RESEARCH PROGRAM ON
Climate Change, Agriculture and Food Security

CGIAR

CCAFS

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AICCRA
Accelerating the Impact of CGIAR Climate Research for Africa

Gender & Social Inclusion in AICCRA
AICCRA GSI Workshop
June 2 and 4, 2021

Overview

AICCRA is required to integrate, monitor and report on gender and social inclusion according to the World Bank Gender Tag system:

Identify gaps relevant to the four pillars of the WBG Gender Strategy;

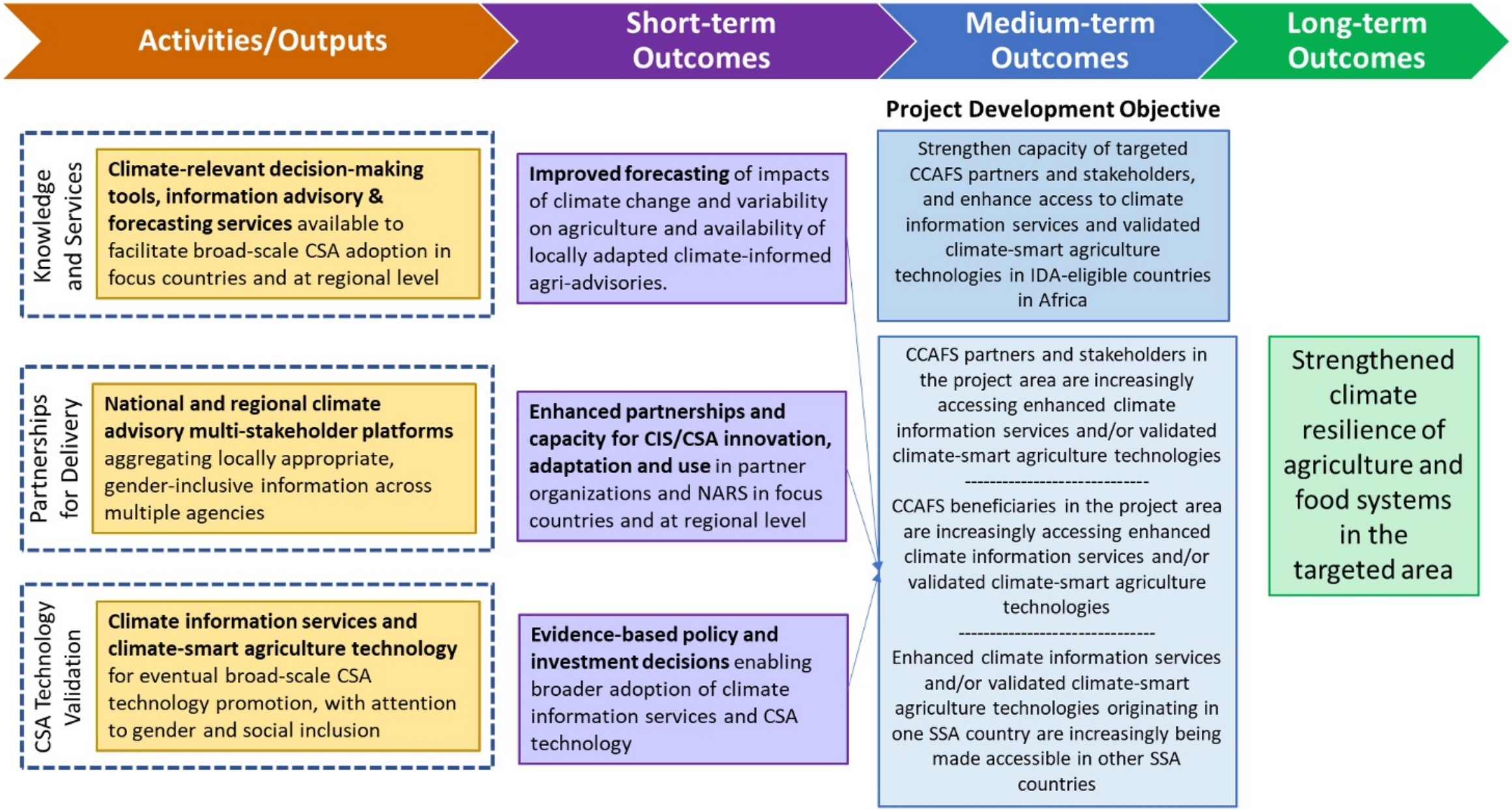
1. Women are not accessing CSA technologies to the same extent as men,
2. Women are less represented in agricultural research and advance at lower rates than men.

Address these gaps through specific actions supported by the project;

Link these actions to indicators included in the Results Framework (RF)

- Activity Areas identified with actions to close the identified gender gaps
- Sex-disaggregation of all indicators (where possible)
- Gender tag-specific indicators
- Two ongoing case studies to monitor/assess gender results

Figure 4. AICCRA Theory of Change



Gender and Social Inclusion Activity Areas

- Identification of tailored CISs and digital agro-advisory packages for use in building new extension systems or strengthening existing extension systems
- Development and identification of gender-responsive practices/technologies
- Targeting CSA technologies at tasks performed by women, and reaching them through customized programs
- Development of business models and identification of innovative finance options for scaling-up CSA and climate-resilient value chains, with special consideration of gender and social inclusion
- Identification of scaling mechanisms for the uptake of CSA, especially for women and youth
- Targeting post-doc fellowships for women researchers
- Support to AGNES for inputs to gender and climate policy in Africa and at the global level

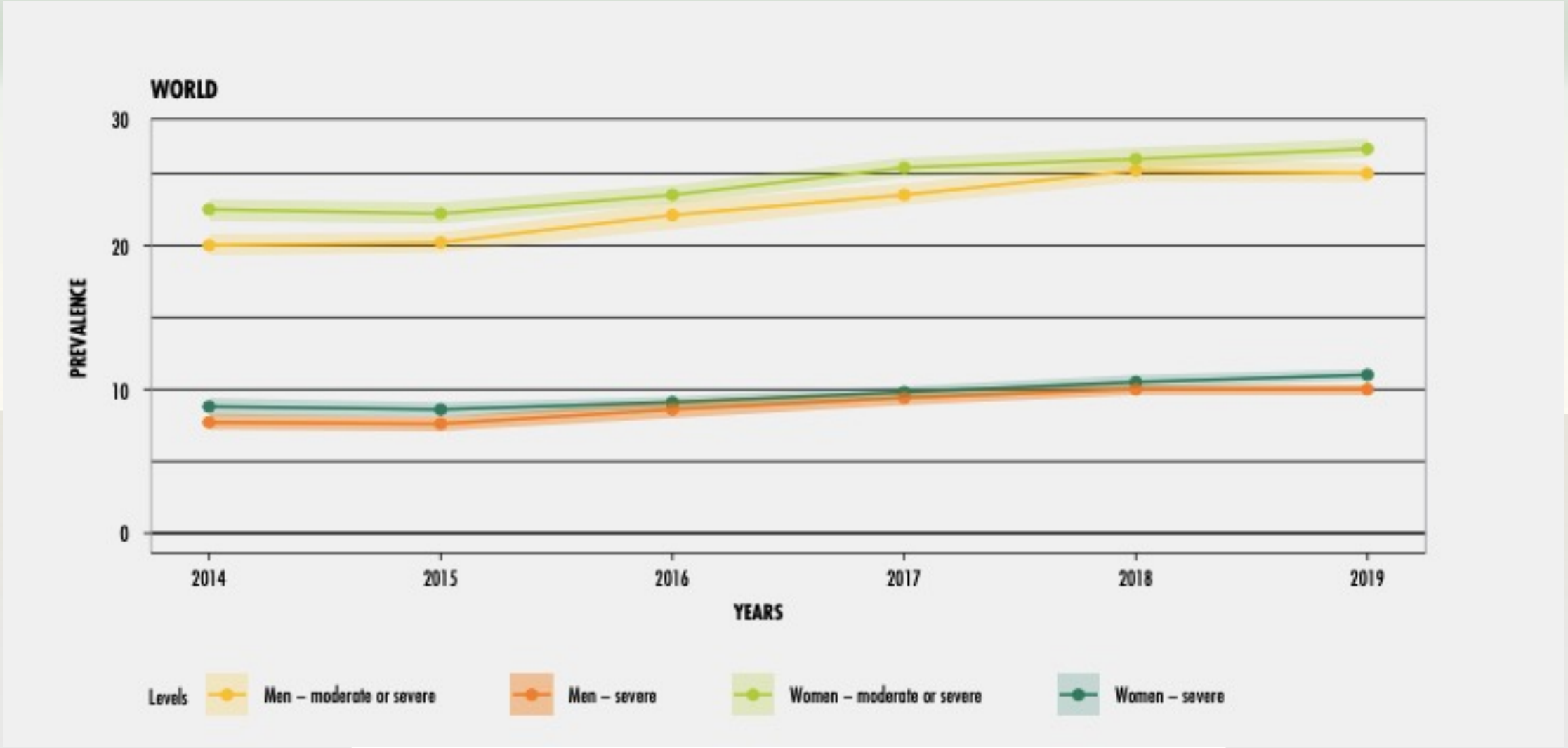
Two monitoring case studies – Coordinated by GSI

