

Bridging Gaps and Challenges in Climate-Smart Agriculture Policies in Nepal

Climate change has significantly affected Nepal's agriculture, which is a critical sector of the Nepali economy and livelihoods. As a consequence, erratic rainfall, droughts, floods, and pest outbreaks have disrupted traditional farming, threatening food security. In this regard, Climate-Smart Agriculture (CSA) emerged as an innovative approach to practices and technologies that boost productivity, build resilience, and reduce emissions through practices like agroforestry, conservation agriculture, resilient crop varieties, and efficient water management¹.

However, Nepal's transition to federalism in many forms has challenged the adoption of CSA-related policies and practices². The federal system, with its three tiers of government i.e., federal, provincial, and local levels, has led to policy fragmentation, weak coordination, and gaps in implementation, hindering the development of effective strategies for climate change adaptation.

As a country with a majority of citizens dependent on agriculture, Nepal's governance framework has taken the initiative to promote CSA. For example, the Constitution of Nepal (2015) states³ rights to food security (Article 36) and mandates state responsibility for climate change adaptation and agricultural development (Article 51(h), (g)). Further, as a federal

state, the constitution delegates agricultural and environmental management rights to local governments, with climate change mitigation and adaptation shared across three tiers of government (Schedule 8, Schedule 9).

But, despite Nepal's commitment to CSA practices reflected in key national and local policies such as the National Climate Change Policy (NCCP, 2019), Agricultural Development Strategy (ADS, 2015-2035), National Adaptation Plan of Action (NAPA, 2010), and Local Adaptation Plan for Action (LAPA, 2011), barriers such as weak institutional capacity, inadequate funding, and poor intergovernmental coordination persist.

Regarding the above issues, this policy brief aims to provide an overview of CSA and CSA-related policies in Nepal and identifies key gaps and challenges to its implementation and sustainability. It also aims to provide recommendations and additional ways forward to overcome these challenges.

This policy brief is based on secondary data including a comprehensive review of national policies and reports. Primary data collected from the field study further supports this brief.

Footnotes :

¹ Climate-Smart Agriculture | Food and Agriculture Organization of the United Nations

² World Bank Document

Key Challenges

- 1. Lack of comprehensive CSA integration and implementation strategy:** Despite Nepal's efforts to promote CSA practices through ADS (2015-2035), NCCP (2019), and NAPA (2010), current policies lack a detailed strategy and a clear roadmap integrating CSA principles systematically across sectors and levels. This results in fragmented efforts, poor coordination between policies and programs, and inadequate guidance among the three tiers of government on implementing CSA practices effectively.
- 2. Intergovernmental conflict leads to delayed policy implementation and trust decline:** In Nepal, intergovernmental conflicts arising from unclear jurisdiction boundaries, resource allocation disputes, and coordination challenges delay policy implementation and diminish public trust in the governance system undermining confidence in Nepal's structure.
- 3. Siloed approach to climate adaptation and agricultural development:** There is a lack of integration between biodiversity conservation, climate adaptation, and agricultural development which hampers the creation of a cohesive and actionable CSA strategy. This compartmentalization further hinders the development of an interrelated strategy for CSA that could effectively guide policy implementation across the interconnected sectors.
- 4. Insufficient localized strategies:** Nepal's diverse topography ranges from high mountains to lowland plains and requires region-specific CSA interventions such as climate-resilient seed varieties and cropping techniques. However, existing strategies rely on a generic approach that fails to address the unique needs of different regions, leaving farmers unprepared to adapt to local climate conditions.
- 5. Inadequate funding frameworks and resource allocation:** Despite the recognition of the need for climate-resilient agriculture, insufficient financial support and inefficient resource allocation hinder CSA implementation. These gaps include funding for technologies, infrastructures (irrigation, storage facilities, tunnels, transportation), skilled manpower, and capacity-building programs to support farmers at ground level.
- 6. Insufficient data and research:** Policymakers lack robust data and research on climate change impacts on agriculture in Nepal and the effectiveness of CSA practices. Additionally, farmers' traditional knowledge and perspectives are often overlooked in policy formulation, leading to poorly tailored CSA programs that fail to address ground-level realities.
- 7. Weak monitoring and evaluation:** Gathered from the field visit, weak monitoring and evaluation in CSA initiatives hinder long-term success by limiting resource utilization, adaptability, and farmers' confidence in these practices. The absence of a follow-up mechanism and unclear responsibilities for the post-project evaluation leaves critical gaps reducing the overall impact of programs and projects.

Key Recommendations

1. Develop a comprehensive CSA strategy that integrates climate adaptation, biodiversity conservation, and agricultural development under unified policies, ensuring a clear road map for implementation across all formal and informal sectors.
2. Strengthen intergovernmental coordination by establishing formal platforms at federal, provincial, and local levels to clarify jurisdictional roles and facilitate collaboration, cooperation, and coordination among the three tiers of government.
3. Develop region-specific CSA interventions tailored to Nepal's diverse topography and agroecological zones to address the local climate challenges.
4. Enhance funding framework for CSA technologies, infrastructure, and capacity building at local levels. Additionally, flexible budget allocation is crucial to direct resources where they are most needed.
5. Develop evidence-based policymaking based on robust data collection and research on climate impact and CSA effectiveness to address local challenges effectively.
6. Establish robust and neutral monitoring systems at the local level to ensure the sustainability of progress made during projects, even after their completion. Regular assessments can track successes, identify gaps, and adapt strategies.
7. Establish a formalized agriculture sector by creating a unified platform where farmers can voice their concerns and access government subsidies and aid more efficiently. This platform would also serve as a hub for targeted capacity-building programs, offering training and resources to policymakers, government officials, and field staff to equip them with the skills and knowledge required for the effective implementation of CSA policies.

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