

**Reducing the Vulnerability of Women Rural Producers to
Rising Hydro-Meteorological Disasters in Senegal:**

Are There Gender-Specific Climate Service Needs?

TECHNICAL PROGRESS REPORT #1

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1. Introduction

The goal of my research is to investigate whether there is a need for gender-specific climate services in communities at risk of flooding, drought and other hydro-meteorological disasters that are on the rise in Africa since the mid-1990s. If there is a need, how can identifying these needs be incorporated into the design of gender-responsive adaptation policies that will serve to reduce the vulnerability of rural women producers towards rising climate-related shocks? Indeed, the past decade (1995-2005) has been characterized by increasing climate variability and more frequent extremes all over Africa (see fig. 1). Whether women's specific vulnerability to these hazards could be mediated through an increased use of salient, timely and legitimate climate information is an important question to answer because this has critical implications for the climate research and development practice communities.

To elicit this question, I will be focusing on three vulnerable communities in the central region of Kaffrine, in Senegal, an arid dryland that has increasingly been hit by more frequent floods and other extremes, and rising climate variability in recent years. I have already begun conducting my fieldwork, investigating whether there are indeed gender-specific vulnerabilities to hydro-meteorological disasters (HMDs) and whether climate services matter in the context of primary sector production by women (agriculture, fishing, natural resource extraction). If climate information is ascertained as a useful vulnerability-reducing strategy, I will be designing jointly with targeted women stakeholders (women farmers, cattle-herders and fisherwomen) in my three communities of study in Kaffrine, the type of agro-meteorological advisories that would be salient to meet their specific information needs in terms of content, timeliness and delivery channels, towards better informed decision-making by these women producers to build more resilient livelihoods.

It is generally assumed that women in climate-vulnerable communities are among the most vulnerable (UN CSW, 2009). They bear the brunt of adaptation in their communities where their livelihoods (mostly agriculture-based) are further jeopardized by the vagaries of an increasingly unpredictable and erratic climate. The second assumption is that climate information plays a meaningful role in reducing vulnerability in the primary sector, but specific obstacles prevent women, even more so than men, from accessing and using climate services. It is also assumed that climate information is differentiated by men and women's access to, and use of, climate/agricultural information (gender-specific climate information access blockages).

My specific research questions are as follows:

- 1) How does climate risk affect men and women differently? What are women rural producers' specific vulnerabilities and local capacities to cope with hydro-meteorological disasters (HMDs) in Kaffrine, Senegal?

- 2) What is the role and added value of using climate services?
- 3) Are there gender-specific climate service needs? If so, what are these?
- 4) What specific obstacles prevent rural women’s access to and utilization of climate services (blockages)?

Research Results Logical Framework Table		
Goal: Investigate whether there is a need for gender-specific climate services in communities at risk of flooding, drought and other hydro-meteorological disasters; and if so, Identify what are these gender-specific climate services needs to design gender-responsive adaptation policies that will serve to reduce the vulnerability of rural women producers to rising climate-related shocks in Kaffrine, Senegal, and across West Africa.		
Specific Objectives	Outcomes	Outputs
1. Understand how climate risks affect the livelihoods of women and men differently in the primary sector production in Kaffrine, Senegal and West Africa	1.1 Better understanding of how climate risks affect the livelihoods of women and men differently in the primary sector production of Senegal and West Africa is generated	<p>1.1.1 Gender-disaggregated data on the impacts of hydro-meteorological disasters on rural producers generated in 3 target community case studies in Kaffrine, Senegal</p> <p>1.1.2 Women’s current on-going local coping strategies, both technical and social, to increasing hydro-meteorological disasters in 3 target communities are mapped out, and compared to that of men</p> <p>1.1.3 Women’s priority adaptation needs, in excess of their local capacities to cope with increasing hydro-meteorological disasters, are mapped out in 3 target community case studies in Senegal, and compared to that of men</p> <p>1.1.4 The 3 target communities have at their disposal a laminated copy of their priority adaptation needs (conclusions of the research) for local advocacy purposes</p>
2. Identify the role and value-added of climate services in Senegal, and West Africa	2.1 The relevance and utility of climate services to reduce vulnerability to climate-related hazards is assessed in three	2.1.1 Assessment of the value of using climate services in three climate disaster prone-communities in Senegal

	climate-disaster prone communities in Kaffrine, Senegal and West Africa	2.1.2 Analysis of the external validity of the findings from Kaffrine to other climate disaster-prone communities of West Africa
3. Understand the specific climate service needs of rural women producers in Senegal and West Africa, and which policies need to be designed to best support their current on-going local coping strategies	3.1 Women’s specific climate service needs (climate information or otherwise) and constraints to access are identified in 3 target communities in Senegal, and serve as input for gender-specific adaptation policy formulation	<p>3.1.1 The type of climate information that will assist both men and women in making ‘climate smart decisions’ is identified</p> <p>3.1.2 Tailored, salient and timely climate information is designed for women rural producers in Senegal</p> <p>3.1.1 Relevant national and local legislations and policies on adaptation are identified to best support gender equality in opportunities, and open a space for women to equally benefit from existing climate risk management tools (including climate information if proven relevant through my research)</p>
4. Understand the gender-specific obstacles to access and use of climate/agricultural information in Senegal and West Africa (if climate information proven to be a relevant vulnerability-reducing strategy)	<p>4.1 Better understanding of the gender-specific obstacles to access and use of climate/agricultural information in Senegal and West Africa is generated</p> <p>4.2 Capacity of ANAMS (the National meteorological office) to deliver climate information tailored to the needs of women rural producers in Senegal is built/strengthened</p>	<p>4.1.1 Gender-specific obstacles to access and use of climate/agricultural information are identified</p> <p>4.1.2 Peer-reviewed journal article published on the identified gender-specific obstacles to access and use of climate/agricultural information</p> <p>4.1.3 Project is developed to assist ANAMS (the National meteorological office) in meeting its needs to ensure tailored information reaches target women, and that their obstacles to access and use of climate information are overcome (if climate information proven to be a relevant vulnerability-reducing strategy through my research).</p>

