

CCAFS EAST AFRICA

Site: Albertine Rift/Hoima, Uganda



RESEARCH PROGRAM ON
**Climate Change,
Agriculture and
Food Security**



Photo: P. Kimeli (CCAFS)

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Content

● Introduction	3
● Map	4
● Demography and basic site characteristics	5
● Changes in farming practices and drivers of changes in resources	6
● Livelihood diversification	7
● Food security	8
● Collective action in natural resource management (NRM)	10
● Membership of organisations and organisational agendas	11
● Household assets	12
● Networks of information	13
● Organisational priorities	16

Introduction

The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) is a strategic partnership of CGIAR and Future Earth led by the International Center for Tropical Agriculture (CIAT). CCAFS brings together the world's best researchers in agricultural science, development research, climate science and Earth System science to identify and address the most important interactions, synergies and trade-offs between climate change, agriculture and food security.

CCAFS is focusing its research for development efforts in five regions, East and West Africa, South and Southeast Asia as well as Latin America, working in 25 research sites. The regions represent areas that are particularly vulnerable to climate change, and the sites are focal locations to generate knowledge and learning that can be applied and adapted to other regions worldwide.

Extensive baselines have been implemented at all CCAFS sites and consist of analysed information collected at three levels: households, communities and organisations. The baselines capture the big picture of how farmers are changing their practices in light of climate change and other pressures. The aim is to revisit the same communities and households in five and again in ten years to document changes in livelihoods, resource management practices and other factors over time

and update these indicator documents accordingly. The CCAFS baseline is a key component of the program's monitoring and evaluation system.

This document series compiles key indicators from the three levels of the baseline for each site. Indicators include: demography and basic site characteristics of each site, rainfall distribution, changes in farming practices and land management, income sources, food security and food sources, asset ownership by households and involvement in organisations and more.

This CCAFS baseline indicator document was developed for the CCAFS site at Albertine Rift/Hoima, in Uganda.

The baseline indicator series is complemented by CCAFS site atlases, that include site maps with climate information, biophysical characteristics and socio-economic factors. Site maps are available at: www.ccafs.cgiar.org/atlas-ccaafs-sites

Download the baseline tools, data and reports:
www.ccafs.cgiar.org/resources/baseline-surveys

Get in touch:
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Sources

Throughout this document the sources of data for the indicators are colour coded as follows:



CCAFS Household baseline study



CCAFS Village baseline study

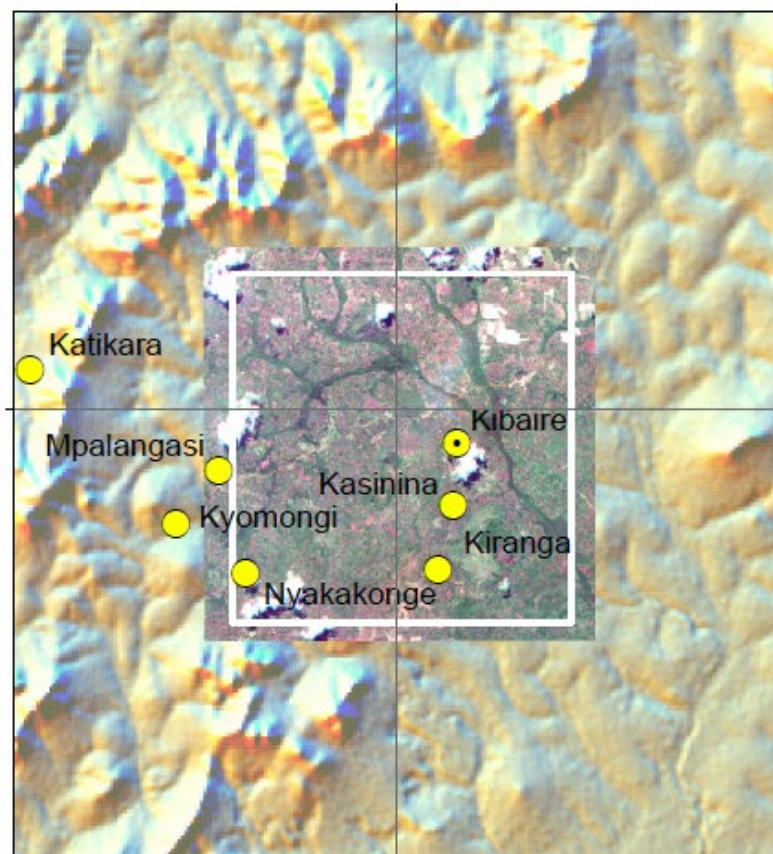


CCAFS Organisational baseline study

Map

Country: Uganda

CCAFS Sampling Frame: Albertine Rift - Hoima



CCAFS Site Name (ID):
Albertine Rift (UG01)

