

**GS PAPER 2-SALIENT FEATURES OF THE REPRESENTATION OF PEOPLE'S ACT**

**Criticism of Model Code of Conduct (MCC)**

The article criticizes the Model Code of Conduct (MCC) for elections in India. It argues that the MCC is ineffective and often ignored. The Election Commission (EC) fails to enforce it, leading to electoral misconduct. The author suggests scrapping the MCC and strengthening existing election laws instead.

**Why is the MCC Criticized?**

1. **Ineffective Enforcement:** The MCC's rules are often violated with impunity. For example, Himanta Biswa Sarma's speech in Jamsheedpur was openly communal, violating the MCC's guidelines against inciting communal tensions, yet no action was taken.
2. **Selective Action:** The Election Commission of India (ECI) has been inconsistent in enforcing the MCC. Despite clear violations, such as slanderous remarks by politicians in Maharashtra and Jharkhand, the ECI has not promptly or effectively responded.
3. **Failure in Preventing Voter Bribery:** The Maharashtra government's announcement of schemes worth Rs 1 lakh crore just before elections is a classic example of voter bribery, which the MCC is supposed to prevent but fails to.
4. **MCC as a Distraction:** The MCC is used to delay governance activities during elections, serving as an excuse for officials to pause regular duties, thus disrupting normal governance.

**What Was the MCC Originally Meant to Do?**

1. **Purpose of the MCC:** The Model Code of Conduct (MCC) was designed to ensure that elections are conducted in a fair and impartial manner. It aimed to foster a healthy democratic spirit and ensure a level playing field among competing political parties.
2. **Promoting Decency:** The MCC emphasized the need for decency in campaign practices. It sought to prevent practices that could lead to unfair advantages, particularly for the ruling parties during the run-up to elections.
3. **Quick Redressal Mechanism:** It provided a framework for quick identification and redressal of electoral violations, which was simpler compared to the lengthy legal processes involved in adjudicating election law violations.
4. **Independent Enforcement:** The MCC positioned the Election Commission as an independent body capable of resolving disputes during elections, complementing the existing laws governing electoral practices.

**What should be done?**

1. **Scrap the MCC:** The MCC is ignored and ineffective. Leaders like Himanta Biswa Sarma make divisive remarks, violating MCC rules without consequences.
2. **Strengthen Election Laws:** Use the Representation of the People Act, 1951, which already covers corrupt practices, like voter bribery and misuse of funds, for enforcement.
3. **Empower the ECI:** With powers under Article 324, the ECI should focus on enforcing laws, not managing the MCC.
4. **Avoid Governance Disruption:** MCC often delays governance activities, as seen in Maharashtra's Rs 1 lakh crore schemes announcement before elections, which risk being seen as bribery.

**GS PAPER 2- JUDICIARY AND GS1-SOCIETY-ROLE OF WOMEN AND WOMEN'S ORGANIZATION**

**Lack of women in the judiciary**

The article discusses the lack of women in the judiciary, highlighting issues in entry and retention. It emphasizes the need for supportive policies, infrastructure, and gender-sensitive practices. Greater representation and understanding of women's specific needs are essential for their advancement in the legal profession.

**What is the current state of women's representation in the judiciary?**

1. Women's representation in the judiciary is low, especially in higher roles.
2. In district judiciary, women make up 36.3%, with 14 states having over 50% female recruits as junior judges.
3. However, only 13.4% of High Court judges and 9.3% of Supreme Court judges are women (as of January 2024).
4. States like Bihar, Chhattisgarh, and Jharkhand have either no women judges or only one.
5. In the Bar, just 15.31% of enrolled advocates are women, with few reaching senior roles.

**What policy gaps hinder women's progress in the judiciary?**

1. **Entry Barriers:** Judicial Service Rules in several states require continuous practice for bench elevation, challenging for women balancing family roles without maternity benefits or stipends.
2. **Restrictive Transfer Policies:** Transfer rules often disregard women's responsibilities as primary caretakers, limiting career growth.
3. **Infrastructural Deficits:** Many courts lack women-specific amenities. For instance, about 100 district courts have no dedicated washrooms for women, and facilities like crèches are limited, such as Delhi High Court's crèche serving only children under six.
4. **Underrepresentation in Administrative Roles:** Few High Court committees, critical for infrastructure decisions, include women, limiting gender-sensitive policymaking.

