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The U.S. Government's Global Hunger & Food Security Initiative

## Political Will and Public Will for Climate-Smart Agriculture in Sub-Saharan Africa

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## Project Background

### Funding

United States Agency for International Development

United States Department of Agriculture

### Activities

Field research: 2015-2018

Dissemination of research: 2015-2021





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## Research Partners

### Senegal

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Dr. Adama Sarr

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Dr. Diaminatou Sanogo

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## Research Partners

### Uganda

Dr. Jackline Bonabana-Wabbi

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### USA

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## Research Roots

### Political will and public will

- Political will conceptual definition (2010)
- Public will conceptual definition (2014)
- Action research (2018)

### Climate-smart agriculture (CSA)

- Sustainably increase productivity/incomes
- Adaptation and resilience
- Reduce/remove greenhouse gas emissions

Original Article

#### Analysis and action: The political will and public will approach

**Amber NW Raile**

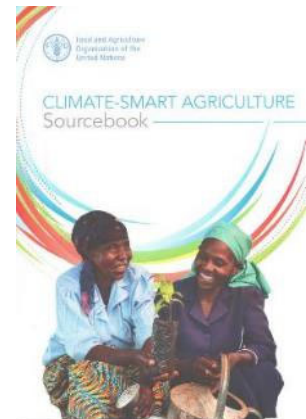
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Collaborative Research on  
Sustainable Intensification

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## CSA Examples: Senegal Stakeholders

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### Agro-forestry & tree growth

- Integrated crop systems with trees
- Restrictions on cutting down trees
- Shrubs for water retention and fixing of organic materials
- Big Green Wall to prevent desertification
- Fuel-efficient stoves (to save trees)
- Pruning of trees

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### Organic fertilizers

- Natural organic composts
- Cheap organic fertilizers
- Elimination of slash-and-burn agriculture
- No-till agriculture

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### Improved water use

- Drip and other forms of irrigation
- Water towers for storage
- Linking seeding and fertilizer application to weather forecasts
- Planting vegetables with low water needs
- Water retention basins

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### Climate-adapted seed varieties

- Drought-resistant seeds
- Flood-resistant seeds







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## Case Study Countries: Uganda & Senegal

### Similarities

- Smallholder agriculture important
- Sub-Saharan Africa location
- Poverty situations

### Differences

- Political regime types
- Historical features
- Climates & crops





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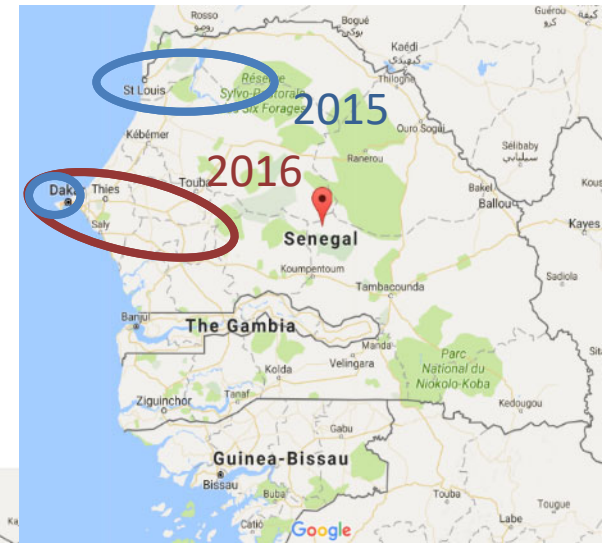
## Research Methods

### Data collection

- Semi-structured interviews
  - Senegal: 2015, 2016
  - Uganda: 2015, 2018

### Data analysis

- Deductive and inductive coding of interview transcripts
- Frequency-based scoring