CCAFS Sampling Frame
Name (ID): Hoima (03)

CCAFS VBS / OBS Village



CCAFS HBS Village



Coordinates of the CCAFS
Sampling frame

31.546E 1.445N
31.546E 1.535N
31.457E 1.535N
31.457E 1.445N

□ Site location

Source: Förch W et al. 2013. Core Sites in the CCAFS Regions: East Africa, West Africa and South Asia, Version 3. Copenhagen: Denmark. CCAFS

Demography and basic site characteristics

	Baseline	Mid-term	Final
Ratio of women headed households	21%		

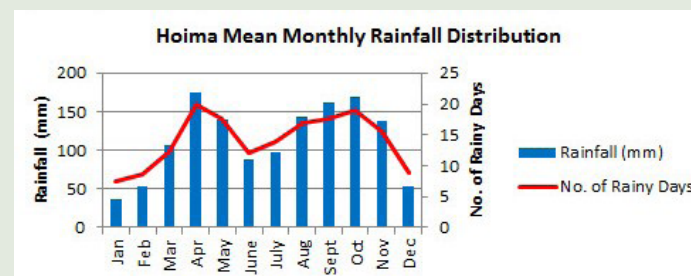
% households of different sizes

Number of people in the household	Baseline	Mid-term	Final
1	6%		
2	7%		
3	7%		
4	11%		
5	11%		
6	16%		
6+	41%		

Area of land cultivated (ha)*	182.49		
Average (mean) per household (ha)	1.30		

Highest level of education obtained by any household member

No formal education	8%		
Primary	46%		
Secondary	33%		
Post-secondary	14%		



Source: MarkSim¹

Ratio of local organisations to total number of organisations named*

	Baseline	Mid-term	Final
Men's group	4/14		
Women's group	10/20		

* Organisations have been recoded by CCAFS researchers from original data (participant perceptions of community, local and beyond local) to categories of local and external.

*Area of land cultivated (ha) is the total amount of owned or rented land used for growing food or aquaculture

¹Source: Jones P G, Thornton P K, Diaz W and Wilkens P W. 2002. MarkSim, a computer tool that generates simulated weather data for crop modeling and risk assessment. Version 1, 2002. CD-ROM and Users Manual. CIAT, AA6713, Cali, Colombia, 87 pp.

Changes in farming practices and drivers of changes in resources

% households introducing 3 changes or more

	Baseline	Mid-term	Final
Crop	46%		
Water	0%		
Soil	20%		
Tree/agroforestry	75%		
Livestock	17%		

Adaptation

% households reporting changes to their agricultural practices

0-1 change	16%		
2-10 changes	47%		
11 or more changes	37%		

Mitigation

% households doing

Tree management*

Yes	75%		
No	25%		

Soil management

None	69%		
Some	31%		

Intensification

None	24%		
Low	68%		
High	9%		

Productivity

No Increase	52%		
Some increase	48%		

Drivers of changes to crop production and land management

% households reporting this driver

	Baseline	Mid-term	Final
Markets	77%		
Weather/climate	46%		
Pest and Diseases	51%		
Labour	46%		
Land	54%		
Projects	21%		

Drivers of changes to livestock production*

% households reporting this driver

Markets	67%		
Weather/climate	3%		
Pest and Diseases	44%		
Labour	19%		
Projects	9%		

Drivers of change in the community

	Men			Women		
	Baseline	Mid-term	Final	Baseline	Mid-term	Final
Frequency with which they were mentioned in group discussions						
Population Growth	2			0		
Deforestation	1			1		
Pest and Diseases	0			0		
Information/Knowledge	0			0		
Land Demarcation/fragmentation	0			0		
Soil degradation/Erosion	0			0		
Rainfall Changes	0			0		
Charcoal Burning/Fuel	1			1		
Government	3			1		
Forest Fire/Bush burning	0			0		
Overuse	0			0		
Spiritual/Cultural/Religious	0			0		
Invasive tree species	0			0		
Increase in wealth	0			0		
Increase in livestock	0			0		
Social/Community conflicts	0			0		
Infrastructure	0			1		

