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HISTORIC DIPLOMATIC OUTREACH: PM MODI'S LANDMARK VISIT TO KUWAIT AFTER 43 YEARS

WHY IN THE NEWS?

Prime Minister Narendra Modi has embarked on a two-day visit to Kuwait, marking the first visit by an Indian Prime Minister to Kuwait in 43 years. The visit comes at the invitation of Sheikh Meshal Al-Ahmad Al-Jaber Al-Sabah, the Amir of the State of Kuwait. This visit is significant for strengthening bilateral ties in energy, trade, investment, and cultural exchange.
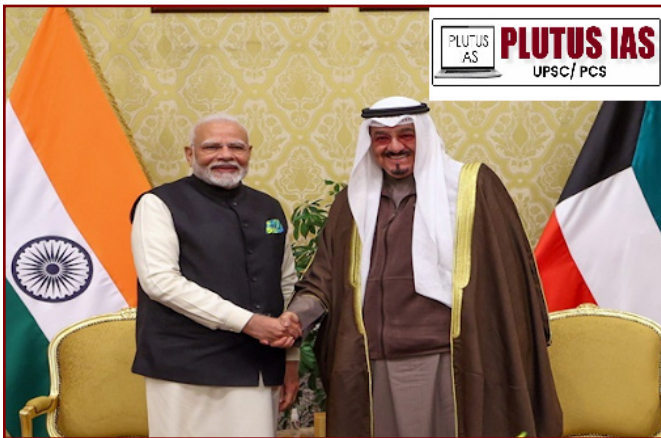
INDIA-KUWAIT BILATERAL RELATIONS

India and Kuwait share traditionally friendly relations, which are rooted in history and have been strengthened over time. India has long been a natural trading partner for Kuwait, with the Indian Rupee even serving as legal tender in Kuwait until 1961. Before the discovery of oil, Kuwait's economy was centered around maritime activities such as shipbuilding, pearl diving, and fishing. Indian traders, traveling on wooden dhows, exchanged dates, Arabian horses, and pearls for goods like wood, cereals, clothes, and spices.

INDIA-KUWAIT AREAS OF COOPERATION

1. **Bilateral Agreements and MoUs:** India and Kuwait have signed 26 bilateral agreements/MoUs across various sectors, with 14 more in different stages of finalization.
2. **Hydrocarbon Sector:** Kuwait plays a vital role in India's energy security, being a reliable supplier of crude oil and LPG.
3. **Medical Cooperation:** An MoU on Medical Cooperation was signed in 2012, leading to the establishment of a Joint Working Group (JWG) on Medical Cooperation. The third meeting is planned for 2024 in New Delhi to enhance collaboration in the healthcare sector further.
4. **COVID-19 Cooperation:** An Indian medical team was deployed to Kuwait in April 2020, and 200,000 doses of Covishield vaccines were supplied in 2021. During India's second wave, Kuwait established an air/sea bridge to send over 425 metric tons of liquid oxygen.
5. **Manpower Cooperation:** Indians form the largest expatriate community in Kuwait, with approximately 1 million citizens residing there. Labor and manpower issues are addressed through a Joint Working Group (JWG), which meets regularly.
6. **Science and Technology:** India and Kuwait have established strong ties in science and technology through various agreements. The S&T Agreement was signed in 2009.
7. **Economic Relations**

Bilateral Trade: Trade relations are robust, with bilateral trade reaching $10.47 billion in FY 2023-24. Indian exports grew by 34.7% YoY, with Kuwait being the 6th largest supplier of crude oil to India, meeting 3% of India's energy needs.

Investments: Kuwait Investment Authority (KIA) has invested over $10 billion in India, primarily in liquid assets.

Indian Businesses: Numerous Indian public and private sector companies, such as L&T, Tata, and Wipro, operate in Kuwait.

BIPPA: A new Bilateral Investment Treaty is under negotiation, with discussions ongoing since 2018.

8. **Civil Aviation:** The two countries have a seat-sharing arrangement of 12,000 seats per week.

9. **Cultural Relations:** Over 200 cultural programs were organized in 2021-22 to mark the 60th anniversary of diplomatic ties. The Festival of India held in Kuwait in March 2023.

10. **Education:** There are 26 CBSE schools in Kuwait

with over 60,000 students, primarily Indian. Efforts are underway to include Indian universities in Kuwait's accreditation system to encourage higher education exchanges.

SIGNIFICANCE OF KUWAIT FOR INDIA

Aspect	Significance of Kuwait for India
Source of Remittances	Approximately 1 million Indians in Kuwait contribute significantly to India's remittance inflows.
Energy Security	Kuwait supplies crude oil and LPG, fulfilling about 3% of India's energy needs.
Regional Cooperation	Kuwait fosters regional stability in the GCC and Middle East, facilitating dialogue on energy, trade, and counter-terrorism.
Strategic Location	Located at the head of the Arabian Peninsula, Kuwait offers strategic advantages for trade, security, and connectivity.
Support at UN Forums	Kuwait has extended diplomatic support to India in multilateral forums, including the United Nations.
Balancing Arab World Ties	Kuwait's potential participation in initiatives like the International Solar Alliance aligns with India's global goals.
Trade and Investment	Bilateral trade with Kuwait reached $10.47 billion in FY 2023-24, making it a key trading partner for India.
Cultural and Educational Ties	26 Indian schools with 60,000+ students and cultural initiatives like the Festival of India strengthen goodwill.

CHALLENGES TO INDIA-KUWAIT COOPERATION

1. **Migration and Labour Rights:** Issues related to the protection of migrant workers' rights, especially blue-collar workers, are strained bilateral ties. Disputes over wages, working conditions, and contractual violations occasionally arise, impacting the welfare of Indian expatriates.

2. **Land Acquisition:** Prolonged delays in the allocation of land for the construction of Indian diplomatic residences in Kuwait and reciprocal arrangements for Kuwait's consulate in Mumbai remain unresolved.

3. **Protection of Indian Diaspora:** Despite forming the largest expatriate group in Kuwait, Indians often face challenges in legal protection and emergencies.

4. **Domestic Political Dynamics in India:** Domestic policies and narratives within India, including laws affecting minorities, could potentially influence Kuwait's perception of India's inclusivity.

5. **Kuwait's Relations with Pakistan:** Kuwait's growing economic and political engagement with Pakistan can occasionally create conflicting priorities for India.

6. **Divergent Strategic Priorities:** While India seeks closer ties with Kuwait for energy security and trade, Kuwait's alignment with GCC policies could sometimes diverge from Indian interests.

7. **Regional and Geopolitical Instabilities:** Instabilities in the Gulf region, including tensions between Iran and GCC countries, can disrupt India-Kuwait relations.

WAY FORWARD FOR STRENGTHENING INDIA-KUWAIT COOPERATION

1. **Continuous Bilateral Engagement:** Foster regular communication and collaboration through mechanisms like Joint Working Groups (JWGs) in key areas such as hydrocarbons, labour, medical cooperation, and culture.

2. **High-Level Meetings and Leadership Engagement:** Organize frequent high-level visits and meetings

between the leadership of both countries to strengthen trust and strategic alignment. Build on the momentum created by events like the 60th anniversary of diplomatic ties to deepen bilateral relations.

3. **Resolving Land Acquisition Issues:** Expedite the allocation of land for Indian diplomatic residences in Kuwait and reciprocal arrangements for Kuwait's consulate in Mumbai.

4. **Managing Migrant and Diaspora Issues:** Address the challenges faced by Indian expatriates through enhanced dialogue and diplomacy with Kuwait's authorities.

5. **Consistent Support for Kuwait's Sovereignty:** Reiterate India's historical support for Kuwait's sovereignty and independence, as demonstrated during the Gulf War.

6. **Collaboration on Mutual Priorities:** Work together on critical global and regional issues such as climate change, energy security, urban development, and water conservation practices.

7. Expanding Economic and Technological Ties: Promote investment opportunities for Kuwait in India's infrastructure and technology sectors. Enhance collaboration in science and technology, building on partnerships between institutions like CSIR and KISR, while exploring innovative solutions for shared challenges.

8. **Counter-Terrorism, Cybersecurity, and Prevention of Radicalization**

1. Strengthen cooperation in counter-terrorism operations by sharing intelligence, conducting joint training, and enhancing security frameworks.

2. Develop partnerships in cybersecurity to combat emerging threats and ensure the safety of digital infrastructure.

3. Work on de-radicalization strategies to prevent the spread of extremist ideologies and ensure regional peace and stability.

CONCLUSION:

A holistic approach that integrates security cooperation with economic, cultural, and diplomatic efforts will ensure that India-Kuwait relations remain strong and resilient in addressing both opportunities and challenges.

PRELIMS QUESTIONS:

Q. Consider the following countries:

1. Kuwait
2. Saudi Arabia
3. UAE
4. Iran
5. Iraq
6. Qatar
7. Bahrain

How many of the above are Gulf Cooperation Council Members?

A. Only two
B. Only three
C. Only four
D. Only five

ANSWER: D

MAINS QUESTION:

Q. "India shares special diplomatic relations with Kuwait and other Gulf countries". In this light discuss the significance of the Gulf countries for India.
(150 words)

NHRC: A PILLAR OF JUSTICE AND HUMAN RIGHTS IN INDIA

WHY IN THE NEWS?

The President of India appointed Justice V. Ramasubramanian, a retired Supreme Court judge, as the new Chairperson of the National Human Rights Commission (NHRC). This appointment comes after the post had been vacant since June 1, 2024, following the

completion of the tenure of Justice (retired) Arun Kumar Mishra. Justice V. Ramasubramanian's appointment to this pivotal role is significant as the NHRC plays a crucial part in safeguarding human rights in India.

