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Thank you for joining us. The webinar will begin shortly.

FEED THE FUTURE INNOVATION LAB FOR FOOD SAFETY

June 26, 2024

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Engaging & Empowering Women to Strengthen Food Safety

Lessons Learned in Bangladesh, Cambodia, & Nigeria

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June 26, 2024 | Webinar Series

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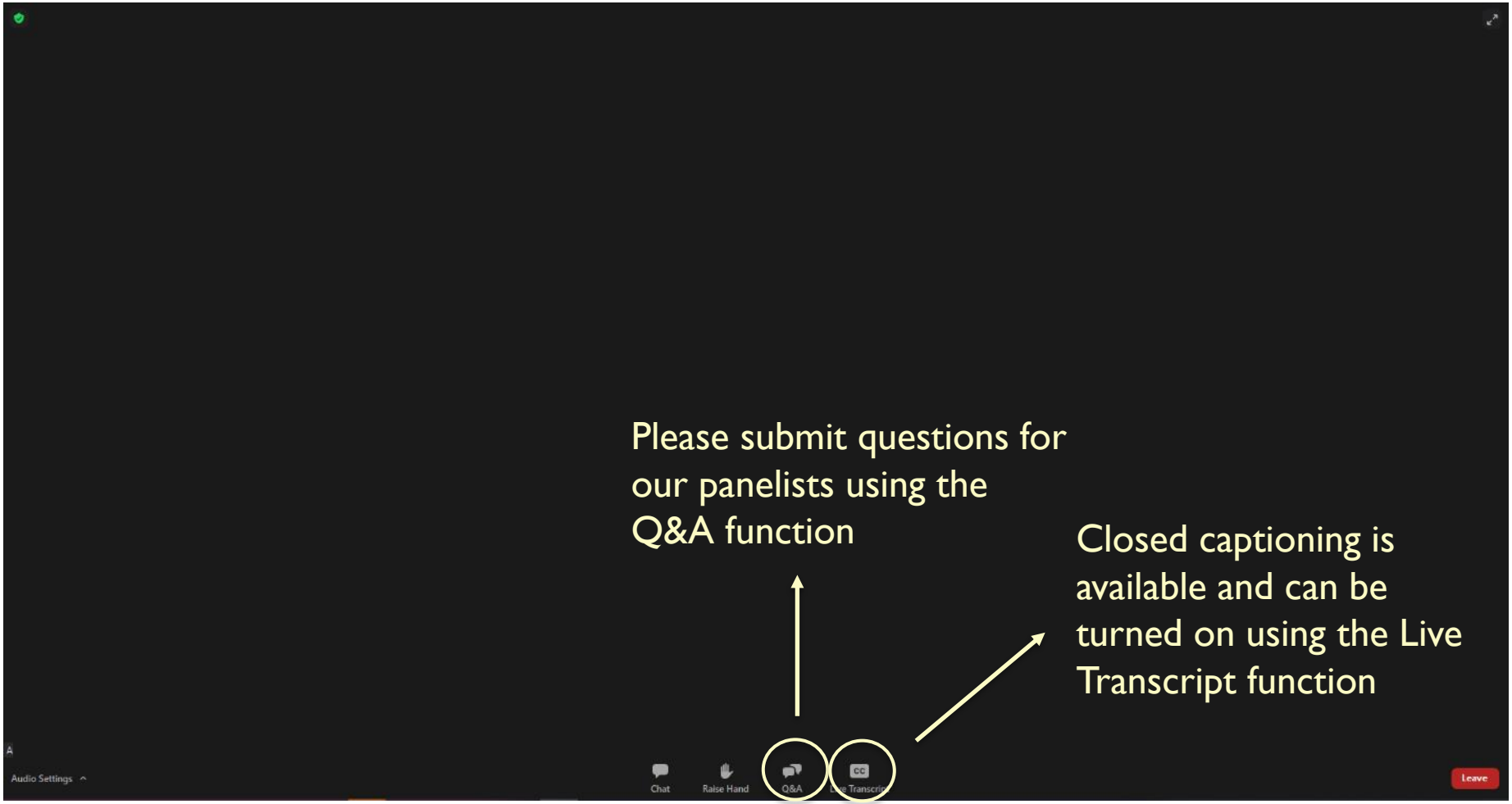
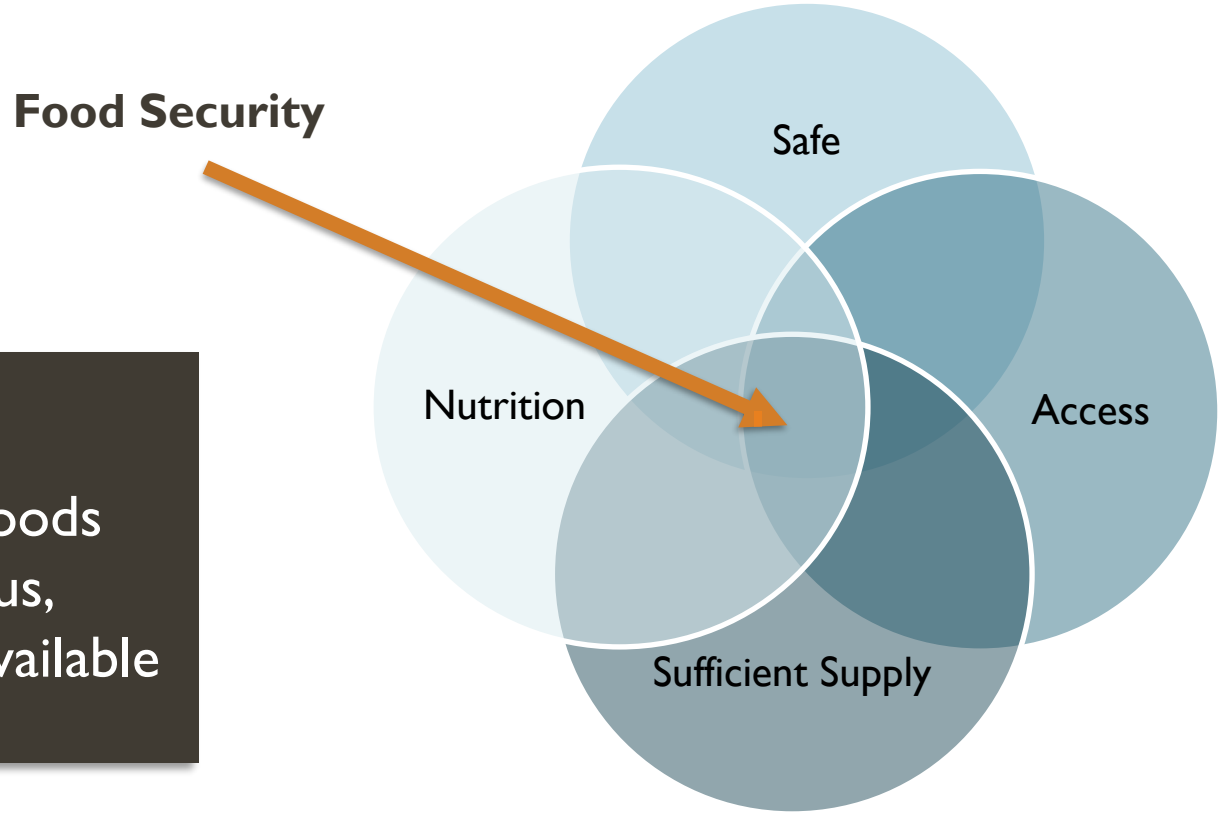
WELCOME