Livelihood diversification

	Baseline	Mid-term	Final
Source of Cash Income other than own farm			
Employment on someone else's farm	41%		
Other off-farm employment	23%		
Business	34%		
Remittances/gifts	37%		
Payments for environmental services	2%		
Payments from government or other projects/programs	8%		
Loan or credit from a formal institution	16%		
Informal loan or credit	31%		
Renting out farm machinery	5%		
Renting out your own land	12%		
No off-farm cash source	10%		
Product diversification			
% of households			
1-4 products (low)	16%		
5-8 products (intermediate)	62%		
9 or more products (high)	22%		
Selling/Commercialization Diversification:			
% of households			
No products sold	7%		
1-2 products sold (low)	29%		
3-5 products sold (intermediate)	46%		
6 or more products sold (high)	18%		

Food security

Food Security Index

% households	Baseline	Mid-term	Final
More than 6 hunger months/year	10%		
5-6 hunger months/	9%		
3-4 hunger months/	16%		
1-2 hunger months/	35%		
Food all year round/No hungry period	31%		

Food security organisational linkages

Men groups		Baseline	Mid-term	Final
Organisation receives				
Funding		0		
Capacity Building		1		
Food		0		
Organisation provides				
Funding		0		
Capacity Building		1		
Food		0		
Women groups		Baseline	Mid-term	Final
Organisation receives				
Funding		2		
Capacity Building		2		
Food		2		
Organisation provides				
Funding		2		
Capacity Building		1		
Food		1		

Source of food during highest and lowest shortage months

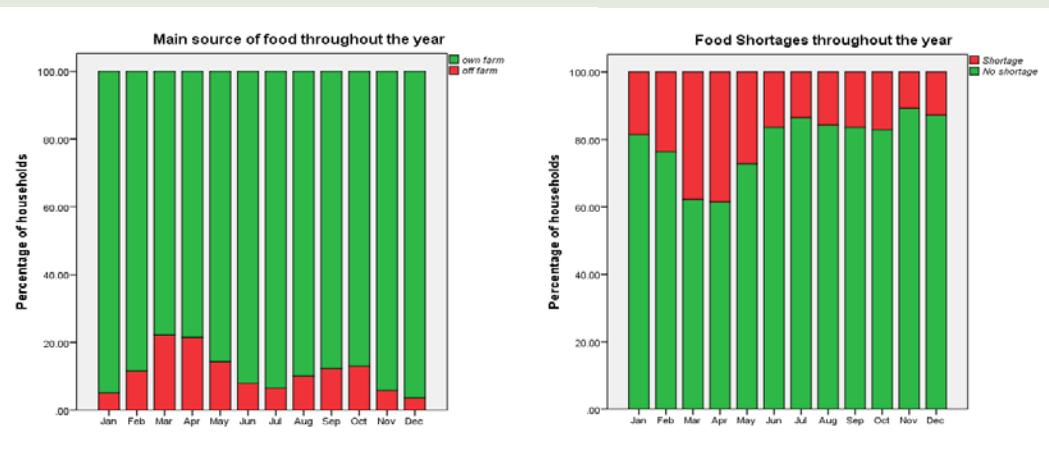
	Baseline	Mid-term	Final
% households mainly consuming from own farm in the month of highest shortage	79%		
% households mainly consuming from own farm in the month of lowest shortage	94%		

Ratio of local organisations to total number of organisations named in each area of food security work*

Men's group	Baseline	Mid-term	Final
Availability	0/2		
Access	0/1		
Utilisation	0/0		
Women's group	Baseline	Mid-term	Final
Availability	4/16		
Access	2/9		
Utilisation	2/6		

* Organisations have been recoded by CCAFS researchers from original data (participant perceptions of community, local and beyond local) to categories of local and external.

These charts are taken from the Household Baseline Survey - Food Security Section



Collective action in natural resource management (NRM)

Resource	Gender	Discussed	Baseline	Mid-term	Final
Is there an issue with the resource?					
Irrigation	M	No			
	F	No			
Farmland	M	Yes	reduced soil fertility and low yields		
	F	Yes	Soil fertility is declining		
Forest	M	Yes	Encroached into and decreasing in size		
	F	No			
Pasture	M	No			
	F	No			
Markets	M	Yes	Some in good condition, others not.		
	F	No			
Is there a problem of access to the resource?					
Irrigation	M	No			
	F	No			
Farmland	M	Yes	private land. Land fragmented		
	F	Yes	private land. Some hire land for cultivation.		
Forest	M	Yes	Owned by government leased to individuals. Government regulates acces & use		
	F	Yes	Owned by government leased to individuals.Access denied by owner		
Pasture	M	No			
	F	Yes	Leased by government to individuals. Private ownership limits access		
Markets	M	Yes	Managed by local council		
	F	No			
Is there any local action in place to address the problem?					
Irrigation	M	No			
	F	No			
Farmland	M	No			
	F	No			
Forest	M	No			
	F	No			
Pasture	M	No			
	F	No			
Markets	M	No			
	F	No			

