



# HARTI POLICY BRIEF

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## Unveiling the Successes and Challenges of Climate-Smart Agriculture in Sri Lanka: Insights for Future Interventions

### KEY MESSAGES

- **Policy Integration:** Integrate CSA principles into national agricultural policies and strategies to ensure coherence and alignment with broader development goals. This involves mainstreaming climate resilience across all levels of policy-making, from national to local, and across relevant sectors such as agriculture, environment, and finance.
- **Capacity Building:** Invest in capacity building programs to enhance the knowledge and skills of farmers, extension workers, and policymakers in CSA practices. This includes training on sustainable land management, climate-smart crop varieties, water conservation techniques, and innovative farming methods.
- **Policy Coherence and Coordination:** Ensure coherence and coordination among relevant government agencies, departments, and stakeholders involved in agricultural and climate-related policies. This includes establishing inter-ministerial committees, multi-stakeholder platforms, and coordination mechanisms to streamline policy implementation and monitoring.

*Agriculture is the dominant livelihood activity in rural Sri Lanka and the sector is highly vulnerable to the impacts of climate change and variability. The increased in frequency, and severity of droughts and also of within-season dry spells and flash floods are especially eroding smallholder farmers' livelihoods and food security aspirations. Many national agricultural policies and programmes are used to guide agricultural interventions to enhance agricultural productivity and resilience in the context of climate change.*

*The policy brief underscores the significant potential for advancing the Climate-Smart Agriculture (CSA) agenda through enhanced coordination among existing programs and policies in Sri Lanka. Specifically, the seamless integration of the design and implementation of current agriculture development initiatives with the promotion of CSA practices emerges as a financially prudent and politically viable strategy. This approach offers a compelling means to incentivize CSA adoption and enhance its overall effectiveness.*

*Advancing climate-smart agriculture in Sri Lanka requires a multi-faceted approach that addresses the diverse challenges faced by farming communities while capitalizing on existing successes and opportunities. By implementing evidence-based policies and interventions informed by this research, Sri Lanka can enhance its agricultural resilience, improve livelihoods, and contribute to global efforts towards sustainable development in the face of climate change.*

## **Introduction**

The growing risk of experiencing extreme weather events presents a considerable threat to agriculture and farmers' livelihoods. In Sri Lanka, where nearly 80 percent of the rural population relies on agriculture for their livelihood, recurrent droughts and floods are increasing food insecurity and production risks. In fact, climate variability and weather extremes are among the key drivers of the recent rise in hunger, especially in rural areas. Supporting farmers, especially smallholders, to prepare for, cope with and adapt to climate change is essential to achieve national poverty reduction, food security objectives and economic growth. Identifying effective policy instruments to support the adoption of climate adaptive practices and technologies among smallholders is paramount to reduce the poverty and eradicate hunger.

The primary aim of this research was to examine both the accomplishments and obstacles encountered in the implementation of Climate-Smart Agriculture (CSA) initiatives in Sri Lanka. Through this investigation, the study endeavors to furnish valuable insights that can inform and guide future interventions within the agricultural sector to increase the resilience.

## **Climate Smart Agriculture Considerations in Sri Lanka**

Climate change adaptation programs are increasingly prevalent in numerous developing nations, particularly across Asia and Africa. The efficacy of these programs in improving livelihood outcomes for beneficiaries is contingent upon various factors such as household contexts and the nature and scale of assistance provided, including the methods of implementation, targeting criteria, and design elements. In Sri Lanka, the adoption of Climate-Smart Agriculture (CSA) technologies and practices not only serves as a means to address climate change challenges but also acts as a catalyst for driving economic growth and advancing the agricultural sector's development. Traditional and modern adaptation strategies coexist within the Sri Lankan context, with ancient irrigation systems continuing to support modern agriculture alongside recently introduced CSA practices.

These modern practices encompass a range of initiatives, including the preservation of genetic diversity, the introduction of high-yield crop varieties, and the implementation of sustainable farming techniques such as water and soil conservation, intercropping, and organic fertilization. Additionally, efforts to diversify crops and promote home gardening further contribute to enhancing food security and sustainability. By integrating these practices, Sri Lanka not only strengthens its resilience to climate change impacts but also fosters sustainable agricultural development, laying the groundwork for long-term economic prosperity.

