



# Gender issue in forest and tree products use for household food security in Sudano-Sahelian area: the case of two villages territories in Burkina Faso

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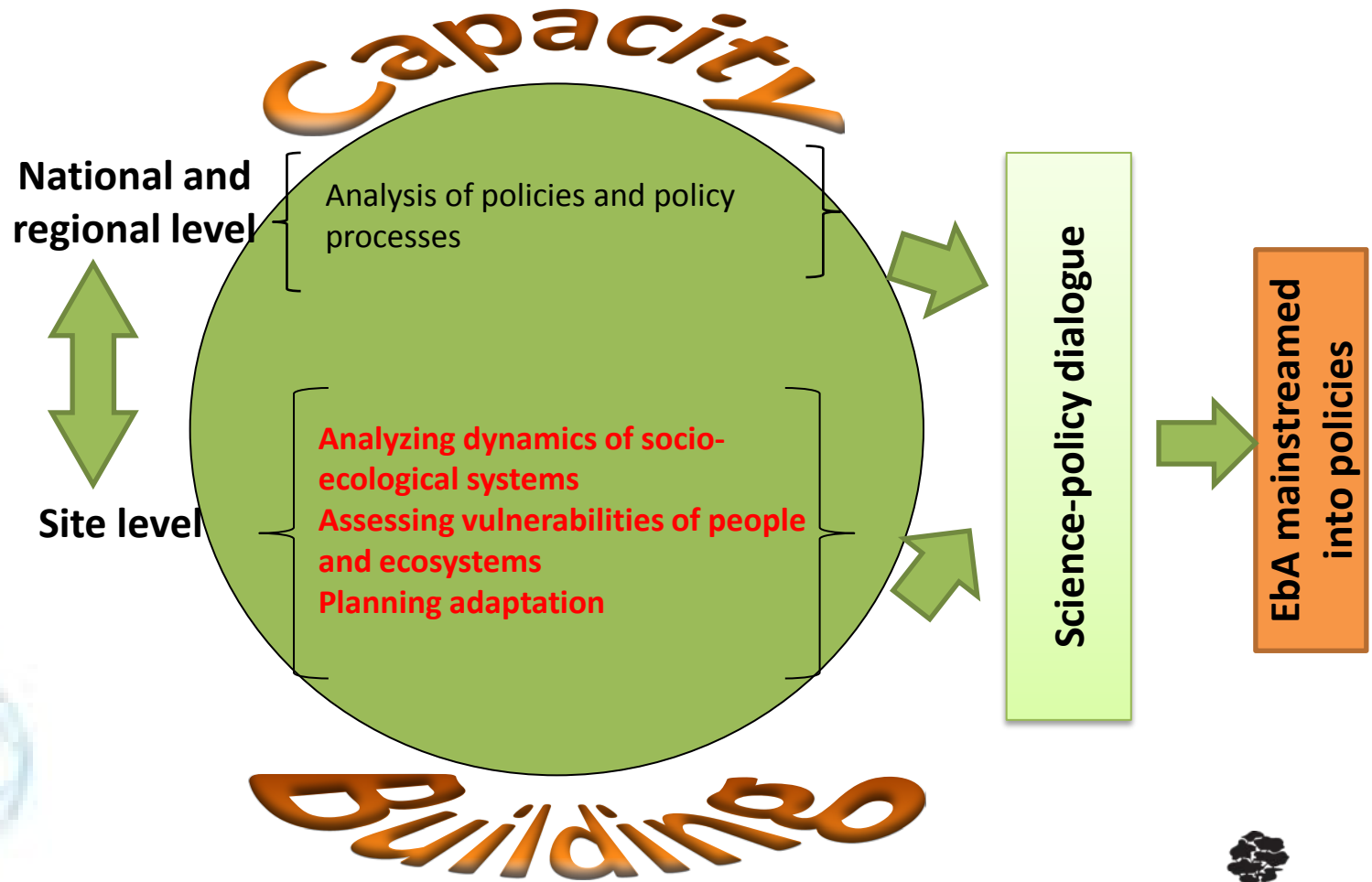


