Adaptation Learning Programme (ALP)

Climate Change Vulnerability and Adaptive Capacity in Northern Ghana

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List of Acronyms

ACCRA	Africa Climate Change Resilience Alliance
ALP	Adaptation Learning Programme
CAAP	Community Adaptation Action Plan
CAN	Climate Action Network
CBA	Community-Based Adaptation
CBO	Community-Based Organization
CIKOD	Centre for Indigenous Knowledge and Organizational Development
CVCA	Climate Vulnerability & Capacity Analysis
DA	District Assembly
DAP	District Annual Plan
DANIDA	Danish International Development Agency
DDF	District Development Fund
DPP	Disaster Preparedness Plan
DRM	Disaster Risk Management
ENSO	El Niño Southern Oscillation
FAO	Food and Agriculture Organization of the United Nations
EPA	Environmental Protection Agency
FGD	Focus Group Discussion
IFAD	International Fund for Agricultural Development
IPCC	Intergovernmental Panel on Climate Change
LAC	Local Adaptive Capacity
MESTI	Ministry of Environment, Science, Technology and Inovaton
MoFA	Ministry of Food and Agriculture
MTDP	Medium-Term Development Plan
NADMO	National Disaster Management Organization
NAPA	National Adaptation Plan of Action
NCAP	Netherlands Climate Assistance Program
NCCAS	National Climate Change Adaptation Strategy
NGO	Non-Governmental Organization
OCHA	Office for the Coordination of Humanitarian Affairs
ODI	Overseas Development Institute
PSP	Participatory Scenario Planning
SSA	Sub-Saharan Africa
UK Aid	United Kingdom Agency for International Development
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
VSLA	Village Savings and Loan Association

Executive Summary

In Northern Ghana, poverty rates are significantly higher than in the rest of the country. The region has suffered from a lack of attention and investment by the central government, which has impeded development progress and undermined the adaptive capacity of local government institutions, civil society organizations and communities. Faced with rising temperatures and increasingly erratic rainfall, agriculture-dependent communities are seeking new strategies to secure their livelihoods and get out of poverty.

The Adaptation Learning Program for Africa (ALP) has a goal to increase the capacity of vulnerable households to adapt to climate change and variability. In 2010, ALP worked with community members and local institutions in Northern Ghana to analyze climate change vulnerability and adaptive capacity in eight communities in Garu Tempane and East Mamprusi Districts.

This document summarizes this analysis, providing insights into the issues that influence vulnerability to climate change and the adaptive capacity that exists in these communities, despite the challenges they face.
Key recommendations from the analysis include:

Improving capacity and collaboration among local development actors is critical for community-level adaptation.

Civil society, government, private sector and traditional institutions are central to the Community Based Adaptation process and must be empowered with information, knowledge and resources. ALP has formed strong relationships with all of these institutions across the program area, and these have been critical in enabling adaptation by communities.

To build adaptive capacity requires strengthening of analytical and planning skills.

Decision-making is the core of the adaptation process. Actors supporting community-level adaptation must facilitate processes that strengthen people's ability to analyze information, evaluate risks and benefits and plan actions in a forward-looking manner. As part of the adaptation planning process, ALP facilitated community visioning processes, which were integral in shifting the focus from current problems to positive scenarios and actions for the future.

Multi-sectoral collaboration is necessary for an informed and integrated approach to adaptation.

ALP has developed relationships and facilitated dialogue among actors across sectors, including development, disaster risk reduction, environmental protection, meteorological services and agriculture. Collaboration among these actors has been essential to ensure an informed and integrated approach to adaptation.

Disaster risk reduction initiatives can provide a useful entry point for adaptation actions.

The development of Disaster Preparedness Plans (DPPs) at the District level has enabled improved linkages between communities and service providers, as well as increased capacity of local government representatives to institutionalize early warning systems and to disseminate disaster preparedness information at the community level.

Integration of climate change into local development planning facilitates allocation of resources for community-based adaptation.

Climate change must be integrated into local development planning in order to ensure that resources are available for community-based adaptation, and that local development initiatives do not increase vulnerability by overlooking climate risks. ALP is working with local government actors to integrate community-identified adaptation priorities into District Annual Plans and Medium-Term Development Plans, a critical step in ensuring that resources are available at the local level to implement adaptive actions.

