HARANDE

GENDER-SENSITIVE CLIMATE VULNERABILITY AND CAPACITY ASSESSMENT (G-CVCA)

for Harandé Development Food Assistance Program

FINAL REPORT

CARE Mali
October 15, 2016

I. EXECUTIVE SUMMARY

The Human Capital, Accountability and Resilience program for the Promotion of Nutrition Security, Livelihoods and Accountability, or Harandé, is designed to promote resilience of participants through coordinated interventions to improve food and nutrition security, while strengthening the capacity of the population at the household and community level to respond and deal with a myriad of shocks and stress factors. Recognizing climate change, gender inequality along with the vulnerability of some sections of the community as an obstacle underlying food and nutrition insecurity, and a key stressor towards instability and insecurity, a holistic understanding of gender sensitive-climate vulnerability and adaptive capacities of target communities is an imperative step for the success of program interventions. The Gender-sensitive Climate Vulnerability and Capacity Assessment (G-CVCA) was designed to:

a. Analyze vulnerability to climate change and adaptive capacity at the community and household-level
b. Assess community knowledge on climate as a complement to scientific data to achieve greater understanding of the local impacts of climate change on different groups in a community

The study developed recommendations for locally appropriate and gender sensitive climate change adaptation activities to ensure optimal engagement and benefits to women, men, boys, and girls in four districts of Mopti Region: Tenekou, Youwarou, Bandiagara, and Douentza. These four districts represent two agroecological zones: Delta and Plateau.

Through a combination of Focus Group Discussions, Key Informant Interviews, and review of Secondary Literature, the study identified the following conclusions.

- Future projections of climate change show increased average temperatures, and unpredictable precipitation.
- Residents in both agroecological zones reported a similar set of hazards, identifying drought and flood as the two of top concern. Both zones reported conflict as an important hazard, though in Tenenkou it has had more far-reaching effects.
- Gender roles are important in livelihoods and division of labor, and lead to differential vulnerability for different genders.
- Strategies for dealing with hazards, including the shocks and stresses due to climate change, are diversified. Coping strategies such as increased cutting and sale of firewood are not sustainable, while longer term strategies such as increased use of irrigation continue to build adaptive capacity. There are limits to the degree to which people can continue to diversify strategies without increased capacity in markets, infrastructure, and administrative capacity of local government.
- Decision-making power continues to be the province of men in collective decisions, though women have more autonomy in some gender specific activities such as small-scale irrigated market gardening. Teenage girls have the least autonomy of all groups for decisions concerning their futures.
- Communities have access to information concerning weather, climate, and some adaptive strategies, though women reported far less exposure to this information.
- Most, but not all, communities have multiple relationships with technical services, commercial providers, and NGOs. Men have more access than women.

Across both zones, the profile of vulnerable people was similar. More vulnerable people from both the Delta and Plateau have:

- Few animals to sell
- Lack of access to production with irrigation or humid soils
- Insufficient land to cultivate
- Lack of household member to seek paid work, local or migratory
- Lack of sufficient labor for crops or livestock
- Subject to violent conflict
- Single headed households (especially female), widows, disabled
- Lack of capacity to buy food when prices are low

The main capacities that serve to reduce vulnerability are:

- Social capital
- Producer networks
- Trade relationships
- Diversified revenue sources
- Religious resources
- Strong local organizations, particularly production management committees
- Supportive NGOs
- Local and regional government with the resources to implement national policies in the main sectors affected by climate change

Programs to reduce these vulnerabilities and strengthen these capacities would support adaptation to climate change.

The report makes the following recommendations:

1. Strengthen the climate information and early warning systems at the community level by creating a two-way communication system, agropastoralists to scientists and scientists to agropastoralists.
2. Support existing adaptive strategies (especially of women), including promotion of revenue producing activities such as gardening, fish farming, poultry, sheep fattening, agricultural and livestock processing, and marketing of products.
3. Strengthen the system of productive finance beyond village level tontines.
4. Promote various agroecological methods, including crop varieties adapted to the climate and technologies which increase soil fertility and structure (Zai, half moons, bunds, organic manure, naturally assisted regeneration).
5. Promote the cultivation of forage, especially Bourgou.
6. Increase support to livestock through a) animal health training and organization of producers and b) advocacy at the national level to provide resources to the regions to strengthen the livestock sector infrastructure.
7. Focus on irrigation perimeters, fish ponds, and irrigated gardening as resilience activities.
8. Support community-based producer groups – livestock, vegetables, grains, etc. – to link them more closely to national producer and marketing networks that provide personal profits.
9. Promote innovative ideas (household scale fish farming, solar pumping systems for irrigated perimeters and gardens).

II. TABLE OF CONTENTS

III. ACKNOWLEDGMENTS

This report could not have been done without the many dedicated people who gave their time and effort to producing this report. Thanks go first to the hundreds of people in Tenenkou, Youwarou, Bandiagara, and Douentza who participated in Focus Groups. Thanks also to all those who agreed to be interviewed for their professional advice, who are listed in the Annex. Staff from CARE's partner organizations played a central role in making the field work a success: Helen Keller International, Sahel ECO, GRAT, and YAGTU, with additional help from AMAPROS and the village of Kondia. And finally thanks to the team at CARE in Bamako, Sevaré, and Segou for their dedication and hard work, under the able guidance of Moustapha Gaye, Idriss Leko, Rabilou Team Leader Moussa Tolofoudie, Sadio Ba, Hassimi Diallo, Chacka Sidibe, and Pierre Togo. Chris Allan led the study and wrote the final report.

IV. INTRODUCTION

The Human Capital, Accountability and Resilience program for the Promotion of Nutrition Security, Livelihoods and Accountability, or Harandé, is designed to promote resilience of participants through coordinated interventions to improve food and nutrition security, while strengthening the capacity of the population at the household and community level to respond and deal with a myriad of shocks and stress factors. The overall objective of Harandé is: improved food and nutrition security and livelihoods in 310,855 vulnerable households in the districts Youwarou, Tenenkou, Bandiagara and Douentza by 2020.

Recognizing climate change, gender inequality along with the vulnerability of some sections of the community as an obstacle underlying food and nutrition insecurity, and a key stressor towards instability and insecurity, a holistic understanding of gender sensitive-climate vulnerability and adaptive capacities of target communities is an imperative step for the success of program interventions. The Gender-sensitive Climate Vulnerability and Capacity Assessment (G-CVCA) facilitates understanding of the underlying causes of vulnerability to climate and disasters to men, women, boys, girls which is key for addressing social inequalities and poverty in a context affected by climatic shocks, stresses and disasters. G-CCVA helps to elucidate factors that the project will need to consider—the nature and degree of climate change impacts, the people and systems that will be sensitive to those impacts, and the adaptive capacities of those affected.

The findings, conclusions and recommendations of the G-CVCA will inform Harande's review of its Theory of Change and will be used to design locally appropriate and gender-sensitive climate change adaptation activities to ensure optimal engagement and benefits to women, men, boys, and girls in the program target areas.

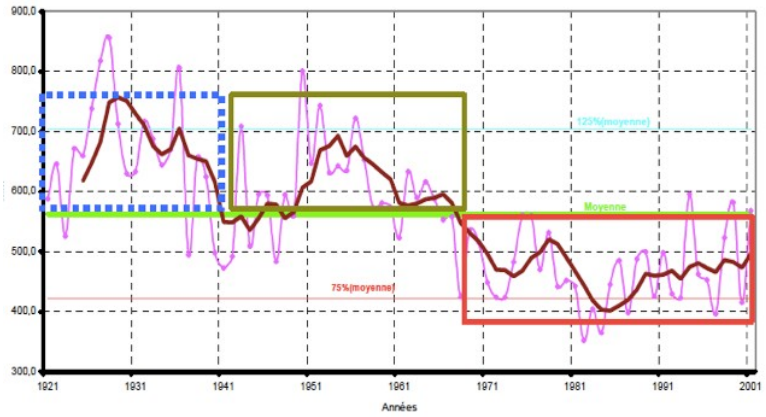
V. BACKGROUND/LITERATURE REVIEW

Climate data

The secondary literature shows high agreement on several points concerning data on the historic climate record and on projections.

Precipitation

The following graph shows changes in precipitation over the twentieth century.[1]



Evolution of Precipitation in Mali, 1921-2001

The historic data fall into three main periods:

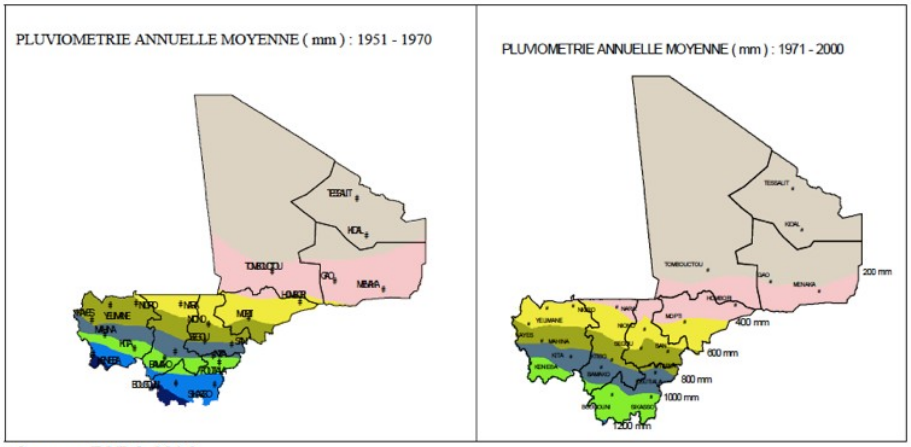
- From 1921 to 1941, rainfall was characterized by an average of 700 mm with a downward trend by 1941;
- From 1941 to 1971, overall the average rainfall was lower than the previous two decades but still above average for the century;
- From 1971 until 2001 there has been a downward trend, as low as an average of 400 mm in the 1980s, which recovered, but is still below the average for the century.

The main conclusions from this data are that farming systems that were functional through three quarters of the twentieth century have been under stress since the 1970s. While precipitation has recovered from the multiple droughts of the 1970s and 1980s, it is still below average levels that farmers and pastoralists relied on for the previous two generations.

The following maps show the effects of these changes on the agroecological zones in Mali.
These maps show changes in average annual precipitation from the period 1951-1970 and 1971-2000. Between these two periods the isohyets have shifted to the southwest 500-750 kilometers, which

1 Ministère de l'Equipement et des Transports, Programme d'Action National d'Adaptation aux Changements Climatiques, République du Mali, juillet 2007.

implies that farming systems adapted to agroecological zones are less appropriate for the areas in which they had been practiced. On average, across the country, average annual precipitation declined by 200 mm per year over this period. Another result has been that the average flow of the Niger River declined from 1300 m^3 in 1978 to 895 m^3 in 2002.[2]

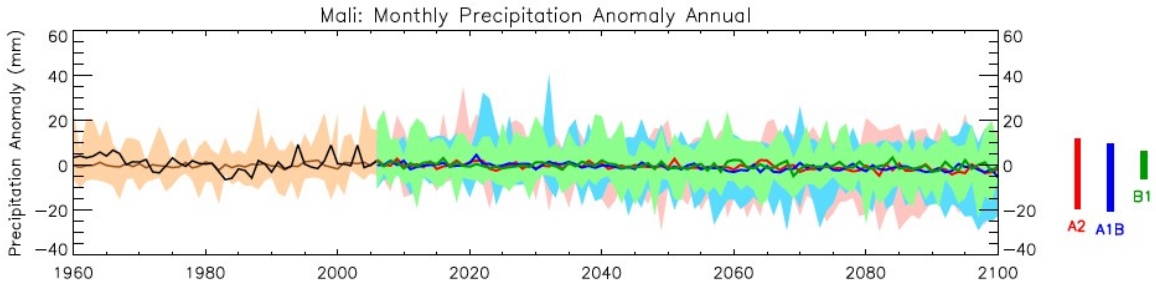


Source : DNM, 2006

Figure 1.3 : Cartes de la Pluviométrie annuelle moyenne

Southwestern Shift in Isohyets of Precipitation, 1970-2000

Future precipitation trends are uncertain. There is no consensus on climate projections for precipitation – it may increase, it may decrease, it may remain the same. The following graph shows both historic data and climate projections for the rest of this century for variations from the mean for precipitation across three climate scenarios. All three scenarios show little change in precipitation from the current mean.[3]

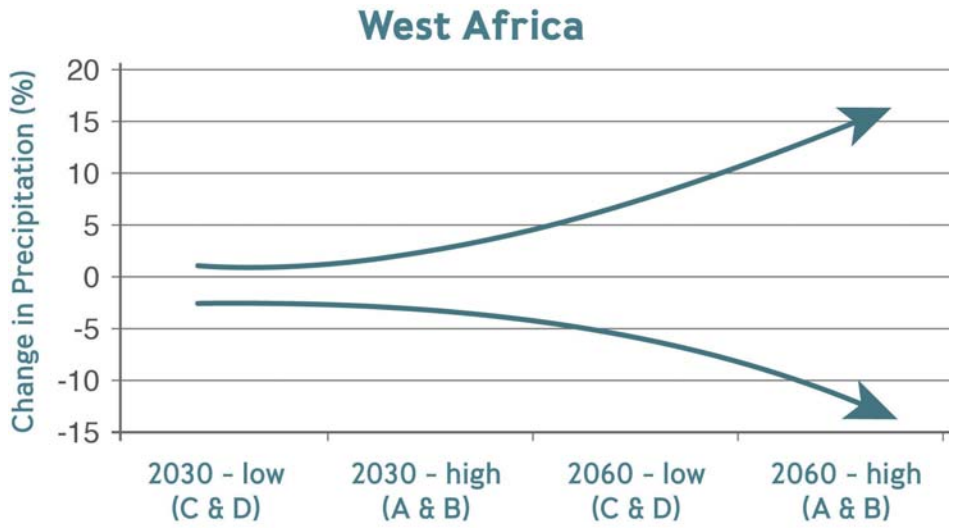


Projected change range from -22 to +25% by the 2090s. The reason for this uncertainty on precipitation is summarized here:

> "Model simulations of precipitation changes for the Sahelian and south-Saharan regions of Africa are strongly divergent and most models fail to reproduce realistic inter-annual and inter-decadal rainfall variability in the Sahel in 20th century simulations. Our understanding of the processes causing tropical rainfall is insufficient to allow a prediction of the direction of change with any certainty.... Model simulations show wide disagreements in projected changes in the amplitude of future El Niño events. West African climate can be strongly influenced by ENSO, thus contributing to uncertainty in climate projections for this region."[4]

2 PANA, Juillet 2007
3 C. McSweeney, M. New, and G. Lizcano, UNDP Climate Change Country Profile: Mali, 2008
4 C. McSweeney, M. New, and G. Lizcano, UNDP Climate Change Country Profile: Mali, 2008

The following graph illustrates the variation across climate models in projected changes in precipitation over the next several decades.[5]



Projections for changes in precipitation in West Africa

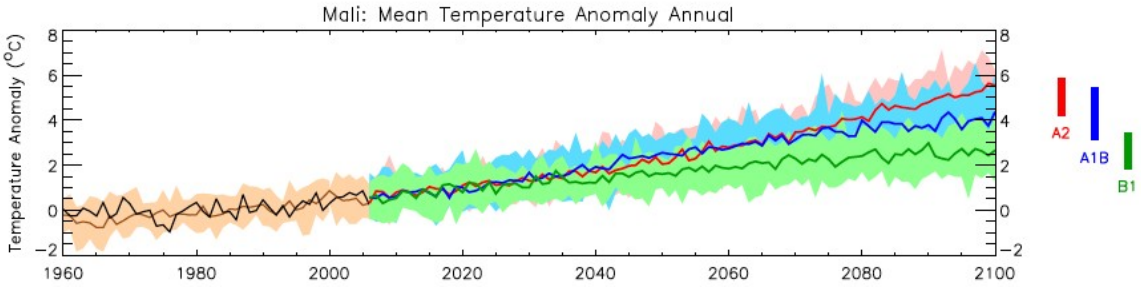
There is consensus that Mali can expect to see greater variability in precipitation, including more extreme events, late start and early finish to rainy seasons.

Temperature

The historic trends for temperature are not as dramatic as those of precipitation, yet they show a clear trend upward.

Historic data on temperature in Mali shows that mean annual temperature has increased by 0.7°C since 1960, an average rate of 0.15°C per decade. The rate of increase is most rapid in the hot, dry season from April-June, at 0.25°C per decade, with no evidence of a warming trend in the driest season, January-March. Despite these changes in averages, the number of days classified as "hot" has not increased significantly.[6] However, the number of hot nights per year has increased by 55, an increase of 14.9%. "Cold" nights have decreased by 31 days per year, which is 8.6% of days. [7]

The following graph shows historic climate data and climate projections across three scenarios. All show expected increases in temperature over the rest of the 21st century.[8]



5 Adapted from Théodore Kaboré, Mercy Corps Niger

6 A "hot" day or "hot" night is defined by the temperature exceeded on 10% of days or nights in current climate of a region and season. "Cold" days or "cold" nights are defined as the temperature below which 10% of days or nights are recorded in current climate of a region or season.