1. What works to increase the gender-responsiveness of CSA technologies and practices
   - including an assessment of whether the participation of women researchers and capacity development staff increases gender-responsiveness.
   - GSI analysis of participatory approaches (F2 and GSI)
   - Framework for assessing gender-responsiveness / gender-smartness of CSA technologies and practices
   - Connections to gender-responsive / gender-smart value chains

2. AICCRA experience and results in promoting women's entry and advancement in agricultural research and extension
   - Sex-disaggregated data for capacity development activities
   - Connections to CGIAR Platform and Gender, Diversity and Inclusion on approaches to support women in agricultural research
   - Endline analysis

Context for AICCRA

Global food insecurity rates by gender



Four gender inequality dimensions of climate resilience

(1)

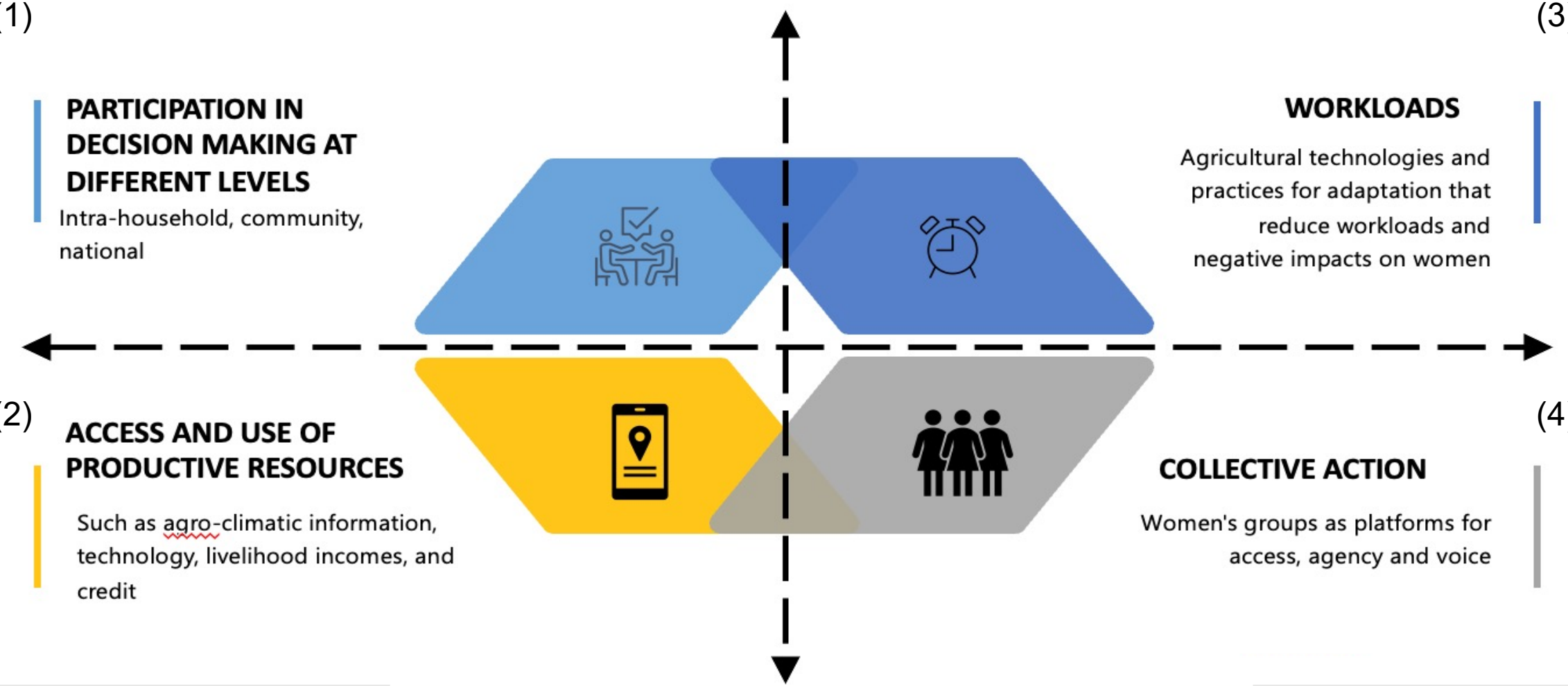
PARTICIPATION IN DECISION MAKING AT DIFFERENT LEVELS

Intra-household, community, national

(3)

WORKLOADS

Agricultural technologies and practices for adaptation that reduce workloads and negative impacts on women



(2)

ACCESS AND USE OF PRODUCTIVE RESOURCES

Such as agro-climatic information, technology, livelihood incomes, and credit

(4)

COLLECTIVE ACTION

Women's groups as platforms for access, agency and voice

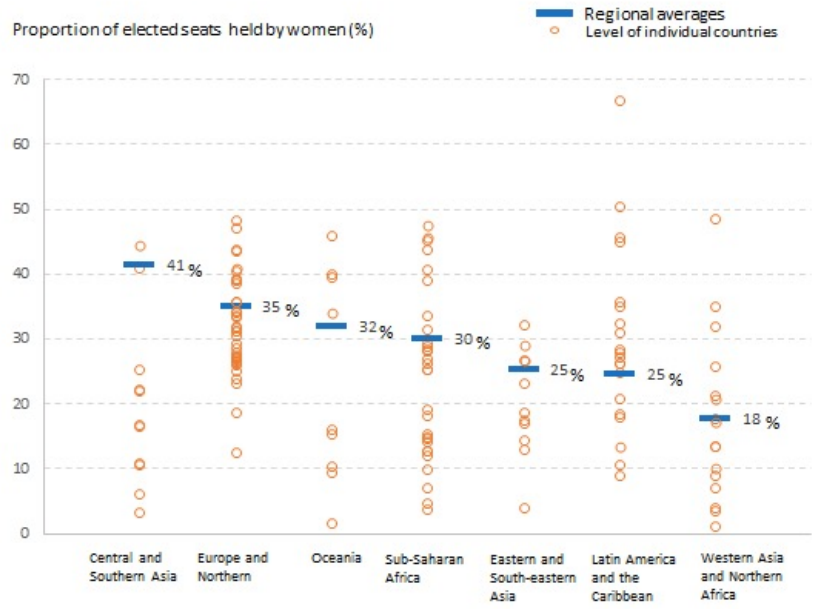
Huyer et al, 2021

1. Gender gaps in decision making

United Nations | Department of Economic and Social Affairs Statistics

Figure II: Proportion of elected seats held by women in local deliberative bodies by region and country: as at 1 January 2020

Proportion of countries

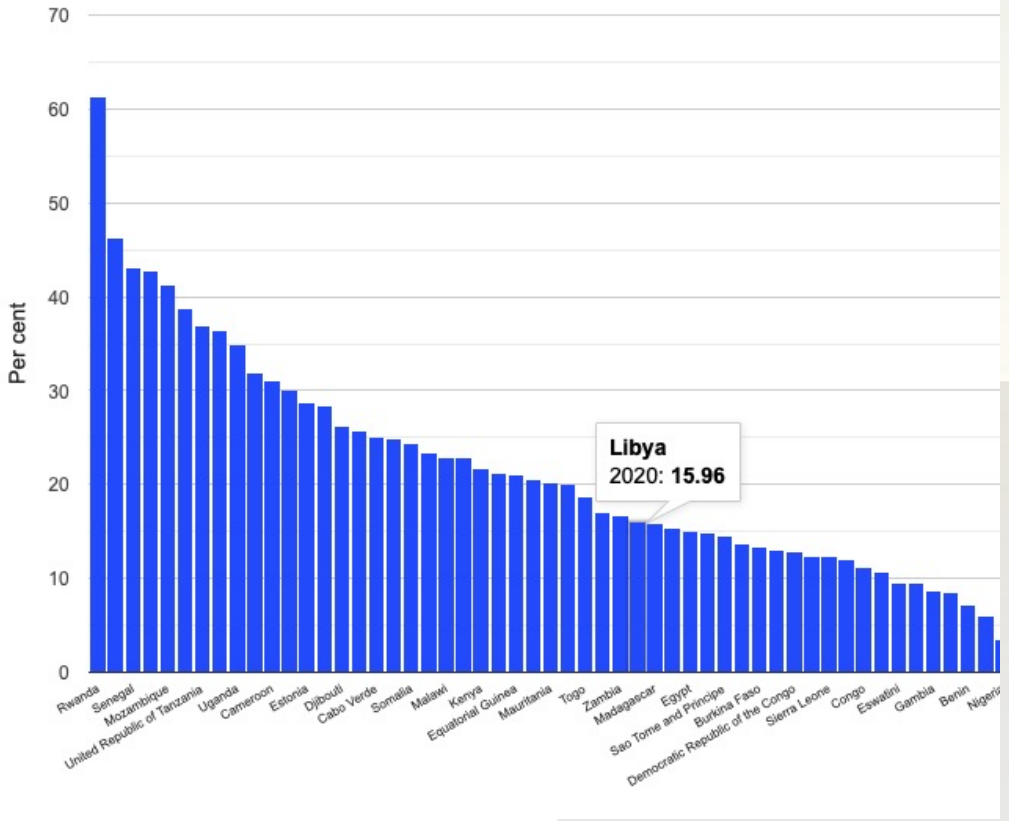


Source: UN-Women

Note: Each circle represents a country: regional averages (weighted by number of local government members) are represented with a blue line.

