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Gender, Climate, and Nutrition Integration Initiative (GCAN): Insights for Nigeria

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CGIAR RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security CCAFS

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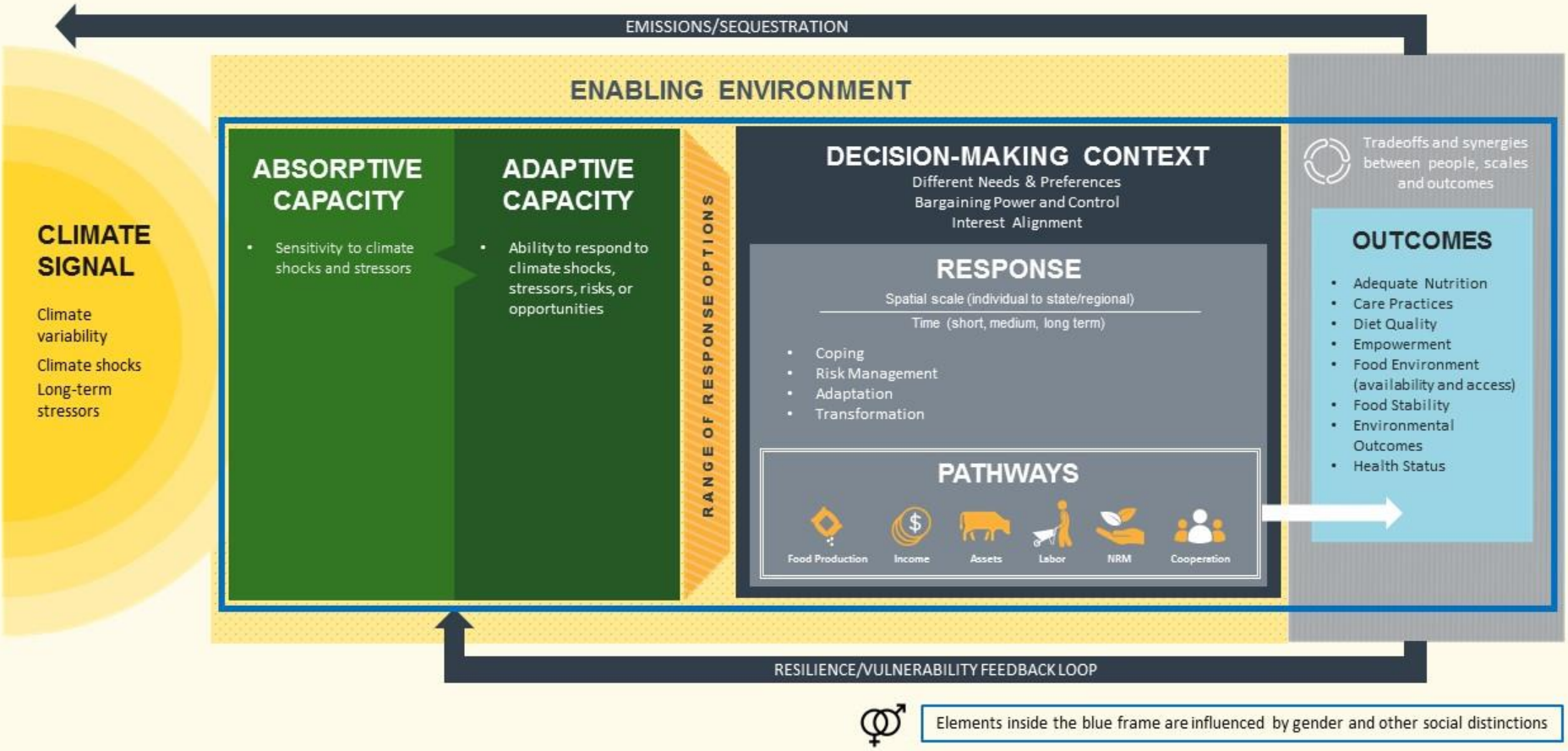
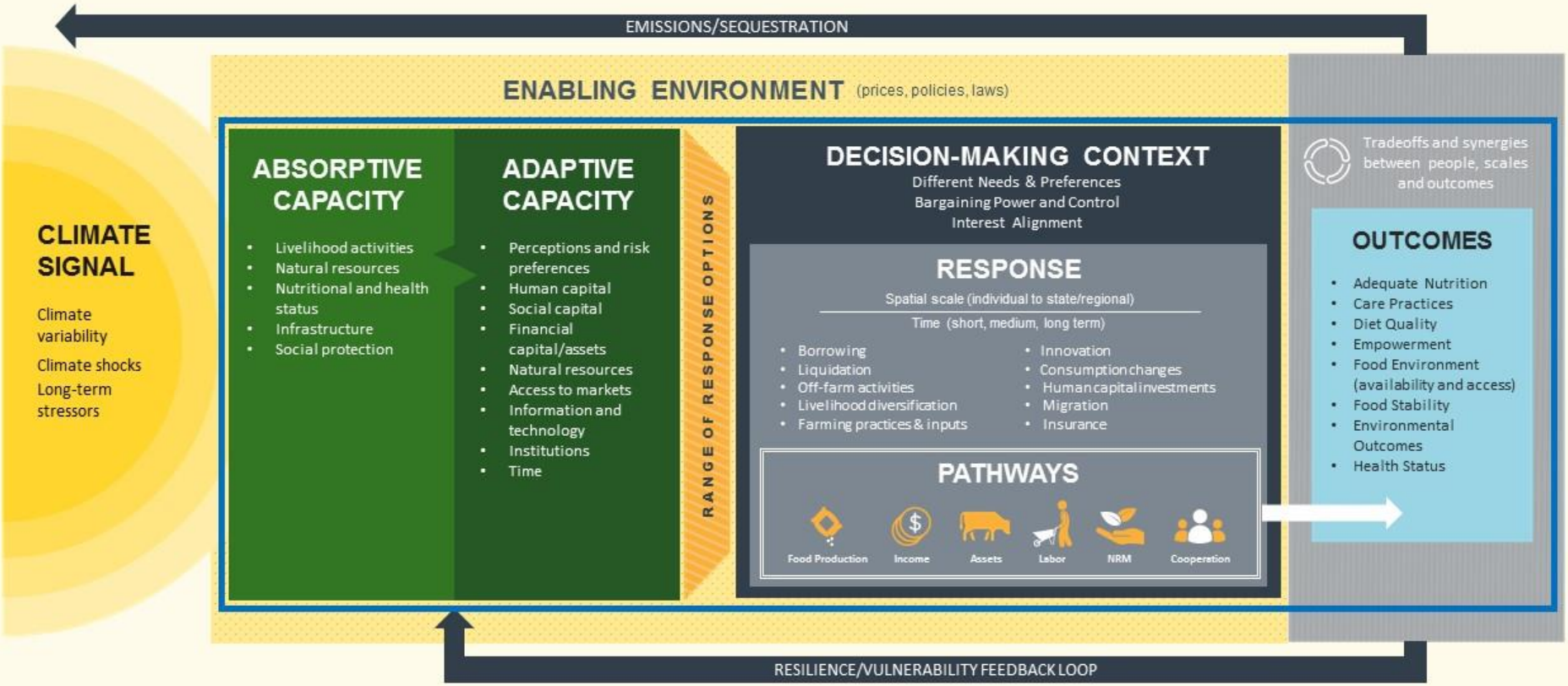
GCAN ACTIVITIES

- **Objective:** Support FTF focus countries to understand and use climate data for climate-smart agriculture (CSA) programming that integrates nutrition and gender for increased resilience under the Global Food Security Strategy
- **Activities include:**
    1. Framework and tools for understanding conceptually the structural connections among climate change, CSA, gender and nutrition.
    2. Research and knowledge management to help answer missions' priority questions related to climate, gender, and nutrition
    3. Enhanced use of FTF open data, including mapping

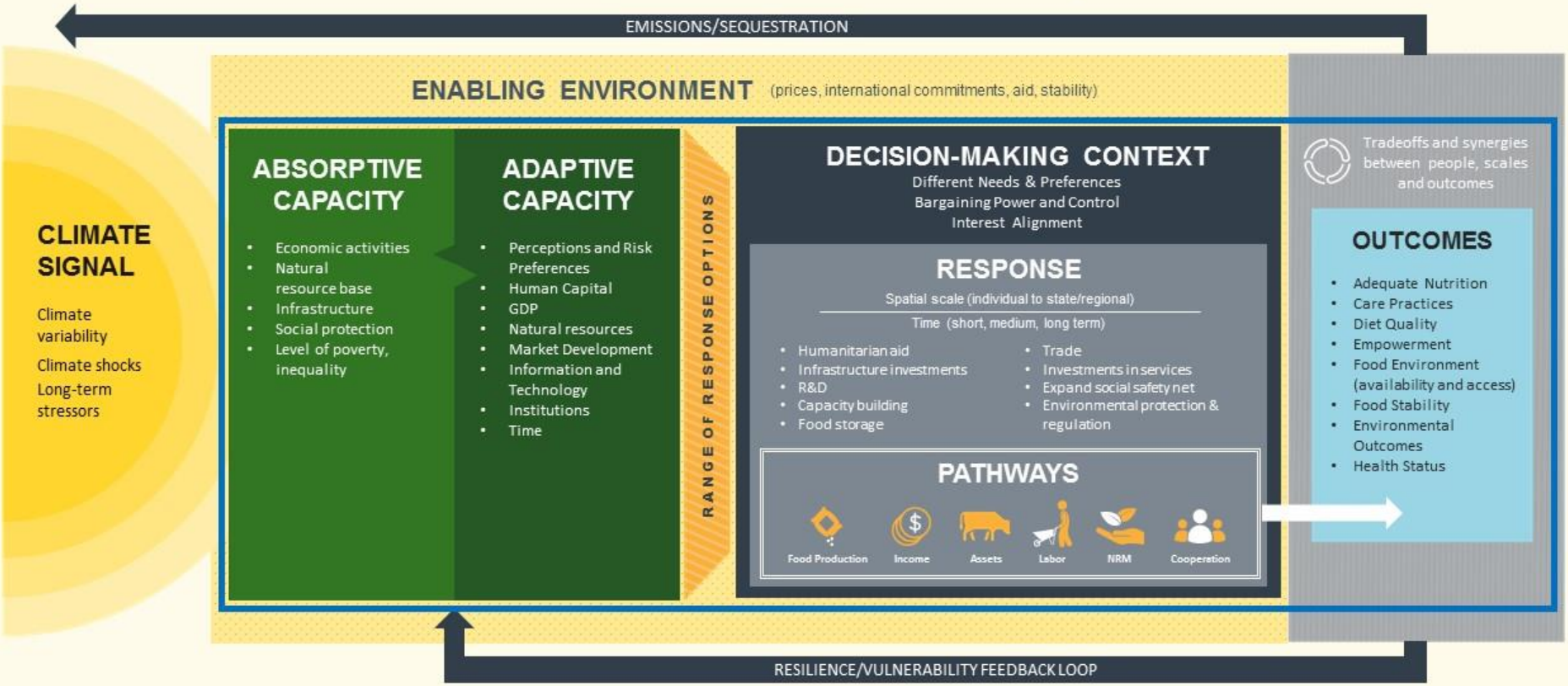
Framework for Climate, Gender, and Nutrition