# Outline

- ACFAO at a glance
- Objectives of the present study
- Study area
- Methods
- Results
- Key message
- Recommendations
- Pilot actions



# ACFAO at a glance



# Objectives of the present study

- **What contribution of forest and tree resources for household food security in Sudano-Sahelian landscape?**

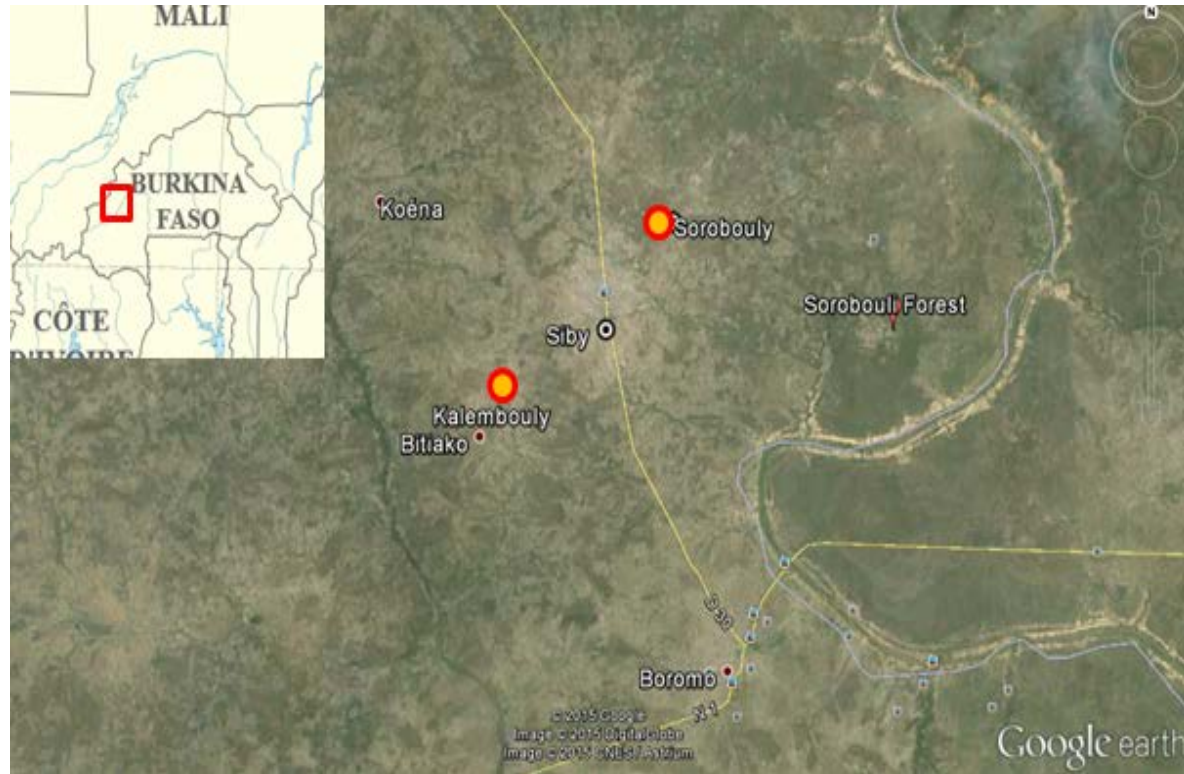
1. What forest and tree resources are solicited for household food security in Sudano-sahelian landscape?



2. What is the gender dimension in the use of forest and tree resources for household food security in Sudano-sahelian landscape?