WHAT IS NHRC?

The National Human Rights Commission (NHRC) is an autonomous body in India that is responsible for protecting and promoting human rights in the country. Established in 1993, the NHRC works to ensure that human rights are upheld by monitoring and addressing violations, providing recommendations for their protection, and raising awareness about human rights issues. It investigates complaints of human rights violations, provides recommendations to the government, and works to improve the legal and social frameworks for protecting the rights of individuals, especially vulnerable groups.

NHRC ACT 1993:
The Protection of Human Rights Act of 1993 established the National Human Rights Commission (NHRC) in India.

1. **Establishment of the NHRC:** The NHRC is headed by a Chairperson, usually a former Chief Justice of India, and includes other members with expertise in human rights.

2. **Functions and Powers:** The NHRC investigates human rights violations, makes recommendations to the government, and can intervene in legal proceedings. It also monitors laws and practices to ensure human rights standards are met.

3. **State Human Rights Commissions:** The Act allows for the creation of State Human Rights Commissions to handle regional cases.

4. **Human Rights Education:** It promotes human rights awareness and protects human rights defenders.

5. **Annual Reports:** The NHRC is required to submit an annual report to the President of India detailing its activities and the state of human rights in the country. This helps in ensuring transparency and accountability in its functioning.

COMPOSITION OF NHRC:

1. **Chairperson:** The Chairperson is a retired Chief Justice of India or a retired Supreme Court Judge. The appointment is made by the President of India.

2. **Members:**
One member must be a person who has been a judge of the Supreme Court of India or is a distinguished jurist.

Two members must be persons who have been the Chief Justices of High Courts.

One member should be a person with experience in the field of human rights, and ideally, this person should have a background in social work, law, or any related field. The President also appoints these members.

3. **Selection Committee:**
The selection of the Chairperson and members is done by a committee comprising:
The Prime Minister (Chairperson of the committee)
The Home Minister
The Leader of the Opposition in the Lok Sabha
The Speaker of the Lok Sabha
The Leader of the Opposition in the Rajya Sabha

NHRC ACHIEVEMENTS IN THE LAST THREE DECADES:

1. Awareness and Advocacy: Raised public awareness through workshops, seminars, and campaigns on human rights, reaching millions. Advocated for human rights education in schools, training 25,000 teachers and 5,000 law enforcement officials.

2. Investigation and Redressal: Investigated thousands of violations, including police brutality and custodial deaths. Helped secure compensation for victims of rights violations, including ₹15 lakh for custodial death cases in 2018.

3. Strengthening Laws and Policies: Influenced revisions to the Child Labour Act and Protection of Women from Domestic Violence Act. Advocated for legislative reforms on torture, human trafficking, and child rights.

4. Protection of Vulnerable Groups: Focused on women's, Dalit, tribal, and refugee rights. For example, helped 1,000+ victims of sexual harassment and trafficking. Led campaigns on gender violence and displacement issues, benefiting marginalized communities.

5. Prison and Detention Reforms: Inspected jails and exposed overcrowded conditions, leading to improved prison reforms. Reduced overcrowding by 20% in prisons through NHRC's intervention.

6. Reporting and Accountability: Submits annual reports to the President, urging quicker action on pending complaints. Ensures 70% of recommendations are implemented, promoting government accountability.

NHRC-POWERS AND FUNCTIONS:

Category	Powers	Functions
Investigative	– Can take serious action on human rights violations.	– Investigates human rights violations and seeks redress for victims.
Power to Intervene	– Can intervene in legal proceedings related to human rights in courts.	– Provides advice to the government on human rights policies and laws.
Recommendations	– Can recommend actions to the government, including reforms and compensation for victims.	– Promotes awareness of human rights through education and campaigns.
Inspection	– Can visit places of detention (jails, mental hospitals) to ensure rights protection.	– Coordinates with State Human Rights Commissions for effective protection.
Call for Records	– Can demand records from government bodies for review.	– Submits annual reports to the President on investigations and actions.
Seek Information	– Can request information from authorities for inquiries.	– Ensures follow-up on its recommendations and monitors government action.
Advisory Role	– Provides recommendations to improve human rights protections.	– Educates authorities and the public on human rights issues.

7. Landmark Case Interventions: Intervened in key PILs like Narmada Bachao Andolan and custodial deaths, leading to legal reforms. Filed petitions to ensure police reforms and anti-discrimination laws.

8. International Cooperation and Recognition: Collaborated with organizations like Amnesty International and Human Rights Watch on forced labour and human trafficking. Recognized by the UN for its proactive role in human rights advocacy and children's rights.

LIMITATIONS OF NHRC:

1. Limited Jurisdiction: NHRC cannot investigate events that occurred more than one year ago. Limited jurisdiction over armed forces and private parties involved in human rights violations.

2. Non-Binding Recommendations: NHRC's recommendations are not legally binding on the government or other bodies.

3. Inability to Penalize: NHRC cannot punish authorities that fail to implement its recommendations or orders.

4. Administrative Constraints: Faces resource shortages, including insufficient funding and staffing challenges, affecting its effectiveness.

5. Lack of Diversity: Criticized for the lack of diversity in its composition, as the Chairman and members are mainly from the judicial fraternity.

6. Lack of Independence: NHRC's composition depends on government appointments, which raises concerns about its independence.

7. **Reactive Response:** NHRC often acts reactively to complaints rather than proactively addressing systemic human rights issues.

WAY FORWARD:

1. **Expanding Jurisdiction:** Advocate for an expansion of its jurisdiction to include more cases, particularly those involving the armed forces and private parties. It should also be empowered to investigate events that happened beyond one year.

2. **Strengthening Recommendations:** The NHRC should work towards making its recommendations legally binding, ensuring greater accountability in the implementation of its suggestions.

3. **Resource Allocation:** Increase funding and staff to overcome administrative challenges and enhance its investigative capacity, making it more proactive.

4. **Promoting Diversity:** Ensure greater diversity in the commission's composition by including experts from various backgrounds like social work, law, and human rights, and not limiting the membership primarily to judicial figures.

5. **Ensuring Independence:** Strengthen the independence of the NHRC by ensuring its leadership and members are free from political influence, perhaps by adopting a more transparent and independent selection process.

6. **Proactive Approach:** Shift from a reactive approach to a more proactive stance by monitoring human rights conditions more closely and initiating investigations into systemic issues without waiting for complaints.

CONCLUSION

The National Human Rights Commission (NHRC) has played a critical role in promoting and protecting human rights in India over the last three decades. It has achieved significant successes in raising awareness, investigating violations, and advocating for vulnerable groups. However, the NHRC faces challenges, including limited jurisdiction, non-binding recommendations, and administrative constraints. Addressing these limitations through reforms and better resource allocation will enhance its capacity to protect human rights more effectively. By evolving into a more independent, proactive, and resourceful body, the NHRC can continue to safeguard and promote human rights in India.

PRELIMS QUESTION:

Q. Which of the following statements regarding the National Human Rights Commission (NHRC) of India are correct?

1. The NHRC is empowered to take binding legal actions against the government.
2. The NHRC's recommendations are legally binding on the government and other authorities.
3. NHRC investigates complaints of human rights violations and can intervene in legal proceedings.
4. The NHRC is mandated to submit annual reports to the President of India.

Choose the correct answer using the code below:

A. 1, 2, and 3

B. 3 and 4

C. 1, 3, and 4

D. 2 and 4

Answer: B

MAINS QUESTION:

Q. The National Human Rights Commission (NHRC) has played an instrumental role in safeguarding human rights in India over the past three decades. Discuss these limitations and suggest measures to enhance the NHRC's capacity to protect human rights more effectively.

(250 words, 15 marks)

HEALTH: BUILDING A HEALTHIER NATION.

WHY IN THE NEWS:

India's progress in building a healthier nation has gained attention due to significant advancements in healthcare access, equity, and outcomes. Over the past decade, the country has introduced transformative policies reflecting a strong commitment to Universal Health Coverage. A major highlight in this journey is the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY), a

flagship initiative that continues to play a pivotal role in reshaping India's healthcare landscape.
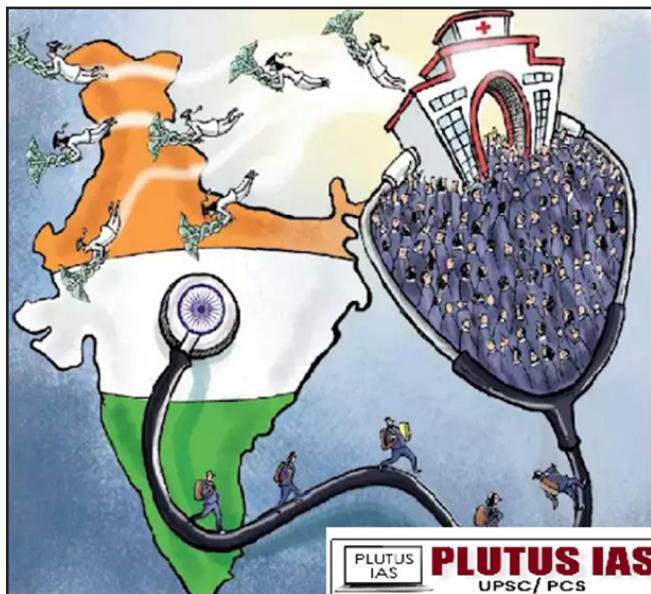
CONSTITUTIONAL PROVISIONS RELATED TO THE HEALTH:

Provisions	Description	Context for Health
Article 38	The state is responsible for creating a social order that promotes the welfare of the people.	Framework for health and welfare-related policies, ensuring the welfare of people, including health, is prioritized.
Article 39(e)	The state is responsible for protecting the health and strength of workers, ensuring children's health.	Ensures workers' health and children's well-being by providing adequate resources for healthy development.
Article 41	The state is responsible for providing public assistance to the sick, disabled, and elderly.	Focuses on providing a safety net for the sick, disabled, and elderly, promoting social security for vulnerable populations.
Article 42	The state is responsible for providing maternity benefits and ensuring humane working conditions.	Aims to improve women's health, particularly during maternity, and ensure just working conditions.
Article 47	The state is responsible for improving public health, raising standards of living, and regulating harmful substances.	Directly mandates the government to focus on public health, nutrition, and prohibit harmful substances like drugs.
Article 48A	The state is responsible for ensuring a pollution-free environment for good health.	Links environmental protection with public health, ensuring a healthy environment for citizens.
Union List (List I)	Central government's role in regulating national health services, medical education, health research, pharmaceuticals, and managing health emergencies.	Union government has authority over national-level health services and emergency health management.