LINKING FOOD SAFETY & **FOOD SECURITY**

Food security is achieved when foods are safe, nutritious, accessible, and available



FEED THE FUTURE INNOVATION LAB FOR FOOD SAFETY (FSIL)

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RESEARCH & ENGAGEMENT ACTIVITIES

Increase stakeholder awareness of food safety issues, impacts, and measures to reduce food safety risks.

Build local research capacity and conduct research on regional food safety challenges.

Support translation and dissemination networks to develop policies and engagement structures.

Enhance local capacity to translate food safety research into training, guidelines, & commercialized products.

Cross-cutting themes: Empowerment of women, youth, and other marginalized populations, human and institutional capacity development, and food safety enabling environments.

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RESEARCH **PORTFOLIO**

FSIL research focuses on nutrient-dense, perishable foods, including dairy, poultry, fish, and vegetables.

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Women are key partners in food systems change with untapped potential to influence food safety and nutrition

Our Approach:

- Require the recruitment of a gender specialist to every long-term subaward
- Incorporate gender throughout the lifecycle of the project
- Assess gender roles, decision making, access to resources, and power dynamics in target value chains
- Tailor trainings and outreach to meet women's needs

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AGENDA

- **Welcome and introduction**
  Dr. Haley Oliver | 5 min

- **Informing Food Safety Engagement: A Gender Analysis of CAMBODIAN Vegetable Production**
  Leah Thompson | 15 min

- **Using the Our Voice Mobile App to Strengthen Household Food Safety in NIGERIA**
  Dr. Folake Samuel | 15 min

- **Women's Voices on Food Safety in BANGLADESH'S Fish Value Chains**
  Dr. Samina Luthfa | 15 min

- **Panel discussion** | 40 min

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Informing Food Safety Engagement: A Gender Analysis of Cambodian Vegetable Production

Leah Thompson

FSIL-Cambodia Ph.D. Candidate

Department of Animal Sciences

Purdue University

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Informing Food Safety Engagement: A Gender Analysis of Cambodian Vegetable Production

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PennState

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REDUCING FOODBORNE PATHOGEN CONTAMINATION OF VEGETABLES IN CAMBODIA

Identify the Problem

Identify and map critical control points for foodborne illnesses in Cambodia's informal vegetable value chain

Targeted Research

Evaluate new and existing interventions to reduce microbial contamination

+

Measure attitudes, perceptions, and knowledgeability of food safety

Engagement

Develop data-informed food safety programming for sustainable adoption of food safety practices

WOMEN ARE FOUNDATIONAL TO CAMBODIA'S INFORMAL VEGETABLE VALUE CHAIN

- 44% of employed Cambodian women work in agriculture
- Women are involved in every step of Cambodia's vegetable value chain

(Gavalyugova & Cunningham, 2020)

WOMEN ARE FOUNDATIONAL TO CAMBODIA'S INFORMAL VEGETABLE VALUE CHAIN

We will be unsuccessful in reducing foodborne pathogen contamination of vegetables *unless* we meaningfully engage Cambodian women in all facets of the project.

GUIDING QUESTIONS

1. How are Cambodian women vegetable producers' labor responsibilities and time distributed?

2. What influences the distribution of Cambodian women vegetable producers' labor responsibilities and how they spend their time?

A STANDPOINT FEMINIST-GUIDED ANALYSIS

Standpoint feminism: Different social (standpoints) shape knowledge production

→ Marginalized standpoints offer unique perspectives and knowledge

→ We should consider the multiple, identity-defining components that contribute to someone's standpoint

(Anderson, 2011; Harding, 1986; Wigginton & Lafrance, 2019)

A STANDPOINT FEMINIST-GUIDED ANALYSIS

1. If we want to improve the safety of vegetables consumed in Cambodia, we should be informed by Cambodian women vegetable value chain actors.