United Nations | Department of Economic and Social Affairs Statistics

Figure II: Proportion of seats held by women in national parliaments in Africa: 2020 (Percentage)



World's Women 2020

Decision making in climate-resilient agriculture

At the household level – participation in HH decision making led to greater fruit production and increased dietary diversity in Nicaragua

Integration of gender issues is low but increasing in **national and global policy** but steadily decreases down to the local level

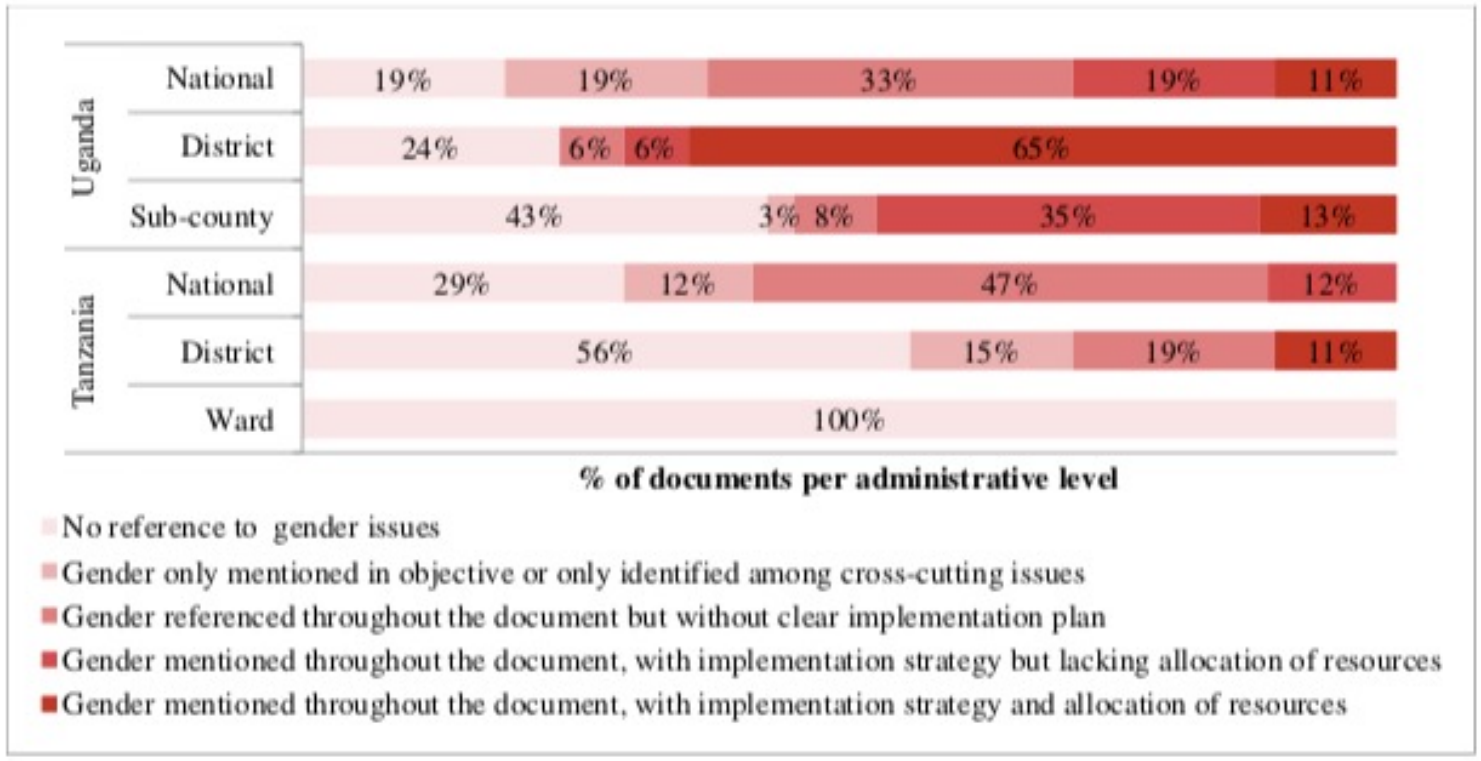


Fig. 1 Level of gender integration by administrative levels in Uganda and Tanzania

Ampaire et al, 2020

Gumucio et al, 2017

Youth decision-making in agricultural adaptation

- Youth in EA considered access to resources to be a greater barrier to their agricultural production than participation in HH decision making
- Young women felt that their decision making power would not increase significantly after marriage

Amsler et al, 2017

2. Gender gaps in resources for food security

Women's economic dependency in developing regions

Women's access to own cash income is much lower than men's

In sub-Saharan Africa,

46% of married women

75% of married men

earned any cash labour income

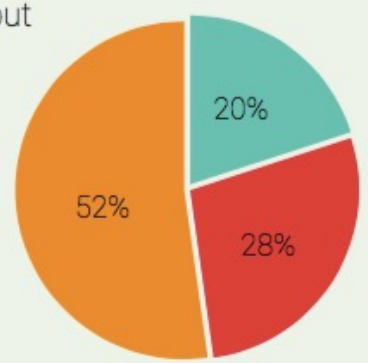
Many women are excluded from economic decision-making within their own households

1 in 3 women has no say about major household purchases

Existing statutory and customary laws restrict women's access to assets

Proportion of developing countries where:

- Law does not guarantee the same inheritance rights
- Law guarantees the same rights, but discriminatory practices against women exist
- Law guarantees the same rights for women and men



Gender differences in access and control of resources

Five most common changes made by men and women to adapt to climate change

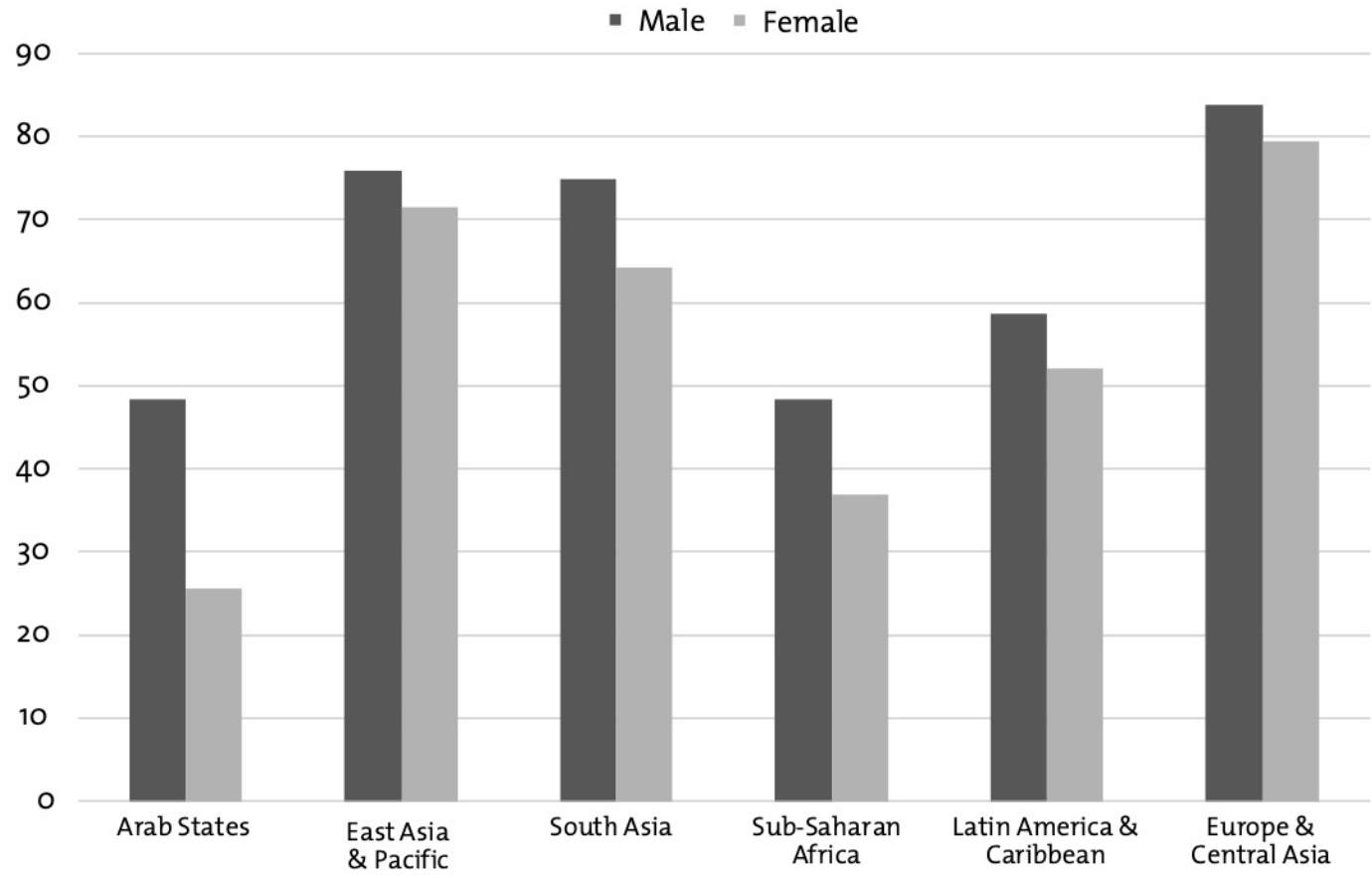
	n = 187	n = 155
Rakai, Uganda	Increase land in production (54)	Planting trees on farm (53)
	Planting trees on farm (26)	Change crop type (22)
	Set up food storage facilities (16%)	Increase land in production (21)
	Change crop type (11)	Change crop variety (10)
	Soil and water conservation (5)	Water harvesting (4)

