



# YOUTH IN JUST FOOD SYSTEMS TRANSITIONS: RWANDA CASE STUDY

**INCLUDE**

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## EXECUTIVE SUMMARY

This report examines youth employment within Rwanda's just food systems transition as part of the larger INCLUDE research programme "Youth in Just Food Systems Transition". Building on Rwanda's 2nd National Strategy for Transformation (NST2, 2024–2029), which emphasizes job creation and climate-resilient agriculture, the research investigated 1) how political economy dynamics shape inclusive food systems transformation (FST); 2) the impact food systems transformation has on four dimensions of justice (distributive, procedural, recognition, and restorative), and 3) the extent to which youth (and in particular young women) are involved in and benefiting from these change processes.

The study employed a mixed-methods research design to holistically examine the complex factors shaping youth employment in Rwanda's transitioning food systems. Quantitative descriptive analysis was undertaken, while qualitative methods included focus group discussions in rural and urban localities across 5 districts as well as key informant interviews with relevant stakeholders both in the private and public sector, CSOs and development partners. The study adopted a participatory and youth-centred methodology, through cooperation with the National Youth Council.

The research findings indicate that Rwanda has a clearly articulated food systems transition (FST) policy framework and an integrated cross-sectional governance system under the Ministry of Agriculture (MINAGRI). The FST framework gives attention to youth inclusion, transition toward sustainable agriculture, and up-scaling of digital technology. Youth groups such as the National Youth Council (NYC) and Rwanda Youth in Agri-Business Forum (RYAF) participate in Rwanda's FST, but lack broader representativity, especially among rural youth living in poverty. Overall, the FST policy is embedded within a national agenda of increasing agricultural productivity and ensuring food security. Social and environmental concerns come second in line. Furthermore, the translation of Rwanda's paper commitments into practice, faces significant structural challenges, across education, employment, gender, and environmental sustainability.

Nearly 83% of agricultural workers have not progressed beyond primary education, a challenge that restricts the adoption of modern farming practices, limits productivity, and reduces opportunities for decent employment, especially for youth. The food production sector remains dominated by subsistence farming (61.4%), with high informality and underemployment dominated by youth. While rural poverty, though declining, persists at 43% (FAO, 2025). Gender disparities further limit transformation as women remain concentrated in subsistence farming while men dominate cash crop production and agribusiness (or commercial farming). Environmental and climate pressures compound these challenges. Rwanda's Green Revolution and related Crop Intensification Policy (CIP), launched in 2007, aimed to transform Rwanda's family-farming into a professionalised sector has contributed to soil degradation, and erosion of farmers' autonomy, and obligatory policies related to priority crops and land tenure registration. Rwanda's food-processing sector as well as controlled environment agriculture (CEA) holds potential in terms of increasing food security and job creation for youth, but both are capital intensive enterprises, requiring technical skills which are presently unavailable for the majority of young Rwandese living in multi-dimensional poverty. Food trade faces structural barriers such as poor transport and road networks, fluctuating prices and the dominance of middlemen, who make

profits at the expense of farmers as well as consumers. These factors have made young Rwandese, interested in food systems, venture into export crops instead of producing national food staples. FGDs further showed that for many, working in the food system is a stepping stone to other sectors and types of employment. It is a way to make some savings to then invest in other SMEs. Indicating that few young people envision a career or long-term livelihood in FS.

Evaluated through the four justice dimensions, Rwanda's FST reveals a mixed picture. Distributive justice is constrained by unequal access to productive assets, income-generating opportunities and access to education for youth and young women. Gendered inequalities need to be addressed to enable women to move beyond subsistence farming. Procedural justice is gradually improving, with more participatory governance mechanisms, although heterogeneous youth voices remain underrepresented and rural youth are often neglected. Recognition justice continues to be undermined by persistent stereotypes and social norms that frame youth, especially young women, as inexperienced or secondary contributors, limiting their ability to benefit from emerging opportunities. Restorative justice shows early but uneven progress, with targeted programmes working to redress historical exclusions, and environmental harm, though these efforts remain small. The above indicates that unlocking the full potential of Rwanda's FST requires a more holistic, participatory, and inclusive model that addresses interconnected nutrition, economic, and environmental challenges. Key recommendations include:

#### **Government of Rwanda**

- Institutionalise youth-inclusive and justice-centred FST systems by strengthening participation across the policy cycle, enforcing representation, expanding access to land, climate-smart agriculture (CSA), and digital infrastructure, and embedding justice in planning and M&E—supported by a dedicated blended finance mechanism for youth- and women-led enterprises.

