

CCAFS WEST AFRICA

Site: Yatenga/Tougou, Burkina Faso



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



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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 Yatenga/Tougou, in Burkina Faso.

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

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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

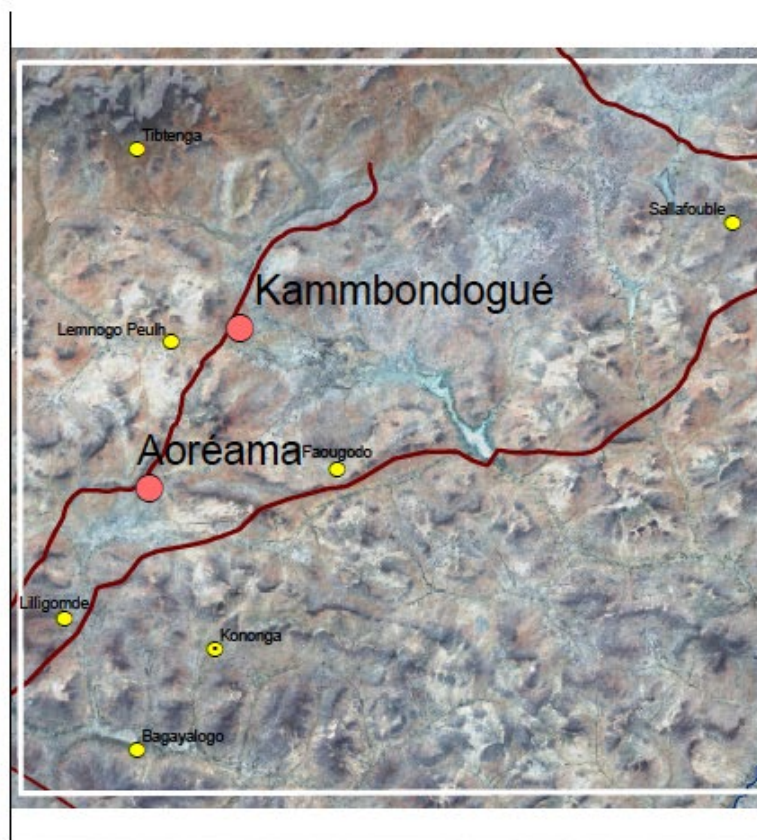


CCAFS Organisational baseline study

Map

Country: Burkina Faso

CCAFS Sampling Frame: Yatenga - Tougou



CCAFS Site Name (ID):
Yatenga (BF01)

CCAFS Sampling Frame
Name (ID): Tougou (07)

Road

Settlement

CCAFS VBS / OBS Village

CCAFS HBS Village

Coordinates of the CCAFS
Sampling frame

2.113W 13.828N

2.113W 13.554N

2.391W 13.554N

2.391W 13.828N

☐ Site location

Source: L. 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	2%		

% households of different sizes

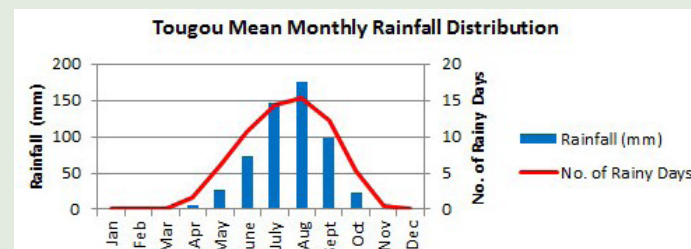
Number of people in the household	Baseline	Mid-term	Final
1	1%		
2	2%		
3	1%		
4	8%		
5	8%		
6	7%		
6+	73%		

Area of land cultivated (ha)*	442.48		
Average (mean) per household (ha)	3.16		

Highest level of education obtained by any household member

No formal education	31%		
Primary	43%		
Secondary	25%		
Post-secondary	1%		

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



Source: MarkSim¹

Ratio of local organisations to total number of organisations named*

	Baseline	Mid-term	Final
Men's group	11/21		
Women's group	8/17		

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

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	54%		
Water	2%		
Soil	69%		
Tree/agroforestry	82%		
Livestock	58%		

