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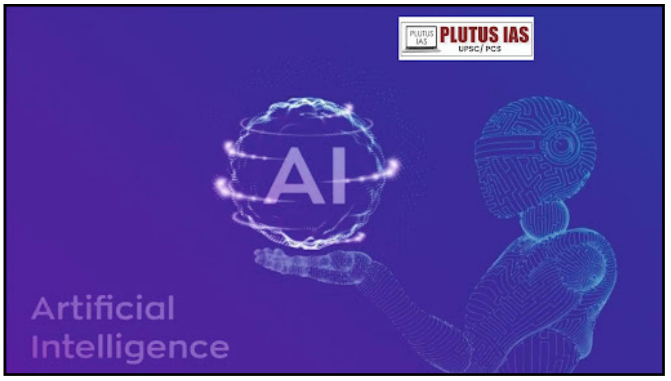
"GOVERNING AI: A CRUCIAL IMPERATIVE FOR THE FUTURE"

WHY IN THE NEWS?

The Paris AI Action Summit 2025 will be a pivotal event in shaping global AI policies, governance, and innovation. Led by India and France, the summit will gather world leaders, tech giants, and policymakers to discuss key issues like privacy, ethics, AI governance, and economic impact. The focus areas include AI regulation, data security, economic growth, and global collaboration, aiming to establish responsible AI frameworks, safeguard user data, and drive AI-driven innovation across industries.



DEFINITION OF AI:

Artificial Intelligence (AI) refers to the ability of machines or computer systems to simulate human intelligence by performing tasks such as learning, reasoning, problem-solving, and decision-making. It enables machines to analyze data, recognize patterns, and make predictions with minimal human intervention.

GLOBAL AI LAWS, AGREEMENTS, AND COOPERATION TREATIES

Name	Enacted By / Organization	Mandate
EU AI Act (2024)	European Union (EU)	Regulates AI systems based on risk levels, with strict rules for high-risk applications.
U.S. Executive Order on AI (2023)	U.S. Government	Ensures AI safety, security, transparency, and promotes AI-driven innovation.
China's AI Regulations	Chinese Government	Imposes restrictions on generative AI, deepfakes, and ethical AI development.
India's AI Framework	Government of India	Focuses on responsible AI use, data protection, and AI-driven economic growth.
G7 Hiroshima AI Process (2023)	G7 Nations	Establishes voluntary AI governance standards among G7 member countries.
Global Partnership on AI (GPAI)	OECD & Partner Countries	Promotes human-centric AI policies, research, and ethical AI deployment.
OECD AI Principles	Organization for Economic Cooperation and Development (OECD)	Provides guidelines for trustworthy and ethical AI.
UNESCO AI Ethics Framework	United Nations (UNESCO)	Sets global ethical standards for AI to ensure fairness, inclusivity, and human rights protection.
EU-U.S. AI Collaboration	European Union & United States	Aligns AI governance frameworks, enhances AI safety, and promotes innovation.

Name	Enacted By / Organization	Mandate
India-France AI Cooperation	Governments of India & France	Strengthens AI research, innovation, and regulatory policy alignment.
China-EU AI Dialogue	European Union & China	Focuses on AI safety, trade regulations, and cross-border AI policies.
AI in BRICS Nations	Brazil, Russia, India, China, South Africa (BRICS)	Develops common AI standards and promotes AI cooperation among BRICS members.

APPLICATIONS OF AI IN VARIOUS FIELDS

Field	Application	Example (Global & India)	Data/Impact
Healthcare	Improved Diagnostics – AI analyzes medical images (X-rays, MRIs) with higher accuracy.	Global: PathAI aids in cancer diagnosis. India: Niramai uses AI for early breast cancer detection.	A study in JAMA found AI detecting diabetic retinopathy with accuracy similar to ophthalmologists.
	Drug Discovery – AI accelerates drug discovery by analyzing large datasets.	Global: Atomwise predicts drug effectiveness. India: Bengaluru-based Innoplexus uses AI for faster drug research.	AI can reduce drug development time and cost significantly.
Transportation	Autonomous Vehicles – AI-powered self-driving cars enhance road safety.	Global: Waymo tests self-driving cars. India: Tata Elxsi works on AI for autonomous driving.	NHTSA reports 94% of accidents are due to human error, AI can reduce this.
	Traffic Optimization – AI analyzes real-time traffic data to optimize flow.	Global: Google Maps provides real-time updates. India: Bengaluru Traffic Police uses AI-powered Adaptive Traffic Signals.	AI can cut travel time by up to 25%.
Retail	Personalized Recommendations – AI suggests products based on customer behavior.	Global: Amazon uses AI for personalized recommendations. India: Flipkart's AI models enhance product recommendations.	McKinsey reports AI-driven personalization can increase sales by 20%.
	Inventory Management – AI predicts demand to optimize stock levels.	Global: Walmart optimizes inventory with AI. India: Reliance Retail uses AI for supply chain efficiency.	AI can reduce waste and stockouts, improving customer satisfaction.

Field	Application	Example (Global & India)	Data/Impact
Finance	Fraud Detection – AI identifies suspicious financial transactions.	Global: Banks use AI to flag fraudulent activities. India: ICICI Bank deploys AI for real-time fraud detection.	AI-powered fraud detection can reduce losses by 70%.
	Risk Management – AI assesses risks by analyzing financial data.	**Global:** Insurance firms use AI for risk profiling. **India:** SBI Life uses AI for customer risk assessment.	AI improves **loan approval accuracy and reduces financial risks**.
Manufacturing	**Predictive Maintenance** – AI detects potential failures in machinery.	**Global:** General Electric uses AI for jet engine maintenance. **India:** Tata Steel employs AI for equipment health monitoring.	Predictive maintenance can **reduce downtime by 50% and extend equipment lifespan by 40%**.
	Quality Control – AI-powered vision systems detect product defects.	**Global:** AI inspects manufactured goods for quality. **India:** Maruti Suzuki uses AI for vehicle quality checks.	AI enhances **product reliability and reduces manufacturing waste**.
Education	**Personalized Learning** – AI adapts content to students' learning pace.	**Global:** Khan Academy uses AI for math tutoring. **India:** Byju's AI-based platform tailors lessons for students.	AI-driven education tools **improve student engagement and performance**.
	Automated Grading – AI evaluates assignments, saving teachers time.	**Global:** AI grades online tests automatically. **India:** CBSE is exploring AI for exam evaluation.	AI can **reduce grading workload by over 40%**.
Customer Service	**Chatbots** – AI-powered virtual assistants provide instant support.	**Global:** Many companies use AI chatbots. **India:** HDFC Bank's EVA chatbot answers customer queries.	AI chatbots **cut customer service costs by 30%**.
	Personalized Recommendations – AI suggests relevant content/products.	**Global:** Netflix recommends shows using AI. **India:** Hotstar uses AI to recommend content.	AI-driven recommendations **enhance user experience and engagement**.
Agriculture	**Precision Farming** – AI optimizes crop yields using sensors and drones.	**Global:** AI drones monitor farmland. **India:** Agri-tech startup CropIn helps farmers with AI-based solutions.	AI **increases crop yields while reducing water and pesticide use**.
	Autonomous Tractors – AI automates farming tasks for efficiency.	**Global:** John Deere develops self-driving tractors. **India:** Mahindra & Mahindra is working on AI-powered agricultural machinery.	AI **lowers labor costs and boosts productivity**.

KEY ISSUES CONCERNING AI REGULATION AND USE

- **Defining AI:** There is no universally agreed-upon definition, making regulation inconsistent. An OECD 2023 survey found that policymakers struggle to define AI, affecting global policy alignment.
- **Balancing Innovation and Regulation:** Overregulation can slow AI advancements in critical sectors like healthcare. EU AI Act could delay life-saving AI medical tools.
- **Bias and Discrimination:** AI models can reinforce societal biases, leading to unfair outcomes. Amazon's AI hiring tool discriminated against women due to biased training data.
- **Transparency and Explainability:** Many AI decisions lack clear explanations, making accountability difficult. AI-driven loan rejections without justification raise fairness concerns.
- **Accountability and Liability:** Unclear legal responsibility when AI systems fail or cause harm. Who is liable when a self-driving car causes an accident—the manufacturer, software developer, or owner?
- **Safety and Security Risks:** AI vulnerabilities can lead to failures or cyberattacks. Example: Tesla's Autopilot failed to detect an obstacle, causing a crash.
- **Data Privacy Concerns:** AI systems collect and process vast amounts of personal data, raising privacy risks. AI-powered surveillance tools often lack proper safeguards for biometric data.
- **Global Cooperation Challenges:** Differing AI regulations create fragmentation, making compliance complex. For example, the EU enforces a risk-based AI approach, while the US prefers sector-specific regulations.
- **Public Perception and Misinformation:** Fear, distrust, and AI-generated misinformation can erode public confidence. Example: Deepfakes spread misinformation, impacting elections and public discourse.

COURSE OF ACTION FOR REGULATING AI AND ENSURING SUSTAINABLE AI DEVELOPMENT

Establish Strong Ethical AI Principles: AI must prioritise human rights, fairness, and transparency to ensure ethical use. For example, the EU's GDPR enforces strict AI data privacy laws, protecting individuals from misuse.

Implement Robust Safety and Security Standards: AI systems should be safe, reliable, and resistant to cyber threats. Microsoft's AI-driven cybersecurity tools detect and prevent cyberattacks in real-time.

Create Clear and Adaptive AI Regulations: Governments must develop flexible laws that evolve with AI advancements. Example: India's NITI Aayog AI framework promotes responsible AI use in healthcare and agriculture.

Ensure AI Transparency and Explainability: AI models should be interpretable and accountable for their decisions. Example: Google's Explainable AI tools help industries understand AI-driven decisions.

Encourage International Cooperation and AI Governance: Global partnerships can harmonise AI regulations and prevent misuse. For example, the Global Partnership on AI (GPAI) unites nations to ensure ethical AI development.

Invest in AI Education and Workforce Training: AI literacy programs must prepare individuals for AI-driven economies. Example: Google's AI for Everyone initiative trains professionals on ethical AI practices.

Promote AI for Sustainable Development: AI should address global challenges like climate change, agriculture, and healthcare. AI-driven precision farming in India optimises water use and boosts crop yields.

Establish Independent AI Oversight and Accountability Mechanisms: Regulatory bodies must monitor AI use, enforce laws, and address violations. For example, the EU AI Act proposes an independent authority to oversee AI safety and ethics.

CONCLUSION

The Paris AI Action Summit 2025 is a pivotal step toward global AI governance. Led by India and France, it highlights the need for collaboration on ethics, regulation, and innovation. Constructive global action is crucial for establishing transparent policies and fostering sustainable advancements to ensure AI's responsible and inclusive growth.

