



GENDER AND CLIMATE CHANGE ADAPTATION IN UGANDA: INSIGHTS FROM RAKAI

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Differences in the roles and responsibilities of men and women in farm households are likely to influence their capacity to adapt to climate change as well as the choice of adaptation strategies. However, governments, development agencies, and NGOs often lack the information needed to facilitate gender-sensitive adaptation to climate change. This brief summarizes research on key gender-related findings regarding climate change perceptions, adaptation strategies and information needs based on an intra-household survey of women and men in Rakai in south-central Uganda, one of the sites where the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) is working. We asked the same set of questions to both women and men. The similarities and differences in their answers provide important insights for the design of policies and programs to meet their specific needs.

GENDERED PERCEPTIONS OF CLIMATE SHOCKS AND CLIMATE CHANGE

Respondents were asked about their perceptions of short-term weather-related shocks (e.g. droughts and floods) over the last five years, as well as about long-run changes in weather patterns they have experienced over their lifetime (climate change). Women were more likely to report experiencing any climate shock. However, there are differences in perceptions of the occurrence of extreme weather-related events. Women were more likely to report droughts, while men were more likely to report observing storms. Both observed a low frequency of floods.

Almost all men and women reported having experienced climate change over their lifetime (Figure 1). When asked about specific types of changes, more women than men reported perceiving increasing temperatures, and more intense droughts. Roughly half

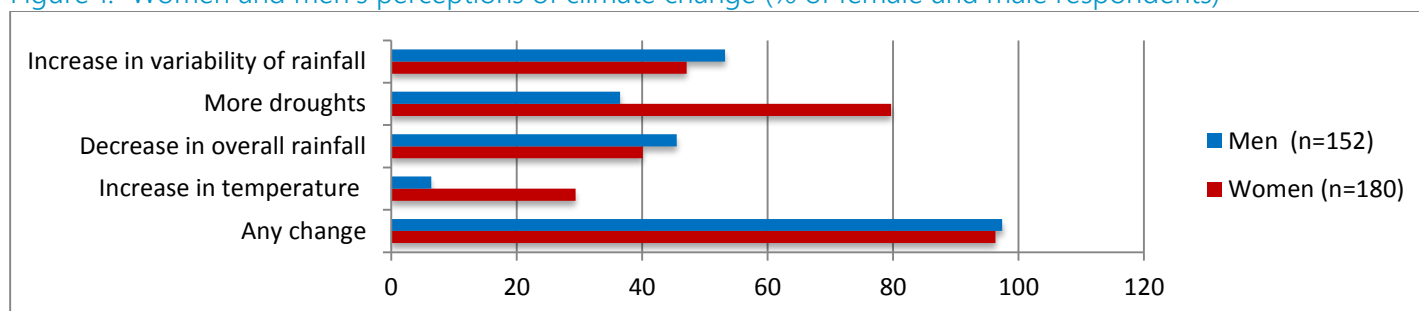


Image: Women farmers participating in group discussion (credit: E. Ampaire).

of both sexes perceived an increase in the variability of rainfall, and a decrease in the amount of rainfall, over their lifetimes.

In terms of perceived impacts of climate change, women, compared to men, were more likely to notice impacts on agricultural productivity (87% vs. 72%), livestock problems (17% vs. 8%) and reduced water availability (18% vs. 9%). Men and women were roughly equally likely to report that climate change contributes to poverty (36% to 32%) and 7% and 8% of men and women, respectively, reported that climatic changes were favorable for agricultural production. Women were slightly more likely to note health problems as a result of observed climate changes than were men.

Figure 1. Women and men's perceptions of climate change (% of female and male respondents)



Source: IFPRI-CCAFS Uganda household survey.

CLIMATE INFORMATION SERVICES AND GENDER

Long-term changes in weather patterns make it essential for smallholders to have access to targeted, timely, credible and trusted information on the nature of these changes and appropriate response options. This includes information on when and how to plant, what inputs to apply and when to harvest the produce. More men than women in Rakai reported having access to all types of such information (Table 1). Over 80% of men received short-term and seasonal weather forecasts, forecasts of the start of the rains, and information on pest and disease outbreaks. Seventy percent or more of the women interviewed reported accessing information on pest and disease outbreaks, start of the rains, and seasonal weather forecasts. Although women are responsible for much of the post-harvest handling of food, just over one-half of them received information related to these practices.