**What should be done?**

1. A female-centric perspective would prioritize women's needs and promote support systems.
2. Recognizing women's experiences would help create gender-sensitive policies and infrastructure, fulfilling the judiciary's promise of inclusivity and empowerment for women.

**GS PAPER 3- INFRASTRUCTURE AND GS1-SOCIETY-ROLE OF WOMEN**

**How solar energy decentralizes power generation**

This article discusses how solar energy decentralizes power generation, benefiting communities, especially women, with income and job opportunities. It highlights solar's positive social and environmental impacts and emphasizes the need for inclusive, gender-aware energy policies.

**What Is the Role of Solar Energy in Modern Society?**

1. Solar energy provides a direct way to generate electricity at home, unlike traditional energy sources like coal and oil that require extensive infrastructure.
2. This decentralization of power helps reduce barriers to accessing energy, particularly benefiting individuals and local communities by making them more self-sufficient and reducing environmental impact.

**How Does Solar Energy Empower Women?**

1. **Income and Health Opportunities:** Solar energy provides women with improved access to income and health benefits, particularly in rural and under-resourced areas.
2. **Gujarat's Little Rann of Kutch Example:** Women salt farmers who switched from costly diesel to solar pumps increased their income by 94% and reduced CO2 emissions by up to 1,15,000 metric tons annually.
3. **Women as Solar Engineers:** Initiatives like Barefoot College in India, Grameen Shakti in Bangladesh, and Solar Sister in Africa empower women by training them as solar engineers. This impacts millions and improves community health and safety.
4. **We Care Solar in Uganda:** The We Care Solar program's solar suitcases reduced perinatal deaths by 72% in Ugandan health centers.
5. **Women in Solar Workforce:** The solar industry employs more women than other energy sectors, with women making up 40% of the workforce in the solar photovoltaic industry in 2022.
6. **Job Growth in India:** India's renewable energy goals are expected to create three million new jobs by 2030, offering significant employment opportunities for women.

**What Challenges Does Solar Energy Face?**

1. **Geographical Imbalance:** Most investments are concentrated in developed countries, leaving regions like Africa underfunded in solar projects.
2. **Sectoral Imbalance:** Large-scale solar farms receive the majority of funding, while small-scale applications like solar pumps and cold storage are often overlooked.
3. **Manufacturing Concentration:** Only two countries dominate solar manufacturing, disrupting supply chains and increasing costs as demand rises globally.
4. **End-of-Life Management:** Proper recycling and waste management are lacking. A framework for recycling photovoltaic materials is needed to prevent waste and enhance sustainability.
5. **Affordability Issues:** Ensuring easy and affordable access to solar requires government and market support.

**How Can Energy Policies Be Improved?**

1. Energy policies need to incorporate a gender perspective to be truly effective.
2. Integrating solar energy initiatives with other sectors such as agriculture can help dismantle systemic barriers that affect women, promoting a more inclusive energy economy.
3. This approach ensures that solar energy not only supports sustainability but also drives socio-economic development.

**GS PAPER 3 - AGRICULTURE - ISSUES RELATED TO DIRECT AND INDIRECT FARM SUBSIDIES**

**India's fertilizer situation amid global crises**

The article discusses India's fertilizer situation amid global crises. It highlights India's reliance on imports for urea, DAP, and MOP. Experts suggest increasing domestic production and adopting better farming practices. The government has allocated significant subsidies for fertilizers in the 2023-24.

**What is India's Current Fertilizer Scenario?**

1. **Dependency on Imports:** According to the Parliamentary Standing Committee report (August 2023), around 20% of urea, 50-60% of DAP, and 100% of Muriate of Potassium (MOP) are imported. This dependence on imports makes India vulnerable to global supply disruptions.
2. **Production vs. Consumption:** In 2021-22, India produced 435.95 lakh metric tonnes (LMT) of chemical fertilizers but consumed 579.67 LMT, showing a significant shortfall.
3. **Impact of Global Crises:** The conflicts in Ukraine and Gaza may disrupt fertilizer imports due to possible increases in oil prices and limited supply from key regions. India imports fertilizers from countries such as China, Russia, Saudi Arabia, UAE, Oman, Iran, and Egypt. Political instability in these regions could impact India's supply chain.