PRELIMS QUESTION:

Q. With reference to the Global Partnership on Artificial Intelligence (GPAI), Consider the following statement:

1. Global Partnership on Artificial Intelligence is an Intergovernmental cooperation set up by the G20 group.

2. India is the founding member of the Global Partnership on Artificial Intelligence (GPAI)

3. GPAI is hosted by the Organization of the Petroleum Exporting Countries (OPEC).

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

ANSWER: A

MAINS QUESTION:

EVOLUTION OF INDIA-FRANCE TIES:

Year	Key Highlights
1950s	– Diplomatic relations established post-Indian independence.
	– Emphasis on cultural exchanges and shared democratic values.
	– France supported India's intellectual and educational initiatives.
1980s	– Growth in defence and technological cooperation, including civil nuclear energy.
	– Strengthened ties in trade and international diplomacy.

Q. The regulation of Artificial Intelligence is not just the need of the hour but a raison d'être (fundamental necessity). Comment.

(Answer in 150 words)

FRANCE: A BEHIND CURTAIN FRIEND OF INDIA

WHY IN THE NEWS?

India and France's recent agreement to enhance cooperation in high-end technology sectors is a significant development, reflecting the growing partnership between the two nations. This includes discussions on long-standing issues in civil nuclear cooperation, setting the stage for Prime Minister Narendra Modi's upcoming visit. The Foreign Office Consultations in Paris involved key officials from both sides, including Foreign Secretary Vikram Misri and French Foreign Minister Jean-Noël Barrot. The talks also covered the upcoming Summit for Action on Artificial Intelligence, which India is set to co-chair, highlighting its role in global tech discussions. Additionally, the focus on coordinated surveillance in the Indian Ocean Region signals both countries' commitment to strengthening security and strategic ties.

Year	Key Highlights
2014	– Prime Minister Modi's visit marks the renewal of the India-France strategic partnership.
	– Major defence cooperation (e.g., Rafale deal), clean energy initiatives, and climate change collaboration.
	– Expansion in trade relations focusing on technology, defence, and infrastructure.
2025	– Economic cooperation growth, especially in green technologies, smart cities, and infrastructure.
	– Continued defence and security collaboration, especially in cybersecurity and Indo-Pacific security.
	– Focus on science & technology cooperation in space research, AI, and digital innovation.
	– Cultural ties expanding through education exchanges, Indian diaspora, and student mobility.

KEY AREAS OF COOPERATION BETWEEN INDIA AND FRANCE:

1. **Defense & Security**: Joint military exercises, defence technology sharing, and maritime security cooperation.
2. **Economic & Trade**: Strong trade relations, investments in green technologies, and joint infrastructure projects.
3. **Clean Energy & Climate Change**: Cooperation in renewable energy, the International Solar Alliance, and climate action efforts.
4. **Science & Technology**: Collaboration on space research, AI, health tech, and innovation partnerships.
5. **Cultural & Educational Exchange**: Student exchange programs, cultural diplomacy, and promoting French language education in India.
6. **Tourism**: Joint efforts to promote tourism, especially heritage and eco-tourism, and hosting related events.
7. **Health & Medicine**: Collaboration on health projects, vaccine partnerships, and medical research.
8. **Diplomatic & Strategic Ties**: Multilateral cooperation through forums like UNESCO, G7, and G20, and regional geopolitical collaboration.

SIGNIFICANCE OF FRANCE FOR INDIA:

1. **Strategic Partnership:** France is a key strategic partner for India, with strong cooperation in defence, security, and counterterrorism.
2. **Defense Cooperation:** France is one of India's most trusted defence partners, with joint military exercises, advanced defence technologies, and the purchase of Rafale fighter jets.
3. **Trade and Economic Ties:** France is an important trading partner, with significant French investments in India. Bilateral trade covers sectors like energy, aerospace, and manufacturing.
4. **Clean Energy and Climate Action:** France plays a crucial role in India's renewable energy goals, particularly through cooperation in solar energy and participation in the International Solar Alliance.
5. **Cultural and Educational Ties:** France is a centre for higher education and cultural exchange, with thousands of Indian students studying in France.
6. **Scientific and Technological Collaboration:** Joint ventures in space research, science and technology innovations, and collaborations on environmental sustainability are key areas of mutual interest.

7. **Tourism and Diplomacy:** France is a popular destination for Indian tourists, and both countries work together to promote tourism. The diplomatic relationship strengthens through frequent visits, summits, and cultural programs.

8. **Geopolitical Influence:** As a permanent member of the United Nations Security Council (UNSC) and a member of major international forums like G7, G20, and the EU, France supports India's role in global governance and regional security.

9. **People-to-People Connections:** France has a large Indian diaspora, fostering deeper cultural, social, and economic ties between the two nations.

ISSUES HINDERING INDIA-FRANCE RELATIONS:

1. **Trade Imbalance**: India's exports to France are low-value, while it imports high-value products, creating a trade imbalance.
2. **Visa & Immigration**: Visa restrictions, particularly for students and professionals, remain a challenge despite efforts to ease processes.
3. **Defence & Technology Transfer**: Delays in defence contracts and issues around technology and intellectual property rights complicate cooperation.
4. **Nuclear Energy**: Concerns over liability laws and nuclear safety hinder progress in nuclear power projects.
5. **Cultural Differences**: Societal and cultural differences can occasionally affect diplomatic and business interactions.
6. **Terrorism & Security**: Differences in counterterrorism strategies may arise based on national security concerns.
7. **Geopolitical Alignment**: Diverging foreign policy priorities, especially on regional issues, occasionally affect cooperation.
8. **Environmental Challenges**: Joint environmental projects face hurdles in balancing climate goals with economic needs.
9. **Bureaucratic Delays**: Slow execution of agreements in various sectors due to bureaucratic red tape.

COURSE OF ACTION TO STRENGTHEN INDIA-FRANCE TIES:

1. **Boost Bilateral Trade**: Focus on diversifying trade beyond high-value products, encourage Indian exports to France, and reduce the trade imbalance.
2. **Enhance Strategic Partnerships**: Expand cooperation in defence, space, and cybersecurity, ensuring quicker execution of defence contracts and technology transfers.
3. **Increase Cultural and People-to-People Exchanges**: Foster deeper cultural understanding through academic exchanges, tourism, and cultural programs. Encourage more French students to study in India and vice versa.
4. **Facilitate Ease of Movement**: Simplify visa processes for students, professionals, and tourists to encourage more bilateral exchanges.
5. **Collaborate on Innovation and Technology:** Enhance cooperation in clean energy, AI, and high-tech industries through joint research platforms and private sector engagement.
6. **Joint Initiatives on Global Issues:** Align both countries' policies on pressing global issues like climate change, counterterrorism, and sustainable development.
7. **Nuclear Cooperation:** Resolve issues related to nuclear liability and safety and expedite projects on nuclear energy, especially for India's energy needs.
8. **Strengthen Diplomacy in Multilateral Forums:** Both countries should collaborate more in international organizations like the UN, G20, and WTO to advance common interests and improve their global standing.
9. **Promote Regional Security Cooperation:** Coordinate more closely on regional security challenges, especially in the Indo-Pacific, and share expertise on maritime security and counterterrorism.

10. **Support Green Energy Transition:** Work on joint projects to promote sustainable and clean energy, enhancing collaboration in green technologies.

CONCLUSION:

The India-France relationship is poised for further growth, driven by shared interests in defence, clean energy, trade, and strategic cooperation. With both nations working to address issues like trade imbalances, defence technology transfers, and nuclear cooperation, their partnership can be deepened through focused efforts in these areas. Strengthening people-to-people exchanges, facilitating ease of movement, and collaborating on global issues like climate change will also be crucial to fostering a stronger bond. By continuing to build on their strategic, economic, and cultural ties, India and France have the potential to become even more significant global partners in the years to come.

PRELIMS QUESTIONS:

Q. With reference to the India-France bilateral relations, consider the following statements:

1. India and France established diplomatic relations shortly after India's independence in 1947.

2. The Rafale fighter jet deal between India and France was signed in 2014.

3. France has supported India's membership in the United Nations Security Council.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

Answer: B

MAINS QUESTIONS:

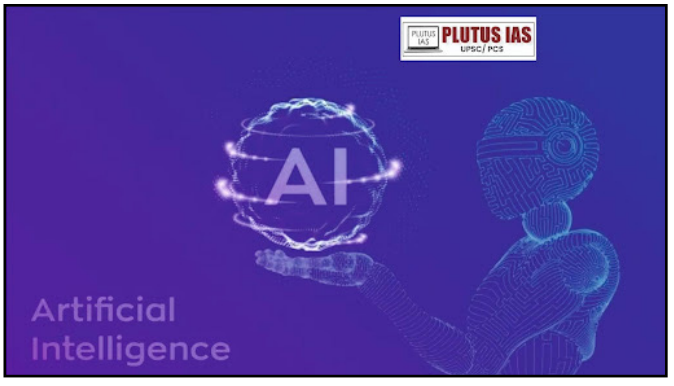
Q. Discuss the key areas of cooperation between India and France and how these contribute to strengthening their bilateral relationship.

(250 words, 15 marks)

PRELIMS BITS: GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE (GPAI)

WHY IN THE NEWS?

The Paris AI Action Summit 2025 will be a pivotal event in shaping global AI policies, governance, and innovation. Led by India and France, the summit will gather world leaders, tech giants, and policymakers to discuss key issues like privacy, ethics, AI governance, and economic impact. The focus areas include AI regulation, data security, economic growth, and global collaboration, aiming to establish responsible AI frameworks, safeguard user data, and drive AI-driven innovation across industries.



GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE (GPAI)

Category	Details
Full Name	Global Partnership on Artificial Intelligence (GPAI)
Established	June 15, 2020
Proposed By	Canada and France (2018 G7 Summit)
Hosted By	Organization for Economic Co-operation and Development (OECD)

Category	Details
Objective	Guide responsible AI development, ensuring it aligns with human rights and democratic values
Founding Members (15)	Australia, Canada, France, Germany, India, Italy, Japan, Mexico, New Zealand, Republic of Korea, Singapore, Slovenia, UK, USA, EU
Joined in 2021 (10)	Czechia, Israel + additional EU countries (total membership: 25)
Total Members (2022)	29 countries
Pending Members (7)	Austria, Chile, Finland, Malaysia, Norway, Slovakia, Switzerland
Key Activities	Supports AI research, policy recommendations, and international collaboration
Working Groups	– Responsible AI (including AI & Pandemic Response)
	– Data Governance
	– Future of Work
	– Innovation & Commercialization
Centres of Expertise	– Montreal (supports Responsible AI & Data Governance)
	– Paris (supports Future of Work & Innovation & Commercialization)
Steering Committee Chairs	– Jordan Zed & Baroness Joanna Shields (2020-2021)
	– Joanna Shields & Renaud Vedel (2021-2022)
	– Yoichi Iida & Inma Martinez (2023-2024)
Rotating Presidency	Canada (2020), France (2021), Japan (2022), India (2023)

PRELIMS QUESTION:

Q. Consider the following countries:
1. Argentina
2. India
3. Russia
4. China

How many of the above countries are members of the Global Partnership on Artificial Intelligence (GPAI)?
A. Only one
B. Only two
C. Only three
D. All four

ANSWER: B

ARTICLE 200:DOUBLE EDGE SWORD

WHY IN THE NEWS?

