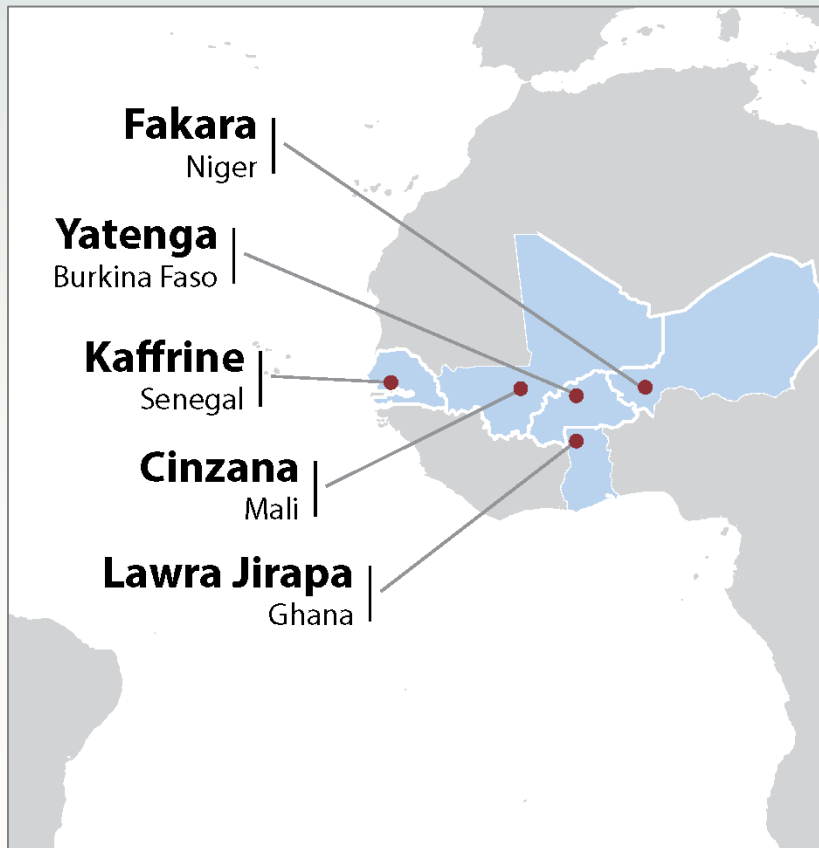


# West Africa Climate-Smart Villages AR4D sites: 2016 inventory

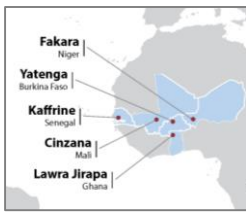


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Food Security



## Citation

Bonilla-Findji O, Ouedraogo M, Partey ST, Dayamba SD, Bayala J, Zougmore R. 2017. West Africa Climate-Smart Villages AR4D sites: 2016 Inventory. Wageningen, The Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Available online at: [www.ccafs.cgiar.org](http://www.ccafs.cgiar.org)



# Inventory of CSA practices in West Africa's Climate-Smart Villages



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**Total Practices: 22** .... with mitigation potential: **6**