Deriving insights on how women rural producers in Kaffrine currently cope with climate stresses in the primary sector, and how these specifically impact their livelihoods and levels of food security will enable us to better understand: (1) what their specific adaptation needs are, (2)

policies that need to be designed to best support their on-going local coping strategies, (3) national and local legislations and policies on adaptation that can best support gender equality in opportunities, and (4) open up a space for women to equally benefit from existing climate risk management tools (including climate services, if these are proven relevant in my research).

How climate risk affects the livelihoods of men and women differently, and the type of climate information that will assist both men and women in making ‘climate smart decisions’ are thus the central questions of concern in this research.

2. Background

African countries face rising climate-related disasters. Indeed, storms, floods, pest infestations, droughts and cyclones are already reducing opportunities and wrecking havoc in communities all across the continent (UNDP 2007/08). Whether a consequence of global climate change as seems to be suggested by the climate science community (IPCC 2007), or resulting from other factors such as increased exposure to meteorological hazards, weaker safety nets, higher vulnerability/lower adaptive capacity or better disaster reporting, an upward trend in hydro-meteorological disasters is noticeable across the continent, as evidenced by the significant, consistent rise in the number of reported hydro-meteorological disasters (see fig. 1).

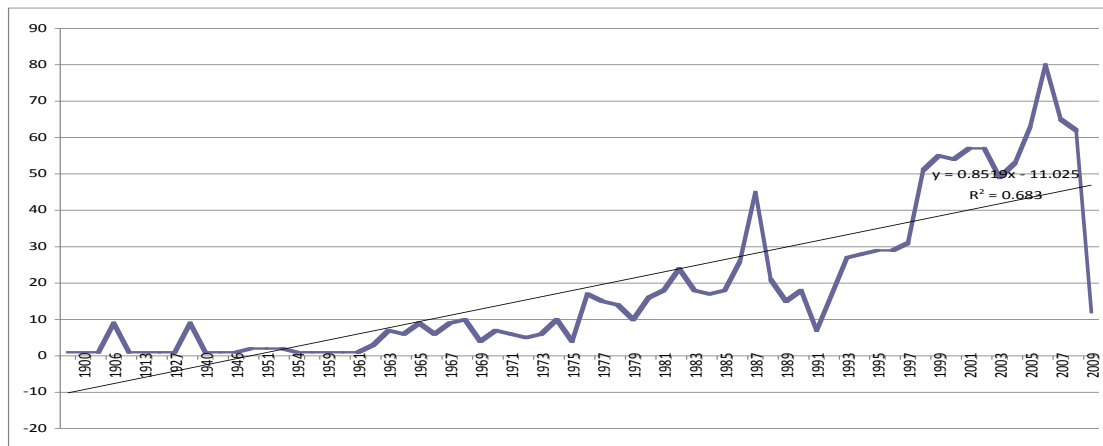


Fig. 1: Sharp increase in hydro-meteorological disasters in Africa since 1990s and rising disaster trend (source: Tall 2011; based on EM-DAT data). Climate-related disasters include floods, pest infestations, droughts and storms/cyclones.

In West Africa, climate variability within the seasonal to inter-annual timescale is a particular source of concern. More than half of the active population on average is employed in the agricultural sector (FAO, 2009), and only 7 percent of the total cultivated land is irrigated or under some other form of water management (FAO, 2009). In countries such as Niger or Burkina Faso, up to 90% of the active population is employed in a rain-fed agricultural sector (FAO, 2009). Across the region, a growing majority also lives in ill-planned urban shantytowns

built on flood plains where they settled during the prolonged drought period that gripped the Sahel from the early 1970s to the late 1980s (Dai et al., 2001; Hulme, 2001), driving peasants out of the countryside and into peri-urban settlements where they are today exposed to the vagaries of a changing climate (Pelling and Wisner, 2009; Diagne, 2007).

When climate-related disasters strike in West Africa¹, they generate human development setbacks that have important social ramifications (Tall, 2009). They jeopardize progress towards achievement of the Millennium Development Goals and generally force poor households to forfeit meager assets in the process of coping with disasters (World Development Report, 2003).

Due to their high dependence on climate factors for their livelihoods, rural communities feel the brunt of hydro-meteorological shocks. Within climate-vulnerable communities however, not everyone is impacted equally. Specifically, women bear the largest burden. They are the ones who have to walk extra miles when water is scarce. They are the ones who often pull the children out of school to help them work the fields when the land becomes dryer and dryer, and yields smaller. Women are the ones left most of the time to find solutions and contend with the disastrous impacts of livelihoods that are no longer guaranteed because of changing climate patterns and unexpected atmospheric conditions.

For instance, a case in point, the more and more delayed onset of the rainy season experienced in many countries of the West African Sahel in recent years resulted in dramatic livelihood impacts at the community level. This has translated into reduced yields of crops for people and livestock in communities dependent on rain-fed agriculture. The indigenous knowledge and local coping mechanisms that served traditionally to adjust to natural climate variability are no longer relevant to cope with an increasingly erratic and unpredictable climate. It has been noticed that women are the ones who take on the load of sustaining the children and the family within these most vulnerable communities, and they are today confronted by a future with a very tough challenge – where do they go for to see income when alternatives such as crop diversification, simultaneous cattle breeding and agriculture, or even petty sale, that existed in the past are just not viable any more (Tall 2010).