Framework for Climate, Gender, and Nutrition- Household Level



Framework for Climate, Gender, and Nutrition- Policy/National Level



OBJECTIVES

- Review the projected impact of climate change on agriculture and livelihoods in the FTF ZOI
- Consider how climate change affects nutrition (& what to do)
- Consider how gender affects ability to adapt to climate change (& what to do)
- Initiate a dialogue about potential research and mission support that can fill evidence gaps to inform mission programming in support of the 2016 Global Food Security Act and Strategy

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Overview of Land Use and Agriculture

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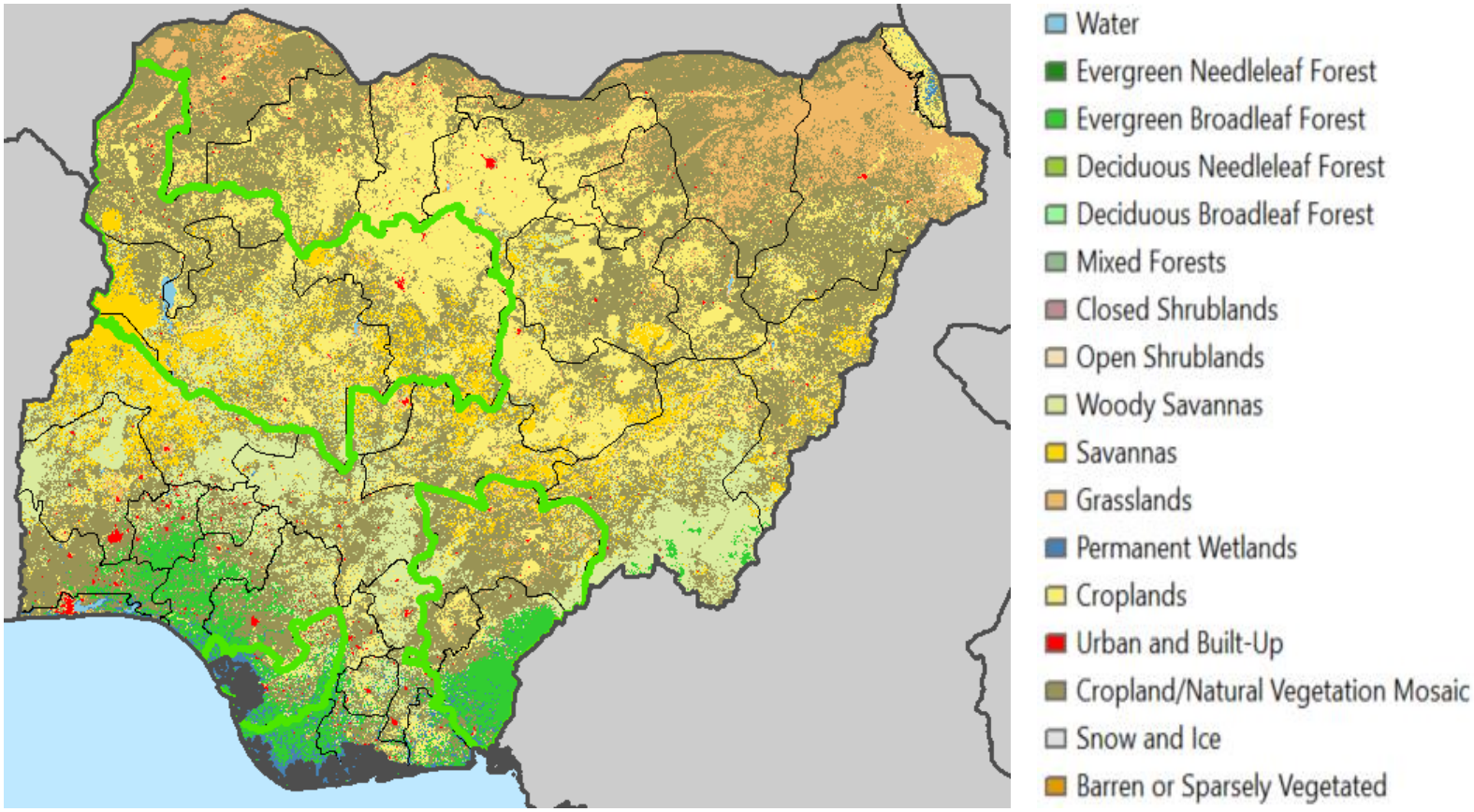
LAND COVER, 2013



Land cover type, 2013, MODIS

SUMMARY OF LAND CATEGORIES FOR NIGERIA, 2009

Land category	Area (sq km)
Water	1,766
Evergreen Needleleaf Forest	56
Evergreen Broadleaf Forest	46,891
Deciduous Needleleaf Forest	28
Deciduous Broadleaf Forest	14,896
Mixed Forests	97
Closed Shrublands	2,398
Open Shrublands	3,083
Woody Savannas	182,532
Savannas	97,548
Grasslands	151,517
Permanent Wetlands	15,352
Croplands	136,807
Urban and Built-Up	4,624
Cropland/Natural Vegetation Mosaic	253,824
Snow and Ice	3
Barren or Sparsely Vegetated	320

Source: Authors, based on MCD12Q1, 2009, NASA (2015)

TEN LEADING CROPS OF NIGERIA, BY HARVESTED AREA, 2010-2012

Item	Rank by area harvested	Hectares harvested, avg 2010-2012	Tons produced, avg 2010-2012	Yield, 2010-2012
Maize	1	5,119,260	8,755,707	1.71
Sorghum	2	5,117,094	6,979,344	1.36
Cassava	3	3,689,663	49,645,544	13.46
Millet	4	3,684,387	3,813,843	1.04
Oil, palm fruit	5	3,216,667	8,033,334	2.5
Cow peas, dry	6	3,083,247	2,576,350	0.84
Yams	7	2,886,013	36,425,856	12.62
Rice, paddy	8	2,565,723	4,624,280	1.8
Groundnuts, with shell	9	2,517,330	3,277,334	1.3
Cocoa, beans	10	1,236,143	391,067	0.32
Sweet potatoes	11	1,105,000	3,333,333	3.02

Source: FAOSTAT (FAO 2014).

VALUE OF PRODUCTION

Item	Rank by value	Value of production, avg 2010-2012
Yams	1	9,290,196
Cassava	2	5,186,123
Fruit, citrus other	3	1,732,874
Groundnuts, with shell	4	1,478,546
Rice, paddy	5	1,288,602
Maize	6	1,240,377
Vegetables, fresh other	7	1,139,792
Sorghum	8	1,073,451
Cow peas, dry	9	865,092
Meat indigenous, cattle	10	819,417
Cashew nuts, with shell	11	729,865
Millet	12	692,014

Source: FAOSTAT (FAO 2014).

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Climate of Nigeria

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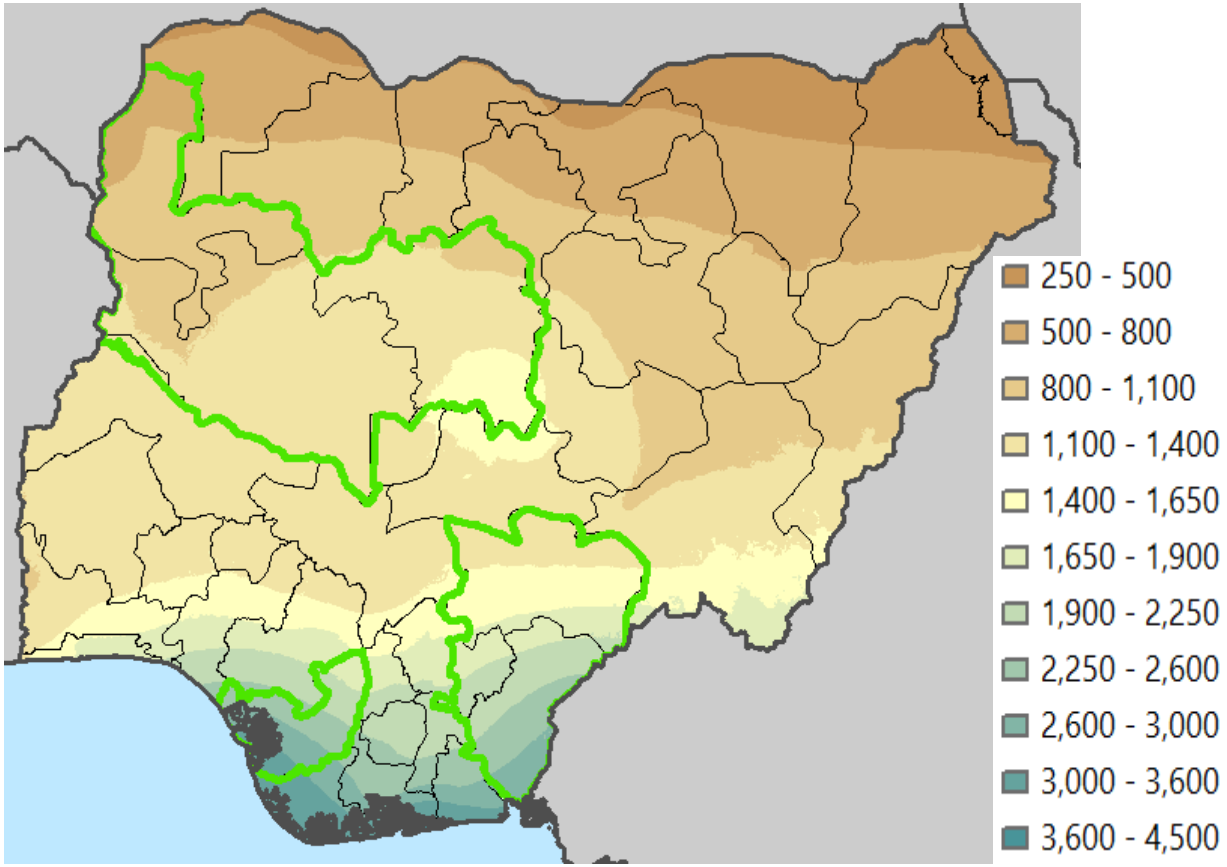
MEAN ANNUAL PRECIPITATION, MM, 1950-2000