To maximize impact, participatory vulnerability analysis processes should be designed to generate evidence for policy influence as well as to inform CBA planning.

If designed appropriately, participatory vulnerability analysis can provide important evidence for higher-level policy and advocacy. The ALP analysis in Ghana was particularly useful in ensuring appropriate attention to CBA, differential vulnerability and gender issues in local development plans and the national adaptation strategy.

As part of the adaptation planning process, ALP facilitated community visioning processes, which were integral in shifting the focus from current problems to positive scenarios and actions for the future.

Introduction

For the poorest people in Sub-Saharan Africa, climate change is already a reality. Rising temperatures, increasingly erratic rainfall patterns and more frequent droughts and floods create challenges for food security and management of land, water and other natural resources. These challenges are particularly critical for rural communities, where agriculture and livestock rearing are the primary livelihood strategies. These strategies are strongly dependent on rainfall and other climatic variables, making them highly sensitive to climate change. For the poorest women and men, this sensitivity is combined with low capacity to adapt to the changes, resulting in high vulnerability. In these communities, action is required to reduce vulnerability, improve management of risks and enable people to adapt to climate change in the longer term. To achieve this, it is critical that the voices of the most vulnerable people are heard in decision-making on adaptation by governments and other actors.

The goal of the Adaptation Learning Program (ALP) is to increase the capacity of vulnerable households in Sub-Saharan Africa (SSA) to adapt to climate change and variability. The program aims to demonstrate and disseminate innovative models and practical tools and methodologies for CBA, while also influencing national and international policy frameworks and financing mechanisms for adaptation to create an enabling environment for CBA. ALP works with communities, government institutions and civil society organizations to ensure that CBA approaches and actions for vulnerable communities are integrated in development policies and programmes in Ghana, Kenya, Mozambique and Niger.

This report presents an analysis of climate change vulnerability and adaptive capacity in northern Ghana. Ghana's northern regions are highly vulnerable to climate variability and change, due to heavy reliance on rain-fed agriculture, high poverty levels and increasing environmental degradation, among other factors. ALP worked with communities in northern Ghana to better understand their perceptions of climate change and how they are currently responding to climate-related hazards.

The analysis revealed the existing adaptive capacity of women and men in the region, as well as the constraints they face in building their resilience. The report reflects on the analysis and provides recommendations for action to empower and enable women and men in Ghana and beyond to adapt to the uncertainty and extremes associated with climate change, now and into the future.

Climate Change Vulnerability and Adaptive Capacity

The ALP approach

Vulnerability to climate change has been defined by the Intergovernmental Panel on Climate Change (IPCC) as 'the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity. The ALP CBA process is grounded in participatory analysis of vulnerability, exploring these different dimensions with communities and other stakeholders. This analysis builds understanding of the dynamics of vulnerability for different communities and specific groups within communities, enabling appropriate CBA actions by local actors.

ALP aims to enhance the adaptive capacity of women and men in its target communities, building on their existing knowledge and approaches to managing risks to their livelihoods. ALP understands adaptive capacity as communities' ability to demand, access and use climate information (as well as other types of information) to identify, assess and choose adaptation options; to innovate in response to evolving challenges and opportunities; and to make forward-looking and flexible decisions that enable them to adapt to a changing climate. The assets available to communities to improve their livelihoods and better manage risks form an important basis for adaptive capacity. Governance and entitlements also play an important role in supporting or constraining people's adaptive capacity.

ALP's analysis has shown that adaptive capacity is strongly influenced by gender. Women and men have different roles, access to information, control over resources and influence in household and community decision-making. These issues influence their ability to manage climate risks and therefore their vulnerability to climate change. ALP places significant emphasis on gender differences in adaptive capacity, exposing gender issues that exacerbate vulnerability and promoting CBA planning that advances gender equality and women's empowerment.

ALP is working in eight communities in the Garu Tempane and East Mamprusi Districts in northern Ghana, engaging communities and local government and civil society stakeholders in analysis, planning and action on community-based adaptation. This report provides a summary of the program's analysis of climate change vulnerability and adaptive capacity in targeted communities, conducted in 2010.