The issue of Tamil Nadu Governor RN Ravi withholding assent to bills passed by the state assembly has sparked a significant legal examination by the Supreme Court. The Court questioned whether the Governor's decision to withhold assent should be considered final, highlighting concerns about the Governor's discretion. Senior Advocate Rakesh Dwivedi, representing the petitioners, argued that the Governor cannot withhold assent indefinitely. The Court pointed out that the Tamil Nadu Assembly had reconsidered and sent the bills back to the Governor in mid-November, but there was no communication from him regarding the withholding of assent nor any reasons given. This raises questions about the transparency and accountability of the Governor's actions, especially when no clear message or explanation was provided.

WHAT IS ARTICLE-200?

Article 200 of the Indian Constitution outlines the powers of the Governor in relation to the assent of bills passed by the State Legislature. It specifies the procedure the Governor must follow after a bill is passed by the Legislative Assembly (or both Houses, in states with a Legislative Council) of a state.

Presentation to the Governor: After a bill is passed by the State Legislature, it is presented to the Governor for assent.

Governor's Options: Assent to the bill, Withhold assent to the bill, Reserve the bill for the President's consideration in certain cases.

Returning Bills: If the Governor withholds assent (except for Money Bills), the bill can be returned to the Legislature for reconsideration with a message. If passed again, the Governor must assent.

Reservation for President: The Governor can reserve a bill for the President if it undermines the powers of the High Court.

WHY WAS ARTICLE 200 ADDED TO THE CONSTITUTION

Article 200 was added to the Indian Constitution to regulate the Governor's role in handling bills passed by the State Legislature, ensuring a balance of power and protecting constitutional integrity.

1. **Preventing Unconstitutional Legislation**: It allows the Governor to withhold assent or return bills for reconsideration, preventing hasty or unconstitutional laws.
2. **Ensuring Gubernatorial Accountability**: The Governor must act within a reasonable time and communicate reasons for withholding assent, ensuring accountability.
3. **Safeguarding Constitutional Principles**: It allows the Governor to reserve bills for the President if they undermine constitutional principles, such as judicial powers.
4. **Preventing Legislative Overreach**: By enabling the return of bills for reconsideration, it adds a layer of scrutiny, preventing extreme decisions by the Legislature.

WHAT ARE THE CONCERNS OVER ARTICLE-200

1. **Indefinite Delays:** Lack of a time frame for granting assent can lead to prolonged delays, creating a constitutional impasse and hindering governance.
2. **Partisanship and Political Influence:** Governors may act under central government influence, leading to political manipulation and accusations of undermining federalism, especially in opposition-ruled states.
3. **Lack of Transparency:** The Governor's reasons for withholding assent or reserving bills for the President are often unclear, raising concerns about accountability and transparency.
4. **Constitutional Impasse:** Delays or refusals to assent can result in deadlocks, disrupting the functioning of state legislatures and delaying important laws.
5. **Impact on Legislative Independence:** The Governor's power to return bills for reconsideration can undermine state legislative autonomy, potentially exerting influence over the legislative process.
6. **Legal and Political Conflicts:** Disputes between the Governor and state governments can escalate into legal and political confrontations, further straining state-central relations.

WAY FORWARD

1. **Time-bound decision-making:** Governors should be mandated to act within a specified time frame to prevent delays.
2. **Clear guidelines for discretionary**

powers: Establishing a clearer framework for the Governor's role could ensure that their actions are transparent and accountable.

3. **Strengthened judicial oversight:** Judicial review of the Governor's actions could help prevent misuse of powers and ensure adherence to constitutional principles.
4. **Enhanced Communication:** Governors must communicate reasons for with holding assent or reserving bills promptly, promoting transparency.
5. **Limit Discretionary Powers:** Discretionary powers should be used sparingly and based on constitutional principles, not political motives.
6. **Strengthening Federal Relations:** Governors should act impartially to maintain the balance of power between state and central governments.

CONCLUSION:

Article 200 plays a crucial role in maintaining a balance of power between the Governor and the State Legislature. concerns about delays, partisanship, and transparency highlight the need for clearer guidelines and reforms to ensure that the Governor's powers are used responsibly, in accordance with constitutional principles, and with respect for state autonomy. The ongoing legal scrutiny by the Supreme Court underscores the importance of addressing these issues to strengthen India's democratic framework.

PRELIMS QUESTIONS:

Q. With reference to Article 200 of the Indian Constitution, consider the following statements:

1. The Governor has the authority to withhold assent to bills passed by the State Legislature indefinitely without providing any reasons.
2. The Governor must reserve for the President's consideration any bill that undermines the powers of the High Court or contradicts central laws.
3. The Governor is required to provide reasons for withholding assent to bills within a reasonable time.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

Answer: B

MAINS QUESTIONS:

Q. Discuss the concerns surrounding Article 200 of the Indian Constitution and suggest reforms to ensure the proper exercise of the Governor's powers in the assent process.

(250 words, 15 marks)

PRELIMS BITS: ENDEMIC ANIMALS TO INDIA

NAME OF THE ENDEMIC ANIMAL, ITS ENDEMIC REGION IN INDIA, AND ITS BASIC FEATURES:

Name of Animal	Endemic Region in India	Basic Features
Sangai Deer (Brow-Antlered Deer)	Keibul Lamjao National Park, Manipur	Semi-aquatic deer, adapted to floating vegetation (Phumdi), endangered.
Kashmir Stag (Hangul)	Kashmir Valley, Jammu & Kashmir	Only red deer species in India, critically endangered.
Rufous Babbler	Western Ghats	A small bird with rufous plumage, found in dense forests.

Name of Animal	Endemic Region in India	Basic Features
Malabar Grey Hornbill	Western Ghats	A large bird with a distinct casque on its beak, feeds on fruits.
Black-and-Orange Fly-catcher	Western Ghats	Small songbird with striking black and orange colors.
Nilgiri Wood Pigeon	Nilgiri Hills, Western Ghats	Large pigeon with dark grey plumage, inhabits dense forests.
Pygmy Hog	Assam (Manas National Park)	World's smallest wild pig, critically endangered.
Indian Giant Squirrel	Western and Central India	Large, colorful tree squirrel, arboreal.
Bare-Bellied Hedgehog	Southern India	Small nocturnal mammal with spiny body, rare species.
Brown Palm Civet	Western Ghats	Nocturnal, tree-dwelling mammal, feeds on fruits and small animals.
Malabar Large-Spotted Civet	Western Ghats	Endangered carnivore, lives in dense forests.
Red-Crowned Roofed Turtle	Northern India (Ganges Basin)	Freshwater turtle with a distinctive red crown on its head.
Nilgiri Flycatcher	Nilgiri Hills, Western Ghats	Small blue bird, found in montane forests.
White-Cheeked Barbet	Western Ghats	Greenish bird with white cheek patches, frugivorous.
Nilgiri Pipit	Nilgiri Hills	Small bird found in grasslands and montane forests.
White-Bellied Treepie	Western Ghats	Tree-dwelling bird with white belly and long tail.
Malabar Gliding Frog	Western Ghats	Large tree frog with webbed feet, capable of gliding.
Great Nicobar Serpent Eagle	Nicobar Islands	Small eagle that preys on reptiles, endemic to Great Nicobar.
Andaman Woodpecker	Andaman Islands	Black woodpecker with strong bill, found in dense forests.
Narcondam Hornbill	Narcondam Island	Large, rare hornbill species with distinctive casque.
Green Avadavat	Central India	Small finch species, bright green plumage.
Yellow-Throated Bulbul	Peninsular India	Medium-sized bird with yellow throat and olive body.
Nilgiri Tahr	Western Ghats (Nilgiri Hills)	Wild goat species, adapted to rocky terrain, endangered.
Nicobar Parakeet	Nicobar Islands	Large green parrot with red beak, found in rainforests.

Name of Animal	Endemic Region in India	Basic Features
Bugun Liocichla	Arunachal Pradesh	Recently discovered bird species, critically endangered.
Nilgiri Laughingthrush	Western Ghats	Social bird with melodious calls, brownish plumage.
Bufo Beddomii	Western Ghats	Toad species, adapted to moist environments.
Rhacophorus Pseudomalabaricus	Western Ghats	Rare tree frog species, capable of gliding.
Bonnet Macaque	Southern India	Monkey species with distinctive bonnet-shaped hair.
Pomona Roundleaf Bat	Western Ghats	Bat species with rounded leaf-nosed structure.
Andaman Shrew	Andaman Islands	Small, nocturnal insectivorous mammal.
Andaman Spiny Shrew	Andaman Islands	Rare shrew species with spiny fur.
Mitred Horseshoe Bat	India	A bat species with horseshoe-shaped nasal folds.
Day's Shrew	Western Ghats	Small shrew species, insectivorous.
Nicobar Flying Fox	Nicobar Islands	Large fruit bat, plays a role in seed dispersal.
Andaman Rat	Andaman Islands	Endemic rodent species, found in forests.
Andaman Horseshoe Bat	Andaman Islands	Nocturnal bat, relies on echolocation for hunting.
Khajuria's Leaf-Nosed Bat	Central India	Small bat species with leaf-like nose structure.
Jungle Palm Squirrel	Peninsular India	Arboreal squirrel, feeds on nuts and fruits.
Kondana Soft-Furred Rat	Maharashtra	Rare rat species found in the Western Ghats.
Nicobar Shrew	Nicobar Islands	Endemic shrew species, found in tropical forests.
Peters's Tube-Nosed Bat	India	Small bat species with unique tube-like nostrils.

REVOLUTIONIZING AGRICULTURAL FINANCE: ENHANCING CREDIT ACCESS FOR FARMERS

WHY IN THE NEWS?

The Union Budget 2025-26 has introduced key measures to strengthen agricultural financing, particularly through the Kisan Credit Card (KCC) scheme. A major highlight is the increase in the loan limit under the Modified Interest Subvention Scheme from ₹3 lakh to ₹5 lakh, reflecting the government's commitment to financial security for farmers and boosting agricultural productivity. With 46.1% of the population engaged in agriculture and allied activities, ensuring accessible credit remains a top priority.

WHAT IS THE KCC

Kisan Credit Card (KCC) Scheme: The Kisan Credit Card (KCC) Scheme was introduced to ensure hassle-free and affordable credit for farmers. It provides easy access to institutional credit at lower interest rates, helping farmers meet various financial needs, including: Short-term & long-term cultivation expenses Post-harvest costsConsumption needs Working capital for allied agricultural activities

BACKGROUND OF THE KISAN CREDIT CARD (KCC) SCHEME

The Kisan Credit Card (KCC) Scheme was introduced in August 1998 by Indian public sector banks to provide farmers with easy access to credit for their agricultural needs. The model scheme was formulated by the National Bank for Agriculture and Rural Development (NABARD) based on the recommendations of the R. V. Gupta Committee. The primary objective was to offer hassle-free credit facilities to farmers, ensuring timely financial support for crop cultivation, post-harvest expenses, and allied agricultural activities.