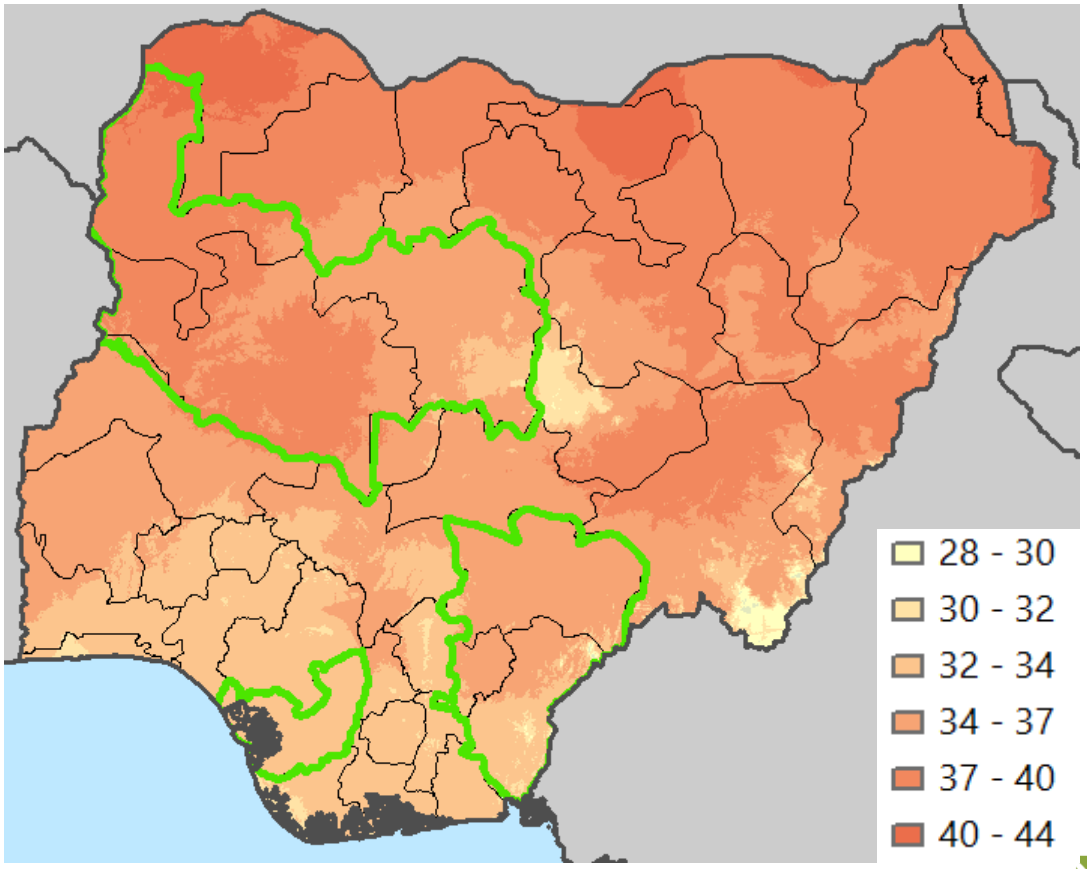
Note: Feed the Future zone is outlined in green.



Source: WorldClim 1.4 (Hijmans et al.).

MEAN DAILY MAXIMUM TEMPERATURE FOR THE WARMEST MONTH, ^{0}C, 1950-2000

Note: Feed the Future zone is outlined in green.



Source: WorldClim 1.4 (Hijmans et al.).

TEMPERATURE AND RAINFALL FOR NIGERIA, 1950-2000

Percentile	Mean daily maximum temperature, warmest month, ^{0}C	Mean annual precipitation, mm
Minimum	28.1	253
5th	32.2	476
10th	32.7	577
25th	34.5	835
50th	36.5	1,129
75th	37.9	1,337
90th	39.2	1,877
95th	39.7	2,377
Maximum	41.2	3,878
Mean	36.2	1,183

Source: WorldClim 1.4 (Hijmans et al.).

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Climate Change Projections for Nigeria

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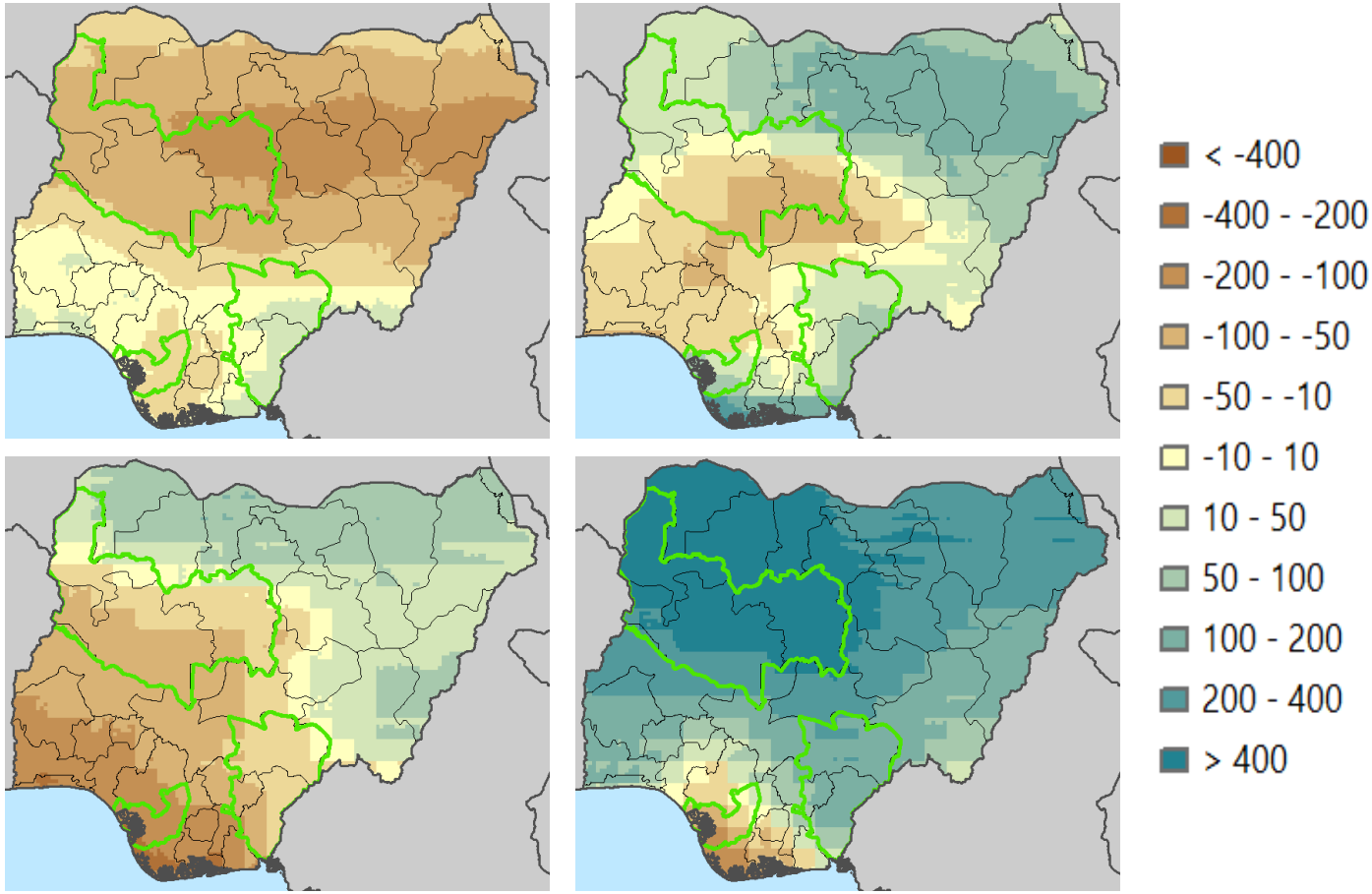
CHANGE IN MEAN ANNUAL PRECIPITATION, MM, 2000-2050

Note: RCP 8.5. Climate models clockwise from top left: GFDL, HadGEM, MIROC, and IPSL. Feed the Future zone is outlined in green.



