flagship species.

• Tribes of Nicobar —

- Great Nicobar is home to the Shompen and Nicobarese tribal peoples.
- The Shompen are hunter-gatherers who depend on forest and marine resources for sustenance.
- The Nicobarese, who lived along the west coast of the island were mostly relocated after the 2004 tsunami.
- An estimated 237 Shompen and 1,094 Nicobarese individuals now live in a 751 sq km tribal reserve, some 84 sq km of which is proposed to be denotified.

Great Nicobar Island project -

• Background —

- In November 2022, the Environment ministry has given environmental clearance for the Centre's ambitious Rs 72,000 crore multi-development projects in Greater Nicobar Island.
- The project for the holistic development of Great Nicobar Island was implemented after a **report by NITI Aayog**.
 - A pre-feasibility report flagged the opportunity to leverage the strategic location of the island.

• Proposal —

- The Great Nicobar Island (GNI) is a mega project to be implemented at the southern end of the Andaman and Nicobar islands.

- The project includes an international container trans-shipment terminal, a greenfield international airport, township development, and a 450 MVA gas and solar based power plant over an extent of 16,610 hectares in the island.
- The port will be controlled by the Indian Navy, while the airport will have dual military-civilian functions and will cater to tourism as well.

Why government is keen to develop this Island?

- **Economic reasons —**
 - The government's greater goal is to leverage the locational advantage of the island for economic and strategic reasons.
 - Great Nicobar is equidistant from Colombo to the southwest and Port Klang and Singapore to the southeast.
 - It is positioned close to the East-West international shipping corridor, through which a very large part of the world's shipping trade passes.
 - The proposed ICTT can potentially become a hub for cargo ships travelling on this route.
 - As per the NITI Aayog report, the proposed port will allow Great Nicobar to participate in the regional and global maritime economy by becoming a major player in cargo transshipment.
- **Strategic and Security reasons —**
 - The proposal to develop Great Nicobar was first floated in the 1970s, and its importance for national security and consolidation of the Indian Ocean Region has been repeatedly underlined.
 - Increasing Chinese assertion in the Bay of Bengal and the Indo-Pacific has added great urgency to this imperative in recent years.
 - India is wary of a build-up of Chinese maritime forces at the Indo-Pacific choke points of especially Malacca, Sunda, and Lombok.
 - China's attempts to expand its footprint in the region includes building a military facility at Coco Islands (Myanmar) lying just 55 km to the north of the Andaman & Nicobar Islands.
 - Close surveillance of the entire area around the archipelago, and the building up of a strong military deterrence at Great Nicobar is of vital importance to India's national security.

Concerns -

- **Threat to Island Ecology —**
 - The proposed massive infrastructure development in an ecologically important and fragile region has alarmed many environmentalists.
 - The loss of tree cover will not only affect the flora and fauna on the island, it will also lead to **increased runoff and sediment deposits in the ocean**, impacting the coral reefs in the area.
 - Environmentalists have also flagged the **loss of mangroves** on the island as a result of the development project.
 - The port project could destroy coral reefs, disrupt the local marine ecosystem, and threaten the Nicobar Megapode bird and leatherback turtles in the Galathea Bay area.
- **Impact on Indigenous People —**
 - Critics point out that there will be devastating impact on the Shompen, a particularly vulnerable tribal group (PVTG) of hunter-gatherers with an estimated population of a few hundred individuals living in a tribal reserve on the island.
 - They allege that the project violates tribal rights.
 - The local administration is accused of not adequately consulting the Tribal Council of Great and Little Nicobar Islands.
 - In November 2022, the council revoked a no-objection certificate for diverting about 160 sq km of forest land, citing incomplete information.
- **Seismic Concerns —**
 - Many experts have highlighted that the proposed port is in a seismically volatile zone, which experienced a permanent subsidence of about 15 ft during the 2004 tsunami.
- **National Green Tribunal's intervention —**
 - In April 2023, the Kolkata Bench of the National Green Tribunal (NGT) declined to interfere with the environmental and forest clearances granted to the project.
 - However, it ordered the formation of a high-power committee to review the clearances. The status of the committee's report is still unclear.