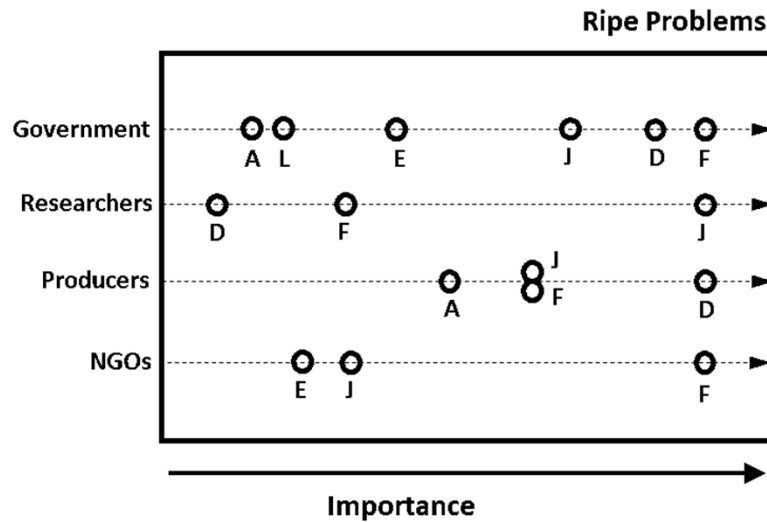






## Ripe Problems: Uganda

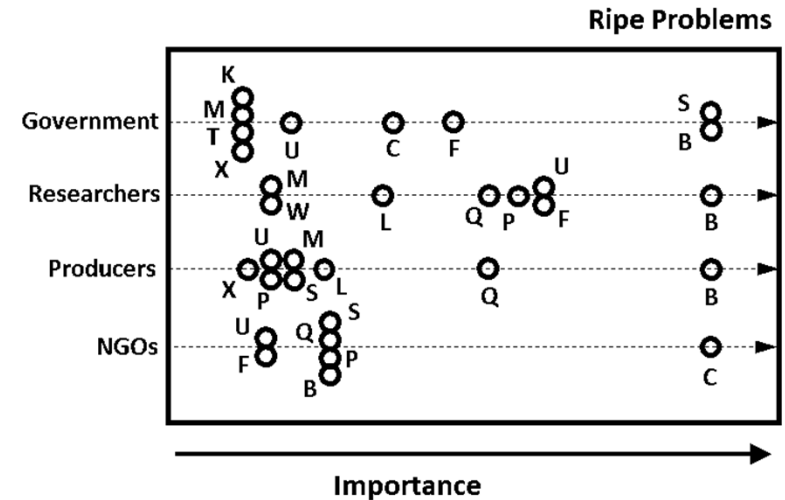
Figure 2A. Climate-Agriculture in Uganda



- F: Inadequate rainfall
- J: Variable precipitation
- D: Extreme weather events

- B: Food/crop storage
- S: Poverty
- C: Gender issues

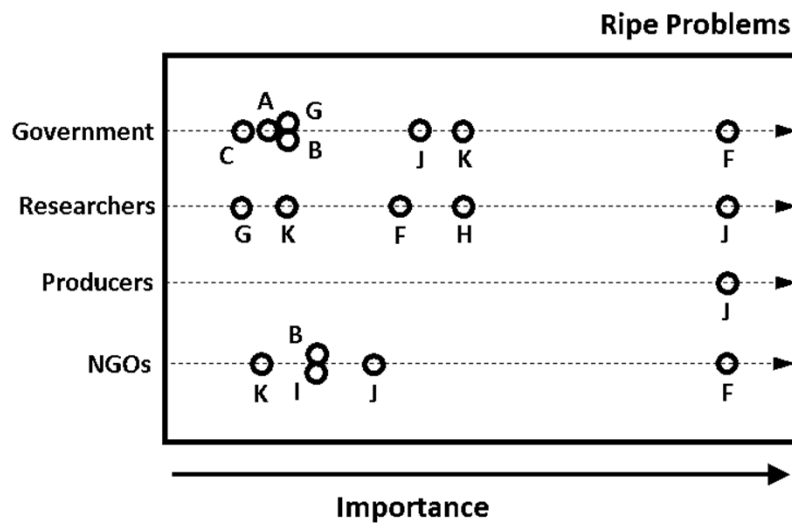
Figure 3A. Socioeconomic & Infrastructure-Agriculture in Uganda





## Ripe Problems: Senegal

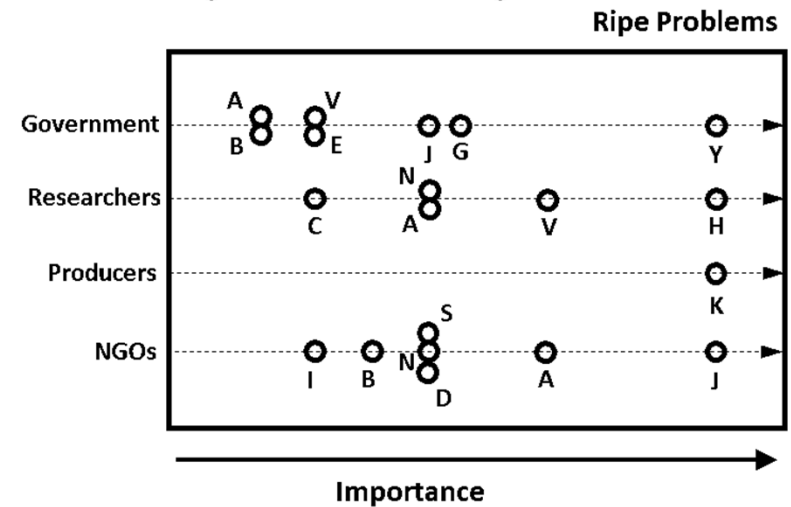
Figure 2B. Climate-Agriculture in Senegal



