

CCAFS WEST AFRICA

Site: Kollo/Fara, Niger



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



Photo: N. Palmer

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Contact:

CCAFS Coordinating Unit - Faculty of Science, Department of Plant and Environmental Sciences, University of Copenhagen, Rolighedsvej 21, DK-1958 Frederiksberg C, Denmark. Tel: +45 35331046; Email: ccafts@cgiar.org.



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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 Kollo/Fakara in Niger.

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:
Science Officer Wiebke Förch (w.foerch@cgiar.org)

Sources

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



CCAFS Household baseline study



CCAFS Village baseline study

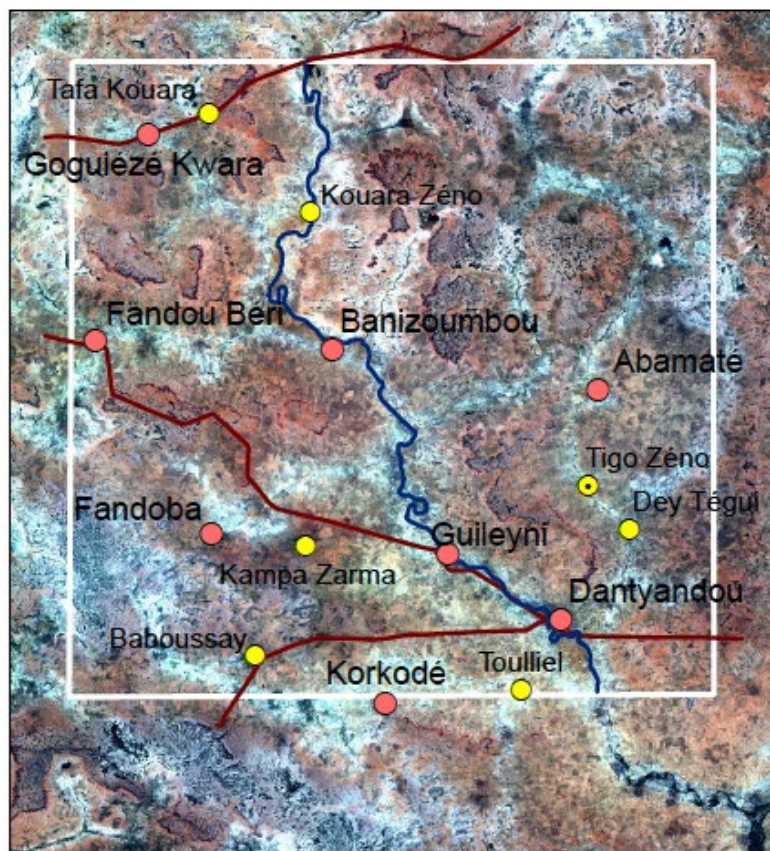


CCAFS Organisational baseline study

Map

Country: Niger

CCAFS Sampling Frame: Kollo - Fakara



CCAFS Site Name (ID):
Kollo (NI01)

CCAFS Sampling Frame
Name (ID): Fakara (11)

Settlement

CCAFS VBS / OBS Village

CCAFS HBS Village

**Coordinates of the CCAFS
Sampling frame**

2.826E 13.379N

2.826E 13.654N

2.547E 13.654N

2.547E 13.379N

□ 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	4%		

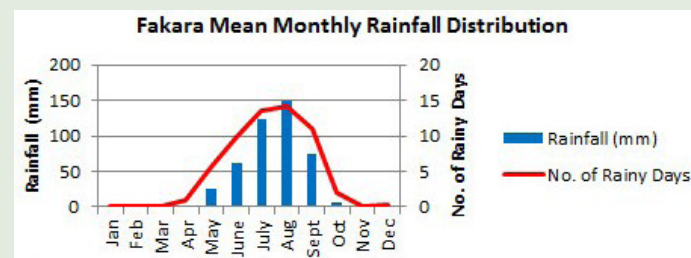
% households of different sizes

Number of people in the household	Baseline	Mid-term	Final
1	0%		
2	0%		
3	1%		
4	2%		
5	5%		
6	7%		
6+	85%		

Area of land cultivated (ha)*	0.00		
Average (mean) per household (ha)	0.00		

Highest level of education obtained by any household member

No formal education	16%		
Primary	59%		
Secondary	26%		
Post-secondary	0%		



Source: MarkSim¹

Ratio of local organisations to total number of organisations named*

	Baseline	Mid-term	Final
Men's group	4/11		
Women's group	5/15		

* 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	62%		
Water	0%		
Soil	13%		
Tree/agroforestry	87%		
Livestock	45%		

