

7 PM COMPILATION

3rd and 4th week Aug, 2024

Features of 7 PM compilation

- ❖ Comprehensive coverage of a given current topic
- ❖ Provide you all the information you need to frame a good answer
- ❖ Critical analysis, comparative analysis, legal/constitutional provisions, current issues and challenges and best practices around the world
- ❖ Written in lucid language and point format
- ❖ Wide use of charts, diagrams and info graphics
- ❖ Best-in class coverage, critically acclaimed by aspirants
- ❖ Out of the box thinking for value edition
- ❖ Best cost-benefit ratio according to successful aspirants

INDEX

Women Safety in India- Challenges and Way Forward- Explained Pointwise	2
Inflation Management in India- Challenges and Way Forward- Explained Pointwise	5
Lateral Entry into Civil Services- Rationale and Criticisms- Explained pointwise	9
Dark Patterns- Concerns and Challenges- Explained Pointwise	12
Ethanol Blending Programme (E20 Blending)- Significance and Challenges- Explained Pointwise.....	17
India-Malaysia Relations- Significance and Challenges- Explained Pointwise.....	21
India-Ukraine Relations- Significance and Challenges- Explained Pointwise	25
Space Sector in India- Significance and Challenges- Explained Pointwise	28
Sexual Harassment of Women at Workplace: Issues and Challenges – Explained, Pointwise	32
Unified Pension Scheme (UPS)- Significance and Concerns- Explained Pointwise	36
Weather Forecasting in India- Achievements and Challenges- Explained Pointwise.....	41
10 years of Pradhan Mantri Jan Dhan Yojana (PMJDY)- Progress, Impact and Challenges- Explained Pointwise.....	45
India's role in Russia-Ukraine Crisis-Significance and Challenges- Explained Pointwise.....	49
INS Arighat and India's Nuclear triad- Significance and Challenges- Explained Pointwise	52

Women Safety in India- Challenges and Way Forward- Explained Pointwise

“The day a woman can walk freely on the roads at night, that day we can say that India has achieved independence”- **Mahatma Gandhi**

The horrific incident of the **rape and murder of a trainee doctor in Kolkata** has sent shock waves across the nation and again has drawn our attention towards the issue of women safety in India. This incident is drawing the same public ire which was generated by the Nirbhaya Rape case.

Despite advancements in technology and urbanization, **women in India continue to face violence and discrimination**. It is deeply distressing that **nearly 88 rape cases are reported daily in the country**, with many more likely going unreported. Our rich cultural heritage and value system have failed to protect the very individuals who are the foundation of society.



Created by Forum IAS

What are the safety issues faced by women in India? What are the data regarding women safety in India?

Women Safety Issues in India- India is a country where women worshiped as Goddesses. However, India remains a hub of alarming atrocities when it comes to women safety. There has been profusion of women safety issues such as **rape, eve-teasing, domestic violence, assaulting, child marriage, and dowry cases**. In the past 10 years, women’s vulnerability has increased many folds in India.

NCRB Report 2023 Data related to crime against women

Women's Safety Indices

According to the Women, Peace, and Security Index 2023, **India ranks 128th out of 177 countries**. The **index score for India is 0.58**, which places it in the fourth quin tile for women's safety.

National Family Health Survey (NFHS-5)

As per the National Family Health Survey (NFHS-5), around **30% of women in India** between **15-49 years** of age have experienced physical, sexual or domestic violence.

What are the reasons behind lack of women safety in India?

- 1. Prevalence of patriarchy-** There is deeply entrenched patriarchal culture in India. This perpetuates the belief in male superiority and normalizes violence against women. **For ex-** Prevalence of '**Ladka hai Galti ho jaati hai mindset**' in India.
- 2. Objectification of Women-** The degenerated portrayal of women in media and entertainment reduces them to objects. This objectification often leads to increased instances of harassment and violence. **For ex-** **Increased objectification of sexuality in movies.**
- 3. Cultural Stigma-** Cultural stigmas regarding sexual violence and harassment, leads to underreporting of crimes, many women fear societal backlash on account of reporting of harassment issues. **For ex-** **Brushing off the child molestation issues under the carpet.**
- 4. Economic Dependency-** **Feminization of poverty** and **high economic dependency** on male family members, exacerbate the vulnerability of women. The lack of financial independence, makes it difficult for them to escape domestic abuses. **For ex-** **Increase in cases of domestic violence against housewives.**
- 5. Lack of Awareness and Education-** Many women in India are **unaware** of the **legal protections** available for women, such as the Domestic Violence Act, Sexual Harassment Act. This leads to a culture of violence and abuse against women.
- 6. Inadequate safety in public places-** Inadequacies in public infrastructure, such as poorly lit streets, lack of safe transportation options, lack of CCTVs, increase vulnerability of women to crime. **For ex-** **Nirbhaya Rape** in a public transportation and **Kolkata rape** in a public hospital **highlights the lack of public safe spaces for women.**

What initiatives have been taken by the Government to prevent crimes against women?

Legal Protection

Against Child violence	Prohibition of Child Marriage Act, 2006 Juvenile Justice (care and protection of children) Act, 2015 The Commissions for Protection of Child Rights Act The Protection of Children from Sexual Offences Act, 2012.
Against objectification of women	Indecent Representation of Women (Prohibition) Act, 1986.
Against Sexual Offences	Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013. Criminal Law (Amendments), Act 2013 for effective legal deterrence against sexual offences. Criminal Law (Amendment) Act, 2018 for even more stringent penal provisions including death penalty for rape of a girl below the age of 12 years.

Against Violence	Domestic	Dowry Prohibition Act, 1961 Protection of Women from Domestic Violence Act, 2005.
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Central Government Initiatives

- a. **Establishment of Nirbhaya Fund**- The Government has set up Nirbhaya Fund for projects for safety and security of women.
- b. **Investigation Tracking System for Sexual Offenses**- MHA has launched it to monitor and track time-bound investigation in sexual assault cases in accordance with Criminal Law (Amendment) Act 2018.
- c. **National Database on Sexual Offenders**- MHA has launched it to facilitate investigation and tracking of sexual offenders across the country by law enforcement agencies. NDSO has data of over 5 lakh sexual offenders.
- d. **Cybercrime Portal**- MHA has launched a cyber-crime portal to report obscene content. Cyber Crime Forensic Labs have been set up in several States.
- e. **Establishment of One stop centers**- Scheme of One Stop Centers has been launched to provide integrated support and assistance to women affected by violence.
- f. **Scheme for Universalization of Women Helpline**- It has been launched to provide 24 hours emergency and non-emergency response to women impacted by violence.

State Government and other Initiatives

- a. **Mission Shakti**- It has been launched by the **UP government** to make improvements to women's safety, and reduce the consequent violence and exploitation faced by them.
- b. **Police pink booths**- Launched by the **Delhi government**, these booths are dedicated to addressing the grievances of women passersby.
- c. **Shakti Criminal Laws (Maharashtra Amendment) Act**- The **Maharashtra Assembly** passed the Shakti Criminal Laws (Maharashtra Amendment) Act to approve death penalty for heinous offences of rape and gangrape.
- d. **Meri Saheli Initiative**- Launched by the **railway Protection force**, this initiative ensures security of lady passengers that are traveling by train by a dedicated Mahila officers team.
- e. **Online Movements and campaigns**- **#CallItOut because #ItsNotOK campaign, #MeToo movement**, have been launched to facilitate knowledge transfer and coordinate efforts towards the prevention of harassment against women.

What are the challenges in ensuring safety of women despite the legal and policy initiatives?

1. **Delayed Justice**- The inefficiencies of the justice system, such as **prolonged legal processes** and **lenient punishments for sexual offenders**, undermines public confidence in law enforcement.
2. **Laxity in conviction procedure**- **39% of officers believe complaints of gender-based violence are baseless**. Prevalent culture of prompt registration of FIRs, lack of time-bound investigations and ineffective collection of forensic evidence in sexual assault cases, lead to inordinate delays in conviction of sexual harassment cases.
3. **Half Hearted implementation**- **SC** has called out the '**authorities/management/employers**' for failing to ensure a "safe and secure work place" for women. It has been observed that the implementation of the Sexual Harassment of Women at Workplace (Prevention, Prohibition, Redressal) Act, 2013, has been half-hearted.
4. **Ineffective utilisation of public funds**- Even though the budgetary allocation of the Nirbhaya Fund has increased by 100% between 2013 to 2022, **less than half of the allocation to the fund has been used**.

What are the implications of prevailing attitudes and crimes against women?

- 1. Deters women from entering the workforce-** Crimes against women is a factor **influencing India's chronically low female workforce participation rates.**
- 2. Chauvinistic attitude of men in the family-** Men-folk **do not to encourage women** in their families to **seek financial or social independence in jobs or careers.**
- 3. Societal attitudes leading to more crimes against women-** The crimes against the girl child **skews the gender ratio**, leading to kidnapping and abduction for seeking wives.
- 4. Physical and Mental Health Consequences-** Victims of sexual violence experience severe physical injuries, which can lead to long-term health issues such as **chronic pain, reproductive health problems, and increased susceptibility to sexually transmitted infections (STIs)** including HIV.
- 5. Impact on Families and Children-** Children who witness violence against their mothers often **face the risk of developing emotional and behavioral problems.** They may also become victims of abuse themselves, perpetuating a cycle of violence across generations.

What Should be the way Forward?

- 1. Police reforms-** There should gender focused recruitment and training in police. There is a need to **create women police stations** and **engagement of mahila police volunteers.**
- 2. Judicial reforms-** There should be **establishment of Fast track courts** and **enhanced punishment in grave cases** like rape, as recommended by **Justice Verma Committee.** Further, the women representation in judiciary must be enhanced.
- 3. Training and capacity building-** Manpower training and skill building programs for **Investigation Officers, Prosecution Officers** and **Medical Officers** must be stepped up. **Gender-sensitive training** and monitoring in criminal law procedures must be promoted to ensure that staff handle cases with a **trauma-informed approach.**
- 4. Establishment of rape Crisis centres-** **Rape Crisis Centres** like in countries like **Australia, Canada, America, United Kingdom**, etc, can be set up in India. These centres can provide the rape victims with medical help, counselling, and financial help by way of providing job opportunities etc.
- 5. Sensitivity on part of Media-** The media must be **sensitive to the plight of the rape victim** and must not highlight the name or any inference leading to the identification of the victim. The **media must highlight those cases where the offender has been convicted**, as it will infuse the feeling of deterrence among the people.
- 6. Civil society participation-** Active participation of civil society against such crimes and helping state and law enforcement agencies in nabbing the criminal is critical.

Read More- [The Indian Express](#)

UPSC Syllabus- GS1 Issues related to Women

Inflation Management in India- Challenges and Way Forward- Explained Pointwise

The economic survey 2023-24 has **suggested changes in India's Inflation management approach.** The economic survey has proposed **removal of food prices from India's inflation target.** It suggests **shifting** of inflation targeting in India from the **'headline'** to **'core' inflation.** However, there are concerns whether the exclusion of food items, will yield the desired results.

In this article we will delve into inflation, its targeting method currently employed. We will look at the concerns being raised about the shift in approach of inflation targeting from 'headline' to 'core' inflation. We will look at the other challenges in inflation management in India.



Measures employed in India to control inflation

Inflation management is a **complex task** as inflation is caused by several factors such as **demand-pull factors**, **cost push factors** and **structural factors**. Therefore a mix of macro-economic policies are needed to manage the inflation in the economy.

Main Tools For Inflation Management	
Monetary Policy	Monetary Policy tool is employed by the RBI to control the supply of money in the economy. RBI applies the repo rate to control the supply of money in the economy. By increasing the repo rate RBI tries to bring down the rate of inflation in the economy.
Fiscal Policy	Monetary Policy tool is employed by the Govt manage inflation through public expenditure and taxation . Government tries to reduce inflation by raising the tax rates and reducing public expenditure.
Other tools for Inflation Management	
Export policy	The government can temporarily ban the export and imposes Minimum Export Price (MIP) to discourage exports of certain commodities to ensure their availability in the domestic markets. Ex-Recent rice export and onion export ban.
Price control Policy	Under the Essential Commodity Act 1955 , the government can declare a commodity as an essential commodity to ensure supplies to people at fair prices.
Anti-Hoarding and Anti-speculation Policy	The Prevention of Black Marketing and Maintenance of Supplies of Essential Commodities Act, 1980 allows for detention of persons engaged in activities like hoarding, creating artificial scarcities of essential commodities in the market and rigging up of the prices.

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What is inflation? What is the inflation targeting method followed in India?

Inflation- Inflation refers to the **rise in the prices of most goods and services of daily or common use** such as food, clothing, housing, recreation, transport, consumer goods. Inflation measures the **average price change in a basket of commodities and services** over a period of time.

Different Inflation indices used in India

WPI Inflation- WPI captures the **average movement of wholesale prices of goods only**. Its major components are- **Manufactured goods (64.23%) > Primary articles (22.62%)> Fuel and Power (13.15%)**. It is primarily used for ascertaining GDP Deflator in the economy.

CPI Inflation- CPI captures the **movement in prices of goods and services** that are acquired by the households for consumption purposes. Its major components are- **Food and Beverages (45.86%) >Housing (10.07%)> Transport and communication (8.59%)> Fuel and Light (6.84%)**. It is primarily used for **RBI's Inflation targeting** and **measurement of DA** for employees.

Headline and Core Inflation

Headline Inflation- Headline inflation is a **measure of the total inflation** within an economy, **including commodities such as food and energy prices**, which tend to be much more volatile and prone to inflationary spikes. The headline inflation is reported through the **Consumer Price Index (CPI) in India**.

Core Inflation- Core inflation is the persistent component of inflation in India. It attempts to remove the volatile, transitory movements from the CPI. In India, it is **measured by removing Food and Fuel categories from CPI**.

Read More- [Inflation In India- Reasons and Solutions- Explained Pointwise](#)

Present Inflation Targeting Framework in India

The Reserve Bank of India is the **authority to control inflation** under **RBI Act 1934**. Presently, the RBI targets headline CPI inflation as part of its 'inflation targeting' mandate.

Inflation Targeting Regime of RBI	
Began in 2016. Central govt fixes the target for RBI's Monetary Policy Committee for 5 years.	RBI has to retain the headline inflation 4%, with a tolerance band of +/- 2 percentage till March 2026.

Economic survey has recommended shifting from 'headline' to 'core inflation' by removing the food component. The economic survey contends that the food price fluctuations are 'transitory' in nature. That means that it's increase is inevitably followed by a downward movement.

What are the concerns regarding Economic survey's recommendation for inflation management?

1. Neglect of economic reality- In India, **food accounts for nearly 50% of Indian household expenditure**. It is crucial to most people's cost of living. Ignoring food prices in inflation targeting would lead to **neglect of a major economic concern for a large portion** of the population.

2. Transitory Fluctuations of food prices is a misconception in India- Contrary to claims that food price fluctuations are temporary, **food inflation in India has been persistent for over a decade**. This indicates a structural problem, and removal of food inflation from inflation targeting will not solve the problem.

3. Interdependence of Food and Core Inflation- Food prices influence wages, which in turn impact core inflation. Hence, it would be **difficult to control core inflation independently of food prices**.

4. Misguided Policy- Exclusion of food prices from the inflation target could leave India vulnerable to rising food costs. This would **undermine the standard of living for a large segment** of the population.

5. Ineffectiveness of Interest Rate Adjustments- Raising interest rates have not led to curbing of core inflation but has instead exacerbated it by increasing the costs for firms. This has led to higher prices of the products and higher inflation in the economy.

What are the other challenges in Inflation management in India?

1. Monetary Policy singular focus on demand side- RBI's monetary policy targets only demand side constraints. It **faces the problem of tackling supply shocks** originating from food and oil.

2. Flawed Model of Inflation targeting- Monetary Policy model used for Inflation management in India is **not statistically validated** for Indian data. The current model of Inflation targeting is based on the assumption that **inflation means overheating the economy – that is increased output greater than natural level output**. However, In India it is impossible to observe the actual level of output in an economy. Hence, setting policy rates based on the assumption that the economy has overheated is unscientific.

3. Failure in addressing supply shocks- Adoption of a myopic vision in inflation management by **focussing on export ban of agricultural products** (like wheat, rice, onions), leads to increased inflation. Export bans induce fear and panic in the domestic market, leading to rise in stock holdings, which ultimately result in price rise.