- Women and men tend to have different adaptation strategies and practices
- Different preferences in crops and uses for crops
- Fewer resources and less decision making power affect their options for adaptation practices
- May use a mixture of own labour and new technologies/practices

Mutenje, M. J., et al. 2019.
Twyman, J et al. 2014

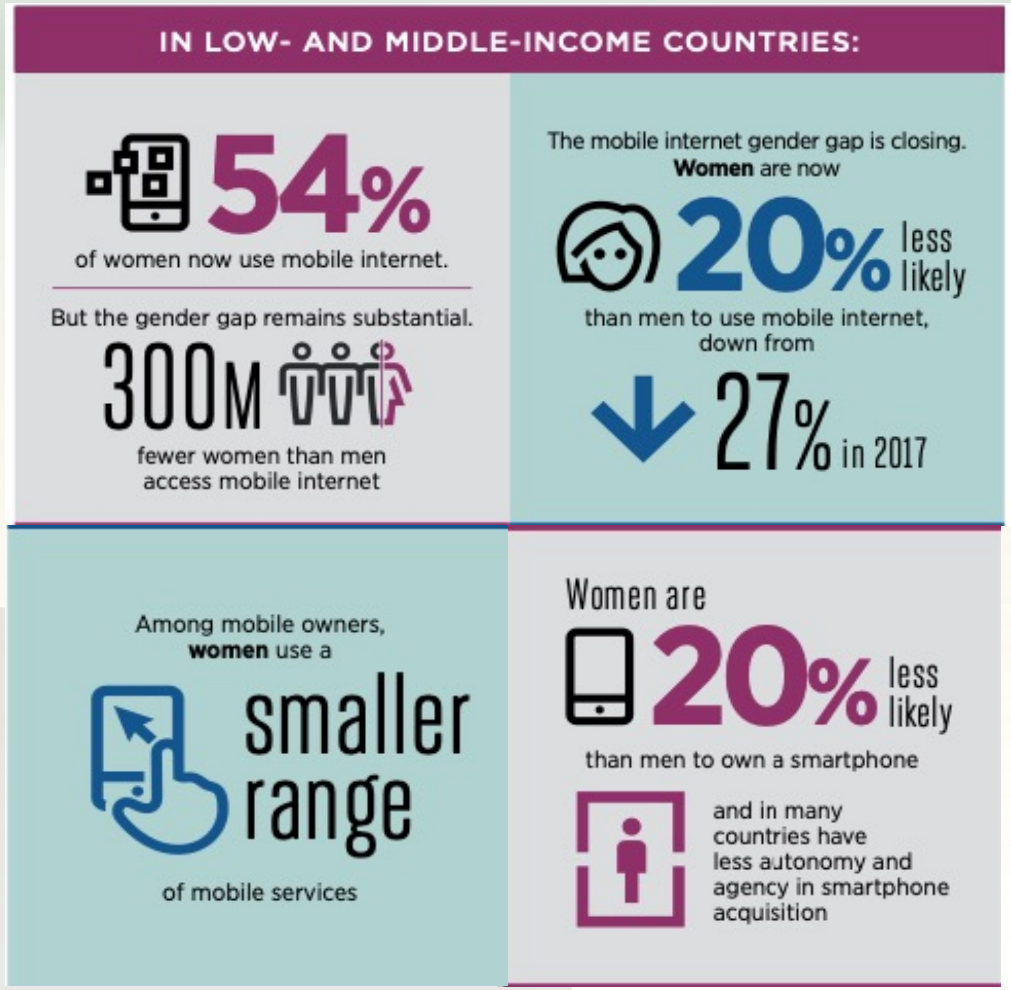
Gender differences in access and control of resources

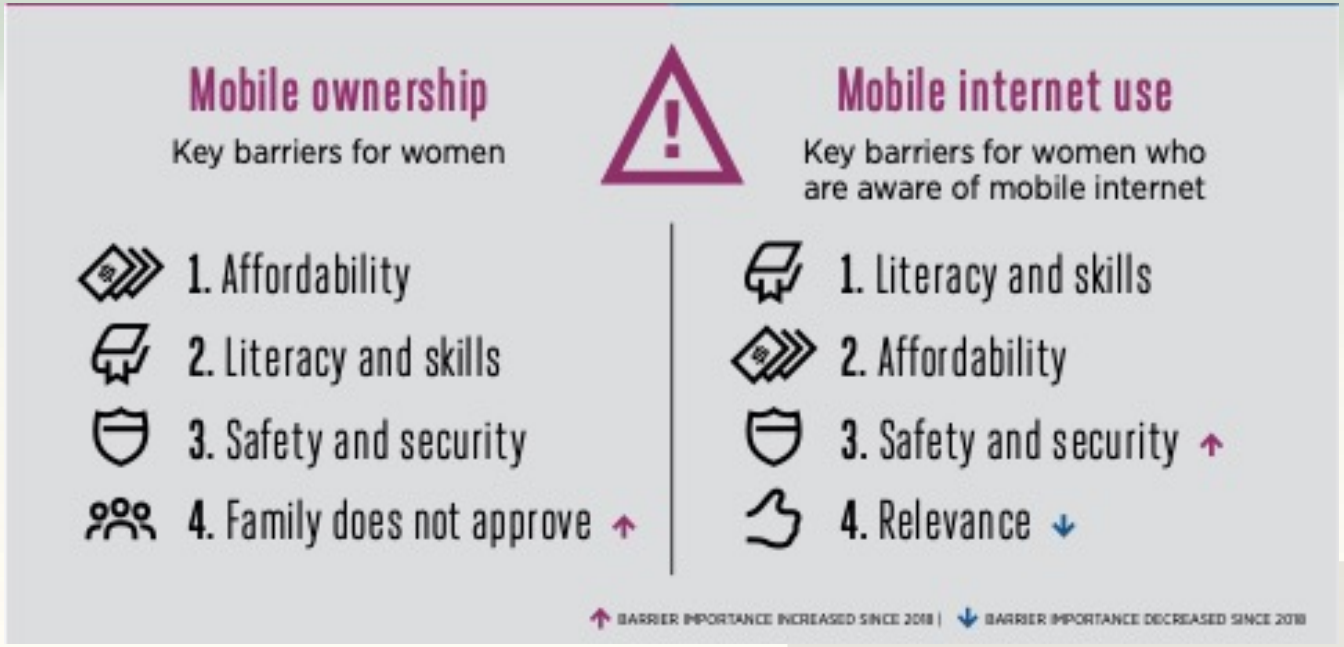
Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile money service provider, by sex and region, 2017



Source: World Bank, World Development Indicators (2020).

Gender digital gap





GSMA, 2020

Differences in information priorities

Table 4. Needs of climate information services.