**Why is Fertilizer Demand Rising in India?**

1. India is experiencing high demand for fertilizers due to the ongoing sowing season for winter (rabi) crops, especially in wheat-growing states.
2. Fertilizers like Diammonium Phosphate (DAP) and NPK (Nitrogen, Phosphorus, Potassium) are essential for crop growth.
3. However, states like Uttar Pradesh report only 10 days' worth of fertilizer stocks, raising concerns about supply.

**What Measures Has the Government Taken?**

1. The government allocated Rs.1.79 lakh crore in fertilizer subsidies for 2023-24. This includes Rs.1,04,063.20 crore for indigenous urea and Rs.25,500 crore for indigenous P&K fertilizers.
2. For imported fertilizers, subsidies include Rs.31,000 crore for urea and Rs.18,500 crore for P&K fertilizers to support affordability and supply.
3. The New Investment Policy of 2012 led to the establishment of six new urea plants, adding a production capacity of 76.2 LMT per year.
4. Revival efforts include four major urea units (Ramgundam, Gorakhpur, Sindri, and Barauni) now operating as gas-based greenfield facilities.
5. The government encourages investment in public, cooperative, and private sectors to strengthen fertilizer production and marketing.

**Way forward:**

India should increase its fertilizer production to reduce reliance on imports, as it currently imports 100% of MOP and over 50% of DAP. Additionally, adopting sustainable farming and using nano urea can decrease import reliance and ensure stable fertilizer supply for crops.

**ELECTION EXPENDITURE GS PAPER2**

**Election Expenditure India vs USA**

Election spending in India often surpasses the limits set by the Election Commission of India (ECI), pointing to challenges like influence-peddling and inequitable representation. Comparatively, countries such as the U.S. and U.K. emphasize transparency and donor influence limitations to regulate election financing.

**Present laws governing election expenditure in India:**

Rule 90 of the Conduct of Election Rules, 1961: Sets expenditure limits for candidates based on election type and state size.

Section 77 of the Representation of the People Act, 1951: Mandates that every candidate must maintain a separate account of all expenses incurred from nomination to result declaration.

Expenditure Statement Submission: Candidates must submit a complete expenditure report to the Election Commission of India (ECI) within 30 days after election completion.

Disqualification for Non-Compliance: Under Section 10A of the Representation of the People Act, 1951, failure to accurately report or exceeding expenditure limits may lead to a three-year disqualification by the ECI.

Political Party Expenditure: While there is no cap on a party's total spending, all registered parties are required to file their election expenditure reports to the ECI within 90 days post-election, addressing concerns around party expenditure exploitation.

**Current limit:**

Election Type	Larger States Expenditure Limit	Smaller States /UT Expenditure Limit	Party Spending Limit
Lok Sabha Elections	Rs.95 lakh	Rs.75 lakh	No limit
Legislative Assembly	Rs.40 lakh	Rs.28 lakh	No limit

**Comparison of election expenditure in India vs. the U.S:**

Aspect	India	United States
<b>Expenditure Limits</b>	Limit for candidates, no limit for political parties	Limits on contributions to candidates, no limit for Super political action committees (PACs') independent spending
<b>Funding Sources</b>	Primarily self-funding and donations	Individual and PAC contributions, with Super PACs accepting unlimited funds
<b>Spending Transparency</b>	Limited transparency, with self-reported spending	High transparency due to campaign finance disclosures by the Federal Election Commission (FEC)
<b>Regulatory Body</b>	Election Commission of India	Federal Election Commission (FEC) and regulations around PACs and Super PACs
<b>Penalties for Violations</b>	Disqualification for up to three years	Hefty fines and disqualification, but Super PACs face fewer restrictions on independent spending
<b>Total Expenditure</b>	Rs.1,00,000 crore estimated for Lok Sabha 2024	U.S. \$16 billion (Rs.1,36,000 crore) estimated for the 2024 U.S. presidential and Congressional elections

**Way forward:**

- State funding of elections: As per the Indrajit Gupta Committee (1998) and Law Commission (1999), consider partial state funding to reduce financial dependency on private donations.

