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THE CONCEPT OF VALUE CHAINS IN AGRICULTURE, CLIMATE ACTION AND ENVIRONMENTAL RESOURCES (GLOBAL ISSUES & LOCAL PERSPECTIVES)

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Preface

This book adopts an exegetical approach as well as a pedagogic model, making it attractive agriculture and environmental economics teachers, professional practitioners and scholars. It is eschews pedantry and lays bars the issues in such clarity that conduces to learning. The book elaborates on contemporaneous *The Concept of Value Chains in Agriculture, Climate Action and Environmental Resources* issues of global significance and at the same time, is mindful of local or national perspectives making it appealing both to international and national interests. The book explores the ways in which climate change, food security, national security and environmental resources issues are and should be presented to increase the public's stock of knowledge, increase awareness about burning issues and empower the scholars and public to engage in the participatory dialogue climate change, food security, national security and environmental resources necessary in policy making process that will stimulate increase in food production and environmental sustainability.

The Concept of Value Chains in Agriculture, Climate Action and Environmental Resources: Global issues and Local Perspectives is organized in three parts. Part One deals with The Concept of Value Chains in Agriculture, Part Two is concerned with The Concept of Climate Actions and Part Three deals with the Concept of Value Chains and Environmental Resources.

Eteyen Nyong/Ignatius Onimawo

April 2025

Chapter Twenty Eight

Breaking Barriers: Gender Dynamics and Opportunities for Women's Empowerment in Agricultural Value Chains

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I. INTRODUCTION

Modern agriculture relies heavily on intricate value chains that connect farmers directly to consumers, streamline operations, and foster economic development. These value chains are crucial for ensuring that agricultural products are delivered efficiently and effectively. However, a significant concern is that these chains often lack inclusivity and equity, especially for women. Women play a vital and multifaceted role in agricultural production, processing, and marketing. Despite their critical contributions, they frequently encounter substantial barriers that hinder their full participation and limit their ability to share in the benefits.

Agricultural value chains present a myriad of opportunities for farmers, facilitating access to cutting-edge technologies and specialized services that significantly enhance productivity and profitability. Moreover, efficient value chains optimize overall efficiency, reduce operational costs, and improve product quality. Empirical evidence supports the notion that effective value

chains can improve farmers' access to markets, technologies, and services, culminating in

increased productivity, efficiency, and profitability (Orebiyi & Henri-Ukoha, 2017).

Despite the immense potential of agricultural value chains, gender disparities persist. Women's

contributions are often undervalued, leading to limited access to essential resources, markets, and

services. This lack of access affects women individually and has broader implications for the

agricultural sector. Addressing gender roles and disparities is essential for promoting fair and

equitable growth in agriculture (Coles and Mitchell, 2011). Ensuring equal opportunities for all

individuals to engage in and benefit from farming activities is also crucial.

This chapter explores the opportunities and challenges of promoting gender equality within

agricultural value chains. It examines the current state of gender dynamics, identifies obstacles

women face, and discusses strategies for empowerment. The chapter also highlights successful

initiatives that advance gender equality, showcasing examples of inclusive and equitable

agricultural practices.

II. Understanding Gender Dynamics in Agricultural Value Chains

Understanding the underlying gender dynamics is essential to address the disparities faced by

women in agricultural value chains. This section provides an overview of key perceptions,

examines the roles and contributions of women, and highlights the gender-based inequalities and

constraints that hinder their full participation.

1. Defining Key Concepts: Gender, Agricultural Value Chains, and Empowerment

Gender

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Gender" includes the societal expectations, roles, and responsibilities associated with being male

or female, whereas "sex" refers to the biological characteristics that define males and females.

Multiple Perspectives on Gender

Various institutions, including the World Health Organization, UN Women, and the American

Psychological Association, describe gender as a multidimensional concept comprising:

- Culturally defined roles and practices deemed appropriate for men and women within a given

society (WHO, 2019).

- Societal norms and expectations that shape the roles, responsibilities, and expectations of men

and women within a specific society (UN Women, n.d.).

- An intricate interaction of physiological, emotional, and environmental factors shaping

identity and self-expression (APA, 2015)

Unlike physiological sex, gender encompasses these sociocultural aspects, emphasizing its unique

and adaptive character.

Differentiating Between Sex and Gender

It is crucial to differentiate between sex and gender:

Sex pertains to the physiological distinctions between males and females, including anatomical

characteristics such as chromosomes, hormones, and reproductive systems.

Gender denotes a cultural concept that encompasses the norms, expectations, and practices

associated with being masculine or feminine.

key aspects of gender

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some key aspects of gender include:

- i. *Gender roles:* the social and cultural expectations associated with being male or female, such as childcare responsibilities for women or breadwinning responsibilities for men. according to the United Way of National Capital Area. (2023), gender roles involve cultural and societal expectations about what is considered masculine or feminine.
- ii. *Gender identity:* It encompasses a person's self-awareness as masculine, feminine, or another gender identity, whereas gender expression involves the outward manifestation of that identity.
- iii. *Gender expression:* This encompasses how they attire themselves, their nonverbal cues, and their overall demeanour, which may conform to or deviate from cultural norms linked to their designated sex at birth.