Membership of organisations and organisational agendas

% households with at least one member belonging to organised groups

	Baseline	Mid-term	Final
Tree nursery/tree planting	4%		
Water catchment/management	3%		
Soil improvement related	4%		
Crop improvement related	3%		
Irrigation	2%		
Savings/credit related	16%		
Agricultural product marketing	4%		
Agricultural productivity enhancement related	7%		
Seed production	4%		
Vegetable production	4%		
Other group not mentioned above?	2%		
No groups	74%		

Ratio of local organisations involved in Natural Resource Management to total number of organisations involved in NRM*

	Baseline	Mid-term	Final
Men's group	1/6		
Women's group	0/4		

** Organisations have been recoded by CCAFS researchers from original data (participant perceptions of community, local and beyond local) to categories of local and external.*

Household assets

% household with assets by type	Baseline	Mid-term	Final
Basic level	9%		
Intermediate level	62%		
High level	29%		

% households ownership

Transport

Bicycle	66%		
Motorcycle	17%		
Car or Truck	4%		

Production

Tractor	1%		
Mechanical Plough	0%		
Mill	1%		
Water pump/Treadle pump	0%		
Thresher	0%		
Boat	0%		
Fishing Nets	1%		

Energy

Solar Panel	5%		
Generator	3%		
Battery	5%		
Biogas Digester	0%		
LPG	0%		

Information

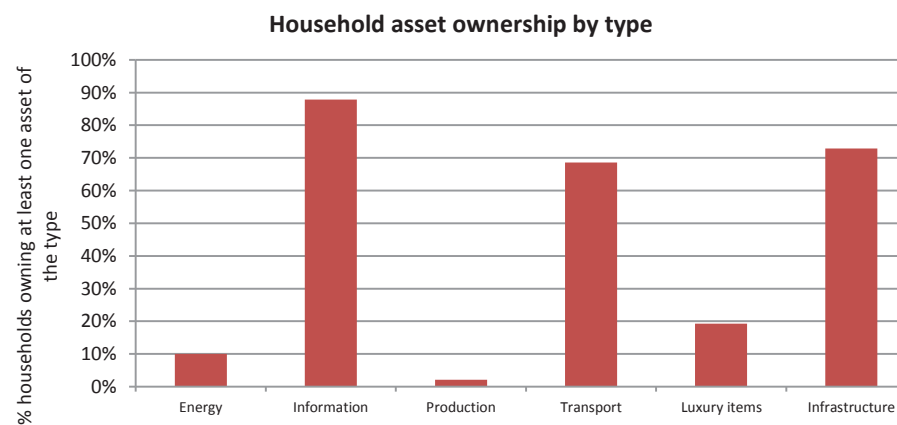
Radio	86%		
Television	6%		
Cell Phone	60%		
Computer	0%		
Internet Access	0%		

Luxury

Refrigerator	1%		
Air Conditioning	0%		
Electric Fan	1%		
Bank Account	19%		

Infrastructure

	Baseline	Mid-term	Final
Improved storage facility for crops	14%		
Water storage tank	4%		
Well/borehole	11%		
Running/tap water in dwelling	3%		
Electricity from a grid	1%		
Improved housing	37%		
Improved roofing	64%		
Separate housing for farm animals	37%		



Networks of information

Networks of information - Men Group

	Baseline	Mid-term	Final
Start of season/rainfall/drought			
Family	Yes		
Friends	No		
Neighbours	No		
Extension workers	No		
Organisations	Yes		
Radio	Yes		
TV	Yes		
Newspaper	Yes		
Personal observation	Yes		
Functions/Meetings	No		

Networks of information - Men Group

	Baseline	Mid-term	Final
Livestock & land husbandry			
Family	No		
Friends	Yes		
Neighbours	No		
Extension workers	No		
Organisations	Yes		
Radio	No		
TV	No		
Newspaper	No		
Personal observation	Yes		
Functions/Meetings	No		

Networks of information - Men Group

	Baseline	Mid-term	Final
Type of seed			
Family	Yes		
Friends	No		
Neighbours	No		
Extension workers	No		
Organisations	Yes		
Radio	Yes		
TV	No		
Newspaper	No		
Personal observation	No		
Functions/Meetings	No		

Networks of information - Men Group

	Baseline	Mid-term	Final
Market information			
Family	No		
Friends	Yes		
Neighbours	No		
Extension workers	No		
Organisations	Yes		
Radio	Yes		
TV	No		
Newspaper	Yes		
Personal observation	No		
Functions/Meetings	Yes		