4. Exclusive Focus on Inflation slows down growth- RBI's current mandate of inflation management is too **singularly focused on controlling inflation**. Inflation management has **negatively impacted GDP growth**. High policy rates (repo) maintained to control inflation affected the cost of domestic capital. It led to a decline in investment rate, thereby resulted in less GDP. For ex- Since 2016 (after inflation rate targeting was institutionalised), there has been a steady increase in repo rates, and a steady decline in GDP growth.

5. Ignoring the Global Nature of inflation- Inflation is global in nature, **as the price level of a good is determined by millions of producers across the world**. Hence, solely targeting inflation management is not good for the health of the economy, as certain prices of goods are beyond our control.

What should be the Way Forward?

1. Increasing agricultural production- We must focus on **improving agricultural productivity** and **controlling food prices** through supply-side measures to address inflation in India.

2. Release Excess Buffer Stocks- The government holds more than 40 million tonnes of rice, much above the buffer stock norms of 13.5 MT. This excess stock **should be unloaded by Food Corporation of India** in the open market at reasonable prices. This will cool down the food inflation.

3. Enhancement of Processing Capacity- About **10-15 percent of perishable items like tomatoes and onions should be processed**. The availability of alternatives like tomato paste and onion powder will help to stabilize prices.

4. Adjustment of Import Duties- Import duties on items like **wheat should be reduced**, as cheaper imports can help control domestic prices.

5. Updation of the CPI Basket Weights- The weight of food and beverages in the CPI basket **should be adjusted to reflect current realities** as the weights are based on the 2011 consumption survey.

6. Greater Tolerance of Higher levels of Inflation- Since Inflation is a global issue, there must be greater tolerance for higher levels of inflation either by adjusting the acceptable range of inflation upwards, or by extending the period over which the MPC has to meet its inflation target.

Read More- [The Hindu](#)

UPSC Syllabus- GS 3- Indian Economy- Inflation and its management

Lateral Entry into Civil Services- Rationale and Criticisms- Explained pointwise

The UPSC has brought the **issue of lateral entry into civil services back into focus** by inviting applications for **45 posts**, from **talented and motivated Indian nationals** for the roles of Joint Secretary, Director, and Deputy Secretary in 24 Union government ministries. However, opposition parties have **criticized the policy of lateral entry into civil services**, for lacking reservations for SC, ST, and OBC candidates.

In this article, we will delve into the issue of lateral entry, and the rationale behind its introduction. We will also focus on its criticisms, and look into the measures that need to be taken to address the concerns.



Source- The Indian Express

What is Lateral Entry? What is the background of its introduction?

Lateral entry into civil services in India refers to the **recruitment of professionals from the private sector at the middle and senior management levels of the Government**. This initiative aims to bring in specialized skills and expertise that may not be present within the traditional bureaucratic framework.

The lateral entry appointments are done on a contractual basis. The appointments are mainly made to the post of Joint Secretary, Deputy Secretary and Director positions in the Central secretariat. These 'lateral entrants' become a part of the central secretariat, which, till now, had only career bureaucrats from the All India Services/ Central Civil Services.

Background

of

Introduction

The Constitution Review Commission recommendation of 2002	It advocated for lateral entry. It suggested that lateral entry, could help in specializing some generalist roles by bringing in professionals from the private sector.
The 2nd Administrative Reform Commission recommendation of 2005	It recommended an institutionalized and transparent process for lateral entry at both the Central and State levels. It highlighted the necessity of infusing new talent into the bureaucracy to enhance governance and policymaking.
NITI Aayog 3 year action agenda	NITI Aayog supported the idea of lateral entry in its three-year Action Agenda. It emphasized that lateral entry has the potential to improve governance by incorporating specialized knowledge and skills from the private sector.
Sectoral Group of Secretaries (SGoS) on Governance	This group endorsed the lateral entry system. It argued that lateral entry could enhance the effectiveness of public services by introducing professionals with relevant expertise.

Implementation of Lateral Entry in India

Process of Lateral Entry- Union Public Service Commission (UPSC) advertises vacancies for lateral entry. Applications are invited for lateral entry against these advertised posts. After a selection process instituted by the UPSC, individuals are recommended for appointment.

63 appointments have been made through lateral entry in the last five years by the government.

2018	The first round of lateral entry began in 2018. These were for the Joint Secretary-level posts. After a selection process by the UPSC, nine individuals were recommended for appointment to nine different Ministries/Departments in 2019.
2021	Another round of lateral entry was made in 2021.
2023	Two more rounds of lateral entry were made in 2023.

What is the rationale behind Lateral Entry into civil services?

1. Need for specialists and fresh talent- The inclusion of **professionals from diverse backgrounds** can help in invigorating the **bureaucracy with new ideas and innovative approaches**. **For ex-** The generalist civil servants often lack domain specific knowledge and fail to incorporate the views of other stakeholders such as private sector, NGO's etc.

2. Meeting the shortage of Personnel at the centre- The **Baswan Committee** (2016) had pointed to the **unwillingness of large states** like Bihar, Madhya Pradesh and Rajasthan in **sponsoring officers for central deputation**, due to deficit of officers in their states. The lateral entry of officers can help in addressing the shortage of staff at the central level.

3. Strengthening of participatory Governance- The lateral entry also aims to strengthen participatory governance, by **providing the private sector** and **NGOs** an **opportunity** to participate in the **governance process**.

4. Improvement of Governance efficiency- The recruitment of private individuals as consultants, officers on special duty by Central government ministries has given fruitful results in the past. **For ex-** Appointment of **Montek Singh Ahluwalia** (Planning Commission), **Vijay Kelkar** (Ministry of Finance) and **Parmeshwaran Iyer** (Swachh Bharat Mission). Thus, there is a need for encouraging private participation at middle-level positions to improve efficiency.

5. Fixing the flaw in public service recruitment- There are many potential and good administrators who **do not participate in examinations conducted by the government during their young age**. Lateral entry provides an opportunity for them, to be part of the governance machinery and contribute to nation building.

6. Promotion of Healthy competitive spirit- Lateral entry aims to promote a sense of healthy competition in bureaucracy. It **induces generalist civil servants to develop expertise** in areas of their choice.

7. Bridging Public-Private Gap- After the economic reforms in 1991, the **Indian government has taken up the role of a facilitator of public services**. **Private sector** has assumed a **greater responsibility** for capital expenditure, investment, and development.

Lateral entry provides a platform for **greater collaboration between the government and private sector**. It allows stakeholders like industry experts and non-profits to participate more directly in the governance process.

8. Inline with Global best practices- Countries like United States, Belgium, the UK, Australia and New Zealand have **institutionalized the practice of lateral entry**, as a permanent part of their system. In countries like the United Kingdom and Ireland, the selection of officers is on the criteria of **work experience in the civil** as well as the **private sector**.

What are the criticisms of lateral entry system?

1. Ambiguity in recruitment process- There are concerns regarding the ambiguities in the recruitment process of lateral entrants such as **determination of vacancy, shortlisting of candidates, evaluation procedure** etc.

2. Sidelining of reservation policy- The **vulnerable sections like SCs, STs, OBCs** etc. have criticized the process for sidelining the reservation policy, as there is **no provision of reservation in appointment of lateral entrants**. **For ex- Non implementation of 13 point roster system** of reservation in lateral entry.

3. Lack of Familiarity with Bureaucratic Processes- The civil servants reaching top positions like Joint secretary level, serve 10-15 years at ground level and are fully well-versed with the bureaucratic process. On the other hand, the lateral entrants, hired based on their theoretical (subject) experience, often lack a deep understanding of the bureaucratic system and its established protocols.

4. Short Tenure and Impact- Lateral entry positions are typically contract-based for a limited duration (three to five years). The lateral entrants find it **difficult to assimilate in the bureaucratic structure within their short contractual time**. This also reduces the probability of delivering optimum results within due time.

5. Potential Conflict of Interest- There are concerns regarding potential conflict of interest arising in policy formulation. **Private people may be focused on profit maximization**, while **government officials aspire to public service**.

6. Potentially Discouraging for Motivated Civil Servants- Large-scale lateral induction may discourage motivated and talented officers by signalling that the current bureaucrats are not competent to run the government.

What should be the way Forward?

1. Maintenance of balance- The government needs to maintain a fine balance between the career civil servants and the lateral entrants. The number of lateral entrants should be kept **optimal and minimal**.

2. Phased Implementation- The lateral entry program should be implemented in a phased manner by **taking feedback and outcomes from initial recruitments**. This will ensure that the integration of private sector professionals is smooth and effective.

3. Implementation of reservation policy- The lateral entry system should aim to implement the '**13 point roster system**' which provides for reservation. This will address the concerns of the SC, ST and OBC communities, regarding their perceived marginalisation.

4. Clearly defined recruitment rules and procedures- The recruitment and service rules for lateral entry posts need to be clearly defined and made incentive-compatible. **For ex- A entry-level test to check the analytical skills, judgement capabilities, and personality traits.**

5. Steps for assimilation with bureaucratic structure- **A greater weightage** can be provided for '**prior consultation work**' with the government, as these people will face less difficulty in assimilation with the bureaucratic structure.

6. Exploration of Allocation of cadres- The option of allocating cadres for lateral entrants can be explored. These lateral entrants can be put for at least one year under State governments, for field level training and exposure.

7. Restriction to few technical sectors- The appointment should **be restricted to sectors of finance, economy and infrastructure**, which are **technical in nature**. It should not be extended to Home, Defence, Personnel etc.

Conclusion

The performance of the Indian bureaucratic structure can definitely be complemented with the lateral entry process. Lateral entrants can complement the regular government officials by bringing in new outside talents, pushing the government officials to work more for public welfare, etc. But a definite policy is the need of the hour to make the system of lateral entry more inclusive, transparent and effective.

Read More- [The Indian Express](#)

UPSC Syllabus- GS 2 – Governance – Role of Civil Services in a Democracy

Dark Patterns- Concerns and Challenges- Explained Pointwise

According to a **recently released report by the Advertising Standards Council of India (ASCI)** and product design studio Parallel, **many top Indian apps have been found to employ dark patterns/deceptive patterns**.

Amid a rise in online shopping and an increase in the number of internet users, which is expected to touch 900 million by 2025, the issue of dark pattern has caught the attention of the government. Department of consumer Affairs notified the **Guidelines for Prevention and Regulation of Dark Patterns 2023**, under the Consumer Protection Act, 2019, for regulation of these deceptive patterns.

Despite the government guidelines and regulation efforts, **dark patterns continue to endanger consumer rights in the digital landscape.**



False Urgency	Misleading users into immediate actions by creating a false sense of urgency or scarcity , such as- a. Falsely inflating the popularity of a product or service. b. Misrepresenting the availability of a product or service as more limited than it is.
Basket Sneaking	Inclusion of additional items such as products, services, payments to charity/donation at the time of checkout from a platform, without the consent of the user.
Confirm Shaming	It involves guilt as a way to make consumers obey. It involves criticizing or attacking consumers for not conforming to a particular belief or viewpoint.
Forced Action	This involves forcing consumers into taking an action they may not want to take, such as signing up for a service to access content.
Subscription Traps	This tactic makes it easy for consumers to sign up for a service but difficult for them to cancel it.
Interface Interference	A design element that manipulates the user interface in ways that (a) highlights certain specific information; and (b) obscures other relevant information relative to the other information.
Bait and Switch	This involves advertising one product or service but delivering another product, often of lower quality.

Created By Forum IAS

What are Dark Patterns? What are the different types of Dark Patterns?

According to ASCI definition, Dark patterns are business practices employing elements of digital choice architecture, in particular in online user interfaces, that subvert or impair consumer autonomy, decision making or choice.

Dark patterns are also called deceptive patterns. These patterns are used for **intentionally manipulating or misleading users to make certain choices** or **perform specific actions** that may not be in their best interest. These **unethical strategies** are designed to **exploit certain cognitive** and **behavioral biases** to persuade users

into purchasing goods and services they would typically not pay for. They downgrade the user experience to benefit the company implementing it.

Harry Brignull coined the term 'dark pattern' in 2010 to describe deceptive strategies used by websites or apps to deceive users.

What are the different types of dark patterns identified by Consumer Affairs Ministry?

The Consumer Affairs Ministry has identified 10 types of dark patterns. These are explained below-

False Urgency	Misleading users into immediate actions by creating a false sense of urgency or scarcity , such as- a. Falsely inflating the popularity of a product or service. b. Misrepresenting the availability of a product or service as more limited than it is.
Basket Sneaking	Inclusion of additional items such as products, services, payments to charity/donation at the time of checkout from a platform, without the consent of the user .
Confirm Shaming	It involves guilt as a way to make consumers obey . It involves criticizing or attacking consumers for not conforming to a particular belief or viewpoint.
Forced Action	This involves forcing consumers into taking an action they may not want to take , such as signing up for a service to access content.
Subscription Traps	This tactic makes it easy for consumers to sign up for a service but difficult for them to cancel it . It is often done by hiding the cancellation option, or requiring complex-multiple steps, or authorization for auto debits for availing a free subscription.
Interface Interference	A design element that manipulates the user interface in ways that (a) highlights certain specific information; and (b) obscures other relevant information relative to the other information. For ex- Highlighting certain parts with contrasting colours, which misdirects a user from taking an action desired by her.
Bait and Switch	This involves advertising one product or service but delivering another product , often of lower quality.
Drip Pricing	It is a deceptive practice where- a. Price details are hidden or revealed subtly during the user experience; b. The final price is disclosed only after purchase , charging more than shown at checkout; c. A product or service is advertised as free without clearly stating that continued use requires in-app purchases ; d. Users are blocked from accessing a paid service unless they make an additional purchase .
Disguised advertisement	A practice of posing, masking advertisements as other types of content such as user generated content or new articles or false advertisements .
Nagging	Overload of requests, information, options, or interruptions ; unrelated to the intended purchase of goods or services, which disrupts the intended transaction.

Some examples of prominent companies using Dark Patterns

Amazon- Amazon came under fire in the European Union for its **confusing, multi-step cancelling process (subscription trap)** in Amazon Prime subscription. However, in 2022, Amazon made its cancellation process easier for online customers in European countries.

YouTube- YouTube nags users to sign up for YouTube Premium with pop-ups (**nagging**).

Indigo airlines- Indigo airlines have been found to be creating **false urgency in booking of seats from their app**, and **Interface interference** (the option to skip is placed in the top right corner and displayed in a tiny font).

What are the concerns with dark patterns?

- 1. Harm to consumer autonomy-** These **compromise consumers' personal autonomy** as they lead consumers to make choices they may not otherwise have made. These deceptive patterns often **provide the illusion of control** rather than **actual control** to consumer.
- 2. Financial loss to the consumer-** Deceptive patterns such as **basket sneaking, drip pricing or false urgency**, lead to financial losses for the consumers, as these lead to more spending than their intended expenditure.
- 3. Harm to customer Data Privacy-** **Privacy-intrusive deceptive patterns** like **nagging** and **confirm shaming**, force consumers into **accepting privacy-intrusive settings**. Consequently, consumers unintentionally disclose more personal data than intended. This potentially **exposes them to additional risks** and **violates their right to privacy (Article 21)**.
- 4. Psychological harm and time loss-** These patterns cause **psychological harm** like emotional distress, feelings of shame and frustration.
- 5. Limits User-Centric Innovation-** Reliance on deceptive patterns for short-term gains, stifles innovation in user-centric design. Businesses start prioritizing deceptive practices over creating genuinely valuable and user-friendly products. **For ex- False urgency practice in seat booking started gaining prominence in Indian airlines industry.**
- 6. Social Backlash and brand erosion-** These deceptive patterns lead to **negative publicity**, especially in the age of social media where users can share their experiences widely. Public backlash can damage a company's brand image.
- 7. Distorted competition-** Firms employing dark patterns obtain a competitive advantage over firms that do not employ these patterns, without offering better quality goods or services. **For ex- Generation of higher revenue through basket sneaking, subscription traps** etc.

What initiatives have been taken for regulation of dark patterns?

Initiatives in major countries

Recently, regulators in jurisdictions such as the European Union, USA and UK have acted against deceptive patterns.

EU	In 2022, the European Data Protection Board released guidelines that gave designers and users of social media platforms practical guidance, on how to spot and avoid dark patterns that are in violation of General Data Protection Regulation (GDPR) laws .
US	In 2021, California passed amendments to the California Consumer Privacy Act , banning dark patterns that made it difficult for consumers to exercise legal rights, like opting out of the sale of their data.