7 C. McSweeney, M. New, and G. Lizcano, UNDP Climate Change Country Profile: Mali, 2008

8 C. McSweeney, M. New, and G. Lizcano, UNDP Climate Change Country Profile: Mali, 2008

The mean annual temperature is projected to increase by 1.2-3.6°C by the 2060s, and 1.8-5.9°C by the 2090s. The projected rate of warming is similar in all seasons and regions of Mali.

Wind

Given the increase in energy in the climate system in general, it is reasonable to expect changes in winds, including those strong enough to be destructive. However, wind is a largely local phenomenon, and therefore difficult to monitor and project, so there are no reliable climate projections for wind.

Water

Mali is rich in water resources, but they are largely restricted to the large rivers, especially the Niger and Senegal Rivers. Since the 1970s, uncertain rainfall has promoted increased migration from dry-land farming areas to the Inland Delta and to urban centers.[9] The most effective adaptation strategy to uncertain precipitation has been an increase in cropping using irrigation. There are several forms of irrigation that have been effective:

- Large scale irrigation schemes, such as the Office du Niger
- Small community managed systems (irrigation de proximité), usually less than 40 hectares
- Flood irrigation of rice
- Recession irrigation, using declining water levels or ponds to grow vegetables.

These systems are largely used to produce high value crops such as rice and vegetables. For other crops such as millet, sorghum, and cowpeas, irrigation is either impractical or uneconomic.[10] While it is possible to increase use of pumped groundwater to supplement irrigation needs in areas away from rivers, there is a risk of depleting water tables. For these areas, strategies to increase production in dryland farming currently focus more on increasing the soil structure to retain moisture and capture of rainfall by small-scale rain catchment systems.[11]

9 Migration to cities increases about 6% per year. Key Issues in Water Resources
10 Murray-Rust, Hammond, Climate Change in Mali: Key Issues in Water Resources, USAID, November 2013.
11 USAID, Climate Change in Mali: Agricultural Adaptive Practices Impact Modeling Assessment – Summary Report, November 2014; Key Issues in Water Resources

Current precipitation projects do not give great concern for continued flow above the Markala and Manantali Dams in western Mali for the remainder of the century. Of greater concern is increased diversion of the Niger River for irrigation, which could potentially have great impact on the availability of water in the Delta for rice irrigation, fisheries, and general ecosystem health. For example, reservoir operations at the Selingue Dam have reduced rice production in the Delta by 10%, and extractions from the Office du Niger have reduced production by 5%.[12] Fisheries in the Delta follow closely the area inundated, with variations from a low of 10,000 tons traded when the inundated area was re- duced to less than 8000 km^2 in the early 1980s to a high of over 50,000 tons when the area inundated reached 18,000 km^2 in the early 1990s.[13] At the same time, Mali is a signatory to the regional NBA agreement, which obligates Mali to provide a minimum flow of 40 m^3/second for downstream ecolog- ical purposes.[14] While this is a legal obligation, the ability to maintain functioning ecosystem services to support agriculture, livestock, fisheries downstream is as important to local populations as it is to meeting international requirements.

Crop and livestock adaptation

Since climate projections show increased temperature and uncertain changes in precipitation, projections for changes in crop and livestock diseases also show wide variability. Two scenarios which are helpful to consider are a) hot and wetter and b) hot and drier.

Given the wide range of conditions these two scenarios present, it is not useful to make precise predictions of disease trends. There are two studies which indicate what to expect for a variety of diseases under these two scenarios.[15] More useful is a recommendation to increase the capacity of farmers and pastoralists to manage disease outbreaks by increased local capacity and improved capacity in private sector and government services in provision of advice for agroecological approaches to manage them, and for provision of products when appropriate.

Trends in the agriculture sector show that farmers readily adapt their methods to changing climate conditions. In addition to the migration to flood zones and cities noted above, farmers are increasingly changing choices of crops and varieties to those which take fewer days to mature. They have adapted a wide variety of techniques which respond to uncertain rainfall, as well as soil conditions and taste. Overall, the rate of adaptation of a particular technique depends on the demands for labor, money, and technical knowledge. The higher the barriers to adoption, the lower the rate.[16]

A complex variety of forces have been degrading rural environmental conditions for decades. Both satellite imagery and rural surveys have documented the reduction in quality and quantity of vegetation near villages, and a decreased ability of vegetation to recover after droughts. Besides changes in rainfall patterns, other factors contributing to this degradation are: clearing of land for cultivation (especially irrigation), overharvesting of firewood, overproduction of charcoal, and use of forest resources for artisanal production.[17] The consequences of this degradation are far reaching: "With less vegeta-

12 Key Issues in Water Resources
13 Key Issues in Water Resources
14 Key Issues in Water Resources
15 del Rio, Alfonso, Brent M. Simpson, Climate Change in Mali: Expected Impacts on Pests and Diseases Afflicting Selected Crops, USAID, August 2014; Mario Younan and Brent M. Simpson, Climate Change in Mali: Expected Impacts on Pests and Diseases Afflicting Livestock, USAID, August 2014.
16 Climate Change in Mali: Agricultural Adaptive Practices
17 USAID, Climate Change In Mali: Organizational Survey And Focus Groups On Adaptive Practices, August 2014; Key Issues in Water Resources.

tion cover there is more flash flooding, greater soil erosion with accompanying loss of soil nutrients, less recharge of shallow groundwater, and reduction of soil organic matter. This results in poorer crop yields, poorer water productivity in agriculture, and increased depth to water in wells."[18]

One survey suggested that men adopt new techniques more often than women do, but that once adopted, women use new techniques at a higher rate than men.[19] This was reported in only one survey, so a more extensive literature search is necessary. It is notable that in the CARE Harandé survey of adoption of agricultural techniques, women reported more innovations than men.[20]

There is some indication in the literature that the ability to adapt to climate change varies with gender and age. One study in Kayes and Koulikoro found differences among junior and senior men and junior and senior women based on their differential dependence on irrigation and production for market. This study is suggestive of the need to move past broad categories of people in assessing vulnerability and capacity ("men" and "women"), and to examine more closely the gendered and aged relationships to livelihoods. The focus groups reported below did not reproduce this finding despite sounding for differences among age within genders, though closer work with communities may in fact demonstrate some of these differences.

There are important differences in control and access to land by gender. By law, women have the same access to land as men do, but in practice access to land is controlled by men in the majority of cases. This situation is changing: the percentage of women having access to land has increased in Mali from 18.7 percent in 2007 to 20 percent in 2008-2009. This positive trend can be partially attributed to implementation of the Agricultural Framework Law (Loi d'Orientation Agricole) favoring women.[21]

Food security

Beyond sector specific studies, examinations of food security overall show great regional differences in vulnerability to climate change. The concept of food security includes factors related to food availability, access, and capacity of utilization, and so moves far beyond simple agricultural or livestock production issues. The USAID/FEWSNET assessment of climate vulnerability followed the UN Framework Convention on Climate Change concept of climate vulnerability as being a combination of the following factors:

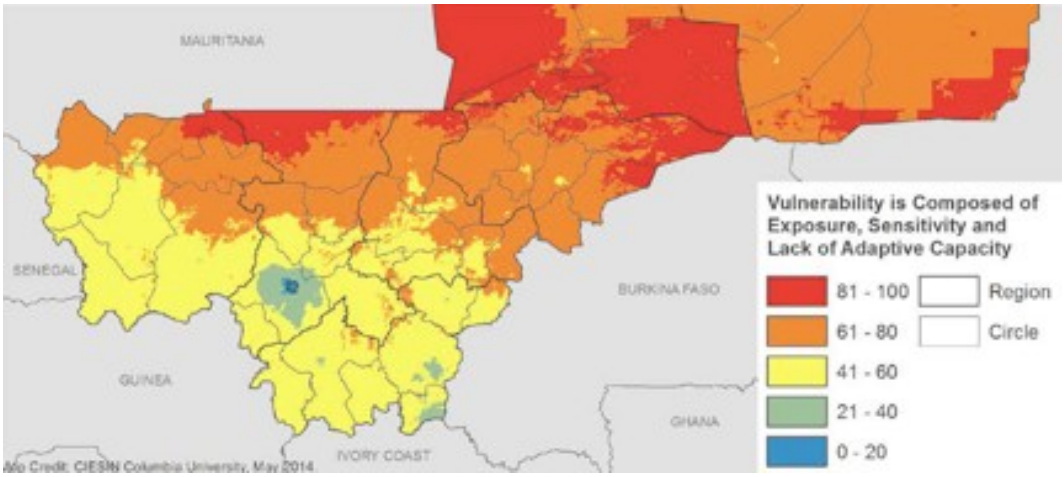
- Exposure to climate hazards
- Sensitivity to climate hazards
- Adaptive capacity

Using a variety of measures –from precipitation data, to maternal mortality, to availability of social services – the FEWSNET analysis produced the map below of vulnerability to climate change.[22] Areas indicated in red are the most vulnerable, those in blue, the least.

For Mopti Region, the map indicates that most of the Region can be considered highly vulnerable, with the eastern portions among the most vulnerable in the country. The FEWSNET study properly advises caution on drawing deep conclusions from this analysis, instead suggesting that it should be

18 Key Issues in Water Resources, p. 15.
19 Climate Change In Mali: Organizational Survey And Focus Groups
20 Gender Sensitive Participatory Assessment of Adaptive Agricultural Practices
21 Drakenberg, Olof, and Emilie Cesar, Mali Environmental and Climate Change Policy Brief, SIDA, 5 July 2013.
22 de Sherbinin, Alex, et al., Mali Climate Vulnerability Mapping, USAID, January 2014.

used to indicate broad areas of concern that then need to be examined more closely on the local level.



Map of Climate Vulnerability

Finer grained studies of food security use the Household Economic Approach, done for Bandiagara[23] or across the country by Livelihood Zones by FEWSNET.[24] Because these studies document livelihoods by local area, this report will address them below in the results section where they complement the findings from the field work.

Institutional framework

Mali ratified the United Nations Framework Convention on Climate Change and presented its National Adaptation Programme of Action in 2007. The country has had a national climate policy, a climate strategy and an action plan for implementation since July 2011. In January 2012, the Malian Government created a national climate fund designed to mobilize national and international financing from public and private sources.[25] While there are many bodies involved in addressing climate change, the main government structures are the following:

- National Committee on Climate Change (Comité National des Changements Climatiques (CNCC)) – overall interministerial cooperation on climate change issues among government ministries, NGOs, private companies, academic and research institutions, the municipalities
- Environment and Sustainable Development Agency of the Ministry of Environment and Sanitation (Agence de l'Environnement du Développement Durable (AEDD) du Ministère de l'Environnement et de l'Assainissement) – Secretariat for the CNCC
- Mali Météo of the Ministry of Equipment and Transport – serves as the focal point for the Intergovernmental Panel on Climate Change process and implements an agro-meteorological program providing next-day, 10-day and seasonal weather forecasts.

Other important institutions include:

23 Commission Européenne Aide Humanitaire, Profil de Moyens d'Existence Zone Agricole Mil-Sorgho-Echalote/ Plateau Dogon Bandiagara, décembre 2010.

24 Dixon, Sam, Julius Holt, Zones et profils de moyens d'existence au Mali: un rapport spécial du réseau de système d'alerte précoce (FEWS NET), USAID, janvier 2010; Famine Early Warning Systems Network (FEWS NET), MALI Description des nouvelles zones de moyens d'existence, aout 2015.

25 Supporting the National Strategy for Adaptation to Climate Change, GIZ, https://www.giz.de/en/worldwide/31402.html.

- CNRST (National Centre for Research and Technology) from the Ministry of Higher Education and Scientific Research
- IER (the Institute of Rural Economy) linked to the Ministry of Agriculture
- Government departments in charge of key sectors of economy such as Agriculture, Forestry, Water, Energy, Transport, Waste, Building, Planning, etc.
- Civil society network "Reso Climat Mali" regrouping over 100 NGOs
- Private sector operators, particularly those in the agribusiness, energy and forestry sectors
- Donors and development partners. [26]

The policy framework is set up in three documents:

- National Policy on Climate Change (Politique Nationale Sur Les Changements Climatiques (PNCC)), July 2011
- National Climate Change Strategy (Stratégie Nationale Changements Climatiques (SNCC)), July 2011
- National Climate Plan of Action (Plan d'Action National Climat (PANC))

The National Policy on Climate Change (PNCC) lays out the basic parameters of how Mali is approaching the issue, calling on all government ministries to integrate climate challenges into their policies and strategies, and building the capacity for resilience of people and systems. The PNCC and the accompanying Strategy and Plan of Action cite the following sectors in particular as key to this effort: Agriculture, Livestock, Fisheries, Water Resources, Forestry, Energy, and Health.

The three documents then lay out the main lines of work to pursue in each sector.[27]
For individual ministries, policies and strategies all include climate change challenges. Yet in the face of an ongoing decentralization process and continuing questions of security, implementation at the regional and local levels has been constrained by a lack of capacity and resources. For example, the government technical services – the main state resource for assisting people to implement adaptation actions at the local level – are staffed at a third of the level needed. And while most field staff have motorcycles to do their work, petrol is usually unavailable to them.[28] One recent institutional analysis concluded that:

> Mali's environmental authorities have weak capacity and their reliance on international funding, including projects, diverts attention from core functions such as monitoring control and coordination. Strengthening important human rights principles such as the rule of law, transparency and public participation may be equally or more important than specific environmental policies or projects in order to improve environmental outcomes. Prospects for improving environmental outcomes is thus not only dependent on legal frameworks and strengthened capacities of the environmental authorities and sector ministries, but also largely on external factors that provide the 'enabling environment.'

This analysis suggests that action at the local level can be more effective if accompanied by complementary action at the national level to create conditions conducive to local level adaptation.

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26 Green Climate Fund, Readiness Inception Document, Mali, October 15, 2015.
27 Politique Nationale Sur Les Changements Climatiques (PNCC)), July 2011; National Climate Change Strategy (Stratégie Nationale Changements Climatiques (SNCC)), July 2011; National Climate Plan of Action (Plan d`Action National Climat (PANC))
28 Interview with Bemba Diallo, National Agriculture Directorate (Direction Nationale de l'Agriculture), August 29, 2016.

VI. OBJECTIVES OF THE ASSESSMENT

The Gender–sensitive Climate Vulnerability and Capacity Analysis (G-CVCA) is designed to:

a. Analyze vulnerability to climate change and adaptive capacity at the community and household level with a focus on social and in particular the gender dimensions in the districts of Youwarou, Tenenkou, Bandiagara and Douentza in Mopti region. This will help communities articulate and understand their own vulnerabilities and capacities in the face of climate change and natural disasters, evaluate options that may help prevent or mitigate the negative impacts of climate change and increase the resilience of at-risk people and systems by strengthening their capacity to adapt to change.

b. Assess community knowledge on climate as a complement to scientific data to achieve greater understanding of the local impacts of climate change on different groups in a community (men, women, boys and girls) so that they are better able to analyze risks and plan for community-based climate adaptation. This will explore and understand how community members – including men, women and youth - perceive current and future climate risks and threats to their lives and livelihoods and analyze the knowledge, resources (capacities) and strategies available to communities to address or reduce these risks and support the community to develop adaptation plans.

The process is highly participatory with the use of tools that facilitate the interaction between the interviewers and respondents, but also the analysis and common reflection for the surveyed targets. Program staff and the data collection teams are sufficiently trained on the use of tools with practical course phases to understand the challenges they may face in the field. A monitoring team will be established to support the teams and answer difficult questions when needed.

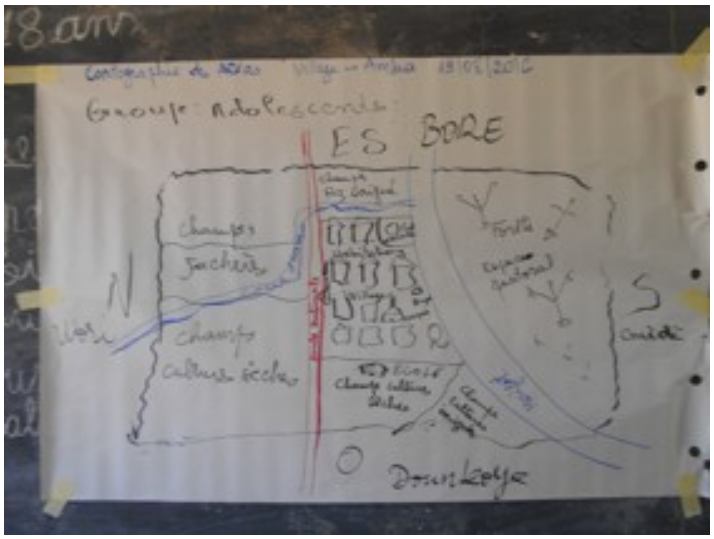
VII. METHODOLOGY/APPROACH

The study adapted a conceptual framework from the CARE Climate Vulnerability and Capacity Analysis Handbook. The framework is summarized here.

