

Policy memo

State policy roundtable on Friday, 23 September | 10:45-12:15

Ghana: How can we improve the state of energy management practices among government subvention institutions?

Mozambique: Can we use agricultural insurance schemes to reduce farmers' vulnerability to climate change?

Rwanda: How can Rwanda's social protection policies help vulnerable populations adapt to climate change?

Rwanda: What is the impact of national climate funds on coordinating climate change programmes and financing local climate priorities?



How can we improve the state of energy management practices among government subvention institutions?

Policy challenge

Access to reliable electricity is generally recognised as a key lever of sustained economic growth (Allcott & Greenstone, 2015). However, there is an increasing recognition that energy consumption-related emissions pose an existential threat to the climate and humankind (Stern, 2007). There is anecdotal evidence that energy efficiency and conservation management practices among subvention institutions are poor. For Ghana, energy conservation and efficiency management practices are critical pieces of policy options to address the electricity demand and supply mismatch. Over the past decade, the annual electricity demand growth centred around 10%, with the grid expansion unable to match up adequately ([GRIDCo, 2022](#)). The result is waves of brownouts and blackouts of increasing duration and severity with dire consequences for the economy ([GoG, 2017](#)). IGC interactions with the Electricity Company of Ghana indicate that stakeholders are concerned about the poor energy management practices. GRIDCo is an important stakeholder. Other subvention institutions that are characterised by a high default rate include: ministries, departments, agencies, public tertiary institutions, military barracks, and police barracks.

Current research

An effective energy management practices and policies need to embrace both in energy efficiency and conservation. Studies suggest low uptake of available cost-effective energy management measures ([Farrell. & Remes, 2009](#)). A range of economic, behavioural and organizational perspectives provide conceptual explanations of this apparent paradox ([Cagno et al. 2013](#), [Sorrel et al. 2004](#), [Weber 1997](#), [Sutherland 1996](#), [Golove and Eto 1996](#), [Jaffe and Stavins, 1994](#)).

There is a need to conduct studies into energy management practices in the public sector of Ghana to document how energy management practices vary across and within institutions and top management observable characteristics. A randomised control trial study could then examine the impact of a set of energy management practices on energy consumption and bill payments. The study would require primary data collection. The first phase of the study is likely to be exploratory, to systematically establish the extent and the drivers of energy management practices. The second phase could adopt evaluate the impact of energy management practices on a set of outcome variables.

Policy interventions

[The Ghana Strategic National Energy Plan](#) indicates that there are high levels of end-use energy inefficiency with adverse implications for the environment and the economy. Accordingly, the Strategic National Energy Plan seeks to reduce electricity consumption of public sector institution by 50%. But further understanding of current energy management practices across public sector and the drivers or barriers to energy efficiency and conservation adoption is needed. IGC discussions with the Electricity Company of Ghana indicate that stakeholders are concerned about the poor energy management practices, particularly in police and military barracks.

Data availability

Further resources are needed to create in-country datasets research.



Can we use agricultural insurance schemes to reduce farmers' vulnerability to climate change?

Policy challenge

Mozambique's agriculture sector is primarily rain-fed. The sector faces frequent drought and floods impacting over 90% of food crops and causing significant production loss and increased food insecurity. 81% of the total population rely on this sector for income. The areas of Mozambique most at risk of severe climate events are Nampula, Zambezia, and the coastal part of Gaza. At the same time, economic development is very limited in these areas, suggesting lower mitigation capacity and larger benefits for insurance, but lower capacity to purchase insurance and therefore higher costs for insurers. The Ministry of Agriculture and Rural Development, which is in the process of developing the country's agrarian insurance policy, is concerned particularly with agricultural risk management and the uptake of insurance against climatic events (flooding and drought). The Mozambican setting not only provides the opportunity for the introduction of innovative products, but also one to evaluate the benefits of these products in the absence of an alternative insurance product.

Current research

Low levels of insurance awareness and literacy coupled with difficulty in communicating insurance policy use have been recurrent themes in the literature as main drivers of the low take-up of insurance products among farmers, and particularly among poorer populations (Churchill, 2013; Coydon and Molitor, 2011). Previous attempts at providing financial literacy have proved futile (Cole et. al., 2012). Available experiences and lessons in Mozambique are mainly limited to two sources. First, an in-depth study of the sector commissioned by the Government of Mozambique and performed by PwC in 2018. Secondly, a pilot project to promote the development of markets for index-based weather and catastrophic risk insurance under the Global Index Insurance Facility (GIIF). Understanding impact in the context of Mozambique is useful for developing the agricultural sector in the country as well as the region.

Policy interventions

The experience and sectoral development for the insurance market in the country is very limited. The introduction of new products should be complemented with an evaluation in terms of take-up and of benefits for farmers that become insured against adverse climatic events. In addition, the introduction of new products linked to an evaluation design allows testing for different versions of the same product or for the introduction of the product in combination with an alternative product and/or service.