OBJECTIVES OF THE KISAN CREDIT CARD (KCC) SCHEME

Meeting Short-Term Credit Needs – Providing funds for crop cultivation and seasonal agricultural activities.

Covering Post-Harvest Expenses : Ensuring financial support for storage, transportation, and processing of produce.

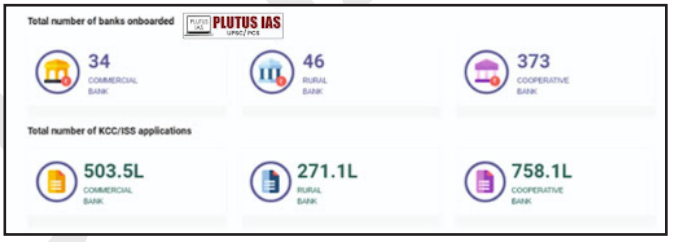
Facilitating Produce Marketing Loans: Helping farmers bridge financial gaps until they sell their produce.

Supporting Household Consumption Needs: Preventing reliance on informal credit for essential family expenses.

Ensuring Working Capital for Farm Assets: Assisting in the maintenance and operation of farm equipment and machinery.

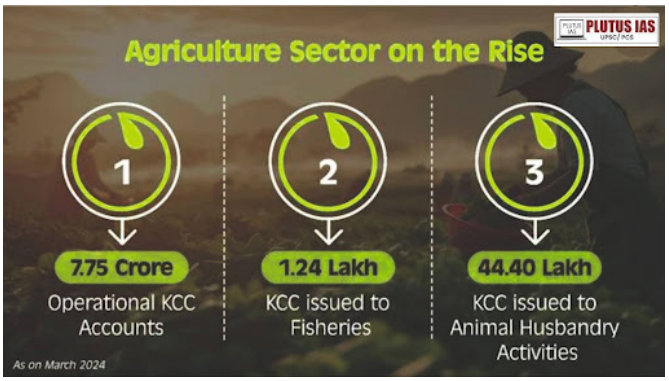
Providing Investment Credit for Allied Activities:- Supporting animal husbandry, dairying, fisheries, and other agricultural extensions.

HOW KCC HELPS FARMERS



- **Easy Access to Institutional Credit** – Provides timely and affordable loans, reducing farmers' dependence on informal moneylenders.
- **Support for Cultivation & Post-Harvest Activities-** This ensures the availability of funds for crop production, harvesting, and storage costs.
- **Marketing & Short-Term Loans** – Helps farmers manage finances until they sell their produce at competitive market rates.
- **Household Consumption Needs** – Offers financial support for essential household expenses, preventing reliance on high-interest loans.
- **Working Capital for Farm Assets** – Assists in the maintenance of farming equipment, irrigation, seeds, and fertilizers.
- **Investment in Allied Activities –** Supports animal husbandry, dairying, and fisheries, expanding income opportunities for farmers.

- **Collateral-Free Loans—**This allows banks to offer loans up to ₹1.60 lakh without collateral, ensuring financial security and easy credit access.



CHALLENGES FACED BY THE FARMERS IN ACCESSING THE FORMAL CREDIT:

- **Limited Access for Marginal & Small Farmers:** Approximately 86.2% of India's farmer population comprises small and marginal farmers. Of these, about half are unable to borrow from either formal or informal sources, indicating a substantial gap in credit accessibility.
- **High Dependency on Informal Credit:** Despite efforts to enhance institutional credit, a significant proportion of small farmers still lack access, leading many to rely on informal lenders who charge exorbitant interest rates.
- **Lack of Collateral:** Many farmers, especially tenant farmers and sharecroppers, lack land ownership documents, making them ineligible for institutional loans.
- **Cumbersome Loan Application Process:** Farmers often face challenges in filling out the application forms required for accessing credit. This lack of knowledge may lead to farmers being unable to provide the necessary information or documents, resulting in their applications being rejected.
- **Regional Imbalance in Credit Distribution:** There is a wide regional imbalance and unequal access by small farmers to institutional credit, with some regions receiving more institutional credit than others.
- **Inadequate Loan Amounts:** Many farmers receive lower loan amounts than required, limiting their ability to invest in better technology, machinery, and equipment.
- **Delayed Loan Disbursement:** The slow processing of loans affects farmers' ability to purchase inputs like seeds, fertilizers, and pesticides on time.
- **High Interest Rates on Unsubsidized Loans:** Approximately 75% of farmers cited interest rates as a challenge in obtaining formal financing, indicating that high interest rates remain a significant barrier.
- **Limited Financial Literacy:** Many farmers lack awareness about available credit schemes, interest subsidies, and financial management, restricting their access to formal credit benefits

KCC-RELATED ISSUES AND LIMITATIONS

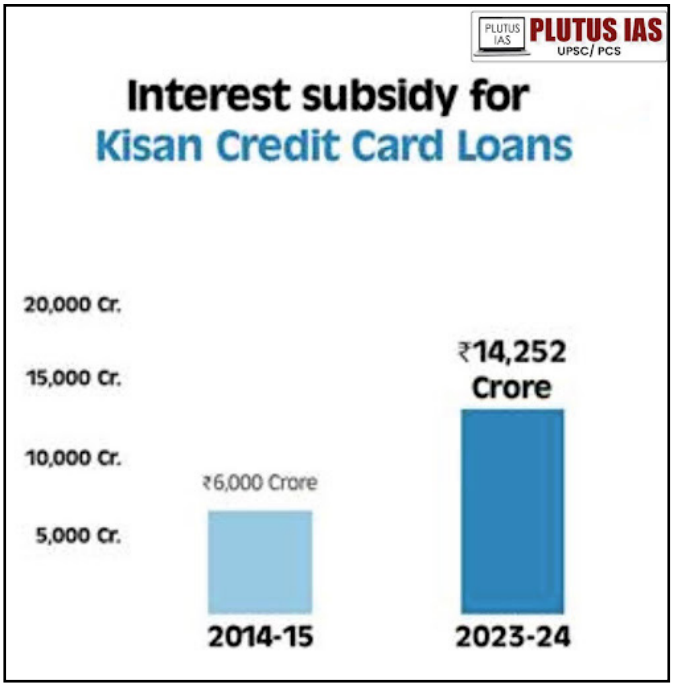
Loan Limit Restrictions: The loan limit for KCC is determined by the District Level Technical Committee (DLTC) or State Level Technical Committee (SLTC), which may not always align with the actual financial needs of farmers.

Margin Requirements: Farmers must maintain a margin based on the loan amount. For instance, loans above ₹1,60,000 to ₹10 lakh require a 10% margin, making access to higher credit more challenging.

Security & Collateral : Loans up to ₹1,60,000 require hypothecation of crops or assets created from the loan. However, for loans exceeding ₹1,60,000, a charge on land is required, limiting access for farmers without land ownership.

Insurance Period Constraints : The insurance period for KCC loans depends on the annual or three-year premium paid, which can be an additional financial burden for small farmers.

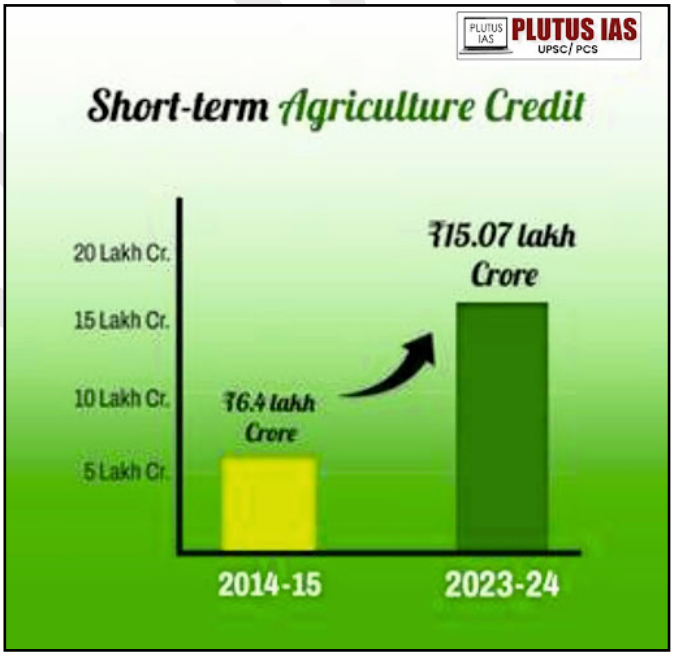
RECOMMENDATIONS OF THE VIJAY SHANKAR VYAS COMMITTEE(2003) TO EXPAND CREDIT FLOW TO AGRICULTURE



- **Expansion of Direct Agricultural Lending:** Banks should increase direct agricultural lending to 12% of net bank credit within two years and 13.5% in the following two years. Indirect lending should be 6% initially, reducing to 4.5% thereafter.
- **Integration of Investment and Production Credit:** Merging investment and production credit would improve the overall credit flow. District-level scales of finance should be revised to align with modern, market-driven agriculture.
- **Strengthening Marketing and Warehouse Financing:** Pledge financing and advances against warehouse receipts should be promoted. Credit for marketing and post-harvest storage should be expanded.
- **Human Resource & Training Development in Rural Banks**: The lack of trained personnel is a major bottleneck in rural financial institutions. Posting technical staff at branch and head offices is necessary for efficient credit delivery.
- **Leveraging Technology & Local Institutions for Credit Outreach:** Use of SHGs, NGOs, Panchayati Raj Institutions, and Farmers' Clubs as development agents to increase credit outreach. Implementing village information kiosks for agriculture and credit dissemination.
- **Legal & Institutional Reforms for Credit Access:** Recognising tenant's and sharecroppers' rights in land records to facilitate access to institutional credit. Treating cooperatives and banks equally regarding charges and stamp duties for loan recovery.

KEY RECOMMENDATIONS OF THE ASHOK DALWAI COMMITTEE(2016)

Enhanced Credit Access for Small & Marginal Farmers: Improve credit availability for tenant farmers, sharecroppers, and landless labourers. Small and marginal farmers hold 80% of total land holdings but receive only 27% of total credit disbursements. Their credit share should be raised to 40%. Expand Kisan Credit Card (KCC) coverage with simplified procedures.



- **Strengthening Institutional Credit Mechanisms:** Improve Regional Rural Banks (RRBs) and Cooperative Banks to ensure last-mile credit delivery. Encourage NBFCs and fintech participation in rural credit.
- **Targeted Interest Subvention & Subsidies:** Shift from universal interest subsidies to a targeted benefit approach for small farmers. Implement Direct Benefit Transfer (DBT) in loan-linked subsidies.

- **Integration of Digital Technology in Credit Disbursement:** Link credit access to Aadhaar and digital banking for faster and transparent loan disbursal. Use AI-based risk assessment to reduce loan defaults.

