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## 1. Agricultural Credit in India

- Prelims Agricultural Credit in India
- Mains GS 3 Economy

#### Why in the news?

• The Union Finance Minister urged rural banks to enhance the disbursement of agricultural credit to meet the increasing financial needs of a rapidly transforming rural India.

#### **Agricultural Credit in India**

#### • What is it?:

- → Agricultural credit refers to financial support extended to farmers for agricultural and allied activities such as crop production, purchase of inputs, and investment in farm machinery and infrastructure.
- → It plays a crucial role in ensuring timely availability of capital, enhancing productivity, and reducing dependence on moneylenders.

# • Importance of Agricultural Credit:

- → Helps improve capital formation and modernisation of agriculture.
- → Reduces dependence on informal lenders.
- → Enables purchase of inputs and equipment.
- → Facilitates risk management through schemes like KCC and crop insurance.

## • Institutional Structure for Agricultural Credit:

- → Cooperative Credit Institutions: Three tier system
  - ★ Cooperatives provide short- and long-term credit, often refinanced by NABARD.
  - ★ Primary Level: Primary Agricultural Credit Societies (PACS)- village level.
  - ★ Intermediate Level: District Central Cooperative Banks (DCCBs).
  - ★ State Level: State Cooperative Banks (SCBs).

## → Regional Rural Banks:

- ★ Serve small and marginal farmers.
- ★ Provide short- and medium-term agricultural loans.
- → Commercial Banks:







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- ★ Major source of institutional agricultural credit today.
- ★ Promote direct lending and crop loans under schemes like Kisan Credit Card (KCC).

## → National bank for Agriculture and Rural Development(NABARD):

- ★ Apex institution for agricultural and rural credit.
- ★ Provides refinance support to RRBs and cooperative banks.
- ★ Manages Long Term Rural Credit Fund and other refinance schemes.

#### • Major Government Schemes:

## → Kisan Credit Card (KCC):

- ★ Provide short-term credit for farmers.
- ★ As of March 2024, 7.75 crore accounts with ₹9.81 lakh crore outstanding

## → Pradhan Mantri Kisan Samman Nidhi (PM-KISAN):

- ★ Direct income support
- ★ ₹6,000 per year in three instalments

## → Pradhan Mantri Fasal Bima Yojana (PMFBY):

- ★ Crop insurance Scheme
- ★ Premium: 2% (Kharif Crops), 1.5% (Rabi Crops), 5% (Horticulture Crops)

## → Interest Subvention Scheme (ISS):

- ★ Subsidy on crop loan interest
- $\star$  2–3% to promote timely repayment.

#### → AtmaNirbhar Bharat – KCC Saturation Drive:

- ★ Cover 2.5 crore new KCC holders
- ★ Provides ₹2 lakh crore credit boost under the drive

#### **→** Other Initiatives:

- ★ Digitisation of PACS and integration with Core Banking Systems.
- ★ Doubling of farmers' income target through enhanced credit access.
- ★ Credit guarantee schemes to support agri-startups and FPOs (Farmer Producer Organisations).
- ★ Strengthening of RRBs through recapitalisation and consolidation drives.



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#### • Challenges:

- → Regional disparity: Higher credit flow in southern and western states.
- → Limited reach: Small and marginal farmers face exclusion due to collateral requirements.
- → Reliance on Non-Institutional Credit: Limited Institutional credit penetration forces rural marginal farmers to rely on Money lenders.
- → High non-performing assets (NPAs) in cooperative and RRB sectors.
- → Dependence on short-term loans: Constrains capital formation.
- → Delay in credit delivery & procedural complexity.

#### Way Forward:

- → Enhance credit reach to tenants and small farmers via JLGs/SHGs.
- → Focus on long-term investment credit for capital formation.
- → Improve digital access and financial literacy among rural farmers.
- → Promote inclusive growth by balancing regional disparities.
- → Strengthen cooperative credit through structural and governance reforms.

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## 2. South Atlantic Anomaly (SAA)

- **Prelims** South Atlantic Anomaly (SAA)
- Mains GS 1 Geography & GS 3 Science and Technology

#### Why in the news?

Recent findings from the European Space Agency's (ESA) Swarm mission reveal
that the South Atlantic Anomaly (SAA) — the region of weakest intensity in Earth's
magnetic field — has expanded by nearly 0.9% since 2014.