Area		Specific Questions
BROADER CONTEXT	Climate and disasters context	The analysis of what weather extremes (temperatures, precipitation, cyclones, floods, droughts, etc.) are considered normal, and whether this has changed. What changes in the climate and weather have people observed over decades and over recent years? Which hazards occur in the area, when, how often and how strong are they? Have changes been observed in the occurrence of these hazards (frequency, intensity, etc.) How has the community climate decision making process evolved over time and what are the main factors that led to the new beliefs?
	Climate projections	What are climate change predictions for West Africa including the Sahel? How is the climate likely to change in the future to inform discussions about how to manage these changes?
	Social Context	What are the most important livelihood resources to different groups within the community? Are there differences between ethnic and religious groups? What do they do (main livelihood) and own, how do they live?
UNDERLYING CAUSES OF VULNERAB	Access to and control over assets and services	Which assets (e.g. land, rivers, other natural resources, livestock, etc.) and services are key for the ability of men, women and youth to buffer shocks and adapt to changes, and what degree of access to and control (i.e. decision-making power) over these do they have? How have gender inequalities in access to and control over these assets and services changed in the past or are currently changing, and why?
	Decision-making and participation	How does the community view and prioritize risks from climate variability/change as compared to other risks? Whose interests are represented externally, e.g. towards local government? When climate variability and change affect people's lives and livelihoods, who makes decisions over changes in resource distribution and practices?
	Division of labor, use of time	Who (women, men, boys, girls in what circumstances) is allowed or expected to do certain types of work, complete certain tasks? How have labor division and time use changed over time and why by gender and age? What happens to people's roles and time use under changing climatic circumstances, for example when floods and droughts become more frequent and intense?
	Control over	What threats jeopardize women's, men's, boys' or girls' control over their bodies, and what factors drive these risks (such as gender based violence, or constraints to migration)? What impacts do climate variability and disasters have on this or how are climate change and disasters influencing this control?

CLIMATE RESILIENT LIVELIHOODS	Livelihoods	Which livelihoods, agro-ecology and adaptive capacities are most vulnerable to climate variability and disasters? Whose livelihoods are they (women or men, young or older, married, unmarried etc.)? How have the livelihood strategies of women and men at different stages in their lives (adolescent/ adult/elderly, unmarried/married/divorced/ widowed etc.) evolved? How are female-headed households adapting? Do households (male-headed and female-headed) have diversified livelihood strategies?
	Coping and adaptive strategies	What strategies are currently employed to deal with shocks and stresses to the livelihoods of women, men and youth? What types of weather/climate information sources are people consulting? How are they choosing what information they are using? Are women, men and youth headed households employing climate-resilient agricultural practices and if so, which households do so (socio-economic situation, male or female headed households etc.)?
DISASTER RISK REDUCTION	Hazards and changes	What are the most important climate related hazards and other hazards the region and/ or ecological zone faces? How have these hazards changed in recent decades and years, and how are they currently changing? How do they affect different groups within the community? Which groups are most vulnerable by which hazards and why? Within each group, how are junior women and senior women and youth affected by these hazards and how are junior men and senior men affected? Why?
	Disaster risk information	What early warning systems are in place and how well are they working? Who (among women, men, boys and girls in different social situations) has access to them and makes use of these, and who does not?
	Response and risk management	How do women, men, boys, and girls protect themselves and their assets in the event of a disaster? Who has protected reserves of food and agricultural inputs, secure shelter, and mobility to escape danger, and who does not?
LOCAL AND COMMUNITY CAPACITY	Social Networks	Are social and economic safety nets available to households?
	Knowledge Information	Do people have knowledge and skills to employ adaptation strategies? Do people have access to seasonal forecasts and other climate information? What distinct knowledge do women and men hold in their livelihood activities?
	Institutional	Are financial services available to households? Who receives institutional support to adapt (extension service, NGOs, financial institutions, religious authorities, finance and development institutions, etc.)?

The methodology was to conduct Focus Groups in eight villages in the Delta and Plateau, two per Cercle. There were four teams, two villages per team. The team members came from the three local partners in the program, Sahel ECO, GRAT, and YAGTU. Focus Groups were divided into men, women, teenage boys, and teenage girls. Each of these four groups in each village used three tools:



- Hazard Mapping
- Vulnerability Matrix
- Venn Diagram[29]

The villages were chosen by the following criteria:

1. high probability of occurrence of hazards and/or potential climatic risks typical of the region;
2. representative of the agroecological zones of the region (Gourma, delta, plateau, plain);
3. presence of different categories of livelihoods – farmers, pastoralists (transhumant and sedentary), fishermen, etc.
4. accessible during the rainy season
5. not already covered by a data collection team from Harandé
6. minimal population size (at least 800)

The following villages were selected:

AGROECOLOGICAL ZONE	DELTA		PLATEAU		
Cercle	Communes	Villages	Communes	Villages	Partners
Bandiagara			Dandoli	Sibi Sibi	YAGTU
			Dourou	Soningué	
Douentza			Dangal Boré	Amba	Sahel ECO
			Douentza	Drimbé	
Youwarou	Dongo	Owa			GRAT
	Deboye	Sobé			
Ténenkou	Ténenkou	Ténenkou			YAGTU
	Sougoulbé	Sindé Salah			

Due to limitations of time and logistics, it was not possible to cover villages in all four ecological zones. The villages cover both the flood zone and the non-flood zones in the Delta and Plateau, and cover the rest of the criteria.

For each group in each village (men, women, teenage boys, teenage girls), teams generated three sets of Focus Group Discussion results, one for each tool. Research teams then consolidated the results of these three tools for each group into the analysis framework above with the Team Leader on a daily

29 Copies of all tools are in the appendix.

basis during the fieldwork. The fieldwork generated 96 Focus Group Discussion notes, which were consolidated into 32 analysis frameworks on a digital form provided.

Fieldwork was followed by a three-day workshop with the team leaders from CARE and leadership staff from Harandé. This workshop produced a synthesis of the main themes from the research. The results are reported in the Results and Analysis section of the report below.
These results were supplemented by Key Informant Interviews at local, regional, and national level and by review of relevant literature on climate change in the region.

VIII. RESULTS AND ANALYSIS

This section reports the results of the Focus Group Discussions and Key Informant interviews. It is supplemented by the findings of the household surveys done for the Household Economic Approach and the FEWSNET Livelihood Zoning and Profiling Report. The findings from those two studies are here rather than in the literature section since the results of those documents complement the field work done for the G-CVCA, and shed more light here.

Social Context

In the four cercles surveyed, the following summarizes the main ethnic groups and livelihood activities.

CERCLE	COMMUNE	MAJORITY ETHNIC GROUPS	MINORITY ETHNIC GROUPS	MAIN LIVELIHOOD ACTIVITIES
Bandiagara	Dandoli	Dogon	Peulh	Agriculture, livestock, off-season market gardening
	Dourou	Dogon	Peulh	Agriculture, livestock, off-season market gardening
Douentza	Douentza	Dogon	Peuh, Bambara, Touareg	Agriculture, livestock, commerce, market gardening
	Dangal Boré	Bambara, Peulh	Dogon, Touareg	Agriculture, livestock, market gardening
Ténenkou	Ténenkou	Peulh	Bozo, Sonrai, Touareg, Bambara, Dogon	Agriculture, livestock, fishing, commerce, market gardening
	Sougoulbé	Peulh	Bozo, Sonrai, Bambara, Touareg	Agriculture, livestock, fishing, commerce, market gardening
Youwarou	Dongo	Bozo, Sonrai, Peulh	Bambara, Touareg	Agriculture, livestock, fishing, market gardening
	Deboye	Bozo, Sonrai, Peulh	Bambara, Touareg	Agriculture, livestock, fishing, market gardening

Livelihoods, Division of Labor, and Use of Time[30]

Focus Group Discussions and Interviews gave the following picture of the main livelihood activities and division of labor by gender and age.

DELTA
Youwarou and Ténenkou

Men

- Rain fed agriculture – cassava, millet (men and adolescents from all ethnic groups –Bozo, Songhai, Bambara, and Peul)
- Small-Scale Irrigated rice cultivation (PIV) (men and adolescents)
- Livestock (majority Peul)
- Fishing (Bozo and Somono)
- Migrant labor (adolescents, mostly)
- Manual labor

Note: Trend toward irrigated rather than rain fed agriculture

Women

- Irrigated market gardens near rivers and ponds – (women have control over the income)
- Tobacco cultivation
- Sale of fish (women, Bozo)
- Sale of milk (women, Peul)
- Sale of henna
- Gathering and sale of firewood
- Crafts (weaving mats)
- Manual labor
- Migrant labor
- Household tasks

NB: Community groups often aid women household heads who have difficulty in the cultivation of irrigated rice because they have little agricultural equipment

Teenage Boys

- Cultivation of rice during the rainy season
- Livestock and fishing, dry season
- Migrant labor after harvest in the gold mining areas, urban centers, abroad

Teenage Girls

- Market gardening in the dry season
- Migrant labor
- Manual labor (rice transplanting)
- Housework in the Bozo community
- Household chores at home

PLATEAU
Bandiagara and Douentza

Men

- Gardening – shallots
- Dam fishing – men
- Livestock fattening (bovine)
- Migrant labor – adolescents
- Livestock – cattle
- Small business

Women

- Rain fed agriculture – cowpea (they have control over revenue)
- Gardening – vegetables and shallots (they have control over revenue)
  Livestock fattening (bovine)
- Livestock raising – small ruminants and poultry
- Small business
- Crafts

Observed in Sibi Sibi: Community groups often aid women household heads who have difficulty in the cultivation because they have little agricultural equipment.

NB: Climate change has expanded the time needed for work for women and teenage girls.

Teenage Boys

- Livestock rearing
- Commerce
- Migrant Labor (Bamako, Abroad)
- Crafts

Teenage Girls

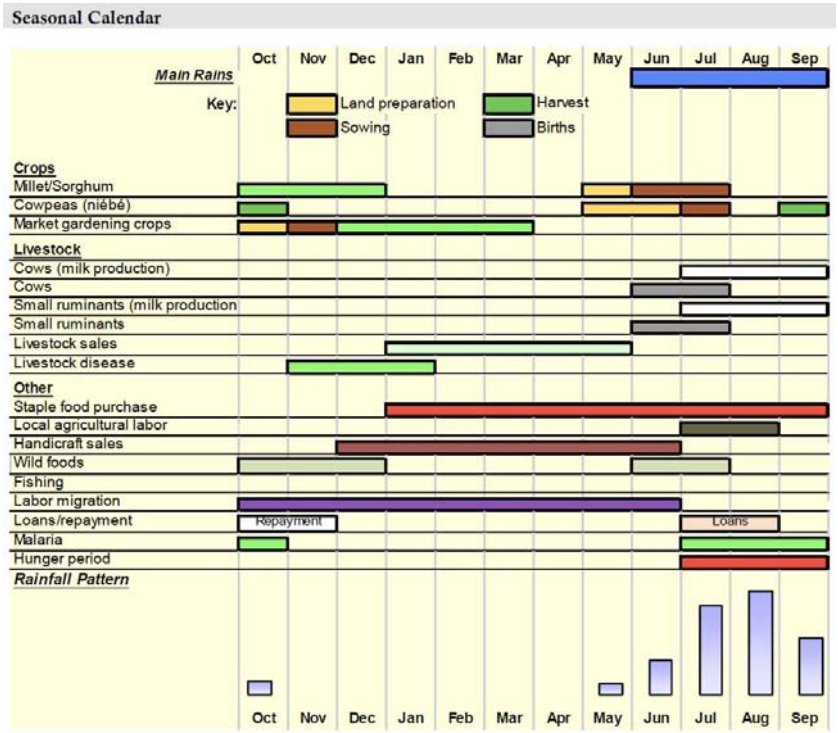
- Crafts
- Migrant labor (to larger centers)
- Small business
- Domestic work
- Preparing food for workers in the fields

"Climate change has had an impact on the use of time among women and the girls given their great contribution in the fields and market gardens"[1]

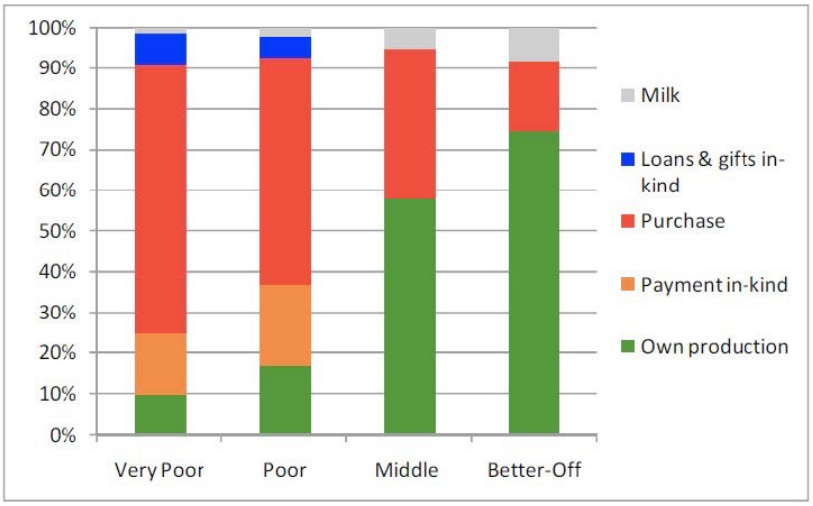
30 High level agreement across all four group types

Plateau

The Plateau Zone corresponds roughly to Livelihood Zone 4: Millet and transhumant livestock rearing and Zone 5: Dogon plateau - Millet, shallots, wild foods, and tourism. The Livelihood Zones report supports the Focus Group results, and adds detail about seasonality of these activities in this seasonal calendar: [31]



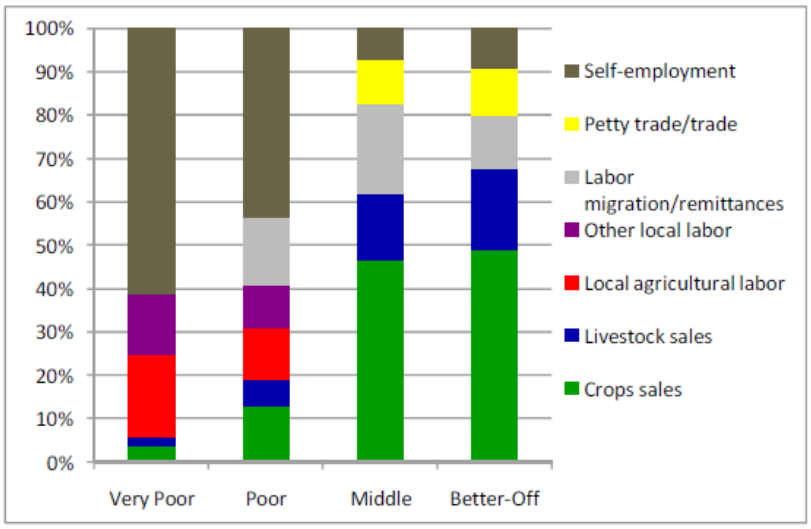
The Livelihood Zones report also documents that in this region there are important differences in how the very poor, poor, middle, and better-off households meet their food security needs. As demonstrated in the chart below, the very poor and poor are net food purchasers, relying on cash and payment in-kind for the majority of their food.



Sources of Food in the Plateau

31 FEWSNET Livelihood Zoning and Profiling Report. Note that this calendar is for Zone 4. Zone 5 is similar, with slight differences. Only one is shown here due to limitations of space. All charts in this section are from this report unless otherwise noted.

As for sources of money, the following chart also shows key differences across income groups. All groups rely on migrant labor or remittances for about 20% of their income, except for the very poor who do not have anyone able to fill this role. And while all groups derive some income from crop and livestock sales, the poor and very poor earn no income from petty trade.