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CHANGE IN ANNUAL RAINFALL BY FTF ZONE, 2000-2050

FTF	Base (1960-1990)	Change in annual rainfall, percentiles across 32 GCMs in average for 1960-1990 to 2050							Change in annual rainfall, 1960-1990 to 2050			
		0 (min)	10	25	50	75	90	100 (max)	GFDL	Had-GEM	IPSL	MIROC
1	2,477	-276	-126	-63	38	141	181	544	13	68	-26	-50
2	1,823	-223	-120	3	65	129	191	230	39	113	21	205
3	1,117	-265	-49	-32	40	88	117	388	-196	69	-36	387
All FTF	1,395	-251	-80	-14	57	84	154	309	-121	80	-21	309
Nigeria	1,176	-204	-60	-8	50	88	148	272	-123	102	-5	267

25-75	Within interquartile (IQ) range
10-25	Moderately below IQ range
75-90	Moderately above IQ range
< 10	Considerably below IQ range
> 90	Considerably above IQ range

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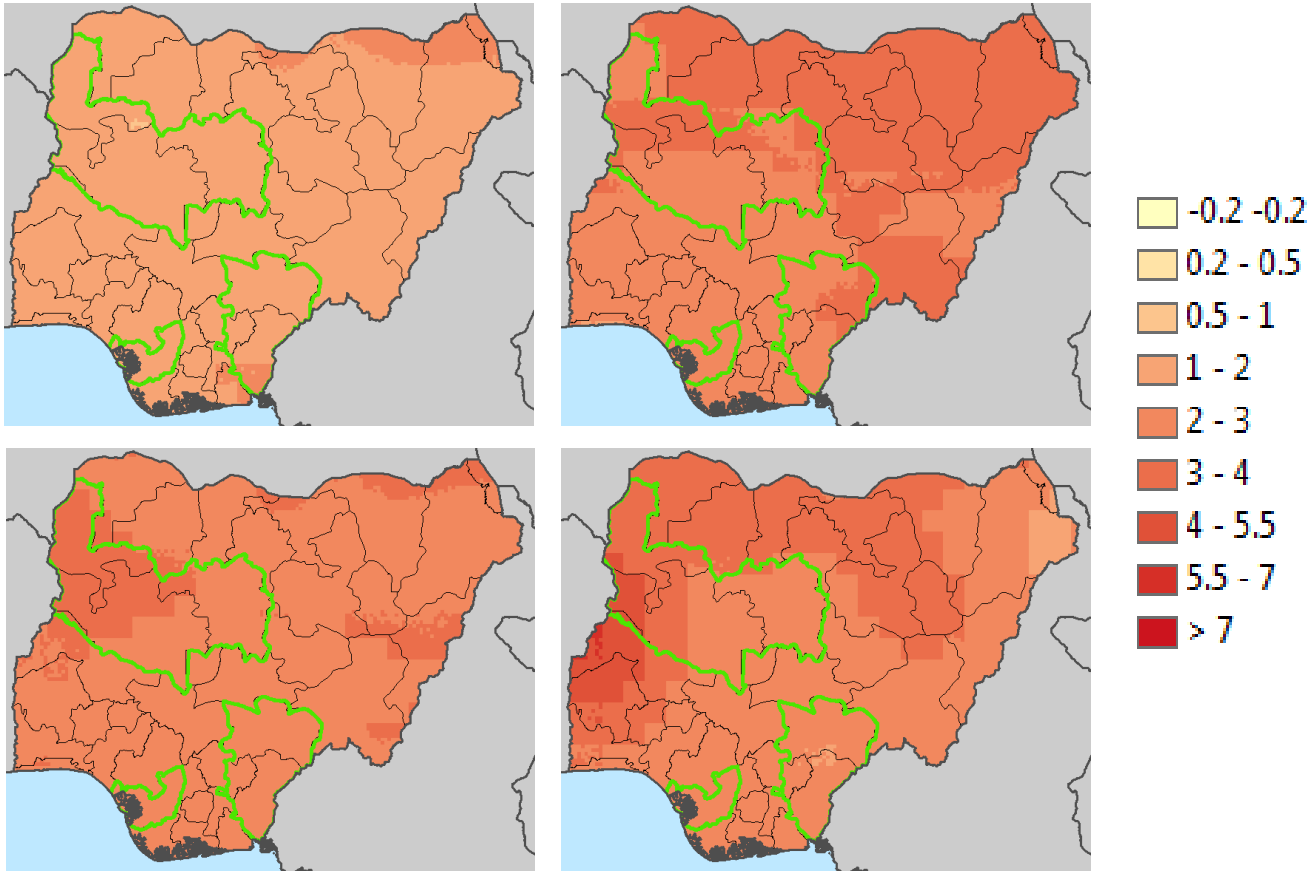
CHANGE IN MEAN DAILY MAXIMUM TEMPERATURE FOR THE WARMEST MONTH, ^{0}C, 2000-2050

Note: RCP 8.5. Climate models clockwise from top left: GFDL, HadGEM, MIROC, and IPSL. Feed the Future zone is outlined in green.



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CHANGE IN MEAN DAILY MAXIMUM TEMPERATURE OF THE WARMEST MONTH BY FTF ZONE, 2000-2050

		Change in mean daily maximum temperature for the warmest month, ^{0}C, percentiles across 32 GCMs in average for 1960-1990 to 2050							Change in mean daily maximum temperature for the warmest month, ^{0}C, 1960-1990 to 2050			
FTF	**Base (1960-1990)**	**0 (min)**	**10**	**25**	**50**	**75**	**90**	**100 (max)**	**GFDL**	**Had-GEM**	**IPSL**	**MIROC**
1	32.7	0.8	1.6	1.7	2.2	2.8	3.2	4.2	2.0	2.6	3.2	0.8
2	34.4	1.7	2.0	2.2	2.6	3.0	3.3	4.7	2.4	2.7	3.2	2.2
3	37.0	0.4	2.0	2.2	2.7	3.0	3.4	3.6	2.0	3.0	3.6	2.9
All FTF	36.0	1.4	1.9	2.2	2.5	2.9	3.3	3.9	2.1	2.9	3.5	2.6
Nigeria	36.4	1.8	1.9	2.1	2.5	3.1	3.4	3.7	2.0	3.1	3.4	2.5

25-75	Within interquartile (IQ) range
10-25	Moderately below IQ range
75-90	Moderately above IQ range
< 10	Considerably below IQ range
> 90	Considerably above IQ range

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Projected Impact of Climate Change on Agriculture

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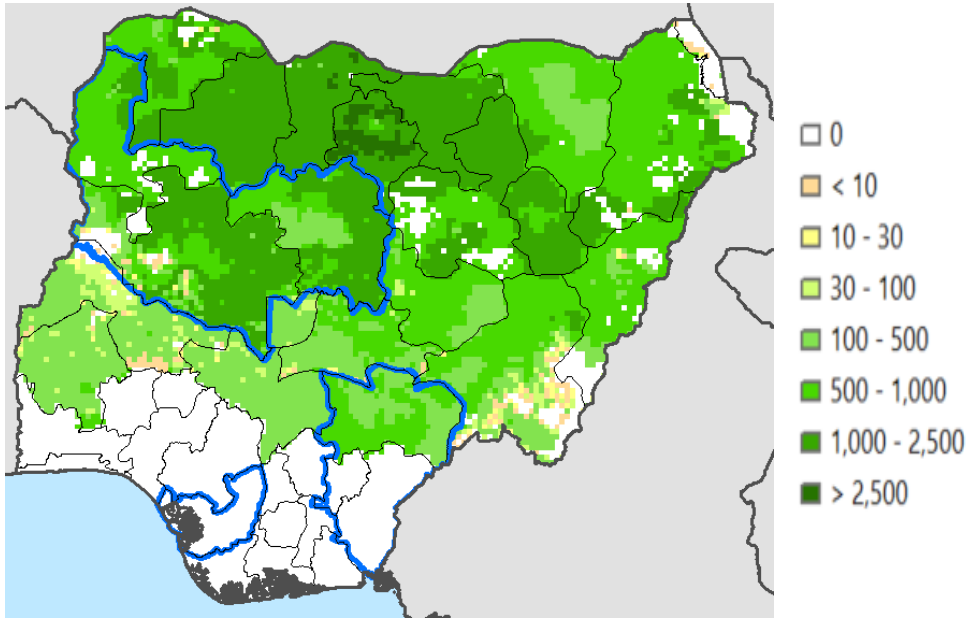
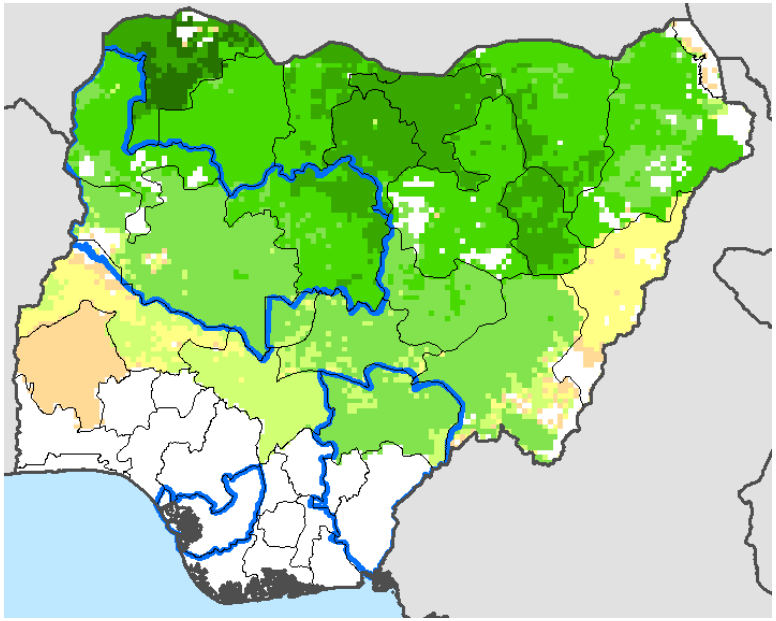
HARVESTED AREA FOR RAINFED SORGHUM AND MILLET, HECTARES PER PIXEL, CIRCA 2005

Sorghum



Millet



Source: SPAM 2005 (You et al. 2014).

Notes: A pixel at the equator has approximately 8,500 hectares in it.

