PARTICIPATORY ANALYSIS OF CLIMATE CHANGE VULNERABILITY AND ADAPTIVE CAPACITY
Informing efforts to build climate resilience in Burkina Faso, Mali and Niger

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Cover photo: People drawing water from a communal well used by pastoralists in the arid region of Diffa, Eastern Niger © CARE/Melanie Brooks

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Pastoralist women carry water cans in the arid region of Diffa, Eastern Niger © CARE/Melanie Brooks

INTRODUCTION

BUILDING RESILIENCE WITHOUT BORDERS in the Sahel (BRWB) is a project developed by CARE International, RBM, SNV and TREE AID for the Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) programme funded by the UK Department for International Development (DFID). The project brings together the experience of the four consortium members with technical partners AGRHYMET (the regional centre for drought control in the Sahel) and ICRISAT (International Crops Research Institute for the Semi-Arid Tropics) to work alongside local stakeholders in an integrated approach to building climate resilience.

BRWB aims to build the climate resilience of almost 1 million women and men in Burkina Faso, Mali and Niger by facilitating change in three key areas:

- improving relevance, access to and use of climate information services for planning and risk management;
- scaling up access to and adoption of sustainable and climate-resilient livelihood options; and
- promoting equitable, sustainable and climate-resilient governance of natural resources.

Building climate resilience requires context-specific solutions. The project therefore uses participatory climate vulnerability and capacity analysis (CVCA) as a critical first step to engage local stakeholders in dialogue around climate risks, vulnerability and existing adaptive capacity, and to inform prioritisation of activities in particular at community and commune levels.[1]

Understanding differential vulnerability, and particularly gender-based differences, is prioritised during assessment and subsequent implementation. The project draws on the methodology outlined in CARE's Climate Vulnerability and Capacity Analysis Handbook[2] and incorporates learning from practical experience of applying the CVCA process in a wide range of contexts and programmes, notably in CARE's Adaptation Learning Programme for Africa.[3] This is essential to ensure that the BRWB project goes beyond 'business as usual' to make a genuine difference in building climate resilience for the communities involved.

As part of the project development phase, CARE, in partnership with the other consortium members, completed a preliminary CVCA in 12 communities in Gorouol, one of the project target communes in Niger. This process was designed to generate learning on community-level climate change vulnerability and adaptive capacity to inform the project design, as well as to build community-level capacity,

create a foundation for further engagement of stakeholders and demonstrate the value of the approach.

The consortium is also drawing on analyses conducted in Burkina Faso and Mali by other CARE projects operating in the same geographic areas and agro-ecological contexts to ensure that the project design is relevant and appropriate for the particular context of the Sahel and the specific areas targeted by the project.

This report provides a brief overview of the learning from these analyses, illustrated by a case study of a particular commune in each country, and summarises the lessons for climate resilience programming in the Sahel and beyond.

PARTICIPATORY ANALYSIS OF CLIMATE CHANGE VULNERABILITY AND ADAPTIVE CAPACITY

Climate change requires new approaches to development and humanitarian action that recognise the challenges local communities face in managing increasing climate variability, uncertainty and extremes.

Recurrent shocks and ongoing stresses resulting from changing temperatures and rainfall patterns are affecting food and livelihood security in the Sahel, with consequences for health, the natural resource base and human security. Local institutions have limited resources and capacity to respond appropriately to, and support people in managing, these changes.

The impacts of climate change affect different people in different ways, based on their livelihood strategies, their socio-economic status, their decision-making power and their access to resources, services and information. In the Sahel, these differences are particularly stark between women and men, with women often facing social, cultural and religious barriers that limit their choices and their actions.

To design effective programming that takes these issues into account, a better understanding is needed at local level of the dynamics of people's and communities' vulnerability to the impacts of climate change, and their capacity to adapt to these impacts. The CVCA process provides a framework of guiding questions for analysing these dynamics, including the impacts of climate-related hazards on livelihoods, trends and changes in climate conditions and extremes, and the potential and/or limitations of current response strategies in light of future climate projections.

