

Briefing Paper

“Home-Grown Solutions”: Rwandan Cases of Linking Climate Change, Agriculture and Trade

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Summary

This briefing paper looks at specific cases of home-grown solutions in Rwanda that have linked agriculture, climate change, and trade. In many LDCs heavily dependent on agriculture, climate change leads to floods or drought that can wipe out entire harvests. This not only inhibits their agricultural trade, but can also be disastrous for the rural poor who often rely on rain-fed agriculture for their own sustenance. Rwanda has been devising unique “home-grown solutions” to this problem, leading to the identification of linkages between agriculture, trade, and climate change at the local level that provide lessons for integrating environmental issues into development processes.

Introduction

In his opening remarks to the United Nations Framework Convention on Climate Change (UNFCCC) in December 2011, UN Secretary-General Ban Ki-moon reminded the world of its dire predicament: “The Intergovernmental Panel on Climate Change tells us, unequivocally, that greenhouse gas emissions must be reduced by half by 2050 – if we are to keep the rise in global temperatures to 2 degrees since pre-industrial times. According to the International Energy Agency, we are nearing the ‘point of no return,’ and we must pull back from the abyss.”¹ Now in 2015, nations have increasingly come together to try and form a united front on tackling the issue of climate change. In September, the UN Summit will meet to adopt the post-2015 development agenda, including the new Sustainable Development Goals (SDGs). All of the SDGs inherently

focus on sustainability, and proposed Goal 13 specifically calls for nations to “take urgent action to combat climate change and its impacts.”² The year will also end with a UNFCCC Conference of Parties meeting in Paris to discuss a climate change agreement focused on capping global emissions.³

Developing and least developed countries especially depend heavily on agriculture, and climate change severely disrupts weather patterns, leading to floods or drought that can wipe out their entire harvests. This inhibits trade in agricultural products, but even more so, it can be disastrous for people that rely on agriculture for their own sustenance. Without predictable climate patterns, countries cannot build up adequate food security stores as they can suffer from low yields, crop diseases, or reduced water supplies. Unfortunately, some of the drivers of climate change can be linked to

¹ Ban Ki-Moon, Remarks to the UNFCCC COP17 High Level Segment, 6 December 2011.

² “Open Working Group proposal for Sustainable Development Goals,” Sustainable Development Knowledge Platform, accessed 26 March 2015, <https://sustainabledevelopment.un.org/sdgsproposal>.

³ “Towards a climate agreement,” UN and Climate Change, accessed 26 March 2015, <http://www.un.org/climatechange/towards-a-climate-agreement/>.

economic growth and development efforts, inadvertently threatening agriculture and food security.

Accordingly, it is increasingly important for countries to recognize the links between agriculture, climate change, and trade, especially in regards to food security. If nations possess an awareness of their interrelation and seek to coordinate policies between the three, both at the national and district levels, they can mitigate and/or adapt to the effects of climate change and move forward in their own sustainable growth and development.

This note seeks to look at particular case studies of home-grown solutions in Rwanda that have linked agriculture, climate change, and trade. By understanding the logistics of the thematic interplay, this paper can identify successful implementations, and provide suggestions for how to replicate these initiatives in other regions facing similar issues.

A Closer Look at Rwanda

Rwanda has not escaped from the consequences of climate change, which is increasingly problematic given its dependence on the agricultural sector for both food security and development. Rwanda's main exports are coffee, tea, minerals, non-traditional exports (including mining and tourism), and re-exports, with coffee and tea accounting for 14% of total exports.⁴ High productivity efforts in Rwanda's agricultural sector – including the use of inorganic fertilizers and agriculture mechanization and irrigation that requires excessive use of chemicals and energy - have inadvertently led to increased greenhouse gas emissions and environmental degradation, although Rwanda's contribution (as is the case with the rest of Africa) is relatively small on the global scale. Additionally, its current agro-processing technology requires wood energy that contributes to deforestation and the reduction of carbon sinks, increasing the nation's vulnerability to climate change.⁵