UK	The Competition and Markets Authority (CMA) of the U.K. has listed different pressure-selling techniques (false urgency) that it believes violate consumer protection laws and for which actions will be taken.
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India's initiative

Guidelines for Prevention and Regulation of Dark Patterns (2023)	These guidelines aim at preventing and regulating the deceptive patterns under the Consumer Protection Act, 2019 . These guidelines include a list of identified dark patterns in user interface (UI) and user experience (UX). The Central Consumer Protection Authority (CCPA) is responsible for enforcing these guidelines.
Advertising Standards Council of India (ASCI) Guidelines	The Advertising Standards Council of India (ASCI), an industry body, has also come up with guidelines against the use of deceptive patterns.

What are the challenges in regulation of dark patterns?

- 1. Lack of Specific Regulations-** Most countries **currently lack specific laws targeting dark patterns**, and instead, existing consumer protection and data protection laws are applied for deceptive pattern regulation.
- 2. Complexity of Legal Definitions-** Determination what constitutes a dark pattern is often complex, as it is **at times challenging to determine the threshold** at which the pattern crosses from controversial marketing technique to illegal practice.
- 3. Evolving Nature-** The tactics used in dark patterns are continually evolving. This makes it difficult for regulatory frameworks to keep pace, and deal with the menace of these deceptive patterns. Further, there are **insufficient case laws available for the regulators**, to draw upon previous rulings and guide enforcement actions.
- 4. Enforcement Challenges-** Regulatory bodies **lack the resources** to monitor and address dark patterns effectively.
- 5. Low Consumer Awareness and Reporting-** There is low consumer awareness regarding the menace of dark patterns, which leads to **underreporting of incidents**.

Read More- [On Regulating 'Dark Patterns' – Battling dark patterns](#)

What Should be the Way Forward?

- 1. Empowering users-** User must be empowered to deal with dark patterns, which will enhance their ability to avoid being deceived.
 - a. Equipping them with tools and resources to make informed choices-** Use of **browser extensions, apps or plugins** that **detect and block dark patterns**.
 - b. Encouragement for reporting of cases-** Users should be encouraged to report cases of dark patterns they encounter. Clear channels must be provided to users to provide feedback and report manipulative practices.
- 2. Industry self-regulation-** Online platforms should establish ethical design guidelines that discourage the use of dark patterns. **For ex-** Encouraging **responsible design practices** and **conducting independent audits** to identify and rectify dark pattern issues.

3. Conscious score and ethical design- The designers of the apps must employ ethical design practices and provide a 'conscious score' to their apps, to avoid dark patterns.

4. Streamlining enforcement- The Central Consumer Protection Authority (CCPA) must be provided adequate financial and technical resources, to deal with the cases of dark patterns.

Read More- [The HinduBusinessline](#)

UPSC Syllabus- GS 3- Advancements in the field of IT

Ethanol Blending Programme (E20 Blending)- Significance and Challenges- Explained Pointwise

India is on course to achieve its E20 Blending target (blending 20% of petrol with ethanol by 2025-26) as part of its Ethanol Blending Programme. The **National Policy on Biofuels 2018**, had initially set an indicative target of achieving 20% ethanol blending (E20) by the year 2030. However, the target of E20 blending, was advanced to 2025-26 after the NITI Aayog released the expert committee report on ethanol blending titled 'Roadmap for Ethanol Blending in India 2020-25'.

Going by the milestones on blending percentages crossed so far and the increase in ethanol production capacity, India is on track to achieve its blending target. However, the **food versus fuel equation continues to hang over the ethanol economy**.



» Biofuels are the fuel derived from the biomass of plants or animal wastes. It is commonly produced from corn, sugarcane and animal waste like cow dung.

» Generation of biofuels

1st Generation Biofuel	Produced from edible items like sugar, corn, starch.	Higher carbon content and emit greenhouse gases.
2nd Generation biofuel	Produced from leftover food crops like rice husk, wood chips	Greenhouse content less than 1st generation biofuel
3rd Generation biofuel	Produced from microorganisms like algae.	Carbon Neutral (CO ₂ emitted=CO ₂ sequestered)
4th Generation biofuel	Produced from genetically engineered crops like GM crops	Carbon Negative

» Common biofuels used

Bioethanol	Produced from corn and sugarcane using fermentation process. E10 is the most common blend in which 10 per cent composition is Ethanol
Biodiesel	Produced from vegetable oils like soybean oil or palm oil, vegetable waste oils and animal fats using transesterification process.
Biogas	Produced from organic matter like sewage from animals and humans by anaerobic decomposition .

Created- Forum IAS

What is the Ethanol Blending Programme? What is the Status of the targets?

Ethanol Blending Programme- The Ethanol Blended Petrol (EBP) program was launched in **January 2003**. The program seeks to **achieve blending of Ethanol with petrol** with a view to reduce pollution, conserve foreign exchange and increase value addition in the sugar industry enabling them to clear cane price arrears of farmers.

As per the programme targets, India has to achieve **10% blending rate (E10)** by 2021-22 and **20% blending rate (E20)** by 2025-26. The average ethanol blending in petrol has risen from **1.6%** to **11.8%** between 2013-14 and 2022-23.

Sources of Bio Ethanol Production in India

Sugarcane	<p>Sugarcane gives rise to three main related products, in the order of decreasing sugar content.</p> <p>a. Sugarcane juice and syrup b. B-heavy molasses c. C-heavy molasses</p> <p>(Sugarcane juice and syrup, and B-heavy molasses typically go into making sugar, as they have higher sugar content.)</p> <p>In a bid to up fuel ethanol production, the government had started permitting the diversion of Sugarcane juice and syrup, and B-heavy molasses. However, in December 2023, the government restricted the diversion of Sugarcane juice, syrup, and B-heavy molasses, over fears of falling sugar stocks.</p>
Maize	The use of maize for ethanol blending has been increasing to produce more fuel ethanol to compensate for restrictions on using Sugarcane juice, syrup, and B-heavy molasses .
Surplus rice & damaged grains	Surplus rice and damaged grains have been permitted by the government for use as a feed in grain-based distilleries.

Ethanol for blending

With the government restricting the use of B-heavy molasses and sugarcane juice for ethanol production from December 2023, grain-based ethanol production has increased to maintain blending percentages

Ethanol supplied to oil marketing companies

Supply-year	C-heavy molasses	B-heavy molasses	Sugarcane juice	Surplus rice	Damaged grains	Maize	Total in litre crore; blending % in brackets
2019-20	74	68	15	0	16	0	173 (5.00)
2020-21	39	183	39	2	39	0	302 (8.10)
2021-22	11	265	85	49	24	0	434 (10.02)
2022-23	6	235	128	74	32	32	506 (12.06)
2023-24*	39	95	56	0	76	135	401 (13.00)

Supply years are December-November, December to October for 2022-23 and November to October for 2023-24

*Data available only for November-June

Source- The Hindu

What is the significance of Ethanol Blending Programme?

- 1. Bolsters India's Energy security-** India has a high dependence on imported fuel to meet its energy needs (**In 2021-22, 86 percent of consumed fuel was imported**). Such high import dependence, makes India's energy security vulnerable to global events like the **Russia-Ukraine war** or **oil-cut decisions of OPEC countries**. Ethanol blending programme reduces India's dependence on imported oil, and in turn bolsters the energy security.
- 2. Import Substitution-** Ethanol Blending programme can help in strategically reducing the dependence on imported fossil fuels and conserve foreign exchange reserves. **According to NITI Aayog, India's crude oil import bill will fall annually** by about **\$4 billion** by the achievement of E20 target.
- 3. Reduction of emissions-** Use of ethanol-blended petrol decreases emissions such as carbon monoxide (CO), hydrocarbons, and nitrogen oxides. As per **NITI Aayog**, petrol blended with 20% ethanol would reduce **carbon monoxide emissions** by **50% in two-wheelers** and **30% in four-wheelers**.

4. Bolstering Rural Economy and Farmer's Income- It bolsters the rural economy by promoting the cultivation of various crops (like maize, paddy) through an assured market. Under Ethanol Blending Program, **Oil Marketing Companies (OMCs)** have paid **sugar mills nearly Rs 81,796 crore for ethanol supplies in the last seven years** (till 2022), which has helped mills to clear farmers' dues.

5. Job Creation- As per the Asian Development Bank (**ADB**), the ethanol blending programme can help in **generating about 18 million rural jobs in India.**

Read More- [Significance of Biofuels-Explained,Pointwise](#)

What are the Challenges in achieving 20% Ethanol Blending in India?

1. Rise in import of maize- Government restricted the diversion of Sugarcane juice, syrup, and B-heavy molasses for ethanol production, over fears of falling sugar stocks. This reduction has increased the import of maize from **\$39 million in 2022-23** to **\$103 million in FY 2024.**

As per NITI Aayog's estimates, ~ 4.8 million hectares will have to be added to maize cultivation area to meet the 20% target. This additional area is almost half of the current maize cultivation area in India.

2. Financial vulnerability of Sugar Mills- The lack of financial stability of the sugar mills to invest in biofuel plants, and their **heavy concentration in certain regions**, poses a significant challenge to the ethanol Blending Programme.

3. Barriers to Inter-state movement of ethanol- The central government amended the **Industries Development and Regulations Act** to ensure smooth implementation and transportation of Ethanol across the country. But only **14 states have implemented the amended provisions.** As a result, states that produce ethanol more than the requirement for blending cannot transport the Ethanol to other states.

4. Focus of states on ethanol for liquor production- The use of ethanol for fuel blending has failed to attract attention in states like Tamil Nadu. The **Liquor sector remains a highly lucrative market for ethanol distilleries.**

5. Modification of existing petrol engines to use E20- The estimated petrol vehicles stock in India is 212.7 million as of March 31, 2023 (176.2 million two-wheelers, 21.8 million three-wheelers, and 14.7 million four-wheelers). The modifications entail significant costs and skilled manpower. This can create considerable disruption in the economy.

What are the concerns with higher ethanol Blending in India?

1. Impact on India's Food security- The diversion of food crops, such as rice for ethanol production, will hamper India's food and nutritional security ambitions. **For ex-** In 2022, **close to 1 million metric tonnes of rice fit for human consumption** from FCI's stocks **was sold at subsidised prices** to produce ethanol.

2. Diversion of Agricultural Land- Excessive blending target can lead to the conversion of agricultural land used for growing food crops, to **cultivating biofuel feedstocks** like **sugarcane, corn, or oilseeds.**

3. Impact on Water Availability- Incentives for higher ethanol blending might encourage increased sugarcane and rice cultivation, which are water-guzzling crops. According to TERI, **400 billion litres of water would be needed additionally**, which can exacerbate concerns about agricultural sustainability.

4. Impact on Soil Health- The practices of monocropping for biofuel feedstock crops (such as rice, sugarcane) can deplete the nutrients in the soil and make it infertile.

5. Increase in Import of Agricultural Crops- The use of crops like maize for ethanol blending **increases the import bill** and **impacts related agricultural sectors** such **poultry sector** and **livestock feed.**

What should be the Way Forward?

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- 1. Diversification to higher generation of biofuels-** The government should diversify and move to 2G and 3G biofuels, that are more benign in terms of impact on food security.
- 2. Increase in grain based distilleries-** According to the [roadmap for achieving ethanol blending targets](#), prepared by the Niti Aayog, India must invest to increase the capacity of [Grain-based distilleries from 258 to 740 crore litres](#).
- 3. Interest Subvention programmes-** Two interest subvention programmes should be provided for [establishment of new distilleries](#) and [ramping up of ethanol generation capacity](#).
- 4. Streamlining supply chain-** The Oil Marketing Companies (OMCs) should sign [more long-term contracts with distilleries](#). The inter-state movement of ethanol should be facilitated to streamline supply-chain.
- 5. Promotion of maize cultivation in rotation with sugarcane-** Maize is not water intensive. However, it degrades soil and cannot be the sole crop either. It should be cultivated in rotation with sugarcane to ensure that soil fertility is not degraded.
- 6. Increase in fuel ethanol pricing-** Increased price support for fuel ethanol can decrease its diversion towards liquor use.

Read More- [The Hindu](#)

UPSC Syllabus- GS 3 Environment Conservation

India-Malaysia Relations- Significance and Challenges- Explained Pointwise

During the recent visit of the Malaysian PM Anwar Ibrahim, India-Malaysia relations were upgraded to '[Comprehensive Strategic Partnership](#)'. It was noted during the visit that [India and Malaysia have close similarities](#) as both are '[multicultural, multi-ethnic and multi-religious countries](#)'. Several key agreements were signed during the visit, providing impetus for the deepening of India-Malaysia relations.

However, there are also serious challenges between India and Malaysia. In this article, we will look at the history of India-Malaysia Relations, significance of the relations and the way forward.

Key Takeaways from the recent India-Malaysia Bilateral Summit

1. **Comprehensive Strategic Partnership-** The existing **Enhanced Strategic Partnership**, which was established in 2015, was upgraded to a **Comprehensive Strategic Partnership**.
2. **Key Agreements-** Multiple agreements were signed covering critical areas such as **worker mobility, digital technology, culture, tourism, sports, and education**.
3. **MoU on Recruitment, Employment, and Repatriation of Workers-** MoU was signed to streamline the processes related to the movement and management of workers between the two countries.
4. **MoU on Ayurveda and Traditional Systems of Medicines-** MoU was signed for Co-operation in the field of Ayurveda and other traditional systems of medicine. India will establish an **Ayurveda Chair at Universiti Tunku Abdul Rahman in Malaysia**, for promotion of traditional medicine education and research.
5. **BRICS Membership Support-** India has agreed to support **Malaysia's interest in joining BRICS**.
6. **ASEAN-India Trade in Goods Agreement (AITIGA)-** India and Malaysia have agreed to support and expedite the review process of AITIGA, and make it more effective and business-friendly. The aim is to conclude the review by 2025 and enhance supply chain connections between India and ASEAN countries.
7. **Strategic Rice Export Agreement:** India has agreed to a **one-time export of 2,00,000 metric tonnes** of white rice.
8. **Discussion on Extradition and Counter-Extremism-** Both leaders emphasized the need to **tackle extremism and radicalism**.
9. **Cooperation in Digital Technologies-** India and Malaysia have agreed to work on connecting **India's Unified Payments Interface (UPI)** with **Malaysia's PayNet** for **digital transactions**.

What is the History of India-Malaysia Relations?

Historical Ties-

- a. **Establishment of Relations-** The historical ties between India and Malaysia trace back over a millennium. The relation was **significantly influenced by the Chola Empire** (9th-13th centuries). The Cholas established **extensive maritime trade routes** that connected South India with the Malay Peninsula. It fostered close cultural and economic exchanges.
- b. **Rule over the Malaysian Territory-** Under the reign of emperors like Rajaraja Chola I and Rajendra Chola I, the Cholas established control over parts of Southeast Asia, including present-day Malaysia.

Post Independence Ties

India and Malaysia share close cooperation since the independence of both nations. The major phases of relations are mentioned below-

Establishment of Relations	India established diplomatic relations with the Federation of Malaya (predecessor state of Malaysia) in 1957 .
Phase of Strong Relations	India-Malaysia enjoyed a strong relationship in the 1960s as a result of the personal friendship between Prime Ministers Nehru and Tunku Abdul Rahman Putra . India and Malaysia have developed close political, economic and socio-cultural relations.
Enhanced Strategic Partnership	India-Malaysia relations were elevated to Enhanced Strategic Partnership during the visit of PM Narendra Modi in 2015.

What are the areas of cooperation between India and Malaysia?

1. Geopolitical Cooperation- India and Malaysia are members of key global forums like the **Commonwealth of Nations, NAM, G-15, and G-77**. This forms a strong foundation for close geo-political mutual cooperation. Further, India and Malaysia closely cooperate through **ASEAN plus** and **East Asia Summits**.

2. Geo-strategic Cooperation-

a. India and Malaysia have steadily expanded their defence ties since signing a **defence cooperation memorandum in 1993**.

b. India and Malaysia engage in regular defence cooperation meetings, and joint military exercises. **For ex- Exercise Harimau Shakti (Military), Exercise Samudra Lakshmana (Navy), and Exercise Udara Shakti (Air Force)**.

