



*Promoting Agricultural  
Technology Adoption  
and Resilience*

# Addressing gender and nutrition issues in climate-smart technology design and dissemination

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# Today Session

2:45 – 3:00 Introduction and Warm Up

3:00 – 3:30 Presentations

3:30 – 3:45 Q&A

3:45 – 4:05 Activity

4:05 – 4:15 Wrap Up



# Session Objectives

- Introduce different frameworks for addressing gender and nutrition issues in climate-smart technology design and dissemination
- Explore the gender and nutrition dimensions of agricultural technologies



# Warm-up Activity

## INSTRUCTIONS

Reflect on 2-3 questions by yourself. Write your answers down.

Share your answers with 1<sup>st</sup> person. Move and share your answers with 2<sup>nd</sup> person. Move and share your answers with a 3<sup>rd</sup> person.

With the 3<sup>rd</sup> person, join another pair. You are now a group of 4. Discuss and answer the next questions.

## QUESTIONS

- Why do we care about gender and nutrition in the context of climate change?
- How can technologies address climate change, gender equality, and nutritional goals?
- Can you think of a technology that meets these goals? What is it and how does it respond to climate change, gender equality, and nutritional goals?



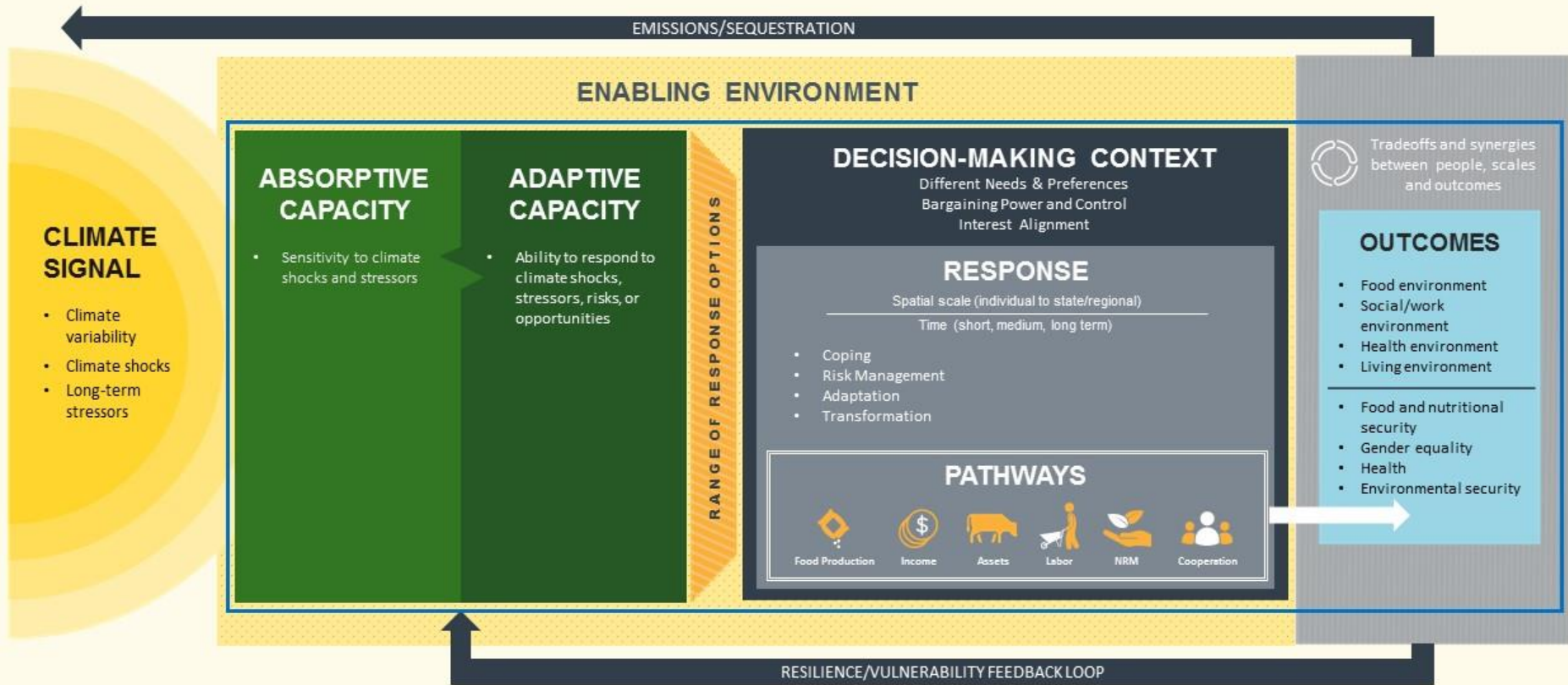
# WHY DO WE CARE ABOUT GENDER AND NUTRITION IN THE CONTEXT OF CLIMATE CHANGE?