- Simultaneous elections: Conducting elections simultaneously could help streamline expenditures, although constitutional challenges exist.
- Cap on party expenditure: Establish a ceiling on total party spending, calculated as candidate limits multiplied by the number of candidates.
- Amend financial assistance laws: Amend laws to count any financial assistance provided by political parties to candidates within the spending limit.
- Enhanced judicial oversight: Increase judicial capacity to handle election disputes swiftly, disincentivizing breaches of expenditure limits.

**Conclusion**

India's election financing model has controls, yet lacks spending caps for parties, favoring wealthier candidates and creating imbalance. Implementing transparency and stricter caps, as recommended, could curb undue influence, improve fairness, and strengthen public trust in the electoral process.

**PRELIM FACTS****1. Surge in Global Greenhouse Gas**

The World Meteorological Organization (WMO) has reported a record rise in global greenhouse gas (GHG) levels, highlighting a surge in carbon dioxide emissions and the warming effects on global temperatures.

**Greenhouse gas surge:**

- CO<sub>2</sub> concentration increase: 2023 saw 2.3 parts per million (ppm) rise in CO<sub>2</sub> levels from 2022, marking the twelfth consecutive year of over 2 ppm increases.
- Global warming record: 2023 surpassed the previous record held in 2016, with temperatures 1.48°C above pre-industrial levels (1850-1900).
- Carbon cycle: About 50% of CO<sub>2</sub> emissions remain in the atmosphere, 30% absorbed by land, and 25% by oceans.
- India's contribution: India's GHG emissions grew by 6.1% in 2023, now accounting for 8% of global emissions, with historical contributions standing at 3%.
- Radiative forcing increase: Since 1990, radiative forcing (warming effect) from GHGs has risen by 51.5%, with CO<sub>2</sub> contributing 80% of this increase.

**2. TASN-Airbus Facility**

Prime Minister Narendra Modi and Spanish Prime Minister Pedro Sanchez inaugurated the Tata Advanced Systems Ltd. (TASN)-Airbus facility in Vadodara, Gujarat.

- This facility will manufacture the C295 aircraft for the Indian Air Force, marking India's first private sector plant to produce military aircraft.
- This collaboration aligns with India's "Make in India, Make for the World" initiative, aiming to boost India's defense manufacturing capabilities and strengthen the India-Spain partnership.

**About C295 Airbus facility:**

- Strategic importance: The C295 plant marks a milestone in India's defense sector by enabling local, private-sector-led manufacturing.
- Production: Of 56 C295 aircraft for the Indian Air Force, 16 will be from Spain, with 40 produced in Vadodara.
- Job creation: Expected to generate over 10,000 jobs and support MSMEs by sourcing 18,000 indigenous parts.
- Versatility: C295 aircraft serve multiple missions like medical evacuations, disaster response, and maritime patrols.
- Cultural diplomacy: Highlights shared cultural interests between India and Spain; introduces 2026 as the India-Spain Year of Culture, Tourism, and AI.
- Future aviation hub: Vadodara is poised to become a key aviation manufacturing hub, advancing India's goal to produce indigenous civil aircraft.

**C-295 Aircraft Features:**

- Versatile tactical airlifter: Built by Airbus for light-medium transport with a range of mission capabilities.
- High payload: Carries up to 9 tonnes or 71 troops, with a max cruise speed of 260 knots.
- Extended endurance: Up to 13 hours of flight time, suitable for varied weather conditions.
- Rear ramp door: Enables rapid deployment of troops and cargo, enhancing tactical flexibility.
- Short take-off & landing (STOL): Operates on unprepared airstrips with high manoeuvrability.
- Dual propulsion: Powered by two turboprop engines for efficient performance.
- Specialized for Tactical Missions: Low-speed capability (110 knots) and strong low-level handling.

**3. Fast Patrol Vessels**

The Indian Coast Guard (ICG) launched two Fast Patrol Vessels (FPVs) 'Adamyra' and 'Akshar', marking a milestone in its commitment to enhanced maritime security and indigenous manufacturing.