Gender impact assessed for **0**



Potential gender impact known for **4**

CSA sub-Practice	Mitigation potential	Country	CSV AR4D sites	Crop	Impleme nted	Evaluat ed	Impl. & Evaluated	# of Hholds	Gender Assessed	Potential gender impacts
<b>Crop Rotation</b>	-	Ghana	Lawra-Jirapa	Maize, cowpea	-	-	x	61	-	-
<b>Farmer Managed Natural Regeneration (general)</b>	x	Burkina Faso	Yatenga	Ziziphus mauritiana, Balanites aegyptiaca, Sclerocarya birrea, Acacia nilotica, Acacia seyal, Piliostigma reticulatum, Adansonia digitata	x	-	-	-	-	x
		Niger	Fakara	Millet, sorghum, cowpea, peanut, hibiscus	x	-	-	-	-	x
		Senegal	Kaffrine	Maize, millet, groundnut	-	-	x	20	-	x
<b>Improved Varieties</b>	-	Ghana	Lawra-Jirapa	Maize, cowpea , soybean	x	-	-	-	-	-
		Burkina Faso	Yatenga	Cowpea, Sesame, millet	x	-	-	184	-	-
		Mali	Cinzana	Sorghum, millet, sesame, fonio	x	-	-	-	-	-
		Niger	Fakara	Millet, Sorghum, cowpea, okra, Sena obtusifolia	x	-	-	-	-	-
		Senegal	Kaffrine	Maize, millet	-	-	x	20	-	-
<b>Improved Breed (Poultry)</b>	-	Niger	Fakara	Chicken	x	-	-	20	-	x
		Senegal	Kaffrine	Chicken	x	-	-	20	-	-
<b>Inorganic Fertilizer</b>	-	Senegal	Kaffrine	Maize, millet	-	-	x	20	-	-
<b>Integrated Nutrient Management</b>	x	Ghana	Lawra-Jirapa	Maize, cowpea	-	-	x	61	-	-
		Burkina Faso	Yatenga	Millet and Cowpea	x	-	-	-	-	-
		Senegal	Kaffrine	Maize, millet	-	-	x	20	-	-
<b>Integrated Nutrient Management (Microdosing)</b>	x	Mali	Cinzana	sorghum, millet	-	-	x	-	-	
<b>Intercropping</b>	-	Ghana	Lawra-Jirapa	Jathropa, cowpea	x	-	-	-	-	-
		Burkina Faso	Yatenga	Millet and Cowpea	x	-	-	-	-	-
		Mali	Cinzana	Sorghum, millet, fodder crops (groundnut, cowpea)	x	-	-	-	-	-
		Niger	Fakara	Sorghum, Millet, cowpea	x	-	-	-	-	-
<b>Intercropping (Agroforestry)</b>	-	Mali	Cinzana	Jatropha based agroforestry with Sorghum and millet	x	-	-	-	-	
<b>Macro/Micro catchments</b>	-	Burkina Faso	Yatenga	Millet, sorghum	x	-	-	-	-	
<b>Mulching</b>	x	Ghana	Lawra-Jirapa	Yam, vegetables	x	-	-	-	-	
<b>No/Reduced Tillage</b>	x	Ghana	Lawra-Jirapa	Maize, soybean, cowpea	x	-	-	-	-	-
		Senegal	Kaffrine	Maize, millet	-	-	x	20	-	-
<b>New cropping system &amp; additional crops (Home gardens)</b>	-	Ghana	Lawra-Jirapa	Soybean, vegetables	-	-	x	-	-	x
		Senegal	Kaffrine	Water melon, okra, mint and pepper	-	-	x	110	-	x
<b>Organic Fertilizer</b>	-	Ghana	Lawra-Jirapa	Maize, soybean	-	-	x	61	-	-
		Burkina Faso	Yatenga	Millet, sesame, Cowpea	x	-	-	-	-	-
		Niger	Fakara		x	-	-	-	-	x



# Inventory of CSA practices in West Africa's Climate-Smart Villages



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CSA sub-Practice	Mitigation potential	Country	CSV AR4D sites	Crop	Impleme-nted	Evaluat-ed	Impl. & Evaluated	# of Hholds	Gender Assessed	Potential gender impacts
<b>Tree Planting</b>	x	Ghana	Lawra-Jirapa	Magnifera indica, Anacardium occidentale, Tectonagrandis Teak, Moringa oleifera	x	-	-		-	x
		Burkina Faso	Yatenga	Adansonia digitata (baobab), Moringa oleifera, Acacia senegal, A. nilotica and Cassia senna.	x	-	-	300	-	X
		Mali	Cinzana	Gliricidia sepium, Moringa olifera, Adansonia digitata	x	-	-		-	X
		Niger	Fakara	Moringa,	x	-	-		-	x
		Senegal	Kaffrine	Ziziphus mauritiana, Adansonia digitata, Tamarindus indica, Psidium guajava and Annona muricata	-	-	x	300	-	x
<b>Water Harvesting (Bund)</b>	-	Niger	Fakara	Millet, Sorghum	x	-	-		-	-
<b>Water Harvesting (Earth bund)</b>	-	Ghana	Lawra-Jirapa	Maize	-	x	-	61	-	-
<b>Water Harvesting (Contour ridging)</b>	-	Mali	Cinzana	sorghum, millet	-	-	x		-	-
<b>Water Harvesting (Half moon)</b>	-	Niger	Fakara	Millet, sorghum	x	-	-		-	-
<b>Water Harvesting (Planting pits)</b>	-	Ghana	Lawra-Jirapa	Maize	x	-	-		-	-
		Burkina Faso	Yatenga	Millet and Cowpea	x	-	-		-	-
		Niger	Fakara	Sorghum	x	-	-		-	-
<b>Water Harvesting (Ties ridges )</b>	-	Ghana	Lawra-Jirapa	Maize	-	x	-	61	-	-



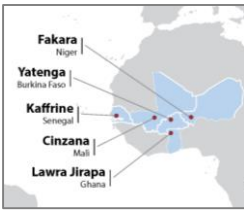
# Inventory of climate information services in West Africa's Climate-Smart Villages