#### **Development Partners**

- Catalyse inclusive transformation by combining financing with technical assistance, including green skills, enterprise development, and financial literacy, while scaling mentorships, internships, and job pathways and supporting government to mainstream justice in policy and implementation.

#### **Private Sector (Agribusinesses)**

- Drive inclusion by integrating youth and women into viable value chains through fair contract-farming models, tailored finance, and investment in green technologies—complemented by structured mentorships and apprenticeships, especially for young women.

#### **Civil Society Organisations (CSOs)**

- Strengthen accountability and inclusion by facilitating community dialogue, challenging restrictive norms, documenting barriers, and feeding evidence into policy processes to ensure youth and women benefit equitably in practice.

## 1. INTRODUCTION

This report examines youth employment within Rwanda's just food systems transition as part of the larger INCLUDE research programme “Youth in Just Food Systems Transitions”.

Food systems are critical for livelihoods in Rwanda, yet many young people face challenges such as limited access to land, financial services, and modern agricultural practices (Republic of Rwanda, 2021). While 65% of the female workforce is employed in agriculture, they encounter systemic barriers, including restricted participation in decision-making and unequal access to resources, such as capital (WorldBank, 2025; Medium, 2019). Building on Rwanda's 2nd National Strategy for Transformation (NST2, 2024–2029), which emphasizes job creation and climate-resilient agriculture, the research investigated 1) how political economy dynamics shape inclusive food systems transformation (FST); 2) the impact food systems transformation has on four dimensions of justice (distributive, procedural, recognition, and restorative); and 3) the extent to which youth (and in particular young women) are involved in and benefiting from these change processes.

The report sets the context in which Rwanda's FST is unfolding, followed by the study objectives, analytical framework, and research methodology. It then provides a mapping of Rwanda's food system, outlining key policies and regulations, and major stakeholders. Building on these insights, a justice analysis is adopted across four dimensions, followed by cross-cutting challenges and opportunities for youth employment within Rwanda's food systems. The report ends with conclusions and recommendations for key stakeholders involved in Rwanda's food systems transition and offers practical suggestions for the way forward.

### 1.1 Background

Food systems have emerged as a critical global policy focus in response to escalating food vulnerabilities driven by climate change, population growth, and widening socio-economic inequalities (FAO, 2021; Laderchi et al., 2024). Encompassing interconnected actors and processes, from production and processing to distribution and consumption, food systems are a central pillar of the United Nations' Six Transitions Framework, which seeks to address food insecurity, malnutrition, and inequality alongside energy, digitalisation, education, jobs and social protection, and climate–water–biodiversity governance (UNSDG, 2023). Transforming food systems through sustainable practices, inclusive policies, and resilient local supply chains is widely recognised as essential for enhancing food security, climate resilience, and inclusive development, particularly in African contexts.

Despite their potential, food systems remain characterised by persistent exclusion. Inequities in access to land, nutritious food, markets, and productive resources continue to undermine inclusive participation and livelihoods (Allievi, 2017; Carson & Boege, 2020). While food systems generate employment opportunities through globalisation and value-chain expansion, small-scale producers and rural workers—especially youth—are often excluded from decent work. Structural barriers such as limited asset ownership, weak institutions, inadequate training systems, and fragile legal frameworks constrain the rural poor's ability to benefit from food system transformation (FAO, 2023). In addition, unaccounted costs—including environmental degradation, inefficient resource allocation within agrifood

systems, and economic losses associated with unhealthy diets—remain substantial, undermining both sustainability and equity (MINAGRI, 2021).