Adaptation

% households reporting changes to their agricultural practices

0-1 change	0%		
2-10 changes	66%		
11 or more changes	34%		

Mitigation

% households doing

Tree management*

Yes	87%		
No	13%		

Soil management

None	19%		
Some	81%		

Intensification

None	10%		
Low	61%		
High	29%		

Productivity

No Increase	46%		
Some increase	54%		

Drivers of changes to crop production and land management

% households reporting this driver

	Baseline	Mid-term	Final
Markets	56%		
Weather/climate	71%		
Pest and Diseases	8%		
Labour	74%		
Land	94%		
Projects	5%		

Drivers of changes to livestock production*

% households reporting this driver

Markets	78%		
Weather/climate	15%		
Pest and Diseases	11%		
Labour	6%		
Projects	0%		

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			2		
Deforestation	1			0		
Pest and Diseases	0			0		
Information/Knowledge	0			0		
Land Demarcation/fragmentation	0			0		
Soil degradation/Erosion	2			2		
Rainfall Changes	4			2		
Charcoal Burning/Fuel	1			0		
Government	0			0		
Forest Fire/Bush burning	1			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	1			2		

*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 or 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	44%		
Other off-farm employment	12%		
Business	15%		
Remittances/gifts	2%		
Payments for environmental services	3%		
Payments from government or other projects/programs	9%		
Loan or credit from a formal institution	4%		
Informal loan or credit	48%		
Renting out farm machinery	0%		
Renting out your own land	1%		
No off-farm cash source	25%		
Product diversification			
% of households			
1-4 products (low)	41%		
5-8 products (intermediate)	55%		
9 or more products (high)	4%		
Selling/Commercialization Diversification:			
% of households			
No products sold	44%		
1-2 products sold (low)	47%		

Food security

Food Security Index

% households	Baseline	Mid-term	Final
More than 6 hunger months/year	9%		
5-6 hunger months/	26%		
3-4 hunger months/	31%		
1-2 hunger months/	31%		
Food all year round/No hungry period	1%		

Food security organisational linkages

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

Organisation provides				
Funding	2			
Capacity Building	0			
Food	2			

	Women groups			
	Baseline	Mid-term	Final	
Organisation receives				
Funding	3			
Capacity Building	2			
Food	0			

Organisation provides				
Funding	1			
Capacity Building	1			
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	2%		
% households mainly consuming from own farm in the month of lowest shortage	100%		

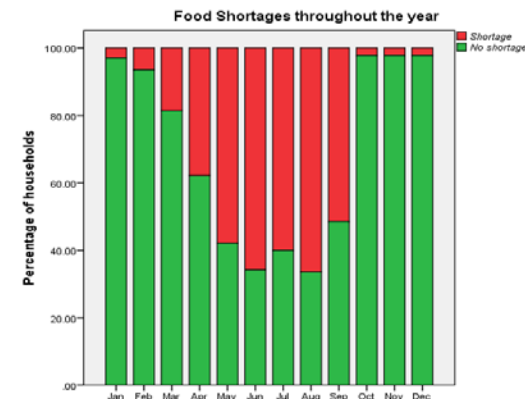
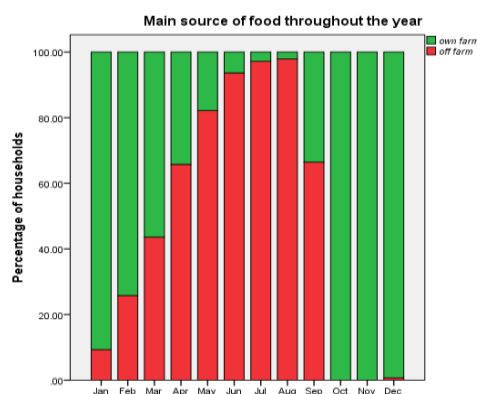
Ratio of local organisations to total number of organisations named in each area of food security work*

Men's group	Baseline	Mid-term	Final
Availability	0/6		
Access	0/1		
Utilisation	0/3		

Women's group	Baseline	Mid-term	Final
Availability	4/13		
Access	1/4		
Utilisation	1/5		