- F: Inadequate rainfall
- J: Variable precipitation

- Y: Urban migration
- H: Insufficient irrigation
- K: Mechanization
- J: Low investment

Figure 3B. Socioeconomic & Infrastructure-Agriculture in Senegal





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## Senegal: Political Will

### (1) Sufficient set of decision makers

- Options: president, ministries, local officials, donors

### (2) Common understanding of problem

- *Emerging Senegal Plan vs. rice self-sufficiency*

### 3) Commonly perceived, potentially effective solution

- Government agriculture programs

### 4) Commitment to support

- Greater support for rice than CSA initiatives





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## Senegal: Public Will

### (1) Social system

- Success of community radio

### (2) Shared recognition of a particular problem

- Competing problems

### 3) Resolve to address the situation

- Coordination problems, but local commitment

### 4) In a particular way

- Importance of local needs

### 5) Through sustained collective action

- Identification with programs and sponsors possible





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## Senegal: Climate-Smart Village of Daga-Birame

- National, international, and local actors
- Participatory development and testing
- Holistic approach, including social reorganization
- Agroforestry
- Weather forecasts



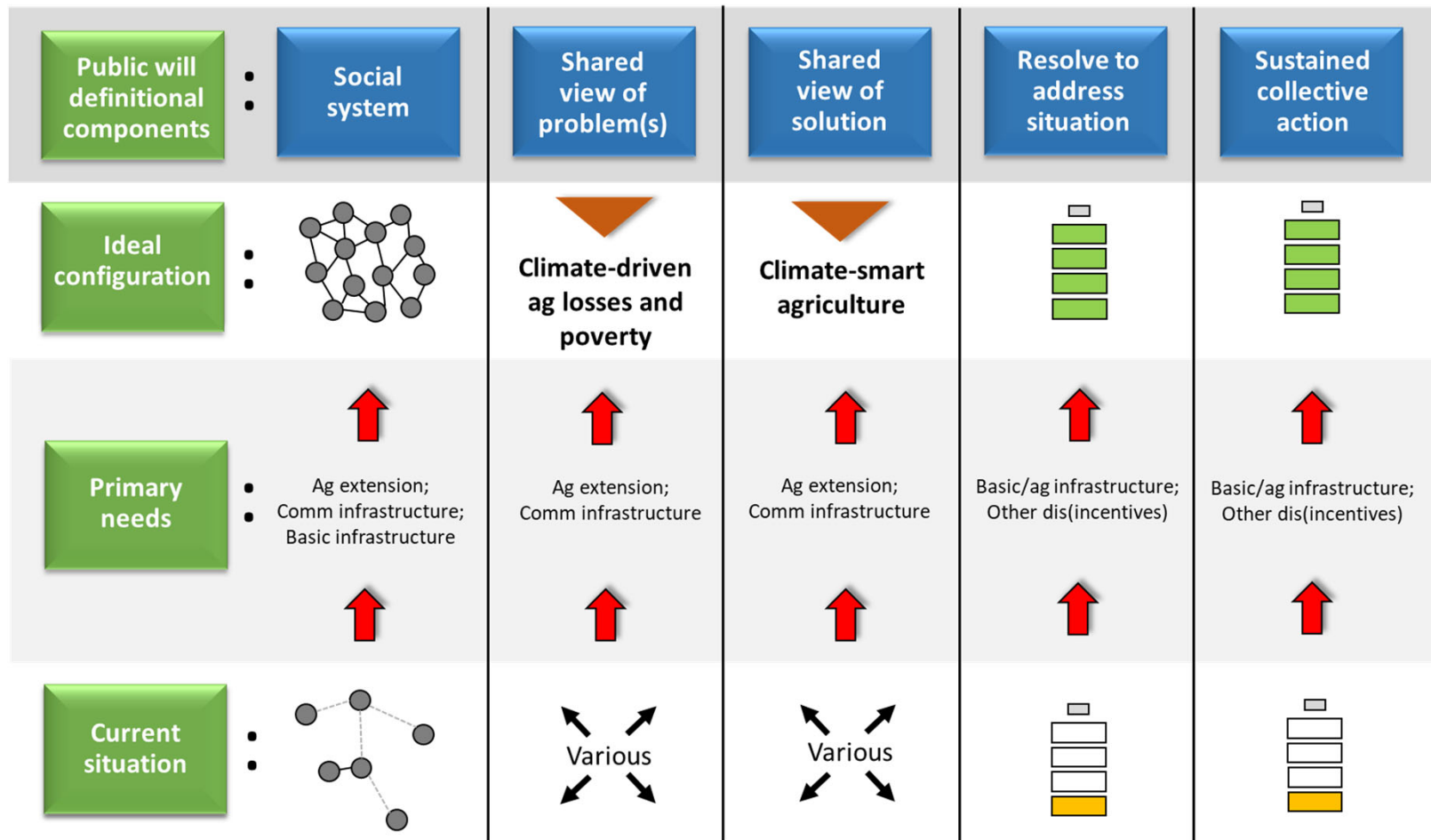




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## Public Will for CSA in Uganda





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## Opportunities for Scaling: Senegal

### Opportunities for policy entrepreneurs

- Joining problems and solutions via effective messengers

### Opportunities for agribusiness entrepreneurs

- Information dissemination and demonstrations
- Equipment and inputs
- Financing

### Opportunities for governments and donors

- Supporting research and communication
- Enabling environments and subsidization