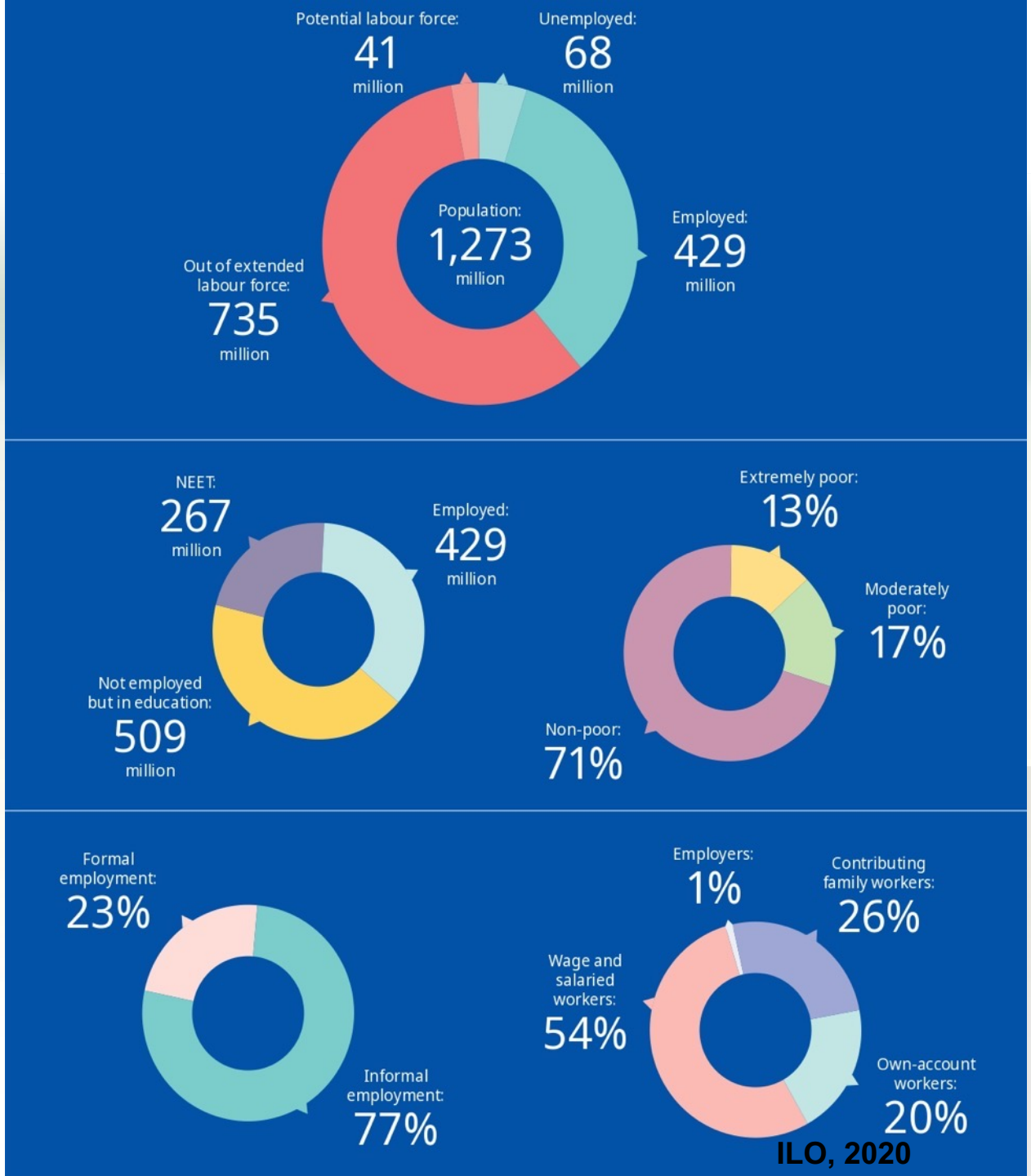
Type of climate information	Men (%)	Women (%)	All (men and women) (%)	Difference (%)
Onset date	89.65 (0.01)	94.85 (0.01)	90.68	−5.2 (0.02)**
Cessation date	90.39 (0.01)	94.85 (0.01)	91.28	−4.45 (0.02)**
Cumulative rainfall	85.49 (0.011)	88.84 (0.02)	86.15	−3.36 (0.025)
Daily rain forecast	87.19 (0.01)	93.13 (0.017)	88.38	−5.94 (0.023)**
Dry spells	84.2 (0.011)	92.27 (0.018)	85.81	8 (0.025)**
Wet spells	82.28 (0.012)	77.25 (0.027)	81.28	5 (0.028)*
Off seasons rains	87.5 (0.01)	87.98 (0.021)	87.61	−<1 (0.024)
Temperature forecast	87.3 (0.01)	87.12 (0.022)	87.26	−<1 (0.024)
Wind forecast	86.02 (0.011)	87.55 (0.02)	86.32	−1.5 (0.02)

Note. ***, **, and *, respectively, denote significant levels of 1%, 5%, and 10%.
Standard Err. in ().
Source: Surveys (2017).

This table indicates the gender differences in preferences for climate information, based on women's and men's differing production activities. For example, if HH labour is prioritized for men's land and crops, then women's crops will be sowed or harvested at different times in the planting season and they may need different climate information.

Diouf, Ndeye Seynabou et al. 2019.; Gumucio et al, 2020; GSMA, 2012

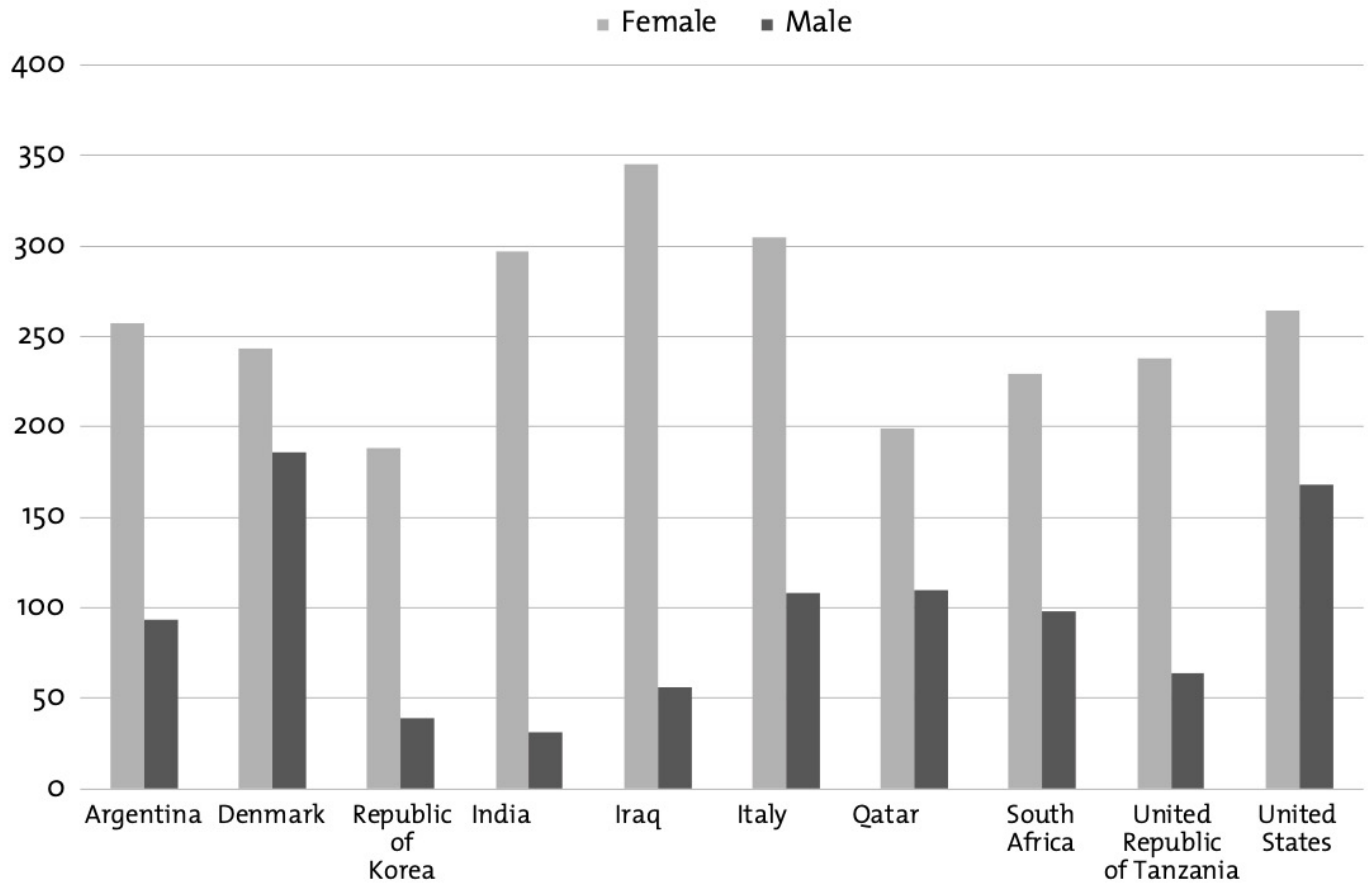
Youth gaps: employment



ILO, 2020

3. Women's workload

Average time (minutes) per day spent on unpaid work by sex, selected countries



Source: ILO (2018a).