- **Improving Risk Management & Credit-Linked Insurance:** Ensure all farmer loans are linked to crop insurance (PMFBY) for financial security. Promote warehouse receipt financing to help farmers avoid distress sales.

CONCLUSION

The Kisan Credit Card (KCC) Scheme has played a pivotal role in enhancing agricultural credit accessibility, ensuring that farmers receive timely and affordable financial assistance. With the increased financial support under the Union Budget 2025-26, the government reaffirms its commitment to empowering farmers and strengthening rural economies. These initiatives contribute to agricultural growth, financial security, and sustainable rural development, paving the way for a resilient and self-sufficient farming community in India.

PRELIMS QUESTION:

Q. The Kisan Credit Card loan is mandatorily used for which of the following purposes?

1. Meeting short-term credit requirements for crop cultivation.
2. Covering post-harvest expenses.
3. Availing produce marketing loans.
4. Fulfilling household consumption needs of farmers.
5. Providing working capital for farm assets and allied agricultural activities.
6. Meeting investment credit requirements for agriculture and allied sectors.

Select the correct answer using the code given below:

(a) 1, 2, and 6 only
(b) 2, 3, 4 and 6 only
(c) 1, 2, 3, and 4 only
(d) 1, 2, 3, 4, 5 and 6

ANSWER: D

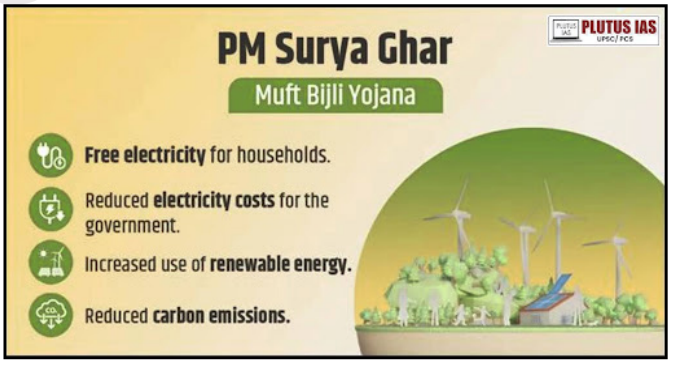
MAINS QUESTION:

Q. The Kisan Credit Card (KCC) scheme has been instrumental in providing timely and affordable credit to farmers, making it the backbone of agricultural financing in India. Discuss the significance of KCC in ensuring financial inclusion for farmers and suggest measures to enhance its effectiveness. (Answer in 250 words)

PM SURYA GHAR YOJANA: TRANSFORMING INDIA'S ENERGY LANDSCAPE

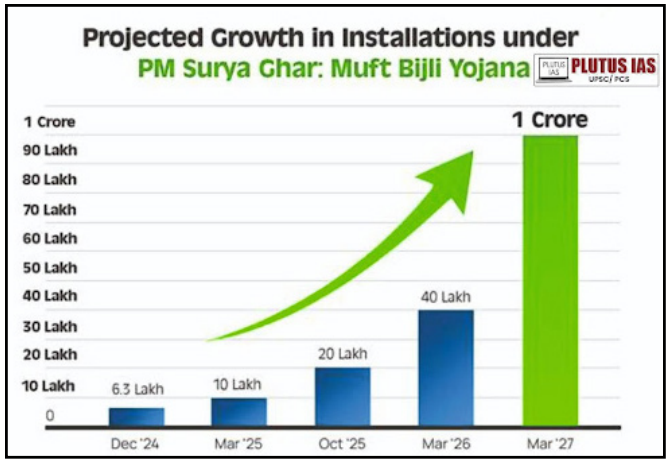
WHY IN THE NEWS?

On February 13, 2025, PM Surya Ghar: Muft Bijli Yojana (PMSGMBY) marks its first anniversary, celebrating a year of empowering households with affordable solar energy and advancing India's sustainable energy transition. Launched by Prime Minister Narendra Modi on February 13, 2024, this initiative aims to provide free electricity through rooftop solar panel installations.

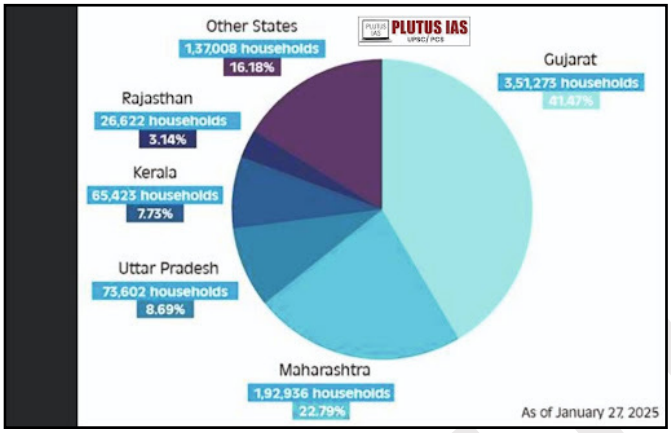


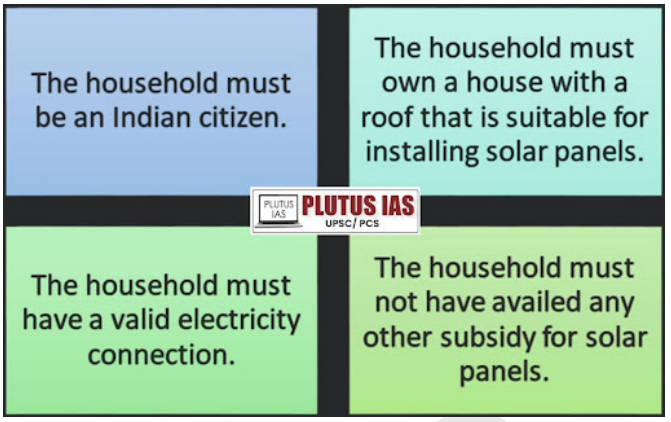
WHAT IS PM SURYA GHAR: MUFT BIJLI YOJANA (PMSGMBY)?

Prime Minister Narendra Modi launched the PM Surya Ghar: Muft Bijli Yojana (PMSGMBY) on February 13, 2024. It is the world's largest domestic rooftop solar initiative. By facilitating rooftop solar panel installations, it aims to provide free electricity to households, making renewable energy more accessible and affordable.



KEY ACHIEVEMENTS OF PM SURYA GHAR: MUFT BIJLI YOJANA





BENEFITS OF PM SURYA GHAR: MUFT BIJLI YOJANA

- **Household Savings & Income Generation** – Households benefit from lower electricity bills and can earn revenue by selling surplus solar power to DISCOMs. A 3-kW system can generate over 300 units per month, ensuring energy security and potential earnings.
- **Expansion of Solar Capacity** – The scheme aims to add 30 GW of rooftop solar capacity in the residential sector, significantly accelerating India's renewable energy transition.
- **Boost to Renewable Energy Goals**—This supports India's commitment to achieving 500 GW of non-fossil fuel energy capacity by 2030, strengthening energy sustainability.

Metric	Details
Households Benefitted	**8.46 lakh** (as of January 27, 2025)
Installation Growth	**Tenfold increase** in monthly installations, now averaging **70,000 per month**
Subsidy Support	Up to **40% subsidy** to make solar energy affordable
Financial Assistance	₹4,308.66 crore disbursed as **Central Financial Assistance (CFA)** to **5.54 lakh residential consumers**
Average Subsidy Per Household	₹77,800
Zero Electricity Bills	**45% of beneficiaries** now enjoy **zero electricity bills** based on their solar power generation and consumption patterns

ELIGIBILITY

- **Environmental Impact**—Over its 25-year lifetime, the scheme is expected to generate 1000 BUs of electricity and reduce CO_2 emissions by 720 million tonnes, helping combat climate change.
- **Job Creation** – Expected to create 17 lakh direct jobs in manufacturing, logistics, supply

chain, sales, installation, and operations & maintenance (O&M), fostering economic growth.

- **Energy Security & Grid Stability**: Decentralized rooftop solar installations will reduce transmission losses, enhance grid stability, and decrease reliance on fossil fuels.
- **Lower Dependence on Conventional Power**: Reduces demand on coal-based power plants, leading to a cleaner energy mix and improved air quality.
- **Empowerment of Rural & Urban Households**: Provides affordable, reliable, and sustainable energy solutions to both urban and rural households, improving their overall quality of life.

KEY RENEWABLE ENERGY & ELECTRIFICATION INITIATIVES IN INDIA

Programme	Launched Date	Key Objectives
International Solar Alliance (ISA)	**2015**	Global alliance to promote **solar energy adoption** and reduce fossil fuel dependency.
Solar Energy Corporation of India (SECI)	**2011**	Implements **grid-connected rooftop solar projects** in partnership with the Education Ministry.
Solar Parks Scheme	**2014**	Establishes **solar parks & ultra-mega solar power projects** across India.
Bhaskara Advanced Solar Energy (BASE) Programme	**2013**	Supports the development of **students and scientists** in solar energy research.
Renewable Energy Certificate (REC) Scheme	**2010**	Allows renewable energy producers to **sell certificates** to distribution firms and industries.
Green Hydrogen Mission	**2023**	Promotes the production and adoption of **green hydrogen** as a clean energy alternative.
Perform, Achieve & Trade (PAT) Scheme	**2012**	Enhances **energy efficiency** in energy-intensive industries through tradable energy-saving certificates.
Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA)	**2017**	Ensures **affordable and reliable electricity** for all rural and urban households.
Ujjwala Scheme (PMUY)	**2016**	Provides **free LPG connections** to poor households, reducing dependence on traditional fuels.
Green Energy Corridor (GEC)	**2013**	Integrates **renewable energy** into India's national transmission grid for stable power supply.
Indian Renewable Energy Development Agency (IREDA)	**1987**	Provides **financial support** for renewable energy and energy conservation projects.

CHALLENGES IN INDIA'S CLEAN ENERGY TRANSITION

Challenges	Details
High Installation Costs	Solar panel installation remains expensive, limiting widespread adoption.
Coal Dependency	India still relies on **60% coal-based** energy, slowing the renewable transition.

Challenges	Details
Financial Constraints	Shortage of financial resources and high upfront costs hinder clean energy projects.
Land Acquisition Issues	Difficulties in acquiring land, especially for **wind farms** in populated areas.
Grid Integration	Renewable energy fluctuations require significant **grid upgrades** for stability.
Energy Storage	Limited storage solutions make managing **intermittent solar & wind power** challenging.
Infrastructure Limitations	Existing power infrastructure struggles to handle **large-scale renewable energy**.
Regulatory Hurdles	Lack of **clear policies** discourages investment in clean energy projects.
Technical Expertise	Shortage of skilled professionals for **design, implementation & maintenance**.
Social & Environmental Concerns	Addressing community and **ecosystem impacts** of renewable projects.
Public Awareness	Need to educate people on **clean energy benefits & adoption**.