The analysis provided insights into vulnerability to climate change and existing adaptive capacity, enabling planning and policy influence for CBA actions in the communities. The report also presents recommendations for CBA policy and practice, in northern Ghana and throughout Sub-Saharan Africa.

Livelihoods in Northern Ghana

Ghana's three northern regions are the poorest in the country, with poverty rates that are significantly higher than those further south, where steady progress on poverty reduction has been achieved in recent years. The two districts where ALP is working fall in two different regions: East Mamprusi is in the Northern Region, while Garu Tempane is in the Upper East Region. These regions have poverty rates of 52% and 70%, respectively. The average annual per capita income in the Upper East Region is less than 130 Ghana Cedis (approximately US $50), compared with the national average of 1217 Ghana Cedis (approximately $324). There are also discrepancies between the north and the south in terms of social development, with the northern regions showing significantly poorer performance on indicators such as school attendance and infant and child mortality.

The Ghanaian landscape is divided into different eco-climatic zones, which are characterized by their climate, vegetation and soils. East Mamprusi is in the Guinea Savanna Zone, while Garu Tempane District falls within the Sudan Savanna Zone. The Guinea Savanna Zone is the largest zone in the country, comprising the Volta River Basin as well as parts of the high plains of the Konkori and Gambaga escarpment. The zone has poor quality soils in general, but there are some more fertile areas along rivers and in floodplains. The vegetation consists of wooded grasslands with deciduous trees and a range of different grass types growing between and under the trees.

The zone is prone to bushfires in the dry season, often caused by human activities. The Sudan Savanna Zone covers the most northern part of the country and extends into Burkina Faso and Mali. The vegetation in this zone is smaller and more sparse than in the Guinea Savanna, consisting of small, thin-leaved trees and short grasses. This zone receives the lowest amount of rainfall in the country (see the following section for further details). Desertification is a growing concern and may be causing expansion of the zone southwards into the Guinea Savanna.

Across both zones, agriculture, including livestock rearing, is the most important livelihood strategy. There is evidence, however, of increasing diversification into off-farm activities, as well as more dependence on remittances from family members who have migrated. These transitions are likely driven by a variety of factors, notably increasing environmental degradation, desertification and climate change, all of which are having a significant negative impact on farm productivity. Northern Ghana has suffered from a lack of attention and investment by the central government, leading to limited development of infrastructure and services that would support livelihood enhancement and resilience building. Recently, a strategy has been developed to remedy this by accelerating development in the north of the country. If implemented, the strategy will begin to address some of the key underlying causes of vulnerability to climate change.

Climate Change in Northern Ghana

The northern regions of Ghana are hotter than the rest of the country, with an average temperature of 28.6 degrees Celsius in the Sudan Savanna Zone and 27.5 degrees Celsius in the Guinea Savanna Zone (based on data from 1961-2000). This area also has the greatest seasonal variations in temperature, ranging from 22-25 degrees Celsius in the July-September season to 27-32 degrees in the hot, dry season from February to May. There is one rainy season, which typically occurs from May to November. The average annual rainfall between 1961 and 2000 was 992 mm in the Sudan Savanna and 1115 mm in the Guinea Savanna, compared to over 2000 mm in the evergreen forest zone further south. Across the country, there is strong inter-annual and inter-decadal variability in the timing and length of the rainy season and in the overall rainfall throughout the year, due to the influence of the Inter-Tropical Convergence Zone and in particular

Agriculture and Livestock rearing a source of livelihood in Northern Ghana ©Nindow Musah 2013 CARE-ALP

El Niño Southern Oscillation (ENSO) events, which cause drier than average conditions in West Africa.

Data from 1961 to 2000 shows that across the country, the mean annual temperature rose by 1.0 degree Celsius, with the greatest rate of change in the northern part of the country. Because of the high rainfall variability between years and decades, it is difficult to identify long-term trends in rainfall patterns. ALP's own analysis of data from the Garu Tempane meteorological station showed that since the early 1990s, many years have had rainfall that was higher than the climatological average. On the other hand, the 1970s and 1980s were drier than average. More recently, the years from 2007 to 2009 were abnormally wet across West Africa, leading to high water levels in rivers and widespread flooding, which displaced thousands of people and caused significant damage.