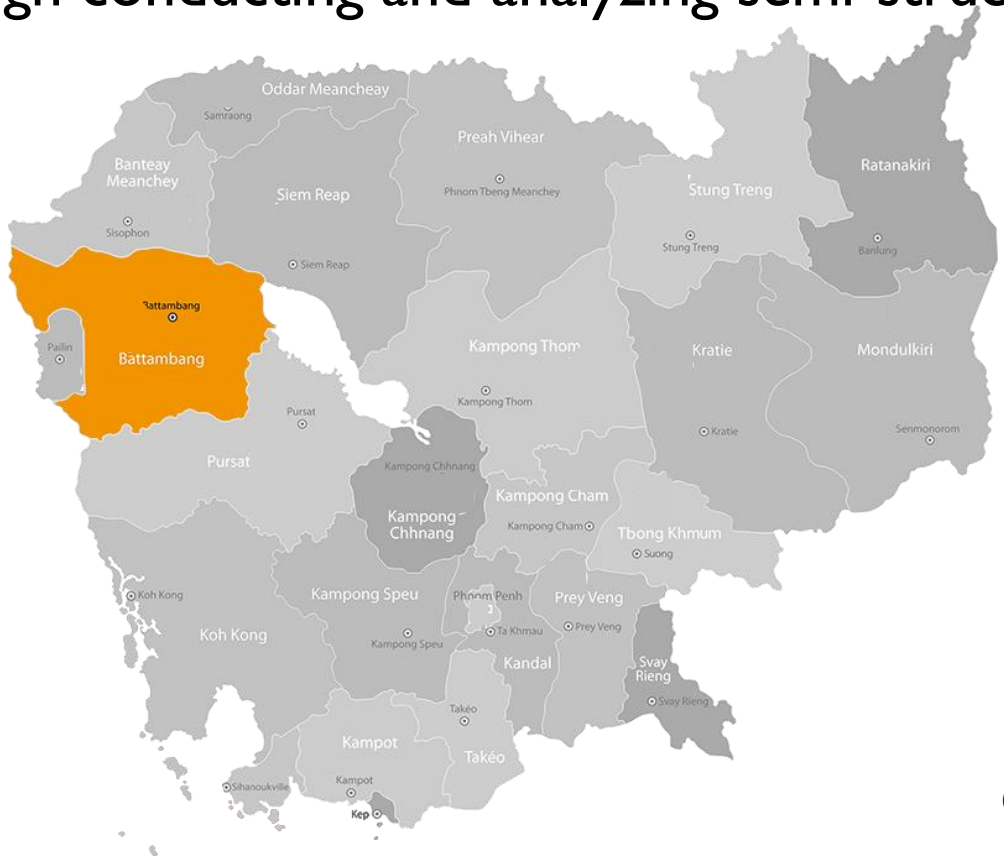
2. We should consider Cambodian women vegetable producers' perspectives beyond their gender identities – what other identity components shape their standpoints?

(Anderson, 2011; Harding, 1986; Wigginton & Lafrance, 2019)

A STANDPOINT FEMINIST-GUIDED ANALYSIS

- Our approach: provide vignettes of individual women vegetable producers through conducting and analyzing semi-structured interviews

Battambang Province: 12

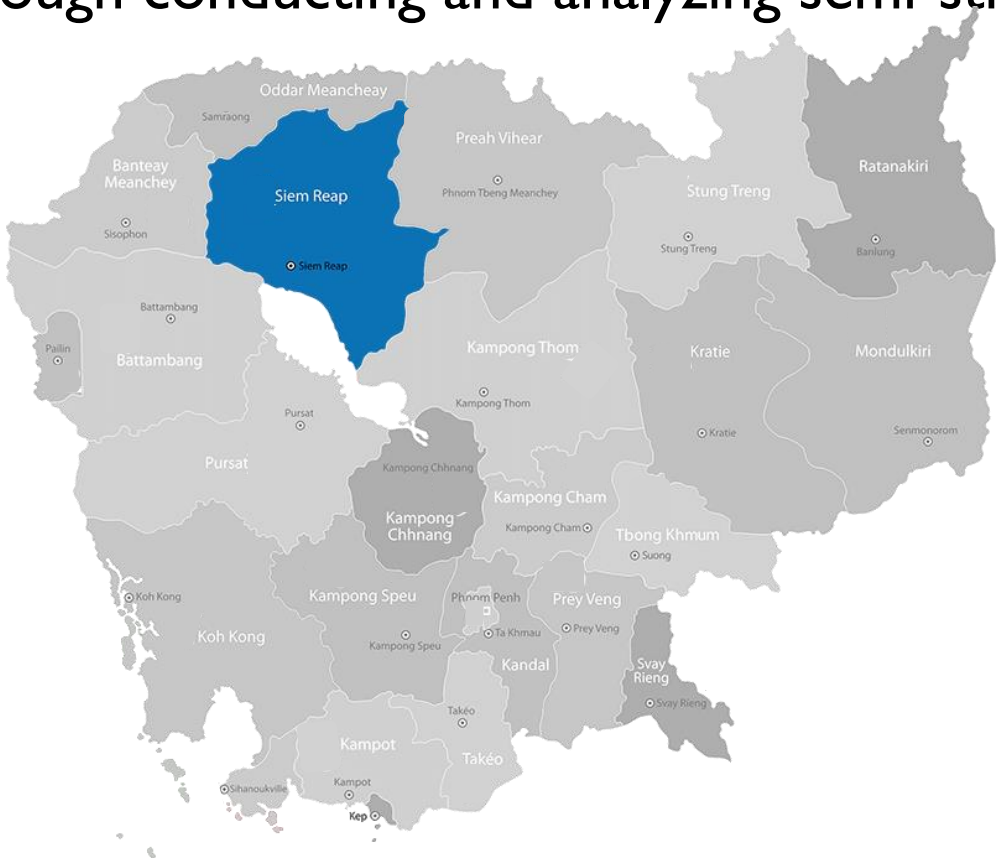


(Visit-Angkor.org)

A STANDPOINT FEMINIST-GUIDED ANALYSIS

- Our approach: provide vignettes of individual women vegetable producers through conducting and analyzing semi-structured interviews