STRATEGIES TO PROMOTE CLEAN ENERGY IN INDIA

Strategies	Implementation
Enhancing Grid Connectivity	Strengthening **transmission networks** for efficient renewable integration.
Solar Rooftop Mission	Expanding rooftop solar to **reduce individual household electricity needs**.
PM Surya Ghar Yojana	A game-changer for **marginalized and low-income groups**.
Modern Solar Village Programme	Supporting rural areas in becoming **self-reliant through solar energy**.
Boosting Private Sector Participation	Encouraging **domestic & foreign companies** to invest in large-scale renewable projects.
Expanding Financial Incentives	Providing **low-interest loans, subsidies, & tax benefits** for clean energy projects.
Strengthening International Collaboration	Partnering with **USA, Denmark, Germany & Japan** for technology transfer & joint projects.
Research & Development in Storage Solutions	Focusing on **battery storage, hydrogen fuel & smart grids** for energy efficiency.
Reducing DISCOM Burden	Implementing reforms to **ease financial pressure on power distribution companies**.

Strategies	Implementation
Promoting Nuclear Energy	Strengthening the **National Nuclear Mission** for alternative power sources.
Exploring Geothermal Energy	Harnessing **Puga Valley (Himachal Pradesh)** for geothermal energy production.
Developing Offshore Wind Energy	Expanding **offshore wind farms** to utilize India's vast coastline for clean power.

CONCLUSION

The PM Surya Ghar: Muft Bijli Yojana is revolutionizing India's energy landscape by empowering households with solar power. With installations set to exceed 10 lakh by March 2025, 20 lakh by October 2025, and 40 lakh by March 2026, the scheme is on track to achieve its ambitious one crore target by March 2027. By saving the government ₹75,000 crore annually, reducing carbon emissions, and creating jobs, the initiative cements India's leadership in clean energy.

PRELIMS QUESTION:

Q. Consider the following statements regarding the PM Surya Ghar: Muft Bijli Yojana (PMSGMBY):

1. PMSGMBY is a central sector scheme.
2. To avail of the benefits of PMSGMBY, a person must be a citizen of India.
3. PMSGMBY aims to reduce GHG emissions by reducing the coal-based energy demand.

How many of the above-given statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

ANSWER: C

MAINS QUESTION:

Q. To what extent can rooftop solar initiatives like PMSGMBY contribute to India's net-zero target? Examine the challenges and suggest measures for effective implementation.

(Answer in 250 words)

A MILESTONE IN INDIA'S RURAL WATER REVOLUTION: JAL JEEVAN MISSION

WHY IN THE NEWS?

The Jal Jeevan Mission (JJM) is making headlines due to its ambitious goal of providing clean tap water to every rural household in India by 2024. Launched by Prime Minister Narendra Modi, the initiative aims to drastically reduce the gap between rural and urban water access. With only 17% of rural households having tap water connections at the time of launch, JJM plans to deliver water to nearly 16 crore additional households, directly benefiting over 19 crore rural families. This effort is not only about improving access but also enhancing public health and tackling disparities in water supply. The mission's progress is closely watched as it works towards its 2024 target, reshaping the water supply landscape for rural India.

KEY ACHIEVEMENTS:

As of August 12, 2024, 11.82 crore additional rural households have been connected to tap water under the JJM, bringing the total to 15.07 crore households (77.98% of rural households). This milestone significantly impacts rural

populations by ensuring consistent access to potable water.

OBJECTIVES OF THE JAL JEEVAN MISSION

1. Provide tap water connections to every rural household.
2. Prioritize areas affected by poor water quality, drought, deserts, and villages under the Sansad Adarsh Gram Yojana (SAGY).
3. Provide tap water to essential public facilities, including schools, Anganwadi centres, health centres, and community buildings.
4. Monitor the functionality of tap connections to ensure consistent supply.
5. Encourage community participation (through cash, kind, or labour) to foster ownership of the project.
6. Ensure sustainability by maintaining water sources, infrastructure, and regular operational funding.
7. Empower the workforce in the water sector by training in various areas such as construction, plumbing, water quality management, and more.
8. Raise awareness about safe drinking water and promote shared responsibility among all stakeholders.

COMPONENTS UNDER JJM:

1. **Development of Infrastructure:** Creating or upgrading in-village piped water supply systems to connect every rural household to reliable tap water.

2. **Augmentation of Water Sources:** Developing and enhancing reliable sources of water, such as wells, borewells, rivers, or reservoirs, to ensure a sustainable water supply in rural areas.

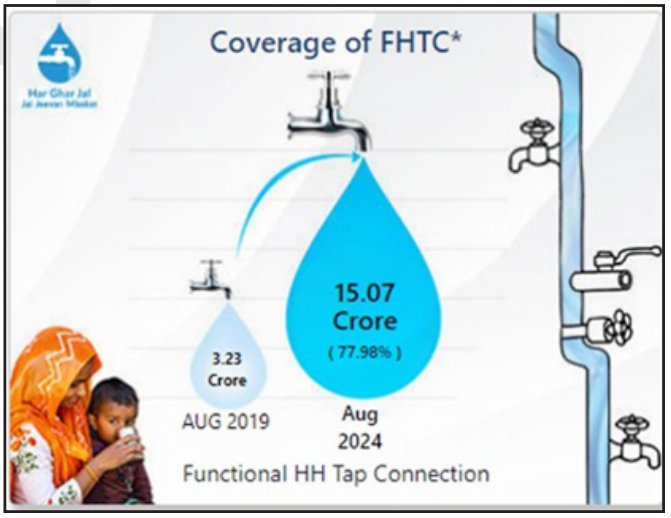
3. **Bulk Water Treatment and Transfer:** Establishing or improving water treatment plants and bulk water transfer systems to ensure that clean, safe water reaches villages, especially in areas where local sources are insufficient.

4. **Technological Interventions for Contaminant Removal:** Installing technologies in areas where water quality issues, such as contamination by arsenic, fluoride, or iron, affect the water supply. These technologies help ensure that water is potable and safe for consumption.

5. **Retrofitting Existing Water Schemes:** Upgrading and modifying ongoing or completed water supply schemes to ensure that every household receives at least 55 litres of water per capita per day (lpcd).

6. **Greywater Management:** Implementing systems to manage and recycle greywater (wastewater from baths, sinks, etc.), reducing water wastage and promoting sustainable water use practices within rural communities.

7. **Flexi Funds for Unforeseen Challenges:** Provision of Flexi Funds to address unforeseen challenges such as those arising from natural disasters, enabling timely and effective responses to safeguard the water supply.



IMPACT OF JJM

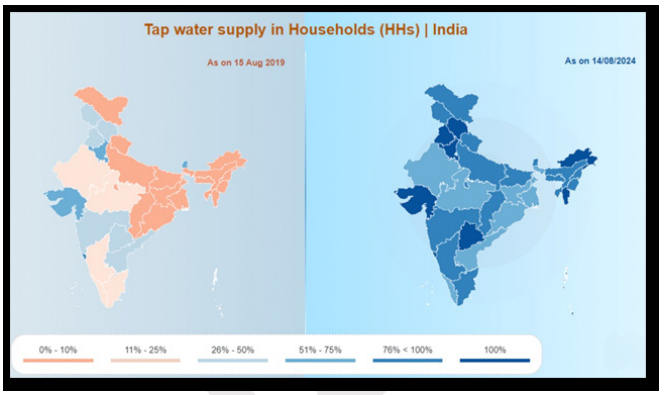
1. **Time-saving:** The mission saves an estimated 5.5 crore hours daily, mostly for women who no longer need to spend hours fetching water from distant sources.

2. **Health Improvements:** By providing safe drinking water, JJM helps prevent 400,000

deaths annually due to waterborne diseases like diarrhoea, which is a leading cause of death in rural areas. The initiative is also projected to save 14 million Disability-Adjusted Life Years (DALYs), indicating a significant improvement in public health.

3. **Reduction in Child Mortality:** According to Nobel Laureate Prof. Michael Kremer's research, safe water coverage can reduce child mortality among those under five by 30%, potentially saving 136,000 children's lives every year.

4. **Job Creation:** JJM's implementation is expected to generate 59.9 lakh person-years of direct employment during its capital expenditure phase. Additionally, 13.3 lakh person-years of direct employment will be generated during the operation and maintenance phase.



CHALLENGES AND SOLUTIONS IN JAL JEEVAN MISSION (JJM):

Challenges	Solutions
Lack of Reliable Water Sources	Financial assistance from the Ministry of Finance for infrastructure development.
Groundwater Contamination	Technological interventions like filtration systems (e.g., reverse osmosis) for safe drinking water.
Uneven Geographical Terrain	Decentralized water supply systems, such as solar-powered pumps and rainwater harvesting.
Scattered Rural Habitations	Bulk water transfer and decentralized systems for remote areas.
Regulatory Delays	Streamlined regulatory processes and coordination for faster statutory clearances.
Lack of **Skilled Personnel**	The Nal Jal Mitra Programme to train local personnel in water supply management.
Inefficient Implementation	Establishment of State and District Programme Management Units (PMUs) to monitor progress.

FACTORS RESPONSIBLE FOR WATER SCARCITY IN INDIA:

1. **Climate Change:** Altered rainfall patterns and increasing frequency of droughts due to global warming affect water availability in many regions, particularly in arid and semi-arid areas.
2. **Over-extraction of Groundwater**: Over-reliance on groundwater for irrigation, drinking water, and industrial use has led to the depletion of aquifers in several parts of India, causing wells and borewells to dry up.
3. **Pollution:** Industrial and domestic waste contaminating rivers, lakes, and groundwater resources leads to reduced availability of clean and safe water for consumption.
4. **Population Growth:** Rapid population growth increases the demand for water, making it difficult to meet the needs of rural and urban areas alike, especially in water-scarce regions.
5. **Agricultural Practices:** Irrigation inefficiencies, such as flood irrigation and the overuse of

water-intensive crops (e.g., rice, sugarcane), place immense pressure on available water resources.

6. **Water Management Issues:** Lack of proper water management and inefficient distribution networks result in wastage of water and unequal distribution across regions.
7. **Deforestation:** Deforestation and land degradation reduce the natural water retention capacity of the environment, leading to soil erosion, reduced groundwater recharge, and poor water retention in the ecosystem.
8. **Limited Water Storage Infrastructure:** Inadequate reservoirs, dams, and rainwater harvesting systems reduce the ability to store and manage water for future use, especially during dry seasons.
9. **Urbanization:** Rapid urban expansion increases the demand for water but often lacks proper planning and infrastructure for sustainable water supply and wastewater management.