These wet years were preceded by a five-year dry period. The data also shows that the number of rainy days is increasing at a rate of approximately 0.26 days per year. There is some evidence that years with high rainfall have fewer rainy days, which means that higher amounts of rain are falling over shorter periods of time. This suggests that heavy rainfall events may be occurring more frequently. In terms of temperature, the analysis from Garu Tempane revealed that the annual minimum and maximum temperatures have been increasing, at a rate of approximately 0.05 degrees Celsius per year. Future projections for climate change in Ghana indicate that the mean annual temperature will increase by 1.0 to 3.0 degrees Celsius by the 2060s and up to 5.2 degrees by the 2090s.

The rate of change is expected to be highest in the northern inland regions, where ALP is working. The projections for average annual rainfall are inconclusive, with about half of the models indicating increases and half indicating decreases. There is some agreement among models that there are likely to be decreases in rainfall during the January to June period and increases from July to December, and that more rainfall will occur in heavy events.

Climate Change Vulnerability and Adaptive Capacity in Northern Ghana

The combined effects of high levels of poverty, heavy reliance on rain-fed agriculture and poor access to resources and services create a situation of high vulnerability to climate change in Ghana's northern regions. The area is inhabited by communities of mixed religion: Muslim (38%), Christian (33%) and traditional religions (27%). Household sizes are large, at an average of eight people per household. Poor families tend to live in mud houses with thatch roofs that require ongoing maintenance and are easily damaged by storms and floods. Education levels are low: over 75% of women and men between the ages of 18 and 100 (average age of 45), had no schooling at all, while primary school is the highest level attained by any family member in almost 40% of households.

Crop production is the primary income source for almost all households. Almost 90% of households in the ALP communities grow subsistence crops such as rice, millet, sorghum and maize and 39% grow cash crops such as groundnuts, soya beans and cotton. Farming methods are mostly traditional, with only about half of the farmers using fertilizers or weed control. Only 24% were implementing conservation agriculture practices at the time of the analysis. There is limited access to agricultural extension services – more than half of the community members stated that they had not received any agricultural training or technical support in the last year. Livestock rearing, primarily goats, sheep and chickens, represents an important secondary strategy, complementing crop agriculture with an important asset that can be relied on in times of scarcity. Outside agriculture, the most common sources of income were petty trading, remittances or gifts from family members or friends, agricultural day labour and agricultural contract labour.

Food insecurity is high in the ALP communities. Over 60% of households do not have sufficient food during four months of the year. In May and June, the leanest months, more than 80% of households face food shortages. Households are managing these periods of scarcity in a variety of ways, including limiting the number of meals eaten per day, limiting portion sizes and adults going without food so that the children of the household will be able to eat. Indebtedness is higher in Garu Tempane than in East Mamprusi, with almost 50% of the households holding loans, mostly from informal savings and loan groups and relatives or friends.

The most common reasons for taking a loan were to start a small business, to purchase agricultural inputs, for medical treatments and for buying household needs such as food and clothing. At the same time, 60% of households stated that they have savings, mostly held by a savings and loan group or at home. Over 50% of households had a net income of less than 50 Ghana Cedis ($186) for the last twelve months.

The biggest climate-related hazards the ALP communities are exposed to are droughts, floods and storms with heavy rains and strong winds. Droughts affect crops, livestock and human health, making access to water and pasture difficult, with impacts on crop productivity, animal health and incidence of disease. Floods and storms destroy crops, interrupt livelihood activities and damage houses and animal shelters, as well as other assets such as fruit and shea nut trees. These events have a significant impact on communities, particularly the poorest households, causing food insecurity, poor health and increasing indebtedness.

The overwhelming majority of community members feel that the climate is changing. In line with the weather data, they have also noted that temperatures are increasing, citing high intensity of heat as a change.

They report that strong winds are more common and that it is becoming drier. Above all, they assert that the rains are increasingly unpredictable and that natural disasters such as droughts and floods are more common. Approximately 95% of the community members state that they are worried or extremely worried about climate change.

A significant proportion (91%) feel that their yields have decreased due to climate change, and many find it difficult to know when to plant. Climate change is also perceived to be affecting livestock, making access to water for animals more difficult and affecting availability of forage. Local weather prediction systems that use indicators such as clouds, bird calls and emergence of certain insects were traditionally used to plan planting of crops and other livelihood activities.