Networks of information - Men Group

	Baseline	Mid-term	Final
Pest & diseases			
Family	No		
Friends	No		
Neighbours	Yes		
Extension workers	No		
Organisations	Yes		
Radio	No		
TV	No		
Newspaper	No		
Personal observation	No		
Functions/Meetings	No		

Networks of information

Networks of information - Women Group

	Baseline	Mid-term	Final
Marketing			
Family	No		
Friends	Yes		
Neighbours	No		
Extension workers	No		
Organisations	Yes		
Radio	Yes		
TV	Yes		
Newspaper	Yes		
Personal observation	No		
Functions/Meetings	Yes		

Networks of information - Women Group

	Baseline	Mid-term	Final
Land preparation			
Family	No		
Friends	No		
Neighbours	Yes		
Extension workers	Yes		
Organisations	Yes		
Radio	Yes		
TV	No		
Newspaper	No		
Personal observation	No		
Functions/Meetings	No		

Networks of information - Women Group

	Baseline	Mid-term	Final
Disease control			
Family	Yes		
Friends	Yes		
Neighbours	Yes		
Extension workers	No		
Organisations	Yes		
Radio	Yes		
TV	No		
Newspaper	No		
Personal observation	No		
Functions/Meetings	No		

Networks of information - Women Group

	Baseline	Mid-term	Final
Planting			
Family	No		
Friends	Yes		
Neighbours	Yes		
Extension workers	No		
Organisations	Yes		
Radio	Yes		
TV	No		
Newspaper	No		
Personal observation	No		
Functions/Meetings	Yes		

Networks of information

% of households receiving weather-related information			
	Baseline	Mid-term	Final
Start of the rains	58%		
Forecast of extreme events	51%		
Forecast of pest or disease outbreak	54%		
2-3 month weather forecast	33%		
2-3 day weather forecast	23%		

Of households receiving information, who in the family receives it			
	Baseline	Mid-term	Final
Start of the rains			
Men	21%		
Women	19%		
Both	61%		

Forecast of extreme events			
Men	21%		
Women	19%		
Both	60%		

	Baseline	Mid-term	Final
2-3 month weather forecast			
Men	11%		
Women	15%		
Both	74%		

2-3 day weather forecast			
Men	13%		
Women	19%		
Both	69%		

	Baseline	Mid-term	Final
Forecast of pest or disease outbreak			
Men	16%		
Women	18%		
Both	66%		

Organisational priorities

Relative importance in the portfolio of organisations
placed on climate or weather related activities

	Baseline	Mid-term	Final
Allocation of time			
Very high	20%		
High	0%		
Medium	30%		
Low	30%		
None	20%		
Allocation of staff			
Very high	10%		
High	10%		
Medium	10%		
Low	60%		
None	10%		
Allocation of budget			
Very high	10%		
High	10%		
Medium	20%		
Low	30%		
None	30%		

Organisational priorities

Match of organisational activities to perceived needs of communities			
Community issues about natural resources and infrastructure	Organisation activities		
	Baseline	Mid-term	Final
Forest: Encroached, diminishing in size. Government owned leased to individuals.	Effort to protect the forests and increase tree cover; environmental protection; sustainable forest management by improving the management of central forest reserves; campaigning to maintain existing forest cover and limit tree felling by licensing pit sawyers, conducting forest patrols, limiting the use of power saws to convert trees into timber and limiting charcoal burning; tree planting; raising tree seedlings; tree nursery bed establishment and management; processing and utilization of non timber forest products like honey, mushrooms,...		
Swamp: Water levels reduce during droughts, bad water quality, polluted. Government owned without control over its use.	Promotion of sustainable use of wetlands		
Grassland: Private ownership limitates its access	Promotion of pasture and fodder plants with high carbon sequestration		
Roads: Bad condition, with potholes, muddy when it rains.	Problems with access in general and with roads and road materials in particular are not mentioned in any activities.		
Wells: sometimes boreholes dry up for two months	Improving water conservation, borehole management		
Schools: bad condition	Pre-primary/nursery school education; Child rights advocacy and youth empowerment		
Market and trading centres: some in good condition, some not.	Link farmers to potential markets; enhance markets; advise farmers on potential buyers, prices and value chain actors; Selection of appropriate, marketable crop & livestock enterprises		
Churches and mosques: limited space, dusty floors	Actions related to churches and/or mosques are not mentioned in any activities.		
Farmland: soil fertility declining. Private land	Improving soil fertility and water conservation; promotion of organic agricultural production; evaluation of drought tolerant maize varieties and distribution of drought tolerant maize seed; promotion of fast and early maturing crop varieties; Enhancing farmers' access to improved seed; promotion of vegetable production		



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