Siem Reap Province: 8



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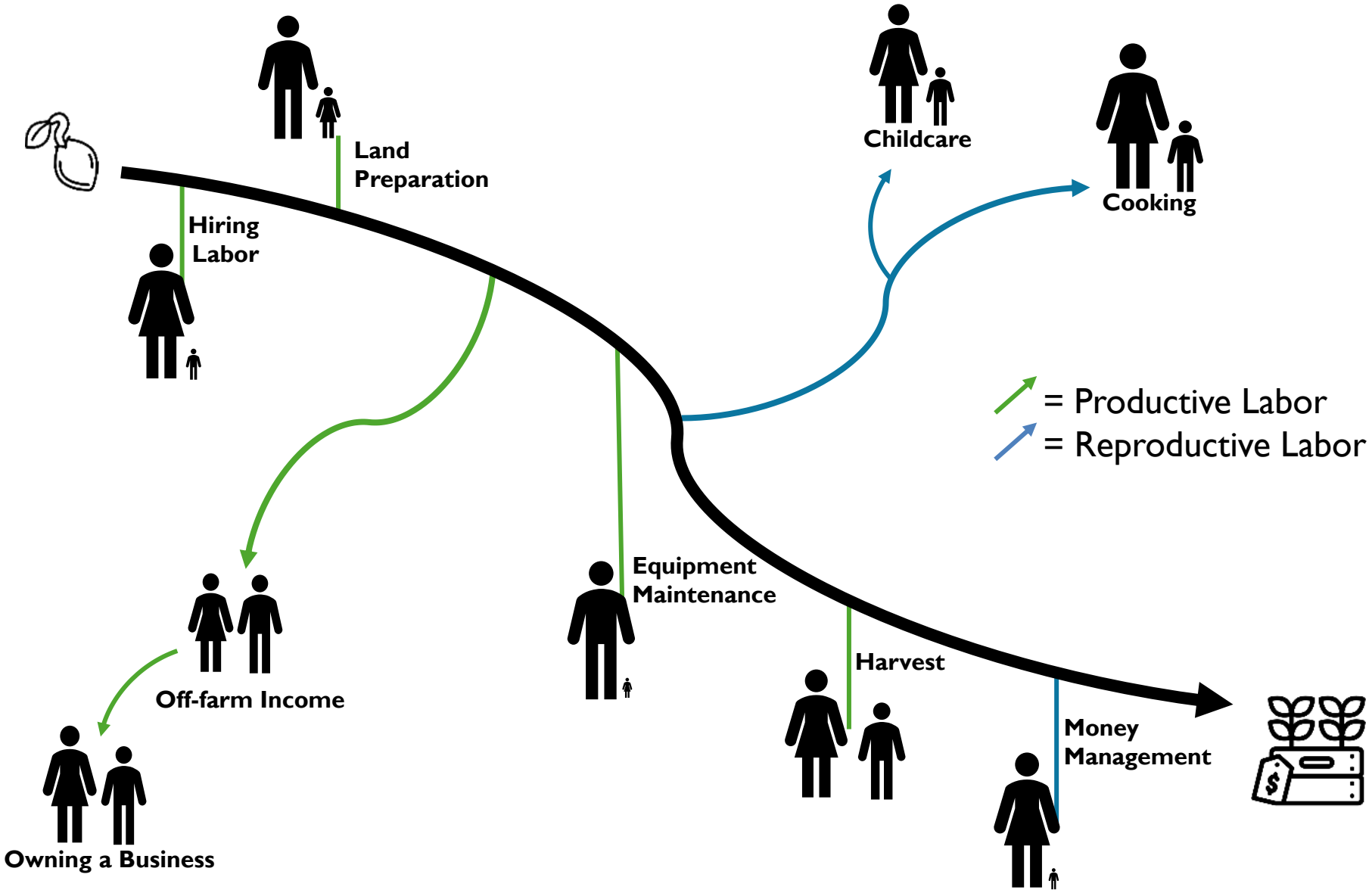

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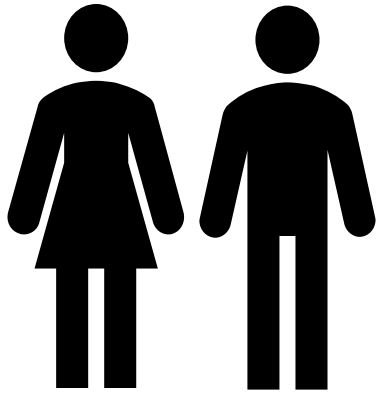
HOW ARE WOMEN VEGETABLE PRODUCERS' LABOR AND TIME DISTRIBUTED?

Women spend more time on…

- → Hiring labor
- → Managing Money
- → Harvesting
- → Cooking
- → Childcare



- Land preparation ←
- Equipment maintenance ←

Women spend less time on…

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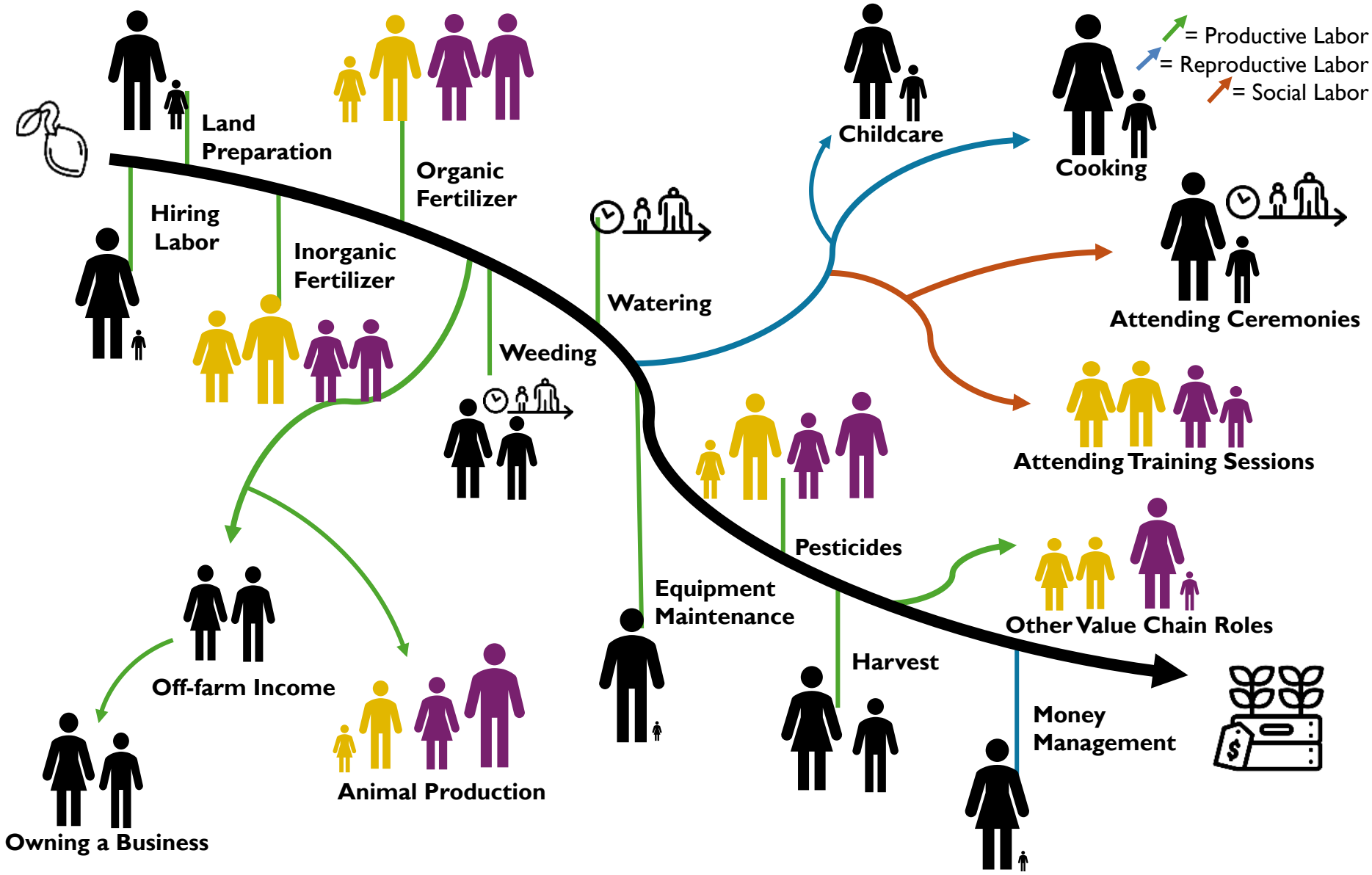
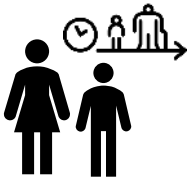