- These vessels, built by Goa Shipyard Ltd. (GSL) with over 60% indigenous content, are part of an eight-vessel contract valued at Rs. 473 crores.

**About Fast Patrol Vessels (FPVs):**

- Dimensions: 52 meters in length and 8 meters in breadth; displacement of 320 tons.

- Performance: Equipped with a Controllable Pitch Propeller-based propulsion system, with a top speed of 27 knots.
- Indigenous manufacturing: Over 60% of components are domestically sourced, supporting India's self-reliance in defense.
- Primary roles:
  - Fisheries protection: Monitoring foreign trawlers in Indian waters.
  - Coastal patrol: Regular patrols of the Exclusive Economic Zone (EEZ) and coastal areas.
  - Anti-smuggling: Prevents smuggling activities in Indian maritime territory.
  - Search and rescue: Conducts search and rescue missions for distressed vessels or personnel.
  - Communication link: Provides essential communication channels during conflicts or emergencies.
  - Escort services: Escorts coastal convoys during hostilities or wartime conditions.

#### **4. Ayushman Bharat Pradhan Mantri Jan Arogya Yojana**

On Dhanvantari Jayanti, celebrated as the 9th Ayurveda Day, the Prime Minister will launch the expansion of health coverage to all senior citizens aged 70 years and above as a major addition to the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana.

- This will help provide health coverage to **all senior citizens regardless of their income.**

About Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY):

- Launch year: 2018, as a flagship scheme focused on accessible healthcare for India's vulnerable families.
- Objective: Provides health insurance coverage of up to Rs.5 lakhs per family annually for secondary and tertiary hospital care.
- Coverage: Currently covers 55 crore individuals across 12.34 crore families nationwide.
- Key features:
  - Universal health access: Seeks to ensure no citizen, especially the marginalized, is deprived of healthcare.
  - Health and Wellness Centres (HWCS): Target of 1,50,000 HWCs to offer primary healthcare, emphasizing preventive and curative services.
  - Expanded senior citizen coverage: Recently expanded to include all senior citizens 70+, offering coverage irrespective of income.
  - Financial protection: Reduces out-of-pocket healthcare expenses for low-income families by covering a wide array of medical treatments.

#### **5. Coral Triangle**

A report released on October 26 at the 16th Conference of Parties (COP16) to the Convention on Biological Diversity (CBD) highlighted the serious dangers that fossil fuel expansion poses to the Coral Triangle which is one of the most biodiverse marine areas in the world.

##### **About Coral Triangle**

- 1. Location:** It spans six countries in Southeast Asia and the Pacific – Indonesia, Malaysia, the Philippines, Papua New Guinea, Solomon Islands, and Timor-Leste.
- 2. Biodiversity:** It is often referred to as the "Amazon of the seas." It holds the highest marine biodiversity in the world including around 76% of all known coral species and over 2,000 species of reef fish.
- 3. Marine Ecosystems:** It encompasses critical ecosystems like coral reefs, mangroves, and seagrass beds, supporting a vast array of marine life, including turtles, sharks, and various fish species.
- 4. Ecological Importance:** The Coral Triangle is crucial for maintaining global marine biodiversity and resilience, playing a vital role in marine and coastal ecosystems.
- 5. Human Dependency:** Over 120 million people live in the Coral Triangle area, depending on its resources for food, livelihood, and economic activities, particularly through fishing and tourism.
- 6. Threats:** Faces significant threats from overfishing, climate change, pollution, and habitat destruction, particularly coral bleaching due to rising sea temperatures.
- 7. Conservation Efforts:** The Coral Triangle Initiative (CTI) was established to promote conservation, focusing on sustainable fisheries, marine conservation, and adaptation to climate change impacts.
- 8. Global Significance:** It has been recognized as a global priority for conservation due to its ecological wealth and the critical role it plays in ocean health and biodiversity.

#### **6. Medicinal Foods and Benefits**

In recent decades, researchers have identified new compounds and potential drugs from plants traditionally used in medicine, and today, these plants are being further explored for broader health applications and benefits.