Note: Data based on most recent year available.

Reducing workloads: gender-responsive technologies

Joshi et al, 2019

4. Collective action for equality in Daga Birame, Senegal

A

B

C

D

Ouédraogo, Mathieu et al. 2018.

Collective action as a platform for equality, agency and resilience in India

AICCRA Case Study 1:

Gender-targeted CSA technologies and practices

Components of the gender and CSA case study

- Articulation of how and why gender-targeted CSA technologies, practices, crops, were chosen – what was the prioritization and implementation process
  - Development of common approach or set of approaches
- Relation to value chains, and the position of the GSI-targeted CSA in the value chain;
- Monitoring of improvements in terms of one or more of the following:
  - Women's time use and resulting benefits
  - Household results (TBD)
  - Community results, i.e. participation and leadership in community organizations
  - National results?
  - Empowerment – GEI CSV
- Monitoring the numbers of women as capacity developers, researchers (MARLO)

We need to come up with a common & connected but not necessarily identical approach

Integrating Gender in CSA: CSA Prioritisation

1. Situational Analysis
    1. Sex disaggregated data – collect a sample or already available
    2. CSA Profiles – some have gender data and information
    3. Gender Profile of CSA in Ghana
    4. Global databases – World Bank, ILO, etc.
    5. Climate-Smart Agriculture Rapid Appraisal tool – gender example: : Gender divisions and climate variability are hindering a climate-smart East Africa
    6. Participatory identification of climate-smart agriculture priorities
    7. Climate Change and Food Security Vulnerability Assessment toolkit

Gender in CSA Prioritisation

2. Identification and evaluation of existing current and promising gender-responsive CSA practices, technologies and services

- Compendium of gender-responsive CSA techs and practices – F2 synthesis
- Potential of climate-smart agriculture in reducing women farmers' drudgery in high climatic risk areas – Arun Khatri-Chhetri, 2020, *Climatic Change*
- Cost-benefit analysis: A cost-benefit analysis of climate-smart agriculture options in Southern Africa: Balancing gender and technology (2019)
- Participatory approaches – Partnerships for Scaling up CSA in Africa

2017: Field testing of CSA portfolio and # of farmers involved

Tested | Evaluated | Tested & Evaluated | Mitigation potential | Households

Available in Site, not by CCAFS | Gender aspect assessed | Potential gender impact

CSA Practices

- Improved seeds (Soybean, brought tolerant, maize) — 103
- Intercropping (cowpea, jatropha) — 53
- Improved seeds (Biofortified, maize, orange, flesh potato, iron rich millet, non shattering soybean) — 53
- Tied ridges (maize) — 53
- Crop rotation(maize, cowpea) — 53
- Inorganic Fertilizer (maize) — 53
- Bunds (maize) — 53
- No or Zero Tilla (soybean) — 53
- IntercroppingTree planting (cashew, moringa) — 53

Agro-climatic services

- Seasonal forecast — 641
- Daily forecast — 641
- Weekly/10 days forecast — 641
- Agro-advisories on varieties applied under forecasted information — 641
- Agro-advisories on fertilizer & pesticide application — 641

Financial services

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

Market incentives

- Input subsidies
- Price support — 641

West Africa CSVs AR4D Sites: 2017 Inventory

Table 4. Percentage of men and women on the perceived effect on the generation of additional income derived from the implementation of CSA practices)

CSA Practices (Olopa)	N		Percentage
Improved black bean varieties	Men	16	**44%**
	Women	24	**67%**
Vegetable garden with water harvesting	Men	9	**44%**
	Women	20	**90%**
Vegetable garden with-out water harvesting	Men	75	**53%**
	Women	94	**71%**
Irrigation	Men	21	**57%**
	Women	23	**65%**

Acosta et al, 2019

Table 5 List of women-led agricultural activities and CSA interventions

Key activities	Key climate-smart interventions	Expected impact on labor/yield/income
Weeding	• Weed management activities	• Reduction in labor hours
Collection of fodder or fuelwood	• Agroforestry	• Reduction in fuelwood collection time
Collection of water for domestic or irrigation purpose	• Management of water harvesting structures • Management of irrigation through solar pumps	• Reduction in water collection time
Horticultural activities (vegetable cultivation and high-value fruit)	• Water-smart technologies such as drip irrigation, especially for drought-prone areas • Improved home gardens	• Reduction in time and labor for irrigation, additional source of income (leading to improved food security)
Sowing	• Improved high-yielding variety of seeds • Direct seeded rice, zero-tillage wheat	• Improved yield and income
Livestock management (fodder collection and milking)	• Fodder cultivation and management (fodder bank, improved varieties, silage/hey preparation) • Weather-friendly housing for livestock • Connect with local dairy • Livestock manure management	• Improve milk production during weather stress conditions • Better livestock management leading to secured income especially in cases of crop loss, reduced labor for livestock-related activities • Increase nutrient supply for crop cultivation
Weather information, agro-advisory, and market information	• Agro-advisory and market information customized for women	• Access to information for better management of activities, especially useful for females responsible for all agricultural operations including marketing of produce

Khatri-Chhetri et al, 2020

Weather Smart	Water Smart	Carbon Smart	Nitrogen Smart	Energy Smart	Knowledge Smart
					
• Weather forecasts • ICT-based agro-advisories • Index-based insurance • Climate analogues	• Aquifer recharge • Rainwater harvesting • Community management of water • Laser-leveling • On-farm water management	• Agroforestry • Conservation tillage • Land-use systems • Livestock management	• Site-specific nutrient management • Precision fertilizers • Catch-cropping/ legumes	• Biofuels • Fuel-efficient engines • Residue management • Minimum tillage	• Farmer-to-farmer learning • Community seed and fodder banks • Market information • Off-farm risk management

Photos: N. Palmer (CIAT), K.Trautmann, V.Meadu and Ron Nichols (USDA)

Gender integration in CSA prioritisation: CCAFS experience

East Africa

- Group based interventions
  - Community Based Organizations (CBOs)
  - Sub groups: Only women, Both men and women, and youth
  - Majority women participation in mixed groups
- Targeted technical interventions
  - Removing gender constraints and barriers eg. Smart-farm
- Soft interventions eg. Exposure visits, agri fairs

West Africa

- Group based interventions
  - CSA groups of 8-10 women
- Targeted technical interventions
  - Forest degradation in Senegal
- Capacity building of project staff
- Multiple rounds of gender analysis

Latin America

- Family level adaptation planning
  - Prioritization based on gendered roles within family
- Targeted technical interventions
  - Smart greenhouses

South Asia

- Group based interventions
  - One group per village (all women) for project activities
- Targeted technical interventions
  - Custom Hiring centers
  - Technologies eg biogas,
- Soft interventions eg. Exposure visits, agri fairs, trainings

Challenges

- Cultural differences
  - Kenya, India
- Lack of gender knowledge and expertise as well as a clear roadmap
- Integrating interest of all farmers
  - Dominant groups tend to bias prioritization processes

Learnings

- It is important to understand the **role of women farmers (including intersectional identities), their local knowledge and their preferences** to better understand what to implement, with whom and how
  - Example: new seed varieties in Kenya

- Participation of women in project activities (and uptake of CSA) is higher in areas where **women are more empowered**
  - Example: Nyando (Kenya) and Betul, Madhya Pradesh (India)
  - Work with women groups, wherever possible

- Solutions/interventions need to be **local / contextual**
  - Prioritize on the field

Gender in CSA Implementation

CGIAR RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

CCAFS

Mainstreaming gender and social differentiation into CCAFS research activities in West Africa: Key achievements & lessons learned for scaling up CSA

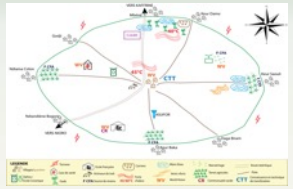
ICRISAT INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS

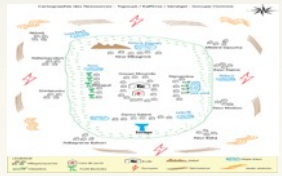
Dr Mathieu Ouédraogo,
CCAFS WA / ICRISAT - Mali

How gender is mainstreamed into CCAFS activities in West Africa?

