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# INDIAN DIASPORA IS INTEGRAL TO THE VISION OF DEVELOPED INDIA: PRESIDENT DROUPADI MURMU

## WHY IN THE NEWS?

President Droupadi Murmu addressed the valedictory session of the 18th Pravasi Bharatiya Divas in Bhubaneswar, Odisha, celebrating the significant contributions of the Indian Diaspora across various fields. She praised their global impact, noting their achievements in technology, medicine, arts, and entrepreneurship. The President also congratulated the Pravasi Bharatiya Samman awardees and recognized Her Excellency Christine Kangaloo, President of Trinidad and Tobago, for her leadership and support for the Indian Diaspora. President Murmu emphasized that the Pravasi Bharatiya Divas has become a key platform for strengthening ties between India and its global community, fostering collaboration and idea exchange.


## INDIAN DIASPORA:

The Indian diaspora is one of the largest and most widespread communities in the world, with an estimated 21 million people of Indian origin residing in over 200 countries.

1. **United States:** One of the largest Indian communities, with over 4 million people.
2. **Saudi Arabia:** Home to approximately 2.5 million people of Indian origin.
3. **United Arab Emirates (UAE):** The Indian population here is also around 3 million.
4. **Malaysia:** Around 2 million people of Indian origin.
5. **Myanmar:** Around 1.5 million people.
6. **United Kingdom:** Around 1.5 million people.
7. **Sri Lanka:** Approximately 1 million people of Indian descent.
8. **South Africa:** Nearly 1.5 million people.

## ECONOMIC IMPACT: REMITTANCES

The Indian diaspora is a major contributor to India's economy, particularly through remittances. In 2021, India received approximately $87 billion in remittances, making it the largest recipient globally. The United States is the largest source of these remittances, followed by countries in the Middle East and other regions.

## GOVERNMENT SCHEMES AND PROGRAMS

1. **Overseas Citizenship of India (OCI):** Offers registration, rights, and procedures for individuals of Indian origin.
2. **Scholarship Programme for Diaspora Children (SPDC):** Provides scholarships for students in fields like engineering, technology, and humanities.
3. **Direct Admission of Students Abroad (DASA):** Facilitates admissions to top Central Engineering institutions for Foreign Nationals, PIOs, and NRIs.
4. **Diaspora Services Division:** Offers comprehensive information on programs and schemes for overseas Indians.

## ROLE OF INDIANA DIASPORA TO PROMOTE INDIAN NATIONAL INTEREST:

1. **Economic Contributions:** The diaspora contributes significantly through remittances, business investments, and job creation, supporting India's economic growth.
2. **Cultural Influence:** By promoting Indian culture globally, including yoga, Ayurveda, and traditional arts, the diaspora enhances India's soft power and fosters global appreciation for its heritage.

3. **Political Advocacy:** Many diaspora members hold influential positions abroad, advocating for India's interests and shaping favourable policies.
4. **Diplomatic Relations:** The diaspora strengthens India's ties with host countries, fostering cooperation in trade, education, and technology.
5. **Soft Power Diplomacy:** The diaspora promotes India's values and interests internationally, bolstering its global influence.
6. **Philanthropy:** They contribute to India's development in areas like education, healthcare, and rural welfare through charitable efforts.
7. **Security and Strategy:** The diaspora can influence security matters and support India's strategic interests on the global stage.

## CHALLENGES AND ISSUES FACED BY THE INDIAN DIASPORA:

1. **Discrimination:** The Indian diaspora can face prejudice and racism based on their ethnicity and skin colour. Discrimination can limit social mobility and make it difficult to integrate into mainstream society.
2. **Identity crisis:** The pressure to assimilate into the host culture while also maintaining ties to Indian heritage can create an identity crisis.
3. **Non-acceptance of qualifications:** Indian immigrants may face challenges in getting their qualifications and work experience accepted. For example, they may need to get additional certifications or licenses to work in certain countries.
4. **Consular issues:** The Indian diaspora may complain about mistreatment, intimidation, and demands for illegal gratification from immigration officials.
5. **West Asian crisis:** The volatility in West Asia and the fall in oil prices have caused fears of a large return of Indian nationals. This could curtail remittances and create demands on the job market.

## WAY TO MAKE INDIAN DIASPORA AS TORCHBEARERS OF INDIAN DIPLOMACY:

1. **Strengthen Diplomatic Engagement:** Organize regular interactions through events like Pravasi Bharatiya Divas. Appoint diaspora figures as cultural and business ambassadors to bridge India's foreign policy with host countries.
2. **Empower Policy Advocacy:** Establish advocacy channels for diaspora groups to lobby for India's interests. Encourage diaspora members to engage in local politics to influence decisions beneficial to India.
3. **Leverage Economic Power:** Facilitate diaspora investments in key Indian sectors like technology and infrastructure. Use diaspora networks to promote trade and business collaborations between India and host countries.
4. **Enhance Cultural Diplomacy:** Promote Indian culture through festivals, exhibitions, and media engagements abroad. Encourage diaspora participation in celebrating Indian heritage and traditions globally.
5. **Harness Technological Expertise:** Collaborate with diaspora professionals to promote digital growth and technological innovation in India. Increase India's digital footprint by leveraging the diaspora's tech skills.
6. **Promote Educational Partnerships:** Establish academic exchanges and collaborations between Indian and diaspora-led institutions. Foster global hubs for research and education, linking India with the world

## CONCLUSION

The Indian diaspora is a powerful force driving India's global influence across economics, culture, and diplomacy. By leveraging their contributions and overcoming challenges, India can enhance its position on the world stage. Empowering the diaspora ensures India's continued growth and strategic importance internationally.

## PRELIMS QUESTION:

**Q. With reference to the Indian diaspora, consider the following statements:**

1. The Indian diaspora is estimated to consist of approximately 30 million people across 200 countries.

2. India is the largest recipient of remittances globally, receiving over $87 billion in 2021.
3. The United Kingdom has the largest Indian diaspora population, with over 5 million people.

**How many of the above-given statements are correct?**

A. Only one
B. Only two
C. All three
D. None

**Answer: B**

## MAINS QUESTION:

**Q. Discuss the role of the Indian diaspora in promoting India's national interest and highlight the challenges faced by this community. How can the Indian government strengthen its engagement with the diaspora to maximize their contribution to India's global influence? (250 words, 15 marks)**

## REVISED APPOINTMENT PROCESS FOR ELECTION COMMISSIONERS: A STEP TOWARDS TRANSPARENCY

### WHY IN THE NEWS?

TRADITIONALLY, the successor to the Chief Election Commissioner (CEC) has been the next senior Election Commissioner. For the first time, as per the Chief Election Commissioner And Other Election Commissioners (Appointment, Conditions of Service And Term of Office) Act, 2023, the net can be cast wider. Current CEC Rajiv Kumar demits office on February 18. The Election Commission comprises the CEC and two election commissioners Gyanesh Kumar and Sukhbir Singh Sandhu at present.


**Elections Commission of India strengthening India's democracy:**

1. **Ensuring Free and Fair Elections:** The ECI operates as an independent body, overseeing all elections to ensure impartiality. It enforces the Model Code of Conduct (MCC) to maintain electoral integrity and fairness.
2. **Voter Representation:** The ECI ensures universal adult suffrage, conducts voter education campaigns, and works to prevent disenfranchisement, especially among marginalized groups and youth.
3. **Technological Innovations:** Introduced Electronic Voting Machines (EVMs) and Voter Verifiable Paper Audit Trails (VVPAT) to enhance transparency. The proposed Remote Voting Machines (RVMs) aim to address the disenfranchisement of migrant workers.
4. **Combating Criminalization:** The ECI mandates the disclosure of criminal records by candidates, helping reduce the influence of criminals in politics.
5. **Fostering Political Accountability:** The ECI monitors campaign financing and political party activities, ensuring transparency and legal compliance.
6. **Promoting Inclusivity:** The ECI ensures adequate representation for marginalized groups, including women, and works towards increasing their political participation.
7. **Ensuring Election Security:** It collaborates with security agencies to prevent violence and electoral malpractices, ensuring peaceful elections, especially in conflict-prone areas.
8. **Advocating for Electoral Reforms:** The ECI advocates for reforms such as simultaneous elections and improved voter registration processes to enhance efficiency and reduce election-related disruptions.

### CONSTITUTIONAL MANDATE OF ELECTIONS COMMISSION OF INDIA:

1. **Article 324:** Grants the ECI the authority to supervise, direct, and control the entire election process in India, ensuring that elections are conducted impartially and fairly.

2. **Articles 325–329:** Establishes the framework for elections, including delimitation of constituencies and guarantees the right to vote for all eligible citizens, ensuring non-discrimination based on religion, race, caste, sex, or place of birth.
3. **Appointment and Tenure:** The President of India appoints the Chief Election Commissioner (CEC) and Election Commissioners. Their tenure is safeguarded by law, ensuring their independence and preventing political interference.
4. **Immunity from Dismissal:** The Chief Election Commissioner (CEC) cannot be dismissed except by impeachment by Parliament, which ensures the independence of the office and prevents arbitrary removal by the government.

## ROLE AND POWER OF THE ELECTIONS COMMISSION OF INDIA:

1. **Supervising Elections:** ECI oversees elections to Lok Sabha, State Assemblies, and Presidency, ensuring they are conducted impartially.
2. **Delimitation of Constituencies:** It ensures fair delimitation of constituencies based on population, maintaining equitable representation.
3. **Regulating Political Parties and Candidates:** ECI registers parties, enforces campaign laws, and ensures candidate eligibility.
4. **Monitoring Campaigns:** It enforces the Model Code of Conduct (MCC), ensuring ethical campaigning and preventing malpractice.
5. **Voter Registration:** The ECI maintains electoral rolls, ensuring all eligible citizens are registered and increasing voter participation.
6. **Ensuring Election Security:** It collaborates with authorities to maintain security, prevent violence, and deploy observers.
7. **Technological Oversight:** It manages the use of EVMs and VVPATs to ensure transparent voting.
8. **Dispute Resolution:** The ECI has the authority to resolve electoral disputes and take corrective actions when needed.

## INDEPENDENCE OF ELECTIONS COMMISSION OF INDIA:

1. **Appointment Procedure:** The President of India appoints the Chief Election Commissioner (CEC) and Election Commissioners. Their tenure and independence are safeguarded by law to ensure impartial functioning.
2. **Finance:** The ECI is granted financial autonomy to prevent government interference. It is allocated its own budget by the Parliament, ensuring independence in executing its duties.
3. **Manpower:** The Election Commission has its own dedicated staff and officials to carry out election-related functions, ensuring independence from government influence in its operations.
4. **Staff:** The CEC and Election Commissioners are appointed for fixed tenures (typically six years or until they turn 65) and cannot be easily removed, protecting them from political pressures.
5. **Suspensions:** The CEC and Election Commissioners cannot be suspended or removed without due process. Only impeachment by Parliament can remove them, ensuring protection from arbitrary suspension.
6. **Re-appointment:** There is no provision for re-appointment of the CEC or Election Commissioners after their term ends, ensuring their independence by preventing potential political re-entry or influence.