In Rwanda, agriculture forms the backbone of the national food system, contributing 26.8% of GDP and sustaining an average annual growth rate of 5% over the past 15 years. The sector has played a significant role in poverty reduction, with national poverty declining from 60% in 2000 to 27.4% in 2023. However, spatial inequalities persist, as rural poverty remains markedly higher at 43% compared to 14.5% in urban areas (NISR, 2024). Agriculture also underpins Rwanda's external trade, generating 37% of export value following diversification beyond traditional cash crops such as tea and coffee into macadamia, flowers, and selected staple crops (World Bank, 2024). Nevertheless, Rwanda remains a net food importer. Domestic rice and wheat production falls well below demand, with imports filling the gap (The Rockefeller Foundation, 2021). Food commodities dominate Rwanda's formal import structure, with rice accounting for the largest share, followed by cane sugar, cereal flours, groundnuts, and maize (Minicom, 2024). This continued reliance on food imports reflects deeper structural constraints, including population growth, dietary transitions, limited agro-processing capacity, and dependence on imported agricultural inputs, rather than trade policy alone.

Rwanda has articulated a comprehensive policy framework for food systems transformation, emphasising youth inclusion and sustainable agriculture under the National Transformation Strategy 2 (2024–2029) and the Fifth Strategic Plan for Agriculture Transformation (2024–2029). However, implementation remains constrained by deep structural challenges. Around 83% of agricultural workers have attained no more than primary education, limiting the adoption of modern farming practices, constraining productivity, and reducing prospects for decent work, particularly for youth. Subsistence farming continues to dominate the sector (61.4%), although market-oriented agriculture is rising, accompanied by high informality and underemployment. In 2024, composite labour underutilisation reached 54.2% nationally, rising to 60% in rural areas and 56.2% among youth (LFS, 2024), while rural poverty, though declining, remains high at 43% (FAO, 2025).

Gender inequalities further shape food system outcomes. Women remain disproportionately concentrated in subsistence production, while men dominate cash crops, agribusiness, and commercial farming. Persistent barriers for women include limited participation in input and output markets, restricted control over agricultural income, and increased unpaid workloads (Ingabire et al., 2018). At the same time, rapid urbanisation, projected to result in 30% of the population living in cities by 2050, risks entrenching a dual food system characterised by higher-value diets and diversified supply chains in urban areas alongside subsistence-oriented production in rural communities (World Bank, 2020).

Environmental and climate pressures compound these socio-economic challenges. Rwanda's Green Revolution, launched in 2007 to professionalise family farming, has contributed to productivity gains (Clay & King, 2019) and improved food security (Huggins, 2017), but has also generated negative externalities. Increased chemical fertiliser use and mono-cropping have accelerated soil degradation, while compulsory crop prioritisation, land registration requirements, and the growing role of intermediaries have weakened farmers' autonomy and bargaining power (Ansoms, 2020; Ansoms et al., 2017). Climate change is expected to intensify droughts, pests, and diseases, with projected economic costs of up to

1% of GDP annually by 2030 (World Bank, 2020). These intersecting ecological and socio-economic pressures have disproportionately affected smallholders and vulnerable farmers, reinforcing calls for more inclusive and participatory food systems transformation pathways (Clay & King, 2019).

Given Rwanda's unique context, being a small, landlocked country with the highest population density in Africa and a rapidly growing population, there is a pressing need for a comprehensive understanding of food systems dynamics and youth employment within them. This includes recognising evolving political commitments to food systems transformation while interrogating the structural constraints that shape implementation. This study therefore focuses on how youth and women, as central actors in Rwanda's agrifood economy can be more effectively engaged in food systems transformation, and how such engagement influences the four dimensions of justice underpinning a just, inclusive, and resilient food system.

## **1.2. Research Objectives**

This research examines the drivers of, and systemic barriers to, youth employment within the context of a just food systems transition in Rwanda. It explores how FST contributes to job creation for youth, identifies the nature of jobs, and investigates the challenges that young people face in accessing them. The study also analyses the political and socio-economic factors shaping youth employment in Rwanda's just food systems transition and how the Government of Rwanda is balancing economic ambitions with social and environmental equity concerns within the just food systems transition. It assesses the role of national and international institutional and regulatory frameworks and the extent to which justice dimensions, i.e. distributive, procedural, recognition, and restorative, are integrated into food systems transformation.

Furthermore, the research investigates how digital technologies are leveraged to expand economic opportunities for youth while unpacking the gender disparities that hinder young women's access to green jobs across agrifood value chains. Lastly, it critically assesses the findings from this analysis to inform actionable recommendations to foster inclusive, sustainable, and youth-driven food systems transformation in Rwanda.

