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Addressing gender issues in technology design, use, and dissemination



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Integrating Gender and Nutrition
within Agricultural Extension Services

Acknowledgements

The slides for the “Addressing gender issues in technology design, use, and dissemination” workshop were developed by Cultural Practice, LLC (CP) under the Integrating Gender and Nutrition within Agricultural Extension Services (INGENAES) project. The content of the workshop draws on the framework and methodology described in *Assessing how Agricultural Technologies can change Gender Dynamics and Food Security Outcomes: A Toolkit*.



The workshop was piloted in July 2015 in the U.S. It was refined and delivered to practitioners and students in Bangladesh, Nepal, Sierra Leone between 2016 and 2017.



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Welcome and Introduction



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Workshop Objectives

At the end of the workshop, participants will:

- Understand key issues related to gender, nutrition, extension and advisory services, and agricultural technologies
- Understand principles of integrating gender analysis into technology design, use, and dissemination
- Be able to conduct a preliminary gender analysis of agricultural technologies

Background

This workshop was developed as part of the USAID-funded Integrating Gender and Nutrition within Agricultural Extension Services (INGENAES) Project.

Vision & Goal

VISION

empower women to better contribute to higher household incomes, increase agricultural productivity, and improve nutritional outcomes for family and community members.

GOAL

reduce gender gaps in agriculture, increase empowerment of women farmers, and improve the integration of and attention to gender and nutrition, both in and through agricultural extension and advisory services.

Review of agenda

- Workshop days
- Field day within workshop
- Field work

Rules of the Road

What ground rules do we need to make this a successful workshop?



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Role of Technologies in Agricultural Development



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Activity: This is the best pen you'll ever use

- Divide into two groups: Group A and Group B
- Individuals in Group A will choose an object that they will use to describe in a convincing manner to an individual in Group B. Individuals in Group A will have 1 minute to make a compelling argument.
- At the end of the minute, individuals in Group B will be able to ask questions.
- Repeat with two more people.

Session Objectives

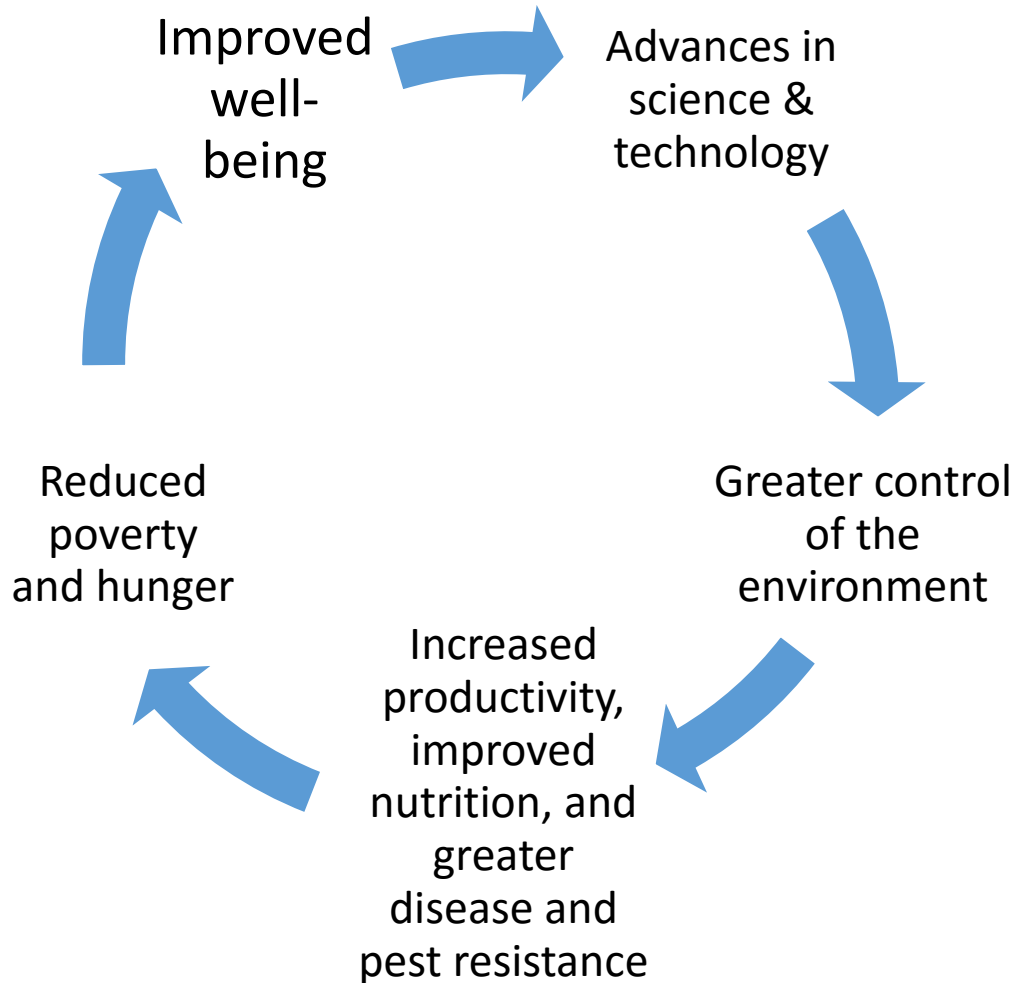
- Understand the role of technologies in agricultural development
- Become familiar with different types of agricultural technologies
- Understand social dimensions of technologies

Science and Tech for Ag Development

Science and technology are the foundation of **increased agricultural productivity**

- They offer the possibility of greater control of the environment
- They can reduce drudgery, making labor more efficient
- They improve the quality and quantity of food, feed, fiber, and fuel

Investments in S&T have many benefits



Technology defined

“practices or techniques, tools or equipment, know-how and skills...[alone or together] ...that are used to enhance productivity, reduce production and processing costs, and save on scarce resources or inputs, such as labor or energy.”

Ragasa (2012:5)