## ISSUES OF THE ELECTIONS COMMISSION OF INDIA:

### 1. Executive Influence on Appointments:

**Appointment Process:** Appointments of CEC and ECs are made by the President on government advice, risking bias.

**Lack of Bipartisanship:** No consultative or bipartisan process, making the EC susceptible to political pressure.

### 2. Limited Safeguards for Independence:

**Tenure:** The CEC has tenure security, but other ECs can be removed by the CEC's recommendation,

lacking equal protection.

**Service Conditions:** CEC's service conditions are protected, but other commissioners lack similar safeguards.

**3. Financial Dependence:**

**Government Control:** The EC's budget is controlled by the government, compromising its financial autonomy.

**4. Bureaucratization:**

**Dependence on Government Staff:** The EC relies on central and state government staff, creating potential conflicts of interest.

**5. Weak Enforcement of Model Code of Conduct (MCC):**

**No Statutory Backing:** The MCC lacks legal enforceability, limiting the EC's ability to act decisively.

**6. Unclear Powers:**

**Transfer of Officials:** The EC's authority to transfer officials during elections clashes with state government control.

**Administrative Interference:** EC may disrupt government actions during elections, potentially affecting essential services.

**7. Limited Control Over Political Parties:**

**Weak Party Regulation:** The EC lacks the power to deregister parties or enforce internal democracy, undermining electoral integrity.

**8. Executive Influence on Election Operations:**

**Central Armed Forces:** Allegations of political influence on Central Armed Police Forces (CAPF), which could compromise election neutrality

## RECOMMENDATION TO PROMOTE THE ROLE OF THE ELECTIONS COMMISSION OF INDIA:

1. **Transparent, Bipartisan Appointment:** Establish a collegium system for appointing CECs and ECs involving the PM, Leader of the Opposition, and Chief Justice of India.
2. **Equal Protections for All Commissioners:** Grant security of tenure and equal removal procedures for all ECs, similar to the CEC.
3. **Financial Independence:** Fund the EC through the Consolidated Fund of India to ensure autonomy in budget management.
4. **Permanent Independent Secretariat:** Set up a permanent, independent secretariat to reduce reliance on government staff.
5. **Legalize the Model Code of Conduct (MCC):** Provide statutory backing to the MCC, giving the EC full enforcement power.
6. **Clarify EC's Powers:** Define EC's authority over official transfers and administrative interference during elections.
7. **Regulate Political Parties:** Empower the EC to deregister parties for violations and enforce internal party democracy.
8. **Ensure Neutrality in Election Security:** Safeguard the Central Armed Police Forces from political influence during elections.

## CONCLUSION

The Election Commission of India (ECI) plays a pivotal role in strengthening India's democracy by ensuring free, fair, and transparent elections. While it has made significant strides in promoting electoral integrity, the ECI faces challenges such as executive influence, limited safeguards for independence, financial dependence, and bureaucratization. To address these challenges and further enhance its role, it is essential to implement reforms that focus on transparent and bipartisan appointments, equal protections for all Election Commissioners, financial autonomy, and a permanent independent secretariat. Additionally, legalizing the Model Code of Conduct (MCC), empowering the EC to regulate political parties, and ensuring neutrality in election security will contribute to a more robust and impartial election process.

## PRELIMS QUESTION:

**Q. With reference to the Election Commission of India (ECI), consider the following statements:**

1. The Chief Election Commissioner (CEC) can be removed by a majority vote in the Parliament.
2. The Election Commission is responsible for conducting elections to the Rajya Sabha, Lok Sabha, and State Legislative Assemblies.

3. The Model Code of Conduct (MCC) is legally enforceable in Indian elections.

**How many of the above-given statements are correct?**

A. Only one
B. Only two
C. All three
D. None
**Answer: B**

## MAINS QUESTION:

**Q. The Election Commission of India (ECI) plays a crucial role in safeguarding the democratic framework of the country. Discuss the challenges faced by the ECI in ensuring electoral integrity and suggest reforms to enhance its independence and efficiency. (250 words, 15 marks)**

## A GLOBAL SHOWCASE OF INDIA'S FOOD ECONOMY: INDUSFOOD 2025

### WHY IN THE NEWS?

Indusfood 2025 is making headlines as Asia's premier Food and Beverage Trade Show, with its 8th edition inaugurated by Shri Chirag Paswan, Union Minister of Food Processing Industries. Organized by the Trade Promotion Council of India (TPCI), the event has evolved into a global platform, marking a significant milestone this year by expanding its scope to an integrated farm-to-fork trade show, underscoring India's commitment to sustainable and comprehensive food systems. Indusfood's growing international participation, with global exhibitors in 2024 and even more this year, highlights its expanding role in connecting businesses worldwide with India's vibrant food and beverage sector. It not only reinforces India's position in the global food market but also emphasizes sustainability in food production, positioning Indusfood as a critical business and networking hub for industry stakeholders.

### WHAT IS INDUSFOOD?

Indusfood is Asia's premier Food and Beverage (F&B) Trade Show, organized by the Trade Promotion Council of India (TPCI) with support from the Department of Commerce. Since its inception in 2017, it has served as a key platform to showcase India's growing food and beverage industry while connecting Indian businesses with international markets. The event highlights India's diverse agricultural capabilities, the potential of its processed food sector, and the country's commitment to sustainable food systems. Indusfood features exhibitors from India and around the world, providing networking opportunities, business deals, and partnerships in the global food sector. It is known for its significant role in driving food exports, fostering innovation, and facilitating trade and collaboration across various segments of the food, agriculture, and manufacturing industries.

### KEY HIGHLIGHTS OF INDUSFOOD:

1. **Exhibitors and Scale:** The event will feature 1,800 exhibitors from over 20 countries, covering an expansive exhibition space of more than 80,000 square metres, showcasing the scale and global reach of the trade show.
2. **International Participation:** Indusfood 2025 is expected to attract over 5,000 international buyers from 180+ countries, along with over 100 supermarket chains and e-retailers, facilitating global business connections.
3. **Farm-to-Fork Focus:** This edition marks a significant milestone with the transition into an integrated farm-to-fork trade show, highlighting India's commitment to sustainable and comprehensive food systems.
4. **Global Audience:** The event will feature 35 international chefs and 100 Indian delegates, offering Indian food companies the opportunity to reach new markets beyond the Indian diaspora and engage with global populations.
5. **Concurrent Shows:** Alongside Indusfood, the 2025 edition will host two key events: Indusfood Manufacturing, focused on food manufacturing solutions, and Indusfood Agritech, showcasing innovations in agriculture, aquaculture, and dairy farming.
6. **Growth and Impact:** Indusfood has witnessed remarkable growth since its inception in 2017, evolving from a national trade show to a global platform that plays a crucial role in promoting

India's food and beverage exports and positioning it as a hub for international trade and investment.


## GOVT INITIATIVES WERE TAKEN TO PROMOTE INDUSFOOD:

1. **National Food Security Mission (NFSM):** Boosts production of essential crops like wheat, rice, pulses, and cereals, ensuring a steady supply for the food industry.
2. **Operation Greens:** Enhances the value chain for tomatoes, onions, and potatoes, stabilizing prices and improving production efficiency.
3. **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY):** Provides food security to the poor, ensuring consistent demand for agricultural products.
4. **PM POSHAN Scheme:** Improves child nutrition in schools, indirectly boosting demand for processed food products.
5. **Mega Food Park Scheme:** Creates infrastructure connecting farmers, processors, and retailers, facilitating growth in food processing and exports.
6. **Production Linked Incentive Scheme (PLISFPI):** Encourages innovation and high-quality food product manufacturing, enhancing global competitiveness.
7. **PLI Scheme for Millet-based Products:** Promotes millet production and exports, positioning India as a global leader in healthy food options.
8. **Pradhan Mantri Kisan Sampada Yojana (PMKSY):** Aims to improve the food processing sector, enhance value addition to agricultural and marine products, reduce wastage, provide better returns to farmers, and create agro-processing clusters, thereby boosting exports and generating rural employment.

## INDUSFOOD CONTRIBUTED INDIAN ECONOMY:

1. **Boosted Exports:** Indusfood has played a pivotal role in increasing India's food and beverage exports, especially in the processed food sector, by connecting Indian businesses with global buyers and opening new international markets for Indian products.
2. **Enhanced Visibility:** The event has helped raise India's profile in global markets, positioning the country as a competitive player in the international food industry and attracting attention from global businesses and investors.
3. **Facilitated Networking and Collaboration:** Indusfood provides a platform for networking, fostering collaborations and partnerships between Indian producers and international buyers, strengthening business ties and creating long-term trade relationships.
4. **Business Deals and Trade Growth:** The trade show facilitates on-the-spot business deals, accelerating trade and ensuring the quick global distribution of Indian food products, thus enhancing India's share in the global food trade.
5. **Attraction of Investment:** Indusfood helps attract both domestic and foreign investment in India's food and beverage sector, driving innovation, infrastructure development, and overall growth.

## ISSUES ASSOCIATED WITH THE FOOD ECONOMY:

1. **Food Security:** Climate change and unsustainable farming threaten food production. Limited access to food due to poverty and insufficient income. Uneven food distribution, especially between urban and rural areas.
2. **Poverty:** Low wages and unstable employment prevent access to food. Gender inequality limits women's access to resources and opportunities.
3. **Climate Change:** Extreme weather events like floods, droughts, and rising temperatures disrupt food production. The expansion of biofuels reduces land available for food crops.
4. **Food Waste:** Inefficient storage, poor distribution, and supply chain issues lead to significant food wastage.
5. **Other Issues:** Corruption in food distribution impacts quality and availability. Natural disasters disrupt food production and access. Health constraints, such as diseases like HIV/AIDS, limit people's ability to work and access food.

## CONCLUSIONS:

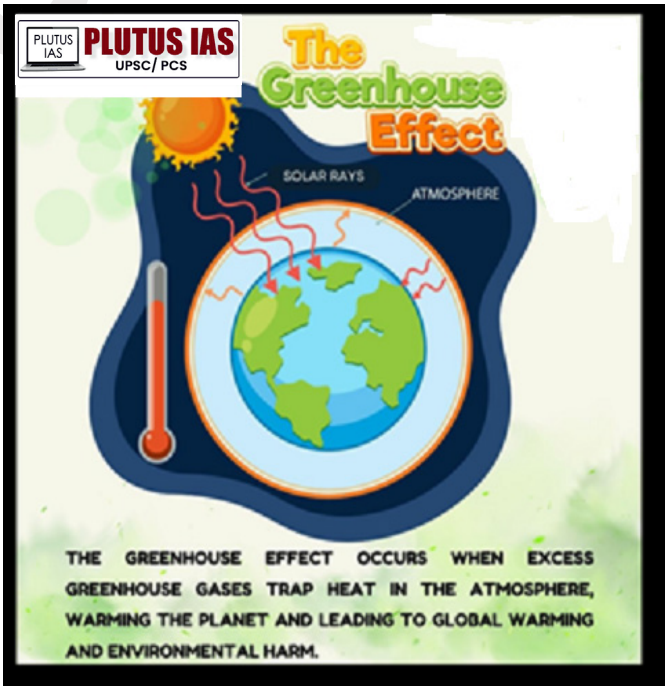
Indusfood 2025 marks a significant milestone in the growth of India's food and beverage industry, showcasing the nation's expanding potential in the global market. As an integrated farm-to-fork trade show, it not only highlights India's diverse agricultural capabilities but also underscores its commitment to sustainable food systems. The event's impressive scale, with participation from exhibitors, international buyers, chefs, and industry professionals, demonstrates the growing influence of India's food economy. With concurrent shows like Indusfood Manufacturing and Indusfood Agritech, the event further cements its role as a comprehensive platform for fostering global business partnerships and driving innovation across the food and agricultural sectors. Indusfood continues to play a vital role in positioning India as a hub for international trade, offering immense opportunities for growth, collaboration, and investment in the food industry.