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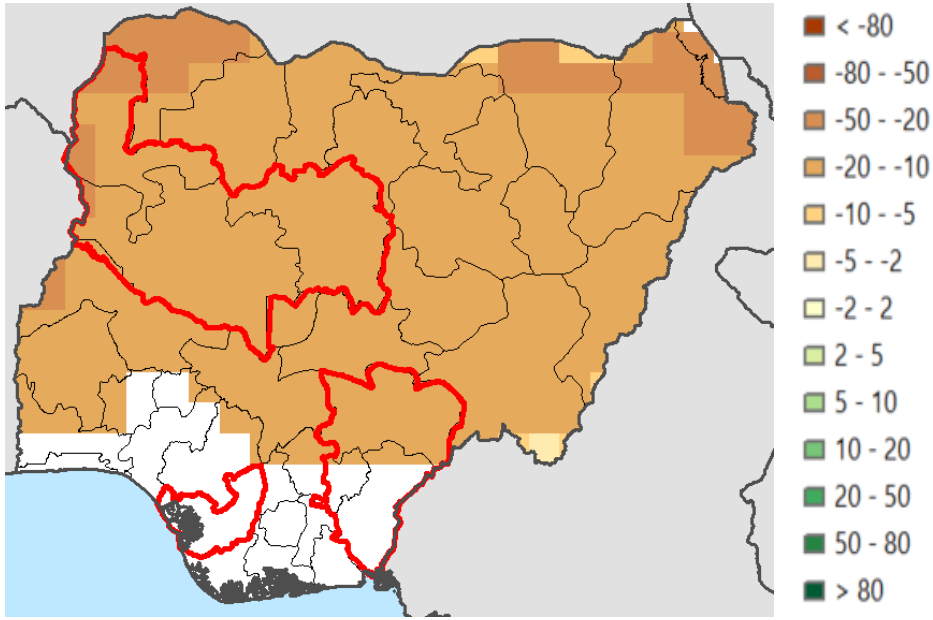
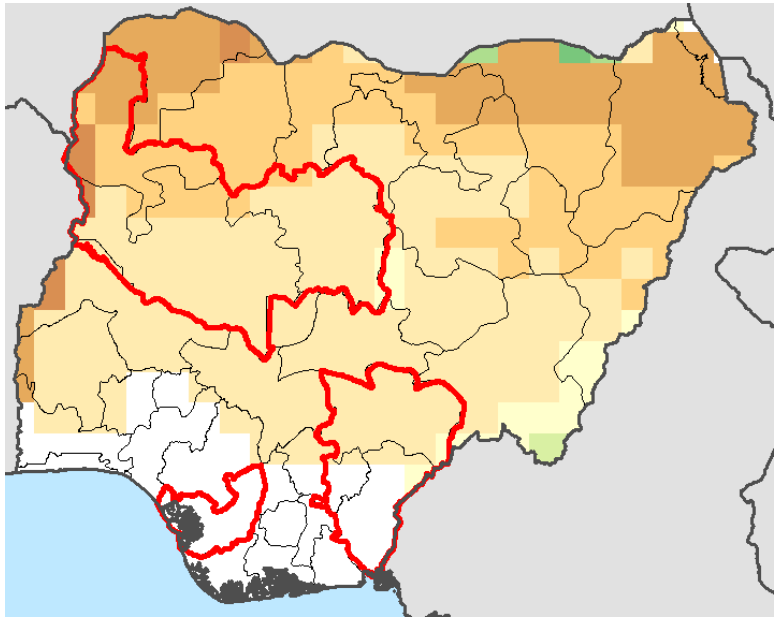
MEDIAN PERCENT CHANGE IN YIELD DUE TO CLIMATE CHANGE, RAINFED SORGHUM AND MILLET, 2000-2050

Sorghum



Millet



Source: AgMIP GGCMI.

Note: Median derived from using four General Circulation Models and one crop model. Evaluated with CO2 fertilization.

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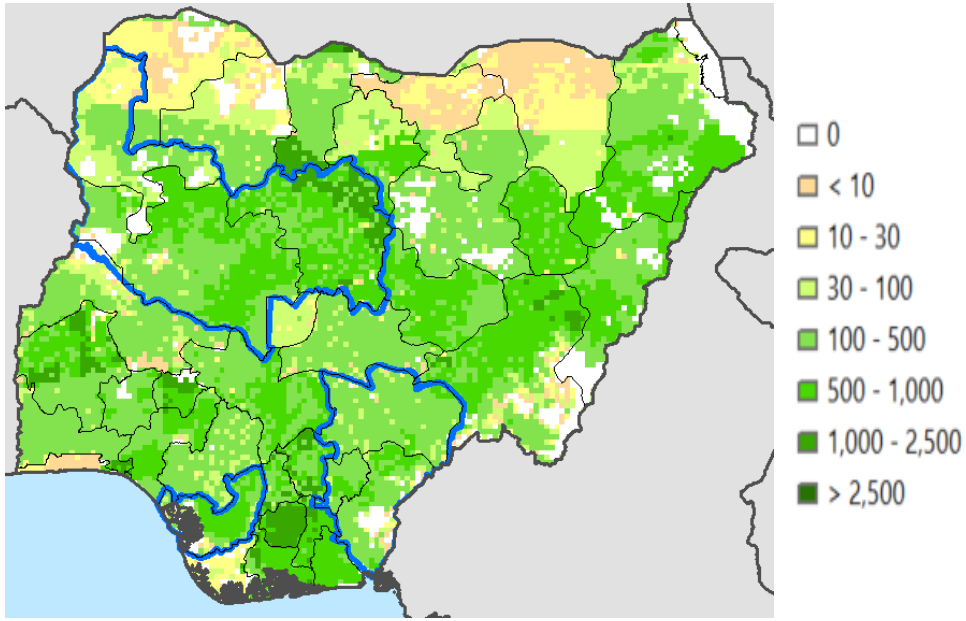
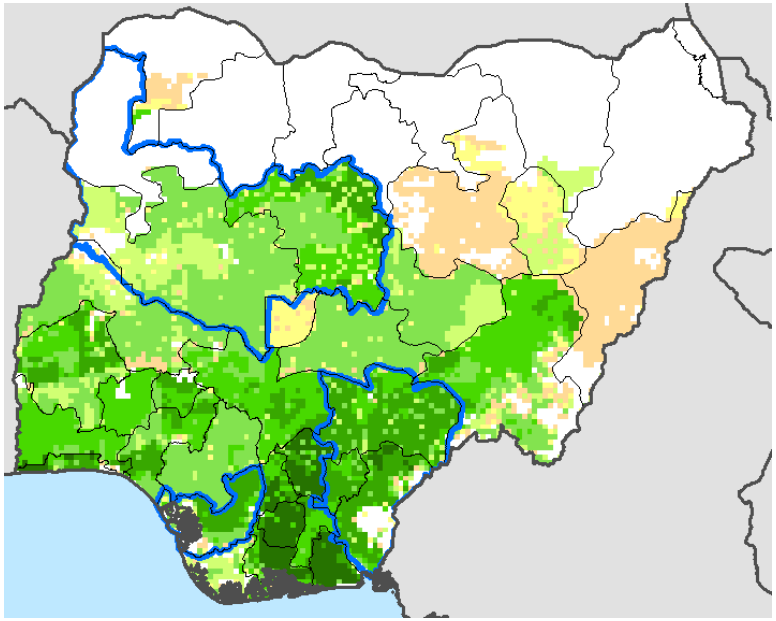
HARVESTED AREA FOR RAINFED MAIZE AND CASSAVA, HECTARES PER PIXEL, CIRCA 2005

Maize



Cassava



Source: SPAM 2005 (You et al. 2014).

Notes: A pixel at the equator has approximately 8,500 hectares in it.

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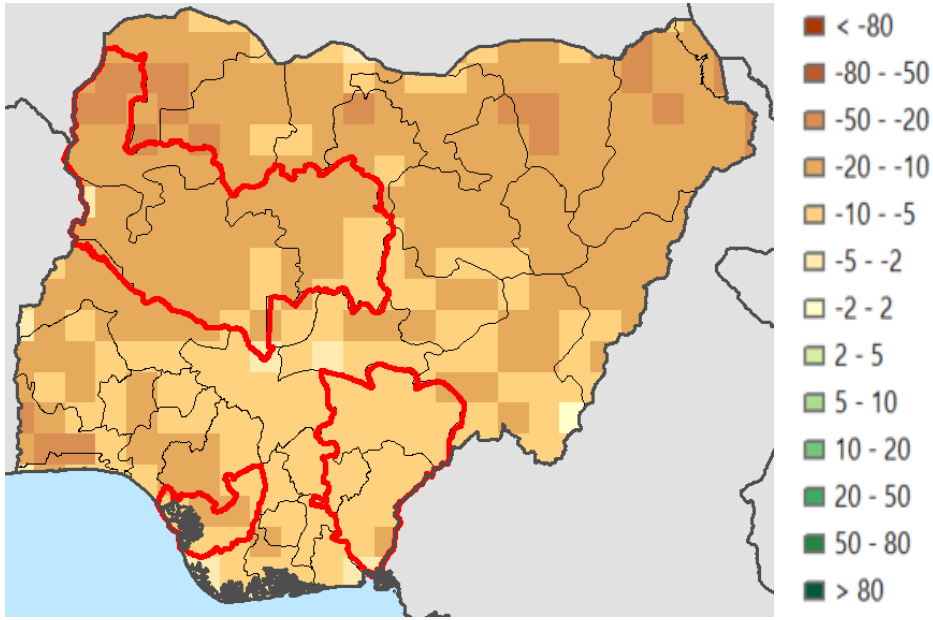
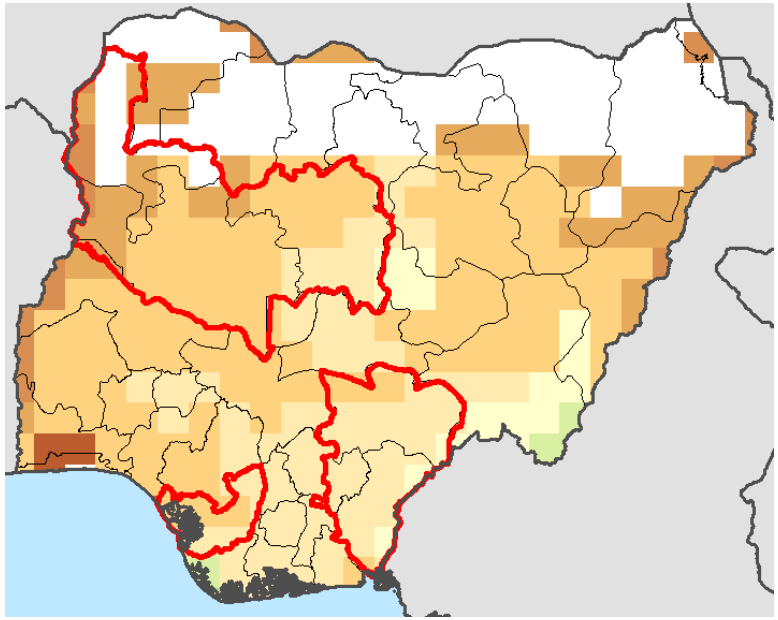
MEDIAN PERCENT CHANGE IN YIELD DUE TO CLIMATE CHANGE, RAINFED MAIZE AND CASSAVA, 2000-2050

Maize



Cassava



Source: AgMIP GGCMI.