¹ We follow here the definition of a Disaster as the conjugation of a naturally driven Hazard and human-induced Vulnerability.

$$\text{DISASTER} = \frac{\text{Hazard} * \text{Vulnerability}}{\text{Capacity}}$$

A disaster can thus be conceived of as a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses, *which exceed the ability of the affected community or society to cope using its own resources*. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk (United Nations International Strategy for Disaster Reduction 2009).

It is thus critical to focus on the specific vulnerability of women, if we are to find a durable solution to climate change and alleviate its impacts at the community-level. The sooner we address the specific adaptation needs of women, the faster we can hope for effective climate change adaptation, and more climate-resilient, sustainable local communities.

My research seeks to generate knowledge on the relevance of providing gender-responsive climate services to rural women producers in three climate-vulnerable communities of Senegal.

3. Research Methods

I have conducted a mix of desk and field research, using a three-stepped approach that consists of:

- a) Baseline research and interviews to identify key hydro-meteorological disaster (HMD) hotspots, areas of acute vulnerability in Senegal where HMDs have become a recurrent phenomenon, for selection of case studies in Senegal;
- b) Community-level fieldwork in the three selected case sites (to collect data on gender-specific vulnerability to rising hydro-meteorological disasters and women's specific needs for climate services and delivery channels;
- c) Data analysis to identify the gaps, priority adaptation needs, climate service relevance and salient policies to address women's specific adaptation needs in the primary sector in Kaffrine, Senegal.

a) Baseline research & Interviews (June-August 2011)

During this phase of my research, I accessed key information on HMDs by region, district and rural community in Senegal. Previous research on impacts of HMDs nation-wide has yielded indicative results for the whole of Senegal (Thiam 2011).

Follow-up work consisted of honing this data at the sub-national level in order to zoom in on which areas (districts and rural communities) are most often impacted by HMDs. Interviews with key informants in my local institution of affiliation, the National Meteorological Office of Senegal (*l'Agence Nationale de la Météorologie du Sénégal-ANAMS*) were critical to the identification of hazard dynamics in Senegal, and areas where these have made landfall most recurrently during the past decade when HMDs began to increase in Senegal. Interviews with socio-economists in the country's line ministries (Planning, Agriculture, Livestock, etc.), research institutes based in Dakar (University Cheikh Anta Diop, CODESRIA) as well as at the Senegalese Red Cross Society and other relevant disaster response nongovernmental organizations were instrumental in helping me determine areas of acute vulnerability in the

country, where conducting this research is urgently needed. My contacts in all of the above institutions were instrumental in enabling access to them and critical for information generation.

Based on expert interview responses, the region of Kaffrine, located in arid central Senegal and prone to increasing yearly floods, was selected as the research site. Three target villages in Kaffrine were selected based on the following three criteria a) feasibility of study (from data collection to analysis) in the 12-month timeframe of my research (June 2011-May 2012); b) vulnerability of local population (both men and women) to hydro-meteorological disasters; and c) site accessibility in the rainy season, height of HMD impacts in Senegal, when the research had to be carried out to observe vulnerabilities to HMDs.

The three target climate-disaster communities in Kaffrine selected were the villages of Malem-Thierign, Dioly-Mandakh and Fass Thieken.

*b) Community-level fieldwork: Vulnerability and Capacity Assessments (VCAs)
(September-December 2011)*

Once my target communities were identified, I commenced my three community-level fieldwork in the selected sites to collect data on gender-specific vulnerabilities and capacities to cope with rising climate-related disasters, as well as women's specific needs for climate services and delivery channels.

The tools I used to generate gender-specific data were adapted from a participatory methods toolbox for assessing communities' vulnerability and capacities to climate disasters devised by the Red Cross/Red Crescent movement for use by its community-level volunteers. The ***Vulnerability and Capacity Assessment (VCA)*** (IFRC 2009) toolbox offers a range of relevant participatory rural appraisal tools that I adapted to my gender-specific data collection objectives, and utilized to generate data on the specific vulnerabilities, women's local capacities to cope, in the three climate-vulnerable communities I worked with in Kaffrine, Senegal.

The purpose of conducting the VCAs were to jointly assess with each of the targeted vulnerable sub-segments of the community (women, men, youth, elders): 1) their particular vulnerability to HMDs; 2) their own local capacities to address these vulnerabilities; 3) their needs in excess of their local capacity to cope; and finally 4) the remaining gaps between their Vulnerabilities and Capacities, which external interventions may be able to close. I then proceeded to rank and identify with each target community priority adaptation options, as well as salient policies that could help address these remaining gaps. If provision of climate services were identified as one of these priority adaptation needs, we then proceeded to the second part of our research protocol –specific research questions 3-4.

A host of community participatory exercises thus convened men and women separately. The specific participatory rural appraisal tools we used are summarized in table 2 (please refer to VCA Exercise Table, **in annex 1**). Each activity required the engagement of all community members, and inclusion of their perspectives and local knowledge at each step of the process.

In addition, a gender-disaggregated household survey was developed with detailed questions administered to male and female members of the household separately, as well as general questions for all members of the household to answer jointly, with the approval of the head of the household found in the surveyed household. This household survey served as the backbone of our gender-specific analysis, and served to complement nicely –and confirm in most instances– the insights emanating from the focus groups.