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Agro-Met Service	Country	CSV AR4D site	Agro-Met Service Implemented	Agro-Met Service Evaluated	# of households	Potential gender impacts known
<b>Agroadvisories on fertilizer and pesticide application</b>	Ghana	Lawra-Jirapa	-	-		-
	Burkina Faso	Yatenga	-	-		-
	Mali	Cinzana	-	-		-
	Niger	Fakara	-	-		-
	Senegal	Kaffrine	-	-		-
<b>Agroadvisories on varieties applied under the forecasted information</b>	Ghana	Lawra-Jirapa	x	-	641	-
	Burkina Faso	Yatenga	x	-	110	-
	Mali	Cinzana	-	-		-
	Niger	Fakara	-	-		-
	Senegal	Kaffrine	-	x	194	x
<b>Daily forecast</b>	Ghana	Lawra-Jirapa	-	x	641	-
	Burkina Faso	Yatenga	-	x	110	-
	Senegal	Kaffrine	-	x	194	x
<b>Seasonal forecast</b>	Ghana	Lawra-Jirapa	-	x	641	-
	Burkina Faso	Yatenga	-	x	110	-
	Mali	Cinzana	-	-		-
	Niger	Fakara	-	-		-
	Senegal	Kaffrine	-	x	194	x
<b>Weekly/10 day forecast</b>	Ghana	Lawra-Jirapa	-	x	641	-
	Burkina Faso	Yatenga	-	x	110	-
	Senegal	Kaffrine	-	x	194	x



# Inventory of climate information services in West Africa's Climate-Smart Villages



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Market Services	Country	CSV AR4D site	Available	Implemented	Evaluated	# of households	Gender Assessed	Potential gender impacts known
Input subsidies	Ghana	Lawra-Jirapa	X	-	-	-	-	-
	Burkina Faso	Yatenga	X	-	-	-	-	-
Market information	Ghana	Lawra-Jirapa	X	X	-	641	-	-

Financial Services	Country	CSV AR4D site	Available	Implemented	Evaluated	# of households	Gender Assessed	Potential gender impacts known
Government Subsidies	Burkina Faso	Yatenga	X	-	-		-	X
Informal individual credits/loans	Ghana	Lawra-Jirapa	X	-	-		-	-
	Burkina Faso	Yatenga	X	-	-		-	-
Informal group loans	Ghana	Lawra-Jirapa	X	-	-		-	-
Informal saving groups	Ghana	Lawra-Jirapa	X	-	-		-	-
	Mali	Cinzana	X	-	-		-	-
	Niger	Fakara	X	-	-		-	-
	Senegal	Kaffrine	X	-	-		-	-
Weather-based insurance	Ghana	Lawra-Jirapa	X	-	-		-	-

## Contacts

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Regional CSV Coordinator

Mathieu Ouedraogo

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Project Leader

Jules Bayala (ICRAF)

[j.Bayala@cigar.org](mailto:j.Bayala@cigar.org)

## Acknowledgments

This CSV inventory was implemented as part of CCAFS Flagship 2 activities under the global and regional coordination of Osana Bonilla-Findji and Mathieu Ouedraogo, respectively. We would like to acknowledge the valuable support of our local partners and focal points from each site: André Babou Bationo (INERA), Saaka Buah (CSIR/SARI), Kalifa Traoré (IER), Abasse Toungiani (INRAN) and Diaminatou Sanogo (ISRA).





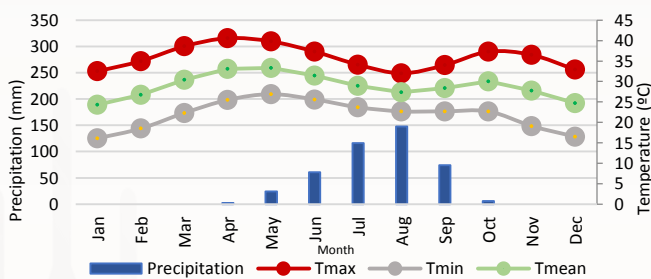
P. Casier (CGIAR)

♦ Tibtenga and Ramdolla villages

### Main crops and livestock Gender specific

- **Food/Cash:** Millet, Cowpea, Sorghum, Maize ♂, Goat, Chicken
- **Cash:** Sesame, Onion ♂ Cow/Oxen ♂, Sheep, Donkey ♂