Note: Median derived from using four General Circulation Models and one crop model. Evaluated with CO2 fertilization.

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CLIMATE IMPACT ON NIGERIA'S LEADING RAINFED CROPS, 2000-2050

Source: AgMIP GGCMI.

Note: Median derived from using four General Circulation Models and one crop model. Evaluated with CO2 fertilization.

PRIORITY ACTIONS RELATED TO CSA IN THE NIGERIA'S INDC

- Adopt improved agricultural systems for both crops and livestock - diversify livestock and improve range management; increase access to drought resistant crops and livestock feeds; adopt better soil management practices; and provide early warning/meteorological forecasts and related information
- Implement strategies for improved resource management - increase irrigation, rainwater & sustainable groundwater harvesting, planting of native vegetation cover & promotion of re-greening efforts; and intensify crop and livestock production in place of slash and burn
- Enhance artisanal fisheries and encourage sustainable aquaculture as adaptation options for fishing communities

CSA PRACTICES BEING IMPLEMENTED IN NIGERIA

- Conservation agriculture
- Integrated crop management
- Crop rotation and cover crops, nitrogen management and fertilization regimes, including oil palm tree residues as manure (potash content)
- Improved HY DT cereals, grain legumes, R&T with tolerance to major disease and pests [ex: NERICA (upland rice) and DT maize varieties. Use of salt tolerant Varieties (e.g. Ex-Dakar cultivar of groundnut).
- National Program for Food Security of Nigeria (NPFS) supports promotion and development of UDP technique in several Nigerian states

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Climate and nutrition: Considerations for nutrition-sensitive climate resilience programming

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NUTRITION PROFILE

- **Priorities**:
  - Global Hunger Index 2016= Score 25.5 (Serious)
  - Stunting in children under 5 years: 32.9% (WHO cutoff ≥20%). Rank: 98/132.
  - Wasting in children under 5 years: 7.9% (WHO cutoff ≥5%). Rank: 93/130.
  - Overweight and Obesity in adults: 33.3%. Rank: 54/190

- **Micronutrient deficiencies** (varies with urban/rural, wealth quintile)
  - Anemia in women of reproductive age: 48.5% (WHO cutoff ≥20%). Rank: 172/185
  - Anemia in preschool-aged children: 71.0%

Global Nutrition Report 2016;

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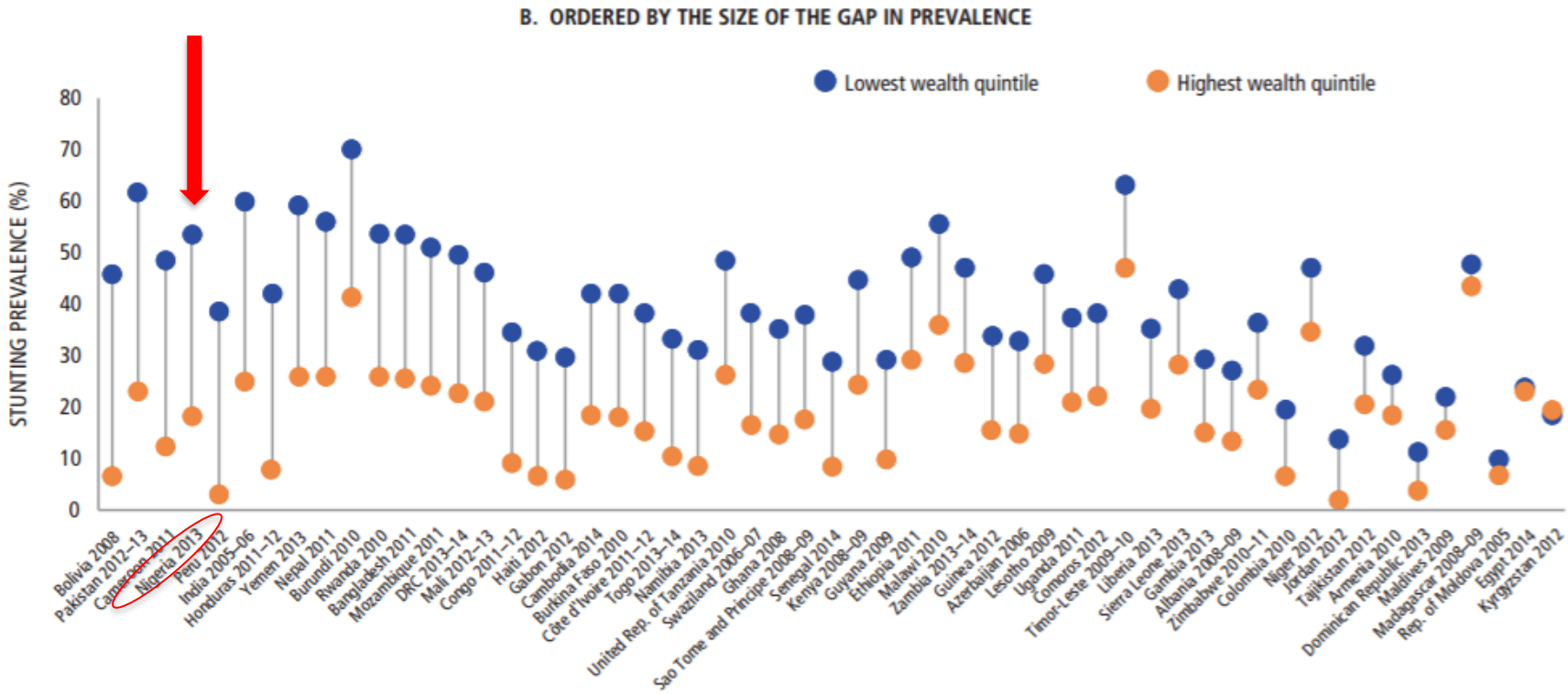

Large gap in stunting prevalence by wealth quintile – importance of targeting and context-specific interventions.

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Global Nutrition Report 2016

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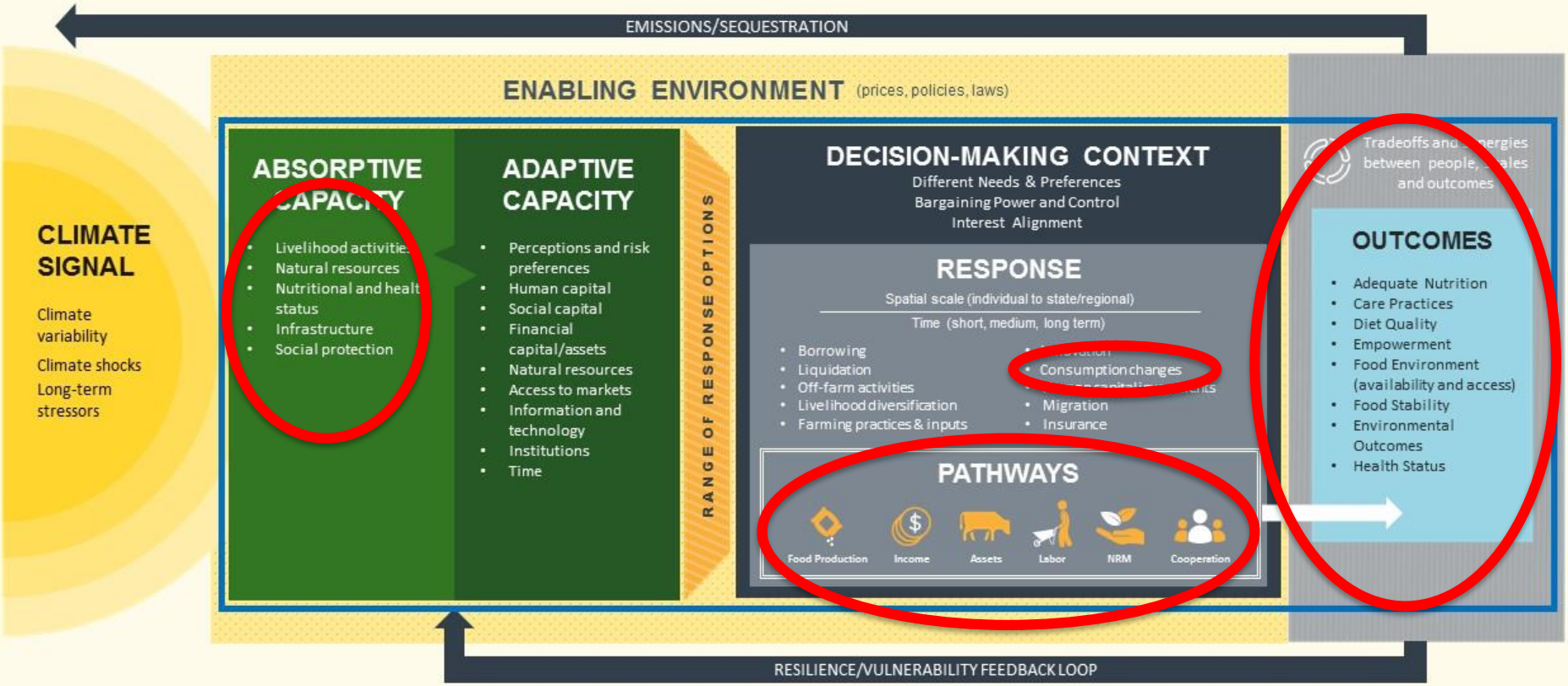
Framework for Climate, Gender, and Nutrition- Household Level