On the first day of research in each community, all research activities were conducted within focus groups (men, women, elders and youth as relevant), save for the final community data validation meeting, which brought the entire community together. The second and third days of data collection in each target community were devoted to administering the detailed household survey to sampled households willing to be interviewed. Average time of each household survey was forty minutes, due to the need to interview men and women separately within the household. 30% of all households within the community were surveyed to ensure high significance of collected household data results, for a total of 55 households were surveyed in Malem-Thierign, 48 in Dioly-Mandakh and 65 in Fass Thieken. Households were selected using the rules of random sampling, beginning in the center of the village, tossing a coin to determine direction of first house to be surveyed, then skipping a set number of households in each community in order to attain the 30% target while covering the entire village area. **Annex II** shows the household data collection sheets administered to sample households in each of our target sites.

The resulting data from all these assessments were gender-disaggregated data on the impacts of climate risks on livelihoods and food security in my target sites, and the gaps in capacities that impede women in these communities to cope well with rising climate risks. These data were then systematized, mined and analyzed to provide a clear picture of gender-specific vulnerabilities and capacities to cope to HMDs in Kaffrine.

As one can see our approach was not to start with climate risks, but rather with community livelihoods, and the stressors that constrain these livelihoods today. This temporal element is important to note: we start off with the assumption that rural community dwellers have been adjusting all their lives to climatic changes. What we tried to understand is what local adjustments are they making today in light of recent climate stresses, and how these endogenous adaptation strategies be best supported. Adaptation is seen here as a *process* of adjustment to constant changes.

For the purposes of this study, only the data specific to the women sub-segment were mined and analyzed. However, generating data on all vulnerable segments in the community was considered an important endeavor in order to characterize women's specific vulnerabilities to HMDs within a larger gender context. In addition, making the entire community identify its own vulnerabilities to climate risks, articulate whom the most vulnerable groups are –in many cases women–, and develop a communal strategy to address these gender-specific vulnerabilities was deemed in itself a meaningful process to assist the community in overcoming its gendered differences in access and opportunities to address climate change impacts. We followed the rationale that turning women's vulnerabilities into capacities will first entail the community in its entirety becoming conscious of its vulnerability to HMDs, realizing on its own whom the most vulnerable are, and articulating a strategy to address these vulnerabilities using a mix of local capacities and external resources.

The outcome of our VCAs was an identification of which strategies are needed to turn target communities' vulnerabilities into capacities. A by-product was also a clear understanding of the ways and processes through which different segments of the community are impacted by hydro-meteorological disasters (women, men, youth, and elders).

More on the Vulnerability and Capacities Assessment (VCA) tools that we utilized can be found in Annex I.

c) Data analysis- GAP analysis, and policy conclusions.
(January-October 2012)

The final phase of my research will be devoted to analyzing and reporting on all the data mined from my community level fieldwork: identification of the clear gaps that emanate from my fieldwork and pathways to transform these gaps into key policy recommendations that address the specific adaptation needs of rural women agricultural producers in Senegal. Thorough institutional and cost-effectiveness analyses will take place during this phase to ensure alignment with local institutional realities and possibilities.

The outcome of this phase will be a publishable peer-reviewed paper on obstacles to climate risk management and gender-specific adaptation needs in the primary sector in 3 rural community case studies in Senegal, and which conclusions appear as externally valid for West Africa.

4. Progress report

As of December 31st 2011, I have been able to finalize Research steps A (case selection) and B (community fieldwork and data collection). I now have remaining the final and most time-intensive step C of my research: data mining and analysis.

Progress Report on Research Step A: Case Selection

After multiple interviews in Dakar with all of the relevant stakeholders involved in disaster risk management and climate service provision, it was confirmed that Kaffrine was indeed a highly climate-disaster prone and vulnerable site where the relevance of my research would be unquestionable. Kaffrine also happens to be a CCAFS research site; thus I was able to benefit from synergies and baseline studies of other existing CCAFS research projects by ANAMS on-site.

Thus I was relatively easily able to zoom in my case selection on three vulnerable communities/village in Kaffrine: Malem Thierign (in the département of Malem Hoddar), Dioly-Mandakh (in the Département of Kaffrine) and Fass Thieken (in the département of Kounghel).