### Climatic conditions



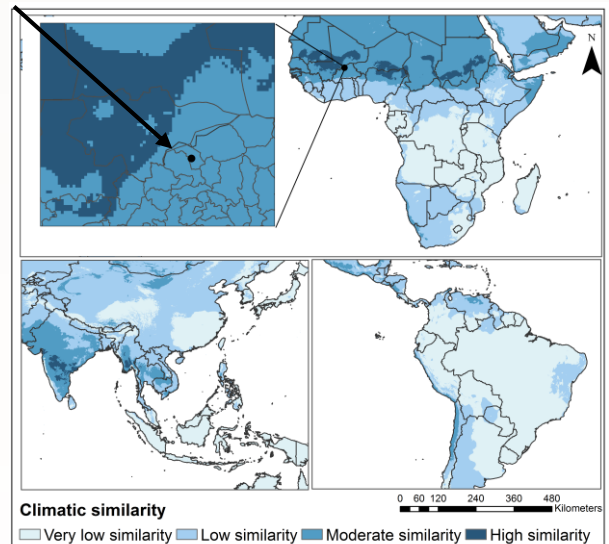
(Source: [www.worldclim.org](http://www.worldclim.org))

### Climate-related risks

High rainfall variability, drought spells during the cropping season and low levels of soil fertility. Widespread soil erosion. Nearly 70% of the land is unsuited for agriculture purposes.

### Areas of climatic similarity

Yatenga - CSV  
13.82 N -2.11 W



Areas whose future projected climate (by 2030) is similar to the current climate in this CSV

(Source: [www.ccafs-analogues.org](http://www.ccafs-analogues.org))

Parameter	Amount	Narrative
Total annual P	509 mm	In a single rainy season of 390 mm (Jul– Sep) and a dry season of 119 mm (Oct-Jun).
Max # of consecutive dry months	10 months (< 100 mm)	
Max T rainy season	33.4 °C	
Max T dry season	39.7 °C	
Highest min T	26.2 °C	May

325 m.a.s.l



farm size  
3 Ha



367<sup>+</sup> HH



2%  
headed



## CSA Portfolio

### Field testing and # of farmers involved (2016)

Implemented

Evaluated

Implemented & Evaluated

Mitigation potential

Available in Site  
(Not CCAFS)

Gender aspect assessed

Potential gender impact

#### CSA Practices



- Tree planting 300 (Moringa, Baobab, Acacia)
- Farmer Managed Natural Regeneration (Ziziphus mauritiana, Balanites aegyptiaca, Sclerocarya birrea...)
- Improved Varieties 184 (Cowpea, Sesame, Millet)
- Planting pits (Millet and Cowpea)
- Organic Fertilizer
- Intercropping
- Integrated Nutr. Mngt
- Macro/Microcatchments

#### Agro-climatic services



- Seasonal forecast 110
- Daily forecast 110
- Weekly/10 days forecast 110
- Agro- advisories on varieties applied under forecasted information 110
- Agro-advisories on fertilizer & pesticide

#### Financial services



- Informal - individual credits/loans
- Gov. Subsidies

#### Market incentives



- Input subsidies

### Flagship projects

- Regional/National synthesis, engagement and support -P255
- Building resilient agro-sylvo-pastoral systems through PAR - P34
- Capacitating African Smallholders with Climate Advisories and Insurance – P46

### Contacts

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Project Leader  
Jules Bayala (ICRAF)  
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### Partners



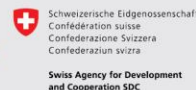
- ICRISAT
- ICRAF
- IUCN
- INERA
- Direction Nationale de la Météorologie



CSV profile developed by Osana Bonilla-Findji, Patricia Alvarez-Toro, Julian Ramirez-Villegas, Mathieu Ouedraogo and André Babou Batio.

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 180-300 m.a.s.l

 farm size  
3 Ha

 344<sup>+</sup> HH

 4% headed



P. Casier (CGIAR)

◆ Doggoh and Bompari villages

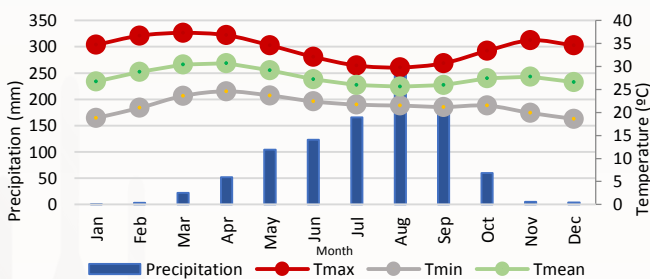
### Main crops and livestock Gender specific

- **Food/Cash:** Millet ♂, Sorghum ♂, Maize ♂, Yam ♂  
Cowpea, Chicken, Guinea fowls ♂
- **Cash:** Groundnut ♀, Goat, Sheep, Cow ♂

### Climate-related risks

High rainfall variability, rainfall more erratic, more drought spells. Land degradation