Elements inside the blue frame are influenced by gender and other social distinctions

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Response: Nutrition-sensitive value chains

Maximize nutrition "entering" the food value chain

Input Supply	Production	Post Harvest Storage	Processing	Distribution	Marketing and Retail	Consumption Food Utilization
Improved varieties, bio-fortification, fertilizer, irrigation	New production locations, diversification, CO2 fertilization, focus on women farmers, extension	Aflatoxin control, refrigeration	Fermentation, drying, fortification, product reformulation (reduce salt, sugar, unhealthy fats)	Moving food from areas of shortage to areas of surplus, targeting of vulnerable groups	Messaging on the importance of nutrition and sustainability, benefits of certain foods	Home fortification (fish powders), training in nutritious food preparation, time mgmt, food preservation
Lack of access to inputs (seeds, fertilizer, irrigation, extension)	Limited available land, soil degradation, loss of biodiversity, temperature and water stress, CO2 effects	Contamination, spoilage, increased electricity demands, damage from extreme weather events	Improper processing of foods, nutrient losses during milling, combination with unhealthy ingredients	Climate impacts on transportation and retail infrastructure, export/import impacts on prices and availability	Advertising campaigns for unhealthy foods, loss of small food retailers	Lack of knowledge of nutrition, nutrient losses during preparation, increased diarrhea & enteropathy

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Minimize nutrition "exiting" the value chain

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Source: Fanzo, Downs and McLaren 2017

Pathways: Climate, Agricultural Revenue, and Dietary diversity

- Examine the link between agriculture revenue, diversification and dietary diversity in rural agricultural households → small but significant effect

Table 2. Production diversity and climate shocks

	Degree Day Shock Quartiles				Rainfall Shock Quartiles				
	– Shock		+ Shock		– Shock		+ Shock		
	1	2	3	4	1	2	3	4	Total
Number of crops and crop groups harvested by household:									
# of crop groups harvested	1.92	1.82	1.84	1.99	1.90	1.88	1.95	1.84	1.89
# of crops harvested	2.69	2.46	2.84	3.40	3.07	3.15	2.77	2.41	2.85
Households that grew crop groups (per cent of quartile):									
Grains or flours	60.0	41.8	87.4	99.6	98.7	95.2	60.1	34.8	72.2
Starchy roots, tubers, and plantains	62.3	86.7	29.2	6.6	4.2	19.3	75.3	86.0	46.2
Pulses, nuts, or seeds	29.1	8.7	56.0	81.0	82.5	56.5	27.9	7.8	43.7
Fruits	12.9	10.7	2.6	0.8	0.7	3.0	11.1	12.3	6.7
Oil plants	6.9	12.8	1.0	0.0	0.0	0.2	4.6	15.9	5.2
Vegetables	20.3	21.8	7.8	10.9	3.7	13.9	16.2	27.0	15.2
Other crops	9.4	1.0	2.2	3.7	2.4	5.7	7.9	0.2	4.1

[1]Dillon et al (2015)

Pathways: Climate, Agricultural Revenue, and Dietary diversity

- A 10% increase of agricultural revenue:
  - 1.8% increase in dietary diversity
  - Increases the likelihood of a household reporting consumption of vegetables by 7.2 % & fish by 3.5%
  - Decrease in consumption share of beverages by 5.9% but increases the consumption share of tubers by 5.2% → Could suggest that as households increase agricultural revenue, beverage consumption is replaced by healthier tuber consumption.

- Other factors play a role:
  - Gender - HHs with male heads less likely to have diverse diet compared to those with female heads
  - Education - HHs with better-educated heads had more diverse diets while households with older heads had less diverse diets.

[1]Dillon et al (2015)

Pathways: Climate, Agricultural Revenue, and Dietary diversity

- The low dietary diversity-agricultural revenue elasticity illustrates potentially limited role that agricultural interventions designed solely to raise the agricultural revenue of households might have on dietary diversity and diet composition[1].

- Might be important for policy interventions to focus beyond income expansion[1].

- Evidence shows higher effects of agriculture income on nutrition when combined with better health and education outcomes [2].

[1]Dillon et al (2015), [2] Bhagowalia et al

Outcomes: Factors Influencing Nutritional Adequacy

- Explore the influence of food consumption diversity on adequate intake of food calories, proteins, and selected micronutrients in rural Nigeria

- Prevalence of food calorie intake deficiency seems to be higher than that of proteins. Incidence of micronutrient deficiencies, such as potassium, vitamin B1 and vitamin C, relatively higher than those of proteins, calories, and other micronutrients examined

Akerele et al (2017)

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Factors Influencing Adequate Intake of Food Calories, Proteins, and Micronutrients

Variables	Calories	Proteins	Vit A	Vit B12
Primary School Education	-0.02	0.03	0.0025	0.02
Secondary School Education	-0.05	0.03***	0.0040	0.01
Tertiary School Education	-0.08	-0.04	-0.01	-0.02
Nonfarm Enterprise Diversification	0.06***	0.02	0.02	0.05**
Food Consumption diversity (food count)	0.05***	0.06***	0.07***	0.13***
Lowest income tercile	-0.68***	-0.26***	-0.42***	-0.57***
Highest income tercile	0.30***	0.08***	0.14***	0.33***

Values are regression coefficients. , *p<0.01; **p<0.05; ***p<0.001

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Akerele et al (2017)

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Outcomes: Factors Influencing Nutritional Adequacy

- Unique role of dietary diversity in addressing nutrition inadequacies

- Other household-level characteristics play a role
  - Better access to education
  - Income improvement, especially through nonfarm enterprise diversification

Akerele et al (2017)

CASE STUDY – AGRICULTURE, MALARIA, AND NUTRITION

- Observations conducted on a random selection of 10.0% of the farms (40 farms).
- Observation based on a checklist that used to document presence of various kinds high risk, potential breeding grounds for anopheles mosquitos

Table 5 Observed major agricultural practices that favour mosquito breeding on the farms

	Fasola community (N = 20)	Soku community (N = 20)	Total (%) (N = 40)
Observations	Frequency (%)	Frequency (%)	Frequency (%)
Dumped cassava peelings in the farm environment	10 (50.0)	10 (50.0)	20 (50.0)
Peeled cassava tubers soaked in plastic containers	11 (55.0)	9 (45.0)	20 (50.0)
Presence of dug trenches	7 (35.0)	7 (35.0)	14 (35.0)
Practice of irrigation	5 (25.0)	5 (25.0)	10 (25.0)
Presence of fish pond used for fish farming	3 (15.0)	3 (15.0)	6 (15.0)

** Only observed practices which promote mosquito breeding are displayed

Oladepo et al (2010)

ENTRY POINTS FOR NUTRITION SENSITIVE CSA

- Need to consider nutrition as an input when addressing agricultural and livelihood risk
- Need to maximize nutrition entering the value chain and minimize exiting
- Need to understand pathways from CSA value chains to improved nutrition
- Need to evaluate whether CSA practices pose any health risks that could impact nutrition → strive for more inclusive practices

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Climate and gender:

Considerations for gender-responsive climate resilience programming

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WHY CARE ABOUT GENDER AND CSA?

Understanding and addressing these gender differences to:

- Ensure social inclusion: *who is adopting CSA and who is not?*
- Mitigate potential harm to the most vulnerable: *identify and reduce unintended negative consequences or inequalities in CSA?*
- Women's participation may enhance CSA effectiveness: *in what ways can women's unique knowledge and networks contribute to CSA?*
- Achieve co-benefits/other development outcomes: *how will activities affect nutrition through health, diets, and care?*
- Advance empowerment and gender equality: *who is benefitting from CSA?*

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WHERE ARE THE GENDER DIFFERENCES?

Framework for Climate, Gender, and Nutrition- Household Level

EMISSIONS/SEQUESTRATION

CLIMATE SIGNAL

Climate variability

Climate shocks

Long-term stressors

ENABLING ENVIRONM

ABSORPTIVE CAPACITY

- Livelihood activities
- Natural resources
- Nutritional and health status
- Infrastructure
- Social protection

ADAPTIVE CAPACITY

- Perceptions and risk preferences
- Human capital
- Social capital
- Financial capital/assets
- Natural resources
- Access to markets
- Information and

RANGE OF RESPONSE OPTIONS

DECISION-MAKING CONTEXT

Different Needs & Preferences
Bargaining Power and Control
Interest Alignment

RESPONSE

Spatial scale (individual to state/regional)

Time (short, medium, long term)

- Borrowing
- Liqu[illegible]tion
- Off-farm act[illegible]
- Livelihood diversification
- Farming practices & inputs
- Innovation
- Consumption ch[illegible]ges
- Human [illegible]pital investment[illegible]
- Migration
- Insurance

PATHWAYS

Food Production

[illegible]tion

Tradeoffs and sy[illegible]rgies between people, sc[illegible]les and outcomes

OUTCOMES

- Adequate Nutrition
- Care Practices
- Diet Quality
- Empowerment
- Food Environment (availability and access)
- Food Stability
- Environmental Outcomes
- Health Status

RESILIENCE/VU[illegible]ERABILITY FEEDBACK LOOP

Elements inside the blue frame are influenced by gender and other social distinctions