However, communities report that these systems are no longer reliable for planning their activities. Only half of the community members indicated that they have access to climate and weather information for use in crop production. Among them, approximately 60% stated that they receive early warnings and 55% receive information on when to plant crops. The most common source of this information is CARE and other NGOs, followed by relatives, friends or neighbours, radio and TV programs and agricultural extension agents.

There is some evidence of forward-looking decision-making in the communities. Of those households that have cash savings, many are saving for medical expenses, unexpected expenditures and to buy food during the lean period.

When possible, households do set aside reserves of grains and tubers to be consumed during periods of scarcity, however this relies on them being able to produce a surplus, which is increasingly uncommon. Investment in livestock is seen as a form of insurance for difficult periods. Some families are making efforts to protect their homes from storms by reinforcing the roof and/or by planting trees around the homestead. Dry season gardening is also increasingly practiced, to provide a supplemental food source using water sources that are available year-round.

These actions demonstrate the existing adaptive capacity present in communities in northern Ghana. However, they are generally limited to a small number of households that are able to invest the resources to put them in place. Other households are reliant on coping strategies that are less positive.

This may be because they are temporary fixes, such as staying with friends when houses are damaged by storms or floods; because they undermine the household asset base, such as sale of livestock; or because they are environmentally unsustainable, such as sale of charcoal. With limited access to information and resources that would support adaptive actions, these families are in a precarious situation when faced with the increasing uncertainty and extremes associated with climate change.

The situation of Tariganga, in Garu Tempane District, illustrates these challenges, but also the potential that exists within the communities in northern Ghana.

Diversification through dry season gardening in Tariganga ©2012, Romanus Gyang/CARE-ALP

Case study: Tariganga

Tariganga is home to approximately 1760 people living in multi-household compounds, often with several generations of the same family. The community is led by a Chief, with whom many of the families share family lineage, creating a close bond among the different households. The community members speak Kusaal, a local language. Houses in Tariganga are mostly made of mud, sometimes reinforced with cow dung, and they typically have corrugated aluminum roofs, although some still have thatched roofs. The community has a primary school and a health clinic. A dam has been constructed to provide water for livestock, irrigation and house construction. It is also used for fishing. Water for drinking is accessed at the community borehole. Almost half of the households in the community are characterized as poor or very poor. These families have high debt loads, experience several months of food scarcity each year and have limited assets.

Community affairs are managed by traditional institutions, mainly the Chief in collaboration with the clan heads and the family heads, who are customarily all men. Tariganga has a women's leader, the Magazia, and in some cases this position also exists at clan level. The village is represented in the formal governance system by elected assembly persons (one man and one woman), who represent the community's interests in the District Assembly (DA). Although this entity has the power to establish by-laws for the district, none have been developed to date, despite efforts to enact a law to limit burning the bush. Community-level institutions include the Parent-Teacher Association for the school, a health committee linked to the clinic and a water users' association that manages the dam.

Agriculture is the most important livelihood strategy in the community, with important staple crops including sorghum, millet, rice and maize. Most households also plant vegetables such as leafy greens, tomatoes and chilies, as well as growing trees for produce such as shea nuts. Although the majority of farmers are producing mainly for their own household consumption, most crops will be sold if they manage to produce a surplus. In some instances, produce is sold even if the family's food needs have not been met, in order to meet the cost of expenses such as school fees and medical care. In addition to crop production, most households also keep livestock. Certain types of livestock are kept mainly for household consumption, notably pigs, chickens and guinea fowl. Others, such as goats, sheep and cattle are kept for sale or for other purposes, including social status. While men tend to focus on agriculture, most women are engaged in some sort of off-farm income generating activities. This includes shea butter extraction, brewing pito, a local sorghum-based alcoholic beverage, and preparing spices. These products are sold at the farm or at local markets.