3. Geo-economic Cooperation-

a. Bilateral trade between India and Malaysia has reached a **record high of USD 19.5 billion**. Malaysia is India's 13th largest trading partner.

b. As per official figures (DPIIT), **Malaysia ranks as the 26th largest investor in India** with FDI inflow of US\$1.16 billion during the period April 2000 to September 2022.

c. **India is a significant investor in Malaysia**, particularly in sectors like technology, manufacturing, and services. More than 150 Indian companies, including 61 Indian joint ventures and 3 Indian Public Sector Undertakings, operate in Malaysia.

d. **Exports from India-** It Includes mineral fuels, aluminium, meat, iron and steel, copper, organic chemicals, and machinery.

e. **Imports to India-** It Includes palm oil, mineral fuels, electrical machinery, animal or vegetable fats, and wood.

f. **ASEAN-India Business Summit 2023** celebrated 30 years of ASEAN-India Engagement, with significant participation from Indian and Malaysian stakeholders.

4. Diaspora Cooperation- Malaysia is home to over **2.95 million large Indian diaspora** and **the second-largest Persons of Indian Origin (PIO)** community in the world after the US.

5. Cultural Cooperation- India and Malaysia share close cultural Cooperation, which are explained below-

a. Institutional Cooperation- The **Indian Cultural Centre Kuala Lumpur**, established in **2010** and **Netaji Subhash Chandra Bose Indian Cultural Center (NSCBICC)** offers classes in Carnatic vocal music, Kathak dance, Yoga, and Hindi, with teachers from both India and Malaysia.

b. Literary Cooperation- **Hikayat Seri Rama** (Malay literary adaptation of the Hindu Ramayana epic) reflects local adaptations, and close literary cooperation. Ramayana's themes are reflected in local stories, arts, and performances of Malaysia.

c. Shared Cultural Architecture and craft- The **Sri Veera Hanuman Temple in Malaysia** shows the shared cultural heritage, with its architecture and tales deeply rooted in Indian traditions.

What is the significance of India-Malaysia Relations?

1. Geopolitical Significance- Close India-Malaysia relations **aligns with India's Act East Policy**. Close cooperation with Malaysia, provides India the **strategic pivot towards the ASEAN region**, and enhance its influence and connectivity in South East Asia. Deepened India-Malaysia relations also forms an important pillar of India's effort of outreach to countries of the Global South.

2. Geostrategic Significance

a. Close Cooperative Mechanism between India and Malaysia on the **Straits of Malacca and Singapore (SOMS)**, is key for the **establishment of rule based order in Indo-Pacific**.

b. Close India-Malaysia relations will **enhance interoperability** and **address regional security challenges** like counter-terrorism and extremism in South East Asia.

3. Geo-economic Significance-

- a. **Comprehensive Economic Cooperation Agreement (CECA)** between India and Malaysia will provide a boost to India's effort for achievement of its foreign trade target of \$2 trillion in merchandise exports by 2030.
- b. The exploration of option of Local Currency Trade between the Indian Rupee (INR) and Malaysian Ringgit (MYR), will help in reducing reliance on the US dollar and enhancing economic resilience.

4. Cultural Significance- The close people to people connect and the presence of large Indian diaspora in Malaysia can be **leveraged for increasing the cross-border investment and trade**.

What are the Challenges in India-Malaysia Relations?

- 1. Extradition of Zakir Naik-** Malaysia's **rejection of repeated India's request for extradition of Zakir Naik**, who is wanted in India on hate-speech and money laundering charges, is one of the prominent challenges in India-Malaysia relations.
- 2. Malaysia's criticism of India's internal Policies-** Malaysia's strong criticism of Indian Government's Policies like the **Citizenship Amendment Act**, and the **reorganisation of Jammu and Kashmir**, has created further wedge between India and Malaysia.
- 3. Economic Challenges-** The economic relationship between India and Malaysia faces challenges such as **higher import tariffs** and **trade restrictions**. This has impeded the growth of bilateral trade between India and Malaysia.
- 4. Diaspora Challenges-** There are concerns of **illegal immigration**, **exploitation of workers**, and **human trafficking** surrounding the Indian diaspora. The **detention of hundreds of Malaysians during the COVID-19** pandemic also created tensions between India and Malaysia.
- 5. Increasing Chinese Influence-** The **increase in Chinese influence in the politics and economy of Malaysia** creates further geo-political and geo-strategic challenges for India.

What Should be the Way Forward?

- 1. Comprehensive Economic Cooperation Agreement (CECA)-** India and Malaysia must **accelerate the review and amendment of the CECA**, to include emerging sectors such as fintech, semiconductors, and defense. This will help achieve the **target of increasing bilateral trade to \$25 billion**.
- 2. Closer Economic Cooperation-** Efforts like **avoiding double taxation**, **mutual customs assistance**, **improving air connectivity**, and **collaborations among airlines** can boost trade and tourism between India and Malaysia.
- 3. Defense Technology Collaboration-** Fostering partnerships in defence technology and research, **can enhance both nation's defence capabilities** and will contribute to regional stability in Indo-Pacific.
- 4. Focus on ASEAN Integration-** India must leverage Malaysia's position in ASEAN to enhance its engagement with the region. This will help in **aligning the relations with India's Act East Policy** and supporting the ASEAN centrality.

Read More- [The Hindu](#)

UPSC Syllabus- GS 2- India and its Neighbourhood relations

India-Ukraine Relations- Significance and Challenges- Explained Pointwise

India-Ukraine Relations has garnered significant attention, in the wake of Indian Prime Minister's historic visit to the war torn country. PM Narendra Modi is the **first Indian prime minister to visit Ukraine** after **diplomatic relations were established** between the two countries in 1992.

The visit, which aims at deepening of India-Ukraine Relations, also **sets to underscore India's consistent position on the Russia-Ukraine conflict**. India has always emphasized that lasting peace can only be achieved through dialogue and diplomacy.

In this article, we will delve in detail into the India-Ukraine Relations. We will also look into the areas of cooperation, the challenges in the India-Ukraine and the significance of this historic visit.



Source- Indian Express

What is the Historical Background of India-Ukraine Relations?

India has an extensive bilateral relationship with Ukraine, which spans across all spheres of cooperation.

Establishment of Diplomatic Relations	India was one of the first countries to recognize Ukraine , after the disintegration of the Soviet Union. India established diplomatic relations with Ukraine in January 1992 , with the opening of The Embassy of India in Kyiv in May 1992 . Ukraine opened its Mission in Delhi in February 1993, which was its first mission in Asia.
Phase of Engagement but lack of going full-steam	Even though India and Ukraine cooperated in a range of domains ranging from defence to diaspora , however, India's bias towards Russia prevented New Delhi from going full steam on its engagement with Ukraine.

Decline in bilateral cooperation after the Russia-Ukraine War	There has been decline in the bilateral relations after Russia-Ukraine war. For ex- The volume of India-Ukraine trade dropped from \$3.39 billion in 2021-22 to \$0.71 billion in 2023-24.
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The visit aims to turn around the declining bilateral cooperation and deepen India-Ukraine relations.

What have been the areas of cooperation between India and Ukraine?

1. Geopolitical cooperation

- Soviet Union under the Ukrainian-born Leonid Brezhnev, support of India in the 1971 war against Pakistan. The slogan of Hindi-Rusi bhai-bhai was coined by USSR's Ukrainian leader, Nikita Khrushchev.
- Regular exchange of high-level visits and interactions** between India and Ukraine. **For ex-Regular telephonic communication** between **Indian Prime Minister** Mr. Narendra Modi and **President of Ukraine** Mr. Volodymyr Zelensky, during Russia-Ukraine War.
- Regular interactions between India and Russia through Joint-Working Groups, Foreign Office Consultations.

2. Defence Cooperation

- Ukraine has been a **source of military technology and equipment** for India since its independence. For ex- **Ukraine manufactured R-27 air-to-air missiles are used on the SU-30MKI fighters** operated by Indian Air force (IAF).
- India has also started exporting defence equipments to Ukraine, during its war with Russia.

3. Economic Cooperation

- In 2020, **India was Ukraine's largest export destination in the Asia-Pacific region.** India was Ukraine's fifth-largest export destination.
- There has been **significant growth of bilateral trade** between India and Ukraine, in the last 25 years. Bilateral trade between India and Ukraine **reached US \$3.386 billion in 2021-22.**
- Main items of export from Ukraine to India**– Agricultural products, Metallurgical products, Plastics & Polymers.
Main items of export from India to Ukraine– Pharmaceuticals, Machinery, Chemicals, Food products.
- A number of Indian companies have their representative offices in Ukraine. **For ex-** Office of '**Indian Pharmaceutical Manufacturers**' Association in Ukraine.

4. Humanitarian Assistance

- India has provided **12 consignments measuring 99.3 tons of humanitarian assistance** to Ukraine in the wake of the Ukraine-Russia war. The aid and assistance comprises **medicines, blankets, tents, tarpaulin, medical equipment.**
- Indian Pharmaceutical Companies have **donated more than USD 8 million worth of medical aid** and financial assistance to Ukraine.

5. Diaspora Cooperation

- The local Indian community, comprises mostly **business professionals** and **students studying medicine.** Indian business professionals are predominantly engaged in manufacturing, packaging, trading, and service industry.
- The local Indian community has formed an association called "**India Club**" which organizes cultural and sports events.

6. Cultural Cooperation

- More than 30 Ukrainian cultural associations/groups, spread across the country, are engaged in promotion of **Indian art forms, yoga, philosophy, Ayurveda, and spirituality.** **For ex- Celebration of Yoga Day and birth anniversary of Mahatma Gandhi.**

b. Shooting of Indian movies in Ukraine. **For ex-** The **iconic Oscar winning song Natu-Natu** was shot in Ukraine.

7. Institutional Cooperation

- a. **ITEC (Indian Technical and Economic Cooperation) program**, which offers training or capacity building programs in different centres of excellence in India.
- b. **ICCR (Indian Council for Cultural Relations) scholarship**, which offers higher-level courses covering wide range of subjects in eminent Indian Institutions.
- c. **Kendriya Hindi Sansthan Scholarship program**, which offers scholarships to Ukraine students to pursue higher-level Hindi language courses.

Read more- [Significance of India's PM Visit to Ukraine](#)

What are the Challenges in India-Ukraine Relations?

- a. **Declining bilateral Trade-** The volume of India-Ukraine trade has **dropped** from **\$3.39 billion in 2021-22** to **\$0.71 billion in 2023-24**, due to the ongoing Russia-Ukraine Crisis.
- b. **Impact on India's import-** The decline in trade has impacted India's import of agricultural, machine-building and military goods from Ukraine. **For ex- Impact on the supply chain of sunflower oil**, has led to rising inflation in the country.
- c. **India's relation with Russia-** India's **continued engagement with Russia**, and its **decision to avoid all public criticism of Moscow**, has led to a little dampening of the spirit of India-Ukraine geopolitical cooperation.
- d. **Ukraine's criticism of India's Policies in the past-** Ukraine's **criticism of India's Nuclear Test** and **India's Kashmir policy** has also been an irritant in India's full steamed engagement with Ukraine.

What are the emerging opportunities which make India-Ukraine relations significant?

The possibility of post-war reconstruction in Ukraine offers various opportunities for India.

1. **Room for enhanced defence cooperation-** Ukraine's urgent need for weapons **creates an opportunity for India to shed the virtually obsolete Soviet arms**. India can swap its Soviet hardware and ammunition for Western ammunition, as India pivots away from Soviet and Russian weapons to NATO systems.
2. **Geo- strategic cooperation in Indian Ocean-** Military cooperation with Ukraine could be a strategic game-changer for India, especially in the Indian Ocean. **Ukraine's modern, low cost and innovative waterborne technology, outsmarted the Russia's vastly superior Black Sea Fleet**. India can use Ukraine's expertise to counter China in the Indian Ocean region.
3. **Shift of Production bases to India-** Close cooperation between India and Ukraine can help in shifting production bases of Ukrainian manufacturing companies in India. **For ex- Shifting of the gas turbine manufacturing company, Zorya-Mashproekt's base in India**.
4. **Enhanced employment opportunities-** Ukraine's future reconstruction will offer huge opportunities for India's strained labour market.
5. **Enhanced cooperation in Digital sector-** India's deepened relations with Ukraine, can enhance the digital cooperation between the two nations and can be **game changer for governance of both countries**. **For ex- Indian electronic voting machines could prove invaluable to wartime Ukraine**, while **Ukraine's ground-breaking DIIA app**, which places government documents and services securely in one's smart phone, **could revolutionise Indian governance**.

What Should be the Way Forward?

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1. Tightrope Diplomatic Balancing Act- India must continue to diplomatically balance its relations with Russia and Ukraine, and with China and the US. India should not let its engagement with Ukraine change its equations with Russia, as Russia's engagement with China does not impact its relationship with India.

2. Take centre stage for delivering peace- India should take centre stage as a peaceable yet principled global player, and take the **lead in negotiations of the Ukrainian peace formula**. This will help in restoring the global food supply chains and prevent millions of starvation related deaths in the World.

3. Demonstrate new definition of non-alignment- India must **demonstrate the changed definition of non-alignment in India's foreign policy** by **deepening its relationship with Ukraine** while **maintaining its close cooperation with Russia**. Non-Alignment's definition in Indian foreign policy has changed from maintaining equal distance from all countries to maintain close ties with all countries.

The ongoing Russia-Ukraine conflict has put India in a delicate position, requiring it to balance its historical ties with Russia against its growing partnerships with the West. India must strategically navigate in this geopolitical quagmire.

Read	More-	The	Indian	Express
UPSC Syllabus- GS 2- Effects of policies of developed countries on India				

Space Sector in India- Significance and Challenges- Explained Pointwise

The celebration of the **first ever National Space Day**, on August 23, 2024, has put the **spotlight on the Space Sector in India**. National Space Day in India commemorates the successful landing of Chandrayaan-3 on the Moon. The Government of India has launched a **month-long campaign** to showcase the **achievements** of the **space Sector in India** and inspire the Indian youth.

In this article, we will look into the recent developments in the Indian Space Sector, post the success of the Chandrayaan-3 mission. We will look at the significance of the Space Sector in India and the pertinent challenges plaguing it.



Source- The Hindu

What have been the recent developments in Space Sector in India post the Successful Chandrayaan-3 mission?

New Space Launches

Aditya-L1 Mission	Aditya-L1 spacecraft has been launched to study solar radiation from the Earth-Sun Lagrange point (L1), aboard the Polar Satellite Launch Vehicle (PSLV) . It reached its orbit around L1 by January 6, 2024, and completed its first orbit on July 2, 2024. In May 2024, it tracked a solar storm in collaboration with ground observatories and lunar spacecraft.
Gaganyaan TV-D1 Test Flight	The test successfully separated the crew module from the Test Vehicle (TV) , ensuring it safely descended and was recovered by the Indian Navy vessel INS Shakti . This test is a key part of ISRO's human spaceflight program .
XPoSat Launch	It studies the polarization of radiation from celestial objects and follows NASA's IPEX mission .
RLV-TD Tests	ISRO tested its Reusable Launch Vehicle (RLV), Pushpak, with landing experiments that mimicked conditions from space . These successful tests provided key data and set the stage for the upcoming Orbital Return Flight Experiment.
SSLV Development	ISRO successfully completed the final test flight of the Small Satellite Launch Vehicle (SSLV). This milestone confirms the SSLV's readiness for commercial use . The payloads included earth observation tools and an ultraviolet dosimeter for the Gaganyaan mission.

Regulatory and Institutional Developments

NewSpace India Ltd. (NSIL)	NSIL now manages commercial activities like Indian Remote Sensing satellite data. On May 1, 2024, NSIL signed a launch deal with SpaceX for the GSAT-20/GSAT-N2 satellite. It has also sought qualifications for LVM-3 production and signed a launch agreement with an Australian company for the SSLV.
Private Sector Contributions	Private space companies are progressing with their missions- Agnikul Cosmos launched its SoRTeD-01 vehicle, Skyroot Aerospace is developing the Vikram 1 rocket, and Dhruva Space and Bellatrix Aerospace contributed to the PSLV-C58 mission.
Regulatory Developments	India's space regulator, IN-SPACE , has updated its policies and issued new licences , including the first satellite broadband license to Eutelsat OneWeb and the first ground station license to Dhruva Space. The government has amended its foreign direct investment (FDI) policy to allow 100% FDI in most space sectors. However, there are some limits on satellite manufacturing (74%) and launch infrastructure (49%).