Different types of agricultural technologies

Soil improvement
technology

Animal health
technology

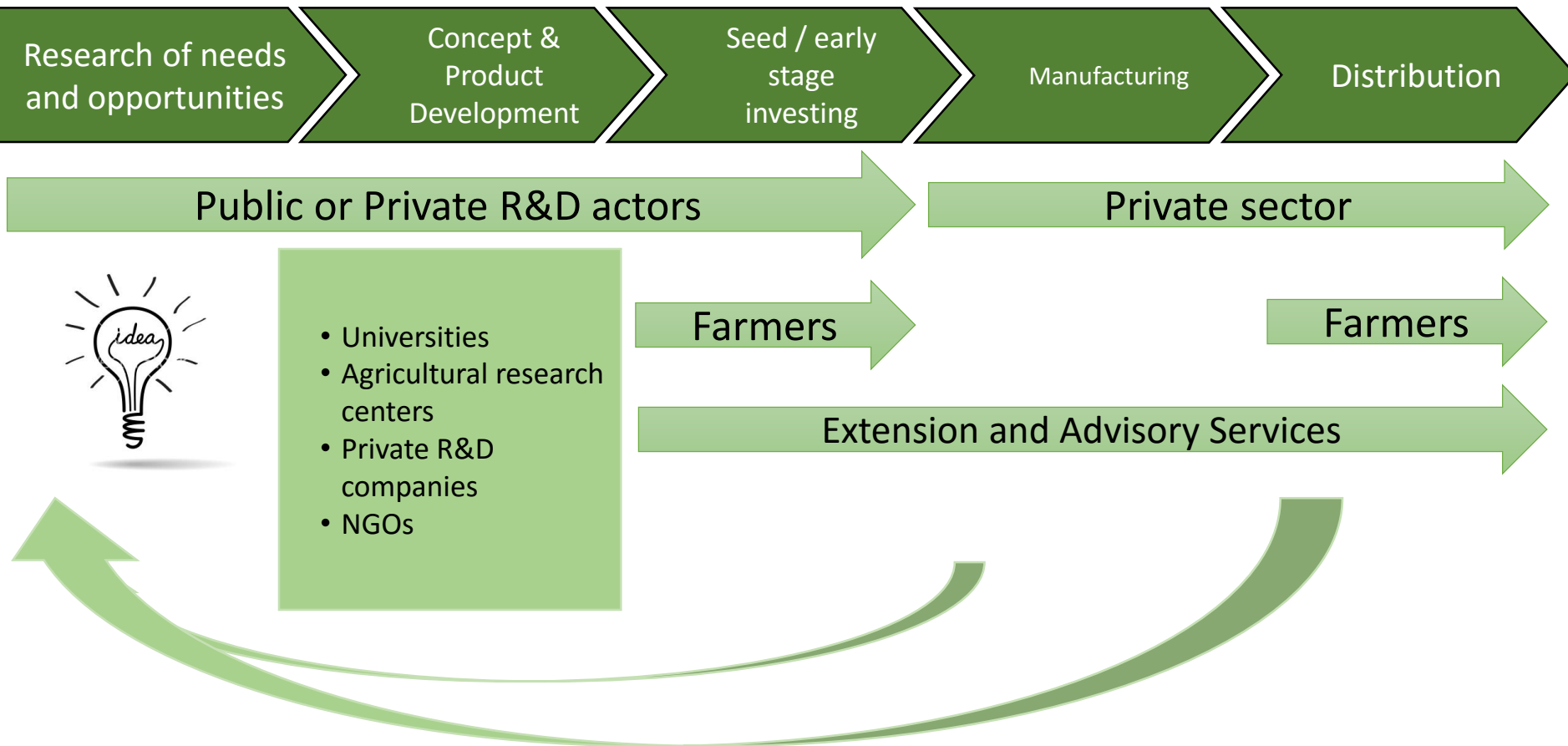
Transport
technology

Water availability
technology

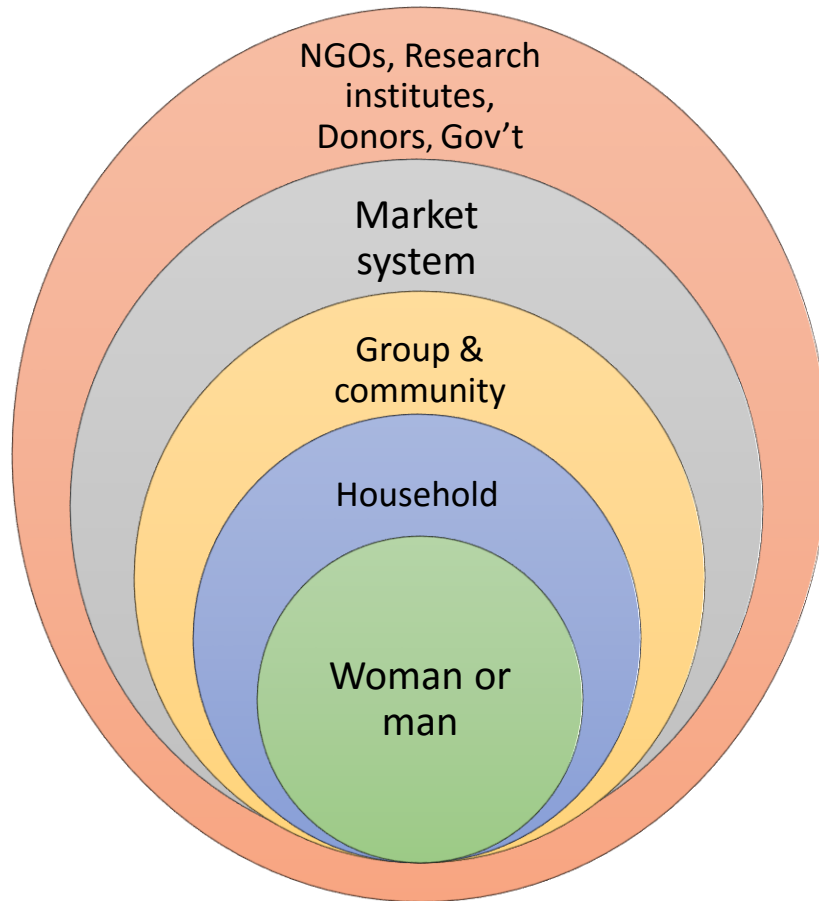
Post-harvest
technology

Energy sources and
efficiency
technology

How are technologies designed and disseminated?



Design and dissemination as a social process



- Men and women exist in a social context – they are not isolated individuals
- This context consists of different institutions – households, communities, associations, markets, research organizations
- Individuals and institutions are influenced by and influence each other
 - We shape institutions
 - They shape us

Characteristics that influence use

Individuals

- Who is the potential user?
- How does this person **perceive** the technology?
 - Ease of use
 - Usefulness
- Is this person able or willing to pay for technology or using the technology?
- Do the benefits outweigh the individual's costs?

Technology

- Ease of use
- Usefulness
- Compatibility with needs and preferences
- Availability
- Affordability
- Effectiveness

Additional factors

- What other factors are necessary for individuals to be able to access or make use of the technology?
- Complementary inputs
- Accessibility
- Capital and infrastructure investments
 - E.g., irrigation or credit
- Supportive social norms
- Differences in agro-ecological zones, land size and quality
- Preferences related to taste, texture, color, cooking
- Government policies that distort prices
 - E.g., tariffs, subsidies, quantity restrictions

How do gender differences influence design, use, and dissemination of technologies?

Men's and women's different:

- **assets** and initial endowments (e.g., education) structure their different capabilities to access, control, and own agricultural technologies
- **crop choices and production practices** require or benefit from different technologies
- **roles** in agriculture shape which technologies they use
- **beliefs** about appropriate work or appropriate locations for work may limit their choice of technologies
- status **under the law** or positions **in institutions** shape their rights to benefits (education, credit, political power, and resources) that influence the technologies they use

Activity: Building blocks of Technology Design, Use, and Dissemination – Part I

On three note cards, write down 3 different types of organizations that are involved in technology design, use, and/or dissemination (e.g., farmer groups).

One note card, one organization.



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Key gender concepts



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Activity: Draw an ideal man and woman

1. Divide into two groups
2. Draw a picture of an ideal man and an ideal woman (5 minutes)
3. Discussion (10 minutes)

Session Objectives

- Be able to define key gender concepts
- Be able to identify gender-related challenges and opportunities in agricultural development

Concepts

Sex

- Biologically defined and genetically acquired differences between males and females
- Defines “males” and “females” independently of each other
- Is the same around the world

Gender

- Socially defined and culturally learned differences between men or women
- Defines “men” and “women” with reference to the socio-cultural relationships between them
- Varies from place to place and over time

Gender roles

Gender roles are the behaviors, tasks, and responsibilities that are considered **appropriate** for women and men as a result of socio-cultural norms and beliefs.

When do we learn gender roles?

Do gender roles change overtime?

Gender relations

Gender relations are the social relationships between men and women shaped by beliefs and social institutions

Gender equality and gender equity

Gender equality is the **GOAL**. It refers to the ability of men and women to have equal opportunities and life chances.

- It does **NOT** mean that resources or benefits must be split evenly between men and women

Gender equity refers to fairness in representation, participation and benefits. The goal is that both women and men have a fair chance of having their needs met and each has equal access to opportunities for realizing their full potential.

- It refers to the processes used to achieve gender equality.

Gender Disparities: What shapes them?

Nepal

- In 2008, women owned about 5% of all land in Nepal; after a change in law removing land titling fees for women, ownership increased to 33% in 3 districts.⁴
- In 2010, women were 48.1% of those economically active in agriculture ²
- Secondary school participation, Net attendance ratio (%) 2008-2012, male: 74.2%; female 66%

1. <http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/129823>
2. <http://www.fao.org/docrep/013/i2050e/i2050e.pdf>
3. <http://www.unicef.org/infobycountry>
4. [http://www.usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID Land Tenure Nepal Profile.pdf](http://www.usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Nepal_Profile.pdf)

Food Security

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. (World Food Summit, 1996)

Food Security: Four Pillars



Gender Dimensions of Food Security

- Women and men play different roles in ensuring food security for their households/ communities
 - Crops
 - Growing and cooking food for home consumption
 - Processing foods
- Differences in men's and women's use of income
- Differences in access to assets impacts food production
- Food discrimination in the household



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Agricultural Value Chains, Technology Design, Use, and Dissemination, and Extension & Advisory Services



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Session Objectives

- Become familiar with agricultural value chains
- Be able to describe relationships between extension and advisory services and technology development, use, and dissemination
- Become familiar with gender issues in agricultural value chains

Definition of a value chain

- Value chain
- *Supply chain*
- **Market chain**
- **Global commodity chain**
- *Filiere (thread)*
- International Assembly Line

A value chain is a linked set of activities and enterprises that brings a product from conception through disposal.



Value Chain Analysis

... is the process of documenting and analyzing the operation of a value chain, and usually involves mapping the chain actors and calculating the value added along its different links.

There is no single method for doing a value chain analysis.

Mapping of a value chain

Value chain maps can be used to show the:

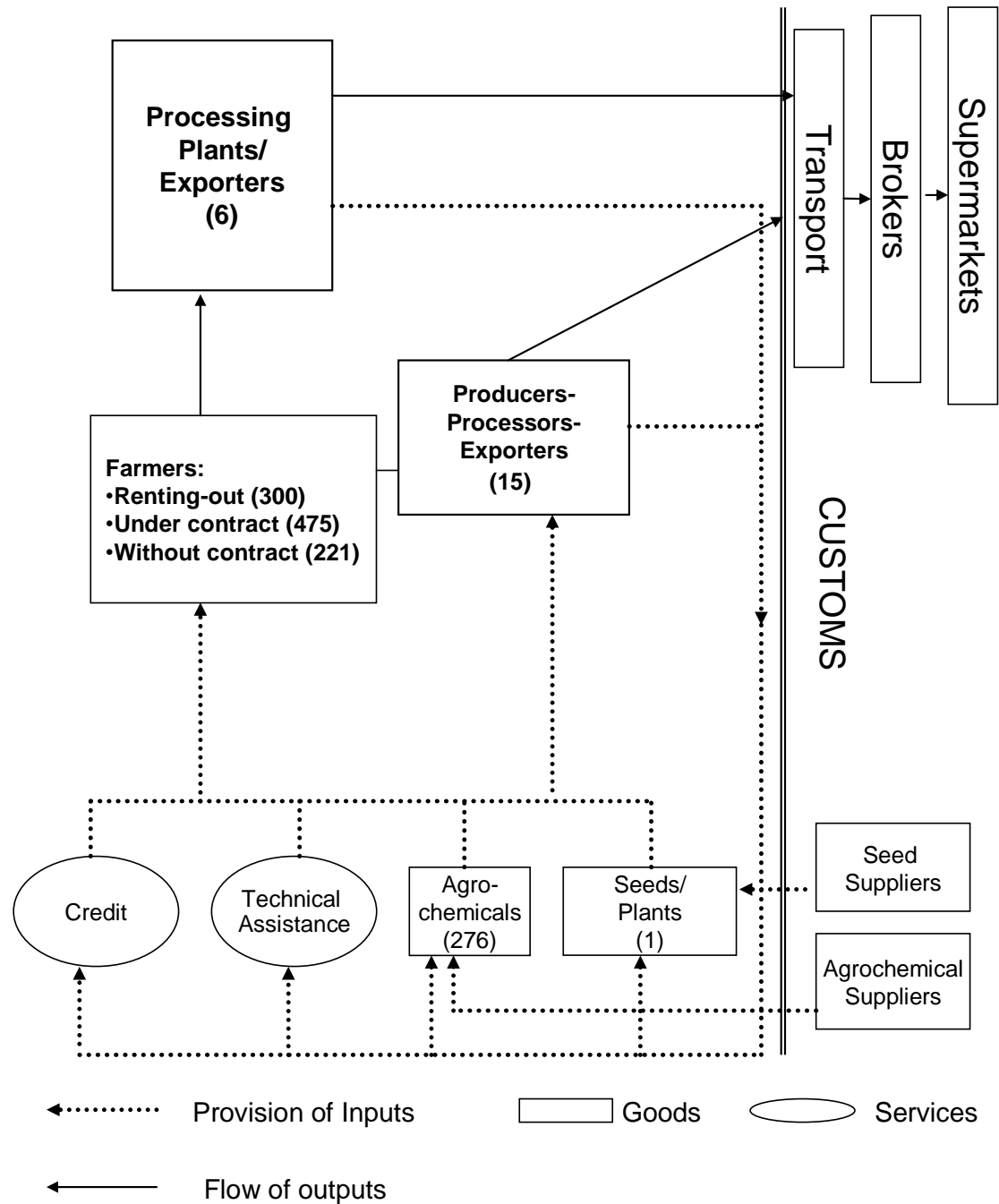
- Flow of goods and services
- Linkages between different actors
- Participation of men and women
- Value addition across the chain

