UNDERSTANDING WOMEN'S NEEDS FOR WEATHER AND CLIMATE INFORMATION IN AGRARIAN SETTINGS

WEATHER AND CLIMATE INFORMATION IS VITAL TO FARMERS

Climate and weather services deliver data, statistical analyses, tools, and other information about historical weather patterns and expected future climate conditions. These include weather mapping tools, SMS weather alerts, global precipitation datasets, and wireless microclimate sensors. These services have the potential to:

- Reduce risks to agricultural production
- Boost agricultural yields by enabling appropriate crop and variety selections
- Build resilience in rural populations

YET WEATHER AND CLIMATE SERVICES OFTEN LACK APPROPRIATE GENDER SENSITIVITY

1. Common data collection tools (i.e. household surveys) often fail to capture women's and men's specific climate information needs.
2. Where men's and women's needs are identified, the common practice of treating women and men as undifferentiated categories obscures the different needs, vulnerabilities, and opportunities with regard to weather and climate information that emerge *among* women and *among* men.
3. Different activities associated with men and women give rise to different awareness of climate and environmental issues, and the use of different sources of information.

WEATHER AND CLIMATE SERVICES ALSO LACK UNDERSTANDING OF DIFFERENT VULNERABILITIES WITHIN GENDERS

1. The literature on gender and adaptation in rural contexts is littered with oversimplified framings of women as a group that often miss the different needs, vulnerabilities, and opportunities *among* women in the first place.
2. To fully understand women's needs, we must first understand that **women are not themselves a unitary category of weather and climates services** in a particular place. Instead, the experience of being a women is greatly shaped by the intersection of gender with other identity categories, such as **seniority** or **ethnicity**.
3. This leads to **different levels of exposure, sensitivity and adaptive capacity among women in the same community or even household**.

LESSONS FROM NGETOU MALECK, SENEGAL

A case study was conducted in Ngetou Maleck, a community in Senegal's Kaffrine Region, to understand women's needs for weather and climate information in agrarian settings. The study demonstrates that even at the village and household levels, women have different climate and weather information needs, and differing abilities to act on that information.

43 INTERVIEW SUBJECTS

8 WEEKS OF FIELD WORK

23 MEN INTERVIEWED

20 WOMEN INTERVIEWED

3401 DATA POINTS CODED IN THE INTERVIEWS

Though Living in the Same Village, Men and Women Experience Vulnerabilities Differently....

Top Sources of Vulnerability (Women)	Top Sources of Vulnerability (Men)
Access to plows (60 percent)	**Access to inputs** (65 percent)
Access to inputs (50 percent)	**Access to water** (52 percent)
Food scarcity (45 percent)	**Access to plows** (43 percent)
Access to water (45 percent)	Environmental shocks (39 percent)
Health-related challenges (40 percent)	**Access to seeds (35 percent)**
Access to seeds (40 percent)	**Food scarcity (35 percent)**
Access to animal traction (26 percent)	Access to farmland (31 percent)
Access to machinery (20 percent)	Access to electricity (31 percent)

Women and men, as aggregated groups, experience different assemblages of vulnerability.

While women and men share similar rates of concern for access to agricultural input, fertilizer, and seeds, men report much higher rates of concern for **environmental shocks**, **access to farmland**, and **access to electricity**.

Women, on the other hand, appear to have greater levels of concern of **health-related challenges**, **access to animal traction**, and **access to machinery**.

...But Not All Women Experience the Same Vulnerabilities

When we desegregate the women of Ngetou Maleck by their seniority and access to livelihoods resources, we see differentiated assemblages of vulnerabilities among women.

Junior women with animals but without equipment have much higher rates of concern for food scarcity than senior women. This is because they are often busier than senior women with fulfilling domestic duties, and without productivity saving equipment, **have less time to dedicate to other non-farm income generating activities**.

Because they have fewer domestic responsibilities, senior women can cultivate sooner than junior women and have marginally **greater opportunity to make variety selections that can address cycle length.**

This suggest that **climate information will have a slightly greater impact on the decisions of senior women** relative to junior women in this group.

Top 5 vulnerabilities among women	Categories of women, by access to productive tools			
	Junior Women without plows or animal traction	Junior women without plows, with animal traction	Senior women without plows or animal traction	Senior women without plows, with animal traction
Access to plows	50 percent	78 percent	50 percent	100 percent
Access to inputs	33 percent	67 percent	50 percent	33 percent
Food Scarcity	17 percent	78 percent	0 percent	33 percent
Access to Water	0 percent	11 percent	0 percent	0 percent
Health-related Challenges	17 percent	44 percent	50 percent	0 percent

Implications for Weather and Climate Service Providers.

If weather and climate services are to address the widest possible set of needs in a given population, they must identify the different vulnerability groups within a target population, understand the aspects of identify and livelihoods, and why they address these vulnerabilities through particular decisions and actions. By understanding this logic of decision-making, designers of climate services can understand how different forms of information and services fit into the existing decisions of communities.

This infographic was produced by the Humanitarian Response and Development Lab (HURDL) at Clark University and Integra. This study is based on the findings of the report: "Understanding women's needs for weather and climate information in agrarian settings: The case of Ngetou Maleck, Senegal". The full report is available here. For more information, contact: Ed Carr, Director, International Development, Community, and Environment, edcarr@clarku.edu