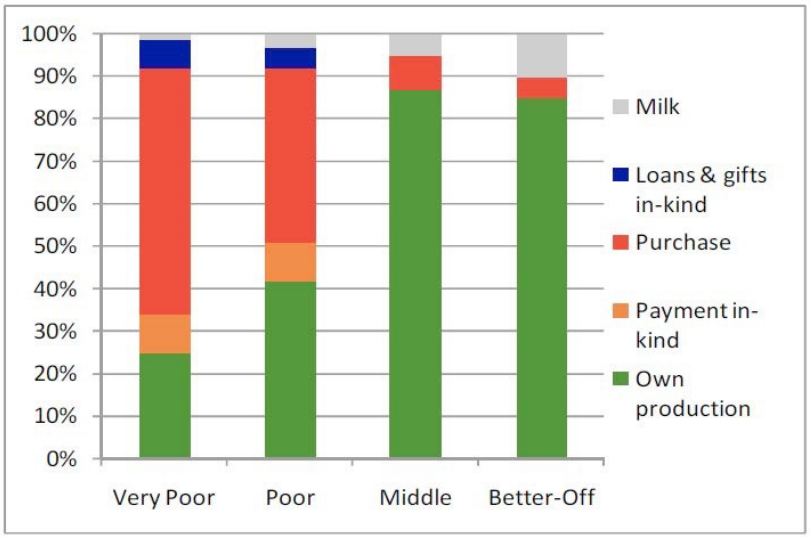


Sources of Cash in the Plateau

Interviews confirmed the environmental degradation identified by Focus Groups and the increas- ing concern about plant and animal diseases.[32] Unlike the Focus Groups, interviews cited increasing drought and unreliable rainfall in recent years.[33] All interviews agreed that the national level climate change policy is excellent, but has not been implemented at the local level.

Delta

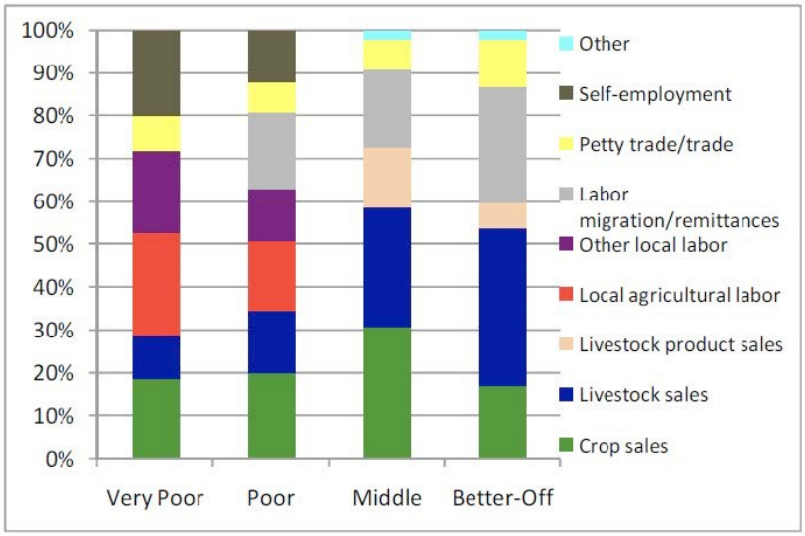
The Delta corresponds to Zone 6: Niger delta/lakes – rice and livestock rearing (agropastoral) in the Livelihood Zones report. As the charts below document, the patterns are similar to the Plateau. The



Sources of Food in the Delta

32 Soumaila Niangaly, Chef secteur Elevage Douentza, Service Elevage, August 24, 2016.
33 Mahamadou Seydou, Chef de Cantonnement Douentza, Service Eaux et Forets, August 24, 2016; Yehissa Bengoulba, Chef secteur Agriculture Douentza, Service Agriculture, August 25, 2016.

very poor and poor are net food purchasers, and the very poor do not benefit from migrant labor or remittances. The differences are that in the Delta, the middle and better-off groups meet nearly all their food requirements from their own production. Also, the very poor in this region are involved in petty trade. There is somewhat more income for the two poorest groups from agricultural labor, given the existence of irrigation schemes.



Sources of Cash in the Delta

Finally, the food security profile for the Bozo is significantly different. They rely on sale or exchange of fish for over 95% of their food needs, meeting the remainder of their needs from fish or fish products. In the past the Bozo have not tended to seek work in the irrigation schemes, because the season of the main harvest overlaps with the main fishing season. In recent years however, poor fish catches have prompted some Bozo to take up irrigated agriculture in an effort to diversify income.

Interviews in Youwarou with the Chamber of Agriculture and Ministry of Agriculture staff showed that gender roles are starting to shift in recent years. With degradation of soil fertility, there is little fallow land left, so land that women used to cultivate in addition to their husbands' is often no longer available. Further, uncertain rainfall and the lack of available rain fed land have led women to begin cultivating rice in the irrigated perimeters alongside the men. Women have also branched out into cattle fattening (embouche) in addition to their more traditional work with goats and sheep. Women are also moving from transformation of fish to actual fishing themselves.[34]
At the same time, expansion of irrigation schemes have improved rice yields over less intensive cultivation, but resulted in deforestation and disappearance of pasture. Another trend is the shift of pastoralists to agropastoralism as traditional pastoralism comes under increasing pressure from loss of pasture and unreliable water sources. Environmental degradation and loss of pasture as far away as Mauritania are causing increasing conflict among pastoralists and between pastoralists and agropastoralists. Development of bourgou culture along the Niger River has provided needed supplemental feed for animals.[35]

34 Interviews with Hamadoun Bocoum, Président, Délégation Locale Chambre d'Agriculture Youwarou, August 26, 2016; Fousseyni Mallé, Chef Sous Secteur de Dirma, Department de l'Agriculture Youwarou, August 25, 2016; Sidi Baba TRAORE, Chef de Service, Service Local de Productions et Industries Animales (SLPIA) Youwarou, August 26, 2016.
35 Interviews with Fouseyni Mallé, Chef Sous-Secteur de Dirma, Secteur Agriculture de Youwarou, Sidi Baba Traoré, Chef de Service, SLPIA Youwarou, August 26, 2016.

Priority Hazards[36]

DELTA Youwarou and Ténenkou	PLATEAU Bandiagara and Douentza
The most important hazards are: • Drought • Flood • Bird infestation • Malaria • Armed and intercommunal conflict (in Tenekou)	The most important hazards are: • Drought • Flood • Locust infestation • Bird infestation • Epidemics • Crop and livestock diseases • Intercommunal conflict (Douentza) Granaries and pastoral spaces are not subject to floods. Farmers and women head of households are the most affected by these hazards.

Changes in Hazards[37]

DELTA Youwarou and Ténenkou	PLATEAU Bandiagara and Douentza
• High frequency of drought, the rains begin late and stop early (every year) • Flooding every 2 years (thanks to the increase of city dwellings in Tenekou) • Control methods against grain-eating birds have improved, but there are more attacks because installation of irrigation perimeters PIV cut down the large trees used to build their nests • Animal diseases down due to increased vaccination • Reduced flood levels in Niger river has reduced the area women can use for off season gardens • New insect which attacks the roots of crops • Increased malaria • Increased conflict (intercommunity and armed) has encouraged the degradation of the social fabric, moral depravity, extortion and rape[40]	• Increased conflict • No other changes observed

36 High level agreement across all four group types
37 High level agreement across all four group types
38 Observed by teenage girls in Sindé Salah

Response, Risk Management, and Adaptation Strategies

	DELTA Youwarou and Ténenkou	PLATEAU Bandiagara and Douentza
Risk Reduction	• Improved irrigated and rain fed agricultural production – irrigation, market gardens, improved seed, Assisted Natural Regeneration, mulching seedlings against birds, other agroecological techniques • Improved livestock production – health, feed (especially bourgou production), marketing (different species for men and women) • Diversified income – especially for women – henna, tobacco, fish, crafts (especially woven mats), charcoal, firewood • Reforestation – particularly around village irrigation perimeters • Increased transformation of farming and livestock products • Management of conflict through Joking relationships and reconciliation commissions (especially in Tenenkou) • Infrastructure improvement for flooding – canals, dikes, sand removal • Cereal Banks	• Improved agricultural production – irrigation, market gardens, Assisted Natural Regeneration, stone erosion barriers (cordons pierreux) and other agroecological techniques, use of inputs like fertilizer, improved seeds, pesticides • Monitoring of fields for birds by children • Improved livestock production – health, feed, marketing (different types for men and women) • Use of weather information by radio, television, word of mouth • Diversified income – hunting, small commerce, crafts, charcoal, firewood (the last three especially for women) • Reforestation • Increased transformation of farming and livestock products • Management of conflict through Joking relationships and reconciliation commissions • Infrastructure improvement for flooding – canals, dikes, construction of houses in stone and elevated above flood zones
Coping	• Sale of livestock (especially small ruminants, by the head of household • Purchase of livestock feed • Production of hay on the bourgou (especially boys) • Increased sales of fish (especially for Bozo women), firewood, charcoal, products of wild gathering (especially for women) • Increased production of woven mats (for women) • Increased production of manioc • Manual labor in the Office of Niger irrigation scheme (especially planting rice seedlings for girls and boys), digging wells and canals and manufacture of bricks (for boys), increased paid work for Bozo families and for household service (for girls) • Herbal remedies for malaria • Joking relationships across ethnic groups to reduce conflict • Evacuation by boat, displacement of the community • Migrant labor – primarily the younger men, but sometimes also the heads of household • NGO assistance • Reconstruction of dikes	• Sale of livestock (especially small ruminants, by the head of household • Increased sales of fish from dams, firewood, charcoal, products of wild gathering (especially for women) • Increased hunting • Manual labor, digging wells, manufacture of bricks • Herbal remedies for malaria • Joking relationships • Displacement of the community • Migrant labor – men (especially boys) to Bamako and neighboring countries, girls to urban centers in Mali • NGO assistance • Prayer in mosques, churches and with traditional religious authorities • Reconstruction of dikes (NB: The non-flood zone is a departure area for migrant labor, whereas the flood zone is a receiving area for migrant labor)

There is a strong trend to reduce rain fed agriculture and turn to irrigated rice cultivation in the Flood Zone, and movement of population into the Flood Zone from other rain fed agriculture areas. This trend was confirmed by both Focus Groups and interviews. These trends are an adaptive response directly related to the perception of increased variability in rainfall. They imply a continued increase in population in the Delta for the foreseeable future, and a preference of farmers to invest more resources into irrigated agriculture. Given the domination of irrigated rice by men, it also implies a need to continue assisting women to improve their ability to benefit from flood-assisted agriculture such as market garden perimeters (PM).

Note that in the Plateau, labor migration is a key adaptation strategy, and the Livelihood Zones report documents that the very poor are not able to use it. For the very poor and poor, local labor, increased gathering and sale of wood and wild foods (including for livestock), and gifts from better-off neighbors and relatives are key coping strategies in difficult times.

In addition to the results reported by the Focus Groups in the Delta, household surveys show that irrigated market gardening is a key adaptation strategy, which all four income groups maximize in difficult years.

Access to, and control over assets and services

DELTA Youwarou and Ténenkou	PLATEAU Bandiagara and Douentza
Men • Livestock (men control the majority) • Rice • Office Rice Tenenkou – controls access to land in the irrigation scheme • PIV - management committee, previously managed by the village council • Pasture – controlled and managed by Jooros in Peul communities • Watercourses • Orchards Women • Access to the market garden areas, watercourses and grazing controlled by men (village council and heads of household). They have control over production and gains related to this activity • Tobacco cultivation and gathering of henna • Small ruminants and poultry • Selling fish (Bozo) • Land and livestock acquired by inheritance when they are female heads of household Adolescents • Have access to assets and services only through parents	Men • Watercourses • Farm land – millet • Market gardens – shallots • Cattle • Manual labor • Dams • Men's grain stores • Guina (traditional maison du village) • Yayé (keeper of village fetishes) • Togouna (place where elders meet to discuss issues) • Church • Mosque • Women's organizations, men and youth The access to all productive assets is controlled by the village chief and distributed to heads of household (men). Women • Farm land – cowpea (they have control over revenue) • Market garden areas at the edge of the dam – shallots and vegetables – (they have control over revenue) • Small ruminants (sheep) and poultry • Dams • Women's grain stores

Control over one's body

DELTA Youwarou and Ténenkou	PLATEAU Bandiagara and Douentza
• Women and adolescent girls are limited in their movements for activities that require such travel outside the village, especially migrant labor. • Teenage boys decide themselves where and when they migrate for labor. • Girls are guided by their mothers in decisions on labor migration. Marriages of teenage girls are decided by parents and their opinion is not asked for (see Decision-making)	• Men decide everything in the household. • Women and girls are subjected to the dictates of men. • Teenage boys are free to move (migration, activities). • Teenage girls have no right to speak and decision-making. • "Climate change has empowered women with their participation in many activities such as income generating activities and savings and credit work" [41]

Decision-making and participation

DELTA Youwarou and Ténenkou	PLATEAU Bandiagara and Douentza
Collective Resources: Decided by the village chief or village council – examples include organizing against grain-eating birds or land distribution. Household level: Decisions on use of land belong to the head of household, for example, adopting off-season farming or use of improved seeds. Men of Tenekou: Decisions on use of land belong to the head of The negligence of the local authority, the lack of material and financial resources, and the embezzlement of funds by managers are the reasons why our adaptive strategies do not work well. Teenage Girls: Girls are guided by their mothers in decisions on labor migration. Marriages of teenage girls are decided by parents and their opinion is not asked for.	Collective Resources: Decided by the village chief or village council – examples to organize against grain-eating birds or land distribution Household level: Decisions on use of land belong to the head of household, for example adopting off-season farming or use of improved seeds

39 Sibi-Sibi Teenage girls

Local and community capacity – Disaster risk and climate adaptation information and knowledge

DELTA Youwarou and Ténenkou	PLATEAU Bandiagara and Douentza
• Men and teenagers – have much contact with the outside and with NGOs and technical services that provide information on new agricultural techniques adapted to our area. • Women and girls - do not have enough information on seeds adapted to the different seasons for gardening. • "We know of no other strategies and this is due to the road conditions and the continuing conflict. People are afraid to leave home to go to gain other experiences" [42]	• "Everyone" has access to information on climate change through the radio and the General Assemblies. Technical services and NGOs have access to info. • "Women do not have access to information on climate change because they are not convened to General Meetings." • Women – no idea on Climate Change • The Early Warning System works through local indices such as great heat in the dry season; movements of the wind; the presence of birds in early winter; the weather reports on the radio

Men and boys in both the Delta and the Plateau have basic knowledge about climate change, and are able to discuss its consequences and their adaptive strategies. They were able to link current trends in agriculture, livestock and deforestation with environmental degradation and the consequences for their livelihoods. They cited radio, television, General Assemblies, government technical service staff, and NGOs as their sources of information about climate and weather.

Women and girls in both the Delta and Plateau said they had little access to information about climate change, and did not know very much about it. They are not invited to General Assemblies, and have less access to radio and television than men. They were able to discuss the main hazards they face and trends in drought, flooding, plant and animal diseases, and grain-eating birds.

40 Teenage girls, Sinde Salah Ténenkou

Local and community capacity – Social Networks and Institutional Support

		DELTA Youwarou and Ténenkou	PLATEAU Bandiagara and Douentza
Community Groups		• Cereal banks • Tontines among women • Irrigation Perimeter Management Committees • Women of Tenenkou: "we have had trouble organizing ourselves to make decisions about financial contributions"	Bandiagara – Sibi-Sibi and Sonoutché: • Village chief and his advisers • Imam of the village • Management committees (schools, health center, boreholes, Bank Cereals) • Groups (women, men, youth) • Parents' Associations and the Togouna • Tontines of women's groups • Youth associations which work in the fields for households that do not have the means Douentza: Amba – • Benkadi association of women • Benkadi Youth Association, • Cooperative farmers and herders, • Fishermen cooperative, • Cooperative rice farmers, • Water management committee, • Savings fund Drimbe – There are no community groups in the village.
	Local/National	• Jiguisèmè yiri distributes cash each month for vulnerable households • AMPROD SAHEL et PASY distribute food during crisis periods • AFAR assists women with market gardens • The Reconciliation commission assists in mitigating intercommunity conflicts in Tenenkou. It is not capable of intervening in armed conflict.	Support and Advice for production: • Waaldé kaoural women; ONG Stop Sahel and the Chamber of Agriculture give agricultural inputs and animal feed • Association Benkadi helps women with market gardens and the youth with temporary employment • The agricultural cooperative helps with inputs Social Protection • YAG TU and World Vision provide cash transfers for vulnerable households
	International	• ICRC, WFP and GTZ make food distributions in crisis periods • GIZ and AFAR assist in management of village irrigation perimeters and market gardens through provision of agricultural inputs (seeds, fertilizers).	• World Vision

Commercial Relationships	• The Village Irrigation Perimeter Management Committee works with a trader who connects them to a fertilizer wholesaler • Fishermen have suppliers that provide fishing materials on credit. • Owa – three women's groups are linked to a market garden seed-seller in Mopti	• None mentioned

Producer groups for village irrigation perimeters (PIV) and market garden perimeters (PM) are strong and function well. Village level groups for other functions tend to come together in response to offers of donations from outside agencies (local, national, and international NGOs, UN agencies such as WFP, and government assistance programs), and their capacity fades when such assistance ceases.

