



Organization for Management & Development Center



2025

Together, We Can Make a Difference



*Sustainable
Agricultural
Practices*



 Education |  Healthcare |  Women
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Sustainability Research 2025

Study on Sustainable Agricultural Practices in Developing Regions with Case Studies and Future Projections

Introduction

Agriculture remains the backbone of many developing regions, but it also faces pressing challenges such as climate change, soil degradation, and resource scarcity. In 2025, sustainability is no longer an option — it is a necessity. OMDC's *Sustainability Research 2025* explores how innovative agricultural practices can secure food systems, support rural livelihoods, and protect the environment for future generations.



Key Focus Areas

1. Climate-Smart Agriculture

- Adoption of drought-resistant crops.
- Precision irrigation systems to minimize water usage.
- Integration of renewable energy (solar-powered pumps, biogas).

2. Organic & Low-Chemical Farming

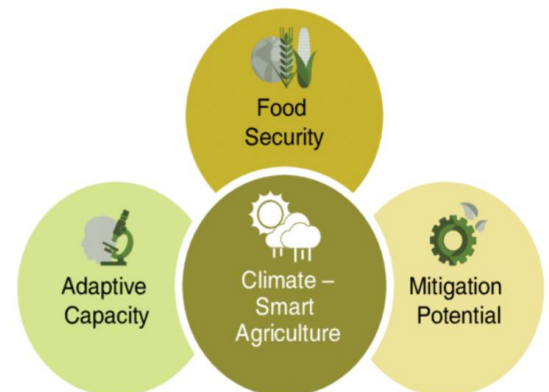
- Reduction in chemical fertilizers and pesticides.
- Use of bio-fertilizers, compost, and natural pest control methods.
- Improved soil health through crop rotation and cover crops.

3. Community-Based Models

- Farmer cooperatives for shared knowledge and resources.
- Local seed banks to preserve indigenous crops.
- Women-led farming initiatives for inclusive growth.

4. Technology & Innovation

- Use of AI and mobile apps for weather forecasting and crop management.
- Satellite mapping for soil health monitoring.
- Blockchain-enabled supply chains for transparency and fair trade.



Case Studies

- **India – Water-Saving Rice Cultivation**

Farmers in Odisha adopted the *System of Rice Intensification (SRI)*, which reduced water usage by 40% while increasing yields by 20%. Women farmers reported improved income and food security.



- **Kenya – Solar Irrigation for Small Farmers**

Small-scale farmers in semi-arid regions shifted to solar-powered drip irrigation systems. This reduced dependency on expensive diesel pumps and allowed year-round vegetable production.



- **Bangladesh – Floating Gardens in Flood-Prone Areas**

Communities developed floating gardens made of bamboo and water hyacinth. These “soil-less farms” provided vegetables even during floods, ensuring food resilience.



Future Projections (2025–2035)

- **Increased Adoption of AI & Digital Platforms**

By 2030, over 60% of farmers in developing regions are expected to use mobile-based advisory services for weather, pest management, and pricing.

- **Rise of Regenerative Agriculture**

Practices like agroforestry, permaculture, and carbon-sequestering crops will become mainstream, helping combat climate change.

- **Global Collaboration**

Partnerships between governments, NGOs, and private companies will play a key role in scaling sustainable practices across borders.

- **Youth & Women Empowerment**

The next decade will witness more youth-led agritech startups and women's cooperatives driving innovation in sustainable food production.

Conclusion

Sustainable agriculture is not merely about farming — it is about securing livelihoods, protecting the environment, and ensuring that no family goes hungry. The case studies of 2025 prove that with the right mix of technology, traditional wisdom, and community participation, developing regions can lead the way in building resilient food systems.

“When we invest in sustainability today, we are not only feeding the present generation but safeguarding the harvests of tomorrow.”



About Us

The Organization for Management and Development Center (OMDC) is a registered non-profit dedicated to uplifting underprivileged communities through education, healthcare, women empowerment, livelihood initiatives, housing support, and environmental sustainability. Our vision is a society where every individual has the opportunity to live with dignity, security, and hope. Guided by compassion and integrity, we work hand-in-hand with communities to bring lasting change.

Legal & Registration Details

- Registered Trust No: 41081602752 | Date: 16 March 2016
- 12A & 80G Certified
- CSR Approved
- FCRA Approved

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