Importance of Understanding Gender

Understanding gender is crucial for promoting equality, challenging discriminatory norms and practices, and addressing the specific needs and concerns of different gender groups. In agricultural value chains, acknowledging the social and cultural factors that influence gender roles enables policymakers and practitioners to create more inclusive and effective programmes.

Value Chains (Agriculture): Encompass the activities and processes involved in producing, processing, and marketing agricultural products, involving various stakeholders such as farmers, processors, traders, and consumers

Empowerment: Refers to the process of gaining control over one's life, making informed decisions, and participating fully in society. Empowerment is a critical aspect of promoting gender equality and reducing poverty (United Nations Department of Economic and Social Affairs, 2025).

2. Overview of Women's Roles in Agricultural Value Chains

Women play a dynamic role in agrarian value chains, contributing to various facets of production, processing, and marketing. Their involvement is crucial for the sustainability and productivity of the farming systems. Some of the key roles that women play include:

- Farmers: Women are involved in crop and livestock production, managing farms, and making decisions about planting, harvesting, and marketing. They contribute significantly to food security and rural livelihoods.
- Processors: Women are involved in processing and preserving agricultural products, such as drying, grinding, and packaging. They add value to raw products, enhancing their quality and shelf life.
- 3. Traders: Women traders actively buy and sell agricultural products, serving as vital intermediaries between farmers and consumers, thereby connecting producers to markets.
- 4. Consumers: Women are also consumers of agricultural products, making decisions about food purchases and preparation.

Abiala (2019) highlight that women make substantial contributions to farming, engaging in various tasks such as cultivation of crops, processing, and distribution, as well as other related activities that extend beyond farming itself. Taiwo and Fasoyiro (2015) emphasize that women are vital in the processing and preserving of agricultural products through activities like drying, grinding, and packaging. Their efforts not only add value to raw products but also improve quality and extend shelf life, significantly enhancing food security and generating income. Women typically process to provide extra income due to the value added through these activities (Yusuf et al., 2014).

Despite their important contributions, women frequently encounter barriers to participation and sharing benefits within agricultural value chains.

3. Unpacking Gender-Based Inequalities: Social, Economic, and Cultural Barriers

Gender-based disparities are prevalent in value chains (agriculture), hindering women's empowerment and limiting their contributions to agricultural development. These inequalities are deeply ingrained in social, economic, and cultural norms, and are often perpetuated by discriminatory laws, policies, and practices.

a. Social Barriers to Women's Participation in Agricultural Value Chains

Social barriers significantly hinder women's participation in value chains. These barriers are entrenched in societal norms and institutions, restricting women's access to education, training, and resources.

- *i.* **Restricted Educational and Training Opportunities:** Women often face barriers in accessing education and training, hindering their ability to acquire essential skills and knowledge for effective involvement in agricultural value chains. This can be due to:
 - Inadequate educational opportunities: Rural women often face significant barriers in accessing high-quality formal education due to a shortage of educational facilities and resources.
 - Vocational training deficits: Women face restricted access to specialized training programmes that equip them with essential skills and expertise for engagement in agricultural value chains.
 - Gaps in support services: Women face limited access to essential extension services, such as training and guidance, which are crucial for improving their agricultural productivity and competitiveness.
 - Digital exclusion: Women in rural agrarian communities encounter substantial obstacles in accessing mobile phones, computers, and the internet, restricting their access to crucial information, markets, and financial services.

According to Sasa, Adebayo, and Maurice (2022), women in developing countries play a crucial role in agriculture, but their participation is limited by factors such as low representation in higher agricultural education and restricted access to education and training. The authors argue that these limitations not only hinder women's personal and professional growth but also impede overall agricultural productivity and food security in these regions.

The authors stress the need for tailored policies that foster equal access to education and resources, empowering women to assume leadership positions and drive transformation in the agricultural sector. This includes creating mentorship programs, facilitating access to financial services, and providing training that equips women with essential skills and knowledge.

Addressing these systemic barriers, can empower women, enhance community resilience, and drive sustainable agricultural practices. Thus, fostering an inclusive and productive agricultural framework in developing countries requires addressing these social barriers.

ii. Restrictive Social Norms: Restrictive Social Norms: Societal norms and expectations can severely limit women's involvement in agricultural value chains. These norms frequently trap women in conventional roles, denying them access to vital resources, skills development, and participation in decision-making processes. Moreover, societal biases can lead to the invisibility of women's agricultural contributions, resulting in a lack of recognition and underutilization of their skills.