Specific Research Objectives:

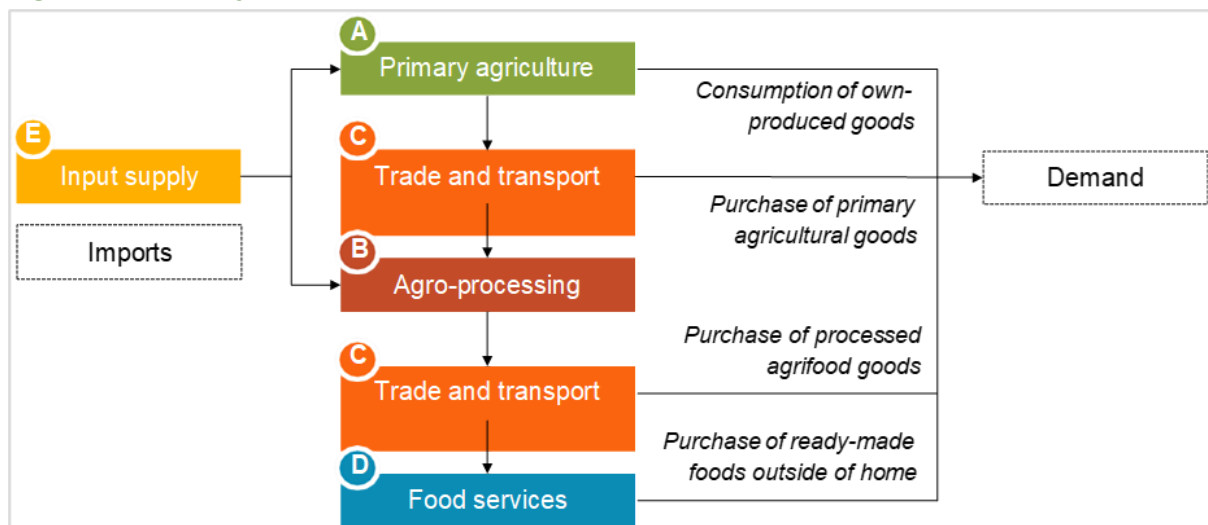
1. Assess the extent to which Rwanda's Food Systems Transition (FST) agenda articulates a vision for a food system that serves people and addresses climate change, with clearly defined goals for youth and women.
2. Evaluate how the just food systems transition addresses existing social and economic inequalities and vulnerabilities among youth and women, and how it reflects the four dimensions of justice: distributive, procedural, recognition, and restorative.
3. Examine how national food transition policies and agendas are being implemented, the degree of youth and women's participation and the exclusion of specific groups.

## 2. METHODOLOGY

### 2.1. Analytical Framework

Food systems are complex, multi-stakeholder processes. They encompass various elements (e.g., environment, people, infrastructure, institutions) and activities (e.g., farming, transport, retail), and cross through various sectors (production, processing, distribution, preparation, consumption of food (and waste management) (Dorvlo., et al. 2025). Scholars have identified many ways to conceptualise food systems. Diao et al. (2025) adopted a framework that describes the various parts of the food system in a way that is measurable to assess the performance and evolution of the system.

**Figure 1: Food System Sub-sectors**



Source: Diao et al., 2025

The analytical framework (Figure 1) conceptualises the food system as five interlinked components along the value chain, illustrating how employment, productivity, and value creation are distributed across stages. Primary agriculture (A) forms the system's foundation, encompassing crop, livestock, forestry, and fisheries production. Non-primary activities include agro-processing (B), which adds value through transforming raw outputs; input supply (E), which provides essential intermediate goods; trade and transport (C), which connect producers, processors, and consumers; and food services (D), covering retail, hospitality, and institutional food provision linked to consumption and distribution.

A just food systems transformation requires systemic changes in how food is produced, stored, processed, transported, valued, and consumed to ensure equitable outcomes for people and the planet (African Food Systems Transformation Collective, 2025). Such transformations are rarely driven solely by top-down interventions but instead emerge through cumulative, ground-level socio-political processes—what Lederach (2005) describes as “critical yeast.” While the FST agenda is shaped by international policy frameworks, this study moves beyond normative prescriptions to examine lived realities within Rwanda's food system (Levy, 2014). Accordingly, a grounded youth approach was adopted, positioning young people not only as subjects, but as active participants in the research process (Restless Development, n.d.).