WHAT IMPACTS DISTRIBUTIONS OF LABOR AND TIME?

Type and level of familial support

- Husbands without additional off-farm jobs provide support by dividing daily labor responsibilities but perpetuate more gendered labor distributions
- Intergenerational households can better disperse labor responsibilities (i.e., weeding, attending ceremonies)



↓

Familial support can impact women's access to professional and/or social spaces

WHAT IMPACTS DISTRIBUTIONS OF LABOR AND TIME?

Individual and local definitions and perceptions

Cambodian women vegetable producers' different perceptions of opportunity shapes how we will engage women in future food safety projects

- i.e., women did not believe they had opportunities to join agriculture training programs unless they *individually* received an invite

Posting a callout flyer in a public spot about a food safety workshop will have little success in encouraging women's participation

MOVING FORWARD

Future food safety projects should consider the gendered distribution of farm tasks when identifying the best audiences for training programs

- i.e., projects that focus more on safe harvesting practices are more likely to engage women

Women with less familial support will likely experience additional barriers to engaging in food safety projects

- We can minimize potential barriers to women's participation, i.e., conducting the same workshop multiple times in the same location to appeal to different schedules

MOVING FORWARD

- Considering the multiple components of Cambodian women vegetable producers' identities resulted in a more comprehensive understanding of how their labor and time are distributed and influenced

- Because labor trends and perceptions vary by community and individual, such preliminary analyses will increase the likelihood of successful and sustainable food safety outcomes by adjusting to individual needs

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Using the Our Voice Mobile App to Strengthen Household Food Safety in Nigeria

Dr. Folake Samuel

FSIL-Nigeria Co-PI

Professor of Human Nutrition

University of Ibadan

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Using the *Our Voice* Mobile App to Strengthen Household Food Safety in Nigeria

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EXCELLENCE AND GODLINESS

RECTE SAPERE FONS

FOR LEARNING AND CULTURE

STATE U | UtahState University

BACKGROUND

- **Larger study - Household-level food safety risk and community capacity to monitor and mitigate foodborne illness in Nigeria**

  - **Nigerian institutions**
    - Bowen University
    - Obafemi Awolowo University
    - University of Ibadan

  - **U.S. institutions**
    - University of Alaska Fairbanks
    - Utah State University

OUR VOICE MOBILE APP

- *Our Voice* component: To document the lived experiences of mothers in the provision of safe and nutritious foods for their families through a citizen science approach.
- Motivation: Inform future efforts to improve food safety and mitigate foodborne illness among families with young children.
- Data: Obtain photographic and narrative documentation from mothers using the *Our Voice* Discovery Tool mobile application.
- Dialogue: Group discussions after data collection to share photos, identify common themes, prioritize target areas, and identify potential solutions.

SUMMARY OF METHODS

- Fifty-five community-dwelling citizen scientists, mothers of children under the age of five
- Five municipal Local Government Areas in Ibadan Metropolis, Nigeria; low and high wealth index categories of mothers
- Process:
  - Awareness → Training → Discovery phase → Discussion phase
- Daily prompts provided to guide the discovery phase (e.g., What makes it easy or hard to wash your hands properly when preparing and eating food?)
- Qualitative Data Analysis (photographic and narrative data, including focus group discussion transcripts)
- Report of Findings

RESULTS

- Twelve themes were identified from the discussions; five emerged as facilitators while seven emerged as barriers to food safety practices by the mothers.
- These factors cut across both low and high wealth index categories of mothers.
- Food safety practices include:
  - proper food storage
  - proper food handling (food acquisition, preparation and cooking, eating)
  - handwashing hygiene
  - household hygiene

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FACILITATORS OF FOOD SAFETY PRACTICES

1. Access to resources, equipment, and basic amenities

"For raw foods like, rice, beans, garri, and others, I keep them inside **covered plastic containers** to prevent them from rats, cockroaches, and other pests that can contaminate them." (CZS, Ibadan North, LWI)

"I find my freezer useful to store both my cooked and raw foods. As long as there is **constant power supply**, the foods in it can stay as long as we want and when we need it, we bring it out for it to thaw and then we heat; the taste usually remains fresh." (CZS, Ibadan South West, LWI)

FACILITATORS OF FOOD SAFETY PRACTICES

2. Safe food retail vendor (cooked or raw)

"The environment where these wholesome tomatoes and peppers were sold to me is very neat. Whenever I go to the market, I usually look out for a neat place to buy my food items. I am usually deliberate choosing **neat vendors in hygienic environments** within the market place. Also, I ensure that the food items I buy are wholesome."

(CZS, Ibadan North, HWI)

FACILITATORS OF FOOD SAFETY PRACTICES

3. Personal values, practices, and strategies

"It's a usual practice for me to **clean my cooking environment** and **wash my hands** thereafter before I start preparing food for my household."

(CZS, Ibadan North, HWI)

FACILITATORS OF FOOD SAFETY PRACTICES

4. Proximity and ease of movement

"My family's eating place, which is our sitting room, is **quite close to the kitchen** and this makes it easy to wash the dishes immediately after eating in order to maintain good hygiene."

(CZS, Ibadan South West, HWI)

FACILITATORS OF FOOD SAFETY PRACTICES

5. Non-communal living

"What makes it easy for me to maintain the hygiene of where I am cooking is because I am the sole user of my kitchen facility; it is **not shared with anyone**. So, I find it **easy to clean regularly** before and after cooking without worries of a third party messing up the place."