Women are just as likely, if not more likely, to use the information that they do receive. A significantly higher number of women than men reported being able to use information related to droughts, seasonal weather forecasts, and information on livestock production. This information supports the activities they are largely responsible for, such as raising sheep, goats and chickens. More men than women were making use of short-term weather forecasts, information that is critical for many of the cropping decisions they make.

Access to different sources of weather and agricultural-related information (i.e. extension agents, radio programs, etc.) is largely structured by gender and cultural factors. A significantly higher share of men have access to such information from all sources, with the exception of religious groups (Table 2). Radio reaches almost all men and 86% of women. On the other hand, agricultural extension services are reaching two-thirds of male and less than one-third of female farmers.

Table 1. Access to and use of climate and agricultural information (% of male and female respondents)

Type of information	Access to information			Use of information**		
	Women (N=187)	Men (N=156)	Significant difference	Women	Men	Significant difference
Pest and disease outbreak	83	90	*	63	66	
Seasonal weather forecast	80	81		93	74	*
Forecast of the start of the rains	73	84	*	94	93	
Crop production	69	74		74	72	
Droughts	64	78	*	77	45	*
Livestock production	60	79	*	74	55	*
Post-harvest handling	56	72	*	55	66	
Short-term weather forecast	37	91	*	39	57	*
Long-term weather forecast	18	53	*	65	57	

Source: IFPRI-CCAFS Uganda household survey.

*Significant difference between men and women.

**Percent of those with access to information

Women are not accessing agricultural or climate-related information from newspapers, although one-third of men do. Similarly, TV reaches only 2% of women and 14% of men. Cell phones are starting to be used for these purposes by 12% of men and 6% of women. The internet has yet to reach farmers in this area. Farmers' organizations are reaching 36% of men and only 12% of women with agricultural and climate knowledge. Agricultural shows and farmer field schools are sources of information for less than one-fifth of men and very few women.

There is clearly much progress to be made by climate information providers and agricultural extension and development agents in order to better understand and serve the needs and preferences of both men and women. Initiatives such as the East African Dairy Development Program's training of volunteer farmer trainers (half of whom are women) and other efforts to strengthen capacity of female extension agents and farmers are starting to yield results, with potentially high impacts given the large agricultural information and services gap that women farmers in Uganda still face, as this evidence shows.

Table 2. Sources of climate and agricultural information for women and men (% women and men with access)

Sources of Information	Women (N=187)	Men (n=156)	Significant difference
Neighbors	91	96	*
Radio	86	98	*
Traditional forecasters or indigenous knowledge	74	76	
Family members	52	72	*
Religious groups	36	31	
Government extension workers	31	67	*
NGOs	31	68	*
Community meetings	24	44	*
Farmer organizations or co-operatives	12	36	*
Agri-service providers	12	40	*
Cell phones	6	12	*
Farmer field schools	6	12	*
Schools/teachers	4	14	*
TV	2	14	*
Newspaper/bulletin	1	33	*
Agricultural shows	1	20	*

Source: IFPRI-CCAFS Uganda household survey.

*Significant difference between men and women.

GENDER DIFFERENCES IN ADAPTATION TO CLIMATE CHANGE

The majority of households in Rakai are pursuing adaptation strategies in response to perceived climate change. However, there are significant differences in the rate of adaptation between men and women, which are likely due not only to differences in the type of climatic change perceived but also differences in access to and control over resources and decision-making authority. Eighty-one percent of men and 67% of women reported making changes in their agricultural, livestock or livelihood practices in response to perceived climate changes. This amounts to a statistically significant difference, suggesting that men in Rakai are more responsive to perceived climate change than are women.