The concept of youth is widely debated and context-dependent, reflecting diverse social positions and lived experiences rather than a homogeneous group (Galstyan, 2022; Arthur-Holmes & Yeboah, 2025; Vercillo & Frayne, 2025). For comparability within INCLUDE’s broader research programme, youth is defined as individuals aged 18–35 (INCLUDE, 2024; African Union, 2006). This focus is particularly relevant given that much agricultural employment in Rwanda remains characterised by low productivity, informality, high climate exposure, and limited value addition—conditions that contrast sharply with the aspirations of emerging green jobs in food systems transformation (World Bank, 2022; Dusingizimana et al., 2022). Three complementary analytical lenses guided the interpretation of findings. A political economy analysis examined how power relations, institutions, and economic interests shape youth employment outcomes within Rwanda’s FST. A gender analysis focused on inequalities in access, control, and labour market participation, particularly affecting young women across agrifood value chains (Rutabagaya et al., 2025). These were embedded within an inclusive development lens, ensuring attention to differential impacts across social groups and pathways toward equitable transformation (FAO, 2023).

Triangulating insights from these lenses enabled a justice-oriented analysis of Rwanda’s food system transformation from a youth perspective, examining procedural, recognitional, distributive, and restorative dimensions of justice, as conceptualised in Table 1.

**Table 1: Conceptualisation of Dimensions of Justice**

<b>Justice Dimension</b>	<b>Conceptualisation</b>	<b>Measured by / through</b>
<b>Distributive</b>	Outcomes/benefits of transition must be equally divided/accessible among different stakeholders and those that lose-out must be compensated	Assess equal distribution of FST benefits across the country and between different population groups (e.g. young women and rural versus urban youth)
<b>Procedural</b>	Decision-making and implementation processes must be inclusive, enable participation of vulnerable/marginalised groups (e.g., Youth, Women) and include local knowledge (plurality of perspectives)	Level of participation of young people, especially women, in policy making and implementation
<b>Recognition</b>	A just transition must take into account and tackle existing inequalities and power-imbalances, and be aware of multiple articulations of sustainability	Level of engagement with farmers’ groups, youth organisations and women’s groups in policy development, attention for existing digital divides and integration of indigenous knowledge in FST
<b>Restorative</b>	Compensations should be given for social/environmental damages and attention paid to (re)building trust & social cohesion among stakeholders	Existence of data on social/environmental damage (is the government taking stock of possible externalities of FST?) and examples of compensation, trust-building efforts.

*Source: Developed by authors*

## 2.2. Research Design and Approach

The study employed a mixed methods research design, integrating qualitative and quantitative approaches to holistically examine the complex factors shaping youth employment in Rwanda's transitioning food systems (Dawadi et al., 2021). This design facilitated triangulation of findings, thereby enhancing the validity and reliability of the conclusions. The research commenced with an extensive desk review, encompassing academic literature, media reports, online content, and official documents from civil society organisations (CSOs), government bodies, and regional and international bodies. Following the desk review, fieldwork was conducted.

## 2.3. Study Sampling Strategy

Primary data collection was conducted across seven districts in Rwanda, strategically selected to ensure comprehensive coverage and representation of diverse geographical and socio-economic characteristics. The selection process was undertaken in close collaboration with the National Youth Council (NYC), incorporating valuable input from representatives across three of the five selected provinces to validate the representativeness of the chosen sites. A stratified random sampling approach was employed to ensure a balanced representation across Rwanda's rural and urban provinces and districts, allowing for generalisable insights while capturing context-specific nuances (Lohr, 2022). The selected districts can be seen in Table 2 below:

**Table 2: Districts sampled for FGD**

Province	Rural	Urban	Total nr of FGD
<b>Northern Province</b>	<b>Gakenke</b>	<b>Musanze</b>	<b>4</b>
	1 FGD mixed youth 1 FGD Women only	1 FGD mixed youth 1 FGD Women only	
<b>Eastern Province</b>	<b>Kayonza</b>	<b>Bugesera</b>	<b>4</b>
	1 FGD mixed youth	1 FGD mixed youth	
	1 FGD Women only	1 FGD Women only	
<b>Southern Province</b>	<b>Huye</b>	<b>Nyanza</b>	<b>4</b>
	1 FGD mixed youth	1 FGD mixed youth	
	1 FGD Women only	1 FGD Women only	
<b>Kigali</b>	<b>Gasabo</b>		<b>2</b>
	1 FGD mixed youth		
	1 FGD Women only		
<b>TOTAL</b>			<b>14</b>