The actors that appear in a value chain will depend on the product but can include:

- Farmers
- Farmer groups
- Input Suppliers
- Banks or other financial institutions
- Buyers
- Extension officers or other technical service providers
- Processors

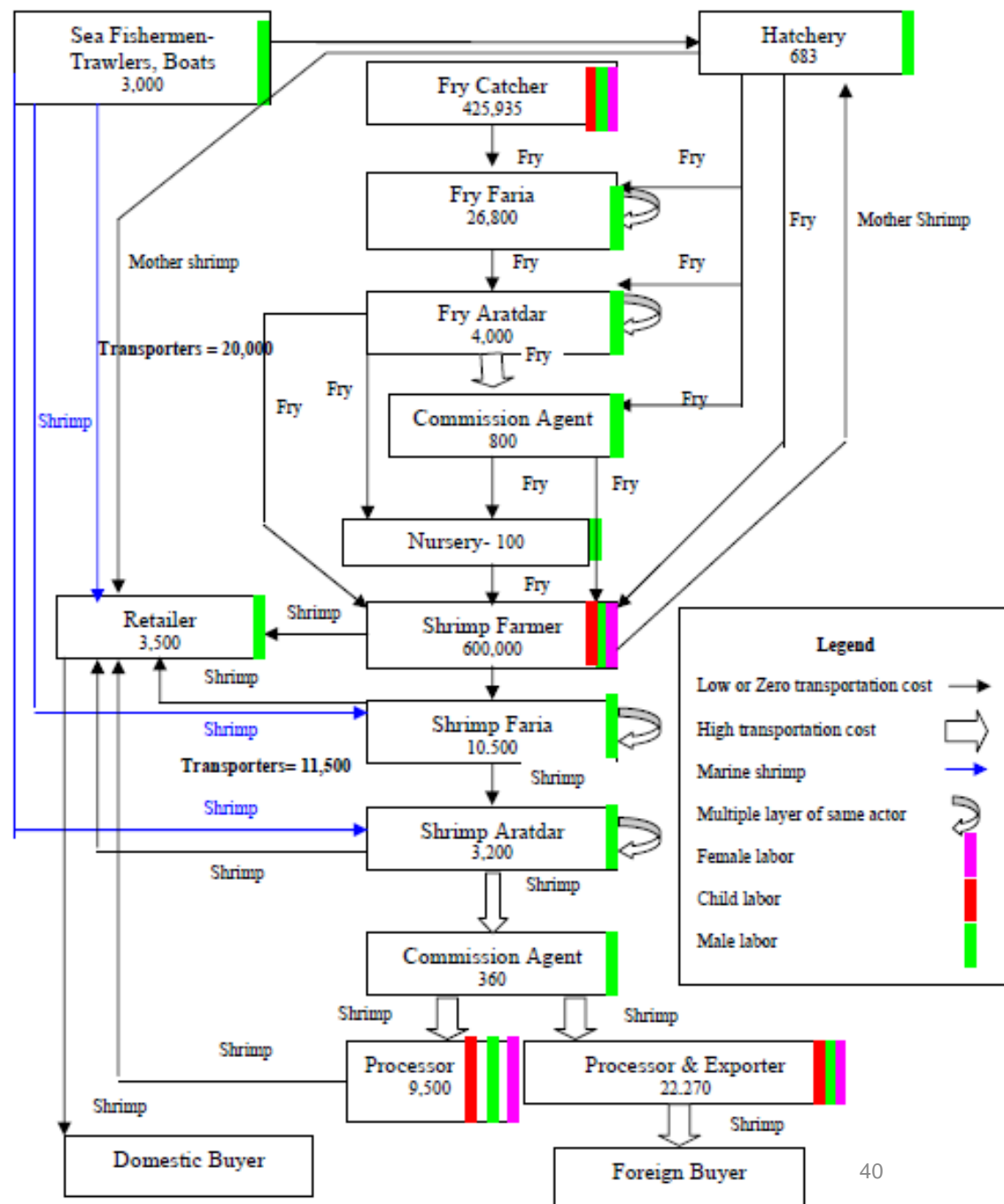
Artichoke Value Chain, Peru

Rebosio, Gammage, and Manfre
2007

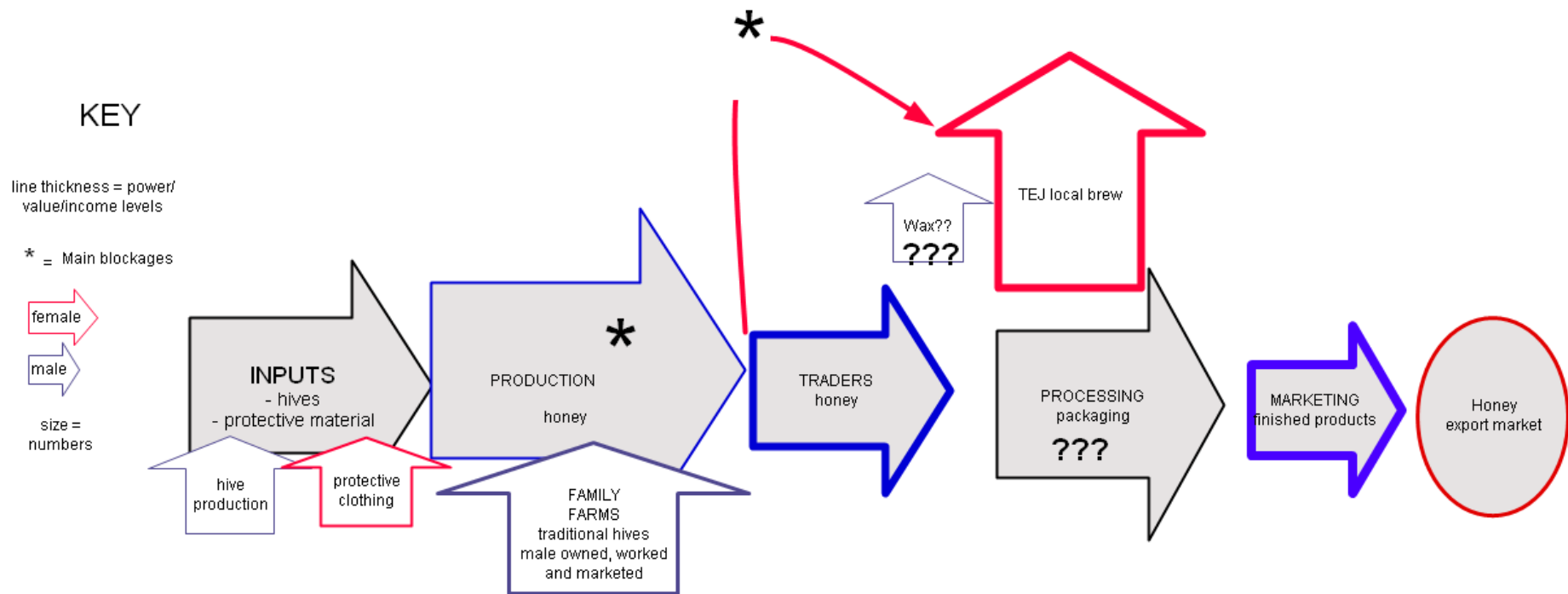


Shrimp value chain, Bangladesh

Gammage, Swanberg, Khondkar, Hassan, Zobair, and Muzareba 2006



Honey value chain, Ethiopia



Source: Mayoux, L., and G. Mackie. 2007. [Making the Strongest Links: A practical guide to mainstreaming gender analysis in value chain development](#). Addis Ababa, Ethiopia: International Labor Organization.

Value Chain for Development

- Potential for increased farm enterprise income
- Creation of additional employment opportunities through direct and indirect pathways (on-farm and off-farm opportunities)
- Better prices for products (especially for value addition and quality)
- More predictable and stable pricing arrangements (e.g., contracts)

The benefits however are not guaranteed...

- Benefits (and risks) depend on who you are and how you enter the chain
 - Farmers, Wage Laborers, Entrepreneurs

Common Constraints for Smallholders

- Small land holdings
- Low productivity or lack of access to productive technologies
- Lack of access to affordable inputs and BDS
- Lack of access to market information
- Limited range of finance and credit options
- Weak producer associations
- Weak market linkages
- Lack of coordination between public and private sector stakeholders
- Trust

Extension and advisory services (EAS) defined

“Rural advisory services, also called extension, are all the different activities that provide the information and services needed and demanded by farmers and other actors in rural settings to assist them in developing their own technical, organisational, and management skills and practices so as to improve their livelihoods and well-being.”