WAYS TO ENSURE THE SUSTAINABILITY OF WATER SOURCES FOR EVERYONE:

1. **Promote Water Conservation:** Encourage water-saving practices like rainwater harvesting, reducing water wastage, and water-efficient appliances at homes, farms, and industries.
2. **Implement Efficient Irrigation Techniques:** Adopt drip irrigation, sprinkler systems, and crop selection suited to local water availability to reduce water usage in agriculture.
3. **Protect Natural Water Bodies:** Conserve rivers, lakes, and wetlands by preventing pollution and encroachment and implementing strict regulations to protect these vital water sources.
4. **Increase Groundwater Recharge:** Promote recharge pits, percolation tanks, and natural recharge systems to replenish groundwater levels and prevent over-extraction.
5. **Water Recycling and Reuse:** Encourage the reuse of wastewater for non-potable purposes (e.g., agriculture, landscaping) and establish systems for greywater recycling.
6. **Reduce Pollution:** Strengthen policies and enforcement on industrial effluent treatment, sewage management, and plastic waste reduction to prevent contamination of water sources.
7. **Restore Watersheds and Forests:** Protect and restore watershed areas and forests, which play a crucial role in maintaining the natural hydrological cycle and ensuring proper water flow.
8. **Public Awareness and Education:** Raise awareness about the importance of sustainable water use and conservation at the community level, through programs, campaigns, and educational initiatives.

CONCLUSION:

The Jal Jeevan Mission is a transformative initiative aimed at ensuring that every rural household in India has access to safe and reliable tap water by 2024. With significant progress already made, the mission is poised to improve the health, education, and socio-economic conditions of rural communities across the country while also promoting sustainable water management practices.

PRELIMS QUESTIONS:

Q. With reference to the Jal Jeevan Mission, consider the following statements:

1. The mission aims to provide clean tap water to every rural household in India by 2024.
2. As of August 2024, the Jal Jeevan Mission has connected 11.82 crore rural households to tap water.
3. The mission exclusively focuses on urban areas to ensure reliable water supply.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

Answer: A

MAINS QUESTIONS:

Q. Discuss the key components of the Jal Jeevan Mission and its potential impact on rural India.

(250 words, 15 marks)

INTERNATIONAL THERMONUCLEAR EXPERIMENTAL REACTOR (ITER)

WHY IN THE NEWS?

Prime Minister Narendra Modi and French President Emmanuel Macron jointly visited the International Thermonuclear Experimental Reactor (ITER) in Cadarache, France. This historic visit marks the first time any Head of State or Government has toured ITER, one of the world's most ambitious fusion energy projects. The visit underscores India and France's commitment to advancing clean energy technologies, with ITER aiming to demonstrate fusion as a large-scale, carbon-free energy source.

WHAT IS ITER?

ITER (originally the International Thermonuclear Experimental Reactor, also meaning "the way" in Latin) is a global nuclear fusion research megaproject aimed at generating energy through fusion, similar to the process occurring in the Sun. It is the world's largest fusion experiment, being constructed in Cadarache, France.

BRIEF HISTORY OF ITER

- **1985:** Concept proposed during the Geneva Superpower Summit.
- **2006:** Seven partners formally agreed to fund and develop ITER.
- **2013:** Construction began at the Cadarache site.
- **2020:** Assembly of the Tokamak reactor started.
- **2035 (Planned):** Expected to achieve first deuterium-deuterium plasma operation.

PARTICIPATING COUNTRIES

ITER is a collaborative effort of seven major members:
China
European Union
India
Japan
Russia
South Korea
United States
Other nations, including Australia, Canada, Kazakhstan, and Thailand, have cooperation agreements.

ITER PARTICIPANTS AND THEIR CONTRIBUTIONS

Country/Region	Contribution
China	Contributes superconducting magnets, vacuum vessel components, and other high-tech systems.
European Union	Largest financial contributor (~45% of funding), provides Tokamak building, cooling water, and power supply systems.
India	Supplies cryostat, cooling systems, and diagnostics.
Japan	Provides superconducting cables, neutral beam heating systems, and remote handling technology.

Country/Region	Contribution
Russia	Supplies superconducting cables, gyrotrons for plasma heating, and diagnostic systems.
South Korea	Contributes superconducting magnets, vacuum vessel sectors, and power supply systems.
United States	Provides Tokamak cooling water systems, central solenoid magnets, and diagnostics.
Switzerland	Previously participated through Euratom; currently a **non-participant** due to EU policy.
United Kingdom	Initially part of Fusion for Energy via Euratom; withdrew in **2024** and is no longer a participant.
Australia	Not a full member, but has a **technical cooperation agreement** focusing on plasma research.
Kazakhstan	Signed a **cooperation agreement** in **2017** to contribute to fusion research.
Thailand	Joined via **cooperation agreement (2018)**, focusing on knowledge exchange and research support.
Canada	Originally a full member but withdrew in 2003; **rejoined in 2020** with a focus on tritium research.

OBJECTIVES OF ITER

- **Demonstrate Feasibility of Fusion Power:** Prove fusion as a large-scale, carbon-free energy source.
- **Achieve High Fusion Gain (Q Value):** Momentarily produce a plasma with thermal power 10× greater than the injected power (Q = 10). Sustain a steady-state plasma with Q > 5 for extended operation.
- **Sustain Long Fusion Pulses:** Maintain a fusion pulse for up to 8 minutes.
- **Develop Key Fusion Technologies:** Superconducting magnets. Remote handling and robotic maintenance.
- **Verify Tritium Breeding Concepts:** Test methods for producing tritium fuel within the reactor.
- **Enhance Neutron Shielding & Heat Conversion:** Improve technologies for handling energy released by fast neutrons in the fusion reaction.
- **Experiment with Burning Plasma State:** Study self-sustaining fusion reactions for future power plants.
- **Build Global Fusion Capabilities:** Develop skills, tools, supply chains, and project management expertise. Strengthen nuclear fusion industries in participating countries.

THE EXACT PROCESS AT ITER: HOW IT WORKS

1. **Fuel Selection:** Deuterium-Tritium Fusion: ITER will use Deuterium (^2H) and Tritium (^3H), two isotopes of hydrogen, as fuel. Deuterium is extracted from seawater, while Tritium is scarce and will be produced inside the reactor using lithium.

2. **Creating Plasma: Heating the Fuel to 150 Million °C:** The reactor uses a Tokamak, a doughnut-shaped magnetic confinement device, to hold the fuel. Plasma (superheated ionized gas) is created by heating the deuterium-tritium mixture to 150 million degrees Celsius, 10 times hotter than the Sun's core. ITER uses three heating methods to reach this extreme temperature: Ohmic Heating – Using electrical currents inside the plasma. Neutral Beam Injection – Injecting high-energy neutral atoms into the plasma.

Radio Frequency Heating – Using electromagnetic waves to energise plasma particles.

3. **Magnetic Confinement: Containing the Plasma:** Since plasma is extremely hot, it cannot touch the reactor walls..Strong superconducting magnets (cryogenically cooled to -269°C) create magnetic fields to confine and shape the plasma in the Tokamak chamber.
4. **Fusion Reaction: Energy Generation** Deuterium and Tritium nuclei collide and fuse, forming helium (^{4}He) and a high-energy neutron. The reaction releases 500 MW of heat energy, achieving a fusion gain (Q) of ≥10 (i.e., 10 times the input power). Helium remains trapped, helping sustain the plasma, while neutrons escape and transfer their energy to the reactor walls.
5. **Handling Energy: No Electricity Generation** Unlike commercial power plants, ITER will not convert heat into electricity. The released energy will be absorbed by the reactor walls and vented to study plasma behaviour. Future reactors (like DEMO) will use this energy to produce electricity.
6. **Tritium Breeding: Future Fuel Self-Sufficiency** ITER will test a breeding blanket, a lithium-based material that captures escaping neutrons to produce Tritium, making future fusion plants self-sufficient.

ITER INSTRUMENTS AND THEIR USES

Instrument	Function/Use in Experiment
Vacuum Vessel	Contains plasma using magnetic fields; provides shielding and structural support.
Breeder Blanket	Tests tritium production via lithium reactions; contributes to fuel sustainability.
Magnet System	Confines and controls plasma using superconducting magnets (central solenoid, toroidal, poloidal, correction coils).
Neutral Beam Injectors (HNB)	Heats plasma by injecting high-energy neutral particles (deuterium ions).
Ion Cyclotron Resonance Heating (ICRH)	Uses radio waves to heat plasma ions by matching their oscillation frequency.
Electron Cyclotron Resonance Heating (ECRH)	Uses electromagnetic radiation to heat plasma electrons.
Cryostat	Maintains a super-cool vacuum environment for superconducting magnets and vacuum vessel.
Divertor	Removes waste and impurities from plasma, extracts heat, and prevents contamination.
Cooling Systems	Maintains operational temperature balance using water, liquid nitrogen, and helium cooling.

SIGNIFICANCE OF ITER

1. **Breakthrough in Clean Energy:** Aims to demonstrate fusion power as a limitless, carbon-free energy source. Unlike fossil fuels, fusion does not produce greenhouse gases or long-lived radioactive waste.
2. **Scientific and Technological Advancements:** Pioneers in plasma physics and fusion

energy research. Develops cutting-edge superconducting magnets, tritium breeding, and neutron shielding.

3. **Energy Security & Sustainability:** Fusion fuel (deuterium & lithium for tritium) is abundant and widely available. Reduces dependence on finite fossil fuels and nuclear fission.
4. **Global Collaboration:** Largest international scientific collaboration in energy research. It involves seven major partners: the EU, the USA, China, India, Japan, Russia, and South Korea.
5. **Economic & Industrial Impact:** Boosts high-tech industries, supply chains, and job creation in participating countries. Strengthens expertise in engineering, robotics, and large-scale project management.
6. **Lays Foundation for Future Fusion Reactors:** ITER is a stepping stone for commercial fusion power plants like DEMO. Helps refine reactor designs for sustainable power generation in the future.
7. **Advancing Fundamental Physics:** Enhances understanding of plasma behavior, magnetism, and extreme heat conditions. Supports broader applications in space science, astrophysics, and material sciences.

PRESENT STATUS OF ITER

- The reactor will not generate electricity but aims to demonstrate the feasibility of nuclear fusion as an energy source.
- It seeks to produce 500 MW of fusion power while consuming only 50 MW, achieving a Q-value (fusion gain) of ≥10.
- Construction delays and rising costs have led to budget estimates between €18-22 billion (some estimates suggest $45-65 billion).

Current Timeline:

- First hydrogen plasma achieved: Work is 70% complete (as of mid-2020).
- Full deuterium-tritium operations planned for 2035.
- ITER's successor, DEMO, aims to be the first fusion reactor to generate electricity experimentally.