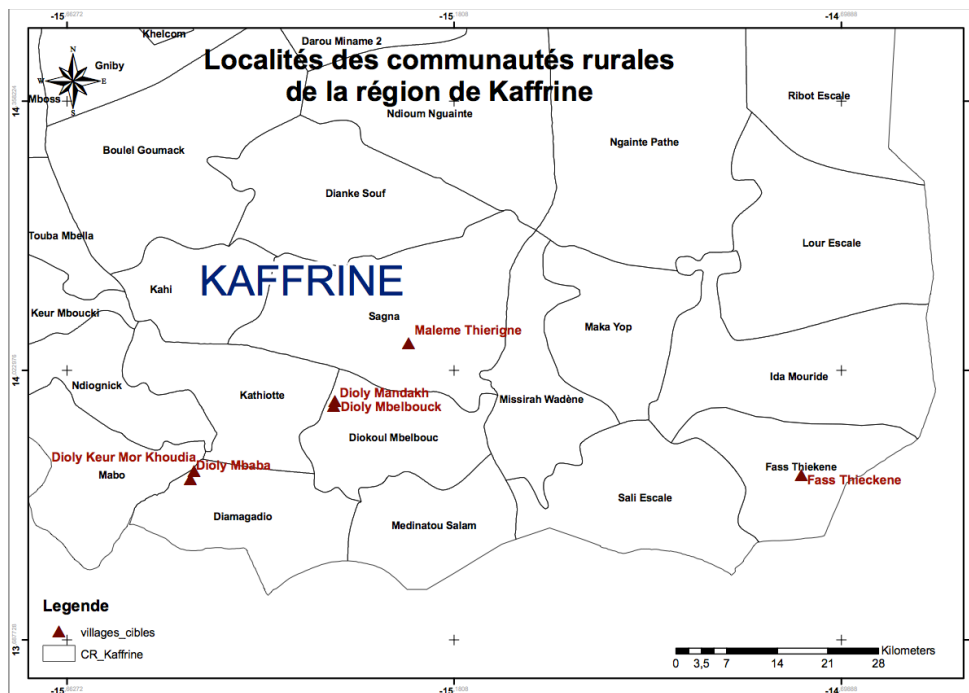


Fig. 2: Location of three target sites in Kaffrine Region, Senegal. Source: CSE

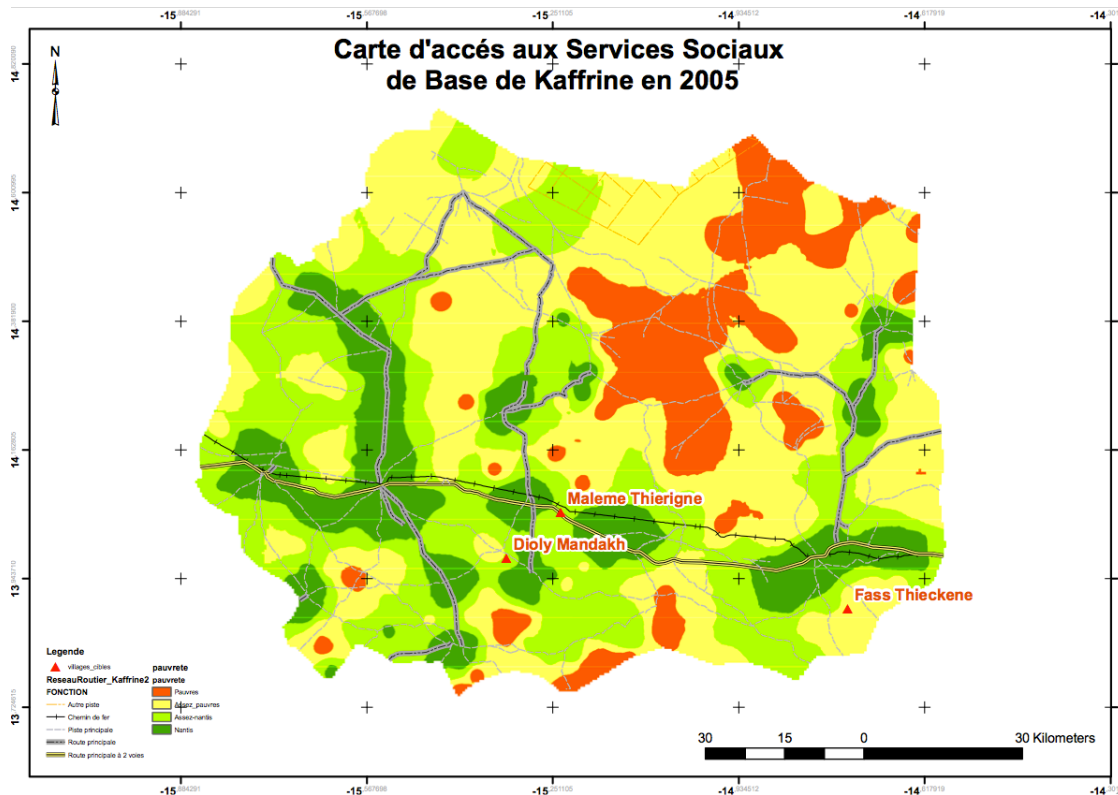


Fig. 3: Access to basic public goods in our three target research sites in Kaffrine Region, Senegal. Source: CSE (Key: green: good access, ok access, yellow, relatively poor, red poor)

Pre-fieldwork visits to all three sites in early June confirmed the accessibility, vulnerability and feasibility of research in all three villages. This pre-research visit also enabled me to make initial contacts with the village leadership, ahead of the start of the investigation. From this visit, the absence of rainfall data records on these three sites from ANAMS was, however, noted.

Progress Report on Research Step B: Community Data Collection

Community fieldwork and data collection constituted the most challenging parts of this research. Indeed, site accessibility during the rainy season (muddy terrain in flooded depression areas), logistics and the sheer manpower demanded to collect and systematize community gender-specific vulnerability data.

In order to overcome these three major obstacles, I allied myself with the largest and most extensive network of community volunteers in Senegal: the Senegal Red Cross Society (*Croix Rouge Sénégalaise- CRS*), with which I entered into a research compact. Through collaboration with the Kaffrine branch of CRS, I was able to overcome the transport, logistical and local terrain knowledge constraints to carrying out my research. Thanks to the generous resources provided by CCAFS, I was able to cover all of the research costs demanded to fuel the CRS research compact.

Furthermore, I utilized CRS's extensive network of volunteers in the Kaffrine region to recruit my research team to carry out the VCAs in my three target research sites. As such 24 Red Cross volunteers, youth between the ages of 24 and 40, were recruited, trained on the Questionnaire in Annex II and transported to the three target sites to help me with data collection. They were provided a modest daily remuneration over the ten days that community data collection lasted.