A combination of factors reinforces restrictive social norms, hindering women's involvement in agricultural value chains, including:

- Cultural and Traditional Practices: Women are expected to conform to traditional roles and responsibilities, including domestic and caregiving duties. These expectations can be

perpetuated by cultural and traditional practices that prioritize women's domestic roles over their economic participation.

- Family and Community Expectations: Women may face pressure from their families and communities to prioritize domestic and caregiving responsibilities over economic activities.
 This pressure can be intense, particularly in rural areas where traditional norms and expectations are more prevalent.
- Lack of Support Services: Women may lack access to support services, including childcare
 and healthcare, that can enable them to participate in economic activities. This lack of
 support services can perpetuate restrictive social norms by making it difficult for women to
 balance their domestic and economic responsibilities.
- Discriminatory Attitudes and Behaviours: Women may face discriminatory attitudes and behaviours from their families, communities, and institutions, limiting their ability to participate in economic activities. These discriminatory attitudes and behaviours can perpetuate restrictive social norms by creating a hostile environment for women's economic participation.

According to the Qanti, Peralta and Zeng (2022) social norms and expectations can limit women's access to resources, training, and decision-making processes, hindering their participation in agricultural value chains.

Consequences of Restrictive Social Norms

- Limited Access to Land and Financial Services: Women face challenges in accessing land and financial services, hindering their participation in agricultural value chains.
- *Entrenched Dependence:* Deep-seated cultural attitudes prohibit women from land ownership and access to credit, perpetuating their financial reliance on male family members.

- *Undermined Empowerment:* The cycle of exclusion undermines women's empowerment and hampers overall agricultural productivity and economic growth.
- Limited Networking Opportunities: Restrictive social norms stifle women's networking opportunities, depriving them of valuable connections that could enhance their market access and business acumen.
- Social Isolation and Exclusion: Women's limited interaction with others hinders their capacity to engage in collective endeavours, exchange ideas, and acquire essential information on market dynamics and innovative technologies.
- **iii.** Restricted Access to Productive Assets: Women are hindered by substantial obstacles in acquiring and managing land, livestock, and other vital resources. This constraint undermines their ability to engage in and derive benefits from agricultural value chains, with land ownership being a major impediment to their economic advancement.
 - Restricted rights to inherit or purchase land: Restricted Rights to Inherit or Purchase
 Land: Customary laws frequently limit women's rights to inherit or purchase land,
 hindering their ability to participate in agricultural production.
 - Lack of secure tenure: Insecure land tenure exposes women to uncertainty and vulnerability, making it challenging for them to invest in their land. The World Bank (2020) indicates that a lack of secure tenure negatively impacts women's investment potential.
 - Inadequate Access to Land-Related Services: Research by the African Development Bank (AfDB, 2020) indicates that women have limited access to essential land-related services, such as surveying and registration.
 - Restricted Access to Livestock and Equipment: Women may not have control over livestock, equipment, or other productive assets, limiting their ability to participate in agricultural value chains.

 Lack of Decision-Making Power: Women often lack the authority to make decisions about the use of land, livestock, and other productive assets, which hinders their participation in agricultural value chains.

This lack of decision-making power often led to:

- 1. *Diminished Farming Efficiency:* Women's restricted access to land and assets hampers their agricultural output, resulting in decreased earnings and compromised nutrition.
- 2. Constricted Market Opportunities: Women's restricted land and asset ownership hinders their ability to participate in markets, sell their goods, and negotiate favourable prices.
- 3. Heightened Susceptibility: Women's restricted control over land and assets exacerbates their exposure to economic insecurity, food insecurity, and various forms of exploitation and marginalization.

b. Economic Barriers to Women's Participation in Agricultural Value Chains

Economic barriers are a significant obstacle to women's participation in agricultural value chains. These barriers can limit women's access to resources, markets, and services necessary for investing in agricultural activities and improving their livelihoods. Three key economic barriers that women face in agricultural value chains are discussed below.

- i. Limited Access to Credit and Financial Services: Women may face difficulties in accessing credit, savings, and other financial services necessary for investing in agricultural activities.
 This can be due to:
- Restricted Access to Mainstream Finance: Women face significant barriers in accessing established banks and credit providers, especially in rural regions (Global Partnership for Financial Inclusion [GPFI], 2020).

- *Unaffordable Credit Terms:* Steep interest rates and rigid collateral conditions deny women access to credit, severely limiting their capacity to finance and expand their agricultural ventures (International Finance Corporation [IFC], 2020).
- *Financial Knowledge Gap:* Women's limited understanding of financial concepts and lack of educational resources hinder their ability to effectively utilize credit systems and access essential financial services (World Bank, 2020).
- Limited access to alternative financial services: Women faces obstacles in accessing innovative financial services, including microfinance and mobile banking, which could offer more convenient and affordable financial solutions.