## **South Atlantic Anomaly (SAA)**

## • What is it?:

- → The South Atlantic Anomaly (SAA) is a region over the South Atlantic Ocean and parts of South America and Africa where Earth's magnetic field is significantly weaker than elsewhere.
- → This anomaly allows charged particles from the inner Van Allen radiation belt to come unusually close to Earth's surface, increasing radiation exposure for satellites and spacecraft operating in low Earth orbit (LEO).
- Extent: From the southern tip of South America to the mid-Atlantic Ridge, including parts of Brazil and Angola.

#### • Causes for SAA:

- → The South Atlantic Anomaly (SAA) arises from irregular movements of molten iron and nickel within Earth's outer core, which disturb the geo-dynamo- the process responsible for generating Earth's magnetic field.
- → Beneath the South Atlantic, scientists have detected reverse flux patches- zones where magnetic field lines dive back into the Earth rather than emerging outward, thereby reducing local magnetic strength.
- → These intricate interactions between the core and mantle lead to spatial variations in magnetic intensity, resulting in the formation of the SAA.
- → Geomagnetic secular variation: The SAA is slowly shifting westward and growing in area as the geomagnetic field weakens over time.

#### • Effects and Impacts of SAA:

→ Impact on Space Assets:





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- ★ **High radiation dose:** Trapped protons cause elevated ionizing radiation, affecting satellites in LEO (including the International Space Station, Hubble Telescope, and communication satellites).
- ★ Malfunctions and data corruption: Satellite computers may crash due to bombardment by charged particles. e.g., NASA reported Shuttle laptop crashes during traversals through SAA.
- ★ Component degradation: Radiation increases wear on electronic systems and solar panels.

## → Impact on Astronauts:

★ Astronauts report seeing "phosphenes"- light flashes from cosmic rays hitting the retina when passing through SAA.

## → Scientific Implications:

- ★ Helps scientists study geomagnetic field evolution, core dynamics, and space weather effects.
- ★ Provides insights into possible geomagnetic reversals and long-term magnetic weakening.

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# 3. Carbon-Free Shipping Initiative of IMO

- **Prelims -** Carbon-free Shipping Initiative of IMO
- Mains GS 3 Environment

#### Why in the news?

 Under pressure from the United States, member nations of the International Maritime Organization (IMO), including India, deferred a vote on a strategic roadmap aimed at steering the global shipping industry away from fossil fuels and achieving 'net-zero' emissions by 2050.

## Carbon-free or Net-Zero Shipping

- What is it?: Carbon-free shipping refers to maritime transport that emits zero greenhouse gases (GHGs) on a lifecycle basis, primarily through the adoption of alternative fuels, clean propulsion technologies, and efficiency-enhancing designs.
- Rationale Behind: The shipping industry is vital to global trade, carrying around 90% of international goods, but it also contributes nearly 3% of global CO<sub>2</sub> emissions.

#### • Key Pathways to Net-Zero Shipping:

- → Clean fuels: Green hydrogen, green ammonia, methanol, and biofuels.
- → Energy efficiency: Hull optimization, wind-assist propulsion, and speed management.
- → Operational measures: Route optimization and digital monitoring for carbon intensity.
- → Market-based tools: Global carbon pricing and fuel standards drive ship owners toward clean energy.

## • <u>Significance of Carbon Free Shipping Initiative:</u>

#### → Global Importance:

- ★ Establishes the first sector-wide international carbon pricing system.
- ★ Supports global alignment with Paris Agreement temperature goals.
- ★ Encourages innovation in maritime fuels and propulsion technologies.

#### → Significance for India:

★ Opens opportunities for green hydrogen and ammonia production as marine fuels.



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- ★ Promotes port decarbonization under India's *Harit Sagar* initiative.
- ★ Aligns with India's Panchamrit goals and Maritime Vision 2030.

#### Challenges:

- → High cost and limited supply of zero-carbon fuels.
- → **Technological barriers:** Onboard fuel storage, safety, and retrofitting needs.
- → Equity issues: Potential trade impact on developing economies, LDCs, and SIDS.
- → Global coordination: Requires robust verification and enforcement regimes.