Source - [The Indian Express](#)

QUESTION - Discuss the implications of the Great Nicobar Project on the island's ecosystem and indigenous communities. Critically analyse the arguments for and against the project in the context of India's economic and strategic interests. Additionally, examine the role of regulatory bodies like the National Green Tribunal in addressing environmental and social concerns associated with large-scale development projects.

Summit for Peace on Ukraine

A two-day peace summit aimed at addressing the ongoing war in Ukraine was held in Burgenstock, Switzerland. The summit aimed to bring warring parties together and facilitate dialogue for a peaceful resolution.

Attendance and Outcomes –

- **High Participation** — Over 90 countries participated in the summit, showcasing a global desire for peace. Notably, leaders from 56 countries attended, demonstrating high-level commitment.
- **Joint Communiqué with Focus Areas** — A joint statement was signed by about 82 countries and organisations. This statement condemned the ongoing war and emphasised key principles
 - Respect for the territorial integrity and sovereignty of Ukraine.
 - Adherence to international law.
 - Importance of nuclear safety and global food security.
 - Exchange of prisoners of war, displaced persons, and detained Ukrainians.
- **Focus on Broad Agreement** — The organisers deliberately kept the statement's scope broad to encourage wider participation from various countries, particularly those in the Global South. This strategy achieved some success in terms of participation.

Shortcomings –

- **One-Sided Perception** — The decision to exclude Russia from the summit and base discussions on Ukraine's peace formula raised concerns about a potential bias towards Ukraine. This approach might have alienated Russia and hindered its willingness to engage in the peace process.
- **Lack of Key Players' Endorsement** — The summit failed to secure the endorsement of China, a nation with significant influence over Russia. Additionally, no BRICS member countries (Brazil, Russia, India, China, South Africa), both current and future members, signed the statement. This lack of support from major emerging economies indicates limited buy-in from this important global bloc.

India's Stance –

- **Balancing Act** — India, a close strategic partner of Russia and a key player in the Global South, has maintained a neutral stance on the war. This neutrality reflects India's desire to avoid jeopardising its relationship with Russia while also condemning the invasion.
- **Participation with Reservations** — India sent representatives to preparatory meetings in Jeddah and Davos, demonstrating a willingness to be part of the peace process. However, India chose not to endorse the final statement due to its perceived anti-Russian slant.
- **Openness to Future Talks** — Despite not endorsing the outcome, India's participation in the summit suggests a potential openness to engaging in future peace talks, particularly if they are more inclusive and involve both Russia and Ukraine at the negotiating table.

Way forward -

Future conferences seeking to resolve the Ukraine conflict might benefit from a more inclusive approach that considers the perspectives of all parties involved. This could involve inviting Russia to participate directly and ensuring the discussions address the concerns of major powers like China and BRICS nations.

Conclusion -

The Burgenstock Summit achieved some consensus on broad principles for peace but lacked participation from key players like Russia and China. This highlights the complexities of ending the war in Ukraine and the need for a more inclusive approach to future peace negotiations.

Source - [The Hindu](#)

QUESTION - The recent Summit on Peace held in Burgenstock, Switzerland aimed to address the ongoing war in Ukraine. Critically examine the achievements and shortcomings of the Summit.

GENERAL STUDIES - III

Economy

Ownership hurdle in India's growth story

India's ambition to achieve a \$5 trillion economy by the end of the financial year 2025-26 heavily relies on foreign investments.

However, attracting foreign investments necessitates the removal of significant bottlenecks facing Indian companies and foreign investors.

The Indian Foreign Exchange Management (Non-debt Instruments) Rules, 2019 (FEMA NDI) while intended to protect Indian companies during the COVID-19 pandemic, has introduced considerable challenges that needs to be addressed to develop a conducive environment for foreign investment.

The Indian Foreign Exchange Management (Non-debt Instruments) Amendment Rules, 2020

- This amendment stipulates that any investments in Indian companies, whether direct or indirect, originating from entities located in countries that share land borders with India, or where the “beneficial owner” of the said Indian investment is situated in, or is a citizen of any of these Neighbouring Countries would necessitate prior government approval (“PN3 Requirement”).
- The amendment to the 2019 Rules (FEMA NDI) has posed a significant challenge for Indian companies, especially start-ups and smaller enterprises seeking foreign investments.