Men's traditional role in managing the family's agricultural production means that they tend to control decision-making around land use and agricultural assets such as livestock. Inheritance rights and social norms disadvantage women in terms of owning property and livestock, however in some cases they are allocated a parcel of land by a male relative, and they use this to grow legumes and vegetables. Women's domain is traditionally within the house, where they are responsible for gathering water, food processing and meal preparation and maintaining assets such as cooking utensils, grinding mills and pots. These differing responsibilities begin at adolescence, when girls are increasingly tasked with domestic duties, while boys are engaged in farm labour, hunting or other activities away from the homestead.

The women and men living in Tariganga believe that the average temperature has risen in recent years and that droughts are occurring more frequently. They have observed that the rains are more erratic, with the rainy season becoming shorter and more intense, often leading to flooding. They also remarked that it is more common than before for dry spells to occur after the rains have started. When asked about the impacts of these changes on their livelihoods, community members were most concerned with the effects on their crop production. The increasingly erratic rainy seasons make it difficult for farmers to know when to plant crops. Further, they have observed that the productivity of certain cash crops such as cotton and groundnuts has decreased, and that certain types of crop varieties, such as local squashes and legumes, have almost disappeared. They also feel that disease outbreaks, both animal and human, are more common.

People's responses to these impacts tend to be reactive and oriented towards managing the immediate crisis, rather than longer-term resilience. The women and men of Tariganga are eager to make the necessary changes to manage the risks and changes they are facing, however they are constrained by their poverty and a lack of support in the form of information, services and technical capacity. To move forward, the community needed a positive vision of the future and a plan to achieve this. ALP worked with community members to develop a vision, which focused on empowerment, food security, environmental sustainability and secure access to services. This vision provided a basis for the development of a Community Adaptation Action Plan (CAAP), which is guiding actions at community level and providing a basis for integrating community priorities into development planning at the district level.

Institutional Capacity to Support Community-Based Adaptation

Alongside the community-level dialogues, ALP engaged government institutions at the district level in East Mamprusi and Garu Tempane to better understand the opportunities and constraints in terms of support for CBA. Local representatives of government agencies such as the Ministry of Food and Agriculture (MoFA), the Environmental Protection Agency (EPA), the Forestry Commission, as well as the District Assemblies (DAs), are aware of the implications of climate change for the livelihoods, food security and health of their constituents. Their key sources of information on weather, climate and climate change are the Ghana Meteorological Agency and the National Disaster Management Organization (NADMO). However, the available information is not systematically monitored and analyzed, except when it generates an early warning for an extreme climate event.

Significant effort has been invested in increasing disaster risk management (DRM) capacity at the local level in northern Ghana, with emphasis on floods, droughts and bushfires. These efforts involve collaboration among a range of different actors, including the different government agencies as well as UN agencies, NGOs and community-based organizations. Initiatives in this area include the development of Disaster Preparedness Plans (DPPs) at the District level, as well as formation and training of Disaster Volunteer Groups (DVGs) at the community level.

These volunteers play a critical role in raising awareness of disaster risks, disseminating early warning information and providing a link between communities and DRM actors at the district level and higher.

Despite these achievements, district-level officials still feel constrained by a lack of equipment, personnel and analytical capacity that would enable them to more proactively engage in DRM actions. Beyond the DPPs, the key entry point for integrating actions identified in CAAPs are the District Annual Plans (DAPs), which guide allocation of development resources at the district level.

The guidance from the Ministry of Finance and Economic Planning and the National Development Planning Commission for the development of these plans and for district budgets already requires that they be 'climate-friendly'. However, some districts, including East Mamprusi and Garu Tempane, are aiming to take this further by explicitly incorporating adaptive actions identified by communities. While there remain many challenges in resourcing the DAPs, the ongoing decentralization process in Ghana presents opportunities for Districts to access new budgetary allocations, for example from the District Development Fund (DDF).

At the community level, traditional authorities, notably the chiefs, are the key decision-makers. The traditional authorities, generally male, play an important role in managing natural resource use and access. They have the power to enact and enforce by-laws, for example to protect forests or to prevent bushfires. If exercised appropriately, their power can be an important force in ensuring sustainable management and use of land, water and trees within the community. The chiefs also represent a crucial link between their communities, local government structures and development actors.