## **International Maritime Organization (IMO)**

- Established: 1948 (became operational in 1959)
- Headquarters: London, United Kingdom
- Membership: 175 Member States and 3 Associate Members (as of 2025)

## • Objectives:

- → Promote safe, secure, and efficient shipping.
- → Prevent pollution of the marine and atmospheric environment by ships.
- → Facilitate international cooperation on maritime legal and technical issues.
- → Ensure a level playing field in global shipping through harmonized regulations.

#### • Functions:

- → Develop conventions, codes, and guidelines on shipping safety, environmental protection, and liability.
- → Adopt binding instruments (like MARPOL and SOLAS) through member consensus.
- → Coordinate implementation via Capacity-Building and Technical Cooperation programmes.
- → Address legal, administrative, and facilitation issues related to shipping.

#### • Funding and Decision Making:

- → Funded through mandatory contributions from Member States, voluntary donations, and commercial revenues.
- → Decisions made through consensus or majority voting among Member States.
- → IMO formulates regulations but does not enforce them. Implementation rests with flag states via domestic laws.







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#### • India and IMO:

→ Member since: 1959.

- → Council membership: India is a regular candidate in Category "B" (major interest in international seaborne trade).
- → Maritime Developments: Collaborates with IMO for port modernization, maritime safety, and green shipping under Sagarmala and Harit Sagar programmes.
- → Stance on Climate Issues: Advocates for equitable, just, and technology-neutral transition for developing countries in IMO's climate negotiations.

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## 4. State Mining Readiness Index

- Prelims State Mining Readiness Index
- Mains GS 2 Governance

#### Why in the news?

 The Ministry of Mines has unveiled the State Mining Readiness Index (SMRI) and corresponding State rankings, a major initiative aimed at promoting mining sector reforms across States.

#### **State Mining Readiness Index**

- What is it?: It is India's first-ever benchmarking framework to systematically assess and rank States based on their readiness, efficiency, and reforms in facilitating non-coal mineral mining.
- Launched by: Ministry of Mines
- Objectives:
  - → To evaluate State performance in the mining sector on key parameters.
  - → To foster healthy competition among States and accelerate the pace of mining reforms.
  - → To promote sustainable resource management and transparency.

#### • Evaluation Parameters:

- → Auction performance: Efficiency and success in conducting mineral block auctions.
- → Early mine operationalisation: Speed in making auctioned mines operational.
- → Focus on exploration: Initiatives and investments in mineral exploration.
- → Sustainable mining practices: Adoption of environmentally responsible mining techniques.

#### • Categorisation of States:

- → Category A: Mineral-rich States.
- → Category B: States with moderate mineral resources.
- → Category C: States with limited mineral resources.





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## **Significance:**

- → Acts as a tool for benchmarking and tracking the reform progress in the mining sector at the State level.
- → Encourages transparency and good governance in mining.
- → Helps States identify gaps and improve their mining ecosystem.
- → Complements India's goal for sustainable and responsible mining.

## **Top Performers:**

- → Category A: Madhya Pradesh, Rajasthan, Gujarat
- → Category B: Goa, Uttar Pradesh, Assam
- → Category C: Punjab, Uttarakhand, Tripura

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## 5. Qatar

- Prelims Location of Qatar
- Mains GS 2 International Relations

## Qatar



#### Why in the news?

 Qatar hosted peace deal between Pakistan and Afghanistan (Taliban).

#### Qatar

- Location: It occupies the Qatar Peninsula on the northeastern coast of the Arabian Peninsula in the Middle East.
- · Capital: Doha
- Bordering Countries: Saudi Arabia
- Bordering Waterbodies: Persian Gulf, Gulf of Bahrain.
- International Groupings: Non -NATO allay, OPEC, Gulf Cooperation Council, Arab League



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#### 6. Bolivia

- Prelims Location of Bolivia
- Mains GS 1 Geography

# **Bolivia**



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## Why in the news?

 Bolivians began voting in the nation's first presidential runoff, marking the end of two decades of dominance by the Movement Toward Socialism (MAS) party and the beginning of a new political chapter.

#### **Bolivia**

- Location: Bolivia is a landlocked country located in western-central South America.
- · Capital:
  - · Legal Capital: Sucre
  - Official Capital: La Paz
- Border Countries: Brazil, Paraguay, Argentina, Chile, and Peru.
- · Geography:
  - Bolivia is part of Amazon rainforest countries.
  - Bolivia is part of lithium triangle countries.
  - Andes mountains passes through Bolivia.