##### **About Medicinal Foods and Benefits:**

- Turmeric: Known for its anti-inflammatory and antioxidant properties, used traditionally in food and medicine. High doses, however, may pose risks, highlighting the need for dosage regulation.
- Giloy (Tinospora cordifolia): Used for immunity boosting, reducing fevers, and other therapeutic benefits; traditionally consumed for its stem's medicinal properties.

- Ashwagandha (*Withania somnifera*): Known to alleviate stress, improve energy levels, and enhance mental focus; it is particularly valued for its root's therapeutic properties in Ayurveda.
- Bhringaraj (*Eclipta prostrata*): Beneficial for hair health, as well as liver and digestive health, and sometimes consumed as a leafy vegetable.
- Lemon (*Citrus limon*): Recognized for vitamin C content and immunity-boosting properties; varies significantly across different varieties and cultivars.

### **7. Dholavira**

The Prime Minister's Office (PMO) has flagged concerns regarding the poor preservation, lack of tourist facilities, and halted excavation activities at Dholavira, an ancient Harappan city and UNESCO World Heritage Site.

#### **About Dholavira:**

- **Significance:** Dholavira is an important archaeological site from the Indus Valley Civilization, inhabited from 3000 BCE to 1800 BCE.
- **Location:** Situated in Kutch District, Gujarat, between the seasonal streams of Mansar and Manhar.
- **Dholavira is the fifth largest site of the Indus Valley Civilization in the sub-continent.**
- **UNESCO status:** Designated a World Heritage Site in 2021.
- **City layout:** Comprises a walled city and cemetery, featuring a Castle with a Bailey, Ceremonial Ground, Middle Town, and Lower Town.
- **Key features:** Notable for its advanced water management system, with 16 reservoirs and channels, step wells, and large public baths.
- **Historical insights:** Dholavira's remains reveal insights into urban planning, trade, governance, and Harappan culture, showcasing fortifications, gateways, workshops, and residential units.

### **ANSWER WRITING**

**Q. Digital transformation in Indian agriculture promises significant benefits. Critically analyze how the Digital Agriculture Mission can bridge these gaps while ensuring inclusive growth across diverse farming communities. Suggest measures for effective implementation.**

The **digital transformation** of Indian agriculture aims to revolutionise farming by leveraging technology and data to improve **productivity, efficiency, and farmer income**. The **Digital Agriculture Mission (DAM)**, with an allocation of **Rs.2,817 crore**, embodies this shift, focusing on **precision agriculture, data-driven decision-making**, and streamlined service delivery. Through innovations like **Agri Stack** and **Krishi Decision Support System**, India targets inclusive growth, boosting the sector's **resilience and sustainability**.

#### **Benefits of Digital Transformation in Indian Agriculture**

- **Enhanced Decision-Making for Farmers:** Digital platforms enable **data-driven decisions** on crop selection, pest management, and water use, ultimately improving **yields and minimising losses**.  
**For example:** The **Krishi Decision Support System** provides insights into **soil quality, weather, and crop health**, aiding in better crop planning.
- **Increased Productivity with Precision Agriculture:** Technologies like **drones** and **IoT** improve the precision of resource application, optimising **fertiliser and pesticide** usage and boosting productivity sustainably.  
**For example:** Precision spraying during **locust attacks** in **2020** reduced crop damage, showcasing the effectiveness of digital tools.
- **Easier Access to Financial Services:** Digital infrastructure enhances access to crop insurance, loans, and government schemes, increasing **financial security** for farmers.  
**For example:** The **PM-KISAN mobile app** allows farmers to check eligibility and track benefits, improving transparency in fund distribution.
- **Strengthened Supply Chain Efficiency:** Online marketplaces like **e-NAM** facilitate direct transactions between farmers and buyers, ensuring **better price realisation** and reducing reliance on intermediaries.  
**For example:** **e-NAM** has expanded to over **1,000 mandis**, offering farmers **transparent pricing** and wider market access.
- **Employment Generation in Rural Areas:** Digital transformation creates jobs in **data management, advisory services**, and tech support, especially for rural youth and **Krishi Sakhis**.  
**For example:** DAM is expected to create **2.5 lakh jobs** for trained rural youth to assist farmers in digital adoption.