ISSUES WITH ITER AND WAYS TO ADDRESS THEM

Challenges	Ways to Address	Steps Taken
Plasma Stability & Control	Advanced Magnetic Confinement – 18 powerful toroidal field magnets. – Active feedback control systems. – Pellet injection & magnetic perturbations.	Plasma control experiments in **JET & EAST**.
Material Durability	Radiation-Resistant Materials – Tungsten-based divertors. – EUROFER steel for neutron resistance.	ITER testing **breeder blankets**.
Tritium Fuel Supply	Breeding Tritium In-Situ – Lithium-based breeder blankets. – Tritium-sharing agreements.	**Canada** joined ITER (2020) for **tritium expertise**.
Superconducting Magnet Performance	High-Performance Superconductors – Nb_3Sn for toroidal coils, NbTi for poloidal coils. – Quench detection systems.	Successfully tested **40kA superconducting cables**.
Vacuum Vessel & Heat Management	Efficient Cooling & Shielding – Helium-cooled blankets. – Advanced heat exchangers & liquid nitrogen cooling.	ITER **cryostat completed in 2020**.

Challenges	Ways to Address	Steps Taken
Remote Handling & Maintenance	Robotic & AI-Driven Maintenance – Autonomous robots & manipulators. – AI-powered reactor monitoring.	Built **Remote Handling Test Facility** in France.
Energy Gain & Continuous Operation	Optimized Plasma Heating & Fueling – Neutral beam injection, radio-frequency heating, electron cyclotron resonance. – Extended tokamak pulse length.	EAST tokamak achieved **1,056s sustained fusion (2023)**.
High Costs & Funding Issues	Global Cost-Sharing Model – International contributions (money, manpower, technology). – Public-private partnerships.	ITER **Council ensures budget & financial stability**.
International Collaboration & Politics	Independent Governance & Dispute Resolution – ITER Council neutral decision-making. – Bilateral agreements.	**UK remains in fusion research** despite Brexit (2024).
Construction & Engineering Complexity	Modular Assembly & Precision Manufacturing – Pre-fabricated components. – Digital twin technology for simulations.	**70% of ITER components built & delivered**.
Public Perception & Regulatory Hurdles	Transparent Communication & Safety Protocols – Open research publications. – Public education & outreach programs.	**Fusion Education Programs** launched globally.
Competition from Alternative Energy	Faster Development & Industry Partnerships – Collaborating with private fusion startups. – Exploring hybrid fusion-fission reactors.	**First private-public fusion projects** started in EU & US.

CONCLUSION

ITER is tackling technical & logistical challenges with cutting-edge solutions and global partnerships. Progress in plasma control, materials science, tritium breeding, and superconducting magnets is ensuring fusion's viability. Despite hurdles, ITER remains the world's most ambitious fusion experiment, paving the way for commercial fusion power.

PRELIMS QUESTION

Q. Which of the following is the primary objective of ITER?

(a) To develop nuclear fission technology
(b) To demonstrate the feasibility of fusion power as a large-scale energy source
(c) To produce electricity for commercial use
(d) To replace all existing power plants immediately

Answer: (b)

MAINS QUESTION

Q. Discuss the key objectives of the ITER project and how they contribute to the future of fusion energy. (Answer in 150 words)

SAINT RAVIDAS: THE MYSTIC POET-SAINT OF THE BHAKTI MOVEMENT

WHY IN THE NEWS?

The birth anniversary of Bhagat Ravidas, a prominent poet-saint of the Bhakti movement, was celebrated with religious fervor. The Shiromani Gurdwara Parbandhak Committee (SGPC) organized special events to honour his contributions to spirituality and social reform. His teachings on equality, devotion, and social harmony continue to inspire millions across the Indian subcontinent.

SAINT RAVIDAS

Ravidas, also known as Raidas, was a revered Indian mystic poet-saint of the Bhakti movement during the 15th to 16th century CE. Venerated as a guru in multiple regions, including Uttar Pradesh, Bihar, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Punjab, and Haryana, he was a poet, social reformer, and spiritual figure. His teachings emphasised the removal of caste and gender divisions and promoted unity in spiritual pursuit.

LIFE AND TEACHINGS:

Ravidas was born in Sir Gobardhanpur, near Varanasi, in present-day Uttar Pradesh. His birthplace is now known as Shri Guru Ravidass Janam Asthan. His mother was Mata Kalsi, and his father was Santokh Dass, belonging to a leather-working Chamar community. Originally engaged in leatherwork, he later devoted himself to spiritual pursuits, spending time with Sufi saints, sadhus, and ascetics. Married to Lona Devi, Ravidas had a son, Vijay Dass. His teachings emphasized the idea of a formless divine (nirguna bhakti), rejected idol worship, and promoted equality.

LITERARY WORKS:

The Adi Granth and the Panchvani of the Hindu warrior-ascetic group Dadupanthi are the two oldest attested sources of Ravidas's literary works. The Adi Granth includes 41 of Ravidas's poems, making him one of thirty-six contributors to this foremost canonical scripture of Sikhism. His poetry addresses issues such as social justice, the nature of a just state, dispassion, and the true essence of a yogi. Some poems attributed to Ravidas were likely composed by later poets as acts of reverence, reflecting the broader Bhakti tradition.

PHILOSOPHY OF SAINT RAVIDAS:

Ravidas' hagiographies illustrate his struggle against rigid social structures and orthodox Brahminical traditions. His teachings emphasise equality, unity, and devotion beyond caste and religious divisions. His poetry and legends often depict a challenge to both Hindu and Islamic authorities of his time. Many miracles are attributed to him, such as making a stone float on water and reversing the flow of the Ganges, symbolising divine intervention in his spiritual journey. Scholars note that poetry attributed to Ravidas from the 17th to the 20th century carries a strong anti-Brahminical and anti-communal theme, reflecting the socio-political struggles of marginalised groups under Islamic and colonial rule.

CONTRIBUTION TO THE BHAKTI MOVEMENT:

- Ravidas played a crucial role in shaping the Bhakti movement, emphasising devotion (bhakti) as the path to salvation.
- He rejected caste-based discrimination and advocated for spiritual equality.
- His teachings focused on a formless divine (nirguna bhakti), similar to other Bhakti saints like Kabir and Nanak.
- He composed devotional hymns that spread the message of love, compassion, and unity.
- His spiritual influence attracted followers across different social and religious backgrounds.
- He emphasised ethical living and selfless service as the true essence of devotion.
- His Concept of Begumpura (a city without sorrow) envisioned an ideal society free from social hierarchies and injustice.
- Ravidas' teachings were included in Sikh scripture, influencing Sikhism and other religious traditions.

SPIRITUAL AND SOCIAL IMPACT:

- He was traditionally considered a disciple of Ramananda and a contemporary of Kabir.
- Ravidas' fame grew, and even Brahmins revered him for his spiritual wisdom.
- He travelled extensively across India, visiting pilgrimage sites and spreading his teachings.
- He played a crucial role in social reform, advocating for an egalitarian society free from caste-based discrimination.
- The Ravidassia religious movement considers him a central figure, continuing his legacy.

THE CONCEPT OF BEGUMPURA:

The Concept of Begumpura was proposed by Sant Ravidas, a prominent Bhakti saint. Through his poetry, he envisioned Begumpura as a utopian city free from suffering, sorrow, and social discrimination. In his couplets, he described it as a land of equality and bliss, where no one experiences pain or injustice:

"Begampura sahar ko naao, dukhu-andoohu nahi tahi thaao"
(Translation: "Begumpura is the name of the city, where there is no suffering or sorrow.") This idea reflected Ravidas' vision of a casteless and oppression-free society, aligning with his broader teachings on social equality and spiritual liberation.

LEGACY:

Ravidas is revered as a saint and a religious reformer who stood against social injustice.

The Ravidassia religion emerged as a distinct religious movement in the 21st century, focusing exclusively on the teachings of Ravidas.

Ravidassias give utmost respect to Guru Granth Sahib but consider Guru Ravidas as their supreme spiritual guide.

The Amritbani Guru Ravidass Ji, a holy scripture compiled by Ravidassia followers, contains 240 hymns based solely on Ravidas' teachings.

The movement gained momentum after the 2009 attack on a Ravidassia temple in Vienna, leading to its formal separation from Sikhism.

Niranjan Dass is the head of Dera Sachkhand Ballan, an important spiritual center for Ravidassias.

The movement reflects the aspiration of marginalised communities, particularly the Chamars, to establish their independent religious identity.

Notable places of worship include Guru Ravidass temples in Bedford (UK), Nasinu (Fiji), Birmingham (UK), and Pittsburg (California, USA).

Kathryn Lum notes that Ravidassia followers emphasise self-identity and independence, aiming for social upliftment beyond Sikhism.

CONCLUSION:

Ravidas' life and works significantly impacted the Bhakti movement, inspiring devotion beyond social barriers. His emphasis on equality, devotion, and inner spirituality continues to resonate in various religious traditions today. His poetry and teachings

remain a guiding force for those seeking spiritual enlightenment and social harmony.

COMPARISON BETWEEN SAGUNA BHAKTI AND NIRGUNA BHAKTI

Features	Saguna Bhakti	Nirguna Bhakti
Origin	Emerged as a response to the need for personal devotion to deities with attributes	Developed as a movement emphasizing formless devotion and inner spirituality
Key Features	Worship of a deity with form (e.g., Vishnu, Shiva, Devi, Krishna, Rama)	Devotion to a formless, attributeless divine (Brahman)
Regions	More prevalent in North and South India (e.g., Tamil Nadu, Karnataka, Maharashtra)	Spread across North India, especially in Uttar Pradesh, Punjab, and Rajasthan
Spiritual Leaders	Prominent leaders include Ramanuja, Tulsidas, Mirabai, Surdas, and Chaitanya Mahaprabhu.	Leaders include Kabir, Ravidas, Nanak, Dadu Dayal, and Sant Eknath
Scriptural Basis	Relies on epics like Ramayana, Bhagavata Purana, and Puranic texts	Rooted in Upanishads, Sufi influences, and Sant poetry
Mode of Worship	Idol worship, temple rituals, bhajans, and kirtans	Meditation, naam-simran (chanting), inner realization, and simple devotion
View on Caste and Social Hierarchy	Some sects followed caste distinctions; however, Bhakti saints tried to soften rigid caste divisions.	Strongly opposed casteism, ritualism, and priestly authority
Philosophical Influence	Based on Advaita (non-dualism), Vishishtadvaita (qualified non-dualism), and Dvaita (dualism) philosophies	Strongly influenced by Nirguna Brahman concept from Vedanta and Sufism
Gender Inclusivity	Prominent female saints like Mirabai contributed, but temple access remained restricted for many lower castes and women.	More inclusive, with women and lower-caste individuals gaining recognition as spiritual seekers
Impact on Society	Strengthened traditional Hinduism, encouraged devotional practices, and popularized bhakti through temple culture	Advocated social reforms, caste, and religious harmony, and challenged rigid Brahmanical traditions
Concept of Liberation (Moksha)	Liberation through devotion (bhakti) and grace of the deity	Liberation through self-realization and merging with the formless divine

Prelims Question:

Q. Which Bhakti saint proposed the Concept of "Begumpura"?

A) Kabir
B) Ravidas
C) Mirabai
D) Tulsidas

Answer: B) Ravidas

Mains question:

Q. Compare and Contrast the Saguna Bhakit and Nirguna Bhakti and their profound impact on medieval social life.

(Answer in 150 words)