(CZS, Ibadan North East, LWI)

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BARRIERS TO FOOD SAFETY PRACTICES

1. Lack of access to resources, equipment, and basic amenities

"Irregular power supply makes my freezer lie fallow and not in use; there is no generator to power it at such times too; this makes it hard for me to store my foods properly."
(CZS, Ibadan South East, LWI)

"Lack of Dining Table makes eating time not too convenient; but we ensure that the floor where we eat most of the time is kept clean before and after eating."
(CZS, Ibadan North East, LWI)

"We do not have a kitchen facility; we make use of the passage for cooking. This makes maintaining hygiene quite difficult but we are managing."
(CZS, Ibadan South West, LWI)

BARRIERS TO FOOD SAFETY PRACTICES

2. Presence of rodents, pests, and insects

- **A majority of respondents attested to the fact that their living environment is characterized by the presence of rodents, pests and insects**.

"There is hardly any house without **pests like cockroaches**; we just find a way to get rid of them; so my own way of keeping my raw foods safe is to keep them in covered plastic containers to prevent them from pests."

(CZS, Ibadan North West, HWI)

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BARRIERS TO FOOD SAFETY PRACTICES

3. Communal living and sharing of space

"It's not easy to keep where I'm cooking clean because it's **meant for everyone living in the house**. Maintaining hygiene each time I need to cook in this shared kitchen require that I first clean up the whole place thoroughly before I start any cooking."

(CZS, Ibadan North, LWI)

"This is a general well where most of us living within the environment fetch from; it is **not covered** and this makes it **difficult to maintain hygiene of the water** used for cooking."

(CZS, Ibadan North)

BARRIERS TO FOOD SAFETY PRACTICES

4. Lack of control over food safety in eating out occasions

"It is quite difficult to maintain hygiene of foods bought outside; we really **do not know the actual source** of these foods, some of them are hawked and this gives us **less control over the hygiene** of the food we are buying. Though the **food may appear neat, but some microorganisms may have found their way into the food** because of the vendor's cooking environment."

(Ibadan North East, LWI)

BARRIERS TO FOOD SAFETY PRACTICES

4. Lack of control over food safety in eating out occasions

"It is not so good to buy cooked food outside because **one lacks control over the hygiene** of the food vendor; the kind of **water** used in food preparation can't be guaranteed. **The neat outlook or appearance of food vendors does not necessarily translate to the safety of the foods they sell**."

(CZS, Ibadan North West, LWI).

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BARRIERS TO FOOD SAFETY PRACTICES

5. Unsafe Food Retailing by market vendors

"This is a food shop in a market, if you notice, you will see that all the foodstuff for sale on the table are all opened up without anything to **prevent flies from landing on it.** And some people who come to buy **dip their hands in** to taste, some with dirty hands carrying all sort of bacteria and germs. The seller can't say wash your hand before tasting; this makes it hard to maintain good hygiene when buying these foods." (CZS, Ibadan South West, LWI)

BARRIERS TO FOOD SAFETY PRACTICES

6. Personal Constraints

"What makes it hard for me to wash my hands when preparing food is that I will have to **climb downstairs to fetch water** from the well before I am able to access water to wash my hands."

(CZS, Ibadan North East, HWI)

BARRIERS TO FOOD SAFETY PRACTICES

7. Environmental conditions

"This is a **public refuse dump**, which is not far from the kitchen arena. This makes it hard to maintain good hygiene when cooking, as **pest and insects do come from this refuse dump** and land on the utensils or food items that I am cooking or want to cook."

(CZS, Ibadan South West, LWI)

MOTHERS' PRIORITY INTERVENTIONS

1. Provision of essential community amenities and routine building inspection
2. Public sensitization on safe food and hygienic practices
3. Food safety education for food (raw and cooked) vendors
4. Enforcement of regular environmental sanitation practices
5. Multifaceted stakeholder involvement in promoting safe food practices

FSIL NIGERIA OUR VOICE: LESSONS

- Valuable approach for understanding (urban) household-level food safety in Nigeria through the eyes and voices of those experiencing it.
- Citizen scientists able to document their household reality of daily food safety risks and discuss their capacity to monitor and mitigate this.
- Researchers can better understand and navigate participants' worlds to better achieve food safety and thereby prevent foodborne illness.
- Enabled co-creation of transparent research and contributions to scientific discoveries as it relates to food safety.

FSIL NIGERIA OUR VOICE: LESSONS

- However, as rewarding as *Our Voice* methodology can be, it sometimes comes with a few challenges:
  - Phone incompatibility (app-related)
  - Technical issues (app and network-related)
  - Misinterpretation of daily research prompts
  - Picture-narration alignment issues
  - Photographs without narrations
  - Repetitions of photographic data

FSIL NIGERIA OUR VOICE: LESSONS

- Overall, engaging women in documenting their lived experiences empowered the women directly and indirectly:
  - **Identifying food-safety related risks:** The daily prompts served as an eye-opener for the women to identify risk as it relates to food safety practices in their households.
  - **Real time relevant data:** Participants provided context-relevant data that may be overlooked by external researchers.
  - **Woman-to-woman learning:** The post data collection discussions provided a platform for mothers/citizen scientists to share their practical and relatable personal values, strategies, practices and experiences as it relates to food storage, preservation, and hygiene with one another.

FSIL NIGERIA OUR VOICE: LESSONS

- **Technology use:** Ability to make use of their mobile phones in more innovative ways (capturing photographic and narrative data with a new phone app). Women feel empowered as active participants in scientific research

- **Our Voice app is fun and promotes SHARING!!!**

THANK YOU!

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Women's Voices on Food Safety in Bangladesh's Fish Value Chains

Dr. Samina Luthfa

FSIL-Bangladesh Co-PI and Gender Specialist

Associate Professor of Sociology

University of Dhaka

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Women's Voices on Food Safety in Bangladesh's Fish Value Chains

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OUTLINE

- Project Objectives
- Literature/Theories
- Data and Methods
- Results
  - Qualitative
  - Quantitative

PROJECT OBJECTIVES: GENDER

Objective 1

To trace out **gender-segregated KAP** scenario among female Value Chain Actors

To explore **women's unpaid working hours** in producing, processing, and retail work in aquaculture

To explore food safety- and hygiene-related **gender norms**

Objective 2

To obtain a gender differential analysis of **Willingness to Pay**

Are women more likely to spend more money for safe products?