- Ensure social inclusion and gender equality: *who is adopting and benefitting from CSA and who is not?*
- Mitigate potential harm: *how can we catch and reduce unintended negative consequences related to gender and nutrition?*
- Enhances CSA effectiveness and impact: *How can we maximize the contribution of both men and women?*
- Achieve co-benefits/other development outcomes: *how will CSA maximize nutrition benefits through health, diets, and care?*



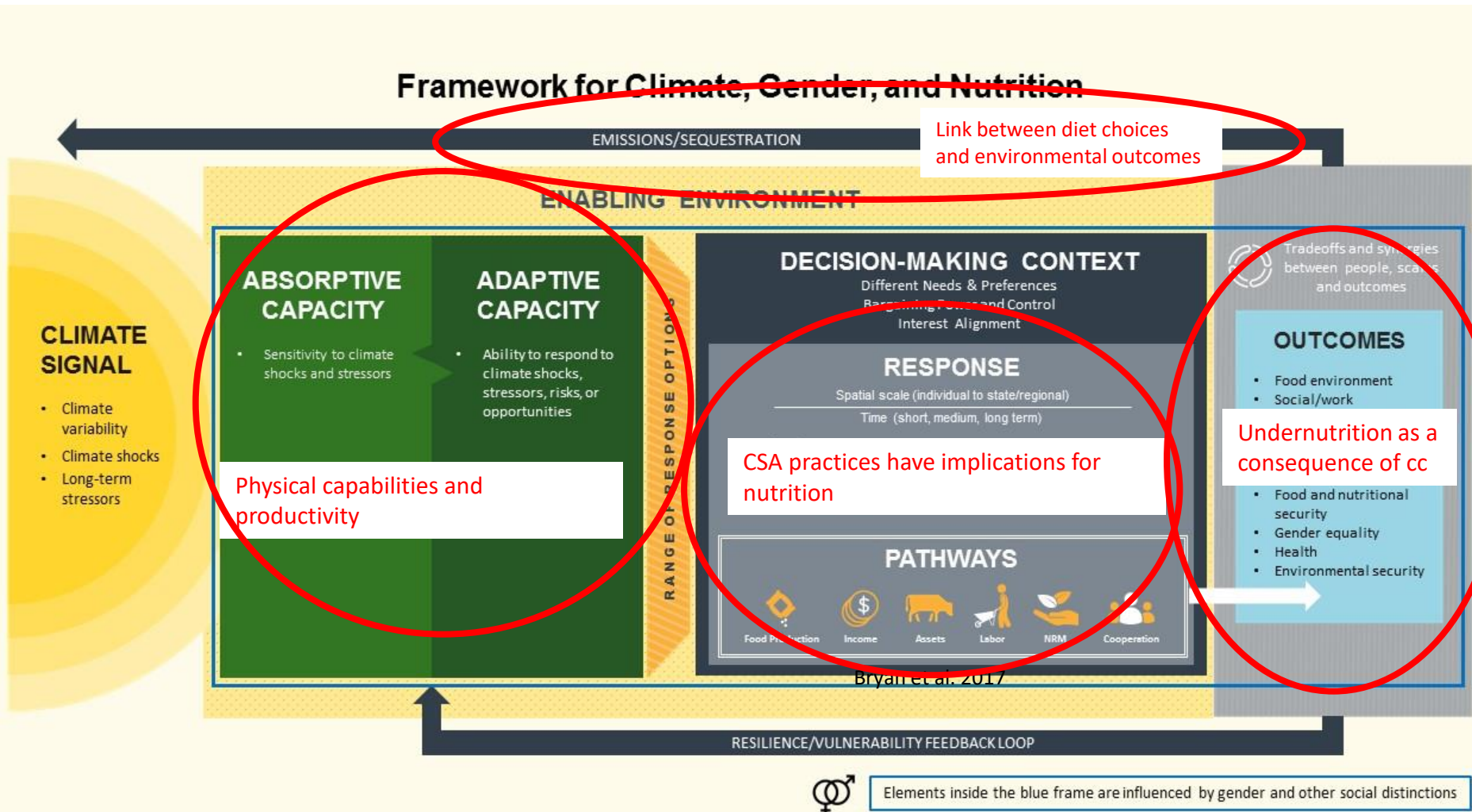
# Gender Climate Change and Nutrition Integration Initiative (GCAN) Framework