# INDIA'S PROGRESS TOWARDS CLIMATE RESILIENCE

## WHY IN THE NEWS?

Climate change and rising temperatures pose serious threats to life on Earth, prompting the United Nations Framework Convention on Climate Change (UNFCCC) to require countries to submit Nationally Determined Contributions (NDCs) under the Paris Agreement to reduce greenhouse gas (GHG) emissions. In response, India pledged to achieve net-zero emissions by 2070 at the 26th Conference of the Parties (COP 26) in 2021. India's 4th Biennial Update Report (BUR-4) highlighted a 7.93% reduction in GHG emissions in 2020 compared to 2019. This demonstrates India's commitment to a sustainable, climate-resilient future.

**India is the land of Mahatma Gandhi, whose vision for sustainable development inspires us greatly. We have shown what it is to realise key principles like Green Future and Net Zero." ~ Prime Minister Shri Narendra Modi**




## INDIA'S CLIMATE ACTIONS UNDER UNFCCC:

### 1. NDC Targets:

**Emissions Intensity:**

**Target:** Reduce emissions intensity of GDP by 45% by 2030, compared to 2005 levels.

**2. Non-Fossil Fuel Energy:**

**Target:** Increase the share of non-fossil fuel-based energy in the total installed electric power capacity to 50% by 2030.

**3. Net-Zero Emissions:**

**Target:** Achieve net-zero emissions by 2070, marking a long-term goal in line with the global climate agenda.

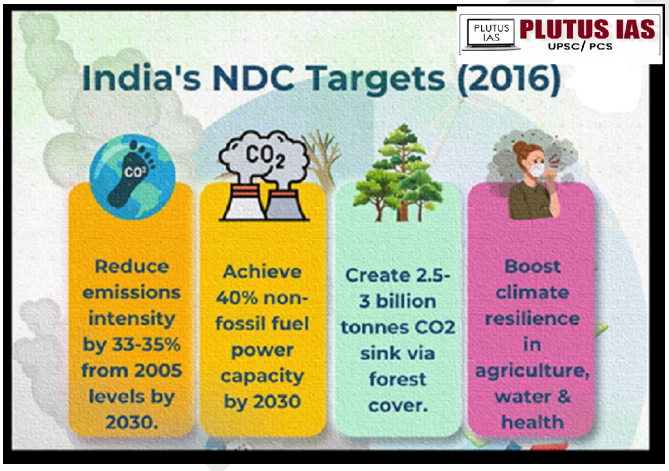
**4. Panchamrit Targets:**

**500 GW Non-Fossil Energy Capacity:**

**Target:** Reach 500 GW of non-fossil fuel-based energy capacity by 2030.

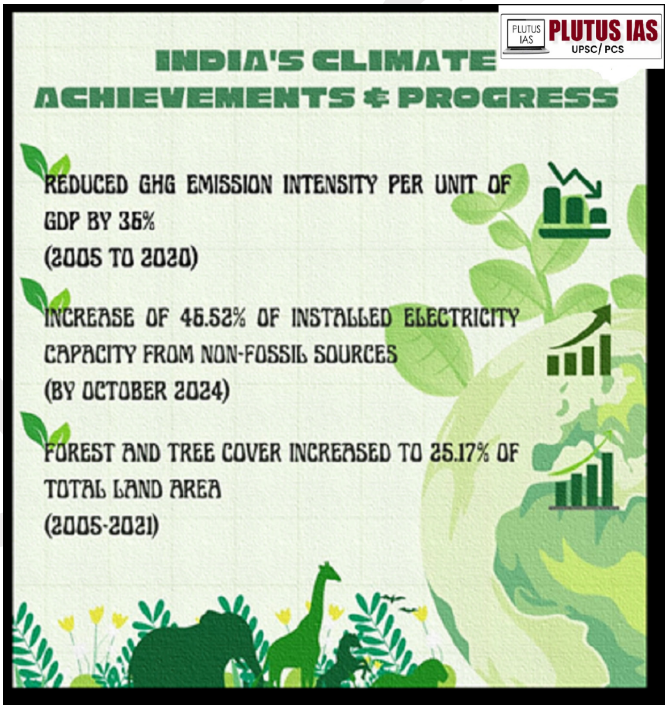
**50% Energy from Renewable Sources:**

**Target**: Ensure that 50% of India's energy needs come from renewable sources by 2030.




## KEY ACHIEVEMENT IN CLIMATE:

1. **Historical GHG Emissions:** India's cumulative share of global GHG emissions (1850-2019) is 4%, despite having 17% of the world's population.
2. **Low Energy Consumption:** In 2019, India's annual primary energy consumption per capita was 28.7 GJ, much lower than both developed and developing countries.
3. **Low-Carbon Pathways:** India is committed to low-carbon development while ensuring energy access, security, and sustainable economic growth.
4. **Climate Vulnerability:** India's diverse geography makes it highly vulnerable to climate change impacts like heatwaves, floods, and droughts.
5. **Adaptation Strategies:** Essential for safeguarding development, focusing on resilient infrastructure, water management, and sustainable agriculture.




## CLIMATE ACTIONS INITIATIVES FOR CARBON NEUTRALITY:

**1. Forest Land Diversion & Mitigation Measures**

**Forest Fragmentation Consideration:** Forest fragmentation is addressed during forest land diversion approvals for non-forestry purposes under Van Adhiniyam, 1980.

**Compensatory Afforestation:** Mandatory afforestation for non-forestry land diversion, including soil and moisture conservation and eco-restoration.

"Ek Ped Maa Ke Naam" tree plantation Campaign: Nationwide tree plantation campaign launched on World Environment Day 2024.

**Green Credit Program:** Launched in 2023, the program focuses on tree plantation on identified degraded forest land parcels to generate green credits.

**National Afforestation Programme (NAP):** Pan-India afforestation in identified degraded forest areas with people's participation and decentralized forest governance.

**2. Urban Climate Adaptation & Low-Carbon Development**

Mainstreaming Adaptation in Urban Planning: India's LT-LEDS emphasizes integrating adaptation measures and enhancing energy and resource efficiency within urban planning policies and guidelines as key components of a low-carbon development pathway.

**Sustainable Urban Planning Policies:**The relevant policies and initiatives include Urban and Regional Development Plans Formulation and Implementation (URDPFI) guidelines, Town and Country Planning Act, Smart Cities Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Pradhan Mantri Awaas Yojana (PMAY) and Swachh Bharat Mission (SBM).

**3. Air Pollution Control & Clean Air Initiatives**

**National Clean Air Programme (NCAP):** Aimed at improving air quality with city-specific action plans for 131 cities.

**Funding & Implementation:** Mobilized through various schemes such as SBM (Urban), AMRUT, Sustainable Alternative towards Affordable Transportation (SATAT), Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME-II)and Nagar Van Yojna.

**Air Pollution Abatement Measures:** Initiatives include cleaner fuels (CNG/LPG), ethanol blending, BS-VI fuel norms, and air quality management.

**4. Coastal Ecosystem Conservation & Resilience**

**Mangrove & Coral Reef Conservation:** Financial assistance provided to coastal states/UTs for enhancing climate resilience, including mangrove conservation.

**Integrated Coastal Zone Management Plans (ICZMP) Plans for Coastal States:** Prepared for Gujarat, Odisha, and West Bengal for coastal ecosystem protection.

**Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI) Program:** Mangrove restoration/reforestation program launched in 2023, covering approximately 540 km² across 9 coastal states and 4 UTs.₹ 12.55 crores has been released to the states of Gujarat, West Bengal, Kerala and UT of Puducherry for the restoration of 3,046 ha. of mangroves in FY 2024-25.

**5. Regulatory Measures for Climate Resilience:** The Coastal Regulation Zone (CRZ) Notifications (2011 & 2019), issued under the Environment Protection Act, 1986, Wildlife Protection Act, 1972, Indian Forest Act, 1927, and Biological Diversity Act, 2002 for enhancing climate resilience.

**CHALLENGES:**

1. **High Dependence on Coal:** India's reliance on coal hampers emission reduction efforts; transitioning to cleaner energy requires significant investments and infrastructure changes.
2. **Financial Constraints:** Limited financial resources hinder large-scale renewable energy projects, climate adaptation, and advanced technologies like carbon capture and green hydrogen.
3. **Energy Access and Security:** Balancing energy access for rural populations with low-carbon transitions is challenging while ensuring energy security during the shift away from fossil fuels.
4. **Vulnerability to Climate Impacts:** India faces significant climate risks (heatwaves, floods, droughts), requiring strong adaptation measures, especially in vulnerable regions.
5. **Infrastructure and Technology Gaps:** The expansion of renewable energy requires modern grid infrastructure, energy storage, and overcoming integration challenges in renewable sources.

6. **Urbanization and Pollution:** Rapid urbanization strains air quality and waste management; sustainable urban planning and pollution control remain ongoing challenges.

7. **Policy and Implementation Gaps:** Inconsistent implementation of climate policies, particularly in rural and vulnerable areas, affects progress towards climate resilience.

8. **Land Use and Deforestation:** Urban sprawl and deforestation challenge land-use management; afforestation efforts are critical for enhancing resilience.

9. **International Financing and Technology Transfer:** India needs continued international financial and technological support to meet its climate targets, relying on commitments from developed nations.

**WAY FORWARD:**

1. **Low Carbon Development of Electricity Systems:** Low carbon development of electricity systems consistent with development

2. **Integrated, Efficient, Inclusive, Low-Carbon Transport System:** Develop an integrated, efficient, inclusive, low-carbon transport system

3. Promoting Adaptation in Urban Design & Sustainable Urbanization: Promoting adaptation in urban design, energy & material efficiency in buildings& sustainable urbanization

4. **Economy-Wide Decoupling of Growth from Emissions:** Promoting economy-wide decoupling of growth from emissions and development of an efficient, innovative, low-emission industrial system

5. **CO2 Removal & Engineering Solutions:** Investing in carbon dioxide removal (CDR) technologies and engineering solutions such as carbon capture and storage (CCS) to reduce atmospheric CO2 levels.

6. **Enhancing Forest & Vegetation Cover:** Enhancing Forest and Vegetation cover consistent with socio-economic and ecological considerations

7. **Economic and Financial Aspects of Low-Carbon Development:** Economic and financial aspects of low-carbon development and Long-Term Transition to net zero by 2070.

**CONCLUSION:**

India is advancing towards a carbon-neutral future with a focus on sustainable development and innovative solutions. Committed to reducing greenhouse gas emissions, India is implementing key initiatives like its Long-Term Low Emission Development Strategy and the Miyawaki tree planting at Mahakumbh 2025. These efforts ensure balanced growth and environmental responsibility, paving the way for a climate-resilient future.