Adaptation

% households reporting changes to their agricultural practices

0-1 change	1%		
2-10 changes	38%		
11 or more changes	61%		

Mitigation

% households doing

Tree management*

Yes	82%		
No	14%		

Soil management

None	7%		
Some	93%		

Intensification

None	5%		
Low	51%		
High	44%		

Productivity

No Increase	41%		
Some increase	59%		

Drivers of changes to crop production and land management

% households reporting this driver

	Baseline	Mid-term	Final
Markets	65%		
Weather/climate	80%		
Pest and Diseases	30%		
Labour	62%		
Land	79%		
Projects	47%		

Drivers of changes to livestock production*

% households reporting this driver

Markets	87%		
Weather/climate	50%		
Pest and Diseases	51%		
Labour	10%		
Projects	47%		

Drivers of change in the community

Frequency with which they were mentioned in group discussions

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

*For tree/agroforestry changes these are the households who have either planted or protected trees within the last year

*For livestock changes these are the households who have made 3 of more of the changes in the livestock section

Livelihood diversification

	Baseline	Mid-term	Final
Source of Cash Income other than own farm			
Employment on someone else's farm	24%		
Other off-farm employment	11%		
Business	40%		
Remittances/gifts	29%		
Payments for environmental services	2%		
Payments from government or other projects/programs	19%		
Loan or credit from a formal institution	11%		
Informal loan or credit	37%		
Renting out farm machinery	14%		
Renting out your own land	6%		
No off-farm cash source	16%		
Product diversification			
% of households			
1-4 products (low)	2%		
5-8 products (intermediate)	69%		
9 or more products (high)	29%		
Selling/Commercialization Diversification:			
% of households			
No products sold	4%		
1-2 products sold (low)	37%		
3-5 products sold (intermediate)	57%		
6 or more products sold (high)	2%		

Food security

Food Security Index

% households	Baseline	Mid-term	Final
More than 6 hunger months/year	10%		
5-6 hunger months/	20%		
3-4 hunger months/	44%		
1-2 hunger months/	17%		
Food all year round/No hungry period	9%		

Food security organisational linkages

Men groups		Baseline	Mid-term	Final
Organisation receives				
	Funding	3		
	Capacity Building	8		
	Food	2		
Organisation provides				
	Funding	3		
	Capacity Building	2		
	Food	2		
Women groups		Baseline	Mid-term	Final
Organisation receives				
	Funding	5		
	Capacity Building	4		
	Food	0		
Organisation provides				
	Funding	4		
	Capacity Building	3		
	Food	0		

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	32%		
% households mainly consuming from own farm in the month of lowest shortage	77%		

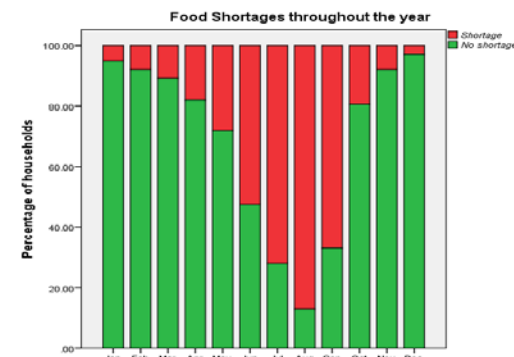
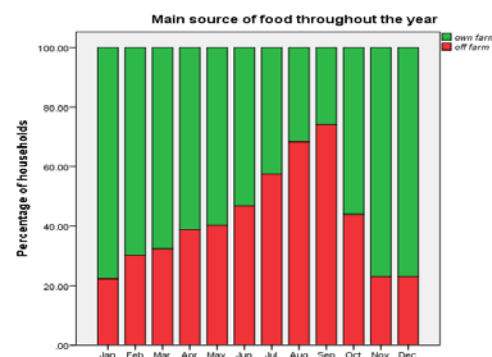
Ratio of local organisations to total number of organisations named in each area of food security work*

Men's group	Baseline	Mid-term	Final
Availability	6/11		
Access	4/7		
Utilisation	1/3		

Women's group	Baseline	Mid-term	Final
Availability	5/13		
Access	2/5		
Utilisation	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.