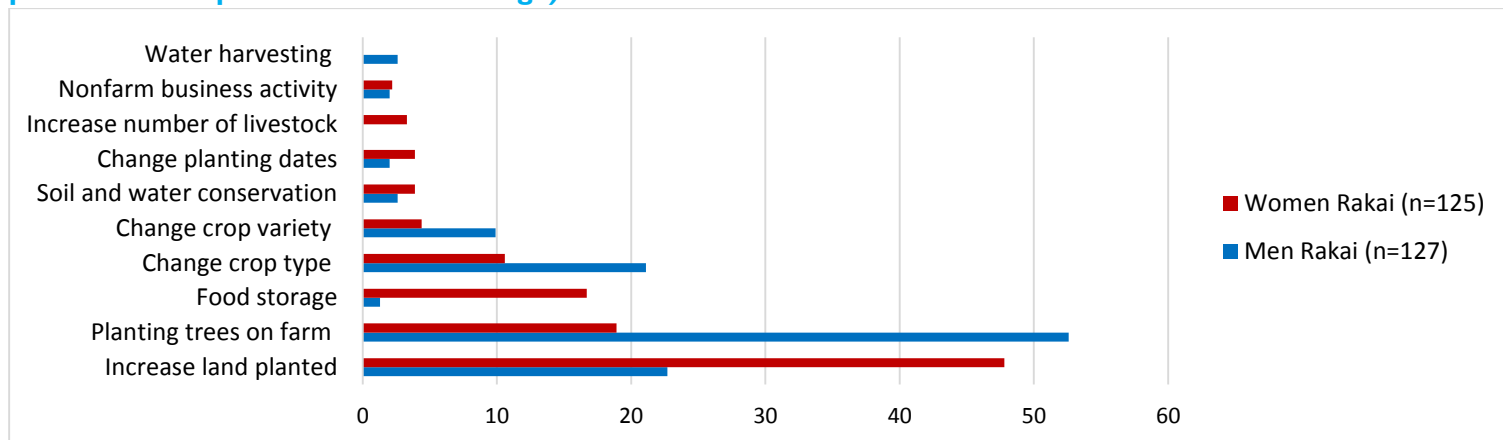
Women who did not take up any adaptation options typically reported that they did not know what to do, that they did not have sufficient financial resources to implement desired changes, or that they did not see a need to make changes. This highlights the highly vulnerable position many women are in with respect to climate change. Most men who did not adapt emphasized the financial challenges.

To change farm management practices in response to climatic shocks and long-term climate change requires prior *awareness* of these practices. We find that significantly fewer women are aware of many practices than are men, including water harvesting, manure management, more efficient use of fertilizer, improved grain storage, cover cropping, as well as rangeland management practices. More women than men, on the other hand, reported being aware of minimum tillage practices, livestock management practices and improved stress-tolerant crop varieties.

In terms of adaptive changes being made in response to climate change (Figure 2) in this coffee/banana-growing region, planting trees on-farm (agroforestry) was reported by almost 53% of men and 19% of women. Women have adjusted by cultivating more land (48% vs. 23% of men) and investing in food storage (17% vs. 1% of men). Both men and women reported changing crop types and varieties in response to perceived climate change.

Few men and no women reported harvesting water, and only 3% of men and 4% of women have undertaken soil or water conservation activities as a response to climate change. These activities are likely perceived as less urgent due to the focus on perennial crops, but will likely become more important under more variable water availabilities and growing land degradation in the future.

Figure 2. Adaptations to climate change (% of female and male respondents reporting changing agricultural practices in response to climate change)



Source: IFPRI-CCAFS Uganda household survey.

DISCUSSION AND CONCLUSIONS

Both rural men and women are aware of climate change and many are taking actions to deal with its adverse consequences. But women are more constrained doing so than men due to their lack of access to information on options for adaptation and even to information on the need to be investing in measures, such as soil and water conservation, for example. This puts everyone, not just women, in a more vulnerable position with respect to livelihoods and food security in the face of an increasingly variable climate, than needs to be the case.

Having access to weather and agricultural information will be essential to overcome this challenge. Women in Rakai are clearly not getting equal access to key information needed to produce food more effectively and efficiently. As long as women continue to be much less aware than men of appropriate practices, strategies and options that can enhance their resilience to a changing climate, investments in climate and agricultural adaptation will not reap the benefits they set out to generate.

Encouragingly, we did find that when women, as well as men, have access to appropriate information, most say they are able to make use of it. This suggests that interventions that improve access to, and more equitable reach of, information will have positive impacts in terms of facilitating adaptive behavioral changes.

FURTHER INFORMATION:

Twyman J, Green M, Bernier Q, Kristjanson P, Russo S, Tall A, Ampaire E, Nyasimi M, Mango J, McKune S, Mwangera C, Ndourba Y. 2014. Gender and Climate Change Perceptions, Adaptation Strategies, and Information Needs: Preliminary Results from Four Sites in Africa. CCAFS Working Paper No. 83. Copenhagen, Denmark. Available online at: <http://ccafs.cgiar.org/publications/adaptation-actions-africa-evidence-gender-matters#.VG054ocg25A>

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