## PRELIMS QUESTION:

**Q. Consider the following statements about India's climate actions:**

1. India's target is to achieve net-zero emissions by 2050.

2. India has committed to reducing emissions intensity of GDP by 45% by 2030.

3. The Panchamrit targets include reaching 500 GW of non-fossil fuel-based energy capacity by 2030.

**Which of the above statements is correct?**

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 2 only

**Answer: B**

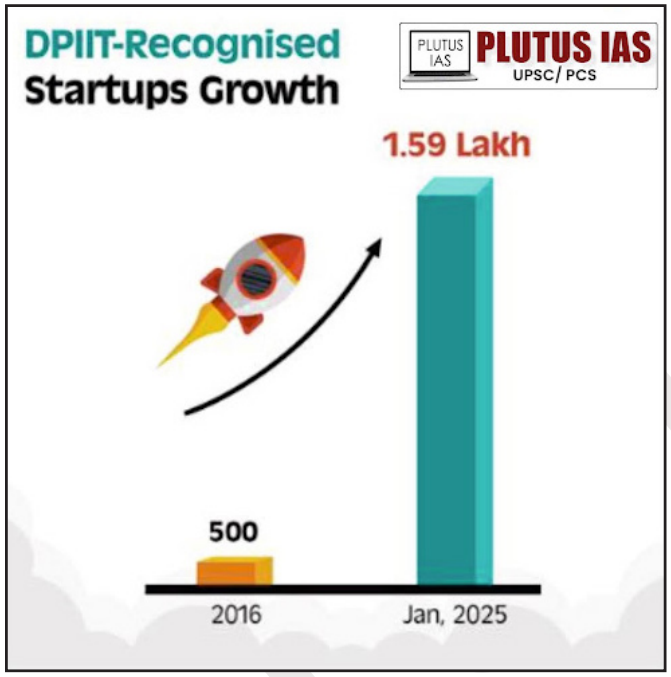
## MAINS QUESTION:

**Q. What are the key adaptation strategies India should adopt to tackle the impacts of climate change? How can India balance its development goals with environmental sustainability? (250 words, 15 marks)**

## STARTUP INDIA: IGNITING INNOVATION, EMPOWERING ENTREPRENEURS, BOOSTING THE ECONOMY"

### WHY IN THE NEWS?

On January 16, 2025, India celebrated the 9th anniversary of the Startup India initiative, launched in 2016 as a flagship program of the Government of India. Designated as National Startup Day, this occasion highlights the nation's remarkable progress in fostering a dynamic and inclusive entrepreneurial ecosystem.




### THE STARTUP CULTURE IN INDIA:

**DPIIT-Recognized Startups:** The number of recognized startups has grown from 500 in 2016 to 1,59,157 as of January 15, 2025, reflecting a vibrant and thriving entrepreneurial culture.

**Women Entrepreneurs:** By October 31, 2024, 73,151 startups included at least one woman director, highlighting the rise of women entrepreneurs and their crucial role in shaping India's startup landscape.

**Job Creation:** Startups have generated over 16.6 lakh direct jobs between 2016 and October 31, 2024, significantly contributing to India's employment and economic growth.

**Global Recognition:** India ranks as the third-largest startup ecosystem in the world, demonstrating its prowess on the global stage.

**Unicorn Boom:** With over 100 unicorns, Indian startups are redefining global innovation and showcasing entrepreneurial success.

**Regional Expansion:** While major hubs like Bengaluru, Hyderabad, Mumbai, and Delhi-NCR lead the transformation, smaller cities are emerging as key contributors to India's entrepreneurial momentum.

**Sectoral Excellence:** Startups in sectors like fintech, edtech, health tech, and e-commerce have addressed local challenges and earned global acclaim.

**Inspiring Success Stories:** Companies such as Zomato, Nykaa, and Ola embody India's shift from a nation of job seekers to job creators, driving economic development and inspiring future entrepreneurs.

### KEY FACTS OF THE STARTUP INDIA SCHEME:

**Launched:** The Startup India scheme was launched by the Government of India on January 16, 2016, to promote entrepreneurship and innovation.

**Benefits:** Offers tax incentives, legal support, and funding options.

**Goals:** Aim to reduce regulatory burden, promote innovation, and create jobs.

**Eligibility:** Available to startups within 10 years of incorporation.

**Self-certification:** Startups can self-certify compliance with certain labor and environmental laws.

**Funding:** Provides funding for startups, including those led by women and from SC/ST communities.

**Legal Support:** Offers low-cost legal assistance and fast-track patent processing.

**Tax Incentives:** Includes capital gains tax exemptions and other tax benefits.

**Seed Fund:** The Startup India Seed Fund Scheme (SISFS) provides financial assistance to early-stage startups.


## SCHEMES AND SUPPORT UNDER THE STARTUP INDIA INITIATIVE

### Startup India Seed Fund Scheme (SISFS)

- Launched for a four-year period starting from 2021-22 with a corpus of ₹945 crore, the scheme supports startups in areas like proof of concept, prototype development, product trials, market entry, and commercialisation.
- Operational since 1st April 2021, the scheme is overseen by the Experts Advisory Committee (EAC), which evaluates and selects incubators for fund allocation.
- As of October 31, 2024, the EAC has approved 213 incubators, which have in turn selected 2,490 startups for a total approved funding of Rs 454.04 crore.

### CREDIT GUARANTEE SCHEME FOR STARTUPS (CGSS)

- The scheme offers credit guarantees for loans provided to DPIIT-recognised startups by Scheduled Commercial Banks, NBFCs, and Venture Debt Funds under SEBI-registered Alternative Investment Funds.
- Implemented by the National Credit Guarantee Trustee Company Limited (NCGTC), it aims to provide a credit guarantee up to a specified limit to eligible startups.
- Under this scheme, ₹555.24 crore in loans were guaranteed to 235 startups, including ₹24.60 crore to 18 women-led startups as of October 31, 2024.

### FUND OF FUNDS FOR STARTUPS (FFS) SCHEME

- Introduced in June 2016 with a corpus of ₹10,000 crore, the Fund of Funds for Startups (FFS) aims to enhance access to domestic capital for Indian startups and boost the entrepreneurial ecosystem.
- The scheme, managed by SIDBI, does not invest directly in startups but provides funding to SEBI-registered Alternative Investment Funds (AIFs), which further invest in startups through equity and equity-linked instruments.
- By 2024, ₹11,148 crore was committed, catalyzing investments of ₹21,221.36 crore in 1,165 startups.

### Significance of the Startup India initiative:

| Key Contribution | Details |
|---|---|
| **Boosting Domestic Capital** | ₹10,000 crore **Fund of Funds for Startups (FFS)** launched in 2016 to enhance access to capital. |
| **Innovative Funding Approach** | Managed by **SIDBI**, funding provided through SEBI-registered **Alternative Investment Funds (AIFs)**. |
| **Significant Financial Commitment** | By 2024, **₹11,148 crore** committed, catalyzing investments across the startup ecosystem. |
| **Economic Multiplier Effect** | Investments of **₹21,221.36 crore** mobilized across **1,165 startups**, amplifying economic impact. |
| **Employment Generation** | Over **16.6 lakh direct jobs** created by recognized startups from 2016 to October 31, 2024. |
| **Empowering Women Entrepreneurs** | **73,151 startups** (as of October 31, 2024) include at least one woman director, promoting women empowerment. |
| **Encouraging Entrepreneurship** | Enabled startups to innovate and scale, fostering entrepreneurship as a key driver of economic growth. |

| Key Contribution | Details |
|---|---|
| **Sector-Wide Growth** | Supported startups across industries like **technology, health, and finance**, driving sectoral innovation. |
| **Strengthening Global Position** | Established India as the **third-largest startup ecosystem globally**, attracting international recognition. |
| **Fostering Inclusive Growth** | Promoted inclusivity by supporting entrepreneurs from all backgrounds, including women and non-metro regions. |

## CHALLENGES FACED BY STARTUPS IN INDIA:

**Funding Constraints:** Despite significant investments from government initiatives and venture capitalists, access to early-stage funding remains a challenge. According to NASSCOM, over 90% of startups fail due to lack of funds, especially in the first 2-3 years.

**Regulatory and Compliance Burdens:** A 2022 study by Deloitte found that 52% of Indian startups face challenges in regulatory compliance, especially in sectors like fintech, healthcare, and e-commerce.

**Talent Acquisition and Retention:** A shortage of skilled talent, particularly in emerging technologies such as AI, blockchain, and data science, is a major hurdle. According to the 2023 Startup Ecosystem Report, over 60% of startups cite talent acquisition as a major challenge, with high turnover rates in technical roles.

**Market Access and Competition:** Startups often find it difficult to access a wide customer base, competing with established industry giants. A report by McKinsey suggests that 70% of Indian startups face significant competition from well-established brands, making market entry and brand recognition a prolonged struggle.

**Infrastructure and Resources:** While tier-1 cities like Bengaluru and Delhi have thriving startup ecosystems, startups in smaller cities and rural areas often face limited access to essential infrastructure, technology, and mentorship. A 2021 study by the World Bank showed that 67% of Indian startups are concentrated in metro cities, leaving rural areas underserved.

**Cultural Barriers:** Entrepreneurship is still viewed with caution in many regions. In a 2020 survey by the Indian School of Business, 44% of respondents from non-metro areas cited societal pressures and fear of failure as major deterrents for pursuing entrepreneurship.

**Access to Networks and Mentorship:** Many startups in India struggle to connect with experienced mentors and investors. According to a 2021 survey by TiE Global, over 40% of entrepreneurs reported difficulty in finding industry-specific mentors or networks, limiting their ability to scale.

**Lack of Effective Marketing Strategies:** Many startups struggle to develop effective marketing strategies due to budget constraints and limited marketing expertise. According to a 2022 survey by KPMG, 58% of startups in India cited marketing and customer acquisition costs as one of their top challenges.

## WAY FORWARD FOR STARTUPS IN INDIA:

**Enhancing Access to Funding:** Expand funding through angel networks, crowdfunding, and government schemes like the Fund of Funds for Startups (FFS).

**Simplifying Regulations:** Streamline regulatory processes and reduce delays as per the Startup India Annual Report 2023. Create a startup-friendly legal and tax environment to ease compliance burdens (DPIIT).

**Fostering Corporate Collaboration:** Encourage partnerships between startups and corporations for market access and resources. Develop regional incubators and accelerators to foster innovation (National Startup Advisory Council).

**Building a Skilled Workforce:** Align academic curriculums with industry needs and promote industry-academia partnerships. According to

NASSCOM (2023), 56% of startups struggle to find the right talent, emphasizing the need for skilled training programs.

**Promoting Rural and Inclusive Innovation:** Strengthen infrastructure in tier-2 and tier-3 cities and support rural and women-led startups. Aligned with Atmanirbhar Bharat to promote balanced regional development.

**Developing Innovation in Emerging Sectors:** Focus on sectors like biotechnology, clean energy, and sustainability with dedicated policies and funding.

**Supporting Sustainable Startups:** Promote eco-friendly startups in clean energy and waste management through government initiatives. Foster socially responsible businesses addressing healthcare, education, and rural development (National Rural Livelihood Mission).

### CONCLUSION

The Startup India initiative has transformed India into a global innovation hub, with over 1.59 lakh recognized startups and a growing workforce. The initiative has empowered startups across sectors, including non-metro areas through flagship schemes, capacity-building efforts, and platforms like BHASKAR. As India moves forward, the Startup India program remains crucial in driving economic growth and fostering a dynamic entrepreneurial ecosystem.