The Rwanda National Vision 2020 recognizes this issue, and the government has appropriately undertaken several actions to mitigate the effects of current and

future climate change. For example, the Rwanda Economic Development and Poverty Reduction Strategy 2013-2018 (EDPRS II) seeks to mainstream environmental sustainability in all sectors of the economy in order to reduce vulnerability by supporting innovative technologies that are likely to have environmental and economic benefits.⁶

Additionally, the government, with support from the UN Development Programme (UNDP) and UN Environment Programme (UNEP), has established the Poverty-Environment Initiative (PEI) to build capacity on all levels in areas of environmental policy analysis, formulation, implementation, and monitoring.⁷ PEI has succeeded in integrating poverty-environment objectives in key planning frameworks, improved the capacities of planning and finance agencies to make informed budget allocations, and institutionalized Environmental Impact Assessments in all sectors.⁸ Additionally, “demonstration projects” have been identified as a main goal for PEI Phase II, in order to demonstrate agriculture, trade, and climate change links at the local level and provide lessons for integrating environmental issues into development processes.⁹ This focus on integration, especially on the local level, has been incorporated through the uniquely Rwandan aspects of development known as “Home Grown Solutions,” specifically with the practices of *imihigo* and *umuganda*.

Rwandan Initiatives

Imihigo, the plural of a Kinyarwanda word meaning “to vow, to deliver,” describes the pre-colonial practice of an individual completing a target or goal within a set period of time, determined to overcome any possible challenge that could arise. This practice has been adopted as part of the new focus on sustainable development programs. Local governments, which after 2000 became responsible for implementing development programs after decentralization, adopted performance contracts, or *imihigo*, with the President as pledges for certain stages of progress they hope to undertake. Because of the

⁴ EACSO Rwanda, “Non-agricultural Market Access (NAMA) Issues in the EAC: Issues of Interest to Rwanda,” 2.

⁵ CUTS, “Climate, Food, Trade: Analysis of Institutional Interplay and Information Exchange – Rwanda,” 3.

⁶ CUTS, “Climate, Food, Trade,” 6.

⁷ Ibid, 16.

⁸ “Rwanda,” UNDP-UNEP Poverty-Environment Initiative, accessed 26 March 2015, <http://www.unpei.org/what-we-do/pei-countries/rwanda>.

⁹ CUTS, “Climate, Food, Trade,” 17.

word's traditional roots, *imihigo* encourages greater participation in and ownership of specific projects, resulting in improved accountability and a faster development pace as citizens are directly involved in the process.¹⁰

Another "Home Grown Solution" is *umuganda*, which refers to the traditional practice of family, friends and neighbors helping each other to complete a difficult task. Today, this translates into acts of service, and Rwanda has implemented a "mandatory" day of community service once a month, where able-bodied persons come together to complete tasks that contribute to national development. Close to 80% of Rwandans participate, and the value of this contribution since 2007 has been estimated to amount to more than USD 60 million.¹¹

Additionally, the Rwanda Environment Management Authority (REMA) – a non-sectorial institution that facilitates the coordination and oversight of national environmental policy - has undertaken the regular training of ministry sectors and district planners according to the Environment and Climate Change Mainstreaming checklist and the Strategic Environment Assessment (SEA).¹² These trainings aim at increasing the capacity and skills of planners and officials in order to integrate the environment and climate into sector planning and District Development Plans (DDPs).¹³ This simultaneously integrates the issues of climate change with trade and agriculture, while promoting consistency and unity in both national and district approaches to the issues.

Particular examples of these "demonstration projects" – that integrate the issues of climate change, agriculture and trade on the local level - can be seen in Bugesera and Gicumbi Districts.

