

Info Note

Review of policies and frameworks on climate change, agriculture, food and nutrition security in Rwanda

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Key messages

- Climate change has emerged as a new challenge to Rwanda's social and economic development. Adaptation measures are urgently needed to address climate change related risks and impacts.
- Declining crop production as a result of climate variability and change coupled with land degradation has exacerbated food deficit in Rwanda.
- Investment in integration of nutrient dense crops such as fruits and vegetables, small ruminants and poultry and bio-fortification of food crops can help improve household food security, nutrition and the economic status of the family and the community.
- Climate change, agriculture, food and nutrition security are well articulated in all policies and strategies, however, integration and linkages between the policies and strategies need to be strengthened to foster effective implementation for impact at scale.
- International, regional and national research organizations can provide scientific evidence and tools to support the design of more inclusive national and sub-national climate change policies and implementation frameworks with mitigation co-benefits for Rwanda.

Introduction

Rwanda is a small landlocked country in East-Central Africa and one of the world's most densely populated countries. Average rainfall in Rwanda is around 1000 mm per annum, with the annual temperature ranging from 16°C to 21°C (Mikova et al. 2015). Climate variability and extreme events in Rwanda are among the most significant factors influencing annual crop production. Climate variability and extreme event-related shocks like drought and flooding

have become more frequent, significantly affecting crop production. The Eastern and South Eastern regions are most affected by prolonged drought, while the Northern and Western regions receive heavy rains usually causing severe erosion, flooding and landslides. Extreme floods in the Western province, for example, often lead to significant losses of agricultural produce, destroyed plantations, agro-ecosystems and valuable infrastructure (Mikova et al. 2015). Increased incidences of landslides in the North Western part of the country are also an example of the negative impact of climate change in Rwanda (RoR 2006).

Despite efforts to boost the agricultural sector, agricultural productivity still remains low—making it difficult for the sector to meet the food and nutrition security needs of the population and contribute to the reduction of the country's trade gaps by producing food for export (FAO 2008). Limited access to agricultural land is among the causes of both food insecurity and malnutrition in Rwanda (NISR 2006). For example, most food insecure households engaged in agriculture either have no land or very small parcels of land (<0.5 ha) (WFP 2018).

Addressing food and nutrition security in a comprehensive manner not only requires boosting food production, but also increasing incomes, creating resilient food systems and strengthening markets to facilitate access to safe and nutritious food at all times (FAO 2008). According to the third Comprehensive Food Security and Vulnerability Analysis and Nutrition Survey (CFSVA), Rwanda is making steady progress with some parts of the country slowly witnessing improved food and nutrition security (WFP 2018). For example, according to the 2018 CFSVA report, the food security situation has improved in 18 of the country's 30 districts, with the greatest improvement observed in Bugesera (+20% of food secure households). However, food insecurity still remains high in Rutsiro and

Ngororero where 49% and 41% of rural households, respectively, remain food insecure (WFP 2012).

Recognizing climate change as an additional threat to agricultural production, the various national and sector development plans have integrated climate-related objectives. The national government has led policy and investment efforts to expand the livestock sector, improve crop productivity, promote sustainable land management, and develop value-added production and markets across the agriculture sector (Ashley 2020). This brief presents a review of climate change, agriculture, food and nutrition security policies and frameworks in Rwanda, including the extent of their integration. The brief is based on a detailed literature review and extensive in-country expert consultations, and it is part of a series of studies carried out across five countries in East Africa.

Methods

The review used three complimentary approaches: i) desk review of relevant literature, publications, policy documents and frameworks on climate change, agriculture, food and nutrition security; ii) stakeholder consultations, where 16 experts from relevant government ministries and agencies and research organizations were interviewed based on their engagement and contribution to relevant policies and frameworks on climate change, agriculture, food and nutrition security; and iii) relevance scoring of national and sector-specific policies, frameworks and programs regarding the extent to which they are designed to address climate change adaptation and mitigation, agriculture, food and nutrition security, with five weight-groups (on a scale of 1-5):

- Very high relevance (5) – climate change or agriculture, food and nutrition security are the primary objective;
- High relevance (4) – climate change or agriculture, food and nutrition security are a significant, but not primary objective;
- Moderate relevance (3) – climate change or agriculture, food and nutrition security objectives are not explicitly stated; but the activities promote climate change adaptation and mitigation actions, or agriculture, food and nutrition security;
- Little relevance (2) – climate change or agriculture, food and nutrition security are not the target objective, but activities have indirect adaptation and mitigation, or agriculture food and nutrition security benefits;
- Very little relevance (1) – climate change, or agriculture, food and nutrition security are not the target objective at all, but activities have minimal indirect links to climate actions, or agriculture and food and nutrition security.

The relevance scores were established for the different components of climate change (adaptation and mitigation), agriculture (productivity), food and nutrition security (availability, access and utilization). The weights were then aggregated to percentiles and grouped into three categories of relevance: High (>75%), Medium (50-74%) and Low (less than 49%).

At the national level, eight cross-cutting policies and strategies were reviewed, including the level of integration of climate change adaptation and mitigation, and agriculture and food security (availability, access, utilization and stability). These included the Rwanda Government Seven Years Program (2010-2017) which had the highest score (77%), Vision 2020 and National Investment Strategy (73%), National Social Protection Policy and Strategy, Economic Development and Poverty Reduction Strategy (EDPRS), Urbanization and Rural Settlement Sector Strategic Plan (2013-18), and the National Land Policy, all of which had an average aggregate score of 72%.