Future Roadmap and Initiatives

Gaganyaan Program	ISRO is progressing with its Gaganyaan human spaceflight program . By 2035, ISRO aims to establish India's own space station , the ' Bharatiya Antariksh Station ' (BAS).
Next-Generation Launch Vehicle	ISRO is working on a Next Generation Launch Vehicle (NGLV) . It will be a three-stage rocket using semi-cryogenic, liquid, and cryogenic engines . The NGLV will replace the GSLV. ISRO is also upgrading the LVM-3 rocket with a new semi-cryogenic engine.

What is the significance of Space sector in India?

- 1. Boost to 'Space Industrialisation'**- Currently, India manages to occupy only 2%, or US\$ 7 billion, of the global space economy. The development of space sector will **promote space Industrialisation in India, provide a boost to space-tech ecosystem** and **help India's space economy to reach \$100 billion by 2040**.
- 2. Low Cost Missions**- The Indian space sector has the **potential of launching space vehicles at a much lower cost**. This will help in getting many foreign contracts. **For ex- Mars Orbiter Mission was 10 times cheaper than western missions**.
- 3. Presence of Budding Entrepreneurs**- According to a global report published in June 2021, **India has 368 private space firms, placing it 5th in the world** in size after the US, the United Kingdom, Canada, and Germany. With these many firms, India is leading China (288), France (269), and Spain (206) in the private space industry.
- 4. Enhancement of India's role and position in the Artemis accord**- India is now a member of the Artemis Accords. With the further growth and development of space sector, India has an opportunity to lead the other Artemis countries alongside the U.S.

Artemis Accord- It is the U.S.-led **multilateral effort to place humans on the moon by 2025** and thereafter to expand human space exploration to the earth's wider neighbourhood in the solar system.

- 5. Expansion of cooperation in outer space**- While geo-political rivalry is a reality, India's space sector provides India an **opportunity to limit competition** and expand cooperation in outer space. However, **it also allows India to gain military advantage in space** over their geopolitical rivals on Earth.

What are the challenges in further development of space infrastructure in India?

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1. Budgetary Challenges- Space sector in India faces budget constraints despite its successes in launching missions. There has been an **8% decline in budget allocations to ISRO in 2023-2024** with respect to 2022-2023. The funds allocated to the space sector are very less in comparison to other countries. The US spent 10 times and China 6 times more than India in the space sector in 2019-20.

2. Manpower Challenges- ISRO, the foundational pillar of Indian space sector, faces manpower challenge due to the **problem of Brain Drain** and **fewer students pursuing advanced spaced space studies**.

3. Absence of a Clear Legislative Framework- The draft Space Activities bill, which was **introduced way back in 2017 but has not yet been passed**. This has hindered the further growth and development of the space sector in India.

4. Lack of robust Dispute Settlement Mechanism- This discourages private investment in the space sector in India. The void was seen in **Antrix-Devas cancelled satellite deal**. The Government of India owes nearly \$1.2 billion to Devas Multimedia as per an order of a tribunal of the International Chamber of Commerce.

5. Technological Challenges- ISRO faces **technological upgradation challenges** like **powerful launch vehicles with higher payload capacity**. For ex- While Chandrayaan-3 took nearly six weeks to get to the Moon, the failed Russian mission Luna-25 took just one week to touch down.

6. Government funding driven sector- Some critics have argued that such **massive spending by the government alone in the space sector** curtails **Indian government's spending capability in social sectors** like poverty alleviation, education, and health which must be the priority for developing country like India.

What Steps have been taken by the Government to address these challenges?

Indian Space Policy, 2023	Indian Space Policy 2023 is a landmark policy for the development for India's space sector . It offers an opportunity to build upon past achievements and harness the potential of the evolving space sector.
IN-SPACe	It aims to provide a level-playing field for private companies to use the Indian space architecture . IN-SPACe will act as a channel between ISRO and any private players that want to participate in space activity, thereby culling lengthy bureaucratic procedures.
FDI Policy	The government has amended its foreign direct investment (FDI) policy to allow 100% FDI in most space sectors. However, there are some limits on satellite manufacturing (74%) and launch infrastructure (49%) .
New Space India Limited (NSIL)	It is a Central Public Sector Enterprise under the Department of Space that was established in 2019. It has been mandated to transfer the technologies emanating out of the Indian space programme and enable Indian industry to scale up high-technology manufacturing base.

What should be the Way forward?

1. Push for greater privatization- India must frame its space policy regulations to allow for greater private sector investment in the field of space technology and infrastructure. **India's space programmes should be driven by commerce**.

2. Passage of space Activities Bill- The passage of the **Space Activities Bill** should also be done in order to give private players greater clarity and protection. This should involve proper consultation and discussions with the concerned stakeholders.

4. Setting up Space Dispute Tribunal- The plan to set up **an independent tribunal to adjudicate disputes among private space entities** should be implemented promptly.

4. Enhanced International Collaboration- India must do more collaboration and research with pioneer countries like the **US & Russia**, who have already ramped up their space infrastructure.

Indian Space sector possesses huge untapped potential which can be realized with adequate policy measures by the government. This would boost the confidence of the private sector and deliver optimum results, thereby helping the country acquire the top spot in the global space industry.

Read More- [The Hindu](#)

UPSC Syllabus- GS Paper-3- Achievements of Indians in Science & Technology (Space)

Sexual Harassment of Women at Workplace: Issues and Challenges – Explained, Pointwise

Sexual harassment of Women at the workplace is a form of gender discrimination that violates women's fundamental rights, including their right to equality under **Article 14** and their right to dignity and a safe life under **Article 21** of the Constitution. It creates an unsafe and hostile work environment, impeding women's professional growth and affecting their overall **well-being**.

The recent **rape** and **murder** of a **female doctor in Kolkata** has highlighted the poor working conditions women face. Women are unsafe whether they work in organized or unorganized sectors. Furthermore, the **Justice Hema committee's** recent report on the **Malayalam film industry** has exposed serious issues like sexual abuse, gender discrimination, and mistreatment of women in the industry.

Despite many laws designed to protect women from workplace harassment, such issues still occur. This article will examine why harassment continues and propose measures to address the problem effectively.

What are the key findings of Justice Hema Committee report?

- 1) **Sexual Demands**-Women entering the industry often face pressure to exchange sexual favors for job roles. This practice, called the "**casting couch**," involves demanding sexual favors in return for opportunities. The report also highlights frequent **vulgar comments** from men and **instances of drunk male** co-actors harassing women.
- 2) **Harassment and Torture**-Women experience sexual harassment, abuse, and assault at work, while **traveling**, and in their **living spaces**, as well as **online**. Those who reject sexual advances often encounter **mistreatment** and offensive remarks.
- 3) **Lack of Facilities and Safety**-Many workplaces, **especially outdoor ones**, lack essential facilities like **toilets** and **changing rooms**, which can lead to health problems such as **urinary infections**.
- 4) **Ban and Silence**- **Unauthorized bans** and threats of being barred from work are used to **silence women** in the industry. A **powerful male network** controls the industry, and challenging them can lead to being pushed out.
- 5) **Discrimination**-Gender bias is widespread, with significant **pay disparities** between men and women. Additionally, junior artists often face harsh conditions, working up to 19 hours a day.
- 6) **Non-execution of Contracts**-Many employment contracts are not **honored**, leading to actors and technicians receiving less pay or no payment at all.

What is the status of Sexual Harassment of Women at Workplace in India?

- 1) **National Crime Records Bureau (NCRB) Data**-From 2018 to 2022, India reported over 400 cases of sexual harassment at work each year, according to a Business Standard report, which used National Crime Records Bureau (NCRB) data.
- 2) **Prevalence of Sexual Harassment**-A 2018 survey by the **Martha Farrell Foundation** revealed that 80% of Indian women have faced workplace harassment, with 38% experiencing it in the past year.
- 3) **Rising Number of Complaints**-According to the Centre for Economic Data and Analysis (Ashoka University) sexual harassment complaints reported under the POSH Act have increased significantly, rising from **161 in 2013-14 to 1,160 in 2022-23**.

What are the existing initiatives to deal with Sexual Harassment of Women at Workplace in India?

The **Vishaka Guidelines**, established by the Supreme Court in 1997 to address **sexual harassment** at the workplace, were superseded in 2013 by the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act (POSH Act).

1) Sexual Harassment of Women at Workplace Act, 2013 (POSH Act)-

- A) **Purpose**: To provide a safe and secure working environment for women by preventing and addressing sexual harassment at the workplace.
- B) **Definition**: Defines **sexual harassment in a broad sense**, including unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature.
- C) **Internal Complaints Committee (ICC)**: Mandates the establishment of an ICC in every organization **with 10 or more employees**. The ICC is responsible for receiving and addressing complaints of sexual harassment.
- D) **Local Complaints Committee (LCC)**: For organizations with **fewer than 10 employees** or for cases where the ICC is not available, a **Local Complaints Committee** can be constituted at the district level.
- E) **Complaint Procedure**: Outlines the process for filing and investigating complaints, ensuring **confidentiality** and **fair treatment** of both the complainant and the accused.
- F) **Penalties**-It prescribes penalties for **non-compliance**, including fines and imprisonment. Employers can be fined up to **₹50,000** for not constituting an ICC.

2) **Addressing Quid Pro Quo Situations**-The **Bhartiya Nyay Samhita** criminalizes sexual harassment that involves false promises of marriage or employment. It treats such actions, where sexual favors are demanded under misleading pretenses, as serious offenses **akin to rape**.

What are the reasons for Sexual Harassment of Women at Workplace in India?

- 1) **Power Imbalances and Gender Inequality**:-In workplaces with a gender imbalance, men often hold more power, which can lead to the exploitation of women. Women may feel forced to **tolerate harassment** to secure their jobs.
- 2) **Lack of Awareness and Training**:-Reports from the **National Commission for Women (NCW)** show that many workplaces lack proper training on sexual harassment. This lack of awareness about **legal rights** and **procedures** hinders effective prevention and handling of harassment cases.
- 3) **Inadequate Implementation of Laws**-Many workplaces, especially in **informal sectors**, do not set up Internal Complaints Committees (ICCs) or enforce the 2013 **Sexual Harassment of Women at Workplace Act effectively**. For **ex-** a 2024 survey by The Udaiti Foundation found that 59% of organizations had not established the required ICCs.

4) **Effectiveness of ICCs**-Internal Complaints Committees (ICCs) may fail to be effective due to problems such as **poor confidentiality**, **bias**, or **interference from powerful individuals**. This weakens the complaint and resolution process.

5) **Fear of Retaliation**:-Many women hesitate to report harassment due to fear of retaliation, such as job loss or being **blacklisted**. For ex-actress **Parvathy** experienced online rape threats and a drop in film roles after she spoke out against misogyny in the industry.

6)) **Cultural and Social Norms**-These downplays the seriousness of sexual harassment, making it difficult for victims to seek justice. Further, **social stigma** and **gender discrimination** contribute to a toxic work environment.

7) **Lack of Basic Facilities and Safety Measures**:-In some industries, especially **outdoor and informal ones**, the lack of basic facilities like proper toilets and changing rooms increases women's risks and discomfort. This can make them more **vulnerable** to harassment.

What are the implications of Sexual Harassment of Women at Workplace ?

1) Individual Impact-

A) Victims of sexual harassment often suffer from severe emotional distress, including **anxiety**, **depression**, and **low self-esteem**. They may also experience physical health issues like sleep disorders, **high blood pressure**, and weakened immune systems.

B) Sexual harassment can lead to lower job satisfaction and hinder career growth. According to a **2019 McKinsey report**, **35% of women in India** have thought about leaving or pausing their careers because of harassment.

2) Organizational Impact-

A) Sexual harassment creates a **toxic work environment** that lowers employee productivity. Victims may become distracted, miss work, and **lose motivation**, harming the organization's overall performance. For ex-it costs India \$6 to \$10 billion each year due to its effects on labor force participation and productivity, according to **World Bank estimates**.

B) Companies that ignore sexual harassment can face costly lawsuits and financial penalties. For ex- one case resulted in a \$17.4 million damage award.

3) **Societal Impact**- The harassment damages social norms by **normalizing violence** and **unsafe conditions** for women, undermining their **dignity** and **empowerment**.

What should be the way forward?

1) Implementing the recommendations of the Justice Hema Committee for film industry-

A) **Establishing a Tribunal**-A new law, the "**Kerala Cine Employers and Employees (Regulation) Act, 2020**," should be enacted to establish an independent tribunal for dealing with harassment and discrimination. This tribunal should be headed by a **retired district judge, preferably a woman**, and have the authority of a civil court.

B) **Mandatory Written Contracts**-The report recommends that all employees, including junior artists, must have written contracts to protect their rights. These contracts should include provisions for **female staff**, such as **safe toilets**, **secure accommodations**, and **safe travel arrangements**.

C) **Gender Awareness Training**-All cast and crew should complete mandatory **online gender awareness** training before starting work. The training materials should be provided in both Malayalam and English.

D) **Incentives for Gender-Just Movies**-The government should offer financial support and low-interest loans for films made by **women that focus on gender justice**.

E) **Banning Alcohol and Drugs**-Alcohol and drug use should be prohibited in film workplaces.

F) **Addressing Cyberthreats**-Online harassment of women, particularly through **fan clubs** and **other platforms**, should be addressed.

G) **Comprehensive Film Policy**-A comprehensive film policy focusing on **gender equality** in all aspects of production, distribution and exhibition should be developed.

2) For organized and other sectors-

A) **Implement and Enforce Legal Frameworks**-Compliance with the POSH Act should be ensured by setting up **Internal Complaints Committees (ICCs)** to handle harassment complaints. **For ex-** HDFC Bank and Accenture have implemented strong, independent ICCs with both male and female members.

B) **Strengthen Internal Policies**-A clear **sexual harassment policy** should be distributed, outlining prohibited behaviours, reporting procedures, and potential consequences. **For exa-** IBM India and Flipkart offer **anonymous reporting options** to protect employees' identities when reporting harassment.

C) **Ensure Fair Investigation**-All complaints should be investigated impartially and confidentially. The ICC should be trained to handle them sensitively and resolve issues quickly to ensure **justice** and **accountability**.

D) **Foster an Inclusive Culture**-A culture of respect and inclusivity should be fostered by encouraging **open discussions** about sexual harassment and supporting gender equality

E) **Support for Victims-Counseling** and **psychological support** should be offered to employees who experience harassment at workplace.

F) **Monitor and Review**-Frequent audits of the **workplace** should be conducted to evaluate the effectiveness of policies and training. **Feedback** should be used to make necessary improvements, and complaints should be monitored to identify and address ongoing issues.

G) **Self-defence Training** -Women should receive self-defense training, and schools should incorporate self-defense education for girls to empower them with the skills to protect themselves.

3) Recommendations of the Justice Verma Committee on Sexual Harassment at Workplace-

A) **Domestic workers** should be covered under the PoSH Act.

B) There is a need to establish an **Employment Tribunal** to handle cases of sexual harassment, rather than relying solely on the internal complaints committee (ICC) under the PoSH Act.

C) It recommended removing the **three-month deadline** for filing complaints, giving victims more time to report harassment without feeling rushed.

[Read More-The Hindu](#)

[UPSC Syllabus- GS1- Issues related to Women](#)

Unified Pension Scheme (UPS)- Significance and Concerns- Explained Pointwise

The **Unified Pension Scheme (UPS)** was approved recently by the Union cabinet. The scheme, which will be effective from April 1, 2025, **aims to provide the government employees with an assured pension** after retirement.

In recent times, **there were growing concerns** within the government employee circles regarding the **National Pension Scheme (NPS)**, popularly known as the New Pension Scheme. The concerns mainly centred around the **lack of assured pension returns** with the NPS. Due to the growing clamour for demands of returning to the Old Pension Scheme, the Union government formed a committee headed by Finance Secretary **TV Somanathan** to look into the issue of Old Pension Scheme vs National Pension System.

The recently introduced Unified Pension Scheme (UPS) **promises retirees a fixed pension**, unlike the National Pension System (NPS). However, it retains the provisions of employee contribution like the National Pension System.