(Christoplos 2010)

What role do extension and advisory services (EAS) play in value chains?

Discussion

How do EAS strengthen smallholder value chain performance?

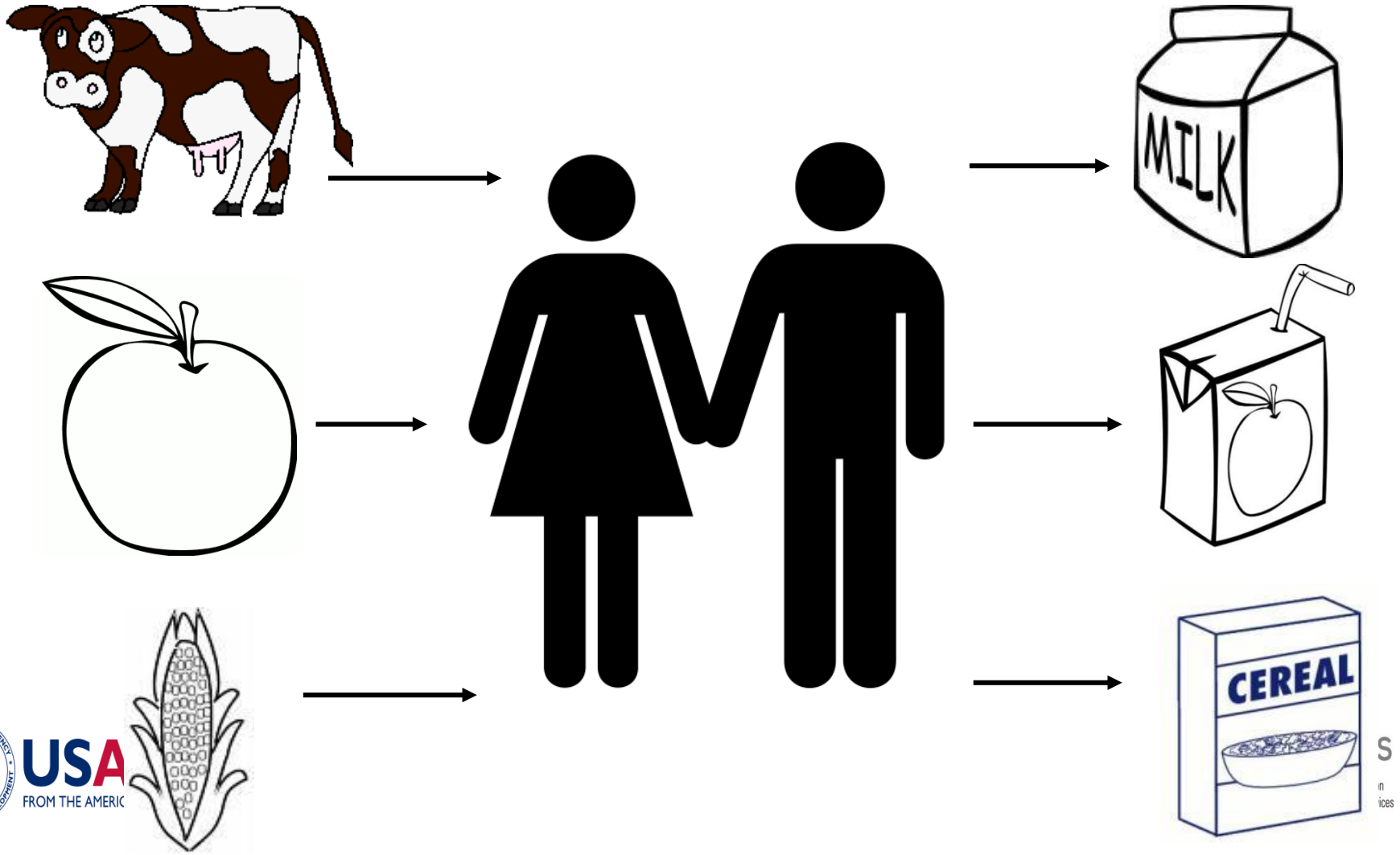
Farmers' needs

- Getting accurate technical knowledge from other input suppliers or buyers
- Meeting quality and environmental standards (and certification)
- Managing complex contractual arrangements
- Maintaining consistent and reliable production
- Managing increased risk associated with dependence on fewer buyers

Extensionists' role

- Delivering technical knowledge to improve productivity and quality
- Delivering information about **new technologies**
- Demonstrating how to use **new technologies**
- Providing technical assistance for contracting
- Strengthening horizontal linkages between farmers
- Facilitating connections to other actors (input suppliers, buyers, processors)

Addressing Gender Issues in Value Chains



Assumptions

- Value chains are embedded in a social context
- Value chain development affects gender roles and relationships
- Gender equity and value chain competitiveness are mutually supportive goals

Three main areas of inquiry

1. Determinants of participation (participation)
2. Opportunities for upgrading (performance)
3. Rewards, risk, and benefit-sharing (benefits)

Rubin and Manfre 2014

Participation

- What do you need to participate in a particular value chain as a producer?
 - Dairy or livestock meat value chain
 - Rice value chain
 - Maize value chain
 - Vegetables value chain
- What do you need to participate in a particular value chain if you cannot or do not wish to enter as a producer?
 - Wage worker
 - Small-scale entrepreneur

Performance

- Improving volume or quality of products
 - Moving from hand milled to hammer milled maize that yields a higher profit
- Shifting to more predictable, better paying markets
 - From informal door-to-door traders to mills
- Maintaining or changing position in the chain
 - Moving from a mill operator position to a mill owner or manager

Benefits

- Income or wages
- Social capital and networking
- Health insurance
- How does your participation facilitate or impede your access to benefits?
- How do norms and values shape patterns of benefit distribution?

Activity: Building blocks of Technology Design, Use, and Dissemination – Part 2

Each group will have 10 minutes to design an agricultural value chain map using the actors identified in session 1:

1. Groups can add or change the organizations.
2. Arrange the actors in the map to create efficient information flows and feedback loops.
3. Every team should discuss the following question:

What do the organizations or actors in your map need to do to make sure they meet both men and women farmers needs?

Where can technologies be introduced in the map?



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Gender Dimensions Framework



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Session objectives

- Define gender analysis
- Review key analytical components of the Gender Dimensions Framework
- Apply the Gender Dimensions Framework to a case study

Gender analysis

Gender analysis is a methodology that both:

1. Describes existing gender relations in a particular environment, ranging from within households or firms to a larger scale of community, ethnic group, or nation, and
2. Organizes and interprets, in a systematic way, information about gender relations to identify gender-based constraints and make clear the importance of gender differences for achieving development objectives.

Gender-based constraints

Refer to potential restrictions on men's or women's access to resources or opportunities that are based on their gender roles or responsibilities. The term includes:

1. Measurable disparities that are revealed by sex-disaggregated data collection and gender analysis and
2. The potential factors that cause the conditions of disparity.

The gender-based constraint is a researchable hypothesis.

Outcomes of a gender analysis

Information for the design of a gender-responsive agricultural project:

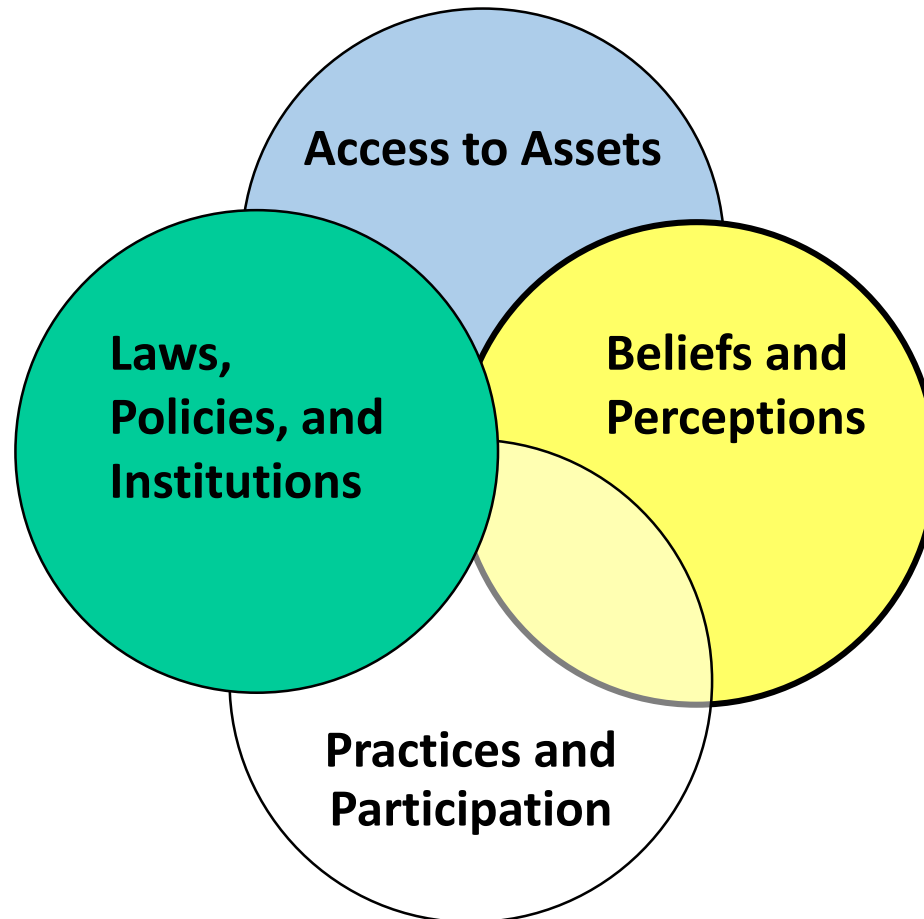
- Description of men's and women's roles
- Identification of factors that shape men's and women's opportunities
- Understanding of gender-based constraints
- Areas of action to ensure the men and women have equal opportunities to participate in and benefit from program activities

How is the GDF useful?