Amendment Conundrum -

- Intent and Implications of the Amendment —
 - The PN3 Requirement mandates prior government approval for any foreign investments originating from countries that share land borders with India, or where the beneficial owner of the investment is situated in these neighbouring countries.
 - This stipulation emerged as a protective measure against hostile takeovers during a period of unprecedented economic instability.
 - The rationale was to safeguard strategic assets and businesses from being acquired at undervalued prices by entities from neighbouring countries, potentially capitalising on India's temporary economic downturn.
 - However, the amendment's implementation has led to considerable uncertainty due to the lack of a clear definition for the term ‘beneficial owner’.
 - This term is crucial as it determines the necessity of obtaining prior government approval.
 - Various Indian laws provide context-specific definitions of beneficial ownership, but none are universally applicable to the PN3 Requirement, causing interpretative inconsistencies.
- Initial Industry Response —
 - When the PN3 Requirement was first introduced, the industry generally adopted a lenient view.

- **Companies and legal advisors relied on beneficial ownership thresholds defined in other laws**, such as the Companies Act, 2013, and the Prevention of Money Laundering Act, 2002.
- These thresholds often varied between 10% and 25%, and the industry used these figures to guide compliance efforts.
- However, **the regulatory landscape began to shift in the latter half of 2023.**
- **The Reserve Bank of India (RBI)**, responsible for overseeing compliance with FEMA NDI, **adopted a more conservative interpretation of the law.**
- This **shift was particularly evident in the RBI's scrutiny of Foreign Owned or Controlled Companies (FOCCs)** and their downstream investments.
- **Many FOCCs received notices from the RBI questioning their compliance**, leading to a re-evaluation of industry practices.
- Subsequent Regulatory Stance and its Effect —
 - **The RBI's conservative stance suggested that FOCCs might be subject to the same restrictions as non-resident entities** regarding aspects of the law that were previously ambiguous.
 - This **interpretation prompted investors to reassess their strategies and caused legal firms to advise clients** against relying on beneficial ownership thresholds from other laws.
 - This **shift in regulatory interpretation created a ripple effect of uncertainty and cautiousness among foreign investors** and Indian companies alike.
- Challenges in Compliance and Approval Process —
 - **The requirement for prior government approval**, as stipulated by the PN3 Requirement, **poses significant challenges.**
 - The **approval process is not only time-consuming but also marked by a high rejection rate.**
 - Although consolidated official data on pending or rejected applications is not publicly available, statements from government officials indicate a substantial backlog.
 - **Proposals worth ₹50,000 crore are either pending, withdrawn, or rejected**, and 201 applications have been turned down in the past three years.
 - **This complex approval process creates a bottleneck for companies seeking foreign investment.**
 - **The uncertainty and delays associated with obtaining approval can deter potential investors**, particularly those looking to invest in fast-growing start-ups and smaller enterprises that need timely capital infusions to sustain their growth trajectories.
- Legal and Financial Uncertainties —
 - **The PN3 Requirement places the onus of compliance squarely on the Indian companies** receiving foreign investments.
 - The **regulatory authorities have the discretion to impose severe penalties** for non-compliance, including fines of up to three times the investment received.
 - **This stringent penalty structure, combined with the inherent vagueness of the legislation, can create significant legal and financial risks** for companies.
 - **Many start-ups**, which often operate with investments far exceeding their current revenues or assets, **face the risk of insolvency if subjected to such fines.**
 - **Non-compliance could also trigger prolonged legal battles**, adding to India's already substantial backlog of court cases.
 - **This legal uncertainty further complicates the investment landscape**, making it less attractive for foreign investors.

Proposed Solutions to Address the Challenges -

- Clear Definition of Beneficial Owners —
 - **Indian companies might consider requiring foreign investors to provide indemnities** ensuring compliance with the PN3 Requirement.
 - However, **this approach could deter investors due to potential liabilities.**
 - Therefore, **a more practical solution involves amending the PN3 Requirement to include a comprehensive definition of 'beneficial owners'**, covering ownership thresholds and control tests.