OPS vs NPS vs UPS

Features	Old Pension Scheme (OPS)	National Pension System (NPS)	Unified Pension System (UPS)
Pension Amount	50% of last drawn salary.	Market-linked pension. No defined pension, with the value depending upon the performance of the investment fund	Guaranteed pension of 50% of the average basic pay from the last 12 months before retirement.
Inflation Indexation	Adjusted for inflation through Dearness Allowance (DA) .	Not applicable, the pension is market linked.	Indexed for Inflation based on the All India Consumer Price Index for Industrial Workers (AICPI-IW)
Employee Contribution	No contribution from employee.	Defined contribution of 10% of basic pay and dearness allowance (DA) .	Defined contribution of 10% of basic pay and dearness allowance (DA) .
Government Contribution	Full Funding	Defined contribution of 14% of the employee's basic pay and dearness allowance.	Defined contribution of 18.5% of the employee's basic pay and dearness allowance.
Family Pension	Yes. Continues after retirees death.	Corpus Dependent	Yes. It is 60% of employee's pension .
Risk	No market risk	Market risk	Lower risk than NPS

What are the different Pension Schemes in India? What are their provisions?

Pension Scheme	Applicability	Features
Old Pension Scheme (OPS)	Applicable to all government employees appointed before January 1, 2004 .	<p>a. It is a ‘defined benefit scheme’ as the government employees were paid 50% of their last drawn salary plus Dearness Allowance (DA) as pension after their retirement.</p> <p>b. Under this scheme, the entire pension amount was borne by the government while fixed returns were guaranteed for employee contribution to the General Provident Fund (GPF).</p>
National Pension System (NPS)	<p>a. Introduced on January 1, 2004. All central government employees joining after January 1, 2004, were compulsorily enrolled in NPS</p> <p>b. It was voluntary for the state governments to join the NPS. Almost all the states except for West Bengal and Tamil Nadu migrated to the NPS.</p> <p>c. Rajasthan, Chhattisgarh, Jharkhand, Punjab, and Himachal Pradesh announced a shift back to the OPS.</p>	<p>a. The scheme is a “defined contribution scheme” as the government employees have to make defined contribution of 10% of basic pay and dearness allowance (DA). There is matching contribution by the government.</p> <p>b. There is no defined benefit. The pension benefit is determined by factors such as the amount of contribution made, the age of joining, the type of investment and the income drawn from that investment.</p> <p>c. It remained voluntary for the workforce in the unorganized sector.</p>
Unified Pension Scheme	<p>a. It will be applicable from April 1, 2025 to all those who have retired under the NPS from 2004 onwards.</p> <p>b. Employees can still opt to remain under the NPS.</p> <p>c. Currently for central government employees, but states can also adopt it.</p>	<p>a. It is an assured Pension Scheme and does not leave things to vagaries of market forces.</p> <p>b. The structure of Unified Pension Scheme (UPS) has the best elements of both OPS and NPS. Like OPS, it provides an assured pension and, like NPS, it has provisions of employee contribution to the pension corpus.</p> <p>c. The UPS is a funded contributory scheme, while the OPS is an unfunded non-contributory scheme.</p>

What are the Salient Features of the Unified Pension Scheme (UPS)?

The salient features of the Unified Pension Scheme (UPS) are as follows-

- Assured pension-** **50% of the average basic pay drawn over the last 12 months** prior to superannuation for a minimum qualifying service of 25 years. This pay will be **proportionate for lesser service period**, up to a minimum of 10 years of service.
- Assured family pension-** This will be **60% of pension of the employee** immediately before her/his demise.
- Assured minimum pension-** This will be **10,000 per month** on superannuation after minimum 10 years of service.

d. **Inflation indexation**- Inflation indexation will be provided on **assured pension**, on **assured family pension** and **assured minimum pension**. **Dearness Relief** will be based on All India Consumer Price Index for Industrial Workers (AICPI-IW) as in case of service employees.

e. **Lump sum payment at superannuation in addition to gratuity**- **1/10th of monthly emoluments** (pay + DA) as on the date of superannuation for every completed six months of service. This **payment will not reduce the quantum of assured pension**.

What is the comparative analysis of the three pension schemes?

Features	Old Pension Scheme (OPS)	National Pension System (NPS)	Unified Pension System (UPS)
Pension Amount	50% of last drawn salary.	Market-linked pension . There is no defined pension and the pension value depends upon the performance of the selected investment funds.	Guaranteed pension of 50% of the average basic pay from the last 12 months before retirement.
Inflation Indexation	Adjusted for inflation through Dearness Allowance (DA) .	Not applicable, the pension is market linked.	Indexed for Inflation based on the All India Consumer Price Index for Industrial Workers (AICPI-IW)
Employee Contribution	No contribution from employee.	Defined contribution of 10% of basic pay and dearness allowance (DA) .	Defined contribution of 10% of basic pay and dearness allowance (DA) .
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Family Pension	Yes. Continues after retirees death.	Corpus Dependent	Yes. It is 60% of employee's pension .
Risk	No market risk	Market risk	Lower risk than NPS
Flexibility	Low, fixed benefits	High, with investment choice flexibility	Limited, with assured pension

What were the reasons for the introduction of NPS, and what were the issues with the NPS?

Reasons for the introduction of National Pension System (NPS)

1. Limited Coverage of the Old Pension Scheme(OPS)- The Old Pension Scheme(OPS) **covered only the government employees**, which formed ~12% of the total workforce of the country. National Pension Scheme aim was to provide **pension coverage to even the workers of the unorganised sector**. Workers of the unorganised sector could also join the NPS voluntarily.

2. Huge Fiscal burden on the Central and State Governments due to OPS- With every new pay commission awards, the basic salaries of the Government servants were increasing. This was **increasing the burden on the Union and state exchequers in making pension payments** under OPS scheme. **According to the India Pension Research Foundation**, the expenditure on Union civil service pensions was around be **2.31% of the GDP in 2004-05** and the implicit pension debt of the Government of India was around 56% of the GDP.

3. Burden on the future Generation due to OPS- Under the OPS Scheme, **contributions of the current generation of workers were explicitly used to pay the pensions of pensioners.** Hence, OPS scheme involved direct transfer of resources from the current generation of taxpayers to fund the pensioners.

4. Disincentivised Early Retirement- The OPS scheme used to disincentivise early retirement, as the pension was fixed at 50% of the last drawn salary. Hence, even the **disinterested government employees used to linger around** to reach till their retirement age to avail maximum pension. This resulted in massive under utilisation of human resources.

5. Flexibility- NPS allowed the subscriber to **choose the fund manager** and **the preferred investment option**, including a 100% government bond option. A guaranteed return option could also be considered to provide an assured annuity.

6. Simplicity and portability- Opening of account with NPS provided a **Permanent Retirement Account Number** (PRAN) which remained valid throughout the lifetime of the subscriber. The NPS is also portable across jobs, as PRAN account remains the same.

7. Well Regulated Scheme- An NPS Trust was also **constituted to regularly oversee performance of fund managers**, with a trustee bank to efficiently manage fund flows. A custodian was also appointed to hold the securities, with subscribers being beneficial owners of the assets.

However, there were Issues with National Pension System(NPS) which demanded review

1. Market Volatility/Uncertainty- Contributions under the NPS scheme were invested in the markets through the fund managers. There were **apprehensions that the new NPS will not deliver the same benefits as the old scheme.** The returns were prone to the market volatility and uncertainty. As per SBI report, **NPS asset growth has been affected by the Ukraine-Russia conflict** and may fall short of the declared target of Rs 7.5 lakh crore by March 2022.

2. Increased burden on Employees- Under the old pension scheme, all the burden of pension was borne by the government. There was no requirement of monthly contribution from employees in the pension fund. Hence, the employees used to get greater disposable monthly income in their hands along with an assurity of pension. NPS had **decreased the disposable monthly income in the employees hands** as 10% of their basic pay and DA is deducted every month.

3. No General Provident Fund (GPF) benefits- Under the Old Pension Scheme (OPS), fixed returns were guaranteed for employee contribution to the General Provident Fund (GPF). However, NPS has no General Provident Fund (GPF) provisions.

4. No assured Family Pension- There were no provisions for assured family pension in the NPS, unlike the OPS. The pension was dependent on the pension corpus.

5. No indexation for Inflation- The NPS lacked any indexation to account for inflation. The pension was entirely market linked.

[Read More- Old Pension Scheme\(OPS\) vs National Pension System\(NPS\)- Explained Pointwise](#)

What is the Significance of the UPS?

1. Assured Pension- UPS provides a fixed, assured pension amount, unlike the market-linked returns of the NPS.

Employees who have served for at least 25 years will receive 50% of their last drawn salary from the previous 12 months as pension.

2. Higher Government Contribution- The **government's contribution rate in UPS is 18.5%**, which is higher than the 14% in NPS. This increased contribution can significantly boost the pension corpus, providing greater financial security in retirement.

3. Inflation Indexation- Employees who have served for over 25 years will be eligible for post-retirement inflation-linked increments to their pension. This **protects the real value of the pension** against rising prices.

4. Assured Family Pension- UPS includes an assured family pension of 60% of the employee's basic pay, payable to dependents upon the employee's death.

5. Combination of Defined Benefits and Contributions- UPS **blends the guaranteed pension features of OPS with the investment flexibility and portability of NPS**. This balanced approach offers both stability and growth potential for retirement benefits.

What are the Concerns with the Unified Pension Scheme?

1. Increased Fiscal Burden- The introduction of a **defined pension** could significantly increase the financial burden on the government. **For ex- The expenditure on arrears will be Rs 800 crore in the first year of implementation**, and would cost the exchequer roughly Rs 6,250 crore.

2. Potential for Unsustainable Liabilities- As the UPS combines features of both the Old Pension Scheme (OPS) and the National Pension System (NPS), there is concern that it may lead to unsustainable liabilities for the government. The **defined benefits could constrain spending on other essential services**, as a larger portion of the budget may need to be allocated to cover pension costs.

3. Inequitable Benefits- The scheme primarily **benefits a small section of the workforce**, the central government employees. While the NPS was voluntary for the workforce in the unorganized sector, there are no such provisions in the UPS.

4. Transition from NPS- This transition raises questions about the **management of the existing NPS corpus** and the potential for **reduced participation in the NPS**.

What Should be the Way Forward?

1. Regular Assessments- Periodic evaluations should be conducted to ensure that the scheme remains financially viable. The **government contributions should be adjusted** based on these assessments to **maintain a balance between employee benefits and fiscal responsibility**.

2. Stakeholder Consultations- There must be **regular engagement with government employees, unions, and other stakeholders** to gather feedback and address concerns regarding the UPS. This can help in refining the scheme.

3. Performance Metrics- The government should aim to establish **clear performance metrics** to evaluate the effectiveness of the UPS in meeting its objectives. Regular monitoring can help in making informed decisions about necessary adjustments to the scheme.

Read More- [The Indian Express](#)

UPSC Syllabus- GS-3 Indian Economy

Weather Forecasting in India- Achievements and Challenges- Explained Pointwise

There has been a **significant increase of trust in India's weather forecasting** among the general public, due to considerable **improvements in the accuracy of forecasts**. This has led to an **increase in demands for more accurate and specific weather forecasting in India**, particularly in **light of the increasing instances of extreme weather events**, and climate change induced catastrophic disasters. To **serve the growing need for accurate weather forecasting**, the government is planning a major upgrade of the IMD's existing capabilities.

In this article, we will delve into the **developments in weather forecasting infrastructure**, the **need for it** and its **success stories**. We will also look at the **challenges in prediction of accurate weather conditions** and the way forward.



Source- Indian Express

What has been the historical development of weather forecasting in India?

Ancient Periods	a. In ancient India, weather prediction was largely based on astrology, observation of natural phenomena, and folklore . b. Varahamihira's classical work, Brihatsamhita , provides clear evidence of deep knowledge of atmospheric processes at the time. c. Kautilya's Arthashastra contains records of scientific measurement of rainfall and its application to the country's revenue and relief operations.
Colonial Period	a. Establishment of the India Meteorological Department (IMD) - Modern weather forecasting in India began during the British colonial period. The IMD was established in 1875 by Sir Henry Blanford. Its primary aim was prediction of monsoons , which were crucial for the agrarian economy. b. Understanding of monsoons - IMD made significant progress in understanding monsoons under Gilbert Walker, who was appointed as head of IMD in 1903. Walker's identification of large-scale oscillations in atmospheric circulations , laid the foundation for modern comprehension of the El Niño phenomenon.
Post-Independence Period	a. Expansion of IMD - The IMD has expanded its network of weather stations across the country.

	<p>b. Introduction of Numerical Weather Prediction (NWP)- These models, which are based on complex mathematical equations, allowed for more accurate and timely forecasts.</p> <p>c. Satellites and Doppler Radars- INSAT System was launched in 1982, which marked a new era in weather forecasting. INSAT provided real-time data on weather patterns, helping to improve the accuracy of forecasts, especially for cyclones.</p>
21st Century Developments	<p>a. Monsoon Mission in 2012- It aimed at improving the long-range monsoon forecasts that are crucial for the government's economic planning.</p> <p>b. Expansion of IMD capabilities- New initiatives were launched by the IMD to improve the observation network, install high-performance computing systems, deploy sophisticated instruments like Doppler radars, and develop better computer simulation models.</p>

Instruments	2024	2014*
Automatic weather stations	1,208	675
Automatic rain gauges	1,382	1,350
Doppler weather radars	39	15
High wind speed recorders	35	19
Upper air observation systems	56	43
GPS-based balloon stations	23	0
District-wise rainfall monitoring scheme	5,896	3,955
Super computers	2	0
Weather satellites	3	1

10 years earlier. Source: IMD*

The current capacity of India's weather forecasting system

Source-Indian express

Read More- [150 years of IMD- Significance and Challenges- Explained Pointwise](#)

What is the significance of weather forecasting system in India?

- 1. Agriculture and Food Security-** India's agriculture is **heavily reliant on the monsoon**. Monsoon provides about **70-80% of the country's annual rainfall**. Hence, accurate weather forecasting helps in planning the agricultural activities such as sowing, irrigation, harvesting, crop management and pest and disease control.
- 2. Disaster Management and Mitigation-** India's vulnerability to various disasters such as **cyclones, floods, heatwaves, cold waves, and droughts**. Accurate weather forecasting helps in mitigating the negative impact of these disasters.
- 3. Reduction of economic losses-**
 - a. The **destruction of agricultural crops** causes due to vagaries of weather like droughts, less monsoon, cause huge economic loss to the agriculturalists and leads to rural distress.
 - b. The energy sector, like the **hydropower and solar power**, is sensitive to weather conditions. Accurate forecasting supports the efficient management of energy resources, ensuring consistent supply and reducing economic losses.
- 4. Construction and Urban Planning-** Weather forecasts are vital for planning construction activities, particularly during the monsoon and winter seasons. These help in **avoiding delays, ensuring worker safety, and minimizing construction costs**.
- 5. Transport and Logistics-** Accurate weather predictions are crucial for the safety and efficiency of road, rail and sea transportation. **For ex- Fog forecasts in winter help in management of flight schedules**.
- 6. Public Health and Safety-** Weather predictions help in the improvement of public health and safety. **For ex- Forecasts of extreme temperatures help in the prevention of Heat-related illnesses like heat-stroke**.
- 7. Water Resource Management-** Weather forecasts are essential for managing water resources like **Irrigation planning and reservoir management**.

What have been the successes of Weather Forecasting in India?

- 1. Improved cyclone forecast system-** The timely and accurate forecasts of cyclones in India has led to the establishment of a reliable response and evacuation mechanism. **For ex- 2013 Cyclone Phailin's and 2020 Cyclone Amphan's** accurate predictions has avoided the loss of thousands of human lives.
- 2. Monsoon prediction-** The **long-range monsoon forecasts** have a **near cent percent accuracy** over the last decade.
- 3. Weather Forecasting for transportation-** **Winter Fog Experiment (WIFEX)** developed by IMD has helped in the dissemination of fog information, which is used by airlines and passengers to plan their travel.
- 4. Air Quality Monitoring-** **IMD's SAFAR system** is being used to monitor air pollution level in major cities such as Delhi.
- 5. Enhanced India's global reputation-** IMD has been recognised as one of the **six Regional Specialized Meteorological Centres of the World Meteorological Organization (WMO)**. IMD has contributed to the United Nations' 'Early Warning for All' programme regarding climate change.

What are the reasons for increased demands for more accurate weather predictions in India?