### Climatic conditions



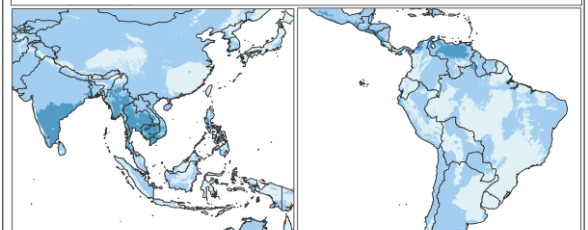
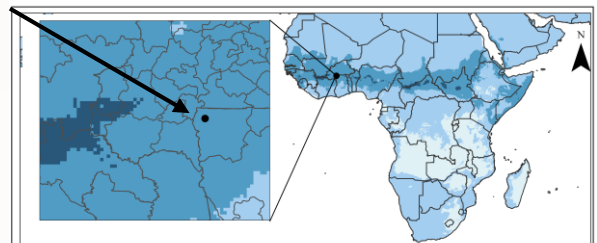
(Source: [www.worldclim.org](http://www.worldclim.org))

### Areas of climatic similarity



Lawra-Jirapa CSV



10.73 N -2.64 W



Climatic similarity

 Very low similarity  Low similarity  Moderate similarity  High similarity

Areas whose future projected climate (by 2030) is similar to the current climate in this CSV (Source: [www.ccafs-analogues.org](http://www.ccafs-analogues.org))

Parameter	Amount	Narrative
 Total annual P	786 mm	In a single rainy season of 599 mm (Jul– Sep) and a dry season of 374 mm (Oct-Jun).
Max # of consecutive dry months	7 months (< 100 mm)	
 Max T rainy season	30.7 °C	
Max T dry season	37.3 °C	
Highest min T	24.6 °C	April





## CSA Portfolio

### Field testing and # of farmers involved (2016)

Implemented  
 Evaluated  
 Implemented & Evaluated  
 Mitigation potential  
 Available in Site (Not CCAFS)  
 Gender aspect assessed  
 Potential gender impact

### CSA Practices

- Tree planting**  
(Magnifera indica, Anacardium occidentale, Tectonagrandis teak, Maringa oleifera)
- Mulching**  
(Yam, Vegetables)
- Improved Varieties**  
(Maize, cowpea, soybean)
- No/Reduced Tillage**  
(Maize, soybean, cowpea)
- Integr. Nutr. Mgt** 61
- Organic Fertilizer** 61
- Intercropping**  
(Jathropa, cowpea)
- Planting pits**  
(Maize)
- Offseason gardening**  
(Soybean, vegetables)
- Water harvesting** 61   
*Earth bunds & Ties ridges*  
(Maize)
- Crop rotation** 61   
(Maize, cowpea)

### Agro-climatic services

- Seasonal forecast** 641
- Daily forecast** 641
- Weekly/10 day forecast** 641
- Agro-advisories on varieties applied under forecasted info** 641
- Agro-advisories on fertilizer and pesticide application**

### Financial services

- Informal saving groups**
- Informal indiv. credits**
- Informal group loans**
- Weather-based insurance**

### Market incentives

- Input subsidies**
- Market (price) information** 641

### Flagship projects

- Regional/National synthesis, engagement and support -P255
- Building resilient agro-sylvo-pastoral systems through PAR- P34
- Capacitating African Smallholders with Climate Advisories and Insurance-P46

### Partners



- ICRISAT
- ICRAF
- CSIR/SARI
- MoFA
- CARE
- Oxfam
- LACERD
- Esoko
- AGRYMET
- Ghana Meteo Agency

### Contacts

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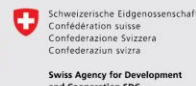
Project Leader  
Jules Bayala (ICRAF)  
([j.bayala@cigar.org](mailto:j.bayala@cigar.org))



CSV profile developed by Osana Bonilla-Findji, Patricia Alvarez-Toro, Julian Ramirez-Villegas, Mathieu Ouedraogo and Saaka Buah.