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	Yes	Water reservoir dries up in dry season and is losing capacity due to sand		
	F	Yes	Water reservoir dries up in dry season and is losing capacity due to sand		
Farmland	M	Yes	Insufficient rainfall, poor soil, lack of agric. inputs and labour		
	F	Yes	Infertile soil,		
Forest	M	Yes	Degraded, loss of vegetation and tree cutting		
	F	Yes	Loss of vegetation and tree cutting, trees dying because of termites		
Pasture	M	No			
	F	No			
Markets	M	No			
	F	No			
Is there a problem of access to the resource?					
Irrigation	M	Yes			
	F	Yes	Under community management		
Farmland	M	No			
	F	Yes	Land owned by husband, therefore, there is lack of land for women		
Forest	M	No			
	F	No			
Pasture	M	No			
	F	No			
Markets	M	No			
	F	No			
Is there any local action in place to address the problem?					
Irrigation	M	No			
	F	No			
Farmland	M	No			
	F	Yes	Use of traditional soil conservation techniques, and of organic manure		
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	6%		
Water catchment/management	6%		
Soil improvement related	33%		
Crop improvement related	7%		
Irrigation	11%		
Savings/credit related	6%		
Agricultural product marketing	13%		
Agricultural productivity enhancement related	28%		
Seed production	1%		
Vegetable production	15%		
Other group not mentioned above?	1%		
No groups	51%		

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

	Baseline	Mid-term	Final
Men's group	3/7		
Women's group	3/7		

* 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	3%		
Intermediate level	40%		
High level	57%		

% households ownership

Transport

Bicycle	93%		
Motorcycle	48%		
Car or Truck	0%		

Production

Tractor	0%		
Mechanical Plough	45%		
Mill	1%		
Water pump/Treadle pump	1%		
Thresher	0%		
Boat	0%		
Fishing Nets	1%		

Energy

Solar Panel	2%		
Generator	2%		
Battery	13%		
Biogas Digester	0%		
LPG	1%		

Information

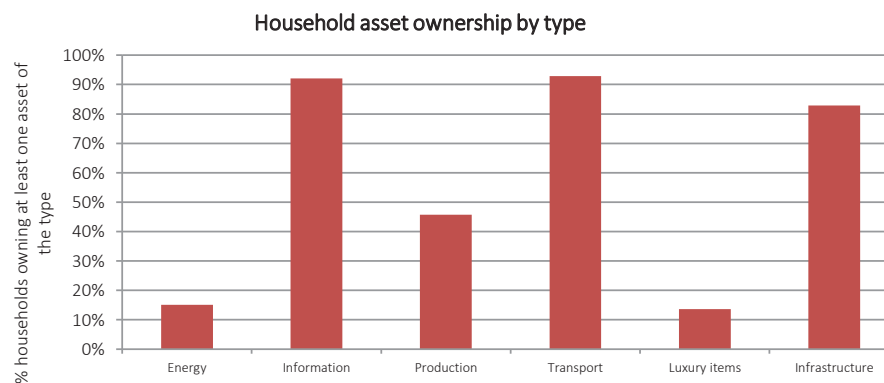
Radio	86%		
Television	11%		
Cell Phone	70%		
Computer	0%		
Internet Access	0%		

Luxury

Refrigerator	0%		
Air Conditioning	0%		
Electric Fan	0%		
Bank Account	14%		

Infrastructure

	Baseline	Mid-term	Final
Improved storage facility for crops	24%		
Water storage tank	0%		
Well/borehole	44%		
Running/tap water in dwelling	0%		
Electricity from a grid	0%		
Improved housing	9%		
Improved roofing	24%		
Separate housing for farm animals	66%		