To reveal the **reasons** behind women consumers' willingness to pay for safer products

Objective 3

To identify **"good practices" and to train** accordingly

To identify and disseminate information about safer fish production with a special focus on women

[This objective is not discussed in this presentation]

GENDER NORMS AND AQUACULTURE

Most female unpaid farm laborers come from households led by men (Raihan et al., 2017)

Women spend a significant portion of their daily lives meeting family and reproductive roles, besides their paid work, creating a d**ouble burden of work** (Ferrant et. al., 2014)

In the aquaculture and fisheries sector women's contribution is low, undervalued, and under-recognized (Jaim et al., 2009, Kruizsen et al. 2018, and Rahman, Ferdous, & Tasnim, 2019).

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FOOD SAFETY AND GENDER IN AQUACULTURE

Female producers face different challenges due to varied gendered norms and access to assets (Quisumbing et al.2015).

Women do not make decisions about pond management strategies, product uses and sales (Kruizsen et al. 2018).

Both genders reported similar levels of food safety knowledge, but females practiced safe food preparation more frequently (Sanlier, 2010).

More women are concerned about food safety and engaged in safe food behaviors (Bieberstein & Roosen, 2015; Dosman et al., 2001; Roseman and Kurzynske, 2006; Cha & Borchgrevink 2019).

METHODOLOGY

Survey 1:

Female Producers

N = 110

Mymensingh

Survey 2:

Producers, Traders, and Consumers

N = 1,140

(Gender Data Available)

FGDs: Female Consumers (8, n= 77)

Mymensingh, Patuakhali, Narayanganj, Jashore, Khulna, Rajshahi, Dhaka

Experimental Auction: Consumers

Mymensingh, Patuakhali, Narayanganj

(Gender data available)

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DATA AND RESULTS

SURVEY 1: KAP OF FEMALE FISH PRODUCERS

- 90% of the respondents practiced basic hygiene in fish farming
- About 30-40% of the female value-chain actors were unaware of the safe practices regarding fish pollution, preservatives, and feed additives
- 50% were unaware of the adverse effect of growth-promoting feed

SURVEY 1: KAP OF FEMALE FISH PRODUCERS

- Pearson's Chi square between Knowledge, Attitude, and Practice categories are significant ($p<0.05$)

Indices	Knowledge (%)	Attitude (%)	Practice (%)
Poor (0.0- 0.6)	26.4	0.9	0
Moderate (0.6-0.8)	17.3	13.6	33.6
Adequate (0.8-1.0)	**56.4**	**85.5**	**66.4**

$$\text{Indices for KAP} = \frac{\text{Sum of scores} - \text{minimum possible scores}}{\text{Differences between max. and min. possible scores}}$$

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SURVEY I: WOMEN'S UNPAID WORKING HOURS

Survey I

- **80% of the female value chain actors spend 2-3 hours a day in fish farming related activities**
  - On average 2.42 hours per day on aquaculture are unpaid work
- 85% percent of these females never received any training

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SURVEY 1: FEMALE PRODUCERS' DECISION MAKING

A staggering 23% perceived that their families never value their contribution.

About 99% of the respondents stated that their position has been changed because of their participation in the fish farm.

Regarding household expenditures, above 47% of the respondents never made the decisions. For their own 25% always took the decisions.

Fish farm-related decisions, like selling or buying land were never or rarely made by women.

SURVEY 2: KAP LEVEL ASSESSMENT (Male & Female)

$$\text{Knowledge index} = \frac{\text{Sum of scores} - \text{minimum possible scores}}{\text{Differences between max. and min. possible scores}}$$

Knowledge index	Producer (%)	Traders (%)	Consumers (%)
Poor (0 to <0.60)	70.83	80.33	69.33
Moderate (0.60 to <0.80)	25.00	17.00	25.33
Adequate (0.80 to ≤1.0)	4.17	2.67	5.34

Note: The overall KAP was categorized using Bloom's cut-off point.

Most value chain actors have a moderate to adequate **attitude score**. However, in case of **practice**, most were in the poor and moderate categories.

ASSOCIATION OF SOCIO-DEMOGRAPHICS WITH FOOD SAFETY KAP

CONSUMERS

Significant and positive associations was found between:

Knowledge and

- ✓ **Age**
- ✓ Education
- ✓ Occupation
- ✓ Income
- ✓ Consumption frequency
- ✓ Advice
- ✓ Training
- ✓ Location

Attitude and

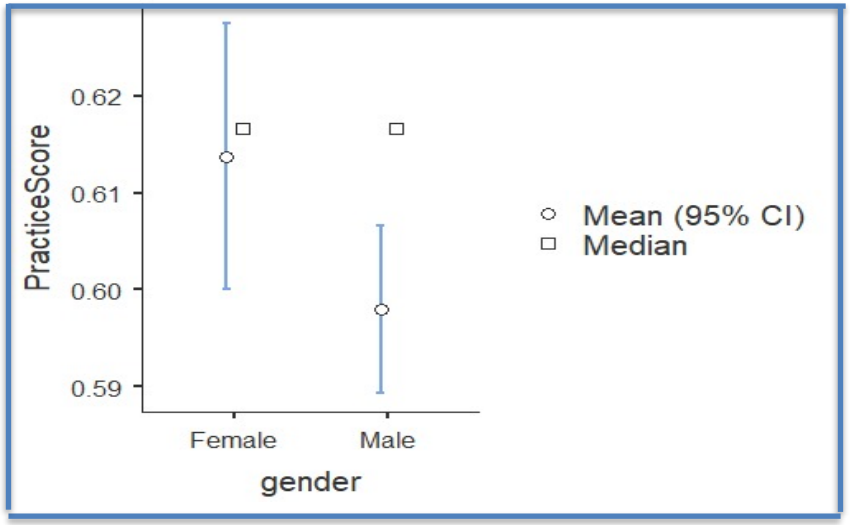
- ✓ Education
- ✓ Occupation
- ✓ Income
- ✓ Consumption frequency
- ✓ Location

Practices and

- ✓ **Gender**
- ✓ Education
- ✓ Occupation
- ✓ Income
- ✓ Training
- ✓ Advice
- ✓ Location

CONSUMERS' KAP GENDERED

- An independent samples t-test was used to compare the mean **Practice Scores** of Female (n=193) and Male (n=407) consumers, and it was significantly higher for females than males ($p<0.05$). Though statistically not significant, knowledge and attitude scores of females were slightly lower than males.