## PRELIMS QUESTIONS:

**Q. Which of the following is/are core features of the Startup India Initiative?**

1. Easy of doing business
2. Tax Exemption
3. Funding Support
4. Sector Specific policies.

**Select the correct answer using the code given below:**

(a) Only one

(b) Only two

(c) Only three

(d) All four

**ANSWER: d**

## MAINS QUESTION:

**Q. Evaluate the impact of the Startup India Programme on fostering innovation and entrepreneurship in India. (Answer in 150 words)**

## PRELIMS BITS: DEPARTMENT OF ATOMIC ENERGY (DAE)

### WHY IN THE NEWS?

The Government of India has reconstituted the Atomic Energy Commission (AEC), as announced through a notification published in the Gazette on January 9. Initially established in August 1948 under the Department of Scientific Research, the AEC plays a pivotal role in formulating policies for the Department of Atomic Energy (DAE).


### DEPARTMENT OF ATOMIC ENERGY (DAE)

**Establishment and Overview**

**Founded:** August 3, 1954, under the direct charge of the Prime Minister through a Presidential Order.

**Type:** Non-statutory, Non-Constitutional body, Executive Body under the direct Charge of the PMO.

**Objective:** To transact all Government of India business related to atomic energy as per the Atomic Energy Act, 1948.

**Atomic Energy Commission (AEC):** Established on March 1, 1958, with full executive and financial powers to formulate policies for the DAE.

**Composition of the AEC:**

**Chairman:** The Chairman of the AEC is the Secretary to the Government of India in the Department of Atomic Energy (DAE). The current Chairman is Dr. Ajit Kumar Mohanty, who took over from Kamlesh Nilkanth Vyas in May 2023.

**Other Members:** Members of the AEC are appointed on an annual basis for each calendar year. The Chairman recommends the members, and their appointments are subject to approval by the Prime Minister of India.

## ORGANIZATIONAL STRUCTURE OF THE DAE

**Research Centers (6):** BARC (Mumbai), IGCAR (Kalpakkam), RRCAT (Indore), VECC (Kolkata), AMDER (Hyderabad), GCNEP (Bahadurgarh).

**Industrial Organizations (3):** NFC (Hyderabad), HWB (Mumbai), BRIT (Mumbai).

**Public Sector Undertakings (5):** NPCIL (Mumbai), BHAVINI (Kalpakkam), ECIL (Hyderabad), UCIL (Jaduguda), IREL (Mumbai).

**Service Organizations (3):** DCSEM (Mumbai), DPS (Mumbai), GSO (Kalpakkam).

**Grant-in-Aid Institutes (11):** TIFR, SINP, TMC, HRI, IoP, NISER, IMSc, IPR, HBNI, UM-DAE CEBS, AEES.

## BOARDS UNDER DAE

**Board of Research in Nuclear Sciences (BRNS):** Promotes extramural research in nuclear and allied fields.

| Objective of Atomic Energy Commission (AEC) | Details |
|---|---|
| **Peaceful Utilization of Atomic Energy** | Harness atomic energy for applications that benefit humanity, such as energy and research. |
| **Advancement of Nuclear Science and Technology** | Promote R&D in nuclear science to enhance India's technological and scientific capabilities. |
| **Electricity Production from Atomic Energy** | Expand nuclear power generation to ensure energy security and reduce reliance on fossil fuels. |
| **Agricultural Enhancements** | Use radiation-based techniques to increase food grain yield and improve shelf life. |
| **Nanotechnology Development** | Advance nanotechnology for applications in medicine, energy, and materials science. |

## MANDATE AND FUNCTIONS

Development of nuclear power technology and applications in power and non-power domains.

Exploration, identification, and processing of uranium resources and atomic minerals.

**Power sector application:**

1. Fabrication of nuclear fuel.
2. Production of heavy water.
3. Construction and operation of nuclear power plants.
4. Nuclear fuel reprocessing and waste management.
5. Research and development in: Fast reactor and fusion technologies.
6. Accelerator and laser technologies, Advanced electronics and materials science, and Biological sciences for healthcare and agriculture.

**Non-power applications:** Isotopes and radiation technologies for healthcare, food, agriculture, industry, and environmental protection.

**KEY ACHIEVEMENTS AND CONTRIBUTIONS OF DAE:**

**Pioneering R&D in nuclear energy and allied disciplines:** Development and operation of the Trombay Atomic Energy Establishment (1957), now BARC, which spearheads nuclear research in India. Indigenous design and construction of Pressurized Heavy Water Reactors (PHWRs), contributing significantly to India's nuclear power capacity.

**Societal applications of spin-off technologies:** The development of Bhabhatron, a low-cost cancer therapy machine, is revolutionizing cancer treatment in India and abroad. Production of radiation-processed seeds for higher-yield crops, enhancing agricultural productivity.

**Urban waste management solutions:** Implementation of Nisargruna Biogas Plants, converting organic waste into clean energy. Development of advanced technologies for treating and managing municipal waste in cities.

**The synergy between research, development, and technology deployment:** Establishment of the Fast Breeder Test Reactor (1985) at Kalpakkam, advancing breeder reactor technology. Contribution to India's Mars Orbiter Mission (Mangalyaan) by providing critical materials and nuclear-grade components.

**Enhancing energy security and fostering growth:** Commissioning of the Kudankulam Nuclear Power Plant (2013), built with international collaboration. Supporting industrial growth through partnerships like Nuclear Fuel Complex (NFC) and Heavy Water Board (HWB) for nuclear fuel and heavy water production.

## PRELIMS QUESTION:

**Q. With reference to the Atomic Energy Commission (AEC) Consider the following statement:**

1. The AEC is a statutory body constituted under The Atomic Energy Act of 1948.
2. The AEC is mandated to regulate the power and non-power use of atomic minerals.
3. Indigenous design and construction of Pressurized Heavy Water Reactors (PHWRs) is one of the contributions of the AEC.

**How many of the above-given statements are correct?**

(a) Only one

(b) Only two

(c) All three

(d) None

**ANSWER: B**

## SELF-RELIANCE IN DEFENSE TECHNOLOGY: A PATH TO STRATEGIC INDEPENDENCE

### WHY IN THE NEWS?

**Three frontline vessels, INS Surat, INS Nilgiri, and INS Vagsheer were commissioned into the Indian Navy, marking a historic first for the country. This significant development highlights India's growing capabilities in defence technology and its commitment to self-reliance. The commissioning of these advanced warships and submarines is seen as a giant leap forward in empowering the Navy, with Prime Minister Narendra Modi emphasizing India's potential to play a major role in shaping global security, economics, and geopolitical dynamics. The event also underscores India's approach to development over expansionism as it strengthens its defence forces to meet both regional and global challenges.**

| Vessel | INS Nilgiri | INS Surat | INS Vagsheer |
|---|---|---|---|
| Class | Nilgiri-class stealth frigate | Project 15B destroyer | Kalvari-class attack submarine |
| Type | Stealth Frigate | Stealth Guided Missile Destroyer | Diesel-Electric Attack Submarine |
| Project | Project 17A | Project 15B | Project 75 |
| Construction | Laid: Dec 2017, Launched: Sept 2019, Delivered: Dec 2024 | Launched: 2022, Commissioned: Jan 2025 | Laid: 2017, Launched: 2022, |
| Armament | Supersonic surface-to-surface missiles, MRSAM, 76mm guns, rapid-fire CIWS | Surface-to-air missiles, anti-ship missiles, torpedoes, modern sensors | Torpedoes, anti-ship missiles, advanced sonar |
| Key Capabilities | Anti-surface, anti-air, anti-submarine warfare | AI-enabled, network-centric warfare, offensive operations | Silent and versatile, multi-mission (surveillance, warfare) |
| Displacement | 6,670 tonnes | 7,400 tonnes | 1,500 tonnes |
| Speed | 30+ knots | 30+ knots | N/A (submarine) |
| Significance | The lead ship of Project 17A, multi-role operations | First AI-enabled warship, enhancing naval capabilities | Final Kalvari-class submarine stealthy attack capabilities |

## GOVT. INITIATIVES TO PROMOTE SELF-RELIANCE IN DEFENCE TECHNOLOGY:

| Initiative | Purpose/Objective |
|---|---|
| Defence Acquisition Procedure (DAP) | Prioritizes procurement of defence equipment from domestic sources to promote self-reliance. |
| Positive Indigenisation Lists | Mandates the armed forces to purchase specific defence items from domestic manufacturers. |
| Make in India | Encourages the Indian industrial ecosystem to participate in defence manufacturing, boosting local capacity. |
| Foreign Direct Investment (FDI) | Liberalized FDI policies to attract foreign investment in the defence sector, enhancing technological capabilities. |
| Technology Development Fund (TDF) | Supports the development of defence technologies by MSMEs (Micro, Small, and Medium Enterprises) and startups. |
| Innovations for Defence Excellence (iDEX) | Fosters innovations in defence technology by startups and MSMEs, encouraging cutting-edge developments. |
| Defence Industrial Corridors | Establishes defence production corridors in Uttar Pradesh and Tamil Nadu to boost defence manufacturing and infrastructure. |

| Initiative | Purpose/Objective |
|---|---|
| Defence Production & Export Promotion Policy (DPEPP) | Acts as a guiding document to enhance defence production capabilities and promote defence exports. |
| SRIJAN (Indigenization Portal) | Facilitates the indigenization of defence items by the Indian industry through a dedicated online platform. |
| Offset Policy | Reforms aimed at attracting investment, technology transfer, and boosting defence manufacturing capabilities. |

## WHY IS SELF-RELIANCE IN DEFENCE TECHNOLOGY:

1. **National Security:** Achieving self-reliance in defence technology enhances national security by reducing dependence on foreign suppliers and mitigating the risk of military crises. According to the Ministry of Defence, India currently imports about 60-70% of its defence equipment.
2. **Economic Growth:** Self-reliance on defence technology contributes to economic growth by creating a large domestic defence industry. The defence sector is one of India's largest employers, providing direct employment to over 1.5 million people, with the potential for further expansion as the domestic industry grows.
3. **Global Standing:** India is currently the 4th largest exporter of defence equipment, with exports reaching $1.59 billion in 2020-21, as per the Ministry of Defence, and aims to achieve $5 billion in defence exports by 2024.
4. **Technological Expertise:** Fostering self-reliance in defence technology helps India retain and enhance its technological expertise. For instance, the development of the indigenous light combat aircraft (LCA) "Tejas" has significantly improved India's aircraft design and manufacturing capabilities.
5. **Developed Indigenous Technologies:** India has developed advanced and complex defence systems, such as the BrahMos missile system and the Arjun tank, which are tailored to meet the unique needs of the Indian Armed Forces.
6. **Increased Domestic Procurement:** The Indian government has substantially increased funding for the procurement of domestically produced defence equipment. In 2022, India allocated ₹70,000 crore for procurement from Indian manufacturers as part of its Defence Acquisition Policy, aiming for self-reliance.
7. **Introduced Funding for Make-I Projects:** Initiatives like the Make-I project, which offers financial support for the development of indigenous defence technologies, are driving the involvement of the private sector.