# Study area



- Two villages in Sudano-sahelian landscape originating from the same 'mother village' (Sorobouly and Kalembouly)
- The study villages were chosen to take account of the level of forest resources
- More trees in Sorobouly than in Kalembouly



# Methods

- Resource inventory and mapping
- 60 households were randomly selected from each village
- Household head and one of his wives were interviewed,
- We carried out the surveys during the crop-growing period (from July 2012 to October 2012)
- We interviewed the head of households once each month and their wives every 5 days,
- The surveys were focused on the source of cereals consumed in the household and the income sources that the household used in case of purchase
- The main statistical analyses used were the descriptive statistics (mean and standard deviation), student testing, chi-square testing
- Analysis with Generalized Linear Model
- Dependent variable = Cereal purchase
- Independent variables = income sources



# Food insecurity approach

- The most common food security valuation approach is based on anthropometrics measures developed by FAO and WHO but has been criticized by some authors because of its difficult implementation in the field (Payne and Lipton 1994; Maxwell 1996).
- Our approach in this study is based on the studies of Janin and Martin-Prevel (2006) in Burkina Faso, which highlight households' capacity to manage the risk of food insecurity.
- In the Sudano-Sahelian area, food insecurity usually occurs during food shortage periods, a period in the cropping season when cereal granaries become empty until the next harvest.
- Empty granaries as the first indicator of risk of food insecurity.



