

NEXT IAS

**DAILY EDITORIAL
ANALYSIS**

TOPIC

**BRIDGING FUNDING GAPS FOR
SUSTAINABLE FARMING**

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BRIDGING FUNDING GAPS FOR SUSTAINABLE FARMING

Context

- India needs to prioritise financing for resilience in its agricultural food production system to ensure long-term food security and protect the livelihoods of millions of small and marginal farmers.

Current Status of India's Agriculture & Climate Resilience

- **Structural Profile of Indian Agriculture: Share in GDP** (~15–17%); and **Workforce Dependence** (~42–45% of total employment).
- **Farm Structure:** Over **86% are small and marginal farmers** (<2 hectares).
 - ♦ Fragmented landholdings reduce economies of scale.
- **Cropping Pattern:** Rice, wheat, pulses, oilseeds, sugarcane, cotton dominate.
 - ♦ High dependence on monsoon (~50% net sown area rain-fed).

Status of Climate Finance for Agriculture in India

- **Domestic Finance Trends:** Climate Policy Initiative (CPI) estimates (2021–22):
 - ♦ Total adaptation finance: **₹1,092 billion**;
 - ♦ Agriculture-specific adaptation finance: **₹265 billion (~\$3.6 billion)**;
 - ♦ Share of agriculture: **24% of total adaptation finance**;
- However, required **financing for agricultural adaptation (2015–2030)** was estimated at **\$67 billion annually**, indicating a significant shortfall.
- **Nature of Investments:** Agroforestry; Crop insurance; Efficient irrigation systems; Resilient cropping systems; Soil and water conservation; and Research and capacity building.

Concerns & Issues (India's Growing Risk)

- **Climate Vulnerability:** As per the *Climate Risk Index 2026* released by Germanwatch, **India ranked ninth among the most climate-affected countries**.
 - ♦ Increasing frequency and intensity of extreme weather events have reduced crop yields, increased crop failure risks, and intensified agrarian distress.
 - ♦ Agriculture is one of the **most climate-sensitive sectors** in India, as it affects rural livelihoods, **smallholders farmers** and impacts national food security.
- **Widening Global Shortfall:** According to the *UNEP Adaptation Gap Report 2025*, developing countries require **\$310–365 billion annually by 2035** for adaptation.
 - ♦ Actual adaptation finance flows stand at **only \$26 billion per year**.
 - ♦ The gap is nearly **12–14 times** the available funds.
 - ♦ It signals an urgent need for countries like India to strengthen their **domestic climate finance architecture** rather than relying excessively on uncertain global flows.
- **Underfunded but Overexposed Agriculture:** The report '*Agri-food Systems in National Adaptation Plans — An Analysis*' (by **FAO & UNDP**) highlights agri-food systems requiring **around 54% of total adaptation funds**.
 - ♦ However, they receive only **about 20%** of adaptation finance globally.
 - ♦ This mismatch is alarming, considering agriculture's centrality to food systems, employment and rural development in developing countries.
- **Technological & Knowledge Gaps:** Limited adoption of climate-resilient seeds; weak last-mile extension services; and digital divide in rural areas.

Why is Private Sector Participation Low?

- Private finance contributes only **~1% (₹2.7 billion)** of total domestic agricultural adaptation finance.

- **Key constraints** include high climate risk exposure, long gestation periods for returns, uncertain business models, small and fragmented landholdings, limited economies of scale, and over 80% beneficiaries are smallholders.
 - ♦ These structural realities discourage large-scale private investment.

Emerging Positive Trends

- Increased focus on **millets (International Year of Millets legacy)**.
- Expansion of **micro-irrigation coverage**.
- Promotion of **natural farming & agro-ecology**.
- Digital agriculture missions and AI-based weather advisories.
- Growing emphasis on **climate-smart agriculture (CSA)**.

Institutional & Policy Framework for Climate Resilience

- National-Level Policies:
 - ♦ National Action Plan on Climate Change (NAPCC): National Mission for Sustainable Agriculture (NMSA)
 - ♦ National Adaptation Plan (NAP) Process;
 - ♦ PM Fasal Bima Yojana (Crop Insurance);
 - ♦ PM Krishi Sinchai Yojana (Irrigation Efficiency);
 - ♦ Soil Health Card Scheme;
 - ♦ National Innovations on Climate Resilient Agriculture (NICRA – ICAR);
- **COP30 Developments (Belém, Brazil):** India joined 13 developing countries to launch a **Country Platform for NAP implementation**. It is supported by the **Green Climate Fund (GCF)**, with aim to:
 - ♦ Integrate domestic public finance;
 - ♦ Mobilise private capital;
 - ♦ Channel international climate funds;

Way Forward: Strengthening India's Climate Finance Ecosystem

- **Public Finance Needs To Lead:** Central and State governments need to continue to provide **98–99% of adaptation funding**.
 - ♦ Budget prioritisation for climate-resilient seeds, water-use efficiency, agroecological transitions, and crop diversification.
 - ♦ **Catalysing Private Investment:** The private sector should be incentivised through blended finance models, Public-Private Partnerships (PPPs), viability gap funding, minimum assured return schemes, risk-sharing instruments, and climate risk insurance mechanisms.
- Institutional and Regulatory Reforms:
 - ♦ Build a **transparent domestic climate finance ecosystem**;
 - ♦ Develop comprehensive **climate risk data systems**;
 - ♦ Strengthen monitoring and evaluation frameworks;
 - ♦ Improve coordination between ministries (Agriculture, Finance, Environment, Rural Development)

Conclusion

- India's agricultural resilience is a **question of economic stability, social justice and food sovereignty**.
- India needs to prioritise strengthening its **domestic climate finance ecosystem** with global adaptation finance grossly inadequate and private participation limited.
- Strategic public investment, supported by innovative financial instruments and institutional reforms, is critical to safeguarding the future of small farmers and ensuring national food security in an era of climate uncertainty.

Daily Mains Practice Question

[Q] Discuss the nature of the financing gap in agricultural adaptation. Examine the challenges in mobilising public and private investments for sustainable farming in India

Source: BL