Data availability

Data availability is limited. However, it is possible to get data from the Integrated Agricultural Surveys (IAI) from 2014 and 2020, collected by Mozambique's Ministry for Agriculture and Rural Development (MADER). These data are disaggregated to the household level and geo-referenced. The Ministry has a mechanism to regularly collect data locally through extension workers associated with the Ministry. There is potential to work with local insurance companies willing to collaborate on an eventual survey.



How can Rwanda's social protection policies help vulnerable populations adapt to climate change?

Policy challenge

Climate change increases the frequency of extreme weather events which have severe and negative impacts on human welfare. Negative impacts such as the emergence of novel diseases, loss or damages to productive assets, and disruptions in health services, lower nutrition and education outcomes can be faulted by climate change. Some populations are more vulnerable to these impacts as they rely on highly exposed economic sectors (agriculture) or are located in more exposed geographies (sub-Saharan Africa, Small Island Nations). Populations with high levels of poverty are therefore less able to adapt, making investments in poverty reduction a tool to help reduce the negative impacts of climate change.

Social protection, offered under a range of mechanisms, can also support adaptation objectives for populations with high levels of poverty. Rwanda has a wide scope of social security programmes including direct income support, health insurance subsidies, voluntary savings schemes, short-term assistance, and livelihood and employment support. IGC collaborates closely with the Ministry of Finance, the Rwanda Social Security Board and the Ministry of Environment. Assessment of current poverty reduction programmes and their ability to also reduce vulnerabilities to climate change would be of interest to these stakeholders and other government partners.

Current research

Research evaluating the economic costs of climate change adaptation (CCA) activities has been conducted broadly, but not through the lens of adaptive social protection. For example, Venton (2018) found that in Kenya, Ethiopia and Somalia there were net benefits of between US\$2.3 and US\$3.3 for every \$1 spent on safety net and resilience programming. In contrast, bench terracing was found to be financially unviable using market prices in Rwanda. Fewer studies focusing on the economic evaluation initiatives at the intersection of social protection and CCA exist in Rwanda. For example, while risk insurance has been advocated to have high potential for CCA, there is little evidence to support this argument. Research which evaluates the long run costs and benefits of different adaptive social protections measures in Rwanda is needed.

Policy interventions

Currently, no particular adaptation spending could be identified as measured in tandem with the impact on poverty reduction. Rwanda does have a national climate change policy. To our knowledge no assessment on the joint impact or efficacy of reducing poverty and improving resilience against climate change has not been undertaken.

Data availability

- Climate change adaptation spending data from Ministry of finance under the green budgeting programme could indicate current spending towards adaptation measures.
- Rwanda, Green climate fund FONERWA, monitoring data and Rwanda Social Security Board monitoring data.
- Ministry of Emergency Management monitoring data.



What is the impact of national climate funds on coordinating climate change programmes and financing local climate priorities?

Policy challenge

The 2012 UNDP report generically defined climate finance preparedness as “the capacities of countries to plan, access, deliver, monitor and report on climate finance, both international and domestic, and in ways that are catalytic and fully integrated with national development priorities and the achievement of the MDGs.” There have been continued calls for the development of national climate funds as a means of facilitating climate finance.

To drive Rwanda’s green growth agenda, as outlined in the country’s Green Growth and Climate Change Resilience Strategy (GGCRS), Rwanda established a green fund, FONERWA, in 2012. The fund is responsible for financing low-carbon climate-resilient growth in the country and pooling diverse sources of climate finance. Key stakeholders that have access to the fund include line ministries, districts, charitable and private entities. It is therefore a major channel through which climate finance is channelled, managed, disbursed and monitored. Despite this central role, little research has been conducted to assess the impact of the fund on collaboration in CCD projects, quality of projects financed, and alignment of finance with local climate priorities and smaller-scale decentralised projects (at the community level). Coordination and finance alignment have been found to be key for efficient resource use in climate change programming as well positioning countries for sustainable development in areas of greatest need. Therefore, answering this question can help identify gaps and opportunities to better leverage national climate funds

Current research

Whereas it is generally theoretically understood that distributing finance through national and other smaller systems has positive implications for coordination, speed and responsiveness to local priorities and needs, there is little empirical evidence in development research. Studies have found that in the absence of a central national climate finance fund, there is little coordination and alignment of finance to local priorities. However, there are different findings for national versus sub-national funds. For Rwanda in particular, to the best of our knowledge, there has been no evaluation of FONERWA on the outlined areas.

Policy interventions

Rwanda provides an interesting opportunity to study the effects of a national climate fund in a developing country context because of the recent establishment of FONERWA. No additional funds have been opened in Rwanda for other purposes. This is just one of a few potential interventions to improve the coordination on climate change programming.

Data availability

Data on green projects financed through the Rwanda Development Bank before FONERWA is available. Additionally, the programme monitoring data from FONERWA can be accessed on request. OECD’s external development finance data on committed climate-relevant ODA is another potential data source.