## Framework for Climate, Gender, and Nutrition



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

# WHERE IS NUTRITION IN THE FRAMEWORK?

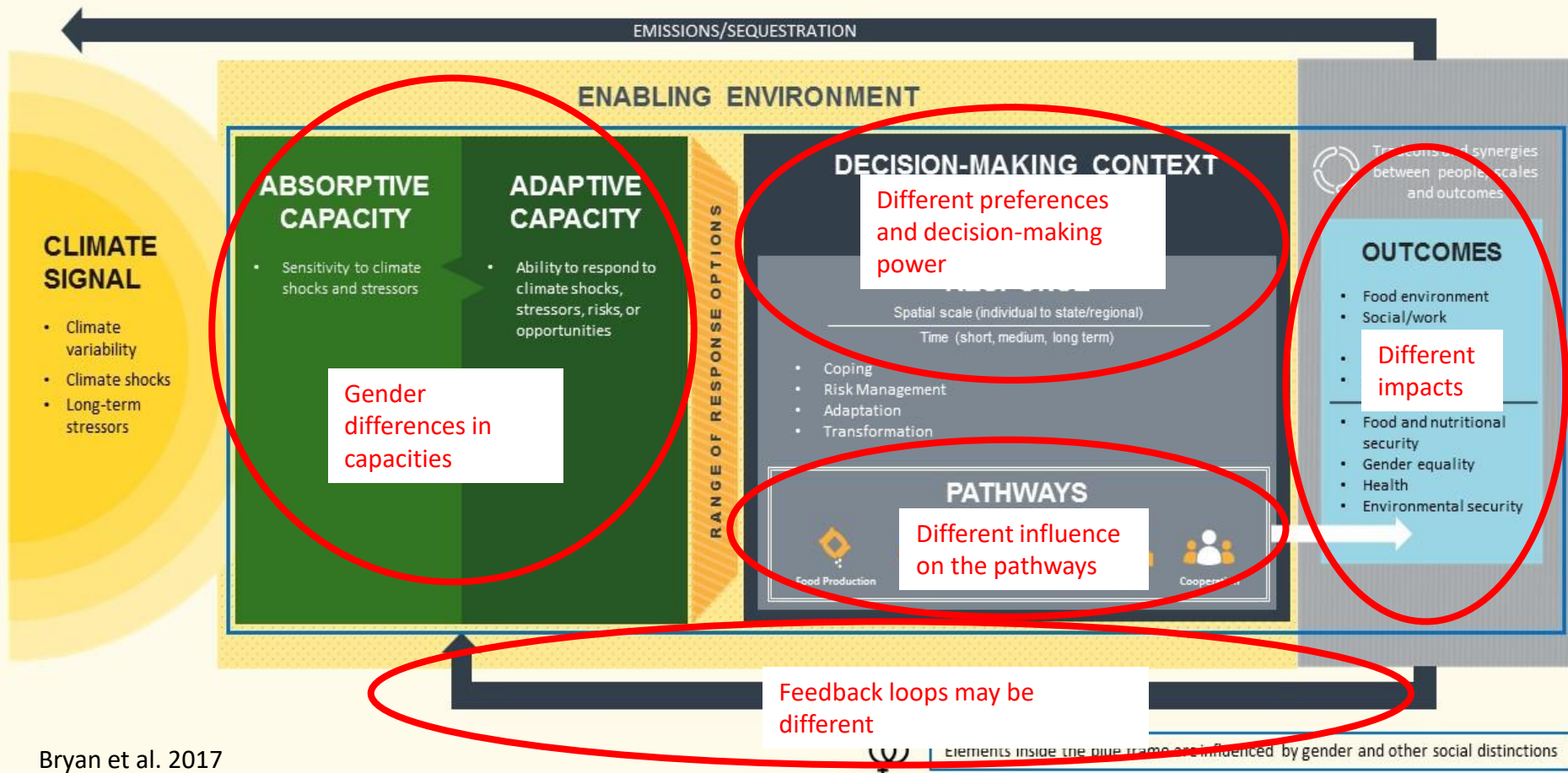


Bryan et al. 2017



# WHERE IS GENDER IN THE FRAMEWORK?

## Framework for Climate, Gender, and Nutrition





# How We Use the GCAN Framework

- Frame synthesis of literature on climate change, gender and nutrition in selected countries
- Guide engagement with missions during week-long engagements
- Identify research gaps on key elements and relationships in the country context
- Support integration of gender and nutrition in climate risk screening activities
- Develop tools to support project implementation and learning



# GCAN Checklist

- **Absorptive Capacity:** How does the ability to *absorb* direct impacts of climate change differ between groups of people?
  - LIVELIHOODS
  - INFRASTRUCTURE
  - SOCIAL POLICIES & SAFETY NETS
  - HEALTH and NUTRITIONAL STATUS
  - NATURAL RESOURCE BASE



# GCAN Checklist

- **Adaptive Capacity:** What factors influence men's and women's *ability to respond* to climate shocks or stressors? How does this then affect their range of available response options?
  - PERCEPTIONS OF CLIMATE CHANGE AND RISK