Bugesera District: Mayange Millenium Village Project

Bugesera district is predominantly vegetated by dry savanna, and the region is heavily dependent on rain and irrigation for its agricultural production. In order to cushion the blows of climate change, the Millennium Village of Mayange was established as an experimental model to reduce poverty and promote sustainable development. This project, supported by various government institutions and the Millennium Villages Project (MVP) - spearheaded by the Earth Institute (Columbia University) and Millennium Promise (a non-governmental organization committed to the achievement of the MDGs) - has initiated several agricultural innovations in the village including new seed varieties, fertilizer and planting techniques, as well as business development initiatives.¹⁴ Because of this local, homegrown approach to development, the region has benefitted from new business opportunities and development progress through a new cassava flour plant, increased honey production, new basket weaving and knitting cooperatives for women, better access to improved drinking water, computer laboratory installations, literacy improvement through new libraries, increased birth safety and immunizations, and the distribution of energy efficient cooking-stoves.¹⁵

While run by a collaboration of non-governmental organizations, the Mayange MVP includes collaboration among various stakeholders dealing with climate change, agriculture, trade, food security and health. These include government institutions (Bugesera District, Eastern Province, and the Local Government Ministry), various local level governmental ministries (Agriculture & Animal Resources, Education, Health, Natural Resources, Trade & Industry, and Infrastructure), national authorities (REMA and the Rwanda Agriculture Board), the private sector, civil society, and development partners.¹⁶ This demonstrates the importance of including all stakeholders in the process, even on such a small-scale project. Adequate links between trade, agriculture and climate change will

¹⁰ CUTS, "Climate, Food, Trade," 11.

¹¹ "Umuganda," Rwanda Governance Board, accessed 26 March 2015, <http://www.rgb.rw/governance-innovations/umuganda/>.

¹² Rwanda Environment Management Authority (REMA), accessed 31 March 2015, <http://www.rema.gov.rw/index.php?id=97>.

¹³ CUTS, "Climate, Food, Trade," 15.

¹⁴ Ibid, 17.

¹⁵ "Mayange, Rwanda," Millennium Villages, accessed 26 March 2015, <http://millenniumvillages.org/the-villages/mayange-rwanda/>.

¹⁶ CUTS, "Climate, Food, Trade," 17.

be better established when all stakeholders work together to take on a holistic approach to development.

Gicumbi District: Kabeza Green Model Village

Gicumbi district, on the other hand, is in one of the wettest regions in the country, yet climate change has severely changed its seasonal structure. Because of this, combined with a history of poor land practices, a multiplicity of environmental and agricultural issues have built up within the district, namely inadequate soil conservation, destruction of wetlands, a declining size of arable and pastoral land, low levels of agro-forestry, inappropriate water harvesting measures, and inadequate investments in environmental conservation. In order to combat these concerns and reduce vulnerability to food insecurity, Gicumbi district sought help through PEI, leading to the Kabeza Green Model Village. This program intended to address the specific issues of access to clean drinking water, energy, food security, nutrition, income generation, and participatory energy and natural resource governance.¹⁷ Structured as a type of commune, households in the village were given a house with necessary facilities, a cow (to provide milk), and access to water rainwater reservoirs and biogas (which turn manure into fertilizer and provide energy for cooking).¹⁸ Each household has access to the communal rainwater collection tanks (which treat the water for drinking), five to eleven households share a cowshed and biogas plant, and a manure compost pile is used in rotation. This provides a clear example of local level sustainable development projects, epitomizing the Rwandan focus on personal ownership and cooperation.

The village project was initiated by Gicumbi district, in collaboration with REMA, in 2010, and was funded by FONERWA. The design and implementation of the village involves many stakeholders, ranging from local governments to district non-state actors (faith-based organizations, local NGOs and the media), and the private sector (including small and medium sized enterprises).¹⁹ This collaboration once again reinforces the need for interplay and collaboration, no matter the

size of the project.