Provisions	Description	Context for Health
State List (List II)	State government's role in managing public health services, including vaccination, maternal health, and disease control within their jurisdiction.	States are responsible for managing local healthcare services, including disease control and maternal health.
Concurrent List (List III)	Shared responsibility between the Union and State governments for regulating public health issues, such as narcotics control, disease prevention, and health insurance.	Both Union and State governments collaborate on health issues like disease prevention and public health regulation.

CONSTITUTIONAL PROVISIONS RELATED TO THE HEALTH:

Area	Achievement	Data/Details
Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY)	– Health coverage of ₹5 lakh per family for secondary and tertiary care across 1,961 procedures in 27 specialties.	– **36.28 crore Ayushman Cards** issued. – Women account for **49% of cards** and **50% of admissions**. – **30,932 hospitals** empaneled.
Digital Health Infrastructure (ABHA)	– Facilitates access and sharing of digital health records. – Bridges gaps in the healthcare ecosystem through digital highways.	– **71.81 crore ABHA numbers** generated. – **46.53 crore health records** linked. – **3.55 lakh health facilities** and **5.38 lakh healthcare professionals** registered. – **PMNDP Portal**, launched on 5th May 2022, integrates dialysis centers under NHM with ABHA ID for portability.
National Health Mission (NHM)	– Strengthens healthcare at district and community levels.	– **753 NCD clinics** at district level and **6,238 NCD clinics** at CHC level. – **220 Cardiac Care Units (CCUs)** and **356 Day Care Cancer Centres** established.
Mission Indradhanush	– Expanded immunization for children and pregnant women in low-coverage areas. – Provides protection against 11 preventable diseases.	– Vaccinated **5.46 crore children** and **1.32 crore pregnant women** in all phases.
Improvement in Health Indicators	– Reduction in mortality rates and fertility rates due to targeted interventions.	– **MMR** reduced from **103 (2017-2019)** to **97 (2018-2020)**. – **IMR** reduced from **32 (2018)** to **28 (2020)**. – **TFR** reduced from **2.2 (2015-2016)** to **2.0 (2019-2021)**.
National Family Health Survey (NFHS-6)	– Conducts large-scale surveys to monitor health indicators across districts.	– Pre-test conducted in **June-July 2022**; main survey fieldwork in progress. – Covers **731 districts** with **6.77 lakh households**. – Fieldwork completed in **20 States/UTs**, ongoing in 15 others.

Area	Achievement	Data/Details
Tobacco-Free Youth Campaign	– Created awareness on the harmful effects of tobacco, focusing on youth and rural areas.	– Launched on **31st May 2023** (World No Tobacco Day). – **60-day campaign** conducted across all States/UTs from **May-July 2023**.
Consumer-Centric Policies	– Data-driven and regularly monitored policies ensure inclusivity and sustainability.	– Commitment to achieving Universal Health Coverage through evidence-based strategies.

PERSISTENT CHALLENGES IN HEALTHCARE

Doctor-to-Population Ratio: The World Health Organization (WHO) recommends a doctor-to-population ratio 1:1,000. India has a ratio of 1:1,511 (as of 2023), indicating a significant shortfall in healthcare providers, especially in rural areas.

Gender Gap in Access to Healthcare: Women account for only 49% of Ayushman Bharat Cardholders despite being 50% of the population, reflecting gender disparities in accessing healthcare services.

Urban-Rural Divide in Healthcare Services: 70% of India's population resides in rural areas, but 60% of hospitals and healthcare infrastructure are concentrated in urban areas. Rural India faces a shortage of 83% of specialist doctors at Community Health Centers (CHCs), according to the Rural Health Statistics (2022).

Regional Divide (Northeast and Remote Areas): Northeastern and remote states have fewer medical colleges and specialized hospitals compared to central and southern states. For example, Arunachal Pradesh has only 1 medical college for a population of over 1.3 million.

Caste-Based Inequality in Healthcare Access: Marginalized communities, such as Dalits, report higher rates of exclusion from healthcare services. The National Family Health Survey-5 (NFHS-5) highlighted that only 28% of Dalit households have access to private health care compared to 50% of upper-caste households.

Slow Growth in Public Health Infrastructure: Public health expenditure in India remains low at 1.28% of GDP (2022-2023), far below the global average of 6%. India has only 1 government hospital bed per 1,844 people, compared to the global average of 1:550.

High Out-of-Pocket Expenditure (OOPE): OOPE accounts for 48.8% of total health expenditure in India, as per the National Health Accounts (NHA) 2022. This disproportionately affects low-income families, pushing an estimated 63 million people into poverty annually due to healthcare costs.

Lack of Health Insurance Coverage: Despite schemes like Ayushman Bharat, only 41.1% of Indian households have at least one member with health insurance, as per NFHS-5. Informal sector workers and rural populations often remain uninsured, leading to higher financial vulnerabilities.

Overemphasis on Secondary and Tertiary Care: A disproportionate focus on hospitals and high-end treatments often overshadows the need for robust primary healthcare systems. Only 3% of the health budget is allocated to preventive and promotive health services, while secondary and tertiary care dominates expenditures.

Privatization of Medical Education: The high cost of private medical education limits access for economically weaker sections. Over 60% of medical colleges in India are private, creating an uneven distribution of healthcare professionals and increasing healthcare costs.

Curative Treatment Over Preventive Services: India's healthcare system primarily focuses on curative treatments rather than preventive care. For example, non-communicable diseases (NCDs) account for over 60% of deaths, yet there is limited emphasis on preventive strategies like lifestyle interventions and early screenings.

WAY FORWARD

Universal Health Coverage (UHC): As envisioned in the National Health Policy, prioritize achieving UHC by ensuring equitable access to quality healthcare for all citizens, irrespective of socioeconomic or regional disparities.

Strengthening Primary Healthcare: Focus on primary healthcare as the backbone of the health system, particularly to address the needs of rural populations, which constitute over 60% of India's population.

Gradual Improvement in Health Infrastructure: Invest in improving health infrastructure incrementally, including building medical colleges, increasing hospital capacities, and enhancing diagnostic and treatment facilities in underserved regions.

Promotion of Alternative Medicine Systems: Promote traditional systems of medicine like AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homeopathy) for a holistic approach to healthcare.

Enhanced Focus on Women and Children: Strengthen programs like ASHA (Accredited Social Health Activists) workers to ensure better access to healthcare for women and children in remote areas.

Emphasis on Preventive Care: Shift the focus from curative treatments to preventive and promotive healthcare to address the growing burden of non-communicable diseases (NCDs).

Inclusive Healthcare for Marginalized Groups: Adopt an inclusive approach as recommended by various committees, ensuring healthcare access for tribal communities, Dalits, and economically weaker sections.

Leverage Technology and Data: Utilize digital platforms like ABHA and telemedicine to bridge the urban-rural healthcare divide.

Increase Public Health Expenditure: Raise public health expenditure to at least 2.5% of GDP as recommended by the National Health Policy to

strengthen the healthcare system sustainably. Collaboration with the Private Sector: Build partnerships with private healthcare providers to expand access and reduce the burden on public healthcare infrastructure. Regulate and subsidize private healthcare services to ensure affordability and transparency.

CONCLUSION:

In recent years, several initiatives have improved the status of the health sector in India. However, the need is to address the persistent challenges and make the health sector affordable, accessible, and inclusive to all people.

PRELIMS QUESTION:

Q. Consider the following subjects:

1. Public health and sanitation

2. Hospitals and dispensaries

3. Medical Education

How many of the above subjects are mentioned in the Union List of the Seventh Schedule?

A. Only one

B. Only two

C. All three

D. None

ANSWER: D

MAINS QUESTION:

Q Assess the role of the National Medical Commission (NMC) Act of 2019 in promoting accessible and affordable health services in India.

(Answer in 250 words)

THE MSME REVOLUTION: POWERING INDIA'S EXPORT GROWTH

WHY IN THE NEWS?

Micro, Small, and Medium Enterprises (MSMEs) are playing a key role in boosting India's export performance, with their exports jumping from ₹3.95 lakh crore in 2020-21 to ₹12.39 lakh crore in 2024-25. The number of exporting MSMEs has also surged, increasing from 52,849 in 2020-21 to 1,73,350 by 2024-25. In 2023-24, MSMEs contributed 45.73% to India's total exports, and this share rose to 45.79% by May 2024. This growth highlights their growing impact on the economy and global trade, solidifying their crucial role in India's trade success.