Primary data collection was done through focus group discussions (FGD) and key informant interviews (KII). Fifteen FGDs were held, one for women and one with youth per district (see table 2). An additional FGD was held amongst members of farmer cooperatives. FGDs were particularly crucial for understanding community-level dynamics and perspectives from diverse youth segments (Alam et al., 2025). A total of 21 KII were conducted with a diverse range of stakeholders, including government officials at national and district levels working in agriculture, on youth issues, and economic development; representatives from CSOs and international organisations; representatives of youth organisations; and key private sector actors across the identified value chains such as farmers, agribusiness owners, and agri-influencers. Findings from this analysis were systematically compared with insights derived from the literature review to identify convergences and divergences.

#### **2.4. Participatory Approach and Youth Engagement**

This study adopted a participatory, youth-centred methodology that actively involved young people across key stages of the research process. The approach sought to align research design, data collection, and analysis with youth perspectives, needs, and aspirations, thereby enhancing the relevance and actionability of findings. Collaboration with the National Youth Council of Rwanda enabled district-level engagement with key stakeholders, while trained youth research assistants supported data collection within their own communities. Youth-led focus group discussions and interviews prioritised the inclusion of marginalised voices, particularly rural youth and young women. A validation workshop with youth networks refined the findings, strengthening their accuracy and resonance with intended beneficiaries.

This participatory approach enhanced the authenticity of the evidence base and positioned young people as active contributors to Rwanda's food systems transformation. However, youth engagement remained consultative rather than fully co-creative. Young participants were engaged throughout the research process, particularly in the refinement and validation of tools, as well as in strengthening the analysis through participatory validation workshops. While the formulation of research questions and analytical frameworks was guided by the parameters of the INCLUDE research call, youth perspectives played an important role in ensuring the clarity, and contextual grounding of the findings. Consequently, although the study offers rich insights into youth experiences, it is more limited in assessing youth agency and decision-making power within food systems governance. These methodological constraints should be considered when interpreting findings related to youth empowerment.

#### **2.5. Ethical Considerations**

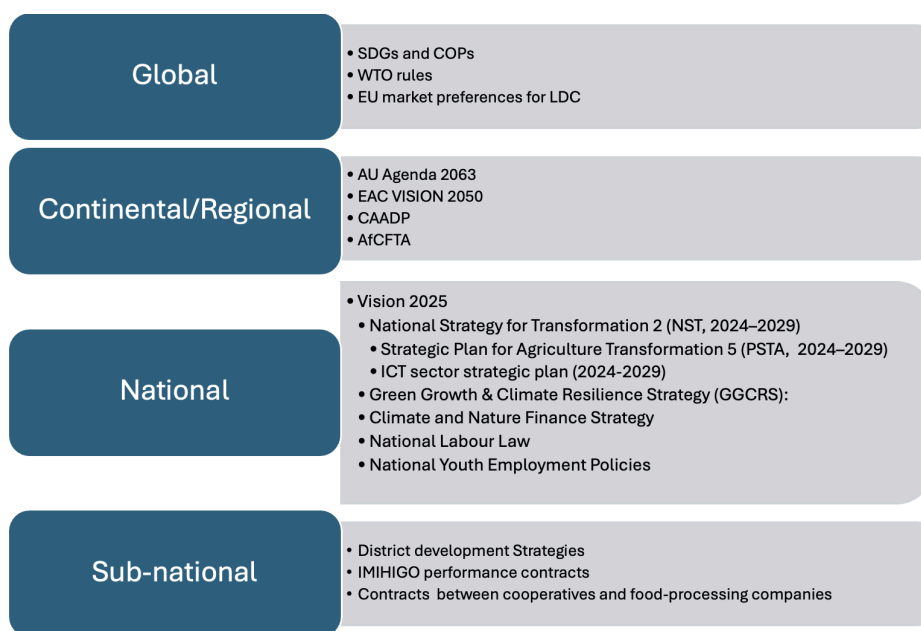
All research procedures adhered to strict ethical guidelines to protect the rights, privacy, and well-being of participants. Ethical approval for the qualitative tools was obtained from National Institute of Statistics Rwanda prior to the commencement of data collection. Informed consent was obtained from all participants, ensuring they understood the study's purpose, their right to withdraw at any time, and how their data would be used and protected. Anonymity and confidentiality were maintained through de-identification of data, secure digital storage with password protection, restricted access to research files, and coding of participant responses to prevent traceability to individuals. Special attention was given to the safety of vulnerable populations, particularly young women and marginalised youth.