Challenges and Suggestions for Moving Forward

Although these projects are relatively young, some immediate challenges have emerged that limit the potential for complete institutional interplay and trade, climate change, and agriculture linkages. In Bugesera and Gicumbi districts, common complaints focused on the insufficient coordination and communication of local and central government ministries, the insufficient involvement of local citizens - which risks leading to lack of ownership and sustainability -, weak monitoring and evaluations systems, an insufficient consultation process, and limited follow-up on the implementation of home grown solutions.²⁰

Insufficient coordination and communication among ministries will result in the ineffective linkage of trade, climate, and agriculture policies. Ministries need to come together to create holistic development programs and policies, and each level of the government needs to be aware of current practices in order to maintain consistency and efficiency in implementation. Without the inclusion of local citizens, or the adoption of sustainable practices, policies put into place will be ineffective. Citizens will not adopt policies that do not work in their interest, and unsustainable practices will undermine long-term progress. Currently, these local solutions include forums for citizen participation, yet they need to be strengthened to ensure increased ownership and involvement in projects. Similar issues will occur if there is an insufficient monitoring process, as impact cannot be evaluated and better solutions cannot be formulated or applied. Local governments should increase their capabilities in order to better promote communication and information sharing between ministries and other stakeholders, inclusive consultations, and monitoring and evaluation mechanisms.

The lack of communication between ministries can be quite costly for individuals. For example, Rwandan

¹⁷ CUTS (2013), "Climate, Food, Trade", 19.

¹⁸ "An Environment-Friendly Pilot Village to Revolutionize National Environment Protection and Poverty Reduction," UNDP, 14 March 2012.

¹⁹ CUTS, "Climate, Food, Trade," 19-20.

²⁰ Ibid, 22.

farmers are often mobilized to increase productivity through various cooperatives, however these cooperatives do not include the Ministry of Trade and Industry in the planning process. Because of this, the agricultural prices set by the ministry are below the costs of production, resulting in losses for farmers, which later discourages them from participating in such cooperatives in the future.²¹ Accordingly, all ministries need to be involved in the formulation of initiatives in order to ensure effective development gains.

Similarly, local people need to be included in the policy-making process in order to emphasize personal ownership of projects and the sustainability of implementation. This can be done through the effective operationalization of *imihigo*, *umuganda*, and other frameworks that provide for their inclusion, but are not currently utilized. For example, the Ubudehe Project was launched in 2001 as a partnership between the Ministry of Finance and Economic Planning and the Ministry of Local Government in order to better involve communities in their development. The project's goal is to create participatory problem-solving mechanisms, through which people can interact with each other, share ideas, create institutions, and make decisions for their own collective development.²² If citizens feel a sense of ownership in a project, they are more likely to contribute to its creation, implementation, and continuation.

Additionally, decentralization should continue to be strengthened in order for districts to act independently. This would allow local governments to control their own resources, which they could mobilize to address specific local issues. In this way, they could consider their own individual climate change, trade, and food security linkages in their planning and budgeting processes, instead of having to apply external budgets or plans to region-specific issues.²³

Lessons Learned

Despite the challenges that the districts face, the homegrown models still provide representative models for local implementation of sustainable development practices. Mayange Millennium Village Project and Kabeza Green Model Village successfully demonstrate that different stakeholders can effectively work together to promote the integration of trade, agriculture, and climate change in policies and projects, instead of having them each work individually to further their independent (and sometimes conflicting) interests.

As such, these initiatives should be replicated in other parts of Rwanda, but also in other countries, especially those that are dependent on agriculture and vulnerable to climate change. The adoption of these types of programs will allow nations to adequately plan and implement policies that will take into account climate change when formulating trade and agriculture policies, while also ensuring that they create a buffer against erratic or unpredictable weather in order to maintain food security. Additionally, with food security taken care of, these nations can work to develop – in a sustainable manner, so as not to contribute to further environmental degradation – their agriculture for trade, contributing to overall economic development in the regions.

²¹ CUTS (2013), "Climate, Food, Trade," 22.

²² *Ibid*, 29.

²³ *Ibid*, 26.

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