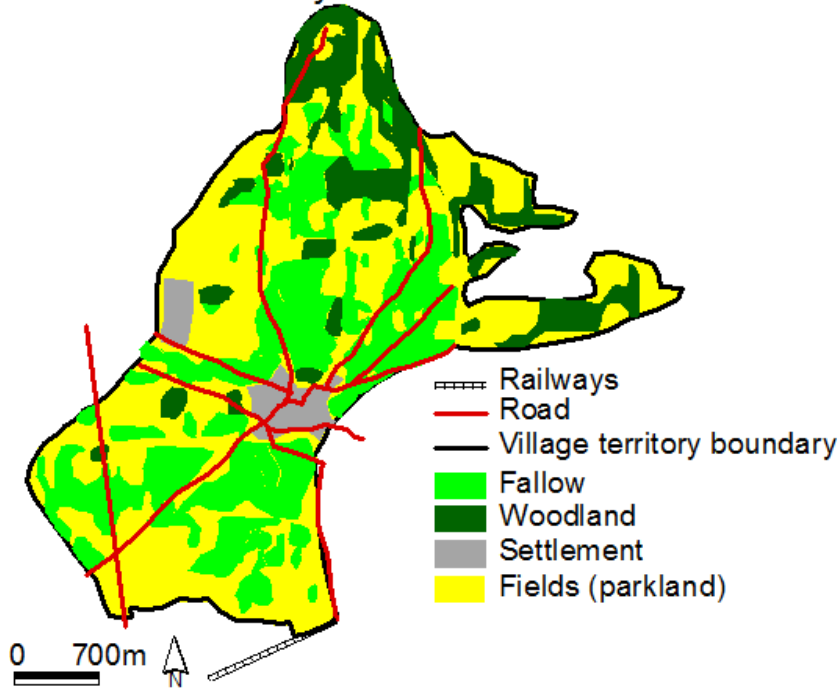
# Results



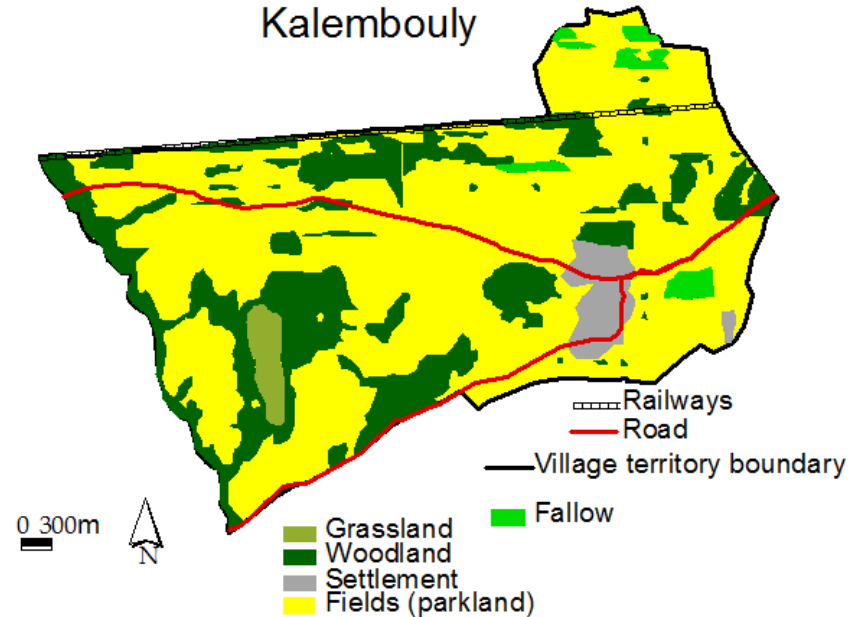


# Land-cover and land-use maps the villages

Sorobouly



Kalembouly



Kalembouly

Agroforestry parklands (70%)

Sorobouly

Natural vegetation (51%)

# Villages profiles based on households characteristics

Household characteristics	Villages		
	Kalembouly		Sorobouly
<b>Oxen per household</b>	<b>3.2±4.3<sup>a</sup></b>		<b>1.9±3.0<sup>b</sup></b>
<b>Cash cropland size per capita</b>	<b>0.5±0.4<sup>a</sup></b>		<b>0.2±0.1<sup>b</sup></b>
<b>Pigs per household</b>	<b>0.2±0.7<sup>a</sup></b>		<b>2.3±3.1<sup>b</sup></b>
<b>Poultry per household</b>	<b>9.7±6.8<sup>a</sup></b>		<b>13.6±8.6<sup>b</sup></b>
Goats per household	3.5±4.1 <sup>a</sup>		3.7±5.6 <sup>a</sup>
Sheep per household	2.5±4.9 <sup>a</sup>		2.3±4.0 <sup>a</sup>
Food cropland size per capita	0.7±0.6 <sup>a</sup>		0.5±0.4 <sup>a</sup>
Formal jobs per household	0.0±0.0 <sup>a</sup>		0.0±0.0 <sup>a</sup>
Pensions per household	0.0±0.0 <sup>a</sup>		0.1±0.0 <sup>a</sup>
Permanent residents per household	6.2±2.2 <sup>a</sup>		6.8±2.5 <sup>a</sup>



# Households at high risk of food insecurity

- The proportions of households with empty granaries in both villages for the period July 2012 to October 2012,
- 17% of the sampled households with completely empty granaries in Sorobouly and 18% in Kalembouly,
- No significant difference between the villages (Khi-square test),



# Gender-differentiation in household incomes generated during food shortages (men vs women)



Income sources	Kalembouly		Sorobouly	
	men	women	men	women
<b>Ground nut</b>	<b>0.0%</b>	<b>7.3%</b>	<b>0.0%</b>	<b>6.9%</b>
Oxen	1.7%	0.0%	0.0%	0.0%
Small livestock	25.4%	16.4%	8.6% <sup>b</sup>	1.7%
Poultry	36.4%	3.6%	34.5%	5.1%
Off-farm activities	18.2%	1.8%	8.6%	3.4%
Nonfarm activities	12.7%	14.5%	6.9%	15.5%
<b>Shea nuts</b>	<b>0.0%</b>	<b>70.9%</b>	<b>0.0%</b>	<b>31.0%</b>
<b>Parkia seeds</b>	<b>0.0%</b>	<b>3.6%</b>	<b>0.0%</b>	<b>5.1%</b>
<b>Fuelwood</b>	<b>0.0%</b>	<b>3.6%</b>	<b>0.0%</b>	<b>51.7%</b>
<b>Charcoal</b>	<b>0.0%</b>	<b>5.4%</b>	<b>0.0%</b>	<b>27.6%</b>
<b>Sorghum beer</b>	<b>0.0%</b>	<b>7.2%</b>	<b>0.0%</b>	<b>50.0%</b>