### 3. YOUTH EMPLOYMENT & FOOD SYSTEMS TRANSITIONS IN RWANDA

#### 3.1. Food Systems Regulatory Framework and Governance

Figure 2 situates Rwanda’s food systems governance within a multi-level policy architecture spanning global, continental/regional, national, and sub-national frameworks. Together, these layers shape the direction, pace, and inclusiveness of food systems transformation in the country.

**Figure 2: Overview of Key Policies Framing Rwanda’s FST**



*Source: developed by authors*

At the national level, food systems governance in Rwanda is embedded within a broader political economy characterised as a hybrid regime that combines formal democratic processes with strong centralised control by the RPF, limiting political competition and civic space (Freedom House, 2025; Harvey, 2024; Loyle, 2016). This governance model operates through a results-based, decentralised system that promotes policy coherence, institutional discipline, and effective coordination with development partners, but constrains local experimentation and citizen participation. Within this structure, the Ministry of Agriculture (MINAGRI) and the Rwanda Agriculture and Animal Resources Board (RAB) play central coordinating roles, supported by detailed mapping of food system actors and an explicit policy emphasis on youth inclusion (Interview with MINAGRI, 2025). Participation of youth, women, farmer’s groups and other civic actors across the food system takes place within a political environment which is characterised by restricted freedom of speech and expected (sometimes enforced) compliance with government priorities (ICNL, 2025). While at the local level individual farmers can share their concerns with RAB officials for example, farmers organisations or cooperatives do not have the freedom to organise and challenge national policies. Within this context food system transformation is a top-down process, with limited room to manoeuvre for grassroots movements such as farmer cooperatives, youth groups or

women's organisations. In Rwanda, the food systems transition is largely government-led, with the state setting direction and driving implementation. Civil society organisations are therefore better understood as complementary actors, supporting inclusion, community-level dialogue, and implementation accountability, rather than autonomous drivers of policy change.

Rwanda's Pathways for Food Systems Transformation in Support of the Sustainable Development Goals (SDG) 2030 Agenda outlines four core priorities: food security and nutrition, environmental sustainability, livelihoods and resilience, and inclusion and empowerment (Government of Rwanda, n.d.). These priorities are operationalised through key strategies, notably the National Transformation Strategy 2 (NST2, 2024–2029), which targets 1.25 million decent jobs and 6% annual agricultural growth, and the Fifth Strategic Plan for Agriculture Transformation (PSTA 5, 2024–2029), which adopts a systems approach emphasising youth and women inclusion, digitalisation, and agribusiness de-risking (Minecofin, 2024; Gachagua & Kabano, 2025). However, policy coherence remains uneven. Weak alignment with the Green Growth and Climate Resilience Strategy, the Climate and Nature Finance Strategy, and ICT sector strategies constrains progress toward climate-resilient transformation. In parallel, Rwanda's outdated labour law, lacking a minimum wage and imposing restrictions on collective bargaining, continues to limit decent work outcomes, with collective bargaining and the right to strike constrained by binding arbitration rules and rare in practice (Labour Rights Index, 2024; Freedom House, 2025).

At the sub-national level, food systems governance is shaped by district development strategies, agricultural extension services, Imihigo performance contracts<sup>1</sup>, and contractual arrangements between cooperatives and agro-processing firms. Focus group discussions across selected provinces highlighted that while these instruments strengthen accountability and vertical coordination, they tend to prioritise production targets over labour conditions, inclusion, and environmental sustainability, reinforcing top-down implementation dynamics.