WHAT IS MSME?

MSME stands for Micro, Small, and Medium Enterprises. These are businesses classified based on their investment in plant and machinery or equipment and their annual turnover. MSMEs play a vital role in driving economic growth, creating employment, and contributing to innovation. The classification varies across different countries, but generally, MSMEs are categorized as follows:

SIGNIFICANT OF MSME:

1. **Contribution to GDP:** MSMEs contribute nearly 30% to India's GDP, driving economic growth through a diverse range of activities in manufacturing and services.

2. Employment Generation: MSMEs are vital for job creation, employing millions, especially in rural and semi-urban areas, thereby helping to reduce unemployment.

3. Rural Development: By establishing businesses in non-urban areas, MSMEs promote infrastructure development, curb urban migration, and enhance living standards in rural communities.

4. Women Empowerment: MSMEs create opportunities for women entrepreneurs, fostering financial independence and contributing to gender equality and economic development.

5. Formalization of the Economy: MSMEs aid in formalizing the economy by encouraging business registration and improving access to government schemes and credit, leading to better tax compliance.

6. Role in Exports: MSMEs significantly impact India's export sector, enhancing competitiveness in global markets, particularly in textiles, handicrafts, engineering, and agriculture.

GOVT. INITIATIVES TO UPGRADE MSME SECTOR:

1. **MUDRA Scheme (Micro Units Development and Refinance Agency):** Provides financial support to micro and small businesses through three loan categories: Shishu, Kishore, and Tarun, ensuring easier access to credit.

2. **PMEGP (Prime Minister's Employment Generation Programme):** Aimed at generating employment by promoting self-employment ventures through subsidies and financial assistance for setting up new micro-enterprises.

3. **Stand-Up India Scheme:** Promotes entrepreneurship among women, SC/ST, and

Category	Investment in Plant and Machinery	Annual Turnover
Micro Enterprises	Up to ₹1 crore	Up to ₹5 crore
Small Enterprises	₹1 crore to ₹10 crore	₹5 crore to ₹50 crore
Medium Enterprises	₹10 crore to ₹50 crore	₹50 crore to ₹250 crore

OBC communities by providing loans for setting up greenfield enterprises.

4. **Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE):** Offers collateral-free loans to MSMEs, encouraging banks to lend to small businesses without the need for tangible security.

5. **Atmanirbhar Bharat Package:** Aimed at making MSMEs more self-reliant by providing financial support, creating a conducive environment, and boosting production and exports.

6. **Technology Upgradation Fund Scheme (TUFS):** Focuses on modernizing technology in the MSME sector by offering financial assistance for the adoption of new technology.

7. **MSME Databank:** A platform that collects and maintains data on MSMEs, helping in better policy formulation, access to credit, and government schemes.

8. **National Manufacturing Competitiveness Programme (NMCP):** Promotes competitiveness in the MSME sector by providing financial and technical support, including quality certification and market development initiatives.

9. **Udyog Aadhar Registration:** Simplifies the registration process for MSMEs, enabling businesses to access various government benefits and schemes quickly.

CHALLENGES FACE BY MSME IN INDIA:

1. **Access to Finance:** Despite various government schemes, many MSMEs struggle with accessing timely and adequate finance due to collateral requirements and complex loan processes.

2. **Lack of Technological Upgradation:** Many MSMEs lack the resources to invest in modern technologies, limiting their competitiveness in the global market.

3. **Inadequate Infrastructure:** Poor infrastructure, especially in rural areas, hampers the growth of MSMEs, affecting their productivity and market

reach.

4. **Regulatory Hurdles:** Complex regulatory processes, including taxes and compliance requirements, create barriers for MSMEs to function efficiently.

5. **Market Access:** MSMEs often face challenges in accessing larger and international markets due to a lack of awareness, marketing expertise, and competitive pricing.

6. **Skilled Labor Shortage:** There is a lack of skilled labour, which limits MSMEs' potential for growth and productivity, especially in specialized industries.

7. **Competition from Larger Firms:** MSMEs face intense competition from large enterprises, which can leverage economies of scale, better technology, and larger marketing budgets.

WAY FORWARD:

1. **Promote Financial Inclusion:** Expanding access to finance through simplified loan schemes and strengthening the banking system's support for MSMEs.

2. **Focus on Skill Development:** Investment in skill development and training programs for MSME workers to bridge the labour skill gap and improve productivity.

3. **Encourage Technology Adoption:** Supporting MSMEs in upgrading their technology and adopting automation to improve production efficiency and global competitiveness.

4. **Ease of Doing Business:** Streamlining regulatory processes, reducing compliance burdens, and providing MSMEs with a simpler framework for doing business.

5. Market Linkages: Creating more opportunities for MSMEs to access domestic and international markets through digital platforms and trade fairs.

6. **Strengthen Infrastructure:** Building better infrastructure in rural and semi-urban areas to

support MSME operations and reduce logistical costs.

7. **Government Support for Innovation:** Encouraging innovation within the MSME sector through incentives for R&D and technology-driven solutions.

CONCLUSION

MSMEs are a cornerstone of India's economic growth, contributing significantly to GDP, employment, rural development, and exports. While government initiatives have significantly supported the sector, challenges like access to finance, technology, and skilled labour persist. By addressing these challenges and focusing on creating an enabling environment, MSMEs can realize their full potential, becoming a driving force in India's continued economic success on the global stage.

PRELIMS QUESTION:

Q. With reference to the role of MSMEs in India's economy, consider the following statements:

1. MSMEs contribute nearly 30% to India's GDP.
2. MSMEs are not involved in the export sector of the economy.
3. The MUDRA Scheme provides financial support to micro and small businesses.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

Answer: A

MAINS QUESTION:

Q. Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in driving India's economic growth, contributing significantly to GDP, employment, and exports. Discuss the key challenges faced by MSMEs and suggest measures for their sustainable growth.
(250 words, 15 marks)

EMPOWERING 'ANNADATAS' FOR A PROSPEROUS NATION

WHY IN THE NEWS:

Farmers, revered as the lifeblood of the nation and 'Annadatas,' form the foundation of India's prosperity. Their relentless efforts not only feed the population but also sustain the rural economy and strengthen households across the country. National Farmers' Day, observed on 23rd December, commemorates their invaluable contribution and coincides with the birth anniversary of Shri Chaudhary Charan Singh, India's fifth Prime Minister. Known for his deep understanding of rural issues and steadfast advocacy for farmers' welfare.

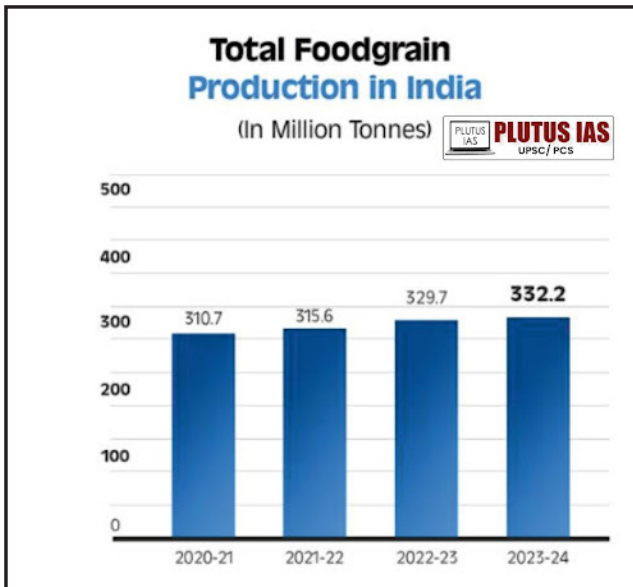### ROLE OF FARMERS IN NATION-BUILDING

Employment Generation: Nearly half of India's population is employed in the agricultural sector, making it a critical source of livelihood and a driver of socio-economic stability.

Economic Contribution: Agriculture contributes significantly to the nation's economy, with 17.7% of the Gross Value Added (GVA) at current prices in FY 2023-24 coming from this sector.

Extensive Agricultural Land: India has approximately 54.8% of its 328.7 million hectares classified as agricultural land, showcasing the vast scope and importance of farming for the country's development.

High Cropping Intensity: With a cropping intensity of 155.4% (as per the Land Use Statistics for 2021-22), Indian farmers maximize land use efficiency, ensuring higher productivity and food security.
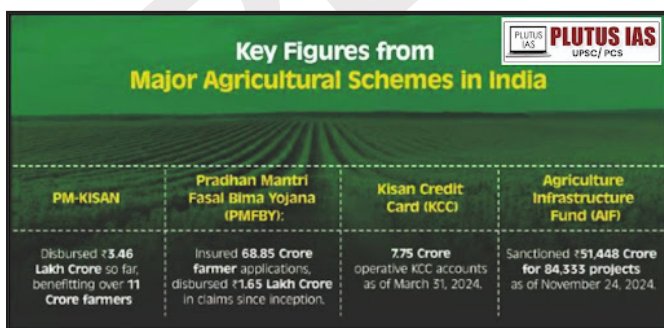
Food Security: Farmers play a central role in feeding the nation, ensuring food availability for over 1.4 billion people, and contributing to global food supplies.

Total Foodgrain Production in India
(In Million Tonnes)

Year	Production
2020-21	310.7
2021-22	315.6
2022-23	329.7
2023-24	332.2

Rural Development: By fostering agricultural growth, farmers act as catalysts for rural development, improving infrastructure, income levels, and living standards in rural areas.