## **Factors That Hinder Climate Change Adaptation of Farmers**

Constraints in climate change adaptation for farmers encompass various challenges including insufficient funds, limited resources such as water and land, and a dearth of inputs and information, all impeding the adoption of climate-resilient farming practices. Land ownership and tenure issues exacerbate this problem, as land fragmentation across generations results in small, inefficient land blocks with limited capacity for adopting Climate-Smart Agriculture (CSA) techniques. Uncertainty regarding climate events further complicates adaptation efforts. Wildlife damage adds to agricultural woes, while inadequate coordination among relevant agencies hampers effective action. Moreover, the declining involvement of youth in agriculture diminishes the potential for CSA adoption, especially among smallholder farmers for whom farming is not the primary livelihood, relegating climate adaptation measures to the sidelines.

## **POLICY IMPLICATIONS**

Creating an enabling policy environment is essential for enhancing climate-smart agriculture in Sri Lanka. By adopting a holistic approach that addresses policy information services, and policy coherence, Sri Lanka integration, financial incentives, capacity building, research and innovation, market access, climate can effectively promote sustainable and resilient



agriculture in the face of climate change. It is imperative for policymakers to prioritize these measures to safeguard the livelihoods of farmers, ensure food security, and contribute to sustainable development goals.

### Financial Incentives

Providing financial incentives and support mechanisms is essential to encourage farmers to adopt Climate-Smart Agriculture (CSA) practices effectively. Subsidies for climate-resilient inputs such as drought-resistant seeds, efficient irrigation systems, and organic fertilizers can significantly lower the upfront costs associated with transitioning to CSA. These subsidies can make these inputs more affordable and accessible to farmers, thus incentivizing their adoption. Additionally, access to credit facilities tailored for investments in CSA technologies allows farmers to make upfront investments in infrastructure and equipment necessary for climate adaptation. This could involve low-interest loans or microfinance schemes specifically designed for CSA initiatives, enabling farmers to invest in long-term climate resilience measures without facing financial strain.

Furthermore, insurance schemes can play a crucial role in mitigating climate-related risks for farmers. Insurance products tailored for agriculture, such as

weather index insurance, can provide farmers with financial protection against losses caused by extreme weather events like droughts, floods, or storms, thereby reducing the economic risks associated with adopting CSA practices

### Develop better targeted, better implemented interventions

Developing better-targeted, context-specific interventions is crucial for advancing Climate-Smart Agriculture (CSA) practices tailored to local agro-ecological conditions. This entails investing in research and innovation to identify, develop, and adapt CSA technologies and practices that are suitable for the specific challenges and opportunities within each region. By allocating funding to research institutions and promoting public-private partnerships, stakeholders can collaborate to address local needs and develop innovative solutions.

Moreover, facilitating the dissemination of research findings to farmers and stakeholders through extension services, demonstration farms, and farmer field schools ensures that the benefits of research translate into practical, on-the-ground solutions. By integrating scientific knowledge with local expertise and traditional practices, context-specific interventions can empower farmers to effectively

adapt to climate change while promoting sustainable agricultural development in their communities.

### **Improving Market Access**

Improving market access is vital for incentivizing the adoption of Climate-Smart Agriculture (CSA) practices among farmers. One key strategy is to enhance market linkages and value chain development for CSA products. This involves creating pathways for farmers to access markets that reward climate-smart practices and environmentally sustainable production methods. Promotion of certification schemes for climate-smart produce, such as organic or fair trade certifications, not only assures consumers of the quality and sustainability of the products but also provides farmers with opportunities to access premium markets and command higher prices for their goods. Additionally, facilitating access to these premium markets through capacity building, logistical support, and market

information services can help farmers capitalize on the value of their CSA products. Furthermore, supporting the formation of farmer cooperatives and producer groups enables smallholder farmers to collectively market their products, negotiate better prices, and benefit from economies of scale. By improving market access and enhancing value chain development, farmers are incentivized to adopt CSA practices as they see tangible economic benefits and opportunities for growth in sustainable agriculture.

### **Access to Climate Information Services**

By providing timely and accurate weather forecasts, agro-meteorological data, and early warning systems, farmers can make informed decisions about their

agricultural practices. Timely access to weather forecasts allows farmers to plan planting, irrigation, and harvesting activities accordingly, optimizing crop yields and resource use. Strengthening climate information services requires investments in meteorological infrastructure, data collection and analysis capabilities, and communication channels to ensure that information reaches farmers in a timely and accessible manner. By empowering farmers with the knowledge and tools they need to adapt to changing climate conditions, climate information services play a crucial role in building resilience and enhancing food security in agricultural communities.

### **Monitoring and Evaluation**

Establishing a robust monitoring and evaluation framework is imperative for assessing the effectiveness of implemented policies, programs, and projects related to climate-smart agriculture and integrating lessons learned into future planning end

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