The collaboration with CRS was a win-win one. CRS was very happy about this collaboration due to the capacity-building it offered to 24 of its volunteers on issues related to climate change and gender. I was able to collect all of my needed gender-disaggregated data on the local impacts, vulnerabilities and capacities to cope with CC in Kaffrine, which I would have never been able to achieve without the support and sheer manpower of my research team.



Stuck in the mud



... On the way to Fass Thieken target site (Kaffrine, Senegal)

Progress Report on STEP C: Data Analysis

I now have all of the collected data from my community fieldwork in Kaffrine catalogued by community with household surveys numbered and separated by gender of respondent. I shall be spending the next eight months looking through this data mining, filing and analyzing. I plan to be done with this last phase by October 2012.

5. Analysis of Findings

I have not yet conducted any analysis of my collected data. I look forward to conducting the analysis in 2012.

6. Conclusion

I have achieved a lot in this first year of my research project. I am on track, and have been able to meet all of my initially planned activities for 2011. Community cases were selected according to pre-defined protocol. Extensive community fieldwork and data collection in my three target sites in Kaffrine, Senegal were complete successfully. As reported in section 4, a number of difficulties were met during the fieldwork, notably muddy terrain and poor accessibility in areas due to heavy rainfall. However even these obstacles were pedagogical. I, along with the research team, were able to observe firsthand the acute vulnerabilities and difficulties that target communities experience as a result of extremes. I was able to overcome these constraints through a solid partnership with the Red Cross Society of Senegal.

The data analysis phase now begins. I look forward to presenting the results from all of my collected data at the end of 2012, towards providing an answer to my research question: “Are there gender-specific climate service needs”.

I am grateful for the generous financial support provided by CCAFS to enable me to undertake this important research project.

ANNEX I

The Vulnerability and Capacities Assessment (VCA) tools that were employed

Kaffrine (Senegal) Research Project

“Are there Gender-specific Climate Service needs”

The Vulnerability & Capacity Assessments (VCAs) Methodology



The tools we will be employing to generate our community vulnerability data are derived from a participatory methods toolbox for assessing communities' vulnerability and capacities to climate hazards, devised by the Red Cross/Red Crescent movement for use by its community-level volunteers for community work programming: the ***Vulnerability and Capacity Assessment (VCA) tools*** (IFRC 2009).

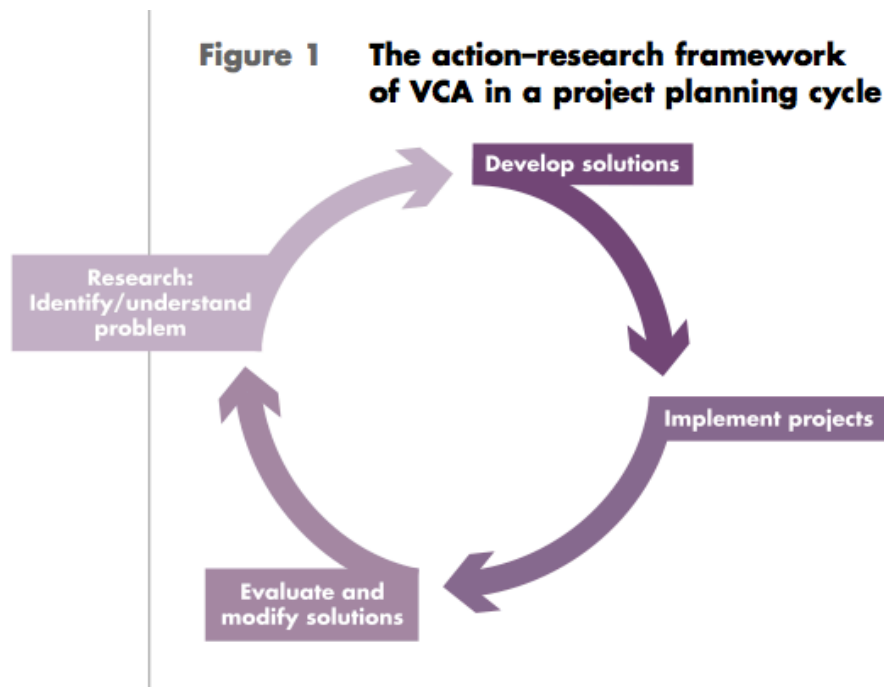
The ***Vulnerability and Capacity Assessment (VCA) toolbox*** uses a range of different tools, which like the hammer, scaffold and measuring meter that one uses to construct a house, are the aides we have used to access data across different segments of the community studied and build a complete picture of the community's Vulnerabilities to and Capacities to address climate changes.

All the data generated across groups using the VCA tools were then triangulated to draw to a complete picture as close to the local reality as possible.

The main attractions of this methodology are its ability to access the most vulnerable groups (women, youth, and elders) and give them a voice within the process of collective solution design, as well as its emphasis on local capacities to address local vulnerabilities, before recourse to external interventions is considered. Additionally is the belief at the center of the VCA methodology that vulnerability is the product of multiple stressors, historically derived from the socio-economic characteristics of the community; climate variability under this understanding is thus solely one factor of vulnerability, out of many others. The output is data on climate vulnerability in the context of the community’s wider vulnerability.

See document: VCA Manual for a full exposition on VCA Tools & Methodology.

The VCA serves first and foremost as a planning tool, at the very beginning of the project cycle, a useful method to identify/understand the problem before devising solutions/policy interventions, and to involve communities from the very outset: in the design of the project’s activities, for their future ownership of these (see fig. 1).



More on the specific Vulnerability and Capacities Assessment (VCA) tools we will be using for the

community assessments in table 1 below.