Tools are provided for gathering the information needed, including primary and secondary research approaches as well as participatory analysis tools. The tools can be used with different groups to surface differences based on gender, age and livelihood system, facilitating identification of particularly vulnerable groups within communities.

The framework acknowledges the importance of an enabling environment, and therefore includes lines of inquiry on the capacity of institutions at community, local and national level, as well as the existence of policies and availability of resources to support adaptation by communities.

CARE's experience has shown that this type of analysis does make a difference in programme design and in the outcomes achieved.[4] CVCAs have been facilitated in over 100 communities in more than 20 countries across Africa, Asia, Latin America and the Middle East. Through the Adaptation Learning Programme for Africa, they have informed the development of Community Adaptation Action Plans (CAAPs) in Ghana, Kenya and Niger, as well as countless other types of community-led plans and actions in other locations. Ghana's National Development Planning Commission has incorporated the process in the latest government guidelines for district-level planning. In Ethiopia, the analysis has been used to support integration of climate change into two national safety net programmes – the Productive Safety Net Programme and the Household Asset Building Programme – through participatory watershed planning processes. In Ecuador, Peru and Bolivia CVCAs have informed the development and implementation of a major cross-border glacial retreat programme funded by the Global Environment Facility, while in Bangladesh, they have provided essential design information for several large-scale livelihoods projects. These processes have led to more informed and inclusive decision-making and have empowered communities in the face of climate change.

The following case studies provide insights into the context in communes found in the BRWB project target areas, and demonstrate the learning that can be generated through a CVCA process.

Women participating in the CVCA © CARE

GOROUOL COMMUNE, NIGER

GOROUOL COMMUNE is found in Téra Department in Niger's Tillabéry Region. Téra is located in the westernmost part of the country, sharing borders with both Burkina Faso and Mali. Gorouol includes 26 villages, with a majority population of Sonrai (80%) and Bella Touareg (15%). The commune is managed by a council of 12 elected officials, which includes two women.

CARE, RBM, SNV and local partners conducted participatory analysis in 12 communities in Gorouol, with a particular focus on Yatakala, which is next to the Malian border, and Dolbel, which is on the border with Burkina Faso. This case study draws on the participatory analysis[5] and on secondary sources of information on the area, notably the Commune Development Plan for 2013-2017.[6]

CLIMATE DATA

Gorouol is located in the Sahelian zone of Niger, which is characterised by 300-400mm of rainfall per year on average. Temperatures have increased since the 1980s, and climate change projections suggest that this trend will continue. Local rainfall data shows a decrease in average annual precipitation during the 1970s and 1980s, followed by an increase starting in the 1990s. However, even with the recent rise, the average annual rainfall has not returned to the level experienced in the 1960s. Further, seasonal and inter-annual variability in rainfall has increased, with alternating wet and dry years and less reliable rainy seasons. Over the two last decades, the average maximum amount of rain falling in a single day has increased by over 25mm. As a result, flood events have increased, particularly along the Gorouol River.

NATURAL RESOURCES

These changes are having a significant impact on natural resources in Gorouol. The communities are reliant on permanent and semi-permanent water bodies, including rivers and ponds, for domestic use, crop production and livestock. The size of these water bodies has decreased due to drying and siltation, reducing water quality and availability.

Soils in the area are typically sandy, with more clay content along the rivers and laterites on the plateaus. Increased drying and erosion have made the soils more fragile and less fertile. Vegetative cover has decreased and sand dunes are encroaching on farmland and threatening homes, particularly near the Malian border.

PASTORALISM

Although this region is typically considered a pastoral zone, many households have lost a significant portion of their herds, either in the severe drought that occurred in 1984

or during the more recent food crises in 2006 and 2010. For those who still have livestock, the remaining herd is generally not large enough to support household needs.