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P. Casier (CGIAR)

◆ Tongo and Ngakoro villages

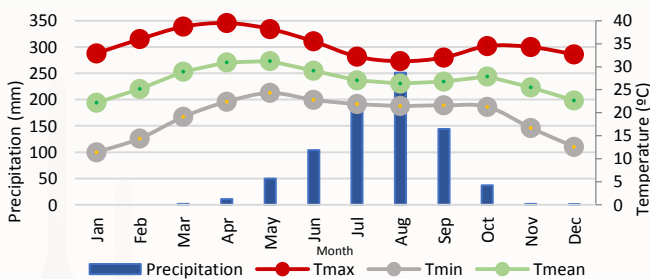
### Main crops and livestock + Gender specific

- **Food:** Millet, Sorghum
- **Food/Cash:** Peanut ♀, Maize ♂, Cowpea,
- **Cash:** Rice, Goat, Chicken ♀, Sheep, Oxen ♂, Donkey ♂

### Climate-related risks

High rainfall variability, low soil fertility and land degradation

### Climatic conditions



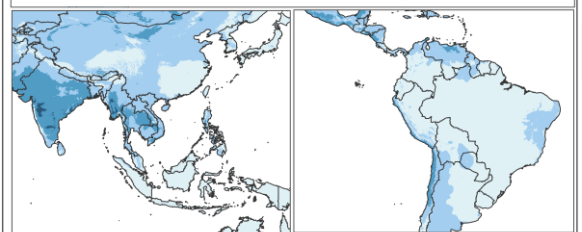
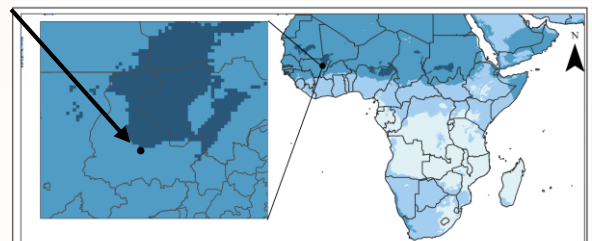
(Source: [www.worldclim.org](http://www.worldclim.org))

### Areas of climatic similarity



Cinzana - CSV

13.50 N -5.61 W



Climatic similarity

□ Very low similarity □ Low similarity □ Moderate similarity □ High similarity

0 50 100 200 300 400 Kilometers

Areas whose future projected climate (by 2030) is similar to the current climate in this CSV (Source: [www.ccafs-analogues.org](http://www.ccafs-analogues.org))

Parameter	Amount	Narrative
Total annual P	786 mm	In a single rainy season of 435 mm (Jul– Aug) and a dry season of 351 mm (Sep-Jun).
Max # of consecutive dry months	8 months (< 100 mm)	
Max T rainy season	32.2 °C	
Max T dry season	39.5 °C	
Highest min T	24.3 °C	May

**300 m.a.s.l**



**farm size**  
9 Ha



305<sup>+</sup> HH



1%  
headed



## CSA Portfolio

### Field testing and # of farmers involved (2016)

♀ Gender aspect assessed

♀ Potential gender impact

Implemented 
 Evaluated 
 Implemented & Evaluated 
 Mitigation potential 
 Available in Site (Not CCAFS)

#### CSA Practices



- ♀ **Tree planting**  
(Gliricidia sepium, Moringa olifera, Adansonia digitata)
- Intercropping**  
(Sorghum, millet, fodder crops; groundnut, cowpea)
- Improved Varieties**  
(Sorghum, millet, sesame, fonio)
- Leg. tree intercropping**  
(Jatropha agroforestry with Sorghum and millet)
- Water harvesting**  
*Contours* (Sorghum and millet)
- Integr. Nutr. Mngt**  
(Sorghum and millet)

#### Agro-climatic services



- Seasonal forecast
- Agro- advisories on varieties applied under forecasted information
- Agro-advisories on fertilizer and pesticide application

#### Financial services



- Informal – saving groups

#### Market incentives



None

### Flagship projects

- Regional/National synthesis, engagement and support -P255
- Building climate smart farming systems through integrated water storage and crop-livestock interventions - P38
- Capacitating African Smallholders with Climate Advisories and Insurance Development – P46

### Partners



- ICRISAT
- ICRAF
- IWMI
- Institut d'Economie Rurale (IER)



### Contacts

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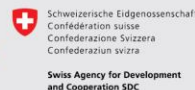
Project Leader  
Jules Bayala (ICRAF)  
([j.bayala@cgiar.org](mailto:j.bayala@cgiar.org))



CSV profile developed by Osana Bonilla-Findji, Patricia Alvarez-Toro, Julian Ramirez-Villegas, Mathieu Ouedraogo and Kalifa B. Traoré.