A Women's group farm in northern Ghanna ©2011 Fiona Percy/CARE-ALP

Neba Alem (left), Tariganga chief ©2013 Agnes Otzelbeger/CARE-ALP

In this capacity, they have been instrumental in bringing forward community development priorities such as construction of schools, health clinics and roads in the ALP communities. The traditional authorities are therefore in a position to play an important role in facilitating adaptation, and represent an important partner for ALP in building the adaptive capacity of their communities.

There is limited private sector capacity in Garu Tempane and East Mamprusi districts. Three banks offer financial services for commercial activities, but their interest rates are high (approximately 28%) and the processes for accessing loans are cumbersome and demanding, creating significant obstacles for poor women and men in securing credit to engage in new livelihood activities or to adapt their current activities.

The traditional authorities, generally male, play an important role in managing natural resource use and access. They have the power to enact and enforce by-laws,

In the district capitals, there are a few small-scale businesses engaged in sale of agricultural inputs such as fertilizers, improved seeds, pesticides and traction, however prices are high and generally out of reach of the poorest farmers. Some efforts have been made to overcome these barriers, for example through government subsidies for agricultural inputs and the establishment of village savings and loan associations (VSLAs).

Despite this, a lack of access to financial services and appropriate inputs remains a significant limitation on the productive and adaptive capacity of poor women and men in these districts.

At the national level, the Ministry of Environment, Science, Technology and Innovation (MESTI) has the overall mandate for coordinating policy and action on climate change issues. MEST coordinates the National Climate Change Committee, which includes representatives of key ministries for implementation of policy decisions, including MoFA, NADMO and the Ministry of Local Government and Rural Development. A National Climate Change Adaptation Strategy (NCCAS) has been developed, building on sectoral vulnerability analyses conducted over the last few years by the Netherlands Climate Change Assistance Program (NCAP).

The NCCAS clearly places adaptation efforts within the framework of sustainable development and poverty reduction, outlined in the National Development Policy Framework. It emphasizes vulnerability reduction, gender equity and stakeholder participation, all very important in creating an enabling environment for community-based adaptation. The challenge lies in ensuring that this policy is rolled out at the local level and that the most vulnerable women and men are able to access any opportunities and benefits that result.

Actors supporting community-level adaptation must facilitate processes that strengthen people's ability to analyze information, evaluate risks and benefits and plan actions in a forward-looking manner.

Recommendations

The following recommendations emerge from the analysis:

1. Improving capacity and collaboration among local development actors is critical for community-level adaptation.

Civil society, government, private sector and traditional institutions all have an important role to play in facilitating adaptation: civil society organizations in mobilizing community participation and action; local government institutions in ensuring adaptation priorities are integrated into planning and resource allocation; private sector actors in facilitating access to financial services, agricultural inputs and markets; and traditional institutions in supporting sustainable management of natural resources.

In Northern Ghana, these institutions suffer from a lack of resources, capacity and support from the central government. This has had serious implications for poverty reduction, natural resource management and consequently for people's adaptive capacity. These local actors are central to the CBA process and must themselves be empowered with information, knowledge and resources in order to enable adaptation by communities. Enhanced collaboration among different types of institutions will improve both effectiveness and sustainability of actions to support adaptation. ALP has formed strong relationships with government, civil society, private sector and traditional institutions across the program area, and these have been central to its success so far.

2. To build adaptive capacity requires strengthening of analytical and planning skills.

The people of Northern Ghana are painfully aware of the risks to their livelihoods associated with climate change. However, generally speaking, this awareness does not factor in to their decision-making regarding their livelihoods. In order for people to engage in adaptive management of their livelihoods, they need to be able to analyze the costs and benefits of different options against different climate and weather scenarios and to plan accordingly. This kind of analysis is a learned skill, and new ways of working with communities may be required to build it. Actors supporting community-level adaptation must facilitate processes that strengthen people's ability to analyze information, evaluate risks and benefits and plan actions in a forward-looking manner. For example, the community visioning processes facilitated by ALP as part of the adaptation planning process were integral in shifting the focus from current problems to positive scenarios and actions for the future.