This finding implies that:

a. Farmers are more willing to invest collective resources into productive activities that show a clear economic benefit than they are in other group activities
b. In working with local groups, NGOs may need to consider investing in approaches to deepen participation and local control if the program requires continued group function beyond the life of the program. (NB: social protection programs and emergency food distribution do not necessarily require long term function beyond crisis periods.)
c. Since people in the Delta and Plateau are already adapting to climate change through increased cooperation in irrigation related schemes, understanding the capacities of local communities is important for supporting their adaptation efforts.

IX. FINDINGS AND CONCLUSIONS

Putting together the insights from the literature review, Focus Group Discussions, and Interviews with Key Informants leads to several key conclusions.

In rural areas, anyone involved in either agriculture or pastoralism is highly exposed to the consequences of a changing climate. However, sensitivity and adaptive capacity to climate change vary considerably from household to household and person to person. In both zones, there are general characteristics that render some people more vulnerable than others.

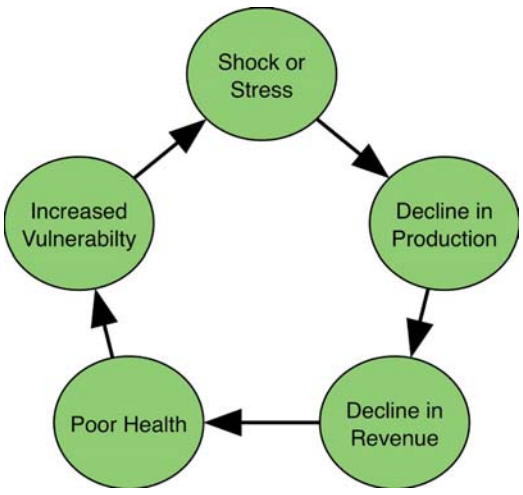
Vulnerability Profile – more vulnerable people from both the Delta and Plateau have:

- Few animals to sell
- Lack of access to production with irrigation or humid soils
- Insufficient land to cultivate
- Lack of household member to seek paid work, locally or migratory
- Lack of sufficient labor for crops or livestock
- Subject to violent conflict
- Single-headed households (especially female), widows, disabled
- Lack of capacity to buy food when prices are low

Focus Groups identified these factors, and they are confirmed by interviews and the Livelihood Zone studies.

As a consequence, people have different abilities to employ the adaptive strategies listed in the Results and Analysis section.

At the same time, vulnerable people can find themselves in a vicious cycle where continued shocks (such as a flood) or stresses (such as a long term increase in average temperature) can undermine the ability of people to cope. This cycle is illustrated here:

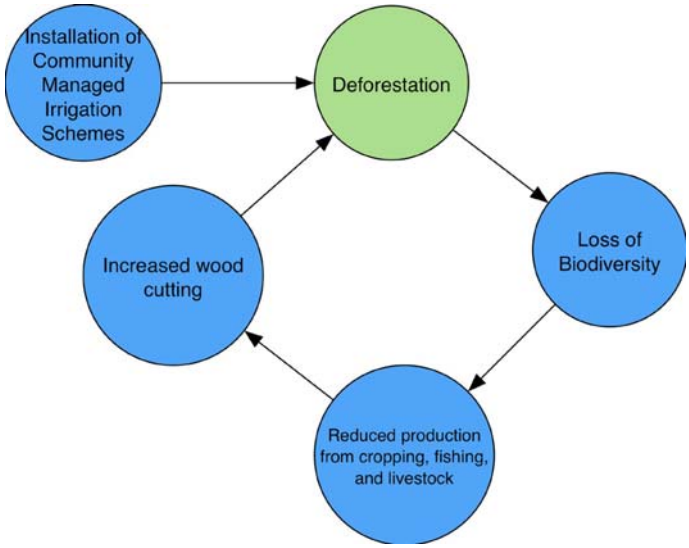


The main capacities that serve to reduce vulnerability are:

- Social capital
- Producer networks
- Trade relationships
- Diversified revenue sources
- Religious resources
- Strong local organizations, particularly production management committees
- Supportive NGOs
- Local and regional government with the resources to implement national policies in the main sectors affected by climate change

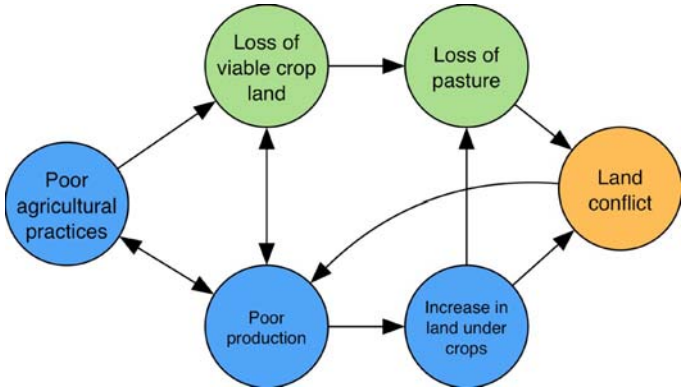
These capacities can reduce the consequences of the feedback loops that are currently undercutting

the effectiveness of adaptation strategies. For example, increased irrigation is one of the most effective adaptation strategies available. Yet if expansion is not done in an ecologically responsible manner, it threatens to reduce other capacities, as indicated in this graphic:



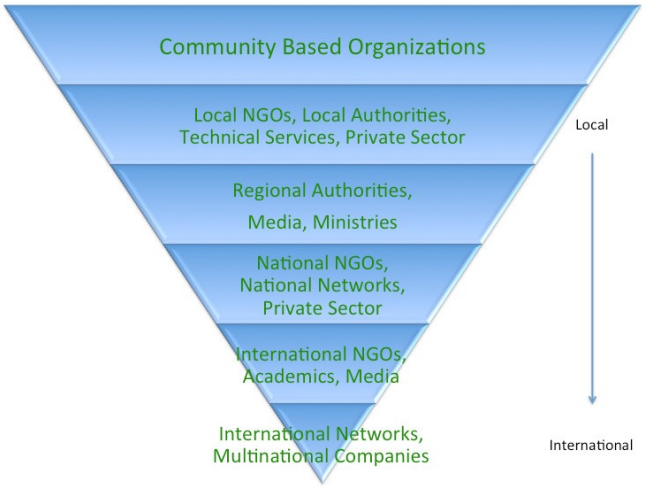
It is necessary to think in terms of systems – food security, ecosystem services, farming systems – rather than individual solutions to individual problems.

A second example is the relationship between agricultural practices which continue to degrade the land, and the consequences for future production and social conflict. Following this systems thinking, addressing conflict on its own is unlikely to solve more than temporary local problems, since it does not address the underlying issues. And going beyond the local perspective, improving the quality of production techniques is unlikely to have profound effects if there is no improvement in services from the public and private sector for transport, production infrastructure like improved marketplaces, input supply, and financial services.



In addition to systems thinking, it is useful also to reflect on what actually drives social change. A narrow focus on technical solutions often forgets that improving food security requires real social change – changes to individuals' practices and the way in which they are organized and access information. Social change of this type requires both improved citizen organizations in villages and at national level, but also a change of approach on the part of development partners, which need to move from implementing technical solutions to facilitating citizen organizations in order to achieve their goals.

A corollary to this type of thinking is the realization that because people find themselves in a regional, national, and global context beyond their control, not all solutions can be local. Outside change agents can assist communities to intervene at all social levels: organizing communities and trying new techniques locally, linking communities with regional and national networks for advocacy and commercial ties, and intervening in policy arenas at national level to promote community interests. The accompanying graphic illustrates the ecosystem of organizations from local to international level that affect people's lives. It is not necessary to intervene at all levels, but it is important to analyze which problems need to be addressed at which levels, and find partners with the capacity to intervene at those levels.



X. RECOMMENDATIONS

1. Strengthen the climate information and early warning systems at the community level by creating a two-way communication system, agropastoralists to scientists and scientists to agropastoralists, in a way that not only meets the supply of information available but also the demand for specific information by agro-pastoralists. Integrate local observations of agropastoralists in the system.

2. Support existing adaptive strategies (especially of women), including promotion of revenue producing activities such as gardening, fish farming, poultry, sheep fattening, agricultural and livestock processing, and marketing of products.

3. Strengthen the system of productive finance beyond village level tontines.

4. Promote various agroecological methods, including crop varieties adapted to the climate and promoting technologies which increase soil fertility and structure (Zai, half moons, bunds, organic manure, naturally assisted regeneration)

5. Promote the cultivation of forage, especially Bourgou

6. Increase support to livestock:

    a. animal health training and organization of producers to seek advice and medicines in a sustainable way, including local private sector suppliers
    b. advocacy at the national level to provide resources to the Regions to strengthen the livestock sector infrastructure, including markets, advice, and assistance with livestock diseases (ticks, skin diseases, paralytic syndrome cattle)

7. Focus on irrigation perimeters, fish ponds, irrigated gardening as resilience activities

8. Support community-based producer groups – livestock, vegetables, grains, etc. – to link them more closely to national producer and marketing networks that provide personal profits. Separate the extension activities from the provision of inputs for producers to strengthen their own relationships with marketing chains.

9. Promote innovative ideas (household-scale fish farming, solar pumping systems for irrigated perimeters and gardens).

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XII. INTERVIEWS WITH KEY INFORMANTS

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Yehissa Bengoulba, Chef Secteur Agriculture, Service Agriculture, Douentza

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Antè KAREMBE, Chef de Village de Sibi-Sibi, Bandiagara

Kazela Kassogue, Présidente des Femmes, Groupement des femmes

Oumar Kassogue, Imam du Village de Sounintché, Bandiagara

Issa Kassogue, Chef de Village de Sounintché, Bandiagara

Issa Thendé, Technicien Agriculture, Secteur Agriculture, Tenenkou

Hamidou Sanou, Chef Antenne, AMPRODE/Sahel, Tenenkou

Mme Timbo Aissata Cissé, Deuxieme Vice Président, Conseil De Cercle, Tenenkou

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Bemba Diallo, Direction Nationale de l'Agriculture, Bamako

Jamila White, Interim Chief of Party, AECOM/Livestock for Growth and Meg Findley, Environmental Specialist, AECOM, Washington, DC

Jeff Ratliffe, Chief of Party, Chemonics/ Mali Climate Change Adaptation Activity, Bamako

Mamadou Baba Diallo, Directeur National Adjoint du Génie Rural, Direction Nationale de Ministre de l'Agriculture, Bamako

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XIII. ANNEXES

HARANDE

Revised Draft:

Scope of Work: Gender-sensitive Climate Vulnerability and Capacity Assessment (G-CVCA) for Harande Development Food Assistance Program

Date Submitted to Food for Peace: May 5, 2016

Organization Leading Assessment: CARE Mali

ACRONYMS

ARCC	African and Latin American Resilience to Climate Change
DCOP	Deputy Chief of Party
FFP	Food for Peace
FGD	Focus Group Discussion
G-CVCA	Gender-sensitive Climate Vulnerability and Capacity Assessment
G-PAAP	Gender Sensitive Participatory Analysis of Adaptive Agricultural Practices
KII	Key informant interview
L4G	Livestock for Growth
MCCCA	Mali Climate Change Adaptation Activity
MFI	Micro-finance institutions
NGO	Non-governmental organization
PDESC	Economic, Social and Cultural Development Plan
PECCN	Poverty, Environment and Climate Change Network
TOR	Terms of reference
WASH	Water, sanitation and hygiene

1 INTRODUCTION

The Human Capital, Accountability and Resilience program for the Promotion of Nutrition Security, Livelihoods and Accountability, or Harande, is designed to promote resilience of participants through coordinated interventions to improve food and nutrition security, while strengthening the capacity of the population at the household and community level to respond and deal with a myriad of shocks and stress factors. The overall objective of Harande is: Improved food and nutrition security and livelihoods in 310,855 vulnerable households in the districts Youwarou, Tenenkou, Bandiagara and Douentza by 2020. The implementing consortium led by CARE selected five inter-related Purposes to address food and nutrition insecurity: Strengthening Human Capital (P1); Diversifying and Improving Livelihoods (P2); Climate Change Resilience, including Disaster Risk Reduction (P3); Conflict Prevention and Mitigation (P4); and Social Accountability and Governance (P5).

The recent USAID Climate Vulnerability Mapping[1] report (2014) by the African and Latin American Resilience To Climate Change (ARCC)[2] project in West Africa identifies Mali's territory and population as highly vulnerable to current and future climate change, in spite of the fact that, like its Sahelian neighbors, Mali has a long history of coping with climate variability-and its livelihood systems are diversified in such a way as to reduce risk. Despite having an abundance of water, Mali has experienced more than its fair share of drought-related catastrophes over the past half century, including the prolonged drought of the 1980s and early 1990s ("La Grande Secheresse"), in which millions of people and animals perished. The droughts, resulting from a combination of long-term decline in rainfall superimposed upon a natural cyclical pattern of wet and dry periods, have exacerbated factors that further increase climate vulnerability. Population increases, poverty, and land degradation all place pressure on land and water resources[3] thereby increasing overall vulnerability. It is projected that in the Sahelian region, extremely dry and wet years will likely be more frequent, with increased desertification as a consequence of less rainfall and increased extreme weather events. As climate change becomes more drastic, deforestation will be accelerating, as pasture land and marginal agricultural lands are increasingly affected by desertification and thus pressure on forested land increases. This will result in anticipated changes in land use, driving changes in cropping patterns.[4]

The Harande program stresses that the key underlying drivers of current and future vulnerability in the region are climate change and environmental degradation. Climate change poses a grave threat to the food, nutrition and income security of communities in the target districts and across the wider region. Mali's average annual rainfall has decreased 30% since 1998 and since 1960 there have been statistically significant declines in rainfall with annual five-day rainfall maxima decreasing by 4.0 mm. per decade.[5] Due to their income and asset poverty and their dependence on rainfall, small-scale farmers and pastoralists in the target districts are particularly vulnerable to the growing magnitude and frequency of extreme weather events such as droughts, and to either too much or inadequate inland

1 Mali climate vulnerability mapping-ARCC-Mali-January 2014

2 The African & Latin American Resilience to Climate Change (ARCC) Program aims to integrate adaptation to climate change into economic investments to support sustainable, climate- resilient growth and improve the adaptation capacity of vulnerable populations in Africa and Latin America. ARCC works to strengthen evidence-based decision-making and local stakeholder engagement in the decision making process.

3 Climate change in Mali: key issues in water resources-ARCC/USAID, November 2013

4 Potential Impacts of Climate Change on Food Security in Mali-FAO-2012

5 UNDP Climate Change Country Profiles: Mali. February 2012.

delta flooding and shifting pest and disease vectors. The four districts targeted for Harande are among the districts where farming areas have the highest exposure to drought and Tenenkou, Douentza and Youwarou are on the list of districts where grazing areas are most prone to loss of vegetation due to rainfall deficits as well as flooding along the Niger Delta.[6] The increasing pressure on natural resources and competition for land, water and pasture are direct causes of conflict between individuals, groups and communities, a key stressor that can lead to instability and insecurity.

Recognizing climate change, gender inequality along with the vulnerability of some sections of the community as an obstacle underlying food and nutrition insecurity, and a key stressor towards instability and insecurity, a holistic understanding of gender sensitive-climate vulnerability and adaptive capacities of target communities is an imperative step for the success of program interventions. The Gender-sensitive Climate Vulnerability and Capacity Assessment (G-CVCA) facilitates understanding of the underlying causes of vulnerability to climate and disasters to men, women, boys, girls which is key for addressing social inequalities and poverty in a context affected by climatic shocks, stresses and disasters. G-CCVA helps to elucidate factors that the project will need to consider—the nature and degree of climate change impacts, the people and systems that will be sensitive to those impacts, and the adaptive capacities of those affected. The exercise will extensively draw from the relevant research work already done by the African and Latin American Resilience To Climate Change (ARCC)[7] project for Mali and the Sahel on vulnerability mapping for the country, assessments and focus groups on Agricultural Adaptive Practices, an analysis of climate and water, plus profiles of adaptive management practices for the Sahel, and climate change predictions for West Africa including the Sahel, among other relevant products.

The findings, conclusions and recommendations of the G-CVCA will inform Harande's review of its Theory of Change and will be used to design locally appropriate and gender sensitive climate change adaptation activities to ensure optimal engagement and benefits to women, men, boys, and girls in the program target areas. The results will help the project evaluate options that may help prevent or mitigate the negative impacts of climate change and increase the resilience of at-risk people and systems by strengthening their capacity to adapt to change. The findings will help Harande identify opportunities to integrate, complement and coordinate climate change adaptation activities with other existing initiatives such as the Mali Climate Change Adaptation Activity (MCCAA),[8] Livestock for Growth (L4G)[9] project and other programs. The tools and processes will be designed to be used and replicated by a wide range of stakeholders. Local governmental and non-governmental organizations can use the G-CVCA to assist in integrating vulnerability and adaptation issues into the Economic, Social and Cultural Development Plans (PDESC) and programs (both long term development as well as emergency programs).