- **The definition should specify a clear threshold** for beneficial ownership, ranging from 10% (as per Indian company law) to 25% (as recommended by the Financial Action Task Force).
- **This threshold can be adjusted to align with the government's objective** of scrutinising varying levels of foreign investment across different sectors.
- **Sensitive sectors like telecom and defence might warrant stricter scrutiny** compared to sectors like manufacturing and construction, which require more foreign capital.
- **The definition should also outline control-conferring rights beyond ownership thresholds**, encompassing significant influence indicators such as board meeting quorums or veto powers over operational decisions.
- However, **investor value protection rights, like veto powers over mergers or right of first offer, should be excluded** as they do not constitute control.
- Employment of Time Bound Consultation Mechanism —
 - **To address lingering ambiguities** even after defining control-conferring rights, **a time-bound consultation mechanism with regulatory authorities could be instituted.**
 - This would allow for a **determination of whether specific clauses in charter documents confer control**, like mechanisms in Indian competition law.
 - Such a system would ensure clarity and reduce legal uncertainties.

Conclusion -

- **For India to attract the necessary foreign investments** to reach its \$5 trillion economy goal, **it is crucial to address the bottlenecks posed by the current regulatory framework.**
- **Amendments to the PN3 Requirement**, specifically defining beneficial ownership and establishing a clear consultation mechanism, **will provide clarity and confidence** to foreign investors.
- **By refining these regulations, India can create a more favourable investment climate, encouraging the influx of foreign capital** essential for its economic growth and development.

Source - [The Hindu](#)

QUESTION - Discuss the challenges posed by the Indian Foreign Exchange Management (Non-debt Instruments) Amendment Rules, 2020, and its implications for India's ambition to achieve a \$5 trillion economy by the financial year 2025-26.

Environment

Direct Seeding of Rice

The Punjab government is promoting the direct seeding of rice (DSR), also known as the 'tar-wattar' technique, to reduce water usage by 15% to 20%. Traditional methods require 3,600 to 4,125 litres of water per kilo of rice, whereas DSR uses much less. Additionally, DSR requires less labor and the rice matures 7 to 10 days faster, allowing farmers more time to manage paddy straw.

Despite these benefits and a government incentive of Rs 1,500 per acre, DSR adoption remains low. Last year, only 1.73 lakh acres out of 79 lakh acres under paddy cultivation used DSR. The government's target for this year is 7 lakh acres, which is still less than 10% of Punjab's total rice acreage.

Direct Seeding of Rice (DSR) -

- About —
 - DSR is a method of planting rice seeds directly into the field rather than transplanting seedlings from a nursery.
 - This technique involves sowing pre-germinated or dry seeds directly into the main field, either through broadcasting (scattering seeds), drilling (placing seeds in rows), or using specialised seeders.

- **Working —**
 - **Field Preparation —**
 - The field is prepared by levelling and ensuring good soil tilth to promote uniform seed germination and growth.
 - Land may be tilled or left untilled (zero tillage), depending on the specific DSR method used.
 - **Seed Sowing —**
 - Broadcasting — Seeds are scattered uniformly over the field.
 - Drilling — Seeds are sown in rows using a seed drill or planter.
 - Mechanised Sowing — Specialised machinery can be used for precision planting of seeds.
 - **Water Management —**
 - Initial irrigation may be provided to ensure seed germination.
 - Subsequent water management practices focus on maintaining optimal moisture levels without continuous flooding, as in traditional transplanting.
 - **Weed and Pest Management —**
 - Effective weed control is critical, often requiring pre-emergence and post-emergence herbicides.
 - Regular monitoring for pests and diseases is necessary.
- **Different from traditional methods —**
 - Traditionally, paddy farmers prepare nurseries where seeds are first sown.
 - After 25-35 days, the young seedlings are uprooted and replanted, in the flooded main field.
 - While this method is labour and water-intensive, it is known to maximise yields and maintain better crop health.
- **Soils suitable for DSR —**
 - Experts emphasise that soil suitability is crucial for the successful implementation of DSR.
 - Farmers should avoid DSR in light-textured soils — it is more suitable for heavy or medium-to-heavy-textured soils.
 - This is primarily because light-textured soils do not retain water well. These soils completely counteract the water-saving benefits of DSR, and in fact, ends up guzzling down more water.
 - The iron content of the soil also determines the suitability of DSR. Soil with severe iron deficiency, and weed problems must not be cultivated using this technique.
 - Experts recommend that soils with plant-available iron are ideal for DSR.
 - In case iron supplements are being used, farmers should apply ferric iron, which is green-coloured and not oxidised, rather than oxidised iron, which is brown in colour.
- **Benefits of DSR —**
 - **Water Savings** — DSR significantly reduces water usage compared to traditional flooded rice fields since it eliminates the need for continuous flooding.
 - **Labor Savings** — Reduces labor requirements for nursery preparation, seedling transplanting, and associated activities.
 - **Faster Crop Establishment** — Seeds germinate and establish more quickly, leading to potentially earlier harvesting.
 - **Reduced Greenhouse Gas Emissions** — Lower methane emissions due to less anaerobic decomposition in non-flooded conditions.
 - **Cost Savings** — Lower costs for labor, water, and sometimes inputs, depending on the method used.
- **Challenges of DSR —**
 - **Weed Management** — Weeds can be a significant problem due to the absence of water that usually suppresses weed growth in traditional systems.
 - Effective herbicide use and integrated weed management practices are crucial.
 - **Water Management** — Requires precise water management skills to avoid water stress or flooding that can affect seed germination and growth.
 - **Pest and Disease Control** — Increased susceptibility to certain pests and diseases compared to traditional flooded systems.
 - **Soil and Crop Management** — Requires good soil preparation and fertility management to ensure uniform seed germination and growth.
 - Variability in soil conditions can impact the success of DSR.