Participatory research action

- Focus group (Village baseline)

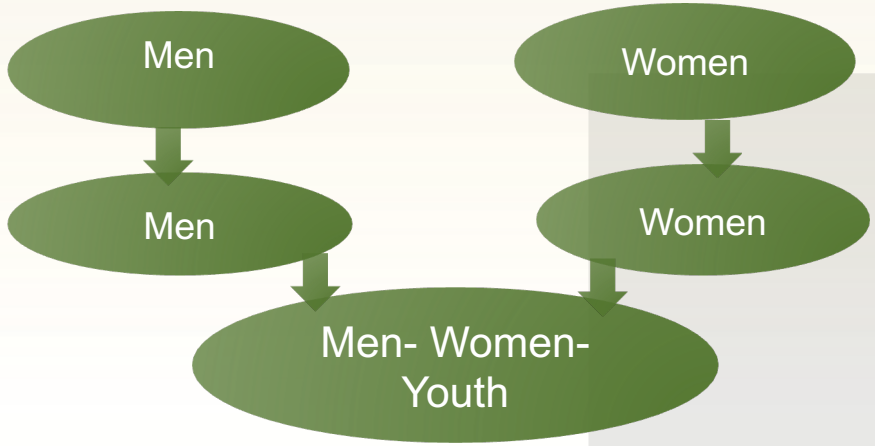




- **Community Resource**
- **Organizational landscape**
- **Information network**

Vision of the future

Vision of the future - Community



- Household and intra household surveys

Keys activities implemented in WA

Capacity building

- Training of partners for gender research in CSVs
- Trainings of women on CSA practices (test, exchange visit)

Gender studies to understand the linkage between gender and CC

- Perception of climate change & adaptation strategies (Mali)
- Prioritization of CSA options (Mali, Niger, Ghana)
- Access & use of climate information (Ghana and Senegal)

Gender sensitive activities to empower women

- Processing of baobab fruit powder (Senegal)
- Promotion of *cassio tora* production (Niger)
- Development of gender CSA groups (Ghana)
- Off/on season gardening (Ghana, Mali and Senegal)

Gender empowerment through CCAFS activities in West Africa

Capacity building (Training, tests, exchange visits) :

PICSA, tree planting and grafting, nutritional education, etc.



Gender sensitive activities

- ✓ Tree planting (*Moringa)*
- ✓ Off season gardening,
- ✓ Nutritional education,
- ✓ CSA groups formed in Ghana CSV (Ghana)
- ✓ New crops (fonio, soya bean, sesame, *cassia tora)*
- ✓ NTFP processing (Senegal)


Understanding gender issue …

- **Gender studies** revealed that :

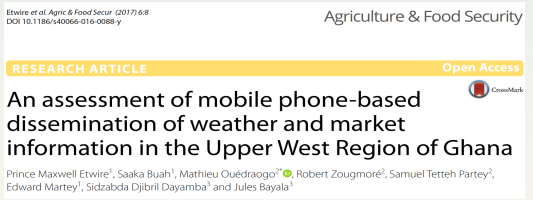
✓Women and men have similar **perceptions** of climate change in Ghana and Mali CSVs


Climatic Change
https://doi.org/10.1007/s10584-018-2239-6

Gender and climate risk management: evidence of climate information use in Ghana

Samuel T. Partey[1] · Angela D. Dakorah[2] · Robert B. Zougmoré[1] · Mathieu Ouédraogo[1] · Mary Nyasimi[3] · Gordon K. Nikoi[4] · Sophia Huyer[3]

✓Women and men have different **perceptions** of adaptation strategies in Ghana and Mali.


Etwire et al. Agric & Food Secur (2017) 6:8
DOI 10.1186/s40066-016-0088-y

Agriculture & Food Security

RESEARCH ARTICLE Open Access

An assessment of mobile phone-based dissemination of weather and market information in the Upper West Region of Ghana

Prince Maxwell Etwire[1], Saaka Buah[1], Mathieu Ouédraogo[2*], Robert Zougmoré[2], Samuel Tetteh Partey[2], Edward Martey[1], Sidzabda Djibril Dayamba[3] and Jules Bayala[3]

✓Women and men have different **access and use** of CSA options including CIS in Ghana and Mali.


atmosphere

Article

Using Seasonal Forecast as an Adaptation Strategy: Gender Differential Impact on Yield and Income in Senegal

Ndeye Seynabou Diouf *, Mathieu Ouedraogo, Issa Ouedraogo, Gnalemba Ablouka and Robert Zougmoré

✓Differentiated **impact** of the CIS use on women and men in Senegal.

Key lessons

An effective mainstreaming of gender and social issue within CSVs' activities in WA requires:

- Understanding gender perception on climate change and adaptation strategies to develop gender responsive CSA options.
- Understanding differentiated access and use of CSA options for promoting the uptake of gender responsive CSA technologies and practices.
- Developing gender specific activities in CSV work that meet women and youth needs and concern and motivate them to participate in CSA.
- Establishing gender collective organizations to support gender initiatives (networking, capacity building, mutual support).

Ways forwards for AICCRA

- Leverage from CCAFS achievements in gender studies in West Africa (perceptions, adoption, impact of CSA on gender)

- Sustain and scale up some promised gender activities within the CSV (need investment) and develop new activities for gender empowerment.

- Address the main constraints of adoption of CSA:
  - –strengthening the capacity of women to implement CSA
  - –improving access to inputs/equipment requires for CSA.

GSI in Monitoring and Evaluation

AICCRA indicators

Indicator Name	PBC	Baseline	Intermediate Targets		
			1	2	3
1. Knowledge Generation and Sharing					
IPI 1.1: Climate-relevant knowledge products, decision-making tools and advisory services created or enhanced including a proportion targeting gender and social inclusion dimensions (Number)		0.00	15.00	45.00	90.00
IPI 2.1: Climate advisory platforms/hubs launched/ strengthened, including their focus on gender and social inclusion (Number)		0.00	1.00	4.00	8.00
IPI 2.3: People engaged in AICCRA-funded capacity development activities (Number)		0.00	500.00	2,000.00	4,000.00
IPI 3.2: Climate information services and climate-smart agriculture technologies reaching women through customized programs targeting their interests (Number)		0.00	5.00	18.00	36.00

Participation of women researchers and capacity development staff in relation to gender-responsiveness???

Gender Empowerment Index for CSVs

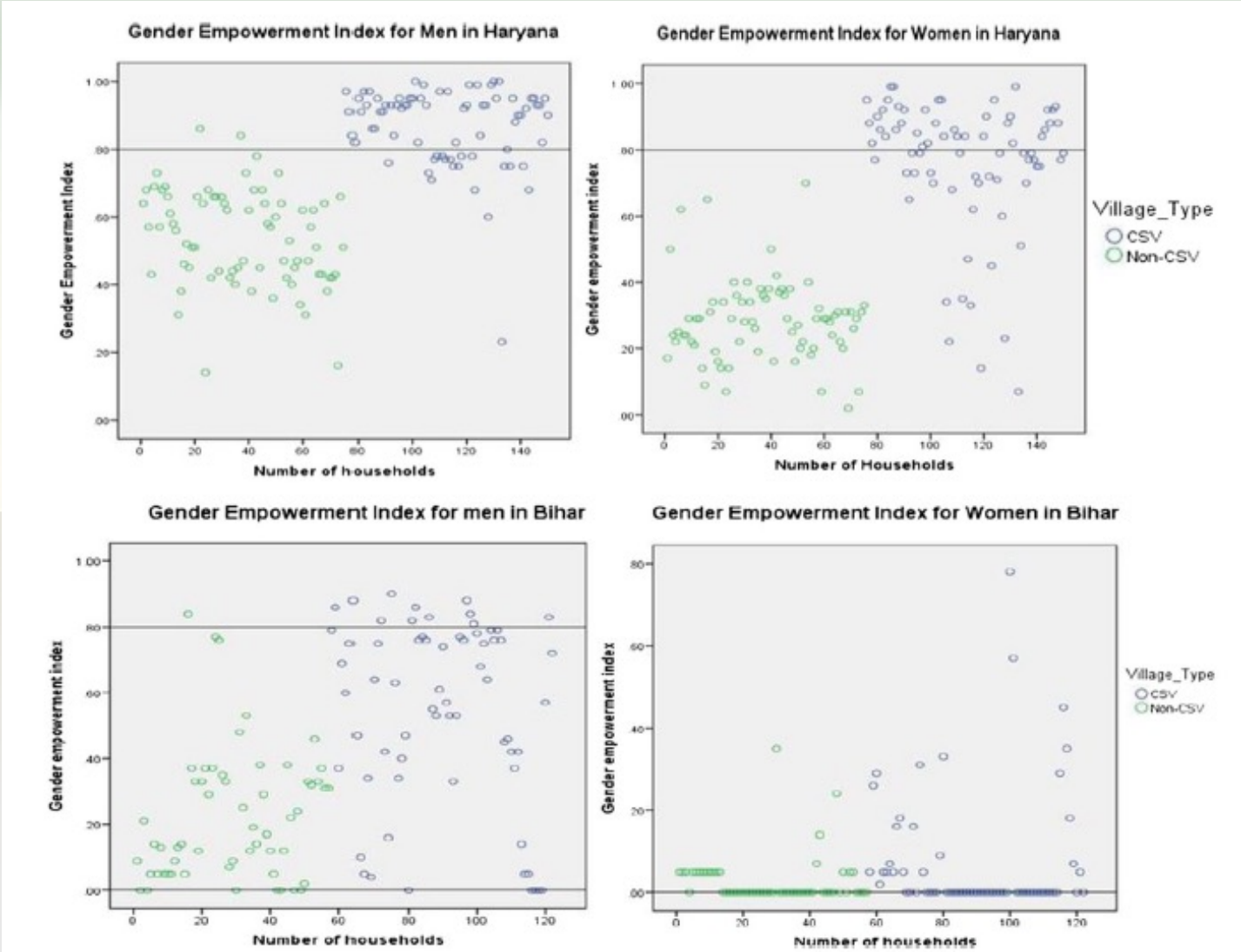
- The Gender Empowerment Index for CSVs or the GEI-CSV is a tool developed by CCAFS and tested in India (Bihar and Haryana) - Does the climate-smart village approach influence gender equality in farming households? A case of two contrasting ecologies in India
- Objective: To understand the process and entry points to achieve empowerment and gender equality in climate change adaptation process in agriculture
- Index comprises of four major measurable indicators
  - Political
  - Economic
  - Agricultural
  - Social
- Measures empowerment at the inter-household and intra-household level.
- Results in India show that both women and men experienced empowerment