The consequences of limited access to credit and financial services are far-reaching:

- Reduced agricultural productivity: Women's limited access to credit and financial services can reduce their agricultural productivity, leading to lower incomes and reduced food security.
- Limited investment in agricultural activities: Women's limited access to credit and financial services can limit their ability to invest in agricultural activities, including purchasing inputs, hiring labour, and adopting new technologies.
- Increased susceptibility: Women's limited access to credit and financial services can increase their vulnerability to poverty, hunger, and other forms of exploitation.

ii. Low Prices and Unfair Markets

Women face low prices for their products and unfair market conditions, limiting their ability to generate income and improve their livelihoods. The low price is attributed to:

- Lack of market information: Women may lack access to market information, including prices, demand, and supply, making it difficult for them to negotiate fair prices for their products.
- Limited bargaining power: Women may have limited bargaining power, making it difficult for them to negotiate fair prices and better market conditions.

- Discriminatory market practices: Women may face discriminatory market practices, including lower prices for their products and limited access to markets.
- Limited access to market infrastructure: Women may have limited access to market infrastructure, including storage facilities, transportation, and communication services.

The consequences of low prices and unfair markets are far-reaching:

- Reduced incomes: Women's limited access to fair prices and better market conditions can reduce their incomes, leading to poverty and hunger.
- Limited investment in agricultural activities: Women's limited access to fair prices and better
 market conditions can limit their ability to invest in agricultural activities, including
 purchasing inputs, hiring labour, and adopting new technologies.
- Increased vulnerability: Women's limited access to fair prices and better market conditions can increase their vulnerability to poverty, hunger, and other forms of exploitation.

iii. Limited Access to Technology

- Barriers to Agricultural Technology Adoption: Women face significant constraints in accessing modern agricultural tools and equipment, such as tractors and irrigation systems, hindering their ability to enhance agricultural efficiency and productivity.
- *Digital Divide:* Women are disproportionately hindered from accessing digital tools, including mobile phones and computers, which constrains their capacity to access vital information, markets, and financial services (World Wide Web Foundation [WWWF], 2020).
- Lack of training and education on the use and maintenance of technology: Women lack training and education on the use and maintenance of technology, making it difficult for them to use technology effectively (International Labour Organization [ILO], 2020).
- Limited access to technology-related services: Women have limited access to technologyrelated services such as, advisory services, demonstration plots, repair and maintenance

services, which makes it difficult for them to adopt new technologies and improve their productivity and competitiveness (African Development Bank [AfDB], 2020).

iv. Limited Access to Other Essential Resources

- i. Limited access to water and irrigation systems: Women have restricted access to water and irrigation systems, making it difficult for them to irrigate their crops. The FAO report, "The State of Food Security and Nutrition in the World 2020", highlights that:
 - Women are more likely to rely on rainwater harvesting and other informal water sources, which can be unreliable and time-consuming to manage (FAO, 2020, p. 123).
 - Women often have limited access to irrigation systems, which can reduce their crop yields and increase their workload (FAO, 2020, p. 124).
 - In many countries, women are excluded from decision-making processes related to water management, which can perpetuate their limited access to water and irrigation systems (FAO, 2020, p. 125).

The report also notes that improving women's access to water and irrigation systems can have significant benefits for food security, nutrition, and sustainable agriculture.

ii. Restricted access to high-quality seeds, fertilizers, and other inputs: Women's access to high-quality seeds, fertilizers, and other agricultural inputs is significantly restricted, which hampers their ability to boost crop yields and support food security. The International Fund for Agricultural Development (IFAD) highlights this lack of access as a major barrier to improving women's agricultural productivity (IFAD, 2019).

The IFAD report, "The State of Food Security and Nutrition in the World 2019," reveals several challenges women face in obtaining quality agricultural inputs:

- Women often lack access to quality seeds, risking lower crop yields and increased vulnerability to climate change (IFAD, 2019, p. 120).

- Many women do not have the resources or knowledge necessary to effectively procure and utilize fertilizers and other inputs, further diminishing their productivity (IFAD, 2019, p. 121).
- In many countries, women are excluded from decision-making regarding agricultural input supply chains, which continues their limited access to high-quality seeds and fertilizers (IFAD, 2019, p. 122).

The IFAD report emphasizes that improving women's access to quality agricultural inputs can significantly enhance food security, nutrition, and sustainable agriculture. Therefore, addressing this issue is vital for promoting women's empowerment and agricultural productivity.

- iii. Limited access to storage facilities and other post-harvest management infrastructure: Women have limited access to storage facilities and other post-harvest management infrastructure, making it difficult for them to store and manage their crops effectively (World Bank, 2020).
- iv. Restricted access to market information and other business development services: Women have restricted access to market information and other business development services, making it difficult for them to access markets and improve their businesses (International Trade Centre [ITC], 2020).