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200 m.a.s.l



farm size  
10 Ha



254<sup>+</sup> HH



4%  
headed



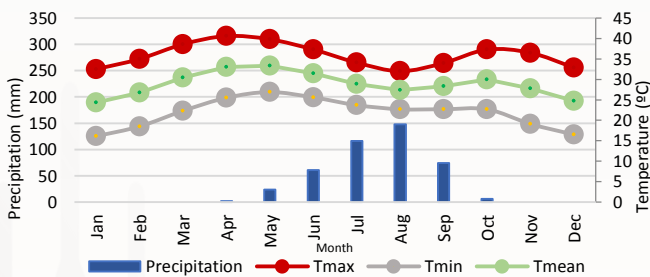
(CCAFS)

◆ Kampa Zarama, Bankadey villages

## Main crops and livestock + Gender specific

- **Food:** Millet, Cowpea, Sorghum ♂, Maize
- **Food/Cash:** Peanut ♀, Maize ♀
- **Cash:** Peanut ♀, Goat ♀, Chicken ♀, Sheep, Cow/Oxen ♂

## Climatic conditions



(Source: [www.worldclim.org](http://www.worldclim.org))

Parameter	Amount	Narrative
Total annual P	431 mm	In a single rainy season of 246 mm (Jul– Aug) and a dry season of 167 mm (Sep–Jun).
Max # of consecutive dry months	10 months (< 100 mm)	
Max T rainy season	34.1 °C	
Max T dry season	40.6 °C	
Highest min T	26.9 °C	May

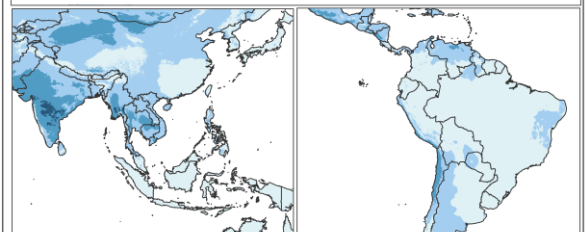
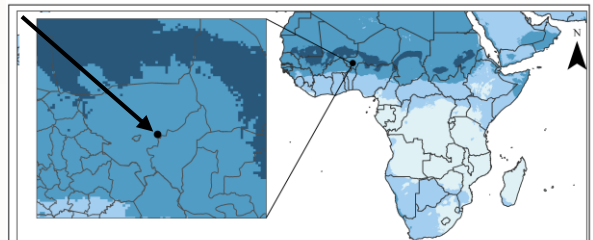
## Climate-related risks

High rainfall variability, low soils fertility, land degradation.

## Areas of climatic similarity



Fakara - CSV  
13.65 N -2.83 W



Climatic similarity

Very low similarity Low similarity Moderate similarity High similarity

Areas whose future projected climate (by 2030) is similar to the current climate in this CSV

(Source: [www.ccafs-analogues.org](http://www.ccafs-analogues.org))



**200 m.a.s.l**



**farm size**  
10 Ha



**254 HH**



**4% headed**



## CSA Portfolio

### Field testing and # of farmers involved (2016)

Implemented 
 Evaluated 
 Implemented & Evaluated 
 Mitigation potential 
 Available in Site (Not CCAFS) 
 Gender aspect assessed 
 Potential gender impact

#### CSA Practices



- Tree planting** (Moringa)
- Farmer Managed Natural Regeneration** (Millet, sorghum, cowpea, peanut, hibiscus)
- Improved Varieties** (Millet, sorghum, cowpea, okra, Sena obtusifolia)
- Planting pits** (Sorghum)
- Organic Fertilizer**
- Intercropping** (Sorghum, Millet, cowpea)
- Water harvesting** (Half moon/bunds -Millet, sorghum)
- Income diversification** 20 (Poultry)

#### Agro-climatic services



- Seasonal forecast**
- Agro- advisories on varieties applied under forecasted information**
- Agro-advisories on fertilizer and pesticide application**

#### Financial services



- Informal – saving groups**

#### Market incentives



None

### Flagship projects

- Regional/National synthesis, engagement and support -P255
- Building resilient agro-sylvo-pastoral systems through PAR- P34
- Capacitating African Smallholders with Climate Advisories and Insurance - P46

### Contacts

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Project Leader  
Jules Bayala (ICRAF)  
([j.bayala@cigar.org](mailto:j.bayala@cigar.org))

### Partners



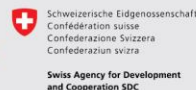
- ICRISAT
- ICRAF
- IUCN
- INRAN
- AGRYMET



CSV profile developed by Osana Bonilla-Findji, Patricia Alvarez-Toro, Julian Ramirez-Villegas, Mathieu Ouedraogo and Abasse Tougiani.

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 to scale climate smart agricultural practices, technologies and institutions which contribute to increased food and nutritional security, low emissions development, sustainable landscapes, and increased gender equity.