- 1. Increased frequency of extreme weather events-** The extreme weather events like **cloudburst, intense heatwaves**, which usually occurred once in a few decades, now threaten people's lives and livelihoods throughout the year.
- 2. Increase in climate induced vagaries-** Climate-induced vagaries have triggered disasters like the **recent landslides in Wayanad and lake bursts in Sikkim and Uttarakhand last year**. This has caught the administrators off guard. Hence the need for more robust and accurate weather prediction has increased in India.
- 3. Need for data at the hyper-local levels-** The need of weather predictions at the hyper-local has increased in recent times. **For ex- Farmers, municipal authorities, and office and school goers demand forecasts about copious rainfall at hyper-local levels**, to plan their daily activities.
- 4. Increased intensity of rainfall-** The increase in incidents of heavy localised rainfall has further increased demands for improving the accuracy of weather predictions in India. **For ex- Kalyanapattinum in Tamil Nadu's Thoothukudi district experiencing an entire season's rainfall in a day**.

What are the challenges with Weather Forecasting in India?

- 1. Greater variability in weather phenomena-** The **forecasting of weather in the tropical countries like India**, is more challenging **than in areas that are farther from the equator**, due to greater variability in weather phenomena.
- 2. Challenges of hyper-locality-** IMD's current weather forecast ability is **spread over a 12km X 12km area**. This grid, which is larger than most Indian cities helps in forecasting of likelihood of rainfall over the city. However, the **lack of 3km X 3km grid**, hinders the ability of monsoon prediction at the hyperlocal level.
- 3. Inherent uncertainties in weather forecasting-** The science of weather forecasting also suffers from **ineherent uncertainties**. The **greater the precision of weather forecasting, the greater is the uncertainty**. Also the **earlier the weather forecast, the lesser will be its precision**.
- 4. Lack of data Assimilation and Modelling-** Incorporation of diverse and accurate data into numerical weather prediction models is another major challenge to the weather prediction in India. **For Ex- IMD's challenge in assimilation of satellite data during the 2015 Chennai floods** which impacted the accuracy of predictions.
- 5. Outdated and insufficient observational infrastructure-** IMD also grapples with the challenge of **outdated and insufficient observational infrastructure** like the **early warning systems**. **For Ex- Failure of early warning systems in disseminating information about the 2013 Uttarakhand floods**.
- 6. Collaboration with neighbouring countries-** IMD also faces the challenge of **lack of enhanced collaboration in data sharing** related to **transboundary air pollution** and **shared water resources** with the meteorological departments of China and Pakistan

What should be the Way Forward?

- 1. Hyper local analysis-** The IMD must should aim at **developing 3 km x 3 km grids**, and should eventually aim to **develop hyper-local forecasts for 1 km x 1 km areas**.
- 2. Tailoring to local specifics-** India's weather forecasting system should aim at **developing computer simulated models** tailored to **local specifics**. The data collectors **should narrow their focus to district, block, panchayat, village and ward and street-levels**.

3. **Integration of Artificial Intelligence (AI) and Machine Learning (ML)**- Incorporation of AI and ML algorithms to analyse vast amounts of meteorological data to improve prediction models and enhance the accuracy of weather forecasts.

4. **Academic and Research Collaboration**- The met department should tap into research conducted in universities and institutions. For ex- Collaboration between IMD and IIT Bombay which has developed cutting-edge computing technologies this year to predict rainfall in the city with greater accuracy than the IMD.

5. **Infrastructural upgrades**- The focus must be on infrastructure upgradation in terms of meteorological aspects like installation of ocean observation systems, high-resolution earth observation satellites and optimum utilisation of Doppler radars in the eastern and northeastern regions of the country.

Read More- [The Indian Express](#)

UPSC Syllabus- GS 3- Achievements of India in the field of science and technology

10 years of Pradhan Mantri Jan Dhan Yojana (PMJDY)- Progress, Impact and Challenges- Explained Pointwise

The launch of the Pradhan Mantri Jan Dhan Yojana on August 28, 2014 was a significant step by the government in its concerted attempt to bring the unbanked sections of the population into the ambit of the formal financial system. As the scheme completed 10 years recently, Prime Minister Narendra Modi hailed the 'momentous' achievement of the scheme. The prime minister held that the scheme was paramount in boosting financial inclusion and giving dignity to crores of people, especially women, youth, and the marginalised communities.

In this article, we will look at the features of the scheme, the achievements of the scheme, the challenges it faces and the way forward for achieving better financial inclusion through this scheme.

What are the features of Pradhan Mantri Jan Dhan Yojana (PMJDY)?

PMJDY- Pradhan Mantri Jan Dhan Yojana (PMJDY) is National Mission for Financial Inclusion to ensure access to financial services, such as a basic savings & deposit accounts, remittance, credit, insurance, pension in an affordable manner.

The Pradhan Mantri Jan Dhan Yojana was launched on August 28, 2014. On the day of the launch of the scheme, banks organised 77,892 camps around the country, and opened about 1.8 crore accounts.

Objective of the Scheme- The primary objective of this scheme is to provide accessible banking services to all citizens, particularly the underprivileged sections of society.

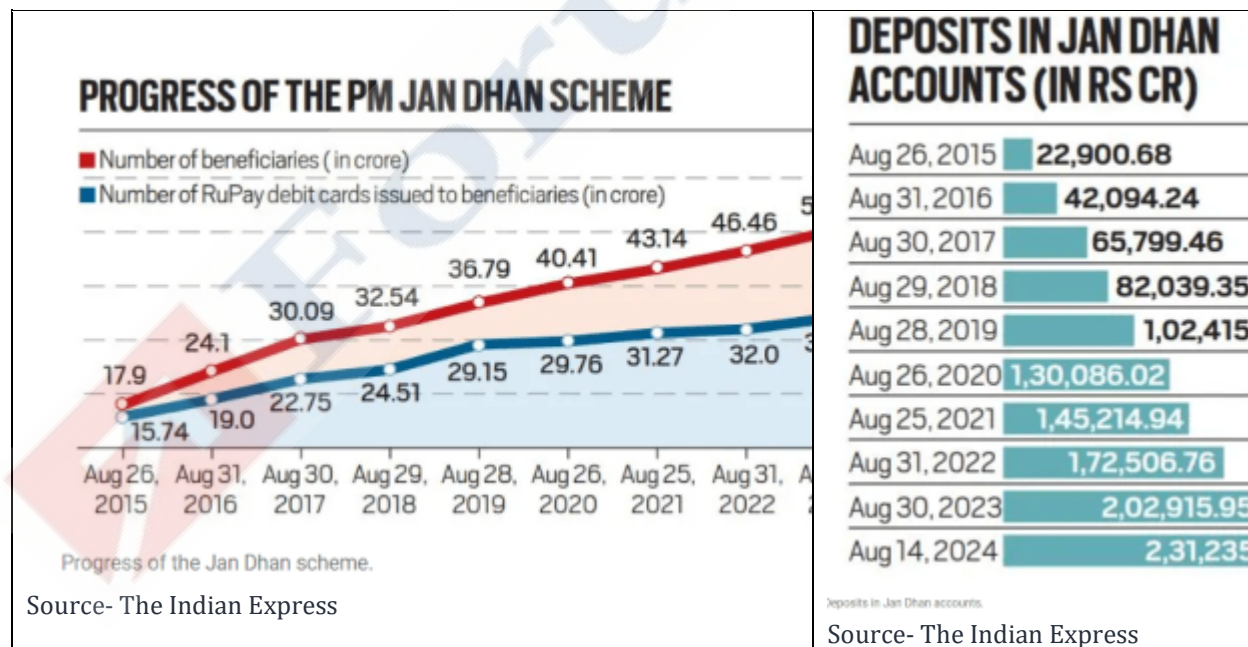
Key Features of the scheme

Account Accessibility	Pradhan Mantri Jan Dhan Yojana (PMJDY) aims to ensure that every household has at least one bank account.
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Zero Balance Accounts	The accounts under PMJDY can be opened without the need for a minimum balance . This makes it easier for low-income individuals to access banking services. These accounts earn interest on deposits like a regular account.
Overdraft Facility	The account holders are eligible for an overdraft facility of up to Rs.10,000 . It is specifically aimed at women account holders.
Accident Insurance Cover	Accident Insurance Cover of Rs.1 lakh is available with Ru Pay card issued to the PMJDY account holders . It has been enhanced to Rs. 2 lakh to new PMJDY accounts opened after 28.8.2018.
Direct Benefit Transfers	PMJDY accounts are also eligible for Direct Benefit Transfers (DBT) , Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) , Pradhan Mantri Suraksha Bima Yojana (PMSBY) , Atal Pension Yojana (APY) , and the Micro Units Development & Refinance Agency Bank (MUDRA) scheme.
Financial Literacy	The scheme focuses on promoting financial literacy among account holders.
Bank Mitras	The scheme employs Bank Mitras (bank representatives) to enhance accessibility of the scheme . These Bank Mitras provide branchless banking services across the country , especially in rural and remote areas.

What has been the progress of the Pradhan Mantri Jan Dhan Yojana (PMJDY)?

1. Large number of new bank accounts- As per the latest data, a staggering **53.1 crore accounts** have been opened under the scheme. This includes **29.56 crore women** beneficiaries account. The **number of bank accounts opened in the PMJDY** is **more than** the **population of the European Union**, and almost the same as the population of the United States.



2. Bank accounts bank wise- The largest share of PMJDY accounts is with public sector banks.

Public Sector Banks- **41.42** crore accounts

Regional Rural Banks- **9.89** crore accounts

Private sector banks- 1.64 crore accounts
Rural Cooperative Banks- 0.19 crore accounts

3. State wise analysis of accounts under PMJDY-

- Most of the accounts have been opened in **Uttar Pradesh (9.45 crores)** and the least has been opened in **Lakshadweep (only 9,256 accounts)**.
- 15 states apart from UP have more than 1 crore PMJDY bank accounts**– Bihar, West Bengal, Madhya Pradesh, Rajasthan, Maharashtra, Assam, Odisha, Karnataka, Jharkhand, Gujarat, Chhattisgarh, Tamil Nadu, Andhra Pradesh, Telangana, and Haryana.

What is the impact and achievement of Pradhan Mantri Jan Dhan Yojana?

- Banking to the unbanked-** The opening of **staggering 53.1 crore bank accounts** has promoted financial inclusion in the country. As per the World Bank's Findex database, **78% of Indian adults** (population with 15 years or more of age) had a bank account in 2021 as compared to 53% in 2014.
- Narrowing of the Rural-Urban Financial access Gap-** Out of the total bank accounts opened under the PMJDY, **67% have been opened in rural/semi-urban areas**. This has helped in narrowing the gap in access to the formal banking system between rural and urban areas.
- Bridging the Gender Gap between financial access-** Out of the new accounts opened, roughly **56% of the new account holders are women**. This has helped bridge the gender gap in access to financial services.
- Expansion of Commercial Bank Infrastructure-** The opening of more than half a billion bank accounts has fuelled demand for banking services. This has encouraged commercial banks to expand their infrastructure in recent years. **For Ex-**

Financial Infrastructure	2013	2023	% increase
Scheduled commercial banks Branches	1,05,992	1,54,983	46%
Number of ATMs	1,66,894	2,16,914	30%
Number of Points of Sale (POS) machines	10.88 lakh	89.67 lakh	82%

- Promotion of Direct Benefit Transfer (DBT)-** The Jan Dhan Yojana as an integral component of the JAM trinity (Jan Dhan, Aadhaar and mobile), has **enabled the government to shift to a more efficient system for transferring benefits directly to beneficiaries**. As per government data, the **JAM trinity** has helped in **total cumulative transfers** of Rs 38.5 lakh crore.
- Prevention of financial leakages-** The direct benefit transfer through the Jan Dhan accounts, has helped in prevention of financial leakages by weeding out ineligible or fake beneficiaries. **For ex-** According to RBI report, the DBT through Jan Dhan account as **resulted in a gain of Rs 3.48 lakh crore in the implementation of government schemes** including MG-NREGS and PM-Kisan.
- Support to citizens in times of distress-** The JAM architecture has been used by the government to provide support to citizens during times of distress. **For ex-** The **transfer of Rs 500 to 20 crore women Jan Dhan account holders** during the initial days of the pandemic.
- Promotion of Digital payments and Digital economy-** JAM framework forms an **integral part** of the **Unified Payments Interface (UPI)**, which has transformed the payment systems in the country. This has eased and increased banking transactions in the economy, leading to significant economic gains. **For ex-** Large share of low value transactions as part of the UPI, shows the ease of the ability of low income households, to engage in formal financial transactions in their daily lives.

What are the Challenges with the scheme?

The Pradhan Mantri Jan Dhan Yojana (PMJDY) has made significant strides in promoting financial inclusion in India since its launch in 2014. However, several challenges continue to impede its effectiveness.

- 1. Account Dormancy and inactivity-** Despite the high number of accounts opened (over 53 crore by 2023), many accounts remain dormant and inactive. **For ex-** According to a report, ~86.3% of PMJDY accounts are operational. This suggests that a significant portion of accounts opened remain dormant.
- 2. Use as mule accounts-** There concerns regarding the use of PMJDY accounts as mule accounts in fraudulent activities, such as **money laundering** or **storage of black money**. **For ex-** Reports of **large sums of money being deposited in dormant PMJDY accounts** raised concerns about the misuse **post-demonetisation** in 2016.
- 3. Infrastructural Issues-** According to **KPMG report**, the **inadequacy of physical** and **digital infrastructure**, particularly in rural areas, has hindered the ability of account holders to perform transactions. **For ex-** Lack of bank branches or functional ATM in villages of states like Bihar and Uttar Pradesh.
- 4. Technological Barriers-** **Poor internet connectivity** and **inadequate banking technology** has affected the effective management of banking services for remote Jan Dhan account holders.
- 5. Lack of Financial literacy-** The lack of financial literacy among beneficiaries is a critical barrier in the effective implementation of Pradhan Mantri Jan Dhan Yojana (PMJDY). **For ex-** **Unawareness** about **overdraft facilities** and **insurance cover** provided for beneficiaries under PMJDY.
- 6. Duplication of Accounts-** The opening of multiple Jan Dhan accounts under different schemes **complicates data management** and **skews the understanding of the actual number of beneficiaries**.
- 7. Exclusion of Certain Populations-** Certain marginalised groups, including tribal populations and people living in extremely remote areas, remain excluded from the scheme due to social and geographical barriers. **For ex-** **Low Banking penetration** in the **tribal regions** of **Chhattisgarh** and **Jharkhand**.
- 8. Gender Disparity-** Women in some conservative rural areas are **less likely** to use **PMJDY accounts independently due to social norms**. This restricts their mobility and financial autonomy.

What Should be the Way Forward?

- 1. Enhancement of Financial Literacy-** Implementation of widespread financial literacy campaigns, in **partnership with local community leaders, NGOs, and educational institutions** will promote financial literacy and better use of Jan Dhan Accounts.
- 2. Encouragement of active use of accounts-** The active use of PMJDY accounts should be incentivized by linking them with various government schemes, subsidies, and benefits. **For ex-** Introduction of schemes where **account holders receive benefits** like **interest on savings, overdraft facilities, or cashback for digital transactions**.
- 3. Greater Integration of Financial Services-** The integration of financial services like **microcredit, pension, insurance products** with the Jan Dhan accounts will help in encouraging the active use of Jan Dhan accounts.
- 4. Improvement of Banking Infrastructure-** Expansion of the banking network, particularly in underserved rural and remote areas, by **setting up more branches, ATMs, and digital banking touchpoints**. Encouragement of the use of Business Correspondents (BCs) and mobile banking units to reach remote areas, will further deepen the process of financial inclusion.

5. Regular Monitoring and Feedback Mechanism- Establishment of a **system for regular monitoring and evaluation of the PMJDY's progress**, and **collection of feedback from beneficiaries** to identify areas for improvement will ensure that the scheme adapts to changing needs.

Source- [The Indian Express](#)

UPSC Syllabus- GS 3- Indian Economy (Financial Inclusion)

India's role in Russia-Ukraine Crisis-Significance and Challenges- Explained Pointwise

During the recent historic visit of India's Prime Minister Narendra Modi to Ukraine, India **reiterated the need for sincere and practical engagement between all stakeholders**, to **develop innovative solutions** that will have broad acceptability and contribute towards early restoration of peace. The **reiteration of India's willingness to contribute in all possible ways to facilitate an early return of peace**, is a clear indication of India's willingness to get involved in a search for peace in Russia-Ukraine crisis.

The article discusses India's foreign policy stand on the Russia-Ukraine crisis, the significance of the peace process and the challenges in finding peace in the Russia-Ukraine crisis.