These barriers are interconnected and can have a compounding effect on women's ability to participate in and benefit from agricultural value chains. Addressing these barriers will require a comprehensive approach that involves policy and legislative reforms, institutional capacity building, and community-led initiatives.

c. Cultural Barriers to Women's Participation in Agricultural Value Chains

Cultural barriers are a significant obstacle to women's participation in agricultural value chains. These barriers can limit women's autonomy, mobility, and decision-making power, making it difficult for them to participate in agricultural activities and improve their livelihoods. According to Bhanjdeo (2024), cultural barriers are a significant obstacle to women's participation in **SAEREM BOOK CHAPTERS** First Published 2025 ISBN 978-978-60709-7-1

agricultural value chains, limiting their autonomy, mobility, and decision-making power. Traditional practices and customs, discriminatory attitudes and behaviours, and limited representation and voice as key cultural barriers that women face in agricultural value chains.

- i. Traditional Practices and Customs: Traditional practices and customs can restrict women's mobility and autonomy, limiting their ability to participate in agricultural value chains. These practices and customs can include:
 - Early marriage and childbearing, which can limit women's education and career opportunities.
 - Limited freedom of movement, which can restrict women's ability to participate in agricultural activities and access markets.
 - Traditional roles and responsibilities, which can prioritize women's domestic duties over their economic activities.
 - Limited access to education and training, which can reduce women's knowledge and skills in agriculture.
- **ii. Discriminatory Attitudes and Behaviours:** Women faced discriminatory attitudes and behaviours from their families, communities, and institutions, limiting their ability to participate in agricultural value chains. These attitudes and behaviours can include:
 - Sexist attitudes and stereotypes, which can undermine women's confidence and ability to participate in agricultural activities.
 - Discriminatory laws and policies, which can limit women's access to land, credit, and other resources.
 - Limited representation and voice, which can reduce women's ability to influence policies and programs that affect their livelihoods.

- **iii. Limited Representation and Voice:** Women may have limited representation and voice in decision-making processes, limiting their ability to influence policies and programmes that affect their livelihoods. This can include:
 - Limited participation in farmers' organizations and cooperatives, which can reduce women's ability to access markets, credit, and other resources.
 - Limited representation in local and national governments, which can reduce women's ability to influence policies and programs that affect their livelihoods.
 - Limited access to information and communication technologies, which can reduce women's ability to access information, markets, and other resources.

III. Opportunities for Promoting Gender Equality

Promoting gender equality in agricultural value chains requires a multifaceted approach that addresses the social, cultural, and economic barriers that women face. This involves a commitment to empowering women through access to education and training, enabling them to acquire the skills necessary for success in various agricultural roles. Moreover, fostering an inclusive environment where women can participate in decision-making processes is crucial. It is essential to challenge and transform existing stereotypes and norms that hinder women's involvement and advancement within the agricultural sector. Additionally, creating opportunities for women to access financial resources and credit is vital. Financial independence not only boosts their entrepreneurial potential but also enhances their bargaining power within households and communities. Furthermore, establishing networks and support systems can facilitate knowledge sharing and mentorship, allowing women to thrive in male-dominated fields. Policymakers and organizations must collaborate to develop gender-sensitive policies that recognize the unique contributions of women farmers and workers. By addressing these systemic barriers and championing women's rights, we can cultivate a more equitable agricultural landscape that benefits

entire communities, promoting not only gender equality but also sustainable development and food security for all. This section highlights three key opportunities for promoting gender equality:

1. Innovative Technologies and Digital Solutions

Innovative technologies and digital solutions can help to promote gender equality by:

- Providing women with access to information, markets, and other resources.
- Supporting women's participation in decision-making processes and leadership positions.
- Challenging discriminatory attitudes and behaviours that perpetuate gender inequality.
- Improving women's productivity and efficiency in agricultural value chains.

Examples of innovative technologies and digital solutions that can promote gender equality include:

- i. Mobile apps that provide women with access to market information and other resources.
- ii. Digital platforms that support women's participation in e-commerce and other digital markets.
- iii. Precision agriculture technologies that improve women's productivity and efficiency in agricultural value chains.
- iv. Blockchain technologies that support women's access to finance and other resources.

2. Women's Empowerment Programmes and Initiatives

Women's empowerment programmes and initiatives are critical for promoting gender equality in agricultural value chains. These programmes can:

- Provide women with training and education on agricultural practices, business management, and leadership skills.
- Support women's access to credit, markets, and other resources.

- Promote women's participation in decision-making processes and leadership positions.
- Challenge discriminatory attitudes and behaviours that perpetuate gender inequality.

Examples of successful women's empowerment programmes and initiatives include:

- i. The International Fund for Agricultural Development's (IFAD) Gender Equality and Women's Empowerment Programme.
- ii. The United Nations Food and Agriculture Organization's (FAO) Gender Programme.
- iii. The World Bank's Women's Economic Empowerment Programme.