Sustaining Livelihoods: The agricultural sector supports millions of smallholder and marginal farmers, providing a foundation for their economic and social well-being.

Resilience and Innovation: Through their hard work and adoption of innovative farming practice

Key Figures from Major Agricultural Schemes in India

PM-KISAN	Pradhan Mantri Fasal Bima Yojana (PMFBY):	Kisan Credit Card (KCC)	Agriculture Infrastructure Fund (AIF)
Disbursed ₹3.46 Lakh Crore so far, benefitting over 11 Crore farmers	Insured 68.85 Crore farmer applications, disbursed ₹1.65 Lakh Crore in claims since inception.	7.75 Crore operative KCC accounts as of March 31, 2024.	Sanctioned ₹51,448 Crore for 84,333 projects as of November 24, 2024.

Scheme	Details
Pradhan Mantri Kisan MaanDhan Yojana (PM-KMY)	Launched on 12th September 2019, PM-KMY provides security to vulnerable farmer families by offering a monthly pension. Farmers between the ages of 18 to 40 contribute monthly to the scheme, which is matched by the government. The Life Insurance Corporation (LIC) manages the pension fund. As of 25th November 2024, over 24.66 lakh farmers have enrolled in the scheme, offering a financial safeguard during their old age.
Modified Interest Subvention Scheme (MISS)	The Modified Interest Subvention Scheme (MISS) provides concessional short-term agri-loans with a 7% interest rate on loans up to ₹3.00 lakh, plus an additional 3% subvention for timely repayment, reducing the effective rate to 4%. Since 2014-15, institutional credit flow to agriculture has nearly tripled from ₹8.5 lakh crore to **₹25.48 lakh crore** by 2023-24. The disbursement of easy and concessional crop loans has more than doubled, with the interest subsidy through KCC increasing 2.4 times to ₹14,252 crore in 2023-24.
Kisan Credit Card (KCC)	Introduced in 1998, the Kisan Credit Card (KCC) scheme provides farmers with easy access to agricultural inputs and cash for their production needs. In February 2019, RBI extended the KCC facility to Animal Husbandry and Fisheries for their working capital requirements. As of 31st March 2024, there are **7.75 crore operative KCC accounts**.
Agriculture Infrastructure Fund (AIF)	The Agriculture Infrastructure Fund (AIF) Scheme, launched in 2020 under the Atmanirbhar Bharat Package, supports sustainable agriculture by financing infrastructure projects across India. It provides loans up to ₹2 crore with a capped interest rate of 9%, along with a 3% annual interest subvention and reimbursement of credit guarantee fees for up to seven years, ensuring affordability for beneficiaries. As of 24th November 2024, ₹51,448 crore has been sanctioned for 84,333 projects under AIF.

KISAN-KAVACH

FOR FARMER'S SAFETY

Kisan-Kavach fabric deactivates pesticides upon contact through nucleophilic mediated hydrolysis, thus preventing pesticide-induced toxicity and lethality

CHALLENGES FACED BY FARMERS

1. **Unpredictable Weather:** Climate change has led to erratic weather patterns, adversely affecting crop yields. For instance, India's sugarcane yields have suffered due to droughts and excessive rains, potentially lowering sugar production below consumption levels for the first time in eight years.

2. Limited Market Access: Farmers often

TABLE: NOTABLE AGRICULTURAL INITIATIVES

Initiative	Details	Key Achievements/Goals
Namo Drone Didi	Approved for 2024-25 to 2025-26 with an outlay of ₹1,261 crore. Provides 80% Central Financial Assistance up to ₹8 lakh for drones and accessories for agricultural rental services.	Empower 15,000 Women SHGs with drones for fertiliser and pesticide application. ₹141.41 crore released for Kisan drone promotion as of Dec 2024.
Soil Health Card Scheme	Launched in 2015 to promote efficient fertiliser use and improve soil health.	Over 24.60 crore cards issued since launch; 36.61 lakh cards generated in 2023-24. Plan to test 5 crore soil samples by 2025-26.
Formation & Promotion of 10,000 FPOs	Launched in 2020 with a budget of ₹6,865 crore to form and promote Farmer Producer Organizations (FPOs).	9,411 FPOs formed so far, involving 26.17 lakh farmers to enhance collective farming and market access.
Kisan Kavach	Bharat's first anti-pesticide bodysuit unveiled on 17th December 2024 to protect farmers from pesticide exposure.	Ensures farmer safety with science and technology. First batch distributed to farmers during the launch event.
Clean Plant Programme (CPP)	Approved on 09.08.2024 with an outlay of ₹1,765.67 crore to provide disease-free planting material.	Enhance the quality and productivity of horticulture crops and promote climate-resilient, high-yield varieties.
Digital Agriculture Mission	Approved on 02.09.2024 with an outlay of ₹2,817 crore, including ₹1,940 crore central share.	Develop Digital Public Infrastructure, implement Digital General Crop Estimation Survey (DGCES), and foster IT initiatives for digital agriculture.
Credit Guarantee Scheme for e-NWR Based Pledge Financing (CGS-NPF)	Launched on 16 December 2024 with a ₹1,000-crore corpus to support post-harvest financing for farmers.	Enable farmers to access credit by pledging produce stored in WDRA-accredited warehouses, backed by e-NWRs.
National Mission on Edible Oils – Oilseeds (NMEO-Oilseeds)	Approved on 03.10.2024 with an outlay of ₹10,103 crore, to be implemented over 2024-25 to 2030-31.	Boost domestic oilseed production and achieve self-reliance in edible oils.
National Mission on Natural Farming (NMNF)	Approved on 25.11.2024 with an outlay of ₹2,481 crore (₹1,584 crore Central and ₹897 crore State share).	Promote chemical-free, natural farming practices across the country.

struggle to access fair markets due to inadequate infrastructure and exploitation by intermediaries. This limits their ability to obtain fair prices for their produce.

3. **Low Income and Debt:** A significant number of farmers (86%) are small and marginal, owning less than 2 hectares of land, which limits their income potential.

4. **Fragmented Landholdings:** The predominance of small and fragmented landholdings reduces productivity and limits the scope for mechanization and large-scale farming.

5. **Soil Degradation:** Overuse of fertilizers and pesticides, along with intensive farming practices, have led to declining soil fertility, adversely affecting crop yields.

6. **Water Scarcity:** Dependence on monsoons and inefficient irrigation systems cause water shortages, hampering crop cultivation. Farmers in regions like Marathwada face chronic water shortages, exacerbated by climate change and overuse of groundwater.

7. **Post-Harvest Losses:** Lack of adequate storage, transportation, and processing facilities results in significant post-harvest losses, reducing farmers' incomes.

8. **Limited Awareness of Modern Techniques:** Many farmers lack access to modern agricultural technologies, training, and resources, hindering productivity improvements.

9. **Price Volatility:** Fluctuations in market prices of crops make it difficult for farmers to plan and earn stable incomes. For example, recent policy changes regarding export restrictions have led to dissatisfaction among farmers, as they had already sold their produce at low prices before the restrictions were lifted.

10. **Policy and Subsidy Gaps:** Delayed implementation of policies, inadequate subsidies, and bureaucratic hurdles often prevent farmers from reaping the intended benefits of government schemes.

WAY FORWARD FOR STRENGTHENING INDIAN AGRICULTURE:

Price support with PM-AASHA: PM-AASHA (Pradhan Mantri Annadata Aay Sanrakshan Abhiyan) ensures remunerative prices for farmers by strengthening procurement mechanisms. In 2023-24, over ₹10,000 crore was allocated to enhance market access for farmers, stabilizing incomes and reducing exploitation by intermediaries.

Basic Minimum Income Schemes: Programs like PM-Kisan provide direct income support of ₹6,000 annually to over 11 crore farmers.

Empowering Women Farmers: Providing land ownership and access to financial aid enables women farmers to play a more active role in agriculture.
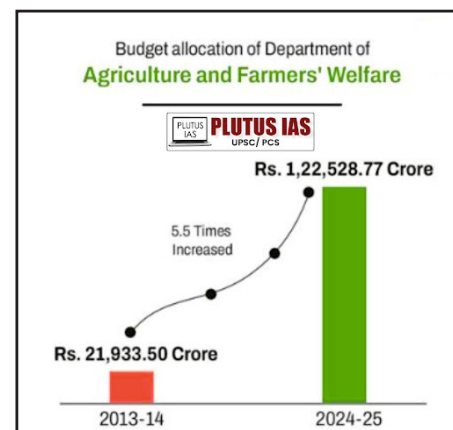
Formal Credit Access through Priority Sector Lending (PSL): Banks disbursed ₹20.39 lakh crore under PSL for agriculture in FY 2022-23, boosting farmers' access to formal credit. The Credit Guarantee Scheme for e-NWRs (2024) ensures post-harvest financing for farmers, reducing dependence on informal lenders.

Weather Prediction via Mission Mausam: Strengthened weather forecasting systems help farmers plan effectively, reducing losses from erratic weather. New satellite data integration under Mission Mausam aims to provide precise weather predictions and agro-advisories.

Promoting Organic and Group Farming: The formation of 10,000 FPOs (Farmer Producer Organizations) with a ₹6,865 crore budget enhances collective farming and promotes sustainable agriculture. The National Mission on Natural Farming (2024) promotes chemical-free farming practices with an outlay of ₹2,481 crore.

Enhancing Cold Storage and Warehousing Facilities: Current storage capacity is only 70% of the required levels, leading to 20-30% post-harvest losses in perishables. Investments under the Agri-Infrastructure Fund aim to develop 35 million tonnes of storage capacity by 2026.