This study will closely coordinate with the Gender Sensitive Participatory Assessment of Adaptive

6 USAID Office of Food for Peace Food Security Desk Review for Mali, FY2015-2019

7 All materials available on http://community.eldis.org/.5c0acf50

8 The Mali Climate Change Adaptation Activity (MCCAA), funded by USAID, aims to share weather information more effectively and create community-driven systems that can better respond to climate variability. It is working in 25 initial communes in the Mopti region of central Mali, creating local climate-proofing committees and empowering vulnerable communities to record, report, and access data on local climate and agricultural conditions.

9 L4G focuses on the livestock production and trading center of Mopti, working in 210 villages in 21 communes in the surrounding Bankass and Koro cercles, from 2015-2020 by AECOM

Agricultural Practices as they address two different aspects of the Harande Theory of Change. The Gender Sensitive Participatory Assessment of Adaptive Agricultural Practices will focus on ensuring climate resilient approaches are integrated into cultivation practices to enhance long-term adaptation to climate change. The G-CVCA study focuses on community resilience and capacity to cope with and mitigate specific climate-generated shocks and stresses that may or may not relate specifically to agricultural production practices. Harande staff and technical advisors will ensure that results from both studies are taken into account when refining the program Theory of Change, etc.

Nonetheless, the two studies will be complementary. The consultants leading these two assessments will be encouraged to liaise with one another on a periodic basis: first in the development of field research plans – in particular for identification of farmer-innovators for the Gender Sensitive Participatory Assessment of Adaptive Agricultural Practices, second in the review and analysis of research results, and third in the development of findings, conclusions and recommendations within their final reports.

2 PURPOSE OF THE STUDY

Specifically, the Gender–sensitive Climate Vulnerability and Capacity Analysis (G-CVCA) will:

e. Analyze vulnerability to climate change and adaptive capacity[10] at the community and household -level with a focus on social and in particular the gender dimensions in the districts of Youwarou, Tenenkou, Bandiagara and Douentza in Mopti region. This will help communities articulate and understand their own vulnerabilities and capacities in the face of climate change and natural disasters, evaluate options that may help prevent or mitigate the negative impacts of climate change and increase the resilience of at-risk people and systems by strengthening their capacity to adapt to change. This will be conducted in coordination with the Gender Sensitive Participatory Analysis of Adaptive Agricultural Practices.[11]

f. Assess community knowledge on climate as a complement to scientific data to achieve greater understanding of the local impacts of climate change on different groups in a community (junior and senior men, junior and senior women,[12] boys and girls, transhumant pastoralists) so that they are better able to analyze risks and plan for community-based climate adaptation. This will explore and understand how community members – including men, women and youth - perceive current and future climate risks and threats to their lives and livelihoods and analyze the knowledge, resources (capacities) and strategies available to communities to address or reduce these risks and support the community to develop adaptation plans. Not only will communities assess current technologies and coping techniques, but will also be informed by likely future climate scenarios and use these scenarios to inform discussions and technology choice.

10 Including adaptive agricultural practices in coordination with the Gender Sensitive Participatory Analysis of Adaptive Agricultural Practices

11 This proposed study will provide a gender sensitive description of locally developed adaptive agricultural practices and innovations, and identify with the target communities the most promising practices and learning priorities for action research

12 Research by Ed Carr GENDER AND CLIMATE CHANGE ADAPTATION IN AGRARIAN SETTINGS(USAID funded study) has shown differential climate vulnerabilities among junior verses senior men and junior vs senior women

The process will be highly participatory with the use of tools that facilitate the interaction between the interviewers and respondents, but also the analysis and common reflection for the surveyed targets. The discussions on adaptation and technology choices will also be informed by likely future climate scenarios. Program staff and the data collection teams will be sufficiently trained on the use of tools with practical course phases to understand the challenges they may face in the field. A monitoring team will be established to support the teams and answer difficult questions when needed.

3 SCOPE OF WORK

For this Gender-sensitive Climate Vulnerability and Capacity Analysis (G-CVCA), the Harande Program intends to hire a consultant (national/international) to lead the study. The consultant will be responsible to undertake a rigorous literature review, guide field level assessments, and support formulation of actions that the program can implement and integrate with other USAID investments in the area. He/she will take a lead role in the completion of the Gender-sensitive Climate Vulnerability and Capacity Analysis. Specifically, he/she will - either in person or with the support of field teams - ensure that the following is delivered:

1. Review literature on climate change vulnerability and capacity in the region of Mopti in Mali, including observed and projected impacts of climate change for the country and the Sahel region; the extent of integration of climate change into various key development policies (e.g. agriculture, natural resource management, fisheries, health, environment, etc.); disaster management planning (including early warning systems); National/local government capacity on climate change; recognition of socio-economic dimensions of vulnerability – in particular the gender dimensions of vulnerability between junior and senior men and junior and senior women;[13] The consultant will review climate-related studies conducted in the country or region including ARCC documents on vulnerability mapping for the country, assessments and focus groups on Agricultural Adaptive Practices, an analysis of climate and water, plus profiles of adaptive management practices for the Sahel, and climate change predictions for West Africa including the Sahel (http://community.eldis.org/.5c0acf50) .
2. Developing and adapting the G-CVCA to create an analysis tool that is appropriate for purpose. The consultant will prepare and apply a Gender-Sensitive Climate Vulnerability and Capacity Analysis[14] tool in four districts/communities of Youwarou, Tenenkou, Bandiagara and Douentza in Mopti region;
3. Train/Orient and guide the assessment team to conduct field assessments that are both qualitative and quantitative;
4. Lead the analysis of assessment results and prepare a draft report on the assessment fulfilling the requirements mentioned in the Purpose section;
5. Facilitate a reflection workshop to outline recommendations for the Theory of Change as well as opportunities to help communities with their climate change adaptation plans, as well as opportunities for integration with existing investments by USAID[15] and other donors.
6. Finalize assessment report after having shared the results and report with the Harande team for feedback; and
7. Submission of the report to CARE and USAID.

13 Note: the division between junior and senior should be locally defined, and tends to fluctuate between ages 35 and 45, depending on the characteristics of the individual and the community in question-Ed Carr report, 2013
14 http://www.careclimatechange.org/files/adaptation/CARE_CVCAHandbook.pdf
15 MCCCA, L4G etc

3.1 Major Areas of Analysis

The analysis of the results of the Harande Gender-sensitive Climate Vulnerability and Capacity Analysis will focus on the following areas:[16]

3.1.1 Broader Context:

Climate and disasters context:

The analysis of what weather extremes (temperatures, precipitation, cyclones, floods, droughts, etc.) are considered normal, and whether this has changed. What changes in the climate and weather have people observed over decades and over recent years? Which hazards occur in the area, when, how often and how strong are they? Have changes been observed in the occurrence of these hazards (frequency, intensity, etc.) How has community climate decision making process evolved over time and what are the main factors that led to the new beliefs? What are climate change predictions for West Africa including the Sahel? How is the climate likely to change in the future to inform discussions about how to manage these changes?

Social Context:

What are the most important livelihood resources to different groups within the community? Who are the better off and worse off in the community? Who are the different wealth groups? Are there differences between ethnic and religious groups? What do they do (main livelihood) and own, how do they live?

3.1.2 Underlying Causes of Vulnerability:

Access to and control over assets and services:

Which assets (e.g. land, rivers, other natural resources, livestock, etc.) and services are key for the ability of men, women and youth to buffer shocks and adapt to changes, and what degree of access to and control (i.e. decision- making power) over these do they have? Which of these assets and services come under most stress from climate variability and disasters? How have gender inequalities in access to and control over these assets and services changed in the past or are currently changing, and why?

Decision-making and participation:

How does the community view and prioritize risks from climate variability/change as compared to other risks? How do local planning processes work? Who is involved in, or influences decisions at the community level? Whose interests are represented externally, e.g. towards local government? In what ways do women, men and youth participate or make sure their interests are represented in local decision-making? When climate variability and change affect people's lives and livelihoods, who makes decisions over changes in resource distribution and practices? Who tends to benefit from these decisions, and who does not? Who influences and decides how natural resources such as land and water are allocated? How has community climate decision making process evolved over time and what are the main factors that led to the new beliefs?

Division of labor, use of time:

16 CARE may have to prioritize and winnow down the list of questions if the process becomes unmanageable.

Who (women, men, boys, girls in what circumstances) is allowed or expected to do certain types of work, complete certain tasks? What specific sets of opportunities, constraints and status do these specific types of work and duties mean for individuals of different gender and age groups? How much time do women, men, boys, and girls spend engaging in these different duties? How have labor division and time use changed over time and why? What happens to people's roles and time use under changing climatic circumstances, for example when floods and droughts become more frequent and intense? Link women time poverty, vulnerability and adaptive capacity.

Control over one's body:

What threats jeopardize women's, men's, boys' or girls' control over their bodies, and what factors drive these risks? Have there been any changes in these dynamics and why? What impacts do climate variability and disasters have on this or how is climate change and disasters influencing women and girls' control over their own bodies?

3.1.3 Climate resilient livelihoods:

Livelihoods:

Which livelihoods, agro-ecology and adaptive capacities are most vulnerable to climate variabi- lity and disasters? How are they affected by them? Whose livelihoods are they (women or men, young or older, married, unmarried etc.)? Which livelihoods are least affected and why? How are the livelihood strategies of women and men at different stages in their lives (adolescent / adult/ elderly, unmarried/ married/ divorced/ widowed etc.) evolved? Who is changing them and why? Are men, woman and youth adapting differently? How are female headed household adapting? Do households (male headed and female headed) have diversified livelihood strategies? Does this in- clude non-natural resource based of nonfarm strategies? Do livelihoods strategies involve working away from the community? If so, who does that and when, for how long and with what effect, on whom? (Considering that seasonal migration of pastoralist as well as settled rural youth are big factors).

Coping and adaptive strategies:

What strategies are currently employed to deal with shocks and stresses to the livelihoods of women, men and youth? How are women, men and youth in different social situations managing risk, planning for and investing in the future? What types of weather/climate information sources are people consulting? Who generates and who makes use of weather and climate information for planning? How are they choosing what information they are using? How reliable do communities think this information is as compared other types of relevant information that informs coping/ adaptation strategies? Are women, men and youth headed households employing climate-resilient agricultural practices and if so, which households do so (socio-economic situation, male or female headed households etc.)? How would the coping and adaptive strategies change with predicted or future changes in climate? (This will be done in coordination with Gender Sensitive Participatory Analysis of Adaptive Agricultural Practices)

3.1.4 Disaster Risk Reduction:

Hazards and changes:

What are the most important climate related hazards and other hazards the region and/or ecolo- gical zone faces? How have these hazards changed in recent decades and years, and how are they

currently changing? How do they affect different groups within the community, which groups are most vulnerable by which hazards and why? Within each group, how are junior women and senior women and youth affected by these hazards and how are junior men and senior men affected? Why?

Disaster risk information:

What disaster risk information do men, women, boys and girls access from local institutions and how useful is it? What early warning systems are in place and how well are they working? Who (among women, men, boys and girls in different social situations) has access to them and makes use of these and who does not?

Response and risk management strategies:

How do women, men, boys, girls protect themselves and their assets in the event of a disaster? Who has protected reserves of food and agricultural inputs, secure shelter, and mobility to escape danger, and who does not? Who can seek support?

3.1.5 Local and community capacity

Are social and economic safety nets available to households? Are financial services available to households? Do people have knowledge and skills to employ adaptation strategies? Do people have access to seasonal forecasts and other climate information? What distinct knowledge do women and men hold in their livelihood activities? What knowledge do they hold of expected future changes? Who has the knowledge, skills and resources to employ innovative strategies to support adaptation? What innovative strategies are available to women and men to adapt to changes in the climate and disasters context? Who can take advantage of them and who receives institutional support to do so –and who does not? Who makes decisions on innovations? What weather and climate forecasting information is available and how are they disseminated to women, men, girls and boys in different social settings? Among them, who has best access to it, who makes use of it and who does not?

4 METHODOLOGY

1. Contextual analysis, literature review and interviews. A review of the literature on climate change vulnerability and capacity in Mali overall and in the region of Mopti in particular, including observed and projected impacts of climate change for country/region; the extent of integration of climate change into various key development policies (e.g. agriculture, natural resource management, fisheries, health, environment, etc.); disaster management planning (including early warning systems); National/local government capacity on climate change; recognition of socio-economic dimensions of vulnerability – in particular the gender dimensions of vulnerability between men and women. This literature review will focus on sectoral policies and strategies, studies and national programs, documents at the level of civil society and the private sector, including recent studies by ARCC.17 Interviews with key informants at national level (state, private sector, civil society, etc.).
2. Qualitative fieldwork. The qualitative fieldwork component of the Gender-sensitive Climate

17 USAID sponsored studies on vulnerability mapping for the country, assessments and focus groups on Agricultural Adaptive Practices, an analysis of climate and water, plus profiles of adaptive management practices for the Sahel, and climate change predictions for West Africa including the Sahel(http://community.eldis.org/.5c0acf50)

Vulnerability and Capacity Analysis will be conducted with the participation of key staff from Harande, with the aim of building staff capacities on climate vulnerability and capacity analysis skills and developing a cohesive understanding of the critical climate and resilience practices to promote across the program.

a. Qualitative methods used to conduct the study, such as Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs).

b. Use of Participatory Rural Appraisal methods and/or other appropriate inquiry approaches to determine specific issues that affect women and youth such as trends, prevalence, aspirations and timelines.

4.1 Study Locations

The study will be conducted in two different agro-ecological zones (Tenenkou, Youwarou - flood plain, and Douentza, Bandiagara – arid/semi-arid zone), in addition to geographical and climatic differences, there are ethnic and socio-economic and livelihood characteristics, including transhumant populations to consider. The G-CVCA will be limited to four districts in the Mopti region covered by the program, and the targeted 16 communes are consistent with those where there are other USAID-funded programs and Government of Mali initiatives. The four districts have the highest exposure to drought and Tenenkou, Douentza and Youwarou are on the list of districts where grazing areas are most prone to loss of vegetation due to rainfall deficits. The increasing pressure on natural resources and competition for land, water and pasture are direct causes of conflict between individuals, groups and communities, a key stressor that can lead to instability and insecurity.

Sampling will be done according to criteria that take into account the type of population, agro-ecological zones, socio-economic profiles, the nature of livelihood activities, ethnic groups, rural and urban areas, etc.

4.2 Data collection

The study will employ the following data collection methods:

a. Key Informant Interviews (KIIs):

- Individuals will be selected to provide useful insights into local governance structures and status of implementation of local policies and programs, as well as power issues within and between communities and other stakeholders.
- Interviews will be held with resource persons (key informants) including local leaders (chiefs, mayors, elected representatives, etc.); community leaders (religious leaders, traditional leaders, etc.), Representatives of community-based organizations (CBOs) and NGOs, Academic/research institutions engaged in the target
- Interviews will be held with resource persons (key informants) from existing climate change and community based adaptation programs, such as Mali Climate Change Adaptation Activity (MCCAA),to identify opportunities for integration and coordination to get climate info and adaptive practices to farmers. Interviews will also be held with staff in other Feed the Future and similar initiatives in Mali, especially Mopti Region.
- Six to eight knowledgeable informants in each of the four districts are sufficient. This initial

contact also provides an opportunity to discuss the project's plans and approaches with these actors to motivate future involvement. These encounters may also be organized as a joint meeting rather than individually when actors are in the same area.

- Special attention will be paid to understanding the different cultural patterns of transhumant populations and the challenges that women, men, girls and boys face in those communities.

b. Focus Group Discussion (FGDs)

- The participants (men, women, and youth) of focus groups will be chosen in a way that takes into consideration the different sensitivities in the community to ensure that the information collected takes into account gender perspectives.
- FGDs will be organized with maximum 8-12 participants per FGD.
- Separate FGDs will be held with women (particularly pregnant/lactating women and women heads of household), men, and adolescents/youth. We will ensure participation of both settled agricultural populations and of pastoral transhumant populations.

c. PRA Inquiry Methods

The PRA tools to be used will include the following:

PRA Tool	Purpose
1	To determine perceptions of wealth differences and inequalities within a community; To discover what wealth and well-being mean in the context of the village; To establish the relative position of family households in a community
2	To identify important livelihoods resources in the community, and who has access and control over them; To identify areas and resources at risk from climate hazards; To analyze changes in hazards and planning for risk reduction
3	To identify periods of stress, hazards, diseases, hunger, debt, vulnerability, etc.; Understand livelihoods and coping strategies for men and women; Analyze changes in seasonal activities for men and women; Evaluate use of climate information for planning by men, women and youth
4	To get an insight into past hazards, changes in their nature, intensity and behavior; To make people aware of trends and changes over time; Evaluate extent of risk analysis, planning and investment for the future by men, women and youth
5	To determine the hazards that have the most serious impact on important livelihoods resources for men, women and youth; To determine which livelihoods resources and productive assets are most valuable and which are most vulnerable for men and women; To identify coping and adaptive strategies currently used by men, women and youth to address the hazards identified
6	To understand which institutions are most important to men, women and youth in communities; Analyze engagement of men and women, and other vulnerable groups, in local planning processes; Evaluate access to services and availability of social safety nets for men, women and youth.