#### **Challenges in Digital Transformation in Indian Agriculture**

- **Fragmented Landholdings Limit Technology Reach:** The average **landholding size of 1.08 hectares** hinders the effective deployment of certain digital tools, which are more suited to larger farms.  
**For example:** Technologies like **drones** are less practical in regions with highly fragmented landholdings.
- **High Initial Costs of Digital Tools:** The expense of **IoT devices, data storage**, and other technologies makes digital transformation less accessible for **small farmers**.  
**For example:** Adoption of AI-based crop monitoring remains low due to **high setup costs** for farmers with limited resources.

- **Insufficient Digital Infrastructure in Rural Areas:** Limited **internet connectivity** and power supply restrict the adoption of digital platforms, particularly in remote regions.  
**For example:** Rural areas with **poor connectivity** face challenges in accessing real-time advisory services through digital tools.
- **Low Digital Literacy Among Farmers:** Many farmers lack the **digital skills** needed to fully utilise tech-based solutions, reducing their willingness to adopt new technologies.  
**For example:** Surveys indicate that a significant percentage of farmers rely on **traditional methods** due to limited digital literacy.
- **Language and Accessibility Barriers:** Digital tools are often not available in **regional languages**, limiting accessibility for non-English-speaking farmers.  
**For example:** Language limitations prevent some farmers from accessing platforms like **Kisan Suvidha**, affecting broader adoption.

#### Digital Agriculture Mission Can Bridge Gaps and Ensure Inclusive Growth

- **Comprehensive Farmer IDs for Tailored Assistance:** Agri Stack's **Farmer ID system** allows for targeted delivery of services and schemes to individual farmers, catering to their specific needs.  
**For example:** Personalised advisories based on **Farmer IDs** will enable precision in subsidy distribution and support.
- **Geo-Referenced Crop and Soil Mapping for Effective Resource Use:** Detailed **mapping** helps in optimal resource allocation, particularly for **water** and **fertilisers**, making agriculture more sustainable.  
**For example:** **Soil profile mapping** allows better crop selection and fertilisation, maximising yield with minimal input wastage.
- **Digital Inclusivity in Financial Services:** With **digital identities**, farmers can access **credit** and **insurance** services, enhancing financial resilience and risk management.  
**For example:** Linking crop loans to the DAM digital system ensures **quicker loan disbursement** and better credit access.
- **Rural Job Creation through Digital Skill Development:** DAM is expected to create employment by engaging rural youth in **data collection**, **advisory roles**, and tech support services.  
**For example:** Digital literacy programs under DAM have led to the training of **rural youth**, contributing to local employment growth.
- **Localised, Real-Time Advisory for Farming Needs:** Digital platforms offer **real-time solutions** on pest management, crop health, and irrigation, improving resilience.  
**For example:** Platforms like **GreenSense** provide pest alerts to farmers, reducing crop loss and increasing productivity.

#### Measures for Effective Implementation of the Digital Agriculture Mission

- **Strengthen Digital Infrastructure in Rural Areas:** Expand **internet connectivity** and mobile access in rural areas to enable effective use of digital agriculture platforms.  
**For example:** **BharatNet's** expansion to connect **2.5 lakh villages** supports the Digital Agriculture Mission's reach.
- **Enhance Digital Literacy Programs for Farmers:** Conduct regular **training programs** to boost digital awareness and technology adoption among farmers.  
**For example:** Training programs by **MANAGE (National Institute of Agricultural Extension Management)** help farmers use digital tools effectively.
- **Ensure Language and Accessibility Compatibility:** Develop **user-friendly platforms** in local languages to overcome language barriers and improve accessibility.  
**For example:** Local language support in apps like **PM-KISAN** enables broader adoption and benefits among rural farmers.
- **Collaborate with Agri-Tech Startups for Scalable Solutions:** Partnering with **agri-tech startups** can bring cost-effective solutions to small and marginal farmers, enhancing digital outreach.  
**For example:** Collaborations with companies like **CropIn** have facilitated scalable, data-driven agriculture solutions for farmers.
- **Focus on Affordability and Accessibility of Technology:** Provide subsidies for costly equipment and ensure **tech tools** are affordable and accessible to smallholder farmers.  
**For example:** **Subsidised digital equipment** under DAM helps small farmers access precision agriculture tools affordably.