Focus on Research and Development with Reduced Subsidies: Shifting focus from subsidies to investments in agricultural R&D ensures long-term productivity. Initiatives like the Clean Plant Programme (₹1,765 crore) and Digital Agriculture Mission (₹2,817 crore) enhance innovation and precision farming.

Budget allocation of Department of **Agriculture and Farmers' Welfare**

PLUTUS IAS UPSC/ PCS

Rs. 1,22,528.77 Crore

5.5 Times Increased

Rs. 21,933.50 Crore

2013-14   2024-25

CONCLUSION

The Government of India's initiatives reflect a strong commitment to empowering farmers and fostering sustainable agricultural growth. Programs like PM-KISAN, PMFBY, Namo Drone Didi, and Digital Agriculture Mission enhance financial security, productivity, and market access. Achievements in food grain production and transformative schemes like the Clean Plant Programme and National Mission on Natural Farming strengthen the agricultural ecosystem. These efforts ensure farmers, the 'Annadatas,' remain integral to India's development, building a resilient and prosperous future.

PRELIMS QUESTION:

Q: What is the primary aim of the Clean Plant Programme (CPP):

A) To promote organic farming practices
B) To provide disease-free planting material for horticulture crops
C) To enhance the irrigation infrastructure for agriculture
D) To support rural electrification for agricultural purposes

Answer: B

MAINS QUESTION:

Q: Discuss the recent initiatives taken by the Government of India to improve farmers' income. Critically analyze whether these initiatives are sufficient to achieve the goal of doubling farmers' income. (Answer in 250 words)

POWERFUL EARTHQUAKE STRIKES VANUATU, TREMORS FELT ACROSS THE ISLANDS

WHY IN THE NEWS?

A 6.1 magnitude earthquake rocked Vanuatu on Sunday morning, just hours before a suspension on commercial flights to the island nation was scheduled to be lifted. The quake, which hit near the capital Port Vila, caused building tremors but did not result in widespread damage or trigger a tsunami warning. This comes just days after a more deadly 7.3 magnitude earthquake. Leading to a seven-day state of emergency and a night curfew. While commercial flights were set to resume, aiding the tourism industry and allowing stranded travellers to return home for Christmas, the latest seismic event has raised concerns about the stability of the region.

WHAT IS AN EARTHQUAKE?

An earthquake is the shaking of the ground caused by the sudden release of energy in the Earth's crust. This energy release generates seismic waves, which cause the ground to move. Earthquakes can vary in size, from small tremors that are barely felt to large, destructive events.

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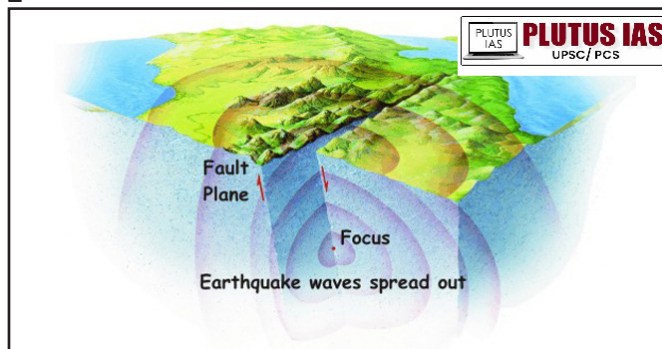
Causes of Earthquakes:

1. **Tectonic Plate Movement:** The Earth's crust is divided into large plates called tectonic plates. These plates are constantly moving, and when they collide, slide past each other, or pull apart, stress builds up at the boundaries. When this stress is released, it causes an earthquake.

2. **Volcanic Activity:** Earthquakes can also occur as a result of volcanic activity. When magma forces its way to the surface, it can cause the surrounding rocks to crack, triggering an earthquake.

3. **Human Activities:** Activities like mining, drilling, or injecting fluids into the ground (such as fracking) can also induce earthquakes.

Types of Earthquakes:

1. **Tectonic Earthquakes:** The most common type, caused by the movement of tectonic plates.

2. **Volcanic Earthquakes:** Caused by volcanic eruptions or magma movement beneath the Earth's surface.

3. **Collapse Earthquakes:** Smaller quakes that occur when underground caves or mines collapse.

TRIGGERING FACTORS:

1. **Tectonic Plate Movements:** Earthquakes occur when plates collide, slide past each other, or move apart along plate boundaries (convergent, divergent, and transform boundaries).

2. **Volcanic Activity:** Magma movement beneath the Earth's crust creates pressure, leading to volcanic earthquakes before, during, or after eruptions.

3. **Human Activities:** Human activities can also trigger earthquakes. Mining causes stress in rocks, potentially leading to small tremors. Fracking injects fluids into rocks, causing faults to slip and induce seismicity. Reservoir-induced seismicity occurs when large dams and reservoirs alter pressure on the Earth's crust, sometimes triggering earthquakes

4. **Faulting:** Sudden movement along faults in the Earth's crust causes earthquakes.

5. **Isostatic Rebound:** As glaciers melt, the Earth's crust adjusts, triggering small earthquakes.

6. **Overburden Pressure:** Accumulation of layers of rock or sediment can cause stress that results in earthquakes.

7. **Cave or Mine Collapse:** The collapse of underground cavities can trigger small tremors.

8. **Meteorite Impacts:** Large meteorite strikes can create seismic waves.

REGIONAL DISTRIBUTION:

1. **Pacific Ring of Fire:** The most active region around the Pacific Ocean, with frequent quakes due to plate boundaries. (e.g., Japan, Indonesia, Chile)

2. **Himalayan Region:** Earthquakes caused by the collision of the Indian and Eurasian plates. (e.g., Nepal, India, Pakistan)

3. **Mid-Atlantic Ridge:** Divergent boundary where plates pull apart, triggering quakes. (e.g., Iceland)

4. **Alpide Belt:** Earthquakes due to the collision of African and Eurasian plates. (e.g., Italy, Turkey, Iran)

5. **San Andreas Fault (California):** Transform fault between the Pacific and North American plates. (e.g., California, USA)

6. **Anatolian Fault (Turkey):** Transform fault between the Eurasian and Arabian plates. (e.g., Turkey)

7. **Indian Ocean:** Subduction zones around the Indian Plate cause frequent earthquakes. (e.g., Indonesia, Sumatra)

8. **East African Rift Zone:** Divergent boundary where the African continent is splitting. (e.g., Ethiopia, Kenya)

9. **New Madrid Seismic Zone:** Intraplate earthquakes in central USA. (e.g., Missouri, Arkansas)

WHY IS IT MORE PREVALENT IN THE PACIFIC RING OF FIRE?

1. **Tectonic Plate Boundaries:** The Ring of Fire is surrounded by multiple convergent, divergent, and transform plate boundaries where plates interact:

2. **Convergent boundaries:** Plates collide or one is forced beneath another, leading to subduction zones, which are prone to earthquakes (e.g., Japan, Indonesia).

3. **Transform boundaries:** Plates slide past each other, causing friction and earthquakes (e.g., California's San Andreas Fault).

4. **Divergent boundaries:** Plates pull apart, creating tension and seismic activity (e.g., the mid-ocean ridges).

5. **Subduction Zones:** Many of the Pacific Plate's boundaries involve subduction, where oceanic plates are pushed beneath continental plates. This generates huge amounts of seismic energy, triggering powerful earthquakes and volcanic eruptions (e.g., the 2004 Indian Ocean earthquake).

6. **Volcanic Activity:** The Ring of Fire is known for volcanic activity, which often accompanies earthquakes. As magma moves beneath the Earth's crust, it can cause the crust to crack, triggering earthquakes.

7. **Frequent Plate Movements:** The constant movement of the Pacific Plate, the largest tectonic plate, against neighbouring plates creates continuous stress, making the area highly seismically active.
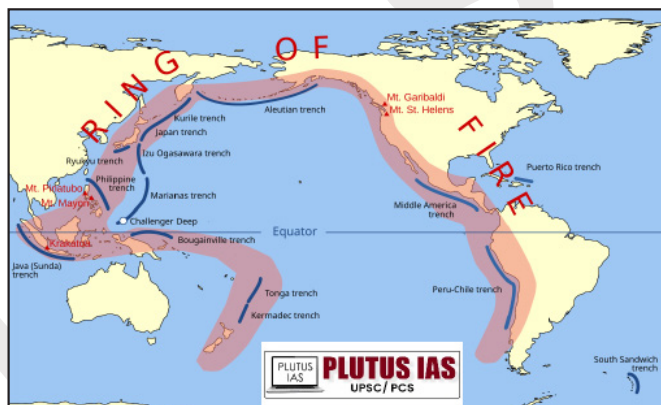
CONSEQUENCES OF THE EARTHQUAKE:

Consequence	Description
1. Ground Shaking	Immediate shaking caused the collapse of buildings, bridges, and infrastructure, leading to fatalities, injuries, and significant damage.
2. Surface Rupture	Cracks or displacements in the Earth's surface that damage roads, railways, pipelines, and buildings.
3. Tsunamis	Underwater earthquakes displace large volumes of water, creating massive waves that flood coastal areas and cause widespread destruction and loss of life.
4. Landslides	Earthquakes trigger landslides, especially in mountainous areas, burying homes, roads, and infrastructure.
5. Fires	Broken gas lines, electrical failures, and damaged infrastructure lead to uncontrollable fires.
6. Infrastructure Damage	Collapsing buildings, bridges, roads, and communication systems, hindering rescue efforts and prolonging recovery.
7. Economic Impact	Massive economic losses due to the destruction of homes, businesses, infrastructure, and long-term economic disruption.
8. Human Displacement	Thousands of people are displaced, often living in temporary shelters with limited access to food, water, and medical services.
9. Environmental Damage	Damage to ecosystems, disruption of water supplies, and adverse effects on wildlife habitats.