* 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	Yes	Drying up increasingly earlier. Silting. Heavy dependence and use of this resource		
Farmland	M	Yes	Poor soil. Degraded		
	F	Yes	Degraded with major drop in soil fertility levels		
Forest	M	Yes	Many isolated trees but degraded		
	F	Yes	Very poor and sparse. Turned into a bush of some sort.		
Pasture	M	No			
	F	No			
Markets	M	No			
	F	No			
Is there a problem of access to the resource?					
Irrigation	M	No			
	F	Yes	Free access to water		
Farmland	M	Yes	Community or family owned		
	F	Yes	Farms are inherited by men who give a small portion to their wives		
Forest	M	Yes	Some D20Isolated trees belong to private farms, some are community owned		
	F	Yes	Free acces		
Pasture	M	Yes	Poor quality		
	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	No			
Forest	M	No			
	F	No			
Pasture	M	Yes	Soil fertility improved with animal dung during grazing		
	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	1%		
Water catchment/management	1%		
Soil improvement related	0%		
Crop improvement related	1%		
Irrigation	0%		
Savings/credit related	7%		
Agricultural product marketing	4%		
Agricultural productivity enhancement related	5%		
Seed production	0%		
Vegetable production	0%		
Other group not mentioned above?	0%		
No groups	85%		

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

	Baseline	Mid-term	Final
Men's group	0/4		
Women's group	3/8		

* 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	26%		
Intermediate level	74%		
High level	1%		

% households ownership

Transport

Bicycle	10%		
Motorcycle	1%		
Car or Truck	0%		

Production

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

Energy

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

Information

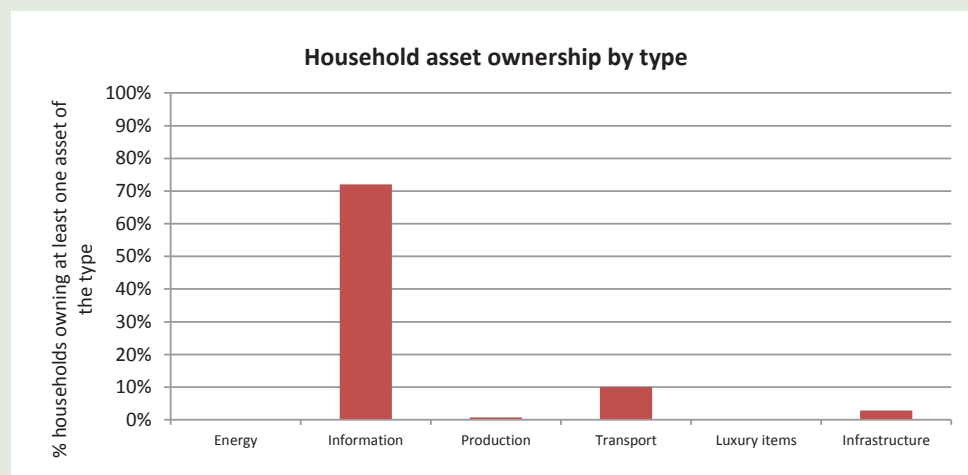
Radio	62%		
Television	0%		
Cell Phone	53%		
Computer	0%		
Internet Access	0%		

Luxury

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

Infrastructure

	Baseline	Mid-term	Final
Improved storage facility for crops	1%		
Water storage tank	0%		
Well/borehole	1%		
Running/tap water in dwelling	0%		
Electricity from a grid	0%		
Improved housing	0%		
Improved roofing	0%		
Separate housing for farm animals	0%		



Networks of information

Networks of information - Men Group			
	Baseline	Mid-term	Final
Pests			
Women/men	Yes		
Marabou (spiritual leader)	No		
Traditional healer	No		
Barta: ICRISAT/INRAN focal point	No		
Elderly men	No		
Herdsmen	No		
Village Chief	Yes		
Public extension office	No		
Groups/NGOs	No		
ICRISAT/INRAN	No		
Projects	Yes		
National radio	Yes		
Local radio	Yes		
Markets	No		
Traditional knowledge	No		

Networks of information - Men Group			
	Baseline	Mid-term	Final
Onset of rains			
Women/men	No		
Marabou (spiritual leader)	No		
Traditional healer	No		
Barta: ICRISAT/INRAN focal point	No		
Elderly men	Yes		
Herdsmen	No		
Village Chief	No		
Public extension office	No		
Groups/NGOs	No		
ICRISAT/INRAN	No		
Projects	No		
National radio	No		
Local radio	Yes		
Markets	No		
Traditional knowledge	Yes		