The GDF is a tool that can help you:

- Organize and analyze information about gender-related gaps or gender-based constraints
- Understand gender-related information (e.g., for background research)
- Develop questions for interviews
- Reflect on challenges and successes of meeting project targets, objectives, and goals

The Gender Dimensions Framework



60

Who has what?

Access to assets

Men and women often have different levels of access to tangible and intangible assets.

- Land and labor
- Capital and credit
- New technologies
- Information and networks

- Men's and women's assets shape their opportunities in agriculture
- Lack of access to one asset may affect access to other assets

Why does access to assets matter?

- Access to assets may be required to obtain technologies.
- Access to assets like land or labor are needed to gain from use of technologies.
- Access to technologies can improve the quality of crops.
- Access to improved technologies can lead to increased income.

Who does what?

Practices and Participation

Men and women are often:

- Responsible for different tasks on the farm, in the firm, and in the household
- Allocating different amounts of time in these activities
- Performing similar tasks in different ways
- Responsible for different non-farm activities (e.g., childcare)

Why do practices and participation matter?

- Men and women do different tasks in agricultural production and processing and within the household.
- Men's and women's productivity can be improved through use of technology.
- Being a man or a woman influences participation in trainings.

What is appropriate for men and women?

Beliefs and perceptions

Different places have different ideas about what is appropriate or acceptable behavior for boys and girls and men and women. These affect:

- Who goes to school and for how long
- Who goes to work and what type
- Where you can go and for how long

Why do beliefs and perceptions matter?

- Beliefs about the appropriateness of women to perform types of work affects their use of technologies.
- Social norms affect where women can travel to access extension services.
- Perceptions that women are not farmers limits their access to extension services.

How are the above shaped by laws, policies, and institutions?

Laws, policies, and institutions

Men and women are often treated differently by formal and informal laws, policies, and regulations including issues surrounding:

- Ownership and inheritance rights
- Employment opportunities
- Wages
- Access to state resources (e.g. health, education, basic infrastructure, and public goods)
- Access to agricultural services, information and credit

Why do laws, policies, and institutions matter?

- Laws can restrict which jobs men and women have and when men and women can work.
- Government policies can promote dissemination of technologies to women farmers.
- Laws restricting women's credit options limit purchase of technologies.

Activity: GDF and case study

Working in small groups:

1. Read the case study
2. Identify what you know about each dimension listed in column for men and for women ,using the information presented in the case study.
3. Brainstorm about what additional information you might want to know and make notes of that.

Dimension	Information about men		Information about women	
		Beliefs & Perceptions		Beliefs & Perceptions
Access (use, control, ownership) to assets				
Practices & participation				
Laws, policies, & institutions				



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Identifying Gender-based Constraints



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Session Objectives

- Be able to identify gender-based constraints

Gender-based constraints

Refer to potential restrictions on men's or women's access to resources or opportunities that are based on their gender roles or responsibilities. The term includes:

1. Measurable disparities that are revealed by sex-disaggregated data collection and gender analysis and
2. The potential factors that cause the conditions of disparity.

The gender-based constraint is a researchable hypothesis.

Identifying gender-based constraints

GENERAL CONSTRAINT

- Small landholdings
- Limited range of finance and credit options
- Lack of access to market information
- Low productivity

GENDER-BASED CONSTRAINT

- Laws or customs that restrict women's land ownership
- Bank policies that require a married women to obtain her husband's signature
- Social norms that limit women's networking abilities
- Inequitable distribution of household income

Formulating a gender-based constraint

Identify a condition of disparity (an observed and measurable difference between men and women)



Identify the factors leading to the condition of disparity



Formulate a cause and effect hypothesis: the gender-based constraint statement

Activity: Identifying gender-based constraints

- Using the information in the case study, identify:
 - Conditions of disparities related to each of the dimensions in the table; and,
 - Factors that contribute to those conditions.
- Formulate at least one gender-based constraint per dimension.

Dimension	Condition of disparity (inequality)	Potential factors causing the disparity	Gender-based constraint
Access to assets			
Practices and participation			
Laws, policies, and institutions			



What is a technology assessment?

Activity: Advantages and Disadvantages of the Cookstove

- Read the hand out on cookstoves
- Describe the purpose of the technology

Instructions

- Divide the group into three groups.
 - Answer the question written on the sheet of paper about the advantages/disadvantages of the technology. **BE SPECIFIC!**
 - Rotate to the next question. Add to the list of advantages/disadvantages or to the list.
- Discussion

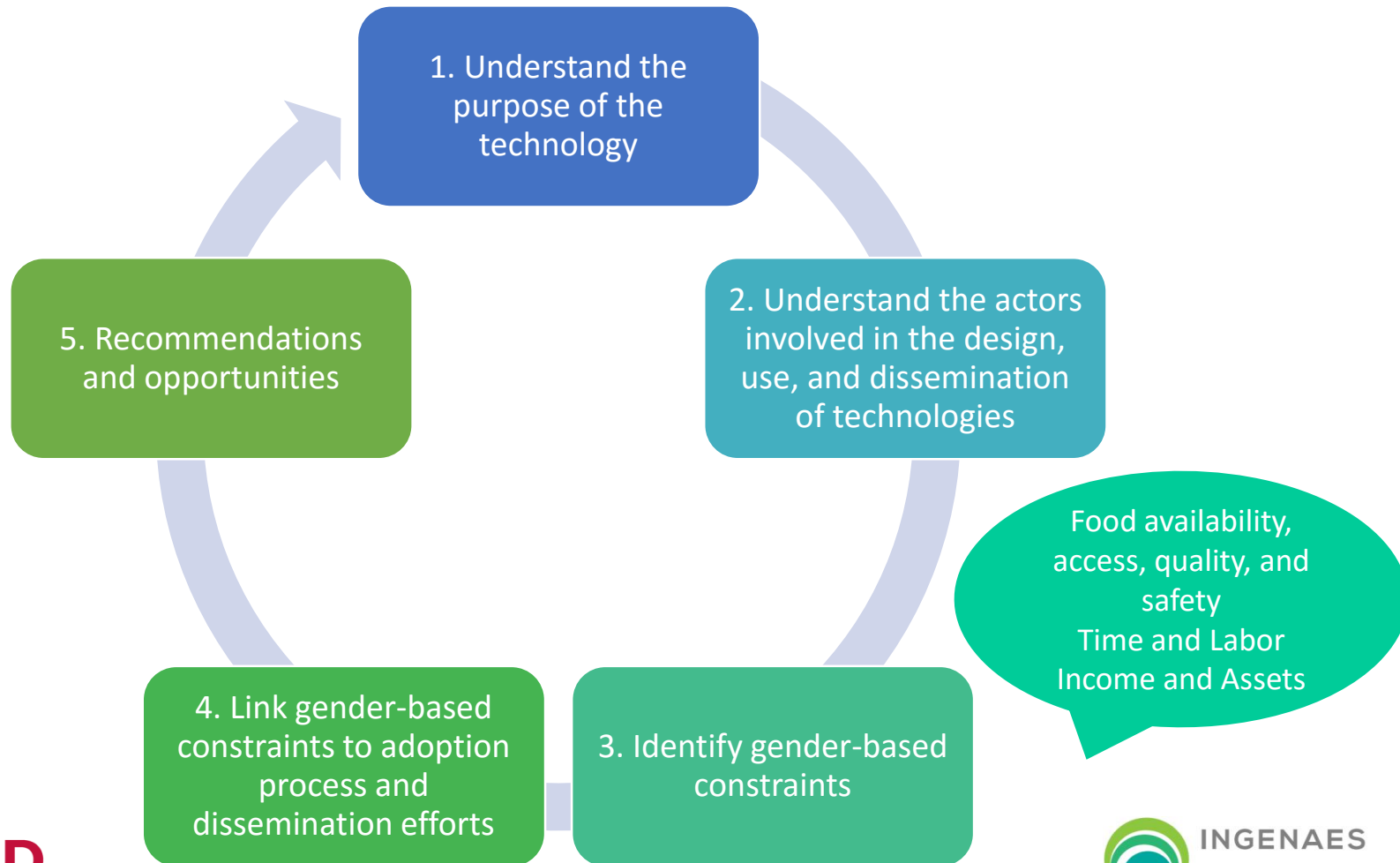
Session Objectives

- Understand the purpose of a gender-responsive and nutrition-sensitive technology assessment
- Understand the elements of a gender-responsive and nutrition-sensitive technology assessment

What is a G&N technology assessment?