Different preferences and decision-making power

Gender-differentiated determinants

Different influence on the pathways

Different well-being outcomes

Different feedback loops

Absorptive Capacity: Sensitivity to CC Depends on—

- Gender roles within and outside of agriculture—this is largely dependent on the context (varied across Nigeria):
- Nutritional status of men and women may be different, changing susceptibility to climate stresses (e.g. heat stress)
- Women might additionally be more sensitive to climate shocks (e.g. flooding)
- The extent to which institutions (e.g. social protection programs, social norms) support both men and women

Absorptive Capacity: Different Crop Choices

Gender indicators and crop choice in Nigeria				
Primary crop choice	Full sample n=3706	Female heads n=1105	Male heads n=2601	Significant difference
Maize	0.14	0.11	0.15	***
Rice	0.08	0.06	0.10	***
Cowpea	0.04	0.02	0.05	***
Cassava	0.04	0.04	0.04	
Tomato	0.03	0.01	0.04	***
Leafy green vegetable	0.03	0.05	0.03	**
Other vegetable	0.03	0.01	0.03	***
Yam	0.02	0.02	0.02	
Sugar cane	0.02	0.01	0.03	***
Peppers	0.02	0.00	0.02	***
Fallow, missing or no crop	0.54	0.67	0.48	***

Peterman et al. 2011, survey covering Fadama project areas in 12 states

Adaptive Capacity: Women Face Constraints

- Evidence that men and women have different perceptions of climate change--women tend to be less likely to perceive changes or to perceive different changes
- Men and women have different access to resources needed for adaptation
- Women tend to have less access to information about CC and response options
- The institutional context for men and women is different—women are sometimes hindered from adopting certain practices because of social norms (e.g. limited mobility), limited group participation, and lack of tenure security

Adaptive Capacity: Access to Productive Resources/Assets

Percent of women who own land, by region				
Zone	Alone	Jointly	Alone and jointly	Do not own land
North Central	7.5	10.5	2.7	79.2
North East	3.3	2.4	0.4	93.6
North West	4.2	2.7	3.4	89.5
South East	5.4	14.1	2	78.2
South South	5.1	12.6	3	79.1
South West	3.5	9.6	1.3	85.4

Source: DHS 2013

Adaptive Capacity: Access to Information

Adoption Level	MA:MF (n=141)	MA:FF (n=72)	FA:MF (n=22)	FA:FF (n=93)	MA:AllF (n=213)	FA:AllF (n=115)
Low	32.6	48.6	50.0	44.1	38.0	45.2
Moderate	29.1	29.2	18.2	22.6	29.1	17.4
High	38.3	22.2	31.8	33.3	32.9	37.4

Lahai et al. 1999

Responses to Climate Change: Gender Differences

Adaptation Strategies	Male (n=133)	Female (n=58)
Modified farming (fruit and vegetable garden along floodplain)	22.4	67.1
Cutting and burning trees	47.9	53.7
Mixed farming	37.8	41.9
Use of agricultural chemicals	17.9	40.7
Cutting trees	38.8	37
Crop rotation	35.7	35.5
Use of irrigation + organic inputs	43.9	24.1
Hire labor	20.3	16.7
Replanting trees	25.7	9.6

Different ecosystem-based adaptation options reported by men and women in west-central Nigeria (Oloukoi et al. 2015, selected practices shown)

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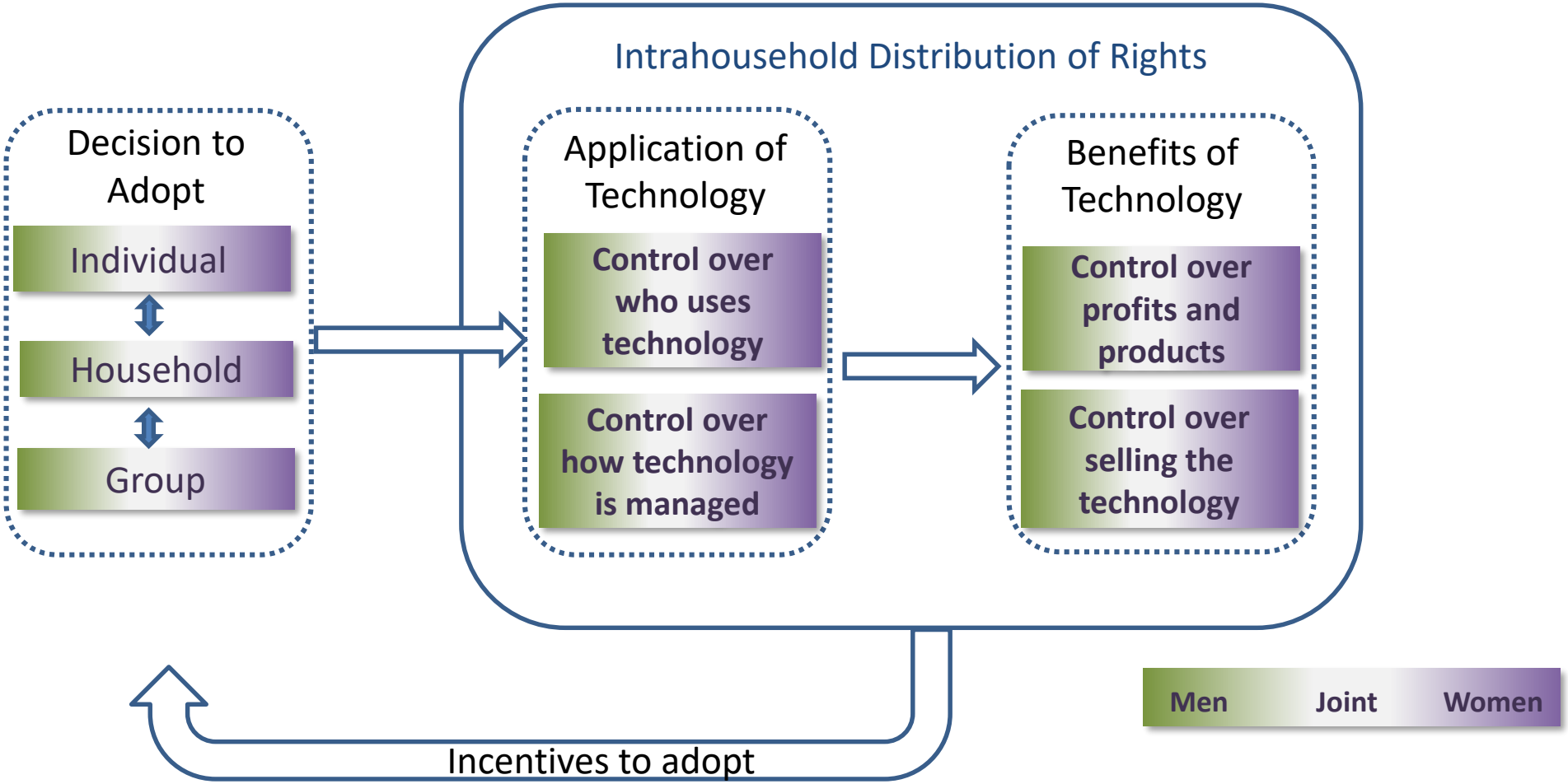
Responses to Climate Change: Decision-Making Context



Source: adapted from Theis, et al. 2017. unpublished

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Men Tend to Dominate Decision-Making

Who makes decisions about:				
Women's responses	Mainly wife	Wife and husband jointly	Mainly husband	Someone else
Own health care	6.2	32.6	60.8	0.2
Major household purchases	5.6	32	61.9	0.2
Visits to family or relatives	7.9	39.5	52.2	0.2
Men's responses	Mainly wife	Wife and husband jointly	Mainly husband	Someone else
Own health care	11.9	22	65	0.8
Major household purchases	23.3	26	50	0.4

Source: DHS 2013

Decision-Making Context in Nigeria Varies Considerably

Table 1
Manager's sex by zone

Plot manager=primary decision maker on the plot

	Manager's sex		
Region	Male	Female	Total
North Central	889	94	983
North East	1,102	101	1,203
North West	817	13	830
South East	369	260	629
South South	180	136	316
South West	248	31	279
	3,605	635	4,240

Oseni et al. 2015 using General Household Survey Panel data 2010-11

Pathways: Influenced by Gender

- Production pathway: Who makes crop/production choices? Men and women may choose different crops and for different purposes (consumption or sale)—implications for nutrition
- Income pathway: Who controls income? Men and women have different consumption preferences
- Asset pathway: Gender-differentiated asset dynamics have implications for well-being outcomes for men and women
- Labor pathway: Different CSA practices have different time implications for men and women (e.g. conservation agriculture)

Pathways: Income Decisions

Person who decides how wife's cash earnings are used			
Zone	Mainly wife	Wife and husband jointly	Mainly husband
North Central	48.3	25.8	25.5
North East	73.5	19.1	6
North West	87.7	7.3	4.7
South East	40.9	37.9	20.9
South South	48	40.6	11.2
South West	80.9	15.2	3.8

Source: DHS 2013

Outcomes: Will CSA Close or Exacerbate Gender Inequalities?

The costs and benefits of responses to climate change, including CSA, are not distributed equally across household members

- How does time use change on different activities, and for whom?
- How does relative control over income change?
- Who gains/loses assets?
- Who is impacted by changes in human capital investments? (e.g. leaving school, reduced health services)
- Who changes consumption?
- Who is more exposed to health risks (e.g. water harvesting)?

ENTRY POINTS FOR GENDER TRANSFORMATIVE CSA

- Need to improve enabling conditions for women both within and outside the household
- Strengthen capacity of organizations on gender
- Develop/disseminate tools for assessing gender in CSA
- More gender-responsive and gender-transformative programs that:
  - Involve women in the design of programs, technologies and approaches to CSA
  - Ensure that both men and women have access to information, groups, social protection programs etc.
  - Ensure buy-in by men (e.g. participatory, family approaches, awareness raising of men's and women's contributions)
  - Gender disaggregated M&E to track outcomes for women/men

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THANK YOU

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