There are a number of barriers to re-establishing herds, including a lack of capital, high pressure on land leading to severe competition between agriculture and livestock, increasing difficulties in accessing water and pasture, and constraints on cross-border mobility due to administrative obstacles and insecurity in Mali. As a result, the majority of households in Gorouol have transitioned to rain-fed crop production as their primary livelihood strategy, moving away from their tradition of pastoralism.

CROP PRODUCTION

Key staple crops in the area include millet and sorghum. Fields are generally controlled by the male head of household – women may be allocated a small area to grow secondary crops such as sesame, groundnuts and okra. Low yields and losses due to rainfall variability, drought and pests mean that households are rarely able to cover their cereal needs throughout the year. In response, farmers are increasing the extent of their agricultural land, with negative implications for forest cover and availability of grazing land, creating an additional barrier to livestock herding.

Fishing, handicrafts and production of cowpeas also represent important livelihood strategies for some members of the community.

IMPACT OF CLIMATE EXTREMES

The main climate extremes affecting the people of Gorouol are droughts, low rainfall years and floods. People distinguish severe droughts from dry years in terms of the effects: droughts cause famines and decimate herds, while low rainfall causes deficits in food and fodder, water scarcity and reliance on cereal banks. Over the longer term, communities have observed the disappearance of certain bird and plant species, which they link with the dry periods. Floods destroy crops, damage fields, particularly through soil nutrient depletion, and cause erosion of river banks, which has been severe enough in some areas to force the relocation of some villages in the commune.

When affected by these shocks and stresses, which gradually reduce productive capacity, women and men in Gorouol have few sustainable options and are forced to migrate, sell their assets, engage in manual labour and/or rely on donations or loans in order to cope. As a result, many are trapped in a cycle of low production, degradation of the asset base and increasing debt.

IMPACT ON WOMEN

These issues are particularly critical for the women of Gorouol, who are dependent on their male relatives for access to land. As a result of gender imbalances in the application of tenure rights, women who are widowed, divorced or particularly vulnerable often have no access to land. Even when women have been allocated a parcel of land to cultivate, they rarely have control of it and the most fertile areas remain under the power of their male counterparts.

Due to cultural norms, women also lack decision-making power in community-based organisations such as cereal and fodder banks. While they are members and have basic rights within the organisation, they have little influence over the management of the banks and the movement of stocks. These barriers exacerbate the vulnerability of women in poor households, as they limit the options available to them to manage risks and respond to shocks.

LEARNING POINTS AND AREAS TO ADDRESS

In the face of these challenges, support mechanisms are needed that enable people to exit this cycle and move towards more flexible, sustainable and climate-resilient livelihood options. However, the existing systems, including humanitarian preparedness and response and longer-term development, are not addressing the underlying causes of vulnerability.

Several development projects are being implemented in the commune, but they lack the consultation and coordination necessary to maximise their effectiveness. The commune administration is the structure closest to the communities, but it lacks the resources and capacity to proactively plan and implement actions that would build resilience and adaptive capacity. The decentralised technical services of the government are located up to two hours from the targeted communities, so technical support for livelihood activities is inconsistent if not absent.

At the moment, investment in regeneration and sustainable management of natural resources is not prioritised, leaving local ecosystems increasingly sensitive to environmental degradation and climate change impacts, with consequences for the availability of natural resources that are critical for livelihoods. When crises occur, the capacity of the local and national system to respond efficiently or appropriately is constrained, and longer-term plans for managing climate risks are not in place.

These findings have informed the design of the BRWB project and will be addressed through its implementation.