- The chi-square test was statistically significant indicating a small to medium relationship between **practice and gender** categories ($p<0.05$)

QUALITATIVE RESULTS: FEMALE CONSUMERS' FOCUS GROUP DISCUSSIONS (FGDS)

1. Consumers' knowledge and practices about handling fish safely differed according to their household income and level of education.

2. Lower income consumers cook and eat fish without preserving it longer.

3. Preservation practices after cooking are mostly unsafe, including freezing.

5. Consumers have difficulty identifying safer fish and managing to meet their nutritional needs.

6. For information or provision of safe fish, they do not trust the local retailers and wanted intervention by the government.

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FEMALE CONSUMERS FGD: ARE THEY AWARE OF SAFER FISH?

"If I remain healthy and well, I am eating safe food"

"For fish, you can see easily if it is not fresh. You will feel it from the state (*bhaab*) of the fish, if it is not good, it will become paler and softer." "will attract flies"

"Unless a bit softened fish is stinking, we still can eat it by cooking with bitter vegetables or greens – tastes good too."

"Recently, I cooked a Tilapia that was stinking of mud. We failed to eat it and gave it away to the cats!"

"I never keep raw and cooked fish together. They need to be kept separate. Raw fish will have to be cleaned and I will put them in plastic bag in the freezer."

FEMALE CONSUMERS FGD: GENDER NORMS

They shop fish from local wet markets and peddlers. Females claim that males often buy bad fish and do not give enough time.

"I choose the fish that my children prefer, followed by my husband's choice, and finally a combination of my family's preferences. I like the fish that will increase blood circulation in our bodies."

They rarely purchase expensive fish. Often buys one or two types.

Shopping, cleaning, cooking, and preservation of cooked food is the female household members' task

Women almost never make decisions about land buying and household expenditure.

FEMALE CONSUMERS' FGDS
ARE FEMALE CONSUMERS WILLING TO PAY MORE FOR SAFER FISH?

1. Most consumers, despite lacking food security, proposed to buy less fish at a higher price than to eat unsafe fish.

2. Consumers were willing to pay way more to buy safer fish for the sake of ensuring the health of their family members, especially children.

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FGDS: ARE FEMALE CONSUMERS WILLING TO PAY MORE FOR SAFER FISH?

"If I have money, I might buy costlier safer fish. However, we often buy small size fish. They are less likely to put bad things in small fish."

"We will have to buy fresh and good fish otherwise family members will fall sick. We have to be careful."

"When I buy fish, I try to buy fresh, but in case the safer fish charges more, I don't know how to buy that if I cannot afford it!"

"No one want to buy unsafe fish, but often we do not know how to get them with the money we have been given."

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EXPERIMENTAL AUCTIONS: WTP

- Experimental auctions conducted with tilapia, pangasius, and rohu fish in three locations (Mymensingh, Patuakhali & Narayanganj).
- **Control** fish were procured from traditional markets. **Trial** fish were produced following Good Aquacultural Practices (GAqPs).


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CONSUMERS' WTP PER KILOGRAM OF TILAPIA, PANGASIUS & ROHU

Fish Species	Round 1: Appearance alone			Round 2: Information treatment		
	Bid Price (BDT)		Price premium (%) for safer fish (t-value)	Bid Price (BDT)		Price premium (%) for safer fish (t-value)
	Control (SE)	Trial (SE)		Control (SE)	Trial (SE)	
Tilapia Average (n=135)	125 (3.10)	161 (3.91)	29 (14.41***)	122 (1.94)	186 (2.52)	52 (25.20***)
Females (n=39)	**119 (4.99)**	**158 (7.94)**	**29 (6.49***)**	**121 (3.80)**	**187 (5.71)**	**54 (15.56***)**
Pangasius Average (n=135)	129 (2.70)	142 (3.01)	10 (4.82***)	119 (1.55)	166 (2.01)	39 (24.20***)
Females (n=39)	**119 (4.48**	**138 (4.76)**	**16 (3.73***)**	**117 (2.55)**	**167 (3.87)**	**43 (12.92***)**
Rohu Average (n=94)	250 (3.24)	303 (4.00)	21 (14.05***)	237 (3.24)	317 (4.19)	34 (16.88***)
Females (n=30)	**250 (6.52)**	**317 (7.31)**	**27 (8.54***)**	**223 (5.56)**	**337 (8.00)**	**51 (12.32***)**

FEMALE CONSUMERS' WTP: GENDERED?

- Fish cultured following Good Aquacultural Practices (GAqPs) were more appealing to both male and female consumers.
- Despite being unaware of specific invisible attributes and production practices, female consumers were willing to pay a substantial premium for safer fish. On average, this premium was 29%, 16%, and 27% for tilapia, pangasius, and rohu, respectively.
- The premium consumers were willing to pay for safer fish increased significantly after the disclosure of lab test information. This premium reached 54%, 43%, and 51% for safer tilapia, pangasius, and rohu, respectively.
- Female consumers demonstrated a greater WTP. Regression model after the consumers were informed about treatment, gender (Female, Ref: male) was a significant determinant of the price premiums for the safer fish group over the control group for Tilapia and Rohu.

SUMMARY & RECOMMENDATIONS

- Female fish producers have a double burden of unpaid household and aquaculture work, low decision-making power, and lesser basic knowledge about safe fish production. They use safe practices but are less likely to spend money on themselves and may disregard their own safety.

- Female consumers are significantly more likely to have safer practice scores than males.

- Female consumers expressed willingness to pay more for safer fish if they had more money to spend and if the fish was liked by their children.

- The Bangladesh Food Safety Authority (BFSA) and the concerned organizations should be more active and effective in providing food safety training, devise effective ways to disseminate information about GAqPs and labelling of safer products and practices and strengthening monitoring activities.

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Engaging & Empowering Women to Strengthen Food Safety:

Lessons Learned in Bangladesh, Cambodia, & Nigeria

Leah Thompson

Folake Samuel

Samina Luthfa

PANEL DISCUSSION

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THANK YOU

A link to the recording and presentations will be emailed to attendees.

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