  - ASSETS AND RESOURCES
  - INFORMATION AND TECHNOLOGY
  - LABOR
  - INSTITUTIONS (e.g. groups, social norms and land tenure)



# GCAN Checklist

- **Decision-Making Context:** How do preferences and ability to achieve their preferences differ between men and women? How does this affect the response options that are chosen by a household/community?
  - PREFERENCES
  - INTEREST ALIGNMENT
  - INFLUENCE



# GCAN Checklist

- **Responses:** What are common responses observed in response to climate change? Are they considered coping, risk management, adaptive, or transformative?
  - *Coping responses*
  - *Risk management strategies*
  - *Adaptation*
  - *Transformative responses*
- Which groups of people choose which responses?
- These responses have implications for outcomes



# Think of climate change responses that:

## Maximize nutrition “entering” the food value chain

Improved varieties, bio-fortification, fertilizer, irrigation

New production locations, diversification, CO2 fertilization, focus on women farmers, extension

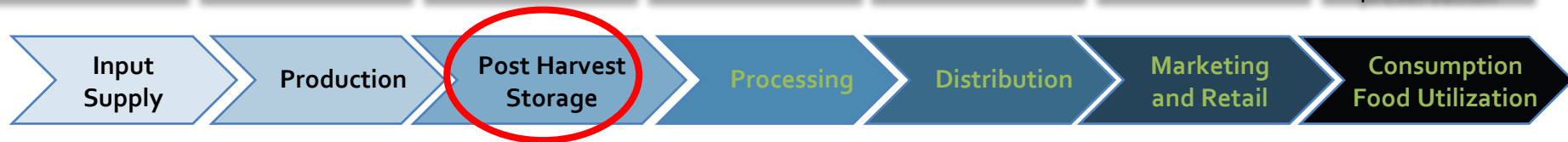
Aflatoxin control, refrigeration

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

## Minimize nutrition “exiting” the value chain

Source: [Fanzo et al. 2017](#)