Women sorting the harvested leaves from a pollarded baobab tree (Barsalogho, Burkina Faso) © TREE AID/Mike Goldwater

TAKOUGOUNADJE COMMUNE, BURKINA FASO

THE COMMUNE OF TAKOUGOUNADJE is located in Yagha Province, in eastern Burkina Faso, along the border with Niger. A CVCA process was carried out in two communities in Takougounadje in the context of the USAID-funded West Africa Water Supply, Sanitation and Hygiene Programme (WA-WASH), implemented in Burkina Faso by a consortium that includes CARE. This case study draws on that participatory analysis.[7]

The programme aims to increase sustainable access to safe water and sanitation and improve hygiene in West Africa. Recognising the impacts of climate change on quality and availability of water, climate change adaptation is a core activity of the programme, with a focus on supporting community planning for adaptation in the water sector.

LIVELIHOODS

The people of Takougounadje are primarily reliant on rain-fed crop production, usually practised in combination with cattle and sheep rearing. As rainfall becomes increasingly unreliable, other income-generating strategies such as gold mining and harvest of baobab leaves and fruit for sale are practised to complement agricultural activities. Crop production in the wet lowlands is increasingly important as a source of food.

RESOURCES

From the perspective of community members, the most important resources are agricultural land, livestock and water bodies, all of which are highly sensitive to climate change. Markets, non-timber forest products, pastures and gold mining sites were also mentioned as important for community livelihoods, however these are perceived to be less sensitive to climate change impacts.

CHANGING CONDITIONS

Droughts and livestock diseases are regular occurrences in the commune, but are observed by community members to be occurring more frequently. Recent years have been marked by floods, strong winds and increasing temperatures.

Increasingly erratic and unpredictable rainfall and weather patterns have a strong impact on livelihoods, making it difficult to plan activities and causing losses when rains don't come as expected. Community members report that water points are drying up, making it a challenge to access water for livestock during the dry season. They describe other changes in the environment as well, including a lack of regeneration of forest resources and negative impacts on water resources resulting from mining activities.

RESPONSES

Communities in Takougounadje have responded by combining agriculture and livestock rearing as a way of spreading risks to their livelihoods. Having livestock provides them with an asset that can be sold when crops fail. There is evidence of adaptation of agricultural practices, including use of improved seeds and organic fertilisers and increased prevalence of vegetable gardens.

There is also evidence of diversification of income sources, with some community members engaging in petty trade and bartering for goods.

In this commune, they also have the option of panning for gold, which is an important income-generating strategy that is relied on when a crisis occurs. However, this activity is dangerous due to the risk of collapse of mines, and it requires significant amounts of water for processing, creating additional pressure on increasingly scarce water sources. As a result, women tasked with cleaning the collected rocks often do so at night to avoid high usage periods at water points, placing them at risk of violence. There are also longer-term negative environmental impacts resulting from gold mining. These negative consequences are recognised by communities, however the practice continues due to a lack of alternatives.

COMMUNITY ADAPTATION ACTION PLANS

Building on the CVCA, the two communities developed CAAPs which identify the priority adaptation activities that the community members would like to put in place to address the challenges identified. Key activities identified include:

- Improving crop production through production and use of improved seeds, acquisition of agricultural equipment such as ploughs and carts, and development of market gardening.
- Supporting livestock management by securing grazing areas, cutting and conservation of fodder, and planting fodder crops. Animal health will be enhanced through training of veterinary assistants and efforts to increase vaccination.
- Establishing banks of grain and animal feed to mitigate future crises.
- Improving availability of water through rainwater catchment, water retention and more efficient use of water.
- Prioritising improved natural resource management through reforestation, soil and water conservation measures and improvements to systems and structures for managing natural resources.

In addition to yielding these concrete actions to address community priorities, the analysis and planning process has built consensus among community members on the priorities for support from the commune.