Note: All the activities detailed in table 1 below were conducted within focus groups (men, women, elders and youth as relevant); save for the final community data validation meeting that will bring the entire community together. For those who have never conducted focus groups in the past, please refer to p. 66 in VCA manual).

Highlighted in Yellow in table 1 are exercises specifically designed to access gender-specific data.

In Red are exercises specially aimed at collecting information on Climate Variability & Change.

Exercise (references in VCA manual)	Target Community sub-segment to participate in exercise	Purpose of Exercise
Community introduction	Village authorities (Mix, all)	Introduction of Research team and of purpose of research
Transect walk (pp. 86-92 in Manual)	Mix (Woman, Man, Youth)	Research team to walk through community scoping and taking note on its most salient features of vulnerability and capacities, accompanied by 3 guides (one woman, man and youth).
Community Mapping: 1) Spatial map 2) Hazard/Risk map 3) Vulnerability maps (places and people) 4) Capacities map (pp. 75-86 in Manual)	Women – Men – Youth & Elders	Mapping exercises will serve to bring to the surface men, women, and age groups’ perspectives on their community, as they see it. Results from these mapping exercises will be confronted across focus groups, towards a more complete picture of vulnerabilities and capacities in the community.
Seasonal calendar: past & present trends (p. 92-97 in Manual)	Women – Men	Exercise to reveal the seasonality of women’s vulnerabilities relative to those of men- during which times of the year are climate impacts felt at their peak?
Historical profile (pp. 98-105 in Manual)	Elders & Youth groups of: - MEN - WOMEN	To get a sense of the community’s history, cultural identity and environmental profile. Essential to put data in context. In this exercise, we ask the group: 1) General historical markers of the community; 2) History of hazards in community; 3) How have you coped with hazards in the

		past?
<p>Institutions and Social network Analysis (Venn diagram) + Assessing the capacity of key community Organizations</p> <p>(see pp. 119-125 and pp. 128-132 in Manual)</p> <p><i>Refer to data collection Sheet 6</i></p>	Women – Men	<p>During the focus group for this exercise, men and women are separated into two different groups and list the institutions and social networks that frame their lives in their community. Following this initial scoping, the capacity of the main local organizations and social networks identified is assessed (see data collection sheet 6), in order to gauge their ability to address and reduce the vulnerabilities of women producers.</p> <p>A comparison of the different diagrams drawn by men and women will show differences in the way men and women perceive the patterns of relationships within the community.</p>
<p>Climate/weather information needs</p>	Women – Men	<p>This newly introduced exercise to the VCA package is a discussion in two distinct groups of men and women, where they are asked separately: 1) What local forecasting techniques do you currently use to make decisions; 2) What do these techniques not tell you? How are they not functioning? WHAT INFORMATION COULD YOU USE MORE OF? Discussion of thresholds</p> <p>2 focus groups: women-men</p> <p>Uses: BUILDS COMMON UNDERSTANDING OF WHAT FORECASTING IS (whether done using local traditional/modern techniques).</p> <p>PROVIDES INSIGHTS ON THE SHORTAGES OF CURRENT LOCAL KNOWLEDGE TECHNIQUES</p> <p>For each identified information need, identify THRESHOLDS for transmission of information.</p>
<p>Direct observation</p> <p>(p. 71 in manual)</p>	Men – Women – Youth - Elders	<p>This activity will be most critical to the understanding and generation of reliable data on the particular climate-related vulnerabilities that people face at the community-level. The purpose of this exercise is to “soak” in the community and bear eyewitness to the vulnerabilities/capacities highlighted by the women and other sub-communities, following the anthropological participant-observant method.</p>

		<p>All observations from this exercise will be duly noted every day and will serve as qualitative input to contextualize the quantitative gender-disaggregated community-level data generated.</p>
<p>DAY TWO: Household Data sampling</p> <p>Household & Village Vulnerability Assessment</p> <p>(p. 107 in Manual)</p> <p><i>Refer to Data Collection sheets 1, 2 and 5</i></p>	<p>Household Head (Women – Men) & members (surveyed separately by gender)</p>	<p>This exercise will serve to generate data on how households and their assets are vulnerable to climate risks.</p> <p>This exercise also makes apparent inter vs. intra-household differences in access to resources.</p>
<p>DAY TWO (Household Data sampling cont’d)</p> <p>Livelihoods and coping strategies analysis</p> <p>(see pp. 109-119 in Manual)</p> <p><i>Refer to Data Collection sheets 1 through 4</i></p>	<p>Household Head (Women – Men) & members (surveyed separately by gender)</p>	<p>How do women specifically cope with climate risks when these occur? Which particular institutional and social mechanisms are triggered in response? What are the pathways of cause and effect?</p> <p>This specific exercise gets us to the heart of understanding the ways in which different members of the household are specifically affected by climate related disasters, which assets they sacrifice in order to cope, and which safety nets they resort to in order cope.</p>
<p>Final Community meeting:</p> <ul style="list-style-type: none"> - Problem tree (pp. 153-159) - Validation of Vulnerabilities, Capacities, Gaps (summary of data collected), with breakout session with Women - Identification of relevant resilience-building interventions - Prioritization of interventions: Ranking matrix (see Data collection sheet 7) 	<p>All</p>	<p>The final community meeting at the end of the study reveals all the vulnerabilities, capacities and gaps that emerged by vulnerable sub-segment in the community and brings them to the surface in front of the entire community, for final validation of Capacity Gaps & relevant vulnerability-reducing/capacity-building strategies by the community.</p> <p>At the end of this meeting, community members identify/validate relevant resilience-building interventions and prioritize these using the Ranking matrix (refer to data collection sheet 7).</p> <p><i>Refreshments/light food needs to be organized for this meeting.</i></p> <p><i>Include a breakout session to give space for women to express themselves.</i></p>

ANNEX II

Annex II shows the household data collection sheets administered to sample households in each of our target sites.