3. Gender-Sensitive Value Chain Development Approaches

Gender-sensitive value chain development approaches can help to promote gender equality by:

- Identifying and addressing the specific needs and constraints of women farmers and entrepreneurs.
- Promoting women's participation in value chain development and decision-making processes.
- Supporting women's access to markets, credit, and other resources.
- Challenging discriminatory attitudes and behaviours that perpetuate gender inequality.

Examples of successful gender-sensitive value chain development approaches include:

- i. The African Agricultural Finance Facility's (AAFF) Gender-Sensitive Value Chain Development Programme.
- ii. The International Finance Corporation's (IFC) Gender-Sensitive Value Chain Development Programme.
- iii. The World Bank's Gender-Sensitive Value Chain Development Programme.

IV. Overcoming Barriers to Achieving Gender Equality

Addressing the challenges and constraints that women face in agricultural value chains requires a comprehensive approach that involves governments, civil society organizations, private sector companies, and other stakeholders. This section highlights three key areas for addressing challenges and constraints:

1. Strategies for Overcoming Social and Cultural Barriers

Social and cultural barriers can be a significant obstacle to women's participation in agricultural value chains. Strategies for overcoming these barriers include:

- Community-based initiatives by working with local communities to challenge discriminatory attitudes and behaviours and promote women's empowerment.
- ii. Education and training by Providing women with education and training on agricultural practices, business management, and leadership skills.
- iii. Role modelling and mentorship: Providing women with role models and mentors who can inspire and support them in their agricultural endeavours.
- iv. Policy and advocacy: Advocating for policies and laws that promote women's rights and challenge discriminatory attitudes and behaviours.
- v. Promoting gender-inclusive policies that ensure equal access to resources and training, by engaging local leaders and community organizations to raise awareness about the importance of women's contributions to agriculture.
- vi. Implementing mentorship programmes to empower women by connecting them with successful female role models in the industry.
- vii. Providing accessible education and skill development tailored to women's needs, such as flexible training schedules and locations.

- viii. Creating safe networking spaces for women to share experiences and strategies, fostering solidarity and increased confidence among participants.
- ix. Encouraging women's representation in decision-making processes at all levels of the agricultural value chain, ensuring that women's voices are heard in the creation of policies and programmes.
- x. Leveraging technology and digital platforms to help women access market information, financial resources, and agricultural innovations, enhancing their productivity and income.

By implementing these strategies, stakeholders can help dismantle the social and cultural barriers restricting women's full participation in agricultural value chains, leading to more equitable and prosperous communities.

Examples of successful initiatives that have overcome social and cultural barriers include:

- The Self-Employed Women's Association (SEWA) in India, which has empowered thousands of women through education, training, and advocacy.
- The African Women in Agricultural Research and Development (AWARD) programme, which has provided fellowships and mentorship to hundreds of African women in agricultural research and development.
- The Women in Agriculture (WIA) programme in Nigeria, which has provided training, capacity building, and microfinance services to thousands of women farmers, enabling them to increase their productivity and income.
- The Nigerian Women Farmers Association (NWFA), which has advocated for women's rights and interests in agriculture, and provided support services to women farmers.

These initiatives demonstrate that with the right approach and support, women can overcome social and cultural barriers and achieve success in agriculture.

2. Approaches for Improving Access to Resources and Markets SAEREM BOOK CHAPTERS First Published 2025 ISBN 978-978-60709-7-1

Limited access to resources and markets are significant constraint to women's participation in agricultural value chains. Approaches for improving access to resources and markets include:

- 1. *Enhancing financial inclusion:* Developing tailored financial products and services that cater specifically to women farmers can empower them to invest in their operations. Microloans, savings accounts, and insurance products designed for women's needs can lead to improved productivity and income.
- 2. Capacity building and training: Providing training programmes that focus on skills development in both agricultural practices and financial literacy can help women gain confidence and competence in managing their farms and businesses. This can include workshops on sustainable farming techniques, market analysis, and negotiation skills.
- 3. Access to technology: Promoting the use of mobile technology and digital platforms can facilitate women's access to market information, agricultural inputs, and financial services. Tech-based solutions can help bridge the gap between women producers and consumers, enabling better price realization for their products.
- 4. Strengthening cooperatives and networks: Encouraging women to form or join cooperatives can enhance their bargaining power, improve access to inputs and markets, and provide a platform for sharing resources and knowledge. Networking opportunities can also foster mentorship and support among women in agriculture.
- 5. *Policy advocacy*: Engaging stakeholders to advocate for gender-sensitive policies in agriculture that address the systemic barriers women face can help create an enabling environment. This includes ensuring equitable access to land, resources, and subsidies specifically targeting women farmers.
- 6. Infrastructure development: Investing in rural infrastructure such as roads, storage facilities, and market access points can significantly improve women's ability to participate in

- agricultural value chains. By reducing transportation costs and post-harvest losses, women can benefit more from their agricultural endeavours.
- 7. *Market linkages and partnerships:* Facilitating connections between women producers and larger markets or buyers can enhance their visibility and sales opportunities. Partnerships with NGOs, private sector actors, and government agencies can help support these linkages and provide technical assistance where needed.