A community participating in the CVCA © CARE

KONNA COMMUNE, MALI

KONNA COMMUNE lies in the middle of Mopti Circle in the Mopti Region, which borders Burkina Faso. A CVCA process was conducted in the commune in the context of the Partners for Resilience (PfR) programme, a multi-country initiative implemented by CARE, Cordaid, the Red Cross/ Red Crescent Climate Centre, the Netherlands Red Cross and Wetlands International and funded by the Dutch Ministry of Foreign Affairs. This case study draws on that participatory analysis.[8]

The PfR project aims to reduce the vulnerability of communities by strengthening their capacity to address the causes and consequences of disasters. In Mali, this will be achieved through three key strategies: strengthening the resilience of targeted populations, strengthening civil society, and influencing policy at local and international level.

The CVCA process was a key step in the project inception. In Konna, the process was facilitated in four communities.

LIVELIHOODS AND RESOURCES

The majority of people in Konna are agro-pastoralists, practising a mix of crop production and livestock rearing. A small proportion of the population relies on fishing in the tributaries of the Niger River.

Each of the communities studied has a school and a literacy centre, however illiteracy levels remain high. The communities do not have health centres and are reliant on community health workers and traditional birth attendants. Women's and men's associations represent important social networks.

A lack of potable water is a major concern for communities, as this exacerbates various health risks, including waterborne disease, particularly in children. Water is accessed through boreholes as well as traditional wells and ponds.

RISKS

The severe drought of 1984 was a major event in the history of Konna, causing devastation of livelihoods and a mass exodus from rural villages. Some families never returned.

Given their proximity to the channels of the Niger River, flooding is the most significant risk to the communities. Floods cause enormous damage, destroying homes, killing livestock and damaging crops. Some villagers have been forced to move their homes further away from the river due to recurrent flooding caused by heavy rainfall events. Siltation of the channels, caused by soil erosion, exacerbates flood risks.

Droughts are also a significant hazard, causing further challenges in accessing potable water and negative effects on crops and livestock. Other issues affecting security and sustainability of livelihoods include reduced soil fertility, invasive weeds and deforestation.

PROPOSED STRATEGIES

As the final step in the analysis, communities discussed the strategies that they would like to implement to improve their resilience to the identified risks. To address flood risks, they propose to build dikes and diversion canals that would protect the community from floodwaters. They are interested in learning about sustainable farming practices, including crop rotation and use of organic fertilisers. Vegetable gardening, reforestation and improved management of water resources were also identified as priorities.

ACTIONS TAKEN

Responding to the CVCA findings, the PfR project has supported communities with implementing a range of activities:

- Two communities in Konna have received support to construct clay dikes, which are planted with native grasses, for flood protection.
- The project has facilitated agreements with a number of communities to provide women's groups with access to land for vegetable gardening, where they are now growing onions, potatoes, leafy greens and peppers.
- Through a partnership with the national agricultural research institute (Institut d'Economie Rurale), community members have been able to access seed varieties that are adapted to different conditions (for example, more drought-tolerant).
- To support risk-oriented decision-making, the project is facilitating access to climate information through a network of community monitors who are tasked with monitoring and disseminating rainfall information, with support from the National Meteorological Service.

Preparing soil for planting in Tahoua region, Niger © CARE/Rodrigo Ordonez

LESSONS FOR BUILDING CLIMATE RESILIENCE

THESE SHORT CASE STUDIES provide snapshots of the context in terms of climate risks and capacity to respond in the communes of Takougounadje, Konna and Gorouol. Reflecting on these particular case studies, as well as the learning from CARE's implementation of CVCAs across Africa and globally, the following lessons emerge. These lessons will inform efforts to build climate resilience in the Sahel through the BRACED programme, as well as contribute to the broader body of knowledge on the role of participatory processes in building climate resilience.

Participatory analysis of vulnerability and adaptive capacity provides a solid basis for identifying appropriate support to build climate resilience

The case studies demonstrate the context-specific nature of the information gained through a participatory analysis process such as the CVCA. They also illustrate the subtle differences between communities – even those in similar agro-ecological zones – in terms of the risks they face, their capacity to respond and their priorities for adapting to climate change.