Integration of climate change into, agriculture, food and nutrition security policies and frameworks

About five policies and frameworks on agriculture, food and nutrition security were reviewed, with high levels of integration of climate change adaptation and mitigation (Table 1). These included the Strategies for Sustainable Crop Intensification in Rwanda, Strategic Plan for the Transformation of Agriculture (PSTA), National Agriculture Extension Policy and Strategy, National Post Harvest Staple Crop Strategy and the National Food and Nutrition Policy. About 80% of these policies and frameworks reviewed had high relevance, with only 20% having medium relevance.

In addition, a number of programs have been developed to fight hunger and malnutrition, as well as improve agricultural productivity. These include:

- 1000 days campaign launched in 2013 to sensitize families to provide adequate nutrition from pregnancy through to the first two years of a child's life
- Joint Action Plan to Eliminate Malnutrition (JAPEM)
- District Plan to Eliminate Malnutrition (DPEM)
- Crop Intensification Program
- One Cow per Poor Family Program

Rwanda has established a National Nutrition and Food Program Coordination Secretariat, with the aim of eradicating malnutrition. Eliminating malnutrition requires coordination across all relevant government ministries and partner institutions. The secretariat offers technical support to the national government, districts, development partners and civil society organizations. While Rwanda has made significant gains in reducing

hunger and undernutrition within the population and committed to reducing the prevalence of stunting and ending child hunger and undernutrition by 2050 in line with the United Nations Sustainable Development Goals (SDGs), sustained success at scale (at the national level) requires accelerated action especially in the context of a changing climate (Lung'aho et al. 2015).

Table 1. Integration of climate change into agriculture, food and nutrition security policies and frameworks

Agriculture, food and nutrition security policies and frameworks	Climate change		Weighted scores (%)
	Adaptation	Mitigation	
Strategic Plan for the Transformation of Agriculture (2018–2024)	4.5	3.5	80
Strategies for Sustainable Crop Intensification in Rwanda (2011)	4.5	3.5	80
National Agriculture Extension Strategy (2009)	4	3.5	75
National Post Harvest Staple Crop Strategy (2011)	4	3.5	75
National Food and Nutrition Policy (2013–2018)	3.5	3	65

Agriculture, food and nutrition security integration in climate change policies and frameworks

The review examined the extent to which national climate change policies and frameworks integrate agriculture, food and nutrition (Table 2). The weighted scores were relatively high, ranging from 65% to 77%.

Table 2. Integration of agriculture, food and nutrition security into climate change policies and frameworks

Climate change policies and frameworks	Integration of agriculture, food and nutrition security Weighted scores (%)
Green Growth and Climate Resilience: National Strategy for Climate Change and Low Carbon Development (2011)	77
National Environmental and Climate Change Policy (2019)	72
Nationally Determined Contribution (2015)	70
National Disaster Management Policy and Strategy (2012)	68
National Adaptation Programme of Action (2006)	65

Institutional landscape for climate change, agriculture, food and nutrition security

The Ministry of Environment (MoE) is responsible for environment, climate change and natural resource management at the national and local levels. The MoE, in partnership with national stakeholders, has put in place a strategy to support national development goals, particularly in green growth, climate resilience, and the sustainable management and utilization of natural resources. The Rwanda Environment Management Authority (REMA), under the MoE, is the national focal point for the United Nations Framework Convention on Climate Change (UNFCCC). Both climate change adaptation and mitigation related activities of the MoE are led by REMA as its designated national authority.

The relevance scoring to climate change, food and nutrition security varied from 3 to 5. Most institutions have a high relevance score with the Ministry of Agriculture and Animal Resources (MINAGRI) leading at 80%, followed by the Ministry of Local Government (MINALOC) and the Ministry of Finance and Economic Planning (MINECOFIN), both at weighted scores of 77%. Other key ministries with high weighted scores (of 75%) include the MoE, Ministry of Health (MoH), and Ministry of Gender and Family Promotion (MIGEPROF). Among national agencies, the Rwanda Agriculture Board (RAB) leads with a weighted score of 85%, followed by REMA with 80%, the National Environmental Fund (FONERWA) with 78%, and the Water and Sanitation Corporation (WASAC) at 75%.

The ongoing key programs and projects related to climate change focus on the following: environment and climate change mainstreaming, climate change management, pollution management (prevention and control), environmental research and planning, environmental governance, forest rehabilitation, water sector reform, revamping the mining sector, and increased investment in innovative technologies including renewable energy, and energy use efficiency.

Conclusions and opportunities for strengthening integration

This review indicates that rainfall deficit, droughts, floods and landslides are among the most common climate-related shocks that significantly impact households' food and nutrition security in Rwanda. However, there is no national level policy directive in place on climate change management and information dissemination to ensure that agriculture promoters and/or extension service providers should provide contextualized and timely accurate climate information to communities.

There are strong national level institutional frameworks on agriculture, food and nutrition security. However, implementation of the policies and frameworks faces challenges due to weak monitoring and evaluation processes. These sectors do not have personnel with expertise required for integration of climate change into agriculture, food and nutrition security programs. The coordination of climate change issues across different government ministries and other relevant stakeholders is still weak. Therefore, development of monitoring and evaluation frameworks, human and institutional capacity, and participatory policies, strategies and incentives that stimulate adoption and grassroots level implementation for impact at scale remain critical.

Research and evidence to inform policy is needed to strengthen synergies across sectors. Partnership and collaboration with all key ministries including MINAGRI, MoE, MoH and local governments, as well as with national and international research organizations (including the CGIAR) and regional climate policy and knowledge dissemination centers is important for developing effective human and institutional capacity, scaling strategy, frameworks, policy and implementation guidance, especially for grassroots level integration of climate change adaptation and mitigation for sustainable agriculture, food and nutrition security.

Further reading

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The Info Note is part of a series of studies carried out to review policies and frameworks on climate change, agriculture, food and nutrition security across East Africa.

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