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ANALYSIS**

TOPIC

**INDIA'S JOURNEY TOWARD A VIKSIT
AGRI ECONOMY BY 2047**

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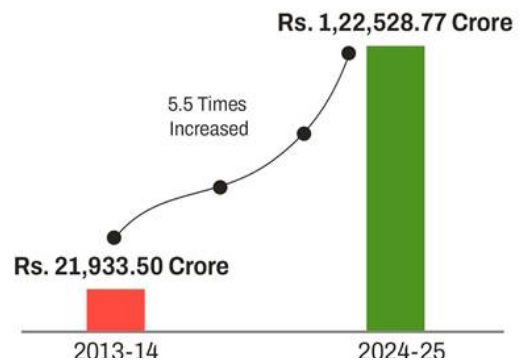
Context

- India stands at a critical juncture in modernizing its agricultural practices, and it needs to focus on key imperatives to build a **Viksit (developed) Agri Economy by 2047**, focusing on food security, rural livelihoods, sustainability and adoption of several modern technology innovations.

Current State of India's Agri Economy

- Workforce:** About **55%** of India's Population;
- Gross Value Added (GVA): 17.7%** (at current prices in FY 2023-24);
 - It is expected that agriculture's share in **GDP might shrink to 7% - 8%** and employ over **30% of the workforce** by 2047.
- Agricultural Land: 54.8% of the India's Total Land** (328.7 million hectares);
 - Arable Land:** 180 million hectares (largest in the world);
- Cropping Intensity: 155.4%** (as per the Land Use Statistics for 2021-22);
- Global Dominance:** India is the world's largest producer of milk, pulses, and spices.
 - India is the second-largest producer of fruits, vegetables, tea, farmed fish, sugarcane, wheat, rice, cotton, and sugar.
- Agricultural Exports:** INR 4.2 Lakh Cr in FY23;

Budget allocation of Department of
Agriculture and Farmers' Welfare



Key Hurdles in Building a Viksit Agri Economy by 2047

- Small and Fragmented Landholdings:** 86% of farmers own less than two hectares, limiting economies of scale and mechanization.
- Climate Change:** Erratic monsoons, rising temperatures, and extreme weather events disrupt crop yields and income stability.
- Water Scarcity:** Over-reliance on groundwater has led to depletion in critical regions like Punjab and Haryana.
 - Dependence on monsoons makes agriculture vulnerable to droughts.
- Market Inefficiencies:** Farmers face challenges in accessing well-developed markets and fair pricing.
 - Complex supply chains and middlemen contribute to price exploitation.
- Post-Harvest Losses:** Poor storage and transportation infrastructure lead to an estimated 74 million tonnes of annual food loss.
- Limited Access to Credit:** Small and marginal farmers struggle to access affordable credit and crop insurance, restricting their ability to invest in modern inputs.
- Soil Degradation:** Overuse of chemical fertilizers has degraded soil fertility and increased vulnerability to pests and diseases.

Vision For Viksit Agri Economy by 2047

- Technological Integration:** Leverage **AI, IoT**, and **big data** for precision farming.
 - Expand access to **satellite-based weather forecasting**, pest management, and **drones** for crop monitoring.

- ◆ Develop **vernacular AI platforms** for accessibility.
- **Regenerative Farming Practices:** Promote **organic** and **zero-budget natural farming** to restore soil health.
 - ◆ Introduce a **national regenerative farming policy** and encourage private-sector R&D.
- **Robotics and Automation:**
 - ◆ Develop **low-cost robotic solutions** tailored to small farms.
 - ◆ Establish **AgTech hubs** and promote public-private partnerships for scaling automation technologies.
- **Alternative Protein Market:** Collaborate with global leaders to improve production and awareness of **lab-grown proteins**.
- **Supply Chain Infrastructure:** Invest in **cold storage**, transportation, rural connectivity, and irrigation.
 - ◆ Expand rural electrification and market linkages to reduce losses and ensure fair pricing.
- **Empowering Farmers:** Strengthen **Farmer Producer Organizations (FPOs)** to enhance bargaining power.
 - ◆ Improve access to **credit, insurance, and digital literacy** programs.
 - ◆ Equip smallholders with modern farming practices and training.
- **Sustainability:** Promote **micro-irrigation techniques** like drip and sprinkler systems.
 - ◆ Adopt climate-resilient crops and diversified cropping patterns.
- **Public-Private Partnerships (PPPs):** Collaborate with private companies and research institutions to drive **innovation and investment**.

Policy Reforms

- **Digital Agriculture Mission:** Develop digital public infrastructure, implement the Digital General Crop Estimation Survey (DGCEs), and promote IT-based solutions.
- **National Mission on Natural Farming:** Focus on chemical-free, natural farming practices.
- **E-Marketplace Initiatives:** Expand the National Agriculture Market (e-NAM) for transparent bidding systems.
- **Complementary Programs:** Strengthen rural welfare schemes like PMAY, NREGA, and NFSA to support the agricultural workforce.

Conclusion and Way Forward

- India, a land of diverse **agro-climatic zones**, is intrinsically tied to its agricultural roots.
- As the nation approaches its centenary of independence in 2047, agriculture remains both a cornerstone of its economy and a key to its future.
- The journey toward a resilient, sustainable, and prosperous agricultural sector is pivotal for addressing challenges like food security, rural employment, and climate change.
- Improving market access, enhancing infrastructure, promoting sustainable farming practices, and providing financial support to small farmers are essential steps towards overcoming these hurdles.
- The future of India's agri economy looks promising, with a focus on technological innovation, policy reforms, and grassroots engagement.

Source: IE



Mains Practice Question

[Q] Analyze the key imperatives for India to achieve a 'Viksit Agri Economy' by 2047. Discuss the challenges and opportunities associated with each imperative. Conclude by outlining a roadmap for successful implementation.