# GCAN Checklist

- **Outcomes:** What are the tradeoffs of different response options? How are the costs and benefits of response options distributed among people?
  - FOOD AND NUTRITIONAL SECURITY
  - GENDER EQUITY
  - HEALTH
  - ENVIRONMENTAL SECURITY





# Assessing how Agricultural Technologies can change Gender Dynamics and Food Security Outcomes

INGENAES Toolkit



# INGENAES

I.  
Build gender-  
responsive and  
nutrition  
sensitive  
institutions

II.  
Replicate gender-  
responsive and  
nutrition  
sensitive service  
delivery  
mechanisms

III.  
Disseminate  
technologies that  
enhance women's  
productivity and  
improve  
nutritional  
outcomes

IV.  
Apply gender-  
responsive and  
nutrition-  
sensitive  
approaches and  
tools



# What is a gender technology assessment?

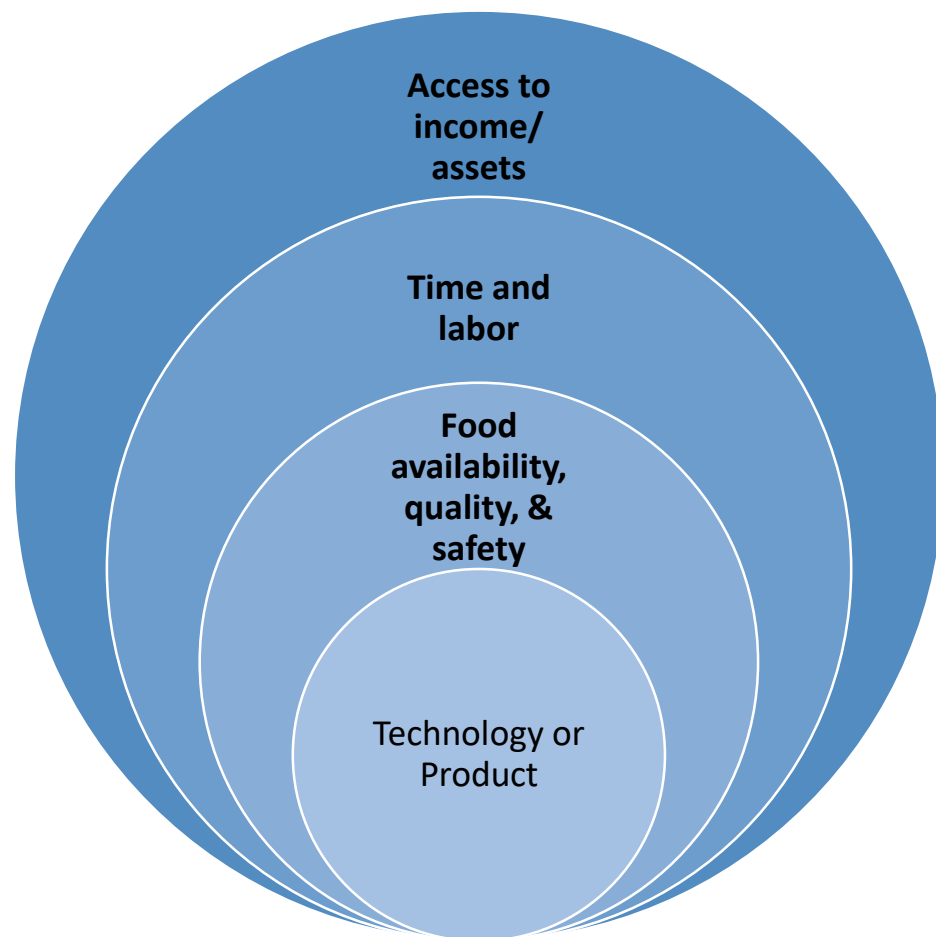
- An analytical process to understand the potential gender-related impacts of specific agricultural technologies on men and women
- Uses gender analysis
- Identifies how gender-based constraints shape adoption process and dissemination efforts
- Identifies specific actions to increase access and adoption