FICHE D'ENQUETE MENAGE D'EVALUATION DES VULNERABILITES ET CAPACITES D'ADAPTATION FACE A L'ALEA CLIMATIQUE

Numéro du questionnaire	/ / / /
Nom du volontaire de la CR	
Nom du superviseur	
Date de l'entretien	
Lieu	

Bonjour, Mon nom est _____. Je suis un volontaire de la Croix-Rouge. Nous sommes ici pour vous poser quelques questions sur votre communauté. Vos réponses seront confidentielles. Vous disposez d'un droit d'accepter ou non de participer. Voulez-vous aider à répondre à ces questions ? Je vous remercie.

Merci de poser la question et attendre la réponse. Ne pas donner des réponses possibles !
Il peut y avoir plus d'une réponse correcte !

1. AGREGATS / DEMOGRAPHIE													
1-1	Nom de la communauté :												
1-2	Répartition du ménage par sexe	MASCULIN				FEMININS				TOTAL			
1-3	Classes d'âge :	0-5	6-	16-	+	0-5	6-	16-	+	0-5	6-	16-	+
		ans	15	49	50	ans	15	49	50	ans	15	49	50
1-4	Chef de famille (homme ou femme)	Femme /_/ Homme /_/											
1-5	Nombre de personnes handicapées ou souffrant d'une maladie chronique	/ / / /											
1-5	Combien de personnes de votre famille peuvent lire et écrire ?	/ / / /											
1-6	Quelle est la principale source de revenu du ménage												
2. DEGRE DE VULNERABILITE DU MENAGE													

2-A : DEGRE DE VULNERABILITE GENERALE					
Items			Oui =1	Non=0	
2-A1	Le chef de ménage exerce t-il une activité génératrice de revenu ?				
2-A2	Le type d’habitat de votre concession est-il en dur / zinc?				
2-A3	Au moins un membre de votre ménage sait-il lire et écrire ?				
2-A4	Avez-vous accès à l’électricité dans votre ménage?				
2-A5	Avez-vous accès à l’eau potable ?				
2-A6	Est-ce qu’il existe au moins une latrine dans votre concession ?				
2-A7	Avez-vous un système de collecte des ordures ?				
2-A8	Avez-vous un système d’évacuation des eaux usées ?				
2-A9	Existe –t-il une structure de santé à proximité (moins de 5 km) de votre domicile ?				
2-A10	Des membres du ménage adhèrent –ils à des organisations communautaires de base ou d’autres réseaux de solidarité locaux				
Total			/		
Résumé : Degré de vulnérabilité			1-3	4-6	7-10
			Forte	Moyenne	Faible
2-B : EVALUATION DE LA VULNERABILITE DES SOURCES DE REVENUS FACE AUX ALEAS					
2-B1 : IDENTIFICATION DES ALEAS QUI TOUCHENT LE FOYER					
Quels sont les aléas auxquels vous êtes exposés pouvant menacer vos moyens subsistance ?			Oui	Non	
3-1	Fortes pluies				
3-2	Eaux de ruissellement (<i>Yoolé / Waale</i>)				
3-3	Feux de brousse				
3-4	Déficit de pluies				
3-5	Sécheresse				
3-6	Pluies irrégulières				
3-7	Tempêtes				
3-8	Pluies hors-saisons				
...					
...					
2-B2 : IDENTIFICATION DES MOYENS DE SUBSISTENCE AU SEIN DU MENAGE					
Quels sont toutes les sources de revenus au sein du ménage ? (hommes / femmes)			Oui	Non	
4-1	Agriculture				
4-2	Pastoralisme				
4-3	Petit commerce				

Notes:

NB : Pour les tableaux suivants, obtenir la permission au chef de famille et s'entretenir avec hommes et femmes séparément.

3. EVALUATION DES CAPACITES D'ADAPTATION : ABILITES A FAIRE FACE AUX ALEAS CLIMATIQUES						
3.A- IDENTIFICATION DES ACTIFS TOUCHES EN CAS DE CATASTROPHE						
Aléa/Catastrophe	Actifs touchés					Impacts sur les actifs?
	<i>Naturel</i>	<i>Physique</i>	<i>Financier</i>	<i>Humain</i>	<i>Social</i>	
Fortes pluies	-					

3.B- IDENTIFICATION DES STRATEGIES DE REPONSE ET CAPACITES D'ADAPTATION
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Aléas	Actifs du ménage touchés (identifiés par Femmes + Hommes)				Stratégie de réponse courante (Quels actifs sont réduits/sacrifiés pour assurer la survie? Quels stratégies adoptez- vous pour pouvoir survivre? Quelles sont les stratégies spécifiquement identifiées par les femmes ? Comment répondent-elles lorsqu'il y-a aléa ? Quelles sont les stratégies des jeunes?)	Mesures ou mécanismes à adopter pour réduire ou annuler l'impact sur les actifs ? QUEL EST LE GAP A RESORBER POUR ASSURER UNE PARFAITE RESILIENCE DU MENAGE /UNE PARFAITE APTITUDE A FAIRE FACE A L'ALEA SANS AIDE EXTERNE (Solutions identifiées par les femmes –les hommes)

N'oubliez pas de remercier les personnes interrogées de leur temps.