CONCLUSION

Earthquakes are natural disasters caused by the sudden release of energy in the Earth's crust. They occur primarily along tectonic plate boundaries, with the Pacific Ring of Fire being the most seismically active region due to its numerous plate interactions, including subduction zones, transform faults, and volcanic activity. The consequences of earthquakes can be severe, affecting both human life and infrastructure, causing economic loss, environmental damage, and psychological trauma. While the causes of earthquakes are diverse—ranging from tectonic plate movement to human activities—their regional distribution highlights the need for better preparedness, especially in high-risk areas like the Pacific Ring of Fire.

PRELIMS QUESTION:

Q. Which region is known as the most seismically active due to frequent tectonic plate movements and subduction zones?

A. Himalayan Region

B. Mid-Atlantic Ridge

C. Pacific Ring of Fire

D. New Madrid Seismic Zone

Answer: C

MAINS QUESTION:

Q. Discuss the primary causes and consequences of earthquakes, with a special focus on why they are more prevalent in the Pacific Ring of Fire.

(250 words, 15 marks)

UNLOCKING THE FUTURE OF POWER: DISTRIBUTED ENERGY TECHNOLOGIES

WHY IN THE NEWS?

Distributed Energy Resources (DERs) are offering exciting new opportunities for power systems but also present significant challenges if grids aren't properly prepared. While many regions are still ex-ploring how DERs fit into the broader energy landscape—understanding their impact on grid stability, reliability, and cost reduction—other areas have already built valuable experience. These regions have demonstrated that, when supported by the right technologies, policies, and incentives, DERs can provide crucial services to enhance grid performance and drive down energy costs.

WHAT IS DISTRIBUTED TECHNOLOGY?

Distributed generation refers to a variety of technologies that generate electricity at or near where it will be used, such as solar panels and combined heat and power. Distributed generation may serve a single structure, such as a home or business, or it may be part of a microgrid (a smaller grid that is also tied into the larger electricity delivery system), such as at a major industrial facility, a military base, or a large college campus. When connected to the electric utility's lower voltage distribution lines, distributed generation can help support the delivery of clean, reliable power to additional customers and reduce electricity losses along transmission and distribution lines.

DISTRIBUTED TECHNOLOGY APPLIED IN THE RESIDENTIAL SECTOR:

1. **Solar Photovoltaic (PV) Panels:** These panels convert sunlight directly into electricity, offering a sustainable and renewable source of energy for homes.

2. **Small Wind Turbines:** These turbines harness wind energy to generate electricity on-site, providing an alternative renewable energy source for residential use.

3. **Natural-Gas-Fired Fuel Cells:** These fuel cells produce electricity through a chemical reaction between hydrogen and oxygen, with natural gas often serving as the fuel, offering a reliable and efficient energy source for homes.

4. **Emergency Backup Generators:** Typically powered by gasoline or diesel, these generators provide backup power during grid outages, ensuring that essential home systems remain functional in emergencies.

DISTRIBUTED TECHNOLOGY APPLIED IN THE COMMERCIAL AND INDUSTRIAL SECTORS:

1. **Combined Heat and Power (CHP) Systems:** These systems generate both electricity and useful heat from a single energy source, maximizing efficiency by utilizing waste heat that would otherwise be lost.

2. **Solar Photovoltaic (PV) Panels:** Like in the residential sector, solar panels are used by businesses and industrial facilities to harness sunlight and convert it into electricity, reducing reliance on the grid and lowering energy costs.

3. **Wind Power:** On-site wind turbines can generate electricity for commercial and industrial operations, especially in areas with consistent wind resources, reducing energy expenses and carbon footprints.

4. **Hydropower:** Small-scale hydropower systems, such as micro-hydropower plants, can be installed in regions with available water resources to produce renewable electricity.

5. **Biomass Combustion or Cofiring:** Biomass, such as wood chips or agricultural waste, can be burned to generate electricity and heat. Cofiring with coal in existing power plants is another method to reduce emissions and diversify fuel sources.

6. **Municipal Solid Waste Incineration:** This technology involves burning waste materials to generate electricity and reduce the volume of waste while also producing heat for industrial processes or district heating systems.

7. **Fuel Cells Fired by Natural Gas or Biomass:** Fuel cells use electrochemical reactions to produce electricity, with natural gas or biomass as the fuel source, offering a cleaner alternative to conventional combustion-based power generation.

8. **Reciprocating Combustion Engines:** Often used as backup generators, these engines can run on various fuels, including diesel, natural gas, or biomass, to provide reliable electricity during peak demand or in the event of grid outages.

MECHANISM OF DISTRIBUTED TECHNOLOGY:

1. Energy Generation:

Solar Panels: Convert sunlight into electricity using semiconductor materials. When sunlight hits the panels, it creates an electric current.

Wind Turbines: Capture wind energy through spinning blades, which turn a generator to produce electricity.

Fuel Cells: Generate power through a chemical reaction, typically using hydrogen and oxygen, producing electricity, heat, and water.

Biomass Combustion: Burns organic material (like wood or waste) to produce heat, which can drive a turbine to generate electricity.

2. Energy Storage:

Batteries: Store excess energy from sources like solar or wind, and release it when needed, especially during periods of low generation or high demand.

Thermal Storage: Stores excess heat for later use, improving efficiency in systems like combined heat and power (CHP).

3. Energy Management:

Inverters & Smart Grids: Convert energy and manage its flow to integrate distributed systems with the grid. Inverters turn DC energy (from solar, for example) into usable AC power. Smart grids help balance energy supply and demand efficiently.

4. Backup Power:

Generators: Provide emergency power when the grid goes down. They are usually powered by natural gas or diesel.

5. Grid Integration:

Microgrids: Localized energy networks that can disconnect from the main grid and operate independently, ensuring continuous power during outages.

CONCERNS RELATED TO DISTRIBUTED TECHNOLOGY:

1. **Grid Integration:** Connecting decentralized systems like solar and wind to the grid can be complex and requires advanced infrastructure.

2. **Grid Stability:** Intermittent energy sources may cause power fluctuations, affecting grid reliability without proper storage or backup systems.

3. **High Costs:** Initial setup and maintenance of distributed systems can be expensive, limiting access for some households or businesses.

4. **Regulatory Uncertainty:** Lack of clear policies and regulations can hinder adoption and investment in distributed energy.

5. **Maintenance Requirements:** Regular upkeep of technologies like wind turbines or biomass systems can be costly and specialized.

6. **Cybersecurity Risks:** Increased connectivity of distributed systems raises the risk of cyberattacks and data breaches.

7. **Environmental Impact:** Some systems, like biomass, may have negative environmental effects if not properly managed.

WAY FORWARD:

1. **Improve Grid Integration:** Developing advanced grid infrastructure, such as smart grids and improved inverters, will enable better integration of DERs, ensuring smooth communication and efficient energy flow between decentralized systems and the main grid.

2. **Enhance Storage Solutions:** Expanding energy storage technologies, like advanced batteries, will help mitigate the intermittent nature of renewable sources like solar and wind, ensuring a more reliable energy supply.

3. **Supportive Policies and Regulations:** Governments need to create clear, consistent policies that encourage investment in DERs, provide incentives for clean energy adoption, and address regulatory gaps to support the growth of distributed systems.

4. **Lower Costs through Innovation:** Continued research and technological advancements will help lower the cost of distributed energy systems, making them more accessible to households, businesses, and industries alike.

5. **Cybersecurity Measures:** As DERs become more connected, it's essential to invest in robust cybersecurity frameworks to protect distributed systems from potential vulnerabilities and threats.

6. **Focus on Sustainability:** Ensuring that technologies like biomass and waste-to-energy are managed sustainably will help mitigate environmental impacts while maintaining the benefits of distributed generation.

7. **Promote Energy Equity:** Efforts must be made to ensure that all communities, particularly low-income and rural areas, have access to affordable and reliable distributed energy solutions.

CONCLUSION

Distributed energy technologies hold great promise for transforming the way we generate, store, and consume electricity, offering cleaner, more efficient, and reliable solutions for residential, commercial, and industrial sectors. However, to unlock their full potential, addressing challenges related to grid integration, cost, regulation, and sustainability is essential. By investing in innovative solutions, supporting clear policies, and ensuring equitable access, we can build a more resilient and sustainable energy future powered by DERs.

PRELIMS QUESTION:

Q. Which of the following technologies are part of Distributed Energy Resources (DERs)?

1. Solar Photovoltaic (PV) Panels

2. Large Hydropower Plants

3. Nuclear Power Plants

4. Combined Heat and Power (CHP) Systems

Choose the correct answer:

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 4 only

D. All four

Answer: C

MAINS QUESTION:

Q. Discuss the challenges and opportunities associated with integrating Distributed Energy Resources (DERs) into the power grid.

(250 words, 15 marks)

THE ROLE OF CENTRAL AGENCIES IN STRENGTHING INTERNAL SECURITY

WHY IN THE NEWS?

The National Investigation Agency (NIA) conducted searches in remote villages of Chhattisgarh and Giridih district of Jharkhand related to a Maoist attack on a polling and security team during last year's state Assembly elections. The NIA seized 1.5 lakh rupees in cash, Naxal pamphlets, booklets, mobile phones, and other incriminating materials. The searches took place in Maoist-affected areas like Rawandiggi, Semra, and Gariyaband, targeting suspects believed to be overground workers supporting the banned CPI (Maoist) group's Mainpur-Nuapada division.