These differences demand tailored approaches to build climate resilience that respond to the specific needs and priorities identified by communities. If facilitated appropriately, the CVCA and similar processes enable identification of these needs and priorities in a participatory way, increasing the potential for actions by government, civil society and private sector actors that are responsive and inclusive.

Participatory analysis is a first step in empowering communities to confront climate extremes and disasters

Engaging women and men in dialogue on climate risks and options for adaptation helps them to look at their livelihoods in a different way, relating risks, impacts and responses. The process also helps people to identify trends and discuss changes that they are observing, linking these local observations to available scientific information on observed and projected changes in climate.

Through these dialogues, local stakeholders can build knowledge of the causes and effects of climate change and inform decision-making around livelihoods and natural resource management. Participants in CVCA processes are empowered with analytical skills that are critical for increasing adaptive capacity.

Gendered analysis of vulnerability and capacity is necessary to ensure gender-equitable approaches to building climate resilience

Although further, gendered analysis would be required to develop a comprehensive understanding of gender dynamics in the targeted communities, each of the case studies provides some insight into gender issues related to climate impacts and responses.

It is clear that women and men face different challenges in managing climate risks and consequently they will require different types of support. This will often include particular actions to empower women to overcome the obstacles they face due to gender inequality.

Gendered analysis of opportunities for and barriers to climate resilience is critical to inform these actions. Further analysis on specific lines of inquiry related to gender may also be required to get the complete picture and ensure gender-equitable approaches.

A better understanding of livelihoods and existing adaptive capacity is needed to effectively increase climate resilience

Climate resilience requires flexibility in livelihoods, allowing people to adapt to new information and changes in their environment, as well as to respond to shocks and stresses. As the case studies illustrate, many people in the Sahel rely on a dynamic mix of strategies, including livestock rearing, crop production and off-farm income-generating activities. The relative importance of these different strategies changes with fluctuations in climate, as well as other factors such as market prices.

In some situations, this enables people to manage risks, while in others, particularly for poorer community members, the alternatives may be simply a way of coping and may have negative impacts on longer-term resilience. In order to effectively increase climate resilience of all groups within communities, these dynamics must be understood and efforts made to support adaptive management of livelihoods, moving away from potentially negative coping strategies.

Building climate resilience requires an integrated approach, combining short-term and long-term actions and 'hard' and 'soft' measures

As shown in the case studies from Burkina Faso and Mali, when identifying adaptation options, communities tend to prioritise 'hard' actions that address their pressing livelihood concerns, such as more drought-tolerant crop varieties and water infrastructure. However, as discussed above, adaptation also requires more informed and forward-looking planning and decision-making processes to enable local stakeholders to make good decisions to manage climate risks.[9] Efforts to support climate resilience must therefore aim to address immediate needs identified by communities, while also strengthening adaptive capacity for the longer term.

An enabling environment for more climate-resilient livelihoods is required

The case studies demonstrate that climate extremes are bringing new challenges for crop and livestock production in the Sahel. With widespread loss of herds due to recurrent crises, reliance on crop production is increasing. However, the case studies also show that with increasing climate variability, the shift from livestock rearing to crop production exposes people to new risks.

Where agriculture is viable, more efficient use of water, improved soil and organic matter management, improved agro-forestry practices and options such as conservation agriculture could be explored in adaptation planning to ensure maximum outcomes from better natural resource management, in terms of production and adaptation for food and nutrition security.

At the same time, there is a need to overcome the barriers pastoral communities face in sustaining their flexible and adapted livelihood system, including reduced mobility, difficulties in reconstituting herds after crises, and access to climate and market information that would enable effective herd management. With increased access to information and productive resources, people will be better able to weigh the costs, benefits and risks associated with different options and to make the best decisions for their resilience.

The CVCA process can provide a basis for identifying context-specific characteristics of resilience

One of the challenges of monitoring changes in resilience is that it is a multi-dimensional concept. The characteristics of a resilient individual, community or system are context-specific and changeable over time. This makes it difficult to identify standard, static indicators that can be used across different contexts.