By implementing these approaches, the barriers to women's participation in agricultural value chains can be significantly reduced, leading to more sustainable and inclusive agricultural development.

Examples of successful initiatives that have improved access to resources and markets include:

- The Kenyan Women's Finance Trust, which has provided financial services to thousands of women in Kenya.
- The e-Marketplace for Women Farmers in India, which has provided women farmers with access to markets and financial services.
- The Nigerian government's Anchor Borrowers' Programme, which provides microfinance loans to smallholder farmers, including women, to improve their access to credit and markets.
- The Nigerian Women Farmers Association (NWFA), which has established agricultural cooperatives and provided training and support services to women farmers, enabling them to increase their productivity and income.
- The e-Wallet initiative of the Nigerian government, which provides digital platforms for farmers to access markets, financial services, and other resources.

- The Nigerian Export Promotion Council (NEPC), which provides support services, including training and capacity building, to entrepreneurs, including women, to enable them to access international markets.

3. Policy and Regulatory Reforms to Support Gender Equality

Policy and regulatory reforms can play a critical role in supporting gender equality in agricultural value chains. Reforms include:

- i. Legislative reforms: Reforming laws and policies that discriminate against women and limit their access to resources and markets.
- ii. Policy reforms: Reforming policies and programmes to support women's empowerment and access to resources and markets.
- iii. Institutional reforms: Reforming institutions and organizations to support women's empowerment and access to resources and markets.
- iv. Capacity building: Building the capacity of governments, civil society organizations, and private sector companies to support gender equality.

Examples of successful policy and regulatory reforms include:

- The Kenyan Constitution, which recognizes women's rights to land and property.
- The Indian Government's National Policy for Empowerment of Women, which aims to promote women's empowerment and gender equality.
- The Nigerian government's National Gender Policy, which aims to promote gender equality and women's empowerment in Nigeria.
- The Nigerian Land Use Act, which has been amended to recognize women's rights to land and property.

These reforms demonstrate the importance of policy and regulatory changes in promoting gender equality and women's empowerment.

V. Case Studies and Examples of Successful Initiatives

1. Promoting Women's Empowerment through Agricultural Value Chains: Success Stories from the Field

- The African Women in Agricultural Research and Development (AWARD) programme: Provided fellowships and mentorship to African women in agricultural research and development, enhancing their skills and leadership.
- The Self-Employed Women's Association (SEWA) in India: Empowered thousands of women through education, training, and advocacy, improving their access to resources and markets.
- The Women's Agricultural Cooperatives in Nigeria: Enabled women farmers to aggregate their produce, negotiate better prices, and access larger markets, increasing their income and livelihoods.
- The Kenyan Women's Finance Trust: Provided financial services to thousands of women in Kenya, improving their access to credit and financial resources.

2. Lessons Learned and Best Practices: Scaling Up Impact and Sustainability

- Community-based initiatives: Working with local communities to challenge discriminatory attitudes and behaviours is crucial for promoting gender equality.
- Education and training: Providing women with education and training on agricultural practices, business management, and leadership skills is essential for their empowerment.

- Policy and advocacy: Advocating for policies and laws that promote women's rights and challenge discriminatory attitudes and behaviours is critical for creating an enabling environment.
- Collaboration and partnerships: Collaborating with governments, civil society organizations, private sector companies, and other stakeholders is vital for promoting gender equality and women's empowerment.
- Monitoring and evaluation: Regularly monitoring and evaluating initiatives and projects is necessary to assess their effectiveness and identify areas for improvement.

VI. Conclusion

The analysis of gender dynamics in agricultural value chains has provided valuable insights into the challenges and opportunities faced by women in agriculture. This section summarizes the key findings, implications for policy and practice, and future directions for promoting gender equality and women's empowerment.

1. Summary of Key Findings

The chapter has highlighted the critical role that women play in agricultural value chains, from production to processing and marketing. Despite their significant contributions, women face numerous challenges and constraints, including:

- i. Limited access to resources, such as land, credit, and technology
- ii. Social and cultural barriers that restrict their participation in decision-making processes
- iii. Lack of access to markets and market information
- iv. Limited opportunities for training and capacity building

The chapter has also identified several opportunities for promoting gender equality and women's empowerment in agricultural value chains, including:

- i. Implementing gender-sensitive policies and programs
- ii. Providing training and capacity-building programs for women

- iii. Enhancing women's access to resources and markets
- iv. Promoting women's participation in decision-making processes

2. Implications for Policy and Practice

The chapter have significant implications for policy and practice. Some of the key implications include:

- i. Policy reforms: Governments and policymakers should reform laws and policies that discriminate against women and restrict their access to resources and markets.
- ii. Gender-sensitive programming: Development programs and projects should be designed and implemented with a gender-sensitive approach, taking into account the specific needs and constraints of women.
- iii. Capacity building: Women should be provided with training and capacity-building programs to enhance their skills and knowledge in areas such as agriculture, business management, and leadership.
- iv. Access to resources: Women should be provided with access to resources such as land, credit, and technology to enhance their productivity and competitiveness.