This work was implemented as part of CCAFS Flagship 2, which is carried out with support from CGIAR Fund Donors and through bilateral funding agreements. For details please visit <https://ccafs.cgiar.org/donors>. CCAFS is supported by:



15-50 m.a.s.l



farm size  
9 Ha



406 HH



2%  
headed



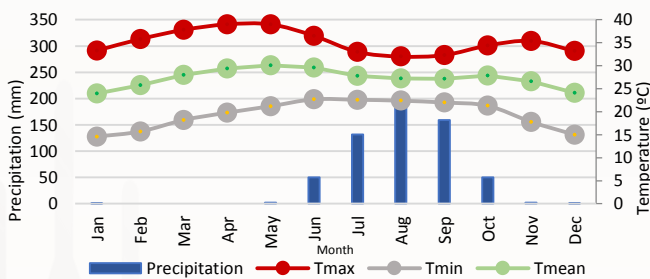
Andy Jarvis (CCAFS)

◆ Daga-Birame and Toune Mosquée villages

### Main crops and livestock + Gender specific

- **Food:** Millet ♂, Sorghum ♂
- **Food/Cash:** Peanut ♀, Maize ♀
- **Cash:** Horse ♂, Donkey ♂, Dairy Cow ♂, Goat ♀, Sheep

### Climatic conditions



(Source: [www.worldclim.org](http://www.worldclim.org))

### Climate-related risks

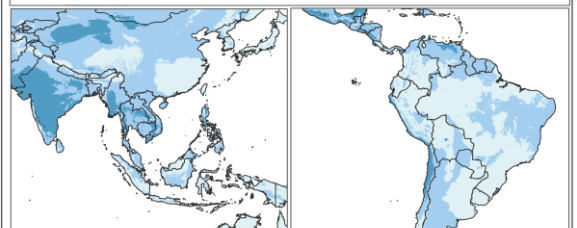
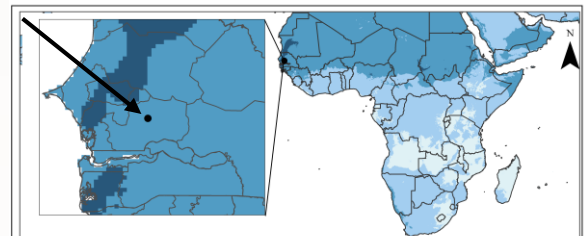
Rainfall variability, droughts, floods and winds

### Areas of climatic similarity



**Kaffrine-CSV**

14.24 N -15.40 W



**Climatic similarity**  
■ Very low similarity ■ Low similarity ■ Moderate similarity ■ High similarity

**Areas whose future projected climate (by 2030) is similar to the current climate in this CSV**

(Source: [www.ccafs-analogues.org](http://www.ccafs-analogues.org))

Parameter	Amount	Narrative
Total annual P	589 mm	In a single rainy season of 483 mm (Jul–Sep) and a dry season of 106 mm (Oct–Jun).
Max # of consecutive dry months	9 months (< 100 mm)	
Max T rainy season	33.0 °C	
Max T dry season	39.0 °C	
Highest min T	22.7 °C	June

15-50 m.a.s.l



farm size  
9 Ha



406 HH



2% headed



## CSA Portfolio

### Field testing and # of farmers involved (2016)



Implemented



Evaluated



Implemented & Evaluated



Mitigation potential



Available in Site  
(Not CCAFS)



Gender aspect assessed



Potential gender impact

### CSA Practices



♀ **Tree planting** 300   
(Ziziphus mauritiana, Adansonia digitata, Tamarindus indica, etc)

♀ **Farmer Managed Natural Regeneration** 20   
(Maize, millet, groundnut)

**Improved Varieties** 20   
(Maize, millet)

**No/Reduced Tillage** 20   
(Maize, Millet)

**Integrated Nutr. Mgt** 20

**Inorganic Fertilizer** 20   
(maize, millet)

♀ **Season gardening (Group)**  
(water melon, okra, mint, pepper)

**Income diversification** 20   
(poultry)

### Agro-climatic services



♀ **Seasonal forecast** 194

♀ **Daily forecast** 194

♀ **Weekly/10 d. forecast** 194

♀ **Agro- advisories on varieties applied under forecasted information** 194

▲ **Agro-advisories on fertilizer and pesticide application**

### Financial services



▲ **Informal saving groups**

### Market incentives



None

### Flagship projects

- Regional/National synthesis, engagement and support -P255
- Building resilient agro-sylvo-pastoral systems through PAR- P34
- Capacitating African Smallholders with Climate Advisories and Insurance P46

### Partners



- ICRIAT
- ICRAF
- IUCN
- ISRA
- ANACIM



### Contacts

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CSV profile developed by Osana Bonilla-Findji, Patricia Alvarez-Toro, Julian Ramirez-Villegas, Mathieu Ouedraogo and Diaminatou Sanogo.

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