- An analytical process to understand the potential gender-related and nutritional impacts of specific agricultural technologies on men and women
- Uses gender analysis
- Intended to highlight issues related to
 - Food availability, access, quality, and safety
 - Time and labor
 - Income and assets
- Used to identify how gender-based constraints shape adoption process and dissemination efforts
- Used to identify specific actions to improve design, use, or dissemination of technologies

Process of the assessment



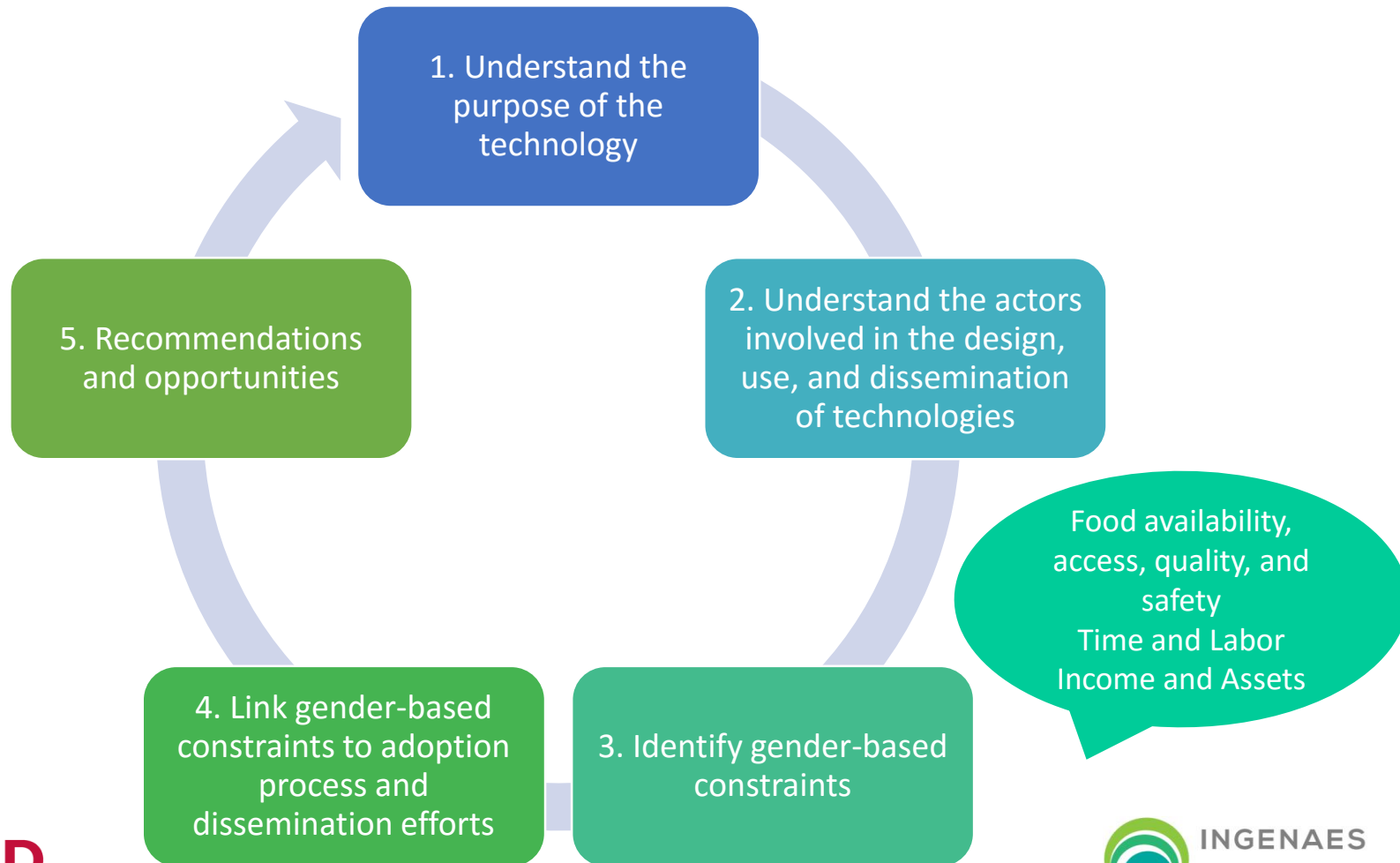
Understand the context

Understand the technology

- Purpose – what are you aiming to achieve?
- Type of technology
 - Biophysical (e.g., new seed varieties)
 - Tangible or physical (e.g., equipment)
 - Intangible (e.g., practices)
- Actors involved in disseminating the technology
 - Projects
 - Government stakeholders
- Development of the technology
- Dissemination and use of the technology

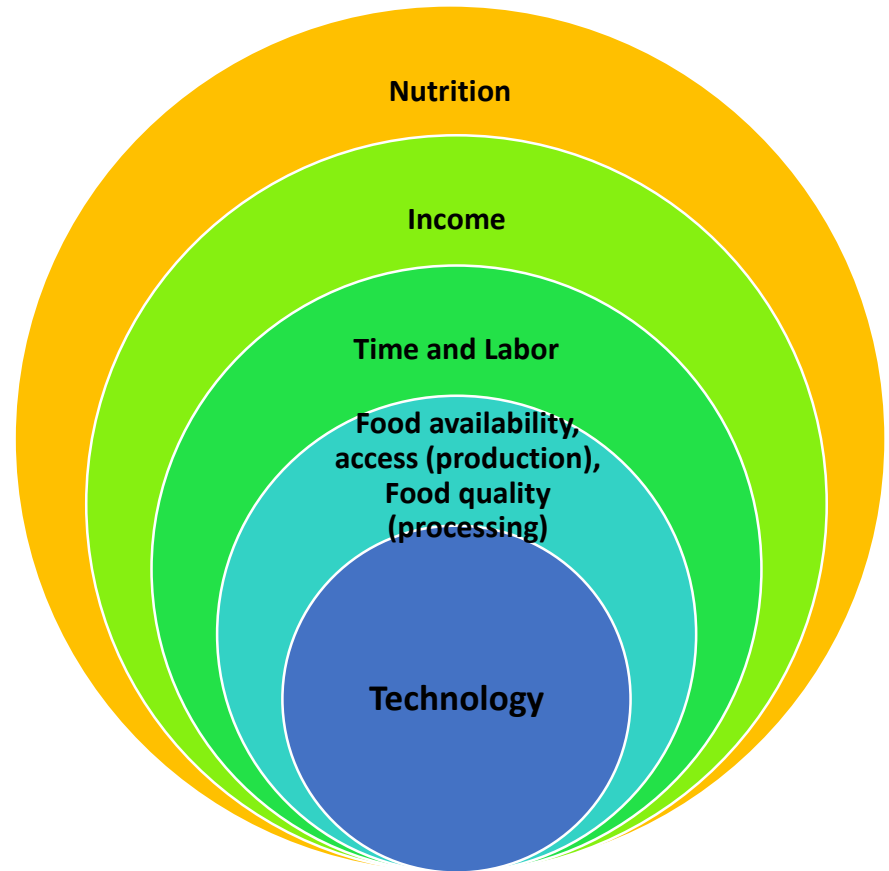
Identify the potential consequences of the technology

Process of the assessment



Key areas of analysis

- The impact of the technology on **food availability, access, 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



Data Collection

- How the technology is disseminated and used
- Users' knowledge of, experiences with or perceptions about the technology
- Interviews with range of stakeholders:
 - Extension agents, men and women technology users and non-users, input suppliers

Recommendations and opportunities

Putting it all together

- How does your analysis inform the design of the technology?
- How does your analysis influence the adoption process?
- How does your analysis inform dissemination?



Time and Labor

Session Objectives

- Understand the relevance of time and labor to the design, use, and dissemination of agricultural technologies.
- Understand how gender differences impact technology design, use, and dissemination.
- Be able to assess the impact of technology on different groups of men's and women's time and labor.

Time

- Conceptualized in different ways
- Measured
- Lost, spent and gained (shifts)

Labor

- Physical or mental effort
- Input in the production of goods and services

Characteristics

- Takes time and energy
- Used to perform specific tasks
 - Paid and unpaid
 - Organized in groups
- Requires different types of knowledge and skills

Activity: Daily Activity Clocks

1. Divide into two groups
2. Discuss a typical day for a woman or a man farmer in the communities you work with.
3. Draw a circle on the piece of paper representing a clock.
4. Draw what a man or woman farmer does each hour of the day over 24 hours.
5. Indicate which technologies the man or woman uses to perform agricultural tasks.
6. Review each other's Daily Activity Clocks
7. Discussion

Discussion Questions

1. What did you notice that was different about men's daily schedules and women's schedules?
2. What was different or similar about men's and women's:
 - Agricultural tasks (time spent and types)?
 - Caregiving/ household tasks (time spent and types)?
 - Leisure time, and sleep (time)?
3. What kinds of technologies were men using? Were women using?
4. How could the technology affect men's and women's time differently?

Division of Labor between Men and Women

- Socially constructed
- Effected by individual's asset endowment
- Changes over time

Agricultural Tasks

- Labor-intensive and time consuming
- Cause physical strain, fatigue
- Require different skills

Key Gender Issues related to Time and Labor

- Differences in the agricultural and household tasks men and women do
- Differences in what is considered appropriate for men and women to do and spend time on
- Differences in restrictions on men's and women's time and mobility

Why does time and labor matter for agricultural technologies?

- Change the amount of time spent on particular tasks
- Increase productivity of existing labor
- Reduce drudgery
- Change employment opportunities

Labor input into rice crop production in Vietnam (person days/hectare) <div>Source: Impact of Row Seeder Technology on Women Labor: A Case Study in the Mekong Delta, Vietnam (Paris and Chi 2005).</div>		
Broadcast Method		
Task	Women	Men
Land preparation	3.67	6.53
Seedbed preparation	.57	.70
Sowing	.57	1.73
Gap-filling	14.17	10.03
Hand weeding	13.83	6.90
Fertilizer application	4.70	3.10
Pesticide application	.63	5.40
Irrigation	1.17	3.67
Harvesting	19.03	26.40
Threshing and drying	13.80	14.97
TOTAL	72.14	79.43

Activity: Scenarios

- Divide into five groups
- Read the scenarios
- In groups discuss:
 - Impacts of the technology on men's time and labor.
 - Impacts of the technology on women's time and labor.
 - Additional information you need to know
- Report out and discussion

How is the GDF useful for understanding Time and Labor?

- How do men's and women's **access to assets** impact men's and women's time and labor?
- How do men's and women's **beliefs and perceptions** shape men's and women's time and labor?
- How do men's and women's **practices and participation** impact men's and women's time and labor?
- How do **laws policies and institutions** influence men's and women's time and labor?



Food Availability, Access, Quality, and Safety

Session Objectives

- Understand the area of inquiry of food availability, access, quality, and safety
- Become familiar with technologies that improve food availability, access, quality, and safety
- Understand the gender dimensions of food availability, access, quality, and safety
- Understand the potential for technologies related to food availability, access, quality, and safety to reduce gender-based constraints

Whether there is meat in the kitchen is
not decided in the kitchen.