- **Technological Requirements** – Access to appropriate machinery and technology for seed drilling and planting can be a barrier in some regions.

Way forward for DSR -

- A basic lack of awareness and understanding is holding DSR back.
 - After using the method on unsuitable soil, farmers do not get the expected yields.
 - They then developed apprehensions regarding DSR and reverted to their traditional puddling method.
- Experts say that comprehensively educating farmers is key to enable the adoption of a new technique, and departure from age-old, tried and tested methods.
- They suggest that extensive training and a ready helpline be provided, to handhold the farmers through the whole process, from pre-sowing to harvesting.
- This can instill confidence among farmers regarding DSR's efficacy.

Source - The Indian Express

QUESTION - The Punjab government is promoting the Direct Seeding of Rice (DSR) technique to address water scarcity and labor shortages in agriculture. Discuss the advantages and challenges of DSR compared to traditional rice cultivation methods. Additionally, suggest strategies to enhance the adoption of DSR among farmers in Punjab.

Hindu Kush Himalayas

As per the Hindu Kush Himalaya snow update of the International Centre for Integrated Mountain Development (ICIMOD) report, the Ganga River basin – India's largest – reached a record low snow persistence in 2024. The Brahmaputra and the Indus basins have suffered similarly, threatening water supply to millions of people.

Hindu Kush Himalaya -

- **About —**
 - The Hindu Kush Himalaya (HKH) region is a vast mountain area that stretches across **eight countries**: Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan.
 - This region is often called the "**Third Pole**" because it contains the largest amount of ice and snow outside of the polar regions.
- **Source of 10 large Asian river systems —**
 - It is the source of ten large Asian river systems - the Amu Darya, Indus, Ganges, Brahmaputra, Irrawaddy, Salween, Mekong, Yangtze, Yellow River, and Tarim.
 - The basins of these rivers provide water to 1.9 billion people, a fourth of the world's population.
- **Snow covered area —**
 - A considerable volume of water resources is stored as snow and glacier ice in the HKH.
 - Cryosphere components including permafrost and glacial lakes provide various ecosystem services for mountain and downstream communities.
- **Indian areas in HKH region —**
 - Entire territory of 11 mountain states/UTs (Jammu & Kashmir (Indian administered area), Uttarakhand, Himachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Arunachal Pradesh), & Darjeeling district of West Bengal state lies in HKH region.

International Centre for Integrated Mountain Development (ICIMOD) -

- ICIMOD is a regional intergovernmental learning and knowledge-sharing centre.
- **Established** – It was established in 1983 with its **headquarters in Kathmandu, Nepal**.
- **Member Countries** – It serves **eight** member countries in HKH region: Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan.
- **Focus Areas —**
 - **Climate Change and Environmental Sustainability** – Monitoring climate change impacts and promoting adaptive measures.
 - **Livelihoods and Poverty Reduction** – Supporting sustainable livelihoods and reducing poverty in mountain communities.