Source- The Indian Express

What has been India's foreign policy stand on the Russia-Ukraine crisis?

1. Non-alignment and strategic autonomy- India's foreign policy stance has been driven by the historical principles of non-alignment and strategic autonomy. India has **sought to balance its relationships with global powers** and a **peaceful negotiation of territorial disputes**.

2. Neutrality and Abstention- Since the onset of the Russia-Ukraine war in February 2022, India has avoided taking sides. Much to the ire of the western states, which have wanted India to condemn the Russian role in the

conflict, India has abstained on resolutions in the United Nations Security Council (UNSC) and the United Nations General Assembly (UNGA).

3. **Economic and Strategic Interests-** India has continued to import discounted Russian oil, prioritizing its energy security amid rising global prices. However, at the same time, India has sought to reduce its dependence on Russian military supplies, recognizing the need for diversification in defence equipment procurement.

4. **Settlement through institutional mechanisms-** India has always advocated respect for the United Nations charter and peaceful settlement of disputes through institutions such as the UN.

This approach of India's foreign policy was consistent with India's broader strategy of managing complex geopolitical landscapes without compromising its national interests.

Heightened expectations of a more active role in the mediation process

a. Prime Minister Narendra Modi's recent diplomatic activities which includes his visit to Ukraine and Russia, conversations with U.S. President Joe Biden and Russian President Vladimir Putin, and upcoming engagements at the UN meeting in September and the BRICS summit in Russia, have all heightened expectations that India may play a more active role in mediating the Russia-Ukraine conflict.

b. In communications with both Russian President Vladimir Putin and Ukrainian President Volodymyr Zelenskyy, Indian Prime Minister Narendra Modi has emphasized the need for a cessation of violence. This diplomatic engagement highlights India's intention to act as a mediator, even as it refrains from taking a definitive side.

Read- [India-Ukraine Relations- Significance and Challenges- Explained Pointwise](#)

What is the significance of PM's recent visit to Ukraine and India's intention of mediation?

1. **Balancing act-** The recent visit by the Indian PM is seen by analysts as a balancing act by India, especially after the PM's recent visit to Russia, which attracted criticism from western powers.

2. **Positioning as a neutral player-** By engaging with both Russia and Ukraine, India could position itself as a neutral player in the conflict. This would reinforce its image as a responsible global actor committed to peace and stability.

3. **Broader strategy to play a more active role as a mediator-** This balancing approach aligns with India's historical role as a mediator in international conflicts, in the Korean War armistice negotiations and the Colombo Plan. India seeks to leverage its unique position as a country that maintains strong ties with both Moscow and Washington, to play a more active mediation role.

4. **Reinforcing the leadership of the Global south-** India's proposal at mediation, puts weight to the already ongoing effort from Global South countries in the negotiation. The push from India reinforces its prominence in the Global South.

Read More- [India-Russia Relations- Significance and Challenges- Explained Pointwise](#)

What will be the advantages of peace in the Russia-Ukraine Conflict?

A temporary cessation of hostilities or a limited peace agreement facilitated by a neutral party such as India might serve the interests of all parties involved.

1. **United States-** For the United States, peace in the Russia-Ukraine crisis allows it to focus on other pressing foreign policy challenges, such as the West Asian geopolitical challenges.

2. **European countries-** The peace would help in the **economic reconstruction** and **addressing energy insecurity**. The peace in the Russia-Ukraine crisis would alleviate the challenges of energy shortages and inflationary pressures, and provide breathing room for European policymakers.

3. **Russia-** For Russia, engagement in negotiations through a neutral party such as India could offer an **honourable exit from the conflict/war** without **appearing to surrender to western pressure**.

4. **India-** India's success as a mediator in the resolution of the conflict **would align with his broader vision of India as a "Vishwamitra"**, a country that contributes to global economic and technological advancements and plays a central role in maintaining international peace and security.

What are the challenges that India would face as a mediator in the Peace Process?

1. **Maximalist position from both the sides-** Both Russia and Ukraine remain focused on military gains, as seen by **Russia's attacks on Ukraine before PM Modi's Moscow visit** and **Ukraine's operations in Kursk Oblast before his Kyiv visit**. The refusal of either parties to budge from their stands is a major challenge in the peace process.

2. **Competing Demands-** The situation is complicated by the **firm positions of both sides**: President Zelenskyy demands a complete Russian withdrawal from Ukraine, while President Putin requires Ukraine to pull back from occupied regions and drop its NATO membership bid.

3. **Conflicting interests of multiple actors-** The **involvement of various international actors in this war**, highly complicates any negotiation process for peace in the Russia-Ukraine Crisis.

4. **Deeply entrenched interests-** The **geopolitical interests of the U.S. and Russia are deeply entrenched**, and both powers are unlikely to agree on a peace deal proposed by the other.

What should be the way forward?

1. **Realistic assessment-** Indian foreign policy establishment needs to make a realistic assessment whether Ukraine and its Western partners want India to get actively engaged as a mediator in the peace process.

2. **Effective Conflict Mediation-** India needs to define its own principles for a ceasefire and lasting peace. India should derive learnings from effective mediations like the **Black Sea Grain Initiative** and recent **prisoner exchanges**.

3. **Learning from Historical Mediation Successes-** India should also derive learnings from its successful interventions as a mediator in the **Austria- Soviet crisis in 1950**, **Korean War Armistice negotiations** and the **Colombo Plan**.

4. **Overcoming Perceptions of Partiality-** For effective mediation of the conflict, India should overcome perceptions of partiality towards Moscow.

Read More- [The Hindu](#)

UPSC Syllabus- GS 2- International Relations

INS Arighat and India's Nuclear triad- Significance and Challenges- Explained Pointwise

Recently, **INS Arighat**, Indian Navy's **second Nuclear Submarine**, was commissioned into the **Indian Navy**. The induction of INS Arighaat aims to **further strengthen India's nuclear triad**, **enhance nuclear deterrence**, help in **establishing strategic balance** and peace in the region, and play a **decisive role in the security of the country**.

In this article, we will focus on INS Arighaat and India's nuclear triad. We will look into the significance of INS Arighaat and India's nuclear triad. We will also look at how the India's nuclear triad enhance India's nuclear deterrence capabilities. We will also look into the challenges in further development of India's deterrence capabilities, and the way forward to address these challenges.



India's Nuclear Triad

Sea Based Deterrence	
INS Arihant	India's first indigenous Ballistic Missile Submarine (SSBN) . The induction of INS Arihant into the Navy in 2016 provided India with maritime strike capability for the first time. INS Arihant conducted its first deterrence patrol in 2018 , thus establishing India's nuclear triad.
INS Arighat	INS Arighat is India's second indigenously built nuclear-powered ballistic missile submarine (SSBN) . It is the successor of India's first nuclear-powered submarine, INS Arihant.
S-4	India's third indigenous nuclear ballistic missile submarine (SSBN) after INS Arihant and Arighat, with more space for nuclear-tipped ballistic missiles.
Land Based Deterrence	
Agni Series	These ballistic missiles are among India's most prominent strategic weapons . The series includes Agni-I (700-1,250 km range) , Agni-II (2,000-3,000 km range) , Agni-III (3,000-5,000 km range) , Agni-IV (4,000 km range) , and Agni-V (5,000 range and Multiple Independent Re-entry Vehicles tech)
Prithvi Series	Prithvi series comprises short-range ballistic missiles which can carry both conventional and nuclear warheads.
Shaurya	Land-based hypersonic missile designed to deliver nuclear payloads with precision at hypersonic speeds within range of around 700-1,000 km
Air Based Deterrence	
Rafale	Rafale aircraft has provided the Indian Air Force with a sophisticated aircraft with nuclear-warhead-carrying capability

Created By Forum IAS

What is INS Arighat? What are the features of INS Arighat?

About	INS Arighat is India's second indigenously built nuclear-powered ballistic missile submarine (SSBN) . It is the successor of India's first nuclear-powered submarine, INS Arihant. However, it is significantly more advanced than its predecessor, INS Arihant , due to the indigenous technological advancements incorporated into it.
Built By	The submarine was constructed at the Indian Navy's Ship Building Centre (SBC) in Visakhapatnam.
Features	<ol style="list-style-type: none"> Nuclear Powered- Both the INS Arihant and the INS Arighat are powered by 83 MW pressurised light-water nuclear reactors. This enables them to remain submerged for longer durations compared to conventional diesel-electric submarines, which need to surface regularly to charge their batteries. Nuclear Tipped Missiles- Like its predecessor, the INS Arighat has four launch tubes in its hump. It can carry up to 12 K-15 Sagarika submarine-launched ballistic missiles (SLBMs), each with a range of 750 kilometres (km), or four K-4 SLBMs with a range of 3,500 km. Speed and size- The INS Arighat, with a displacement of around 6,000 tonnes, is capable of achieving a maximum speed of 12-15 knots (22-28 km/h) on the surface and up to 24 knots (44 km/h) when submerged. Advanced Stealth Technology- The submarine features advanced stealth technology to reduce its detectability by enemy sonar systems. Its design incorporates lessons learned from INS Arihant, improving its operational effectiveness and survivability.

What is Nuclear Triad? What is Nuclear Deterrence and the history of development of Nuclear Deterrence?

Nuclear triad- Nuclear triad refers to a country's **ability to launch nuclear missiles** from **platforms** in the **air, land, and at sea**.

India's nuclear triad- India is **part of a select group of countries with nuclear triad** capabilities. These countries include the United States, Russia, China, and France.

Sea Based Deterrence	
INS Arihant	India's first indigenous Ballistic Missile Submarine (SSBN) . The induction of INS Arihant into the Navy in 2016 provided India with maritime strike capability for the first time. INS Arihant conducted its first deterrence patrol in 2018 , thus establishing India's nuclear triad.
INS Arighat	INS Arighat is India's second indigenously built nuclear-powered ballistic missile submarine (SSBN) . It is the successor of India's first nuclear-powered submarine, INS Arihant.
S-4	It will be India's third indigenous nuclear ballistic missile submarine (SSBN) after INS Arihant and Arighat. The S-4 submarine will be bigger than the INS Arihant and Arighat, with more space for nuclear-tipped ballistic missiles.
Land Based Deterrence	
Agni Series	The Agni series of ballistic missiles are among India's most prominent strategic weapons . The series includes Agni-I (700-1,250 km range) , Agni-II (2,000-3,000 km range) , Agni-III (3,000-5,000 km range) , Agni-IV (4,000 km range) , and Agni-V (5,000 range) . Agni-V, intermediate-range ballistic missile (IRBM) with Multiple Independent Re-entry Vehicles , capable of reaching targets as far as Europe and China.

Prithvi Series	Developed by DRDO, the Prithvi series comprises short-range ballistic missiles designed for tactical use. These missiles, including Prithvi I (150 km range) and Prithvi II (250-350 km range), can carry both conventional and nuclear warheads , providing India with a flexible deterrence option against regional threats.
Shaurya	Shaurya is a land-based hypersonic missile developed by India, designed to deliver nuclear payloads with precision at hypersonic speeds. Its range is around 700-1,000 km , enhancing India's deterrence capabilities by introducing a fast and maneuverable delivery system.
Air Based Deterrence	
Rafale aircraft	The induction of the Rafale aircraft has provided the Indian Air Force with a sophisticated aircraft with nuclear-warhead-carrying capability .

Nuclear Triad aids in bolstering Nuclear Deterrence capabilities

Nuclear Deterrence- Nuclear deterrence is a **strategy employed by states possessing nuclear weapons to prevent adversaries from initiating a nuclear attack** by convincing them that the costs and consequences of such an attack would outweigh any potential benefits.

Principle Behind Nuclear Deterrence- Nuclear Deterrence operates on the **principle of Mutually Assured Destruction (MAD)**, where both sides possess sufficient nuclear capabilities to inflict unacceptable damage on each other, thereby deterring any hostile actions.

India's Nuclear Policy and Nuclear Deterrence- Maintenance of credible nuclear deterrence is one of the foremost priorities of India's Nuclear Policy.

a. Credible Minimum Deterrence- India would maintain a **sufficient number of nuclear weapons** to deter a nuclear attack, but it would not seek to match other countries' arsenals in size.

b. Retaliation to a Nuclear Attack- If India is **subject to a nuclear attack**, it would retaliate, causing massive damage to the aggressor.

Development of India's Nuclear Deterrence

1947	Post Independence, India pursued development of nuclear weapons capability, particularly in light of regional tensions and the emergence of nuclear-armed neighbours , namely China and Pakistan.
1974	India conducted its first nuclear test, codenamed ' Smiling Buddha '. This test demonstrated India's nuclear deterrence capabilities.
1974-1998	During this phase, India maintained nuclear ambiguity , neither confirming nor denying the possession of nuclear weapons. This ambiguity served as a form of deterrence, maintaining uncertainty about India's nuclear status.
1998	The Pokhran Tests of 1998 , which comprised of five nuclear detonations, both fission and fusion, marked India's evolution as a nuclear weapons state.
After 1998 Tests	Following the 1998 tests, India outlined its Nuclear Doctrine. The key elements of India's nuclear doctrine include a No First Use (NFU) policy, minimum credible deterrence , and retaliation only in the event of a nuclear attack. India has worked to develop Nuclear Triad for enhancing India's Nuclear Deterrence. India also established Strategic Forces Command (SFC) to oversee the management, deployment, and operational control of India's nuclear forces.

What is the Significance of INS Arighat?

- 1. Boost to India's nuclear deterrence capabilities-** Induction of INS Arighat, the second nuclear-powered submarine of the Arihant class, **significantly boosts India's nuclear deterrence capabilities.**
- 2. Enhances regional security-** It strengthens the nuclear triad, the ability to launch missiles from land, air, and maritime platforms. Its deployment **enhances regional security** and contributes to India's strategic influence.
- 3. Survivability and execution-** These submarines have the **ability to survive a surprise attack** and execute retaliatory strikes, given India's "**no-first use**" nuclear policy,
- 4. More advanced-** The Arighat is significantly **more technologically advanced than the Arihant**, with the indigenous systems and equipment which were conceptualised, designed, manufactured and integrated by Indian scientists, industry, and naval personnel.

What are the Challenges with India's Nuclear Deterrence?

Sea Based Deterrence Challenges

- 1. India's sea based deterrence smaller than foreign counterparts-** The **United States (US), Russia, United Kingdom (UK), France, and China** possess **larger nuclear submarines** with longer-range missiles. **For ex- China has 12 nuclear submarines**, of which six are nuclear-powered attack submarines. The United States has **14 Ohio-class SSBNs and 53 fast-attack submarines.**
- 2. Large percentage of submarine fleet under maintenance-** Around **30 per cent of the fleet** is under refit (repair and renovation), which has brought down the strength of operational submarines.

Other Deterrence Challenges

- 1. Inadequate nuclear testing facilities-** The **lack of sufficient testing** undermines the extent to which the re-entry vehicles could be designed to carry the warheads.
- 2. Opacity surrounding the warhead numbers-** There is **opacity around the number of warheads, Agni-V**, can carry due to its classified nature. However, specialists suspect that it at present, it can carry at most only three warheads.
- 3. Low yield of the nuclear Warheads-** There are concerns that the **yield of the nuclear warheads is limited** due to the small number of atomic tests conducted by India.
- 4. Problems with Sea based nuclear deterrence-** There are **problems of deep-sea communications with SSBN** because the **very low-frequency systems in use on the submarine** are prone to disruption at great depths.
- 5. Swift Expansion of Chinese Nuclear Arsenals-** Beijing has been **making brisk advancements with its missile and missile defence programmes.**

What Should be the Way Forward?

- 1. Early testing of long-range Submarine Launched Ballistic Missile (SLBM)-** India must add punch to its nuclear arsenal by **testing its long-range Submarine Launched Ballistic Missile (SLBM)** which can be launched by its nuclear submarines.
- 2. Investment in Missile Defence Systems-** To counter the growing threat from **China's modernizing nuclear arsenal**, India **should invest in developing and deploying advanced missile defence systems**, like expediting development of Agni VI.

3. Strengthening of Conventional Capabilities- While maintaining a credible nuclear deterrent, **India should also focus on strengthening its conventional military capabilities.** This can help deter conventional conflicts that may escalate to the nuclear level.

4. Cooperation with Allies- India should continue to cooperate with its allies and partners, **such as the United States,** to deter potential aggressors. This could involve sharing intelligence, conducting joint military exercises, and coordinating on defence strategies.

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