Food availability and access

- **Food availability:** Sufficient quantities of food of appropriate quality, supplied through domestic production (home consumption or purchase) or imports, including food aid (FAO)
- **Food access** refers to the condition when “households and all individuals within them have adequate resources to obtain appropriate foods for a nutritious diet. Access depends upon income available to the household, the household, on the distribution of income within the household and on the price of food” (USAID 1990)
- Technologies increase the quantity of food available, which
 - ✓ Increases the availability of food **at the household level**
 - ✓ Introduces more produce **into markets** that can be purchased
 - ✓ Allows farmers with a marketable surplus **to increase income** and purchase other foods

Technologies for food availability

- Many agricultural technologies are intended to increase food availability, e.g.,
 - ✓ Improved seeds, varieties of plants & animals (genetic gains)
 - ✓ Fertilizers, pesticides, vaccines
 - ✓ Farm equipment
 - ✓ Irrigation and water capture

Food quality and safety defined

- **Food safety:** The absence of hazards that make food injurious to the consumer health, e.g., harmful microorganisms; pesticide residues; misuse of food additives; chemical contaminants, and adulteration

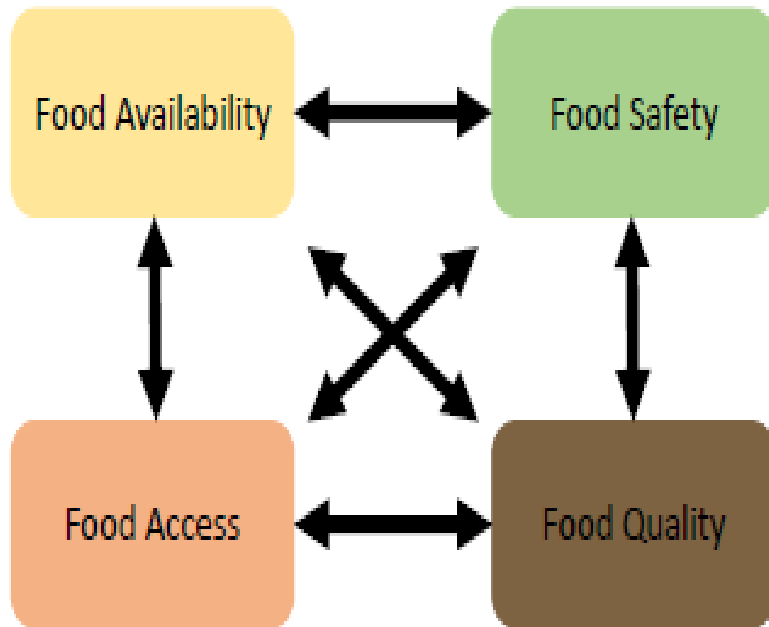
Food quality:

- Food that is acceptable to consumers, based on factors such as appearance (size, shape, color, gloss, and consistency), texture, and flavor;
- nutritional characteristics;
- grade standards, and chemical, physical, and microbial properties

Technologies for food quality and safety

- Biofortified varieties (vitA sweet potato, zinc wheat, iron beans, orange maize)
- Equipment for harvesting, threshing, cleaning, sorting & grading, drying (solar dryers), milling
- Food storage methods: Sealable bags, cold storage, metal silos
- Other processing: cooking, packaging for market

The relationship between FAQs



- Technologies that improve quality and safety can, at the same time, increase food availability
 - Storage bags

Gender issues in food availability, access, quality, and safety

- Who uses these technologies?
- Who benefits from increased food availability, quality, and safety?
- Agricultural production decisions
- Decisions about what to consume and what to sell
- Decisions about what to purchase and how to prepare
- Distribution of food within the household

How is the GDF useful for understanding food availability and access

- How do men's and women's **access to assets** impact **food availability and access**?
- How do **beliefs and perceptions** shape **food availability and access** for men and women?
- How do men's and women's **practices and participation** relate to **food availability and access**?
- How do **laws, policies, and institutions** structure **food availability and access** for men and women?

How is the GDF useful for understanding food quality and safety

- How do men's and women's **access to assets** impact **food quality and safety**?
- How do **beliefs and perceptions** shape men's and women's ideas about **food quality and safety**?
- How do men's and women's **practices and participation** relate to **food quality and safety**?
- How do **laws, policies, and institutions** structure **food quality and safety**?



Income and Assets

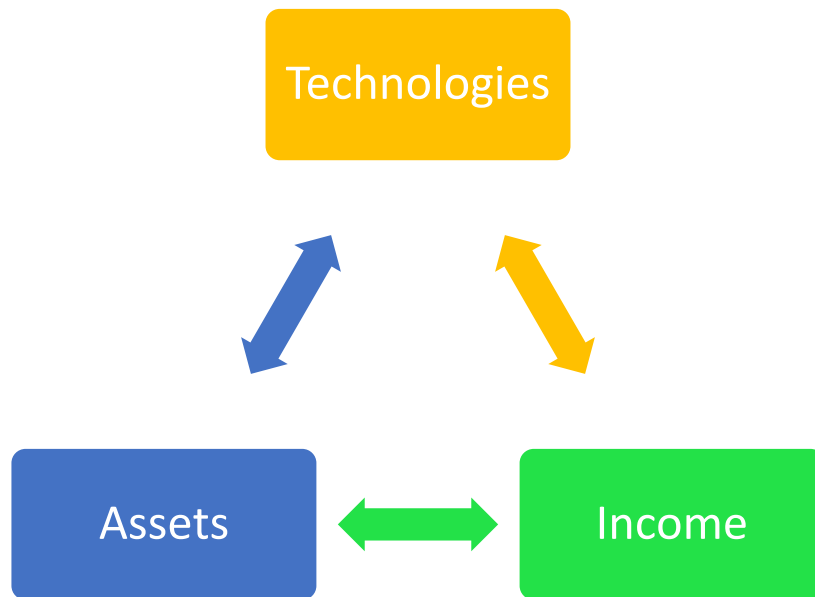
Session Objectives

- Understand the area of inquiry of income and assets
- Understand the relevance of income and assets to the design, use, and dissemination of agricultural technologies
- Understand the gender dimensions of food availability, quality, and safety
- Understand the potential for technologies related to food availability, quality, and safety to reduce gender-based constraints

Income & Assets

- **Income:** Money received, sometimes on a regular basis, for work or through investments
- **Assets:** Multi-dimensional stocks of wealth

Technology – Assets - Income



- Technologies can lead to increases in income and assets
 - Higher productivity – increased income – investments in assets
 - Renting your technological assets – increased income
- Technologies are assets
 - Tractors and pumps
- Income and assets may be required to acquire or use technologies
 - Direct purchase of technologies
 - As collateral for loans
 - Necessary for using or gaining from technologies (e.g., land, labor, or livestock)

Key Gender Issues related to Income & Assets

- Gendered patterns of asset accumulation
- Differences in men's and women's income-generating opportunities
- Differences in men's and women's financial responsibilities
- Gender issues in financial management and cooperation

Gendered patterns of asset accumulation

- Men and women often accumulate different kinds of tangible and intangible assets – Examples?
 - Land
 - Capital and credit
 - New technologies
 - Information and networks
 - Jewelry/livestock
- Men and women accumulate assets in different ways – Examples?
 - Purchase
 - Inheritance
 - Gifts

Gendered patterns of asset accumulation

- Men's and women's asset endowments enable different livelihood strategies
 - E.g., land, credit, networks
- Lack of access to one asset may affect access to other assets
- Men and women value assets differently
 - Jewelry versus land
- Use, control over, and ownership of assets differs by men and women

Differences in men's and women's income-generating opportunities

Income is generated in different ways depending on an individual's or household's asset portfolio and local norms

- At the production level, men and women produce:
 - Different crops
 - Different volumes of the same crops
 - Crops that are either sold or consumed or both
- These crops generate:
 - Different amounts of income
 - Income at different frequencies