## CHALLENGES IN SELF-RELIANCE IN DEFENCE TECHNOLOGY:

1. **Funding Constraints:** The defence budget, although growing, remains insufficient to support large-scale modernization and advanced technology development. In 2023, India's defence budget was approximately ₹5.25 lakh crore, which is compared to China and the US is less.
2. **Technology Transfer Dependence:** India still relies heavily on technology transfer agreements with foreign companies for producing defence equipment. For instance, the deal with France for Rafale.
3. **Import Dependence:** Despite efforts towards self-reliance, India continues to import a large portion of its military hardware. In 2021, around 63% of India's defence equipment was imported.
4. **Lack of Technological Depth:** India faces challenges in developing the technological depth required for advanced systems. In areas like fighter aircraft engines, India still relies on foreign suppliers, which limits the complete

autonomy of the defence sector.

5. **Bureaucratic Delays:** According to the Comptroller and Auditor General (CAG) report, delays in procurement processes have been a recurring issue, often leading to cost overruns and postponed modernization schedules.

6. **Meeting Quality Standards:** The lack of rigorous quality checks in the early stages of manufacturing has been a barrier, as seen in the production issues with the Arjun tank in the past.

7. **Cyber Security Risks:** With rapid advancements in technology, cybersecurity has become a significant concern. Defence systems are increasingly susceptible to cyberattacks, and incidents like the 2020 cyberattack on Indian military systems highlight the vulnerabilities that need to be addressed in national security protocols.

8. **Funding for Startups:** Startups in the defence sector face challenges in securing consistent funding and market exposure. Only a small fraction of the defence budget is allocated to support innovation from private startups.

## PROGRESSIVE WAY FOR SELF-RELIANCE:

1. **Enhancing Domestic R&D:** The Indian government has set up dedicated R&D funds like the Defence Innovation Organisation (DIO), which provides support for cutting-edge defence technologies.

2. **Strengthening Public-Private Partnerships:** Strengthening collaborations between public and private sectors through initiatives like iDEX (Innovations for Defence Excellence) and Technology Development Fund (TDF) will drive innovation.

3. **Expanding Defence Industrial Infrastructure:** The establishment of defence production corridors in states like Uttar Pradesh, Tamil Nadu, and Andhra Pradesh has been a step towards enhancing India's manufacturing capabilities. These corridors aim to boost the defence manufacturing sector and attract foreign investment.

4. **Implementing Efficient Procurement Processes:** Streamlining procurement processes and implementing e-procurement platforms will ensure faster and more efficient acquisition of defence equipment. The Ministry of Defence has already introduced the Defence Acquisition Procedure (DAP) 2020.

5. **Fostering Technological Expertise and Skills:** The government's initiative to establish defence skill development centres in various states is expected to equip youth with skills related to defence manufacturing.

6. **Incentivizing Defence Exports:** Encouraging defence manufacturers to explore global markets will help India achieve its goal of becoming a major exporter of defence equipment. India's Defence Production & Export Promotion Policy, introduced in 2020, aims to increase defence exports to $5 billion by 2024.

7. **Cybersecurity Measures:** Strengthening cybersecurity frameworks is crucial to protect sensitive defence systems from potential threats.

## CONCLUSION:

The commissioning of advanced warships and submarines like INS Nilgiri, INS Surat, and INS Vagsheer reflects India's growing defence capabilities and commitment to achieving self-reliance. While challenges remain—such as funding limitations, import dependence, and bureaucratic hurdles India is progressively strengthening its defence sector through strategic initiatives, technological development, and fostering innovation. By continuing to invest in research, enhancing domestic manufacturing capacity, and fostering public-private collaboration, India is on the path to becoming a global defence powerhouse, thereby reducing dependency and boosting national security.

## PRELIMS QUESTION:

Q. With reference to the commissioning of the frontline vessels INS Surat, INS Nilgiri, and INS Vagsheer into the Indian Navy, consider the

following statements:

1. INS Nilgiri is a Nilgiri-class stealth frigate, commissioned in December 2024.
2. INS Surat is a Project 15B destroyer, which is AI-enabled and designed for network-centric warfare.
3. INS Vagsheer is a diesel-electric attack submarine, and it is the final submarine of the Kalvari-class.

**How many of the above-given statements are correct?**

A. Only one

B. Only two

C. All three

D. None

**Answer: B**

## MAINS QUESTION:

**Q. Discuss the importance of self-reliance in defence technology for India and the challenges faced by the country in achieving it. Also, highlight the progressive steps India is taking to address these challenges. (250 words, 15 marks)**

## PRELIMS BITS: CHERENKOV RADIATION

### WHY IN THE NEWS?

Dr. Ajit Kumar Mohanty, Secretary of the Department of Atomic Energy (DAE) and Chairman of the Atomic Energy Commission, inaugurated the Major Atmospheric Cherenkov Experiment (MACE) Observatory at Hanle, Ladakh. MACE is the largest imaging Cherenkov telescope in Asia and holds the distinction of being the highest of its kind globally, located at an altitude of approximately 4,300 meters. The telescope, which was indigenously built by BARC with support from ECIL and other Indian industry partners, plays a key role in advancing atmospheric science research. The inauguration of the MACE Observatory is part of the Platinum Jubilee year celebrations of the DAE.

### WHAT IS CHERENKOV RADIATION?

Cherenkov radiation is a distinct blue glow that occurs when electrically charged particles, such as electrons, travel faster than the speed of light in a transparent medium like water or glass. It is a form of electromagnetic radiation that is analogous to a shock wave, similar to the sonic boom created when an object exceeds the speed of sound in air.


### DISCOVERY OF CHERENKOV RADIATION

**Who Discovered It?** Russian physicist Pavel Cherenkov discovered the phenomenon in 1934 while studying the effects of radiation on liquids.

**Nobel Prize Recognition:** Cherenkov, along with his colleagues Ilya Frank and Igor Tamm, received the 1958 Nobel Prize in Physics for their theoretical and experimental work explaining the phenomenon.

### KEY CHARACTERISTICS OF CHERENKOV RADIATION

**Color:** The blue color is due to the dominance of shorter wavelengths in the visible spectrum emitted by the radiation.

**Speed Threshold:** The particle must travel faster than the phase velocity of light in the medium to produce Cherenkov radiation.

**Medium Dependent:** Common media include

water, glass, or specific transparent materials, with water being the most commonly observed medium.

## HOW DOES IT HAPPEN?

**High-Speed Particles:** Charged particles, such as electrons or protons, achieve speeds greater than the speed of light within the medium (note: this does not violate Einstein's theory of relativity, as the speed of light in a vacuum is the universal speed limit).

**Interaction with the Medium:** The high-speed particles disturb the electromagnetic field of the medium, polarizing its molecules.

**Photon Emission:** When the medium's molecules return to their normal state, they release energy in the form of photons (light particles).

**Cone-Shaped Radiation:** The emitted photons align in a conical shape, producing the characteristic blue glow.

## APPLICATIONS OF CHERENKOV RADIATION

**Nuclear Reactors:** The famous blue glow in nuclear reactors arises from Cherenkov radiation as high-energy particles released during fission move through the water used as a coolant or moderator. It serves as a visual indicator of the reactor's operational status.

**Particle Physics:** Cherenkov radiation is used in Cherenkov detectors to identify particles by their velocity, enabling differentiation between lighter and heavier particles. These detectors are crucial for studying subatomic particles in experiments like those conducted at CERN.

**Astrophysics:** Cherenkov radiation helps detect cosmic rays and observe neutrinos through ground-based telescopes like the Cherenkov Telescope Array (CTA). It also contributes to understanding high-energy phenomena in the universe, such as supernovae and gamma-ray bursts.

**Medical Imaging:** In oncology, Cherenkov radiation is utilized for imaging radioisotopes during radiotherapy. It also aids in monitoring external beam radiation therapies, improving accuracy in treating cancer.

**Radiation Detection:** Used in nuclear safeguards, Cherenkov radiation helps detect spent nuclear fuel in storage pools, ensuring safe and secure handling.

## PRELIMS QUESTION:

**Q. Which of the following statements are correct about Cherenkov radiation?**

1. herenkov radiation occurs when charged particles travel faster than light in a transparent medium.
2. It is a form of electromagnetic radiation similar to a sonic boom.
3. The radiation is commonly observed as a blue glow.

**Select the correct answer using the code given below:**

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

**ANSWER: D**

## THE GLORIOUS HISTORY OF VADNAGAR

### WHY IN THE NEWS?

Prime Minister Narendra Modi highlighted that Vadnagar in Gujarat has a glorious history spanning over 2500 years. He emphasized the unique efforts undertaken to preserve and protect this historically significant site.

### VADNAGAR: KEY FACTS

Vadnagar is a town and municipality in the Mehsana district of Gujarat, India. Historically known as Anartapura (the capital of Anarta) and Anandapura, it holds immense historical significance. The Chinese traveler Xuanzang visited Vadnagar in 640 CE. Alexander Cunningham, the founder and first Director-General of the Archaeological Survey of India (ASI), identified Anandapura with Vadnagar. Notably, Vadnagar is also the birthplace of Narendra Modi, the current Prime Minister of India.

### VADNAGAR: HISTORICAL OVERVIEW

**Pre-Mauryan Period (ca. 800–320 BCE):** Contemporary to the Late Vedic and pre-Buddhist Mahajanapadas.

Mauryan Period (ca. 320–185 BCE).

**Indo-Greek Period:** Indo-Scythian/Shaka-Kshatrapas Period (ca. 35–415 CE): Linked to the descendants of Achaemenid provincial governors.

**Hindu-Solanki Period.**

**Sultanate-Mughal to Gaekwad-British Colonial Rule (ca. 318 years ago).**

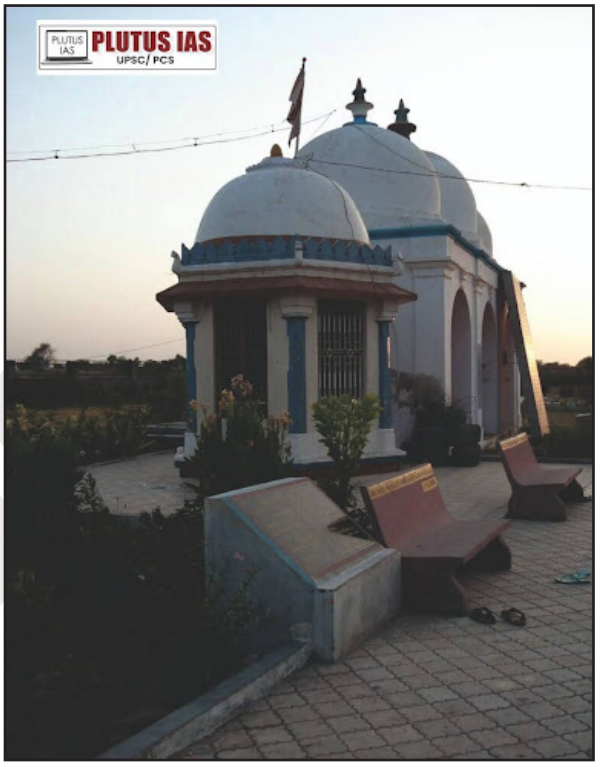
**Anartapura:** The town is frequently mentioned in ancient inscriptions and texts under its former names, Anartapura and Anandapura. It appears in the Mahabharata as part of the Anarta Kingdom.

**Chamatkarapura:** It is also referenced in the Tirtha Mahatmya section of the Nagara Khanda of the Skanda Purana, called Chamatkarapura.