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## Opportunities for Scaling: Uganda

- **Communication:** extension service, infrastructure, producer associations
- **Basic and agricultural infrastructure:** transportation, electricity, inputs, storage, marketing
- **Incentives:** plot sizes, non-farm income
- Many opportunities for industry, government, and donors – separately and together





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## Other Project Outcomes

- Dr. Sanogo has continued scientific work on agro-ecological and socio-economic importance of climate-smart village approach
- Articles shared with other scientists
- Citations of research
- Partner career advancement



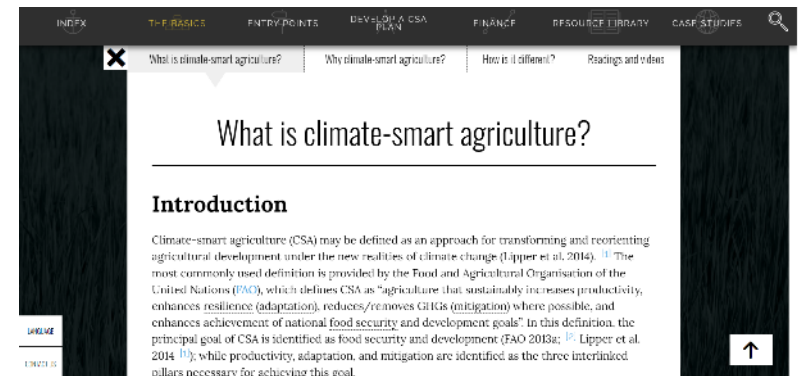


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## CSA Resources

- Sustainable Intensification Innovation Lab
- Food and Agriculture Organization of the United Nations & GACSA
- World Bank



- CCAFS: CGIAR program on Climate Change, Agriculture and Food Security







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## More Information

Eric D. Raile, Linda M. Young, Jackline Bonabana-Wabbi, Julian Kirinya, Samba Mbaye, Lena Wooldridge, Amber N. W. Raile, and Lori Ann Post. 2018. "Agriculture in Shifting Climates: The Configuration and Ripeness of Problem Understandings in Uganda and Senegal." *Review of Policy Research* 35 (2): 302-325. Available at <http://onlinelibrary.wiley.com/doi/10.1111/ropr.12284/full>

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Eric D. Raile, Linda M. Young, Julian Kirinya, Jackline Bonabana-Wabbi, and Amber N. W. Raile. 2021. "Building Public Will for Climate-Smart Agriculture in Uganda: Prescriptions for Industry and Policy." *Journal of Agricultural & Food Industrial Organization*. Available at <https://www.degruyter.com/document/doi/10.1515/jafio-2021-0012/html>

- 1) KNOWLEDGE
- 2) DEMONSTRATION
- 3) CAPITAL/LABOR
- 4) INPUTS
- 5) STORAGE/MARKETS





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