Differences in men's and women's financial responsibilities

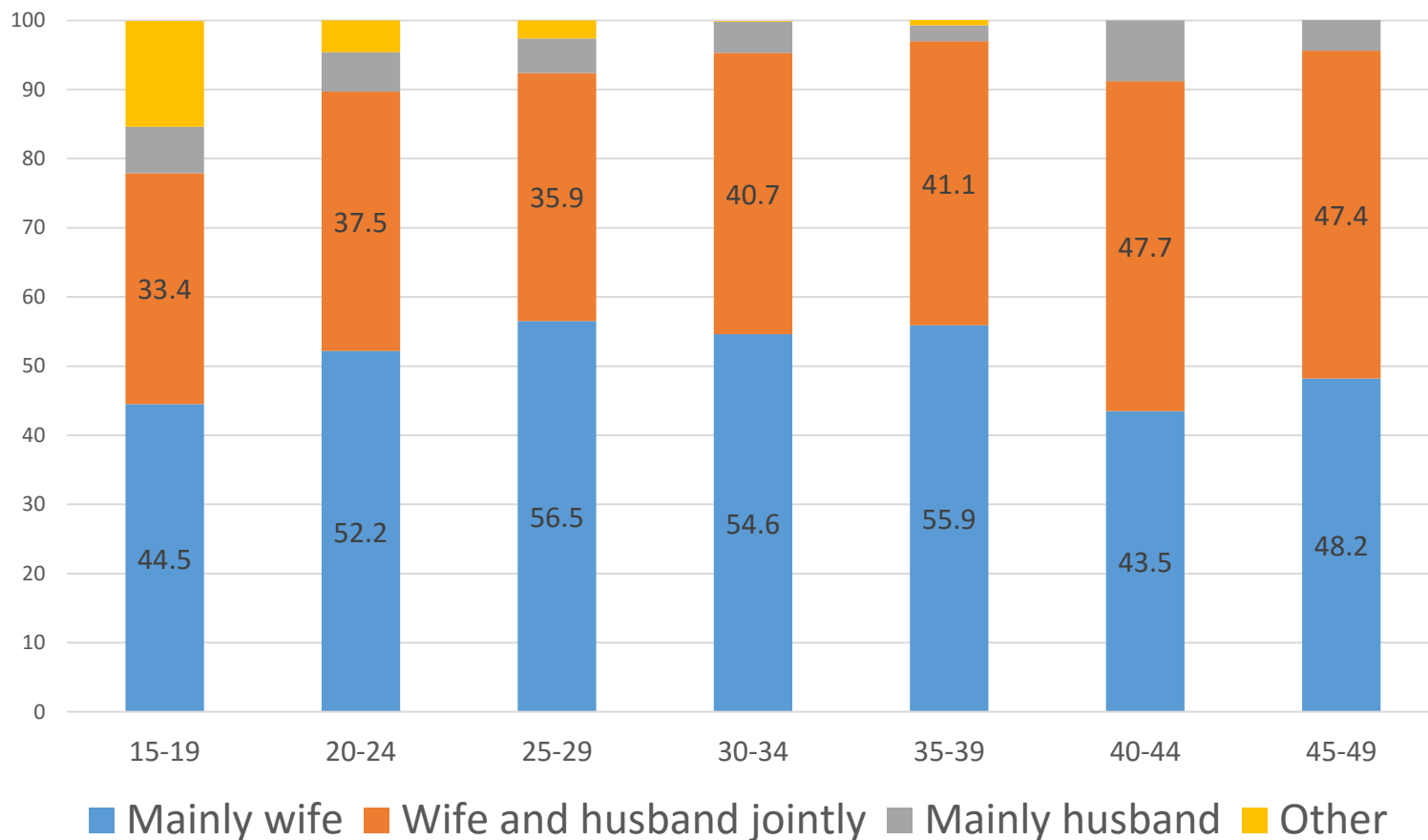
Men and women are often responsible for different kinds of household and investment expenditures

- Agricultural investments
 - New seeds
 - Farm technologies
- Household expenditures
 - School fees
 - Medical

Gender issues in access to, control over, and use of income & assets

- Access to, control over, and use of income and assets varies
 - Men and women can have different rights to the same asset
 - Men and women can have different rights to different assets
- The person who generates the income is not always able to use or control that income

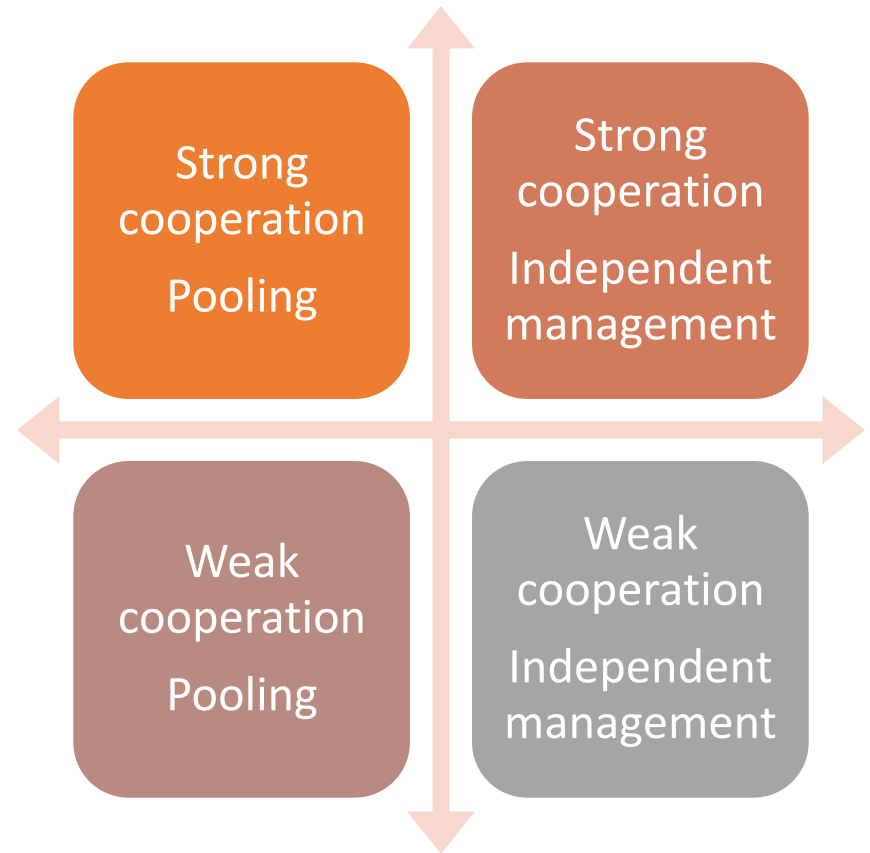
Control over women's cash earnings, Nepal 2011



Percent distribution of currently married women age 15-49 who received cash earnings for employment in the 12 months preceding the survey by person who decides how wife's cash earnings are used

Gender issues in financial management and cooperation

- Men and women in the same household may be generating income in different ways
- A household may pursue multiple financial management strategies:
 - Pooling income
 - Independently managing income
- Relative strength of cooperation is important to understand how to engage individuals and households in financial and investment decision-making



Johnson, S. Forthcoming. [“We don’t have this is mine and this is his”: managing money and the character of conjugality in Kenya.](#) *Journal of Development Studies*.

Activity: Money management

- This activity consists of 3 role playing scenarios
- Six volunteers are needed for the activity
- Each pair will be given a husband-wife scenario
- The context for the scenarios is provided on the next slide.

Activity: Money Management - The context

The rice harvest has just ended and husbands and wives are meeting to discuss how to use the income they will receive after the rice goes to market.

All the women in the scenario produce vegetables for home consumption and sell whatever surplus they have.

You are going to watch three different couples negotiate how to spend the money.

Women's priorities

1. New varieties of vegetable seeds, so that she can increase her homestead production and income
2. School fees for both their daughter and son
3. Jewelry for their 10-year old daughter

Men's priorities

1. New irrigation pump, the old one is broken
2. New power tiller
3. Schools fees for both their daughter and son

How is the GDF useful for understanding I&A

- How do men's and women's **roles and responsibilities** structure to access to and control over income and assets?
- How do **beliefs and perceptions** shape patterns of access to and control over income and assets?
- How do **laws policies and institutions** structure men's and women's access to and control over income and assets?
 - Access to property
- What **dimension** is missing?

Why do income and assets matter for agricultural technologies?

- Who is the consumer? What do you know about their financial profile?
 - Type of income, when, size
 - Control over that income or other income
 - Same for assets
- How can technologies be designed and disseminated to meet preferences and profiles of different consumer segments?
 - Affordability
 - Suitability
 - How do you package technologies? Does it match the size of people's assets (e.g., land)?
- Who will benefit financially from the use of the agricultural technologies?

How do I&A relate to other areas of inquiry?

- Lack of income can reduce women's ability to pay for the use of labor and time-saving technologies
 - E.g., In West Africa there is evidence that women continue to mill or dehull by hand because they can't afford to pay for the services
- Saving time creates new opportunities to generate income
 - Evidence for this is weak
- Access to income can be used to purchase food not produced by the household



Knowing how you're doing

Session Objectives

- Understand the gender issues in designing indicators
- Understand gender-sensitive monitoring

“SMART” Indicators

Specific	The indicator clearly and directly measures a specific result for the objective it is measuring.
Measurable	The indicator is unambiguously specified so that all parties agree on what it covers and there are practical ways to measure the indicator.
Achievable	The measurement of the indicator is feasible and realistic, within the resources and capacity of the project/program, and the data are available.
Relevant	The indicator provides appropriate information that is best suited to measuring the intended result or change expressed in the objective.
Time-bound	The indicator specifies the specific timeframe at which it is to be measured.

Gender-Sensitive Indicators tell us

- **If** projects are affecting men and women differently
 - Are both men and women participating in project activities?
 - Are both men and women able to implement the recommendations provides or access the services offered?
 - Are both men and women receiving benefits from their participation?
- **If** projects are reducing gender disparities
 - Are women's incomes rising? Are they rising relative to men's?
- **If** projects are exacerbating existing or creating new disparities
 - Are women's workloads rising? Are they rising relative to men's?

Gender-“SMART” indicators

Sex-disaggregated	Any indicator about people is sex-disaggregated (M/F).
Mixed methods	Use both qualitative and quantitative methods (including participatory monitoring to collect monitoring data to measure change and elicit explanations of what change means to participants (men and women).
Accurate	Compare like with like. Use appropriate units of analysis. Don't compare households headed by men to those headed by women! The results do not translate to all men and all women.
Reduce gender-based constraints	Measure changes in an identified gender-based constraint, e.g., in access to credit, use of inputs, participation, income, etc.
Time-sensitive	Develop indicators that do not add a large extra time burden to the women from whom data is collected.

Some tips and guidance for creating gender-sensitive indicators

I. Choose the appropriate unit of analysis

2. Indicate that individual (or people) -level indicators will be sex-disaggregated

Aim also to disaggregate other indicators by age, caste, ethnicity, and other variables.

3. Collect numbers and narrative

Use a mixture of quantitative and qualitative indicators

4. Look for opportunities to disaggregate by sex

- Number of improved technologies adopted
- Volume of sales
- Increase in crop productivity

5. Establish realistic targets

- ✓ Don't be risk-averse and be too cautious
- ✓ Don't be overly ambitious
- ✓ Look for the “just right”

Gender and technology indicators should measure change in:

- Productivity
- Dietary diversity
- Energy Expenditure
- Time
- Income
- Assets

Activity: Indicator Identification

1. Each group will identify 2 – 3 indicators related to one of the following analytical areas:

- Food availability, quality, and safety
- Time and labor
- Income and assets

2. At least one indicator should be qualitative.