**Junagadh rock inscription:** The Junagadh rock inscription (150 CE) of King Rudradaman I mentions Anartha as a region in northern Gujarat.

**Maitraka period (505–648 CE):** During the Maitraka period (505–648 CE), Brahmins in Anartapura/ Anandapura were granted land grants. The Harsola copper plates (949 CE) of the Paramara king also record land grants in this region, further linking Vadnagar with the Nagar Brahmins.

### CULTURAL SIGNIFICANCE OF VADNAGAR




**Buddhist Monastery (2nd–7th Century CE):** Excavations have uncovered a monastery with two votive stupas and a central courtyard surrounded by nine cells in a swastika-like layout, highlighting Vadnagar's role in Buddhist history.

**Jain Derasars:** Two Jain temples in Vadnagar emphasize its multireligious past and its significance in Jain culture.

**Hatkeshwar Mahadev Temple (15th Century):** This prominent Shiva temple is dedicated to Hatkeshwar Mahadev, the family deity of the Nagar Brahmins. It features Indo-Saracenic architecture, a towering shikhara, and a richly decorated exterior with carvings of Hindu deities, mythological scenes, celestial beings, and floral motifs.

**Sitala Mata Temple:** Known for its intricate carvings of celestial figures and depictions of Krishna dancing with milkmaids (Rasmandala), this temple showcases exceptional craftsmanship.

**Kirti Toran:** A pair of 12th-century ornamental arches built from red and yellow sandstone, standing 40 feet tall, are iconic symbols of Gujarat's architectural heritage. Likely constructed to commemorate a victory, the toranas feature carvings of battles, hunting scenes, deities, floral motifs, and divine figures. Their design reflects the grandeur of Solanki-era architecture, with similarities to the Rudra Mahalaya Temple in Siddhpur.

**Narsinh Mehta's Chori:** A 12th-century torana associated with the renowned 15th-century Gujarati poet-saint Narsinh Mehta, celebrating his literary and spiritual contributions.

**Tana-Riri Garden and Shrine:** Dedicated to two sisters known for their exceptional singing skills.

**Pancham Mehta's Vav (Stepwell):** A historical stepwell showcasing traditional water management and architectural design.

**Janjanio Well and Gauri Kund:** Ancient water structures that underline Vadnagar's historical importance in sustaining urban life.

**Baithakji of Gusaiji:** A sacred place associated with the Pushti Marg sect.

**Ancient Library and Directional Stone:** Vestiges from the Solanki period, highlighting Vadnagar's scholarly and cultural prominence.

**Recognition and Legacy:** Vadnagar's historical and architectural significance has earned it a place on UNESCO's tentative list of World Heritage Sites (2022). Its rich cultural tapestry, featuring influences from Buddhism, Jainism, and Hinduism, and its architectural marvels make it a vital chapter in India's heritage narrative.

### CONCLUSION:

Vadnagar holds remarkable significance in shaping Indian art, culture, and history. Its rich heritage, reflected in its architecture, religious diversity, and continuous habitation, is a source of pride and inspiration. Preserving such treasures is essential to safeguarding India's cultural identity for future generations.

## PRELIMS QUESTION:

**Q. Consider the following Pairs:**

| S.No | Ancient Sites | Present State |
|---|---|---|
| 1 | Anartapura | Maharashtra |
| 2 | Dwarasamudra | Karnataka |
| 3 | Nabadwip | Gujarat |

**How many of the above pairs are correctly matched?**

(a) Only one

(b) Only two

(c) All three

(d) None

**ANSWER: A**

## MAINS QUESTION:

**Q. Examine the cultural significance of the Solanki and Parampara dynasties in shaping India's architectural and artistic heritage. (Answer in 150 words)**

## SVAMITVA SCHEME: A LANDMARK INITIATIVE FOR RURAL DEVELOPMENT

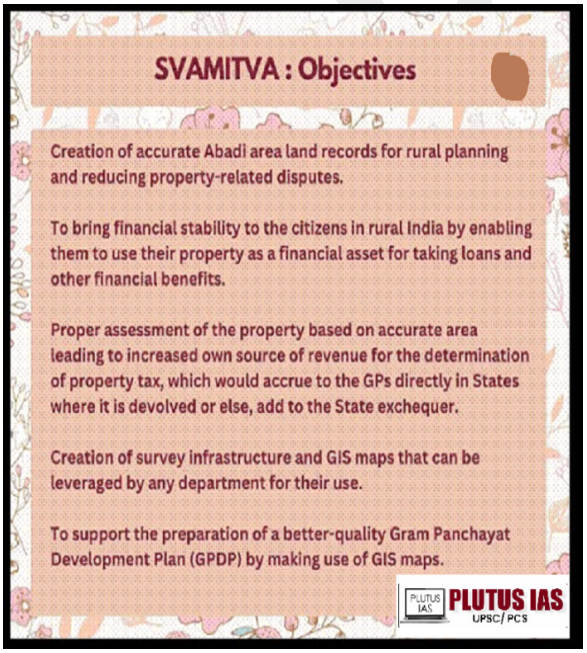
### WHY IN THE NEWS?

Prime Minister Narendra Modi's distribution of over 65 lakh property cards under the SVAMITVA Scheme is making headlines as a major step towards rural empowerment in India. This milestone, set through a video conference, marks the issuance of property cards to residents in over 50,000 villages across 10 states and two Union Territories.m The SVAMITVA (Survey of Villages and Mapping with Improvised Technology in Village Areas) Scheme, launched in April 2020, aims to provide legal ownership

documents to rural property owners. The initiative uses advanced drone and GIS technology to map land and grant a 'Record of Rights' to property owners. With nearly 2.25 crore property cards set to be issued, including 65 lakh in this single distribution, the scheme is significantly formalizing land ownership in rural India.

## WHAT IS THE SVAMITVA SCHEME

The SVAMITVA Scheme (Survey of Villages and Mapping with Improvised Technology in Village Areas) is a central government initiative designed to provide property rights to rural households in India. Launched by the Prime Minister of India on April 24, 2021, the scheme leverages advanced technologies, including drone surveying, to map land parcels in rural areas and create accurate property records. The SVAMITVA Scheme was introduced to address the longstanding challenge of incomplete survey and settlement of rural land, particularly in village Abadi (inhabited) areas. For decades, many rural properties lacked formal documentation, preventing property owners from accessing institutional credit or using their land as a financial asset. This gap in land records not only left rural landowners vulnerable but also hindered economic development, limiting their access to financial assistance, loans, and opportunities for growth.




## ACHIEVEMENTS OF THE SCHEME:

1. **Property Card Distribution:** As of December 27, 2024, 57 lakh property cards have been distributed across 46,351 villages in 10 states (Chhattisgarh, Gujarat, Himachal Pradesh, Madhya Pradesh, Maharashtra, Mizoram, Odisha, Punjab, Rajasthan, Uttar Pradesh) and 2 Union Territories (Jammu & Kashmir and Ladakh).
2. **Widespread Adoption:** The scheme aims to provide a 'Record of Rights' for rural household owners, and it has been onboarded by 31 states and union territories (UTs).
3. **Drone Surveys:** Drone surveys have been completed in 3.17 lakh villages, including the UTs of Lakshadweep, Ladakh, Delhi, Dadra & Nagar Haveli, and Daman & Diu, as well as states like Madhya Pradesh, Uttar Pradesh, and Chhattisgarh.
4. **Property Cards Generated:** Over 2.19 crore property cards have been prepared for nearly 1.49 lakh villages. States like Haryana, Uttarakhand, Puducherry, Tripura, Andaman and Nicobar Islands, and Goa have already generated property cards for all their inhabited villages.
5. **Centralized Monitoring:** A centralized online dashboard tracks the real-time progress of the scheme's implementation, making it easier for stakeholders to monitor its advancement.
6. **Digital Access:** Property cards are now available digitally via the DigiLocker app, enabling beneficiaries to view and download them seamlessly.
7. **Advanced Survey Technology:** The scheme employs survey-grade drones and the Continuous Operating Referencing System (CORS) network, producing high-resolution maps quickly and accurately, significantly improving rural land demarcation.

## KEY FEATURES OF THE SVAMITVA SCHEME:

1. Property Records for Rural Households: It aims to provide clear and accurate property records to households in rural areas, formalizing their land ownership.
2. Drone Technology for Mapping: The scheme uses drone technology to map land parcels accurately, ensuring precision in land record creation.
3. Legal Ownership Cards (Property Cards): It issues legal property cards or title deeds to the owners, which serve as proof of ownership.
4. Reduction of Property Disputes: By providing legal clarity on ownership, the scheme helps in minimizing land-related disputes.
5. Monetization of Property: Rural households can use their land as a financial asset, enabling them to access credit and engage in economic activities.
6. Access to Bank Loans: With legal ownership documents, rural citizens can approach financial institutions for loans using their property as collateral.
7. Improved Rural Planning: Accurate land records aid in better rural planning and development by government bodies.
8. **Collaboration Among Stakeholders:** The scheme involves collaboration between various bodies, such as the Ministry of Panchayati Raj, state departments, and the Survey of India for effective implementation.

## WHAT IS THE SIGNIFICANCE OF THE SVAMITVA SCHEME?

1. **Formalizing Property Ownership:** Aims to provide legal property titles to 1 crore+ rural households. Around 25 lakh property cards have been issued by 2024.
2. **Access to Credit:** Property cards enable rural families to access bank loans by using land as collateral, boosting financial inclusion.
3. **Reducing Land Disputes:** The scheme reduces disputes by creating accurate land records using drones and GIS, resolving 30-40% of land disputes in pilot regions.
4. **Infrastructure & Planning:** Provides detailed land maps for better rural governance and infrastructure development.
5. **Gender Equality:** Supports women's land ownership rights, helping increase the 13% land ownership by women in rural India.
6. **Economic Empowerment:** Enables investment in agriculture and businesses, unlocking the economic value of rural land.
7. **Revenue Generation:** Accurate land records assist in better tax collection, improving government revenues.

## WHAT ARE THE CHALLENGES ASSOCIATED WITH THE SVAMITVA SCHEME?

1. **Difficult Terrain:** Remote areas with poor infrastructure make drone mapping and data collection challenging.
2. **Infrastructure Gaps:** 60% of rural India lacks basic infrastructure like roads, electricity, and internet, slowing down implementation.
3. **Community Resistance:** Rural populations' reluctance to participate in surveys due to lack of awareness or fear of losing land rights.
4. **Ownership Disputes:** Family disputes over land and unclear inheritance complicate accurate ownership identification, especially in states like Uttar Pradesh.
5. **Data Accuracy:** Ensuring accurate validation of land data, particularly in regions with outdated records.
6. **Implementation Delays:** Phased rollout across 6.62 lakh villages facing delays in certain regions, especially in states like Madhya Pradesh.

7. **Capacity Building:** Limited training on drones and GIS for local officials, especially in remote areas, hindering effective implementation.

8. **Legal Challenges:** Varying state-specific land laws and the need for legal coordination among agencies create discrepancies.

**WAY FORWARD:**

1. **Infrastructure Development:** Expediting the improvement of rural infrastructure, such as internet connectivity, roads, and electricity, will enhance the effectiveness of the drone surveys and ensure smoother implementation across all villages.