4.3 Reporting Template:

The output of the Gender-sensitive Climate Vulnerability and Capacity Assessment will be a report with the findings, containing at least the following:

1. Executive Summary
2. Table of Contents
3. Introduction
4. Background/Literature Review
5. Objectives of the assessment
6. Methodology/Approach
7. Results and Analysis
8. Findings and Conclusions
9. Recommendations
10. References (all documents reviewed and utilized in the final report)
11. Annexes (must include the SOW and tools used in conducting the analysis)

The report will endeavor to provide a "top-line" summary of findings and will not exceed 75 pages including all annexes.

4.4 Study Personnel

An International or National consultant should have the following skills:

a. Familiarity and preferably experience with CARE's CVCA tool and related CBA Framework

b. Experience and the necessary technical expertise to be able to sift through the volume of climate change science/information for Mali and the Sahel region in order to focus on the most critical information and to be able to judge the quality of the information sources.

c. Understanding of context, policies, frameworks and strategies regarding climate change and DRR in Mali and the Sahel region.

d. Previous experience in conducting quantitative and qualitative assessments, surveys using participatory approaches

e. Experience of conducting qualitative assessments using a gender lens

f. The candidate should have proven experience in Climate Change Adaptation/Disaster Risk Reduction and resilience programming or work

CARE will provide the following support in this G-CVCA activity:

1. Two/three technical staff from CARE Mali for supervising the field team and guidance
2. Twelve to fifteen technical local staff for collecting data from the community, staff and government stakeholders. The team will combine staff with research skills, knowledge of climate change and disaster risk reduction, sector-specific expertise, facilitation of participatory processes, conflict management, qualitative interviewing, appropriate language skills as com-

munities may not speak the language of the staff, and good writing skills.

3. Three to four headquarters-based Livelihoods/Climate Change Technical Advisors(CARE USA, CARE UK, CARE Nederland and PECCN) to provide technical review, support in conceptualising and standardizing the study, and provide on-going support and assistance as needed
4. Recording equipment to record interviews

5 TIMEFRAME

- A Draft G-CVCA Report will be submitted to members of the Harande consortium for feedback prior to submission to the donor.
- The results of the study will be shared with various audiences (Harande team, CARE HQ PECCN, partners at the regional level in Mopti). Sharing the results of the study with the Harande program team will also be an opportunity to start thinking about the use of the results of the study in line with its Theory of Change, targets and activities.
- A dissemination of results at the national level will be organized.

The consultant will prepare the timeline for conducting the G-CVCA, which may be conducted over a period of five months and will involve the following tasks:

Activity	Duration	Timeframe
Recruitment of Consultant		May 2016
Conduct of Secondary Literature Review	5 days	May 2016
Development of training manual for data collection agents, data collection guide	3 days	June 2016
Training workshop for G-CVCA team on the tools and guide for data collection	5 days	June 2016
Test phase of tools and finalization of data collection tools	2 days	June 2016
Data Collection using qualitative and quantitative tools	30 days	June - July 2016
Validation of findings and reporting	10 days	June - July 2016
Sharing of results with the Harande team for feedback	3 days	July 2016
Finalization of the G-CVCA report	5 days	August 2016
Dissemination workshop to share the results of the analysis with project stakeholders.	1 day	August 2016

Name of the Study	Technical Lead from CO	Technical Support HQ	Remarks
Conduct Gender-sensitive Climate Vulnerability and Capacity Assessment	Climate Change Resilience Specialist	Henry Swira | henry.swira@care.org Karl Deering | kdeering@careclimatechange.org Peter Wright | Peter.Wright@care.org Tom Ashton | CARE UK Wouter Bokdam | CARE Nederland	Overall supervision Harande

Discussion de groupe: Cartographie des aléas

AVANT LA DISCUSSION DE GROUPE		
Préparation	**Informations sur les participants**	**Supports**
1. Sélection des participants appropriés qui sont informés à l'avance 2. Lieu adéquat identifié/trouvé 3. Equipe de facilitateurs ainsi que leurs rôles identifiés (composition de l'équipe et rôle de chacun) 4. Préparation de tous les supports 5. Examiner et comprendre les objectifs de la session, le guide de l'animateur et les formats	1. 8 – 10 participants par groupe de discussion 2. Conduire les discussions en groupes séparés d'hommes et femmes, adolescents, et adolescentes	• Guide d'animation • Formats de prise de notes • Padex • Ruban de masquage • Représentation visuelle des ressources (carte des ressources)

PENDANT LA DISCUSSION DE GROUPE	
• Suivre le guide d'animation • Encourager la participation de tous les participants • Écouter attentivement les intervenants • Prendre soigneusement des notes • Reconnaître la valeur des connaissances et de l'expérience des participants • Considérez les réponses à tendance majoritaire	• **Respecter les salutations d'usage** • Rester concentré • Être clair et réfléchi • Gérer les attentes • Gestion du temps • Remercier les participants à la fin

IMMÉDIATEMENT APRÈS LA DISCUSSION DE GROUPE
• Vérifier et examiner vos notes avant de passer à la discussion avec le groupe suivant • Débriefer rapidement avec l'équipe, rechercher des opportunités pour améliorer le processus • Donner les notes à votre Chef d'équipe

DANS LES 2 JOURS QUI SUIVENT LA DISCUSSION DE GROUPE
• Chef d'équipe : doit remplir le cadre d'analyse

FORMULAIRE/ GUIDE D'ANIMATION

Discussion de groupe

Nom et Prénom des Enquêteurs:
……

Cercle : *cocher la localité*
Youwarou
Tenenkou
Bandiagara
Douentza

Commune de: ……

Village de: ……

Type de Groupe : à cocher
Agropastoral/ Pastoral/ Urbain/
Hommes/ Femmes
Adolescents/ Adolescentes

Nombre des Participants : ……

Date et lieu:……

Objectifs

- Se familiariser avec la communauté pour savoir comment les différents groupes perçoivent leur milieu.
- Identifier les ressources de subsistance importantes au sein de la communauté, qui y a accès et qui les contrôle.
- Identifier les zones et les ressources exposées aux aléas climatiques
- Analyser les changements des aléas et planifier la réduction des risques

Comment faciliter le processus

Cette activité devrait prendre environ 1 heure ½, débat inclus : 45 minutes pour la carte et 45 minutes pour le débat.

1. Accueillez les participants. Présentez-vous et remerciez-les d'avoir accepté de vous consacrer leur temps. Expliquez le but de l'étude : qui est de savoir comment ils s'adaptent aux changements. Expliquez que nous voulons en savoir plus sur leurs moyens de subsistance et à quelles difficultés majeures ils sont confrontés. Nous espérons que cet exercice aidera les participants à mieux comprendre leur propre communauté, leurs ressources, et les difficultés qu'ils rencontrent. Demandez aux participants de se présenter. Dites-leur que ce qu'ils disent restera confidentiel. TE ET DE LA s'ils sont d'accord pour que vous continuiez l'exercice.
2. Expliquez aux participants que vous souhaitez établir une carte de leur communauté.
3. Choisissez un support (terre, sol, papier) et des outils (brindilles, pierres, graines, crayons, craies) pour réaliser la carte. *Si la carte est réalisée sur la terre ou le sol, la personne chargée de la prise de notes devra alors copier la carte sur un tableau ou dans son ordinateur portable. Une photo peut également être utile.*
4. D'abord, dessinez la carte de la communauté. Demandez aux membres d'identifier un point de repère dans la communauté. On peut en plus utiliser les 4 points cardinaux aussi (Est –Ouest – Nord -- Sud) pour rendre la carte bien orientée.
5. Placez une marque ou une pierre pour identifier ce point de repère. NOTE : le facilitateur doit aider les participants à commencer la carte, mais doit les laisser établir leur propre plan. Demandez aux membres de la communauté de tracer les frontières de la communauté.
6. Demandez aux membres de représenter les zones habitées ainsi que les équipements et les ressources cruciaux pour la communauté. Ceci inclut les maisons (toutes les maisons ne doivent pas être représentées sur la carte ; la représentation des zones où se trouvent des maisons est suffisante), les champs à cultiver, le pâturage, les lieux de culte, les pistes/routes, les centres de santé, les écoles et les ressources telles que les zones boisées ou les zones d'eau.
7. Lorsque les membres de la communauté sont d'accord sur le fait que la carte est bien représentative de leur communauté, passez à la deuxième étape, d'identification des aléas. (Souvenez-vous que les aléas sont les phénomènes leur-mêmes, soit la sècheresse, conflit, inondation, etc., pas les effets comme perte agricole, dégâts des maisons, etc.)
8. Demandez aux membres de la communauté d'identifier les zones à risques de différents aléas tels que :
    - § Les catastrophes **naturelles**, comme la sècheresse, les épidémies animales, ou les inondations, les crises sanitaires comme le VIH/SIDA, cholera ou la malaria.
    - § Les catastrophes **civiles**, comme le conflit foncier, conflit politique
    - § Les catastrophes **économiques**, comme la flambée de prix d'alimentation ou intrants
    - § Les catastrophes **technologiques**, comme l'accident industriel.

Les aléas cités qui ne sont pas spécifiques à un lieu précis doivent être notés sur le rapport.

Apprentissage et débats

Lorsque la carte est terminée, demandez aux membres du groupe de répondre aux questions suivantes.

Pendant le débat, noter toutes observations faites par les communautés pouvant être relatives aux données météorologiques disponibles dans la région et comment valoriser les indicateurs locaux, et communiquer ces informations afin de valider les observations.

Le preneur de notes doit transcrire soigneusement les points clés du débat.

1. Les aléas actuels sont-ils différents de ceux qu'il y avait 10/20/30 ans *(selon l'âge des participants)* ? Comment ?
2. Quels sont les impacts de ces aléas identifiés sur les ressources ? Comment se manifestent-ils ?
3. Quels sont les groupes de la communauté les plus affectés aux différents aléas (en fonction du type d'activité, de la situation socio-économique ou de l'âge ou du genre) ? Pourquoi ?
4. Quels sont les endroits de la communauté épargnés des aléas ? Ces endroits sûrs sont-ils utilisés pour se protéger des aléas (par exemple pour y stocker de la nourriture ou des intrants ou pour y abriter du bétail) ?
5. Qui a l'accès aux ressources présentées sur la carte ? Qui contrôle[62] cet accès (sonder particulièrement par le genre et l'âge)?
6. Comment les personnes de la communauté font-elles face aux impacts des différents aléas identifiés actuellement ? Les stratégies d'adaptation actuelles fonctionnent-elles ? Sont-elles durables ?

Liste des Participants

N0	NOMS ET PRENOMS
1.	
2.	
3.	
4.	
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6.	
7.	
8.	
9.	
10	
11	
12	

[62] Qui a le pouvoir sur les ressources.

Discussion de groupe: Diagramme de Venn

AVANT LA DISCUSSION DE GROUPE		
Préparation	**Informations sur les participants**	**Supports**
6. Sélection des participants appropriés qui sont informés à l'avance 7. Lieu adéquat identifié/trouvé 8. Equipe de facilitateurs ainsi que leurs rôles identifiés (composition de l'équipe et rôle de chacun) 9. Préparation de tous les supports 10. Examiner et comprendre les objectifs de la session, le guide de l'animateur et les formats	2. 8 – 10 participants par groupe de discussion 2. Conduire les discussions en groupes séparés d'hommes et femmes, adolescents, et adolescentes	• Guide d'animation • Formats de prise de notes • Padex • Ruban de masquage • Représentation visuelle des ressources

PENDANT LA DISCUSSION DE GROUPE	
• Suivre le guide d'animation • Encourager la participation de tous les participants • Écouter attentivement les intervenants • Prendre soigneusement des notes • Reconnaître la valeur des connaissances et de l'expérience des participants • Considérez les réponses à tendance majoritaire	• **Respecter les salutations d'usage** • Rester concentré • Être clair et réfléchi • Gérer les attentes • Gestion du temps • Remercier les participants à la fin

IMMÉDIATEMENT APRÈS LA DISCUSSION DE GROUPE
• Vérifier et examiner vos notes avant de passer à la discussion avec le groupe suivant • Débriefer rapidement avec l'équipe, rechercher des opportunités pour améliorer le processus • Donner les notes à votre Chef d'équipe

DANS LES 2 JOURS QUI SUIVENT LA DISCUSSION DE GROUPE
• Chef d'équipe : doit remplir le cadre d'analyse

- **FORMULAIRE/ GUIDE D'ANIMATION**

Discussion de groupe

Nom et Prénom des Enquêteurs:
……

Cercle : *cocher la localité*
Youwarou
Tenenkou
Bandiagara
Douentza

Commune de: ……

Village de: ……

Type de Groupe : à cocher
Agropastoral/ Pastoral/ Urbain/
Hommes/ Femmes
Adolescents/ Adolescentes

Nombre des Participants : ……

Date et lieu:……

Objectifs

- Comprendre quelles institutions sont les plus importantes pour les communautés
- Analyser l'engagement des différents groupes dans les processus de planification locaux
- Evaluer l'accès aux services et la disponibilité des filets de sécurité

Comment faciliter le processus

Cette activité devrait prendre environ 1 heure ½, débat inclus : 1 heure pour le diagramme et 30 minutes pour le débat.

1. Expliquez le but de l'étude : qui est de savoir comment ils s'adaptent aux changements. Expliquez que nous voulons en savoir plus sur leurs moyens de subsistance et à quelles difficultés majeures ils sont confrontés. Nous espérons que cet exercice aidera les participants à mieux comprendre leur propre communauté, leurs ressources, et les difficultés qu'ils rencontrent. Demandez aux participants de se présenter. Dites-leur que ce qu'ils disent restera confidentiel. Demandez-leur s'ils sont d'accord pour que vous continuiez l'exercice.

2. Le diagramme de Venn peut être réalisé de différentes manières. Vous pouvez dessiner et écrire avec un bout de bois sur le sol ou travailler sur papier. Si vous optez pour le papier, utilisez d'abord un crayon afin de pouvoir effectuer des corrections. Une autre option est de découper des cercles de différentes tailles dans du papier coloré. Les participants choisissent alors quels cercles représentent les différentes institutions.

3. Si les personnes ont des difficultés à comprendre cet outil, dessinez un exemple simple.

4. Demandez aux participants quels sont les groupes/organisations/institutions présents dans le village, ou quels sont ceux extérieurs au village avec lesquels ils travaillent. Encouragez-les à penser également aux groupes informels et aux organisations à base communautaire.

5. Notez les institutions mentionnées et assignez un symbole compréhensible par tous à chaque organisation.

6. Demandez aux participants de tracer un grand cercle les représentant, au centre du papier ou sur le sol.

7. Demandez-leur de définir l'importance qu'à pour eux chaque organisation. Les organisations les plus importantes sont alors représentées par de grands cercles et les organisations les moins importantes par de petits cercles. Demandez aux participants de comparer la taille des cercles et de les ajuster afin que cette taille représente l'importance relative de l'institution, de l'organisation ou du groupe.

8. Chaque organisation/groupe doit être désigné par un nom ou un symbole.

9. Demandez aux participants de discuter des avantages procurés par les différentes organisations.

10. Le preneur de notes doit transcrire le débat et noter pourquoi les différentes organisations sont considérées comme étant importantes ou moins importantes.

11. Demandez ensuite aux participants d'évaluer le degré de contact/de coopération qui existe entre eux et ces institutions en ajustant la distance entre les cercles. Les

institutions avec lesquelles ils n'ont pratiquement pas de contact doivent être placées loin du grand cercle qui les représente. Les institutions avec lesquelles ils sont en contact étroit et avec lesquelles ils collaborent le plus doivent être placées à l'intérieur du cercle qui les représente.