Networks of information

Networks of information - Men Group

	Baseline	Mid-term	Final
Rainfall, start of season			
Men	Yes		
Women	Yes		
The Aged	Yes		
DRAHRA	Yes		
DRRA	No		
DRE	No		
Project	No		
The Koom Association	No		
FNGN (Nat. Fed. Of Naam Groups)	No		
Naam Groups	No		
The Sougriyide Group	No		
The Wendrabo Group	No		
The Yamlatuma Group	No		
Rural Radio (Voix du Paysan)	Yes		
Radio de l'Amitié	Yes		
Regional radio	Yes		
National radio	Yes		
National television	Yes		
Village Chief	Yes		
Councilor to the municipality	No		
Market	No		
Mosque	No		
Village gatherings	No		
Baptism	No		
Village meetings	No		

Networks of information - Men Group

	Baseline	Mid-term	Final
Farming techniques/practices			
Men	No		
Women	No		
The Aged	No		
DRAHRA	Yes		
DRRA	No		
DRE	No		
Project	No		
The Koom Association	No		
FNGN	Yes		
Naam Groups	Yes		
The Sougriyide Group	Yes		
The Wendrabo Group	Yes		
The Yamlatuma Group	Yes		
Rural Radio (Voix du Paysan)	Yes		
Radio de l'Amitié	No		
Regional radio	No		
National radio	No		
National television	No		
Village Chief	No		
Councilor to the municipality	No		
Market	No		
Mosque	No		
Village gatherings	No		
Baptism	No		
Village meetings	No		

Networks of information - Men Group

	Baseline	Mid-term	Final
Mechanisms to access support for agric. Prod.			
Men	Yes		
Women	No		
The Aged	Yes		
DRAHRA	Yes		
DRRA	Yes		
DRE	No		
Project	No		
The Koom Association	No		
FNGN	No		
Naam Groups	No		
The Sougriyide Group	No		
The Wendrabo Group	No		
The Yamlatuma Group	No		
Rural Radio (Voix du Paysan)	Yes		
Radio de l'Amitié	No		
Regional radio	No		
National radio	No		
National television	No		
Village Chief	No		
Councilor to the municipality	No		
Market	No		
Mosque	No		
Village gatherings	No		
Baptism	No		
Village meetings	No		

Networks of information

Networks of information - Women Group

	Baseline	Mid-term	Final
Characteristics of improved varieties			
Men	Yes		
Women	Yes		
The Aged	No		
DRAHRA	Yes		
DRRA	No		
DRE	No		
Project	Yes		
The Koom Association	Yes		
FNGN	No		
Naam Groups	No		
The Sougriyide Group	No		
The Wendrabo Group	No		
The Yamlatuma Group	No		
Rural Radio (Voix du Paysan)	Yes		
Radio de l'Amitié	No		
Regional radio	No		
National radio	No		
National television	No		
Village Chief	No		
Councilor to the municipality	No		
Market	Yes		
Mosque	No		
Village gatherings	No		
Baptism	No		
Village meetings	No		

Networks of information - Women Group

	Baseline	Mid-term	Final
Rainfall/weather forecasts			
Men	Yes		
Women	No		
The Aged	No		
DRAHRA	Yes		
DRRA	No		
DRE	Yes		
Project	Yes		
The Koom Association	No		
FNGN	No		
Naam Groups	Yes		
The Sougriyide Group	No		
The Wendrabo Group	No		
The Yamlatuma Group	No		
Rural Radio (Voix du Paysan)	Yes		
Radio de l'Amitié	No		
Regional radio	No		
National radio	No		
National television	No		
Village Chief	No		
Councilor to the municipality	No		
Market	Yes		
Mosque	No		
Village gatherings	Yes		
Baptism	Yes		
Village meetings	Yes		

Networks of information - Women Group

	Baseline	Mid-term	Final
Positive effects of vegetation cover on ground			
Men	Yes		
Women	No		
The Aged	No		
DRAHRA	Yes		
DRRA	No		
DRE	Yes		
Project	Yes		
The Koom Association	No		
FNGN	No		
Naam Groups	Yes		
The Sougriyide Group	No		
The Wendrabo Group	No		
The Yamlatuma Group	No		
Rural Radio (Voix du Paysan)	Yes		
Radio de l'Amitié	No		
Regional radio	No		
National radio	No		
National television	No		
Village Chief	No		
Councilor to the municipality	No		
Market	Yes		
Mosque	No		
Village gatherings	Yes		
Baptism	Yes		
Village meetings	Yes		