Participatory analysis such as the CVCA can enable locally-relevant determinants of resilience to be identified, based on analysis of key stresses and shocks, consequences of hazards and current response options.[10] This provides a basis for participatory monitoring and evaluation processes that empower local stakeholders in observing and analysing changes in context and in resilience characteristics.[11]

A woman in Maradi, Niger, carrying local grasses for seeding in a pasture area © CARE/Melanie Brooks

CONCLUSIONS

EVIDENCE FROM CARE'S EXPERIENCE with the CVCA process suggests that participatory analysis of vulnerability and adaptive capacity should be a fundamental component of programmes aiming to build climate resilience. This type of analysis provides critical, context-specific information that is necessary to design, monitor and evaluate programmes that are responsive to local needs and priorities, inclusive of particularly vulnerable groups, and built on local knowledge and capacity. Importantly, it also represents an initial step in building the capacity of local stakeholders to integrate climate risks and changes over time into their planning and decision-making.

CARE, RBM, SNV and TREE AID will use this learning to apply a customised CVCA process, including gender analysis, during the inception phase of the BRWB project. This analysis will inform project decision-making and will serve as an important step in engaging stakeholders in the longer-term process of building climate resilience.

ENDNOTES

1. Commune is a political constituency in several countries in the Sahel, as distinct from community as a local-level social structure.

2. CARE (2009) *Climate Vulnerability and Capacity Analysis Handbook*, available at www.careclimatechange.org/cvca

3. The Adaptation Learning Programme (ALP) works in Ghana, Kenya, Mozambique and Niger to increase the capacity of vulnerable households to adapt to climate variability and change. It is funded by the UK Department for International Development, the Ministry of Foreign Affairs of Denmark, the Ministry of Foreign Affairs of Finland and Austrian Development Cooperation. For more information see www.careclimatechange.org/adaptation-initiatives/alp

4. CARE (2011) *Understanding vulnerability to climate change: Insights from application of CARE's Climate Vulnerability and Capacity Analysis (CVCA) methodology*, www.careclimatechange.org/files/adaptation/CARE_Understanding_Vulnerability.pdf

5. CARE International au Niger (2014) *Analyse des risques et de la vulnérabilité conduite dans la commune de Gorouol (Département de Téra, Région de Tillabéry, Niger)*

6. Gorouol Commune (2013) *Plan de développement communal de la commune rurale du Gorouol*

7. CARE au Burkina Faso (2014) *Program WAWASH: Rapport de synthèse du processus d'élaboration de 8 Plans Communautaires d'Adaptation aux Changements Climatiques (PACAS) au Burkina Faso*

8. CARE International au Mali (2011) *Rapport d'enquêtes CVCA++: L'analyse des besoins prioritaire en résilience des communautés ciblés du projet Partners for Resilience (de huit villages des communes de Konna et Borondougou)*

9. See, for example, Africa Climate Change Resilience Alliance (ACCRA) (2010), *The ACCRA Local Adaptive Capacity framework*, http://community.eldis.org/.59d669a7/txFileDownload/f.59d669a7/n.ACCRA%20Local_Adaptive%20Policy_new.pdf

10. See, for example, Brooks N, Aure E and Whiteside M (2014) *Final report: Assessing the impact of ICF programmes on household and community resilience to climate variability and climate change*, Landell Mills and Garama 3C Ltd for Evidence on Demand, www.gov.uk/government/uploads/system/uploads/attachment_data/file/319570/Assessing-impact-ICF-programmes.pdf

11. See, for example, CARE (2014) Participatory Monitoring, Evaluation, Reflection and Learning for community-based adaptation: A revised manual for local practitioners, http://insights.careinternational.org.uk/media/k2/attachments/CARE_PMERL_revised_manual.pdf

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