3. Multi-sectoral collaboration is necessary for an informed and integrated approach to adaptation.

The participatory vulnerability analysis process initiated dialogue among key institutional actors, including the Ghana Meteorological Agency, the Environmental Protection Agency (EPA), the National Disaster Management Organization (NADMO) and the Ministry of Food and Agriculture (MoFA). These relationships have been strengthened through program implementation and have been an important resource for communities and local institutions in supporting CBA. Because adaptation cuts across sectors and requires action in different domains, this type of collaboration is critical. CBA initiatives must enhance communication and cooperation among stakeholders from development, disaster risk reduction, environmental protection, meteorological services and other relevant sectors to ensure an informed and integrated approach. The seasonal Participatory Scenario Planning (PSP) processes facilitated by ALP at district level have proven to be a useful platform for promoting this collaboration in relation to interpreting and using seasonal forecasts for decision-making.

Community visioning exercise in Tariganga ©ALP Ghana, 2012

4. Disaster risk reduction initiatives can provide a useful entry point for adaptation actions.

ALP has facilitated community engagement in the development of Disaster Preparedness Plans (DPPs) at the District level, bringing forward the priorities identified in the CAAPs. This has led to improved linkages between communities and service providers, as well as increased capacity of local government representatives to institutionalize early warning systems and to disseminate disaster preparedness information at the community level. The DVGs are also an important resource for awareness raising and information dissemination. They are already playing a role in disseminating livelihood advisories resulting from the seasonal PSP processes in an effort to foster risk management and forward-looking decision-making.

5. Integration of climate change into local development planning facilitates allocation of resources for community-based adaptation.

In order to ensure that resources are available for community-based adaptation, and that local development initiatives do not increase vulnerability by overlooking climate risks, climate change must be integrated into local development planning. The CAAP development processes facilitated by ALP yielded community priorities for adaptation, which have now been integrated into the DAPs.

As it is on the basis of these plans that resources are allocated from the central government, this is a critical step in ensuring that resources are available at the local level to implement adaptive actions. As a next step, ALP is now supporting integration of climate change concerns into the Medium-Term Development Plans (MTDPs), which provide an opportunity for sustained action to build adaptive capacity.

The analysis has increased understanding of climate change issues by target communities and local development actors, and has been instrumental in integrating climate change adaptation into district development plans and budgets.

6. To maximize impact, participatory vulnerability analysis processes should be designed to generate evidence for policy influence as well as to inform CBA planning.

Participatory vulnerability analysis provides important evidence for higher-level policy advocacy. Building on the vulnerability analysis, ALP has been successful in bringing the voice of vulnerable communities in northern Ghana into policy dialogues at national and international levels. This includes engagement with networks such as the Ghana Climate Adaptation Network (Ghana CAN) and the EPA-established Adaptation Working Group for Ghana's Third National Communication to the United Nations Framework Convention on Climate Change (UNFCCC).

Using evidence from the analysis, ALP has been influential in policy development related to climate change, notably in ensuring appropriate attention to differential vulnerability and gender issues. As a result, CBA has been integrated in the NCCAS and has been popularized among government institutions and civil society organizations at national level.

Conclusions

The ALP analysis in Northern Ghana has been an important process in terms of bringing local stakeholders together in a dialogue on impacts of climate change, factors influencing vulnerability and the best way forward to strengthen local adaptive capacity. The analysis has increased understanding of climate change issues by target communities and local development actors, and has been instrumental in integrating climate change adaptation into district development plans and budgets. It has also provided evidence for policy development at the national level, leading to increased emphasis on CBA and gender issues. The dialogue initiated through the analysis has provided a basis for forward-looking planning in communities, including the seasonal PSP processes and annual planning as well as longer-term visions for the future. Communities and local institutions are already implementing actions that are making a difference in reducing risks to people's livelihoods and building adaptive capacity for the future.

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About this CVCA report

That climate change is threatening rural communities across Africa, through increasingly unpredictable extreme events like floods and more frequent severe droughts, is well known. But how exactly is this affecting their lives and what are the implications? This report explores the vulnerabilities of agricultural communities to climate change impacts in East Mamprusi and Garu Tempane districts, part of northern Ghana's Guinea Savannah and Sudan Savanna respectively. It goes further to discover their inherent and growing capacity to adapt to the changes and uncertainties they are facing. The report draws from a series of vulnerability and capacity and gender analysis studies conducted in 2010 by the Adaptation Learning Programme implemented by CARE International, as well as from ongoing work supporting Community Based Adaptation.

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