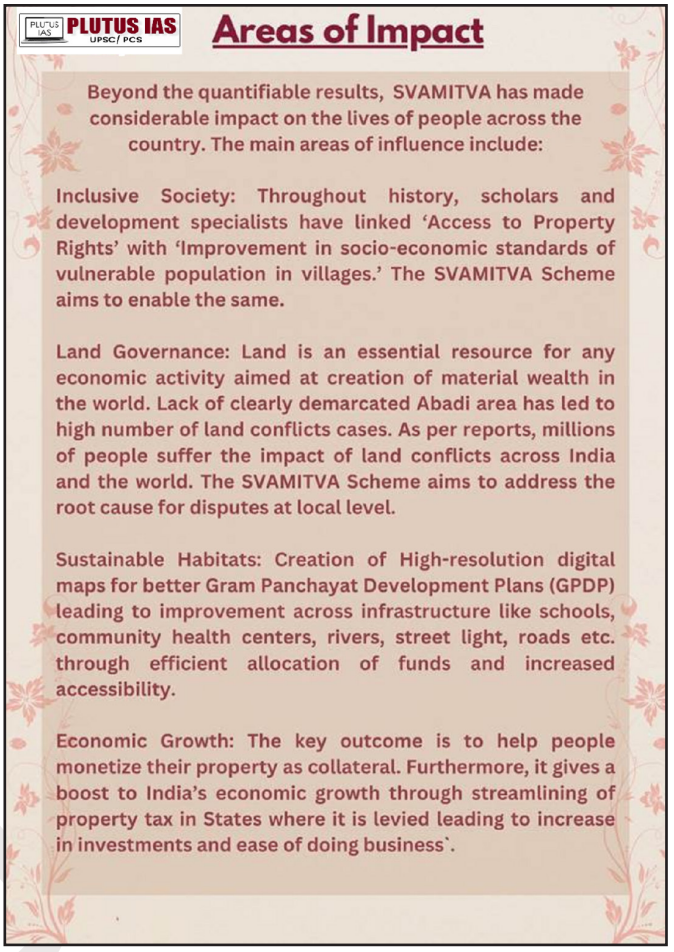
2. **Awareness and Outreach:** Expanding awareness campaigns to educate rural populations about the benefits of the scheme and addressing concerns regarding land rights will foster greater participation and reduce resistance.

3. **Improved Training Programs:** Providing more extensive training on drone technology and GIS for local officials will ensure higher-quality land surveys and more accurate property records.

4. **Legal Reforms and Coordination:** Streamlining legal frameworks and coordinating with state governments to resolve discrepancies in land laws will help to smoothen the integration of land records and property titles.

5. **Addressing Disputes:** Developing a clear, efficient process for resolving ownership disputes, especially those related to inheritance, will be essential in making the scheme truly beneficial for all.

6. **Gender Sensitization:** Ensuring that the scheme includes measures to address women's land rights and increase women's ownership of property is crucial for promoting gender equality in rural areas.




**CONCLUSION:**

The SVAMITVA Scheme stands as a landmark initiative in India's rural development efforts. By providing legal recognition of land ownership and leveraging advanced technologies like drones and GIS, it is addressing long-standing issues related to rural land records. Though challenges remain, including infrastructure gaps, legal hurdles, and community resistance, the scheme has the potential to significantly improve the socio-economic conditions of rural India. By formalizing land ownership, reducing disputes, and unlocking financial opportunities, the scheme can pave the way for sustainable rural growth, economic empowerment, and improved governance.

**PRELIMS QUESTION:**

**Q. Which of the following technologies are used in the implementation of the SVAMITVA Scheme?**

1. Drones

2. GIS Technology

3. Satellite Mapping

4. GPS Technology

**Select the correct answer using the code given below:**

A. 1 and 2 only

B. 1 and 3 only

C. 1, 2, and 4 only

D. 1, 2, and 3 only

**Answer: A**

## MAINS QUESTION:

**Q. Discuss the significance of the SVAMITVA Scheme in promoting rural empowerment and economic growth in India. Highlight the key achievements, challenges, and the way forward for the successful implementation of the scheme.**

**(250 words, 15 marks)**

## LACHIT BORPHUKAN: THE SHIVAJI OF THE NORTHEAST

### WHY IN THE NEWS?

Lachit Borphukan was a legendary army commander of the Ahom kingdom, best known for his leadership during the Battle of Saraighat, where he successfully defended Assam against the Mughal forces. Lachit's actions not only saved Assam but also became a symbol of resilience and self-identity for the Assamese people. His courage and strength have earned him recognition as the 'Shivaji of the Northeast,' solidifying his place as one of India's greatest military heroes.


### THE AHOM KINGDOM:

### LACHIT BORPHUKAN

### EARLY LIFE

Lachit Borphukan was born on 24 November 1622 at Charaideo in Assam. He was the youngest son of Momai Tamuli Borbarua and Kunti Moran. He was born into a royal family. Momai Tamuli Borbarua was the commander-in-chief of the Ahom army, and he was the first Borbarua (Phu-Ke-Lung) of Upper Assam. Lachit's early education took place at his residence, where he was educated in subjects like Ahom scripture, Hindu religion, economics, and military strategies.

### CAREER

Lachit Borphukan was appointed as the commander of 'Hanstidhara Tamuli' and held various posts within the Ahom state. His talent and bravery were first recognized when he successfully handled the position of "Ghura Baruah" and later "Shimaluguria Phukan." He was later appointed as the chief officer, Dulakasharia Baruah, responsible for controlling the king's palace. It was during this time that Lachit's skills were recognized by Swargadeo Chakradhwaj Singha, who appointed him as Commander-in-Chief of the Ahom army.

### BATTLE OF SARAIGHAT:

In 1662, the Mughal forces under Emperor Aurangzeb invaded Assam. Lachit Borphukan played a crucial role in the defense of Guwahati from the Mughal forces. Despite being severely ill, he led his troops in

| Period | Key Events |
|---|---|
| **1228** | **Establishment**: The Ahom Kingdom was founded by Sukaphaa, a Tai prince from Mong Mao (present-day Yunnan Province, China). He established the kingdom in the Brahmaputra Valley, based on wet rice agriculture. |
| **16th Century (Suhungmung's reign)** | **Expansion**: Under King Suhungmung, the kingdom expanded significantly and became multi-ethnic, incorporating various ethnic groups from the Brahmaputra Valley and beyond. |
| **Late 17th Century** | **Battle of Saraighat (1671)**: Lachit Borphukan, the Ahom army commander, successfully defended the kingdom against Mughal invasion, preserving Assam's sovereignty and culture. |
| **18th Century** | **Moamoria Rebellion**: A series of uprisings by the Moamoria community weakened the kingdom's control, reducing its strength. |
| **Early 19th Century** | **Burmese Invasions**: The Ahom Kingdom faced repeated invasions from Burma, weakening its military and political power. |
| **1826** | **British Conquest**: After the defeat of the Burmese in the First Anglo-Burmese War and the signing of the **Treaty of Yandabo**, control of the Ahom Kingdom passed into the hands of the British East India Company, ending the kingdom's independence. |

protection of Assamese identity and culture from foreign invasions. His efforts in maintaining the integrity of the Ahom kingdom were instrumental in preserving the region's autonomy.

**Lachit Divas:** His contributions to the state of Assam and its victory are commemorated every year on 24 November as Lachit Divas, a day to honor his legacy and promote his ideals of bravery, leadership, and patriotism.

**Building of Lachit Maidan:** To honor his memory and legacy, Lachit Maidan was constructed in 1672 by the then king, Swargadeo Udayaditya Singha, where his remains lie in rest. This site continues to be a symbol of Lachit Borphukan's sacrifice for the Assamese nation.

## WHY LACHIT BORPHUKAN IS CALLED THE SHIVAJI OF THE NORTHEAST

**Exceptional Leadership:** Like Shivaji Maharaj, Lachit Borphukan displayed outstanding leadership during the Battle of Saraighat, where he effectively commanded the Ahom forces to protect their kingdom from the Mughal invasion.

**Strategic Brilliance:** Lachit, akin to Shivaji, demonstrated great military strategy, using guerrilla tactics to outmaneuver the technologically superior a desperate battle against the Mughal fleet. Lachit's leadership, determination, and selfless commitment to his duty inspired his soldiers to rally and fight valiantly. After an intense battle, the Mughals were forced to retreat, and Guwahati was successfully defended. Lachit's soldiers pursued the retreating Mughal forces to the Manas River, ensuring the complete victory of the Ahom forces.

## CONTRIBUTIONS OF LACHIT BORPHUKAN:

**Defender of Assam:** Lachit Borphukan is most famously remembered for his leadership during the Battle of Saraighat in 1671, where he successfully

**Master of Military Strategy:** Lachit revolutionized the tactics employed by the Ahom army, employing guerrilla warfare to overcome the Mughal forces, despite being outnumbered and technologically inferior.

**Strong Leadership and Patriotism:** Despite being severely ill, Lachit's personal commitment to his duty and the welfare of his soldiers stood as a model of leadership, inspiring his men to continue fighting against overwhelming odds.

**Preserving Assamese Culture:** Through his actions and leadership, Lachit Borphukan ensured the

Mughal army and ultimately securing victory despite being outnumbered.

**Patriotism Above All:** Lachit's unwavering commitment to his country and his people was evident when he put national duty above personal relationships, even sacrificing his maternal uncle for the greater good, showcasing the same patriotic spirit seen in Shivaji's leadership.

**Unyielding Courage:** Lachit's courage was comparable to that of Shivaji. Despite severe illness during the Battle of Saraighat, he led his troops from the front, refusing to retreat and inspiring his soldiers to fight for their land.

**Uniting Forces:** Just as Shivaji united the Marathas, Lachit Borphukan managed to bring together various tribal groups under the banner of Ahom, forming a cohesive force to defend Assam from foreign invaders.

**Symbol of Resistance:** Like Shivaji's resistance against the Mughal Empire, Lachit's fight against the Mughal expansion in the Northeast made him a symbol of defiance, preventing the Mughal Empire from extending its reach into Assam and the Northeast.

**Legacy of Valor:** The legacy of Lachit Borphukan, much like Shivaji's, continues to inspire generations. In recognition of his contributions to Assamese pride and independence, he is remembered annually on Lachit Divas, celebrated across Assam.

## CONCLUSION

Lachit Borphukan was a symbol of indomitable courage and strong leadership. His contributions to the defense of Assam and his visionary leadership remain ingrained in Assamese history. The courage and foresight of Lachit Borphukan continue to inspire the people of Assam, and his legacy is celebrated annually on Lachit Divas, honoring his heroism and the victory of the Assamese army at the Battle of Saraighat.

## PRELIMS QUESTION:

**Q. Lachit Borphukan is often referred to as the 'Shivaji of the Northeast' due to his significant role in defending Assam. Which of the following battles is he famous for?**

1. Battle of Plassey
2. Battle of Saraighat
3. Battle of Alaboi
4. Battle of Haldighati

**Select the correct answer from the options given below:**

A) 1 and 2

B) 2 and 3

C) 1 and 4

D) 3 and 4

**ANSWER: B**

## MAINS QUESTION:

**Discuss the contributions of Lachit Borphukan in shaping the history and defense of Assam. How has his leadership earned him the title of the 'Shivaji of the Northeast'?**

**(Answer in 250 words)**