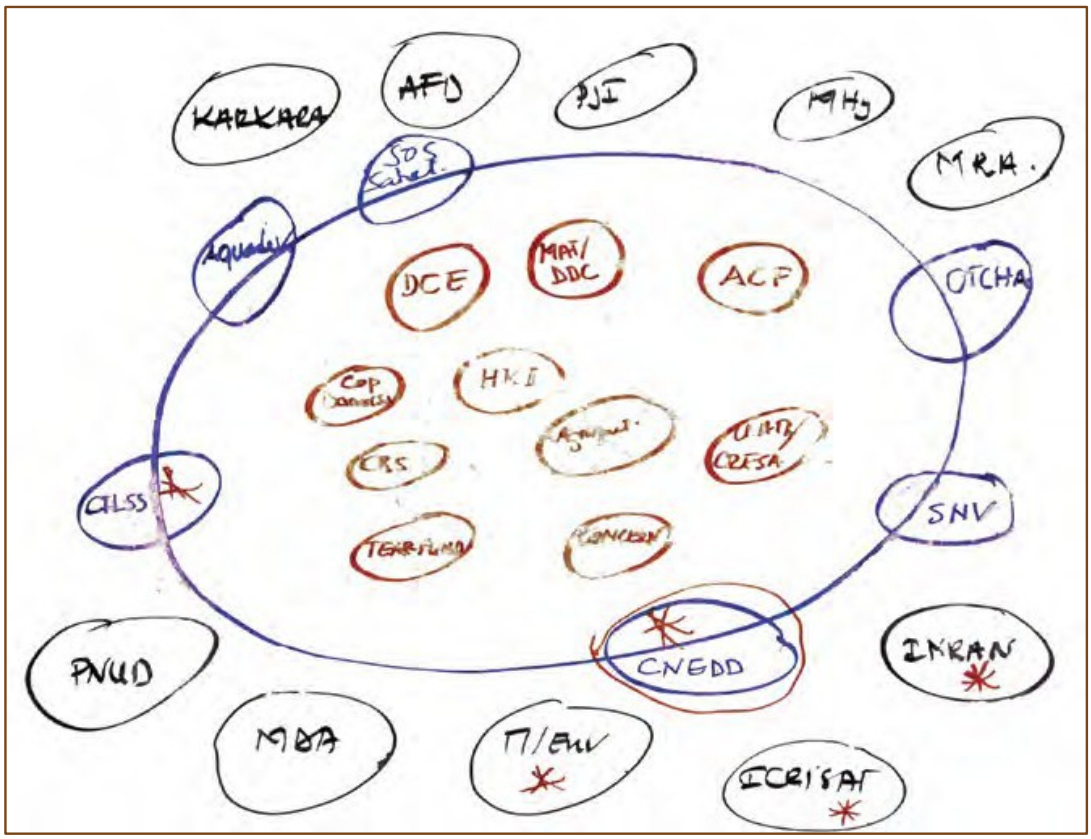

Diagramme de Venn pour le Niger réalisé lors d'un exercice de formation G-ACCR. *L'exemple cite aussi bien les ONG nationales et internationales que les organisations gouvernementales concernées par le domaine du changement climatique.*

Questions à débattre

Lorsque le diagramme est terminé, demander aux membres du groupe de répondre aux questions suivantes :

1. Quels sont les catégories de gens ou ménages qui sont appuyé par les institutions pour s'adapter aux changements climatiques (services techniques, ONG, institutions financiers, autorités religieuse, etc.) ? comment ?
2. Certaines des organisations représentées sont-elles uniquement ouvertes à des membres masculins ou féminins ? Ces organisations offrent-elles uniquement des services aux hommes ou aux femmes ?

3. Y a-t-il d'autres groupes exclus de l'adhésion ou des services proposés par les organisations identifiées ?
4. Y a-t-il des organisations qui offrent une aide en période de crise?
5. Par quels biais/canaux recevez-vous des informations de ces différentes organisation?
6. Par quels biais/canaux communiquez-vous des informations aux différentes organisations ?

Liste des Participants

N0	NOMS ET PRENOMS
13	
14	
15	
16	
17	
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19	
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21	
22	
23	
24	

Discussion de groupe: Matrice de vulnérabilité

AVANT LA DISCUSSION DE GROUPE		
Préparation	**Informations sur les participants**	**Supports**
11. Sélection des participants appropriés qui sont informés à l'avance 12. Lieu adéquat identifié/trouvé 13. Equipe de facilitateurs ainsi que leurs rôles identifiés (composition de l'équipe et rôle de chacun) 14. Préparation de tous les supports 15. Examiner et comprendre les objectifs de la session, le guide de l'animateur et les formats	3. 8 – 10 participants par groupe de discussion 2. Conduire les discussions en groupes séparés d'hommes et femmes, adolescents, et adolescentes	• Guide d'animation • Formats de prise de notes • Padex • Ruban de masquage • Représentation visuelle des ressources

PENDANT LA DISCUSSION DE GROUPE	
• Suivre le guide d'animation • Encourager la participation de tous les participants • Écouter attentivement les intervenants • Prendre soigneusement des notes • Reconnaître la valeur des connaissances et de l'expérience des participants • Considérez les réponses à tendance majoritaire	• **Respecter les salutations d'usage** • Rester concentré • Être clair et réfléchi • Gérer les attentes • Gestion du temps • Remercier les participants a la fin

IMMÉDIATEMENT APRÈS LA DISCUSSION DE GROUPE
• Vérifier et examiner vos notes avant de passer à la discussion avec le groupe suivant • Débriefer rapidement avec l'équipe, rechercher des opportunités pour améliorer le processus • Donner les notes à votre Chef d'équipe

DANS LES 2 JOURS QUI SUIVENT LA DISCUSSION DE GROUPE
• Chef d'équipe : doit remplir le cadre d'analyse

- **FORMULAIRE/ GUIDE D'ANIMATION**

Discussion de groupe

Nom et Prénom des Enquêteurs:
……

Cercle : *cocher la localité*
Youwarou
Tenenkou
Bandiagara
Douentza

Commune de: ……

Village de: ……

Type de Groupe : à cocher
Agropastoral/ Pastoral/ Urbain/
Hommes/ Femmes
Adolescents/ Adolescentes

Nombre des Participants : ……

Date et lieu:……

Objectifs

- Déterminer les aléas ayant le plus fort impact sur les ressources de subsistance importantes
- Déterminer quelles ressources de subsistance sont les plus vulnérables
- Identifier les stratégies d'adaptation utilisées actuellement pour lutter contre les aléas identifiés

Comment faciliter le processus

Cette activité devrait prendre environ 1 heure ½, débat inclus : 45 minutes pour la matrice et 45 minutes pour le débat.

1. Expliquez le but de l'étude : qui est de savoir comment ils s'adaptent aux changements. Expliquez que nous voulons en savoir plus sur leurs moyens de subsistance et à quelles difficultés majeures ils sont confrontés. Nous espérons que cet exercice aidera les participants à mieux comprendre leur propre communauté, leurs ressources, et les difficultés qu'ils rencontrent. Demandez aux participants de se présenter. Dites-leur que ce qu'ils disent restera confidentiel. Demandez-leur s'ils sont d'accord pour que vous continuiez l'exercice.

2. Préparez la matrice à l'avance, soit au sol soit sur un tableau.

3. Demandez au groupe d'identifier leurs ressources de subsistance les plus importantes. Il ne doit pas nécessairement s'agir de ressources dont ils disposent déjà, mais de celles qu'ils considèrent comme les plus importantes pour atteindre le bien-être. Ils peuvent rédiger une longue liste de ressources. Vous pouvez souhaiter organiser la liste selon différentes catégories de ressources - humaines, sociales, physiques, naturelles et financières.

4. Demandez au groupe d'identifier les quatre ressources qu'il considère comme les PLUS importantes pour son bien-être. Notez ces ressources prioritaires à la verticale sur le côté gauche de la matrice. Utilisez des symboles si cela peut aider à une meilleure compréhension des participants. On peut faciliter les processus de classement par l'utilisation des petits cailloux pour « voter » sur les ressources plus importantes pour chacun.

5. Demandez ensuite au groupe d'identifier les aléas ayant le plus d'impact sur leurs moyens de subsistance. Ces aléas peuvent être d'origine naturelle ou humaine. Ne limitez pas le débat aux aléas climatiques. Néanmoins, vous pouvez questionner le groupe s'il n'identifie pas des aléas environnementaux.

NOTE : Il est important d'être précis et de s'assurer que les problèmes identifiés sont réellement des aléas. Par exemple, les participants peuvent considérer « l'insécurité alimentaire » comme un aléa. C'est au facilitateur de demander au groupe d'analyser ces situations afin de vérifier si elles sont bien dues à des aléas (par exemple, l'insécurité alimentaire peut résulter d'une sécheresse, qui est bien un aléa). De même, certains peuvent considérer la pénurie de ressources, « le manque d'argent » par exemple, comme un aléa. Dans ce cas, il sera nécessaire de déterminer si l'absence d'une ressource est provoquée par un aléa ou si, dans certains cas, elle devrait être ajoutée à la liste des ressources prioritaires identifiées à l'étape précédente.

6. Notez les quatre aléas les plus importants à l'horizontale sur le dessus de la matrice en utilisant si nécessaire des symboles.

7. Demandez à la communauté de se mettre d'accord sur un système de notation des aléas qui affectent les ressources de subsistance, des effets les plus importants, à l'absence d'effet :
   3 = impact significatif sur la ressource
   2 = impact moyen sur la ressource
   1 = impact faible sur la ressource
   0 = aucun impact sur la ressource

Vous pouvez utiliser des pierres, des symboles ou différentes couleurs (par exemple rouge = risque significatif sur la ressource, orange = risque moyen sur la ressource, vert = risque faible sur la ressource, bleu = aucun risque). Assurez-vous que tous les membres du groupe comprennent bien le système de notation.

8. Demandez aux participants d'évaluer le degré d'impact de chacun des aléas sur chacune des ressources. Ceci obligera le groupe à aboutir à un consensus. Le preneur de notes doit consigner les points clés du débat ayant abouti aux scores attribués, ainsi que tout désaccord sur les scores.

Bansi ♀ +	human disease	animal disease	drought	floods	erratic rain
animals	2	3	3	3	1
food reserves	3	3	2	3	3
well-fed ♀ + children	3	3	3	2	2
Kids going to school (clothes, shoes)	3	2	2	3	1
♀ engaged in income gen	3	2	1	2	2

Exemple de matrice de vulnérabilité réalisée par un groupe de femmes du village de Bansi, district de Bawku, au nord Ghana.

Questions à débattre

Lorsque la matrice est terminée, demandez aux membres du groupe de répondre aux questions suivantes :

1. Quelles sont les stratégies d'adaptation actuellement utilisées pour faire face aux aléas identifiés ?
2. Quelles sont les difficultés liées à ces stratégies ? Fonctionnent-elles correctement ? si non pourquoi ?
3. Y a-t-il d'autres stratégies (par exemple, selon vos expériences vécues ailleurs) que vous souhaiteriez adopter en vue de réduire l'impact des aléas sur vos moyens de subsistance (par exemple, selon vos expériences vécues ailleurs) ?
4. De quels moyens disposez-vous pour vous aider à adopter ces nouvelles stratégies ?
5. Quels facteurs vous empêchent d'adopter ces nouvelles stratégies ?

Liste des Participants

N0	NOMS ET PRENOMS
25	
26	
27	
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ENTRETIENS AVEC LES INFORMATEURS-CLÉS

Aout 2016

Informateurs-clés : Services techniques gouvernementaux, personnel d'ONG au niveau du cercle ou région

Vous trouverez ci-dessous des suggestions de questions afin de guider les entretiens avec des informateurs-clés dans différents domaines. Ces questions ont pour but de guider les discussions le long des lignes principales de nos travaux de recherche, mais elles ne doivent pas donner l'impression de faire partie d'une liste de questions à poser. Suivez les connaissances et l'expertise de votre interlocuteur et explorez en profondeur les domaines dans lesquels celui-ci a quelque chose à ajouter. *Vous ne pourrez pas poser toutes les questions au cours de l'entretien. Sélectionnez-donc celles qui correspondent au mieux à l'expertise de la personne que vous interrogez.* Mettez l'accent sur le contexte local et creusez sur les modes de fonctionnement qui y sont observés.

Dans chaque service, cherchez à vous entretenir avec des membres du personnel des services techniques gouvernementaux ou d'ONG, des commerçants, ou toute autre personne jouissant de solides connaissances concernant la changements climatique dans la région. Sauf si les informateurs sont prêts à vous parler plus longtemps, les discussions ne doivent pas dépasser 60 minutes. Comme pour les discussions en groupe, écoutez attentivement, posez des questions et creusez de façon à déterminer les connexions et les causes sous-jacentes. Dans tous les cas, demandez des informations concernant les différences entre les hommes et les femmes en rapport avec le sujet abordé. Prenez des notes et mettez-les au clair par la suite afin de permettre à toute personne ne participant pas à la conversation de pouvoir les comprendre.

Vous pouvez sans problème passer d'une catégorie à une autre. Si, par exemple, une personne experte dans le domaine de l'agriculture jouit de bonnes connaissances concernant la problématique hommes-femmes et les questions basées sur le genre, posez-lui des questions à ce sujet.

Choisissez donc les questions qui nous permettront d'aller dans ce sens.

Entretiens : La cible est 6-8 entretiens pour chaque équipe avec des services différents. Mettez l'accent sur des questions qui sont difficile d'aborder dans les Discussion en Groupe.

Prenez des notes dactylographié d'un niveau suffisant pour qu'il des autres membres de l'équipe peut les entendre

I. Contraintes basées sur le genre

Nom et Prénoms :

Titre :

Structures :

Votre Nom et Prénoms :

Date :

	Questions-clés	Réponses
Situation et tendances	1. Quels sont les rôles par genres en la production agricole et de l'élevage de bétail au sein de ce cercle ? Différentiez par ethnicité et zone écologique. Ont-ils changé avec le temps ?	
Impact	2. Quels sont les impacts principaux sur les femmes et les hommes de changement climatique ?	
Capacité	3. Quels réseaux importants travaillent sur la de genre?	
Questions politiques	4. Quels efforts sont menés en vue d'assouplir les contraintes basées sur le genre afin d'améliorer la sécurité alimentaire ? 5. En quels manières est-ce que la politique nationale de genre prend compte des changements climatiques? et par contre, comment est-ce la politique nationale des changements climatiques prend compte de genre?	

II. Environnement / Écologie – hydrologie, sols, forêts, bétail

Nom et Prénoms :

Titre :

Structures :

Votre Nom et Prénoms :

Date :

	Questions-clés	Réponses
Situation et tendances	1. Quels changements ont été observés au niveau écologique dans ce département (couverture forestière, points d'eau, cours d'eau, etc.) au cours des 10 dernières années (pour les communautés pastorales et sédentaires). S'ils ne sont pas mentionnés, sondez les points suivants : • Assèchement des points d'eau • Pluies éparses et irrégulières • Sécheresse cyclique • Perte de pâturages et de terres agricoles	
Impact	2. Quels sont les effets socio-économiques de la dégradation environnementale mentionnée ci-dessus ? Sur les hommes ? Sur les femmes ?	
Capacité	3. Quelles sont les stratégies mises en œuvre pour faire face à ces	

	changements au niveau de l'environnement ? Considérez les différentes techniques agropastorales, les stratégies sociales telles que l'emprunt, les migrations saisonnières, l'évolution des réseaux sociaux, etc. 4. Quels réseaux importants travaillent sur la question ?	
Questions politiques	5. Quelles politiques nationales accentuent cette dégradation de l'environnement ? Quelles mesures contribuent à résoudre les problèmes ?	

III. Agriculture et bétail

Nom et Prénoms :
Titre :
Structures :
Votre Nom et Prénoms :
Date :

	Questions-clés	Réponses
Situation et tendances	1. Comment les systèmes agricoles et d'élevage de bétail ont-ils évolué au cours des vingt dernières années dans le cercle, dans les différents contextes (saisons, récoltes, espèces, schémas migratoires, techniques de culture, rôles sociaux au niveau de la production et du marketing) ?	
Impact	2. Existe-t-il des changements qui accentuent ou atténuent les risques au niveau du climat ? Sondez par groupe cible.	

Capacité	3. Quelles sont les stratégies actuellement déployées ici en vue d'aider les éleveurs et fermiers à éviter et faire face aux chocs et stress ? 4. Quels réseaux importants travaillent sur la question ?	
Questions politiques	5. Des politiques nationales en vigueur empêchent-elles la croissance du secteur dans ce domaine ? Existe-t-il des politiques efficaces en place en faisant la promotion ?	

Experts en Changements Climatiques

Nom et Prénoms :
Titre :
Structures :
Votre Nom et Prénoms :
Date :

	Questions-clés	Réponses
Situation & Tendances	1. Quelles sont les tendances actuelles et futures des changements climatiques ?	
Impact	2. Quels sont les impacts du changement climatique au Mali par zone? 3. Qui sont les plus vulnérables aux impacts du changement climatique ?	
Capacités Absorptives, Adaptives and Transformatrices	4. Quelles sont les institutions les plus stratégiques pour collaboration pour répondre aux changements climatiques de manière efficace (institutions au niveau national, régional et local). 5. Que recommanderiez-vous pour renforcer la résilience des communautés aux effets de	

	changement ? (résilience écologique, sociales, économiques et institutionnelles)	
Questions de politique	6. Est-ce que les politiques en place pour l'agriculture, élevage, eaux, sante, genre, etc. répondent au changement climatique ? 7. Y-a-t-il les lacunes de politique?	