# Key areas of analysis

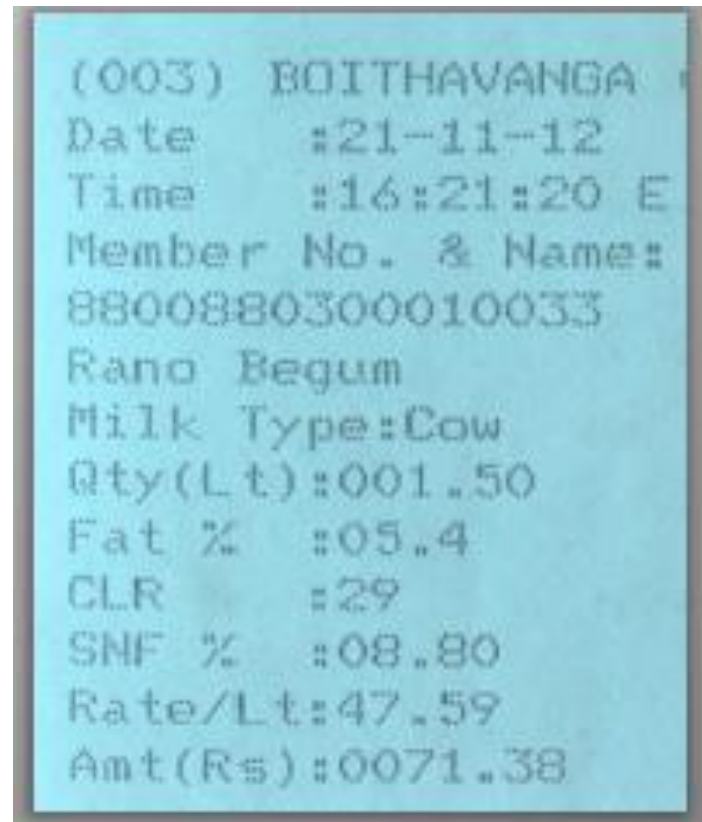
Understanding the gender dynamics related to:

- The impact of the technology on **food availability, quality, and safety**
- The potential consequences on men's and women's **time and labor**
- The extent to which the technology **alters the amount or the control of the income** by men and/or women