- **Ecosystem Management** – Promoting the sustainable management of mountain ecosystems.
- **Water Resources** – Ensuring sustainable management and use of water resources.
- **Disaster Risk Reduction** – Enhancing resilience to natural disasters in the region.

Snow persistence -

• **About —**

- Snow persistence refers to the duration of time that snow remains on the ground in a specific area.
- It is a measure of how long snow cover is present during a given period, typically over a season or year.
- Snow persistence is an important indicator in various fields, such as hydrology, climatology, and ecology, as it influences water availability, climate patterns, and ecosystem health.

• **Factors Influencing Snow Persistence —**

- **Temperature** – Warmer temperatures lead to faster melting of snow, reducing snow persistence.
- **Precipitation** – The amount and type (snow vs. rain) of precipitation.
- **Elevation** – Higher elevations typically have longer snow persistence due to cooler temperatures.
- **Vegetation** – Dense vegetation can insulate snow, slowing its melt and increasing persistence.
- **Topography** – The shape and slope of the land can influence how snow accumulates and melts.

Key highlights of the report -

- The authors of the 2024 HKH snow update analysed data from 2003 to 2024.
- They found significant fluctuations in snow persistence between November and April every year, when snow accumulates above ground.
- **Snow Persistence Trends in India (2024) —**
 - **Ganga River Basin —**
 - Lowest in 22 Years: 17% below long-term historical average
 - Previous Record (2018): 15.2% below normal
 - High (2015): 25.6% above normal
 - **Brahmaputra River Basin —**
 - 2024: 14.6% below normal
 - Worse(2021): 15.5% below normal
 - **Indus River Basin —**
 - 2024: 23.3% below normal
 - Offset: Excesses in lower altitudes
- **Implications —**
 - **Crucial for rivers like Ganga —**
 - Snow persistence is crucial for the Ganga River basin as its melt contributes 10.3% of the water, compared to 3.1% from glacier melts.
 - In the Brahmaputra and Indus basins, snowmelt provides 13.2% and around 40% of the water, respectively, versus 1.8% and 5% from glaciers.
 - **Regional Impact —** Significant reductions in snow persistence are expected to have a lasting effect on water supply for millions of people.
 - **Downstream Effects —** These changes threaten water availability and agriculture in downstream regions.

What explains the lower and higher snow persistence in 2024?

• **Lower snow persistence —**

- **Weak Western Disturbances —** Identified as the main cause for lower snow persistence in 2024.
 - It originates in Mediterranean Sea and brings rain and snow to the HKH region in winter.
 - However, high sea-surface temperatures in the origin regions weakened and delayed these disturbances, reducing winter precipitation and snowfall.
- **Changing Climate and Global Warming —** Increasing instability in weather patterns.

- **Exacerbation by La Niña–El Niño** — Prolonged and intense phases significantly influence global weather patterns, including western disturbances.
- **Higher snow persistence** — Snow persistence in the Yellow River basin was 20.2% above normal in 2024.
 - **East Asian Winter Monsoon** — Brings cold, dry air from Siberia and Mongolia.
 - **Interaction with Moist Air** — Cold air interacts with moist air from the Pacific Ocean. As a result, there was snowfall over higher altitudes in the upper Yellow River basin and eastern Himalaya.

Way forward -

- Experts suggest that **reforestation with native tree species** can help the ground retain more snow.
- Improved weather forecasting and early warning systems can help local communities prepare for water stress.
- Better water infrastructure and policies to protect snowfall areas are also essential.
- Involving communities in decision-making and promoting regional cooperation are vital for sustainability.
- Reducing emissions is crucial to mitigate increasing sea-surface and ground temperatures, which lower snow persistence.
- Emphasising the need for political will, experts highlighted the importance of cutting fossil energy consumption and production, especially among G-20 countries, which account for 81% of all emissions.

Source - [The Hindu](#)

QUESTION - The Hindu Kush Himalaya (HKH) region is a crucial source of water for 1.9 billion people through its ten large Asian river systems. Recent reports indicate a record low snow persistence in the Ganga, Brahmaputra, and Indus river basins. Analyse the implications of this trend for the water security of South Asia and suggest measures to mitigate the impacts of reduced snow persistence.