Table 1 The four domains of gender empowerment index

Domain	Code	Indicators	Weight
Political (P)	p1	Independent right to vote	1/2
	p2	More participation in village level decision making	1/2
Economic (E)	e1	Improved earning opportunity	1/2
	e2	Improved skill set and capability to work	1/2
Social (S)	s1	Increase access to credit/KCC/bank and its facilities	1/8
	s2	Improved participation in the decision on spending money for agriculture	1/8
	s3	Improved participation in the decision on spending money on home expenses	1/8
	s4	Improved participation in decision on spending money on child education	1/8
	s5	Better control of money for education for children	1/8
	s6	Better control of money For health for family	1/8
	s7	Better access to a mobile phone	1/8
	s8	Better access to insurance	1/8
Agricultural (A)	a1	Better awareness that climate variability can be a risk to agriculture	1/17
	a2	Better access to information to manage agricultural risk	1/17
	a3	Better information on nutrient application	1/17
	a4	Better access to nutrient application practices	1/17
	a5	Improved soil/land quality	1/17
	a6	Improved water use efficiency	1/17
	a7	Better access to improved seeds	1/17
	a8	Better access to quality inputs	1/17
	a9	Increased use of weather-based insurance/crop insurance	1/17
	a10	Better access to machines	1/17
	a11	Better access to markets (input and output)	1/17
	a12	Better participation in the sale of livestock products	1/17
	a13	Better participation in training/workshops/seminars	1/17
	a14	Better crop diversification/ any change in cropping pattern	1/17
	a15	Improved role in decision-related to change in cropping pattern	1/17
	a16	Better access to information through mobile-based agro-advisories	1/17
	a17	Improved income through selling output	1/17

Gender Empowerment Index for CSVs

Intra-region comparison



Inter region comparison

Going forward - We need to agree on:

- Common approach to ‘gender-smartness’ and how to get there
- GSI and CSA value chain approach
- Indicators for the case study – or a common approach to measure what is gender-responsive CSA: GEI-CSV? CSA Monitoring?
- Measurement of empowerment results – what are we measuring?

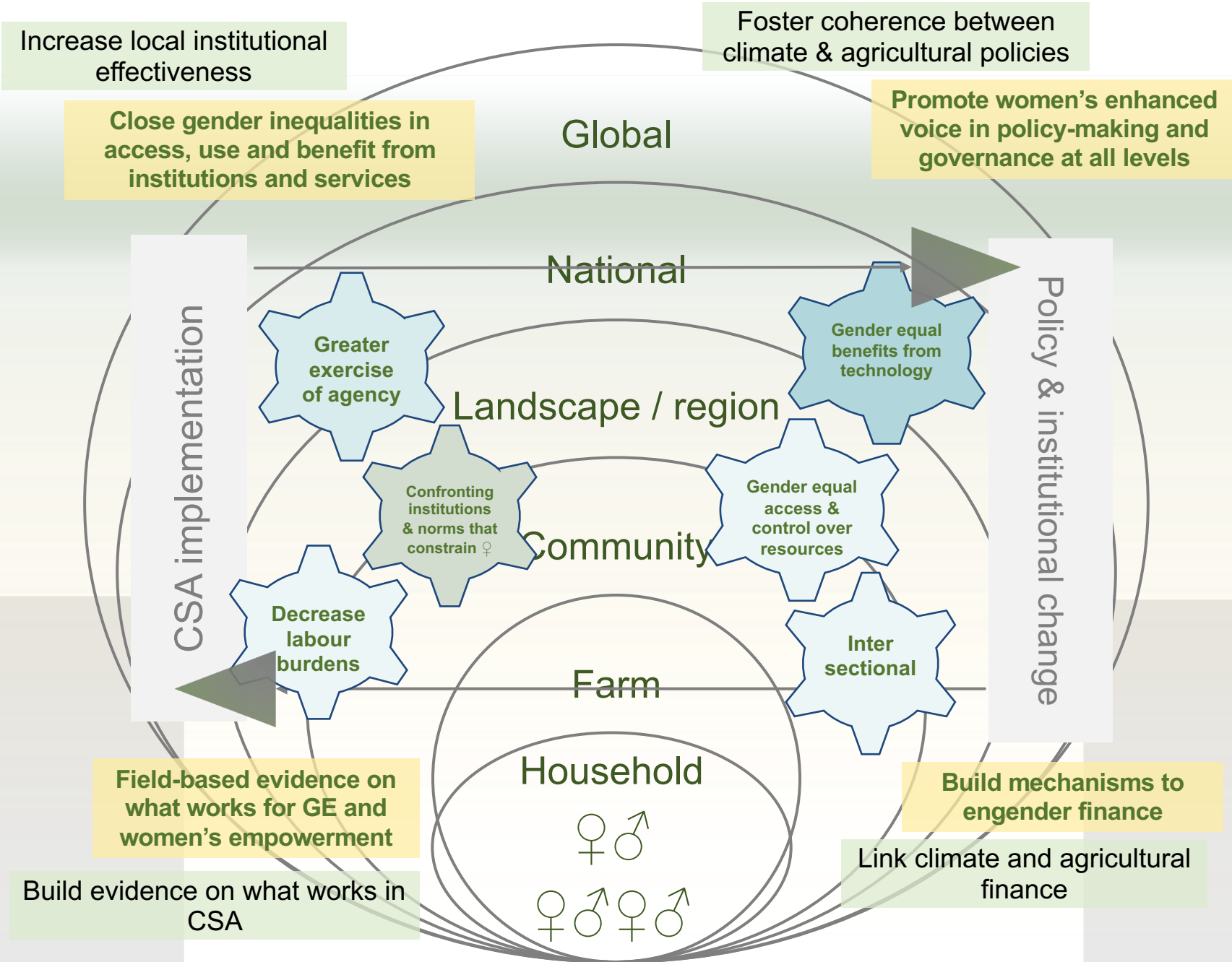
- Other??

Tools and Resources

- Special Issue on Gender Equality and CSA: Approaches and Opportunities. *Climatic Change*, *158*(1) (2020)
- Africa Enterprise Challenge Fund, & University of Reading. (2014). *Assessing the Impacts of Shamba Shape Up*. Nairobi: Africa Enterprise Challenge Fund.
- Kristjanson, et al (2017). Addressing gender in agricultural research for development in the face of a changing climate.
- Standards for Collecting Sex-Disaggregated Data for Gender Analysis: A guide for CGIAR researchers
- CCAFS Gender and Inclusion Toolbox
- A Gender-responsive Approach to CSA: Evidence and guidance for practitioners
- Promoting Gender Equitable Opportunities in Agricultural Value Chains: A Handbook
- Women's involvement in coffee agroforestry value-chains

GSI Scaling framework

Gender Empowerment & CSA: A Scaling Framework



Gender and Social Inclusion
Activity Areas

- Identification of tailored CISs and digital agro-advisory packages for use in building new extension systems or strengthening existing extension systems
- Development and identification of gender-responsive practices/technologies
- Targeting CSA technologies at tasks performed by women, and reaching them through customized programs
- Development of business models and identification of innovative finance options for scaling-up CSA and climate-resilient value chains, with special consideration of gender and social inclusion
- Identification of scaling mechanisms for the uptake of CSA, especially for women and youth
- Targeting post-doc fellowships for women researchers
- Support to AGNES for inputs to gender and climate policy in Africa and at the global level

Tools and Resources

- Special Issue on Gender Equality and CSA: Approaches and Opportunities. *Climatic Change*, *158*(1) (2020)
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- CCAFS Youth Strategy