3. Future Directions for Promoting Gender Equality and Women's Empowerment

To promote gender equality and women's empowerment in agricultural value chains, several future directions can be pursued, including:

- i. Scaling up successful initiatives: Successful initiatives and programs that promote gender equality and women's empowerment should be scaled up and replicated in other contexts.
- ii. Strengthening policy and regulatory frameworks: Policy and regulatory frameworks should be strengthened to promote gender equality and women's empowerment in agricultural value chains.
- iii. Promoting innovative solutions: Innovative solutions such as digital technologies and social entrepreneurship should be promoted to enhance women's access to resources and markets.

iv. Enhancing partnerships and collaborations: Partnerships and collaborations between governments, civil society organizations, private sector companies, and women's organizations should be enhanced to promote gender equality and women's empowerment in agricultural value chains.

References

- Abiala, A. F., & Ojo, A. A. (2019). Role of Women in Agriculture for Sustainable Economic Development: A Conceptual Review. Paper presented at the 1st National Conference of WITED, Ilaro Chapter, The Federal Polytechnic, Ilaro, Ogun State, Nigeria, August 13-16, 2019.
- African Development Bank [AfDB]. (2020). African economic outlook 2020: Developing Africa's workforce for the future. African Development Bank.
- American Psychological Association [APA]. (2015). Resolution on recognizing and addressing the intersection of psychological and sociocultural factors in the experience of gender.
- Bhanjdeo, A. (2024). Barriers and facilitators to women's participation in farmer producer organizations: A qualitative study exploring women's empowerment and collective efficacy in Jharkhand, India (IFPRI Discussion Paper 02259). International Food Policy Research Institute.
- Coles, C., & Mitchell, J. (2011). Gender and agricultural value chains: A review of current knowledge and practice and their policy implications (ESA Working Paper No. 11-05). Food and Agriculture Organization of the United Nations.
- Food and Agriculture Organization of the United Nations. (2020). The State of Food Security and Nutrition in the World 2020.
- Global Partnership for Financial Inclusion. (2020). 2019 GPFI report. Global Partnership for Financial Inclusion.
- International Finance Corporation [IFC]. (2020). Women and finance: An overview. International Finance Corporation.

- International Fund for Agricultural Development [IFAD]. (2019). The state of food security and nutrition in the world 2019.
- International Labour Organization. (2020). Women and the future of work: Technological change and the digital economy. International Labour Organization.
- International Maize and Wheat Improvement Center. (2020). The role of women in agricultural development. CIMMYT Research Report, 14-20.
- International Trade Centre [ITC] (2020). Women economic. https://www.intracen.org > topics > inclusive-trade > wo
- Orebiyi, J. S., & Henri-Ukoha, A. (2017). Mainstreaming agricultural extension services in value chain in Nigeria. Proceedings of the 22nd Annual Conference of the Agricultural Extension Society of Nigeria (pp. 117). University of Port Harcourt, River State, Nigeria.
- Qanti, S. R., Peralta, A., & Zeng, D. (2022). Social norms and perceptions drive women's participation in agricultural decisions in West Java, Indonesia. Agriculture and Human Values, 39(3), 645–662.
- Sasa, S. A., Adebayo, E. F., & Maurice, D. C. (2022). Constraints to women participation in agriculture and economic development in Nigeria: A review. International Journal of Advanced Academic Research, 8(5).
- Taiwo, K & Fasoyiro, S. (2015). Women and cassava processing in Nigeria. *International Journal of Development Research*. 5. 3513-3517.
- United Nations Entity for Gender Equality and the Empowerment of Women. (n.d.). What is gender? UNEGEEW.
- United Way of National Capital Area. (2023, May 19). Gender Roles and Norms: What Are They & How Do They Affect Children? UNWNCA.
- United Nations Department of Economic and Social Affairs. (2025). Empowerment: What does it mean to you? United Nations Social Development Network. Chrome extension://kdpelmjpfafjppnhbloffcjpeomlnpah/https://www.un.org/esa/socdev/ngo/outreac hmaterials/empowerment-booklet.pdf.

- World Bank. (2020). Financial inclusion Retrieved from https://www.worldbank.org/en/topic/financialinclusion/overview
- World Bank. (2020). Financial inclusion for women: A review of the literature. World Bank.
- World Wide Web Foundation. (2020). Women's rights online: Closing the digital gender gap. World Wide Web Foundation.
- Yusuf, H., Akinola, M., Abdulsalam, Z., Shuaibu, H., Yusuf, O., & Yusuf, H. A. (2014). Women's role in agricultural activities: A focus on some agro-processing activities by rural women farmers in Nigeria.