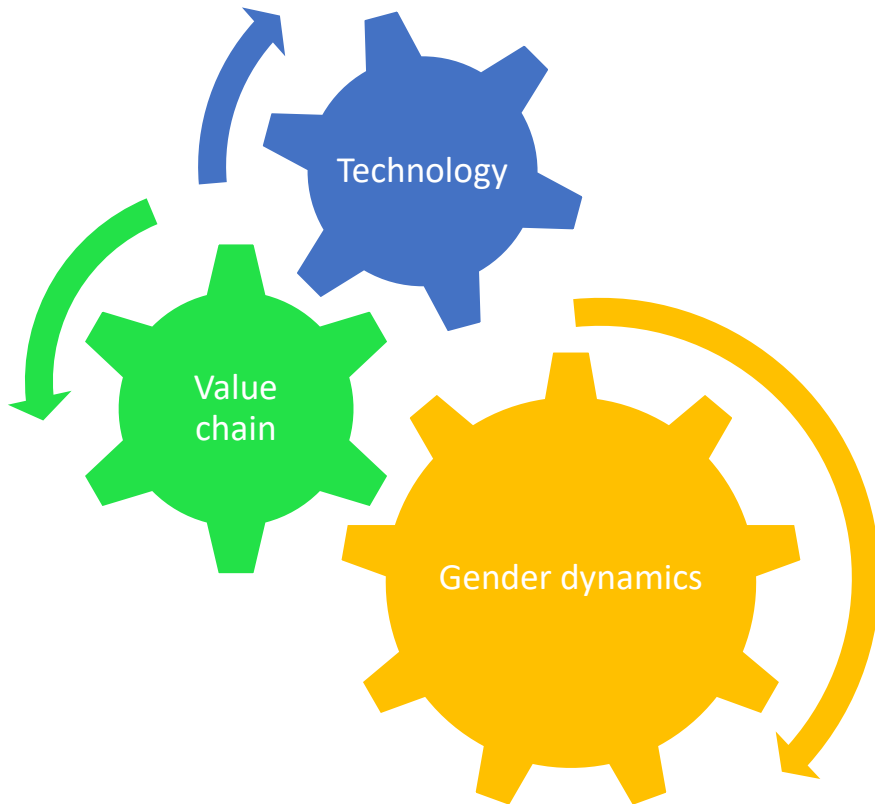
# Digital Fat Tester, Bangladesh

- Strengthening Dairy Value Chain Project, CARE
- Double the dairy-related incomes of smallholder farmers in northwest Bangladesh addressing the major challenges to improving smallholder participation in the value chain



(003) BOITHAVANGA  
Date :21-11-12  
Time :16:21:20 E  
Member No. & Name:  
8800880300010033  
Rano Begum  
Milk Type:Cow  
Qty(Lt):001.50  
Fat % :05.4  
CLR :29  
SNF % :08.80  
Rate/Lt:47.59  
Amt(Rs):0071.38

# Understand the context



- Gender dynamics
  - Limited mobility of women
  - Women responsible for care of cows
- Value chain or agricultural context
  - Farmers and milk collection centers
- Technology
  - Measure fat percentage in milk
  - Improve price transparency and provide information on milk quality to farmers

# Time and Labor

- What impact does the technology have on men's or women's **time**?
- In what ways does it improve or worsen **labor** conditions for men or women?
- In what ways does it **reduce drudgery** for men or women?
- Does the technology **shift labor** between men and women?
- Distance to collection points meant men were largely involved
- Moving milk collection centers closer to villages increased women's involvement in marketing
- Women expressed willingness to spend more time to care for cows, if that meant access to income





# Food Availability, Quality, & Safety

- How does the technology improve food **availability** overall, at different times of year, and for different people in the household?
- What are men's and women's different preferences for food **quality** (e.g., for taste, for processing)?
- How does the technology improve food **safety** for men and for women?
- Women report increase in milk production from 3-4 liters/day to 5-7 liters/day
- Household consumption increased, especially by children
- Women understand how care of cows is linked to quality and to price



# Income and assets

- To what extent do women or men have access to and control over the **income** derived from increased sales of the targeted crop or product?
- Does the innovation have the potential to **shift income patterns** in the household?
- Does the shift in labor result in a **loss or gain of income** for different groups (e.g., landless women who earn income through wage labor)?
- In what ways might it create **additional employment opportunities**?
- Women's enhanced role in milk marketing increased their access to income
- Introduction of DFT created new employment opportunities for men and women as DFT operators



# A few important notes

- It's not just about the technology. Other complementary interventions matter.
- It's not just about the technology. It's about the context in which the technology is being used: who, why, and where.
- The assessment is a snapshot, not about attribution.
- Decisions about what to do need to weigh the potential trade-offs between multiple objectives, e.g., time-income
- Innovation introduces change. What kind of change do we want to support?



# Strategies

- **Acceptable:** Designed and disseminated with women as partners and meet their needs and preferences
- **Affordable:** Are priced to accommodate women's cash flow and/or income or demonstrate value for women
- **Accessible:** Accommodates women's time and labor constraints
- **Opportunistic:** Looks for ways of creating new opportunities for women or addresses women's other constraints



# Q&A



# Activity

- Divide into small groups.
- Read the short description of a response option and discuss the questions with your group.
- Assign a note-taker and someone who will report out.
- Be sure to record your answers on a flipchart.



# For more information

- See Technology Toolkit on INGENAES website:  
<http://ingenaes.illinois.edu/technology-assessment-toolkit/>
- For more GCAN information and materials visit:  
<https://gcan.ifpri.info/>
- Sign up to receive the GCAN monthly newsletter:  
<http://gcan.ifpri.info/sign-up-for-the-cgcan-newsletter/>