Networks of information

Networks of information - Men Group			
	Baseline	Mid-term	Final
Fast maturing varieties			
Men	No		
Women	No		
The Aged	No		
DRAHRA	Yes		
DRRA	No		
DRE	No		
Project	No		
The Koom Association	No		
FNGN	No		
Naam Groups	No		
The Sougriyide Group	No		
The Wendrabo Group	No		
The Yamlatuma Group	No		
Rural Radio (Voix du Paysan)	Yes		
Radio de l'Amitié	No		
Regional radio	No		
National radio	No		
National television	No		
Village Chief	No		
Councilor to the municipality	No		
Market	No		
Mosque	No		
Village gatherings	No		
Baptism	No		
Village meetings	No		

Networks of information - Women Group			
	Baseline	Mid-term	Final
Feeding, keeping animals			
Men	Yes		
Women	No		
The Aged	No		
DRAHRA	Yes		
DRRA	Yes		
DRE	No		
Project	No		
The Koom Association	No		
FNGN	No		
Naam Groups	No		
The Sougriyide Group	No		
The Wendrabo Group	No		
The Yamlatuma Group	No		
Rural Radio (Voix du Paysan)	Yes		
Radio de l'Amitié	No		
Regional radio	No		
National radio	No		
National television	No		
Village Chief	No		
Councilor to the municipality	No		
Market	Yes		
Mosque	Yes		
Village gatherings	Yes		
Baptism	No		
Village meetings	No		

Networks of information

% of households receiving weather-related information			
	Baseline	Mid-term	Final
Start of the rains	36%		
Forecast of extreme events	50%		
Forecast of pest or disease outbreak	20%		
2-3 month weather forecast	18%		
2-3 day weather forecast	9%		

Of households receiving information, who in the family receives it			
	Baseline	Mid-term	Final
Start of the rains			
Men	51%		
Women	4%		
Both	45%		

Forecast of extreme events			
Men	62%		
Women	1%		
Both	36%		

	Baseline	Mid-term	Final
2-3 month weather forecast			
Men	40%		
Women	4%		
Both	56%		

2-3 day weather forecast			
Men	67%		
Women	0%		
Both	33%		

	Baseline	Mid-term	Final
Forecast of pest or disease outbreak			
Men	36%		
Women	11%		
Both	54%		

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	8%		
High	19%		
Medium	19%		
Low	46%		
None	8%		
Allocation of staff			
Very high	4%		
High	19%		
Medium	31%		
Low	38%		
None	8%		
Allocation of budget			
Very high	0%		
High	12%		
Medium	23%		
Low	42%		
None	15%		

Organisational priorities

Match of organisational activities to perceived needs of communities			
Community issues about natural resources and infrastructure	Organisation activities		
	Baseline	Mid-term	Final
Shrubs and bushes: degraded land, loss of vegetation due to tree cutting, strong winds and termites.	interest in reforestation, including sensitization and training; protection of existing forest cover , forest management; diversification out of production by promoting and developing Non Timber Forest Products is encouraged.		
Water resources (reservoir, ponds, boreholes, wells): drie up in dry season, diminishing capacity due to sand filling. Some weels are damaged	water conservation and management; build hydro-agricultural infrastructure, including pits, large diameter wells, vegetable garden wells, boreholes, micro-dams and filtering dykes; embankments near dams protection;		
Farmland: insufficient rainfall, poor soil, lack of agric. Inputs, lack of labour	interest in soil conservation; capacity building in the management of grazing lands; use of erosion control practices and organic manure to restore and develop arable land; give advice on the use of pesticides. Adapting farming practices, through diversification, improved seed varieties and earlier planting;		
Gulley: created by soil erosion, is getting progressively wider and deeper	interest in land regeneration to make it usable; training in soil conservation and restoration techniques; develop degraded land through the use of Zai, bunds and half-moons		
Roads: in better condition			



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For more information, visit www.ccafs.cgiar.org



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