The Digital Agriculture Mission aims to transform Indian agriculture by integrating technology, data, and smart farming practices. Effective implementation requires a focus on affordability, accessibility, and infrastructure, ensuring inclusive growth for farmers across diverse regions. By bridging digital divides, DAM has the potential to empower farmers with tools for sustainable growth and increased resilience, fostering a future-ready agricultural sector.

**MCQ**

1. Why are swing states critical in the U.S. presidential elections?
  - a) **They often have no clear party dominance, making them highly competitive.**
  - b) They are the largest states by population and thus have the most electoral votes.
  - c) Their voting pattern has always favored the incumbent party.
  - d) Their demographics are similar across each election cycle, reducing uncertainty.
2. Why is Gujarat's Dinosaur Fossil Park in Balasinor considered significant in paleontological studies?
  - a) It is the only site in India with fossils from the Jurassic period.
  - b) It is the first site in India to receive a UNESCO geo-heritage tag.
  - c) It houses fossils of mammals from the Paleocene era.
  - d) **It contains one of the world's largest collections of Late Cretaceous dinosaur eggs.**
3. Why are tardigrades often referred to as "extreme survivors" in the biological world?
  - a) They have a complex reproductive system capable of genetic adaptation in one generation.
  - b) They can survive in diverse habitats but are restricted to specific temperature zones.
  - c) **They can withstand extreme environmental conditions, including high radiation and temperatures.**
  - d) They have a unique nervous system that enables rapid adaptation to environmental changes.
4. Consider the following statements about swing states in the U.S. 2024 presidential election:
  1. Swing states can allocate all their electoral votes to the winning candidate, regardless of the margin of victory.
  2. Candidates tailor their campaigns in swing states according to specific demographic groups that have substantial influence.
  3. Swing states have a stable political inclination and usually vote consistently for one party.
 How many of the above statements is/are correct?
  - a) Only one
  - b) Only two**
  - c) All three
  - d) None
5. Consider the following statements about swing states in the U.S. 2024 presidential election:
  1. Swing states can allocate all their electoral votes to the winning candidate, regardless of the margin of victory.
  2. Candidates tailor their campaigns in swing states according to specific demographic groups that have substantial influence.
  3. Swing states have a stable political inclination and usually vote consistently for one party.
 How many of the above statements is/are correct?
  - a) Only one
  - b) Only two**
  - c) All three
  - d) None
6. Consider the following statements:
  1. The election expenditure limit for candidates during elections is set by the Election Commission of India (ECI).
  2. Currently, there are no limits on the expenditure of political parties during elections.
 Which of the statement(s) given above is/are correct?
  - a) 1 only
  - b) 2 only
  - c) Both 1 and 2**
  - d) Neither 1 nor 2
7. With reference to 'Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY)', consider the following statements:
  1. It provides health insurance coverage of up to Rs.5 lakhs per family annually for primary hospital care.
  2. All citizens aged 70 years and above as per their Aadhaar card, irrespective of income status are eligible to avail benefits.
  3. The scheme is being implemented in 33 states and Union territories currently except for Delhi, Odisha, and West Bengal.
 How many of the statements given above are not correct?
  - a) Only one**
  - b) Only two
  - c) All three
  - d) None
8. Which of the following countries are current BRICS members that have chosen not to endorse the Belt and Road Initiative?
  - a) India and Brazil**
  - b) Russia and India
  - c) India and South Africa
  - d) South Africa and Brazil
9. Dyslexia is:
  - a) A visual impairment affecting reading
  - b) A neurological disorder affecting language processing**
  - c) A physical disability impacting speech
  - d) An emotional disorder related to learning
10. Consider the following statements with respect to Sohrai painting:
  1. It is a traditional mural art form practiced by indigenous communities in the eastern part of India.
  2. Gond community is primarily associated with the tradition of Sohrai painting.
  3. The paintings are characterized by vibrant colours and intricate patterns depicting natural elements such as animals, plants, and geometric shapes.
  4. These paintings also represent social hierarchies, showcasing the different social strata through symbolic elements.
 How many of the statements given above are correct?
  - a) Only one
  - b) Only two**
  - c) Only three
  - d) All four