Networks of information - Men Group			
	Baseline	Mid-term	Final
Seed varieties			
Women/men	Yes		
Marabou (spiritual leader)	No		
Traditional healer	No		
Barta: ICRISAT/INRAN focal point	No		
Elderly men	No		
Herdsmen	No		
Village Chief	No		
Public extension office	No		
Groups/NGOs	Yes		
ICRISAT/INRAN	Yes		
Projects	Yes		
National radio	Yes		
Local radio	Yes		
Markets	No		
Traditional knowledge	No		

Networks of information

Networks of information - Women Group

	Baseline	Mid-term	Final
Rainfall forecasts			
Women/men	Yes		
Marabou (spiritual leader)	Yes		
Traditional healer	No		
Barta: ICRISAT/INRAN focal point	No		
Elderly men	No		
Herdsman	No		
Village Chief	No		
Public extension office	Yes		
Groups/NGOs	No		
ICRISAT/INRAN	No		
Projects	Yes		
National radio	Yes		
Local radio	No		
Markets	Yes		
Traditional knowledge	Yes		

Networks of information - Women Group

	Baseline	Mid-term	Final
Care of livestock			
Women/men	No		
Marabou (spiritual leader)	No		
Traditional healer	Yes		
Barta: ICRISAT/INRAN focal point	No		
Elderly men	No		
Herdsman	Yes		
Village Chief	No		
Public extension office	Yes		
Groups/NGOs	Yes		
ICRISAT/INRAN	No		
Projects	Yes		
National radio	Yes		
Local radio	Yes		
Markets	No		
Traditional knowledge	No		

Networks of information - Women Group

	Baseline	Mid-term	Final
Use of fertilisers			
Women/men	No		
Marabou (spiritual leader)	No		
Traditional healer	No		
Barta: ICRISAT/INRAN focal point	Yes		
Elderly men	Yes		
Herdsman	No		
Village Chief	No		
Public extension office	No		
Groups/NGOs	No		
ICRISAT/INRAN	Yes		
Projects	No		
National radio	Yes		
Local radio	Yes		
Markets	Yes		
Traditional knowledge	No		

Networks of information

% of households receiving weather-related information			
	Baseline	Mid-term	Final
Start of the rains	49%		
Forecast of extreme events	28%		
Forecast of pest or disease outbreak	44%		
2-3 month weather forecast	40%		
2-3 day weather forecast	78%		

Of households receiving information, who in the family receives it			
	Baseline	Mid-term	Final
Start of the rains			
Men	43%		
Women	0%		
Both	57%		

Forecast of extreme events			
Men	54%		
Women	0%		
Both	46%		

	Baseline	Mid-term	Final
2-3 month weather forecast			
Men	41%		
Women	0%		
Both	59%		

2-3 day weather forecast			
Men	45%		
Women	3%		
Both	52%		

	Baseline	Mid-term	Final
Forecast of pest or disease outbreak			
Men	51%		
Women	0%		
Both	49%		

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	9%		
High	45%		
Medium	18%		
Low	9%		
None	18%		
Allocation of staff			
Very high	0%		
High	0%		
Medium	18%		
Low	36%		
None	45%		
Allocation of budget			
Very high	0%		
High	0%		
Medium	36%		
Low	36%		
None	27%		

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/reserve: Very poor and sparse. Turned into a bush. There are many isolated trees but degraded	Reforestation and tree plantation; provides farmers with information about the preservation of trees; training on techniques of growing and replanting seedlings; Assisted natural regeneration		
Farmland: degraded. Major drop in soil fertility levels. The farms are inherited by men who give a small portion to their wives	provides farmers with information about the preservation of farmland; diversification of crops is well promoted; provide training on moringa, which is drought tolerant with high nutritional value; promotion of horticulture; distribution of improved seeds; training on rain-fed farming and horticulture; Provide information about the use of manure and domestic waste in the fields		
Grassland/ Open field: Poor quality pasture	Grazing areas seeding;		
Rivers: Drying up increasingly earlier. Silting and reduction of the riverbed as a result of wind erosion. Heavy dependence and use of this resource	No mention of rivers in activities of the organisations		
Borehole/wells: in different conditio, some dried up. Water is insufficient due to the increase of needs	Water points monitoring		
Ponds: Sometimes levels are high and create flooding.Children drown when water levels are high. Presence of mosquitoes (malaria).	No mention of ponds in activities of the organisations		
Roads: Deteriorated and in a poor state; impassable during the rainy season	No mention of roads or other infrastructure in activities of the organisations		
Gullies: Increasingly deeper and wider			
Degraded land: Expanding in size; people unable to cross during the rainy season.	Degraded land restoration; Construction of demi-lunes and Zaï; planting of trees (Acacia senegal) on degraded land		



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