# Gender-differentiation in the expenditure of food items during food shortage (men *vs* women)



Expenditures of food items	Kalembouly		Sorobouly	
	Women	Men	Women	Men
Cereals	18%	3%	17%	3%
Mill	98%	0%	98%	0%
Maggi	98%	0%	100%	0%
Salt	89%	0%	94%	0%
Peppers	76%	0%	70%	0%
Fish	56%	0%	93%	0%
“Soumbala”	90%	9%	81%	20%
Shea butter	67%	3%	74%	0%



# Influence of women's livelihoods strategies on the purchases of cereals in food shortage period

	Sorobouly		Kalembouly	
	z value	Pr(> z )	z value	Pr(> z )
(Intercept)	-4.223	2.41e-05****	-7.004	2.49e-12****
<b>Fuelwood</b>	<b>2.375</b>	<b>0.0175**</b>	1.570	0.116523
<b>Shea nut</b>	0.873	0.3826	<b>3.563</b>	<b>0.000367****</b>
<b>Charcoal</b>	<b>-1.664</b>	<b>0.0961*</b>	0.509	0.610783
<b>Petty trading</b>	0.494	0.6213	<b>2.240</b>	<b>0.025122**</b>
Parkia seeds	-0.011	0.9915	-0.016	0.987530
Sorghum beer	-1.583	0.1135	1.604	0.108805
Groundnut	-0.009	0.9932	0.603	0.546504
Small livestock	-0.004	0.9972	1.592	0.111341
<b>Poultry</b>	<b>1.692</b>	<b>0.0906*</b>	0.126	0.899441
	LRT $X^2=26,797$ ; $df=9$ ; $p=0,001511$ (odds ratio=3.15; $p=0.01175$ ; 95% CI=1.2 – 8.4)		LRT $X^2=29,232$ ; $df=9$ ; $p=0,0005922$ (odds ratio=3.99; $p=0.000367$ ; 95% CI=1.8 – 8.5)	

Significance codes: \*\*\*\*0.001 ; \*\*\*0.01 ; \*\*0.05 ; \*0,1

# Key message

- The use of forest and tree products for household food security in sudano-sahelian area is a women-centred and depend on the landscape evolution



# Recommendations

- As forest and Agroforestry parkland resources in sudano-sahelian landscape is a woman-centred, to achieve the FIP-REDD+ objectives women need to have greater access to forest resources,
- As poverty reduction is a associated benefits expected from the FIP-REDD+ Burkina, developing of market for NTFPs will contribute greatly to the well-being of the whole community,
- Efforts to enhance women's participation in REDD+ process should be also strengthened because women can help to maximize synergies between the forest sector and food security for the benefit of all,
- In Burkina Faso, mitigation needs adaptation, invest in adaptation strategies of both men and women, can contribute both to poverty alleviation and REDD+,





# Pilot actions

## Kalembouly

### Women

1. Building improved stoves
2. Planting trees
3. Building stone barriers in the fields
4. Farmer Managed Natural Regeneration (FMNR)

### Men

1. Rehabilitate degraded lands
2. Building stone barriers in the fields
3. Planting trees
4. Bushfire control
5. Farmer Managed Natural Regeneration (FMNR)

## Sorobouly

### Women

1. Creation of activities which would provide income
2. Bushfire control
3. Building improved stoves

### Men

1. Farmer Managed Natural Regeneration (FMNR)
2. Bushfire control
3. Rehabilitate degraded lands
4. Use organic fertilizer
5. Planting trees



**THANK YOU!**