WHAT IS NIA?

The National Investigation Agency (NIA) is a specialized counter-terrorism law enforcement agency in India. It was established to investigate and prosecute cases related to terrorism, insurgency, and crimes that have national or cross-border implications. The NIA operates across state boundaries, investigating crimes that threaten India's sovereignty, security, and integrity. It was formed in response to the 26/11 Mumbai terror attacks, which highlighted the need for a central agency dedicated to dealing with terrorism-related matters. The NIA has the authority to conduct searches, seizures, and arrests and maintain a database of terrorist organizations and their members.

ESTABLISHMENT OF NIA:

The NIA was formally established through the National Investigation Agency Act of 2008, passed by the Parliament of India on December 31, 2008. It came into being as a response to the growing threat of terrorism in India and the challenges in coordinating investigations across different states. Its role is to centralize and streamline the investigation of serious terror-related crimes. The agency is headquartered in New Delhi, with branches in several cities, and its functioning is Subject to scrutiny, particularly regarding its jurisdiction and coordination with other law enforcement agencies.

COMPOSITIONS OF NIA:

1. Director-General (DG): The head of the agency, responsible for overall operations.

2. Officers and Investigating Staff: Officers from the Indian Police Service (IPS), IRS, and other specialized units like the CBI, BSF, and CISF.

3. NIA Branches: Regional offices across India (e.g., Mumbai, Kolkata, Chennai) headed by senior officers like Superintendent of Police (SP) or Deputy Inspector General (DIG).

4. **Specialized Cells:** Focus on terrorism, organized crime, cross-border crime, cybercrimes, and Naxal activities.

5. **Legal and Technical Staff:** Legal experts handle prosecutions, while technical staff support investigations, especially in digital forensics and cyber issues.

6. **Centralized Functions:** NIA maintains a national database on terrorist organizations and key individuals, streamlining operations.

7. **Advisory Body:** Includes officials from agencies like the CBI, IB, and RAW for strategic guidance.

8. **International Coordination:** NIA works with agencies like Interpol and CIA for cross-border investigations.

POWER AND FUNCTIONS OF NIA:

Powers of NIA	Functions of NIA
1. Investigative Authority Across States	**1. Counter-Terrorism**
The NIA can investigate terror-related crimes and other offences that threaten India's sovereignty, integrity, and security, across state borders, without needing permission from state governments.	Primarily focuses on preventing, investigating, and prosecuting terror-related offences, including those involving international links.
2. Conducting Searches and Seizures	**2. Investigation of Cross-Border Crimes**
The NIA has the authority to carry out searches, seize property, and confiscate items related to criminal activities, especially those connected to terrorism.	Investigates crimes with cross-border implications, such as foreign funding of terrorism, international terror networks, and cross-border smuggling of weapons or explosives.
3. Arrests	**3. Maintaining National Security**
The agency has the power to arrest individuals involved in terror activities or related crimes, ensuring that perpetrators are brought to justice.	Works to safeguard India's sovereignty, integrity, and security by tackling threats from both domestic and international sources, including organized crime and insurgency.
4. Evidence Collection	**4. Coordination with Other Agencies**
The NIA can collect evidence from various sources, including digital devices, documents, and witnesses, to support its investigations and prosecutions.	Coordinates with other Indian security agencies (CBI, IB, RAW, local police) and international agencies (like Interpol) to combat terrorism and organized crime.
5. Prosecution	**5. Intelligence Gathering**
The NIA is authorized to prosecute individuals for offences related to terrorism, insurgency, and national security under various Indian laws like the UAPA.	Gathers intelligence related to terrorist activities and criminal organizations, aiding in preemptive actions against threats.
6. Monitoring and Maintaining a Database	**6. Legal and Forensic Functions**
It can maintain a national database of terrorist organizations, their members, and their activities, which helps in tracking and analyzing terror-related threats.	Handles prosecution of terror cases in courts, working alongside legal and forensic experts to ensure evidence is admissible and robust in trials.

LAW IMPOSED BY NIA:

1. **The Atomic Energy Act, 1962:** Governs the regulation and safety of nuclear energy and materials in India.

2. **The Unlawful Activities (Prevention) Act, 1967:** Targets terrorism, bans terrorist organizations and prevents unlawful activities threatening India's sovereignty.

3. **The Anti-Hijacking Act, 1982:** Addresses the hijacking of aircraft, with severe penalties, including death.

4. **The Suppression of Unlawful Acts Against the Safety of Civil Aviation Act, 1982:** Focuses on acts endangering civil aviation safety, in line with international aviation security conventions.

5. **The SAARC Convention (Suppression of Terrorism) Act, 1993:** Implements the SAARC agreement to combat terrorism in South Asia through regional cooperation.

6. **The Suppression of Unlawful Acts Against Safety of Maritime Navigation and Fixed Platforms Act, 2002:** Deals with maritime terrorism and threats to ships and offshore platforms.

7. **The Weapons of Mass Destruction and Their Delivery Systems Act, 2005:** Prohibits activities related to the proliferation of WMDs and their delivery systems.

8. **Offenses under IPC:**

Chapter VI (Sections 121-130): Deals with waging war against India, sedition, and related offences.

Sections 489-A to 489-E: Addresses counterfeit currency crimes.

ROLE OF NIA TO STRENGTHEN INTERNAL SECURITY:

1. **Counter-Terrorism:** Investigates and prosecutes terror-related crimes nationwide, without needing state approval, and takes over cases from state police when necessary.

2. **Setting Standards:** Establishes best practices for counter-terrorism investigations to ensure effectiveness and excellence.

3. **Law Evaluation:** Analyzes terrorism laws in India and abroad, suggesting reforms to improve legal frameworks.

4. **Coordination:** Collaborates with national and international agencies like CBI, IB, and Interpol to combat cross-border terrorism and organized crime.

5. **Deterrence:** Creates a deterrent effect by successfully prosecuting terrorist activities, discouraging groups from operating in India.

6. **Fighting Insurgency:** Tackles insurgency and organized crime, contributing to overall national security.

LIMITATIONS OF NIA:

1. **Jurisdictional Restrictions:** While the NIA has extensive powers, its jurisdiction is limited to specific types of crimes related to terrorism, national security, and cross-border crimes. It may face challenges when dealing with crimes that don't directly fall under its scope.

2. **Coordination Challenges:** The NIA often faces difficulties in coordinating with state police forces and local agencies, especially in states with varying levels of cooperation or where local interests conflict with national security concerns.

3. **Dependence on State Governments:** Though the NIA can take over cases, it still requires the cooperation of state governments, which can sometimes delay or complicate investigations, particularly in sensitive areas.

4. **Resource Constraints:** The NIA operates with limited resources and faces challenges in dealing with a vast range of terrorist and insurgency-related activities. It may struggle with manpower, technology, and infrastructure in certain cases.

5. **Legal and Bureaucratic Delays:** Delays in the judicial process and bureaucratic hurdles can slow down the NIA's ability to prosecute cases effectively and timely.

WAY FORWARD TO STRENGTHEN THE NIA:

1. **Expanding Jurisdiction:** Broadening the NIA's jurisdiction to cover a wider range of national security-related crimes would help it address emerging threats more effectively.

2. **Improved Coordination Mechanisms:** Strengthening coordination between the NIA, state police, and other agencies through better communication and centralized databases would streamline investigations and enhance collaboration.

3. **Increased Funding and Resources:** Allocating more funds for modern technology, forensic capabilities, and enhanced manpower would improve the NIA's operational efficiency.

4. **Capacity Building:** Regular training and skill development for NIA personnel, especially in emerging fields like cybercrime, can enhance their investigative capabilities.

5. **Faster Legal Processes:** Reforms in the judicial process for terrorism-related cases can reduce delays, ensuring quicker trials and convictions.

6. **International Cooperation:** Strengthening international partnerships and intelligence-sharing networks with agencies like Interpol, the FBI, and other counter-terrorism bodies can aid in handling cross-border terrorism more effectively.

CONCLUSION

The National Investigation Agency (NIA) plays a crucial role in safeguarding India's national security by investigating and prosecuting terrorism-related crimes, insurgency, and other threats. Its specialized capabilities, including cross-border jurisdiction, coordination with other law enforcement agencies, and effective use of intelligence, make it an essential institution in counter-terrorism efforts. However, the NIA faces certain limitations, such as jurisdictional restrictions, coordination challenges with state authorities, and resource constraints. Strengthening the agency's operational capacity, expanding its jurisdiction, improving coordination mechanisms, and enhancing international cooperation will enable it to more effectively counter emerging threats and maintain national security.

PRELIMS QUESTION:

Q. Consider the following statements:

Statement-I: NIA was set up by the top parliament in 2008

Statement-II: There was a terrorist attack in India that led to the establishment of NIA.

Which one of the following is correct in respect of the above statements?

A. Both Statement I and Statement II are correct, and Statement II is the correct explanation for Statement I

B. Both Statement I and Statement II are correct, and Statement II is not the correct explanation for Statement

C. Statement I is correct, but Statement II is incorrect

D. Statement I is incorrect, but Statement II is correct

Answer: A

MAINS QUESTION:

Q. Discuss the role of the National Investigation Agency (NIA) in strengthening India's internal security. What are its limitations, and how can it be strengthened to counter emerging national security threats?

(250 words, 15 marks)