Internationally and regionally, Rwanda's food systems transition is influenced by World Trade Organization (WTO) rules, European Union (EU) market preferences for least developed countries, and global commitments under the SDGs and Climate conference processes. Continental and regional frameworks, including African Union (AU) Agenda 2063, Comprehensive Africa Agriculture Development Programme (CAADP), East African Community EAC Vision 2050, and the African Continental Free Trade Area (AfCFTA), promote productivity, resilience, trade integration, and expanded participation of women and youth in agrifood systems (AU, 2025). WTO provisions enable Rwanda to benefit from duty-free, quota-free access to EU markets, while SDG and 2015 Paris Agreement financing mechanisms offer opportunities to support food systems transformation. The AfCFTA presents potential for deepening regional value chains and expanding non-farm food system activities; ODI (2025) estimates that full implementation could raise Rwanda's intra-African exports by 38% by 2035. However, inadequate capacity to meet Sanitary and Phytosanitary standards (such as aflatoxin regulations) costs Rwanda nearly USD 1.2 billion annually.

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<sup>1</sup> Imihigo are performance contracts signed between the President of Rwanda and sub-national government agencies in which local government are obliged to reach certain socio-economic development targets. Households have IMIHIGO contracts with district authorities (Hasselkog, 2016). MINAGRI signed IMIHIGO contracts with district officials related to agricultural production targets. This system has been criticised by scholars as leading to inflated national crop data (Heinen, 2022).

Moreover, regulatory harmonisation challenges and increased competition from more productive regional producers pose additional risks to domestic agri-food markets.

### 3.2. Key actors in Rwanda’s food systems transition

Figure 3 provides an overview of the diverse key stakeholders shaping Rwanda’s Food Systems Transformation , highlighting the roles of public institutions, private sector actors, academia, development partners, media, and civil society organisations. The table is not exhaustive but reflects the actors emerging from data collection and desk review.

**Figure 3: Overview of key stakeholders in Rwanda’s FST**

Public Sector	Private Sector	Academia	Int. Development community	MEDIA	Local CSO
MINAGRI RAB REMA Min of ICT Min of Trade & Industry Min of Health Food & Drug Authority Min of Gender Min of Youth & Culture	Bank of Kigali Minimax Greenrev GR Sosoma Ltd Sina Rwanda Acre Rwanda	IFPRI NSR University of Rwanda RICA: Rwanda Institute for Conservation Agriculture	FAO UNDP IFAD Embassy of the Netherlands EU Agriterra World Food Forum	Rwanda Television Rwanda Radio The New Times The Rwandan Igihe	Rwanda Co-operative Agency Farmer’s cooperatives FMP Trade Union Center of Workers in Rwanda (COTRAF) Rwanda organic Agriculture Movement

*Source: developed by the authors.*

Rwanda’s FST is a multi-actor process involving government institutions, private enterprises, farmers’ organisations, civil society, research and academic institutions, financial and development partners, and media actors. At the national level, overall coordination rests with the Ministry of Agriculture and Animal Resources (MINAGRI), which develops core food systems policies and convenes stakeholders across sectors. Through a national mapping exercise, MINAGRI identified more than 30 food system stakeholders, with coordination largely occurring through ad hoc meetings convened by the ministry (interview with government official, September 2025). Key public institutions supporting FST include the Rwanda Agriculture and Animal Resources Development Board (RAB), the Rwanda Environment Management Authority (REMA), the Ministry of ICT and Innovation, the Ministry of Trade and Industry, the Ministry of Health, the Food and Drug Authority, and the Ministry of Gender and Family Promotion, reflecting the cross-sectoral nature of food systems governance. RAB plays a central operational role, translating MINAGRI’s policies into implementation through agricultural research, extension, and advisory services. With officers present at village level, RAB supports farmers and cooperatives with knowledge transfer and facilitates linkages to finance and markets. REMA complements this role by ensuring that environmental protection and climate change considerations are integrated into food systems interventions and that regulatory standards are upheld across value chains.

Youth engagement is channelled through formal platforms such as the Rwandan Youth in Agriculture Forum (RYAF) and the Rwanda National Youth Council (NYC). RYAF is a membership-based organisation funded by MINAGRI and development partners, working

across value chains, including food-processing, ICT for agriculture, and livestock, to advocate for youth-friendly policies, provide business support, and link young entrepreneurs to relevant institutions. RYAF has adopted inclusion measures such as a 40% quota for women and representation of youth with disabilities and recently signed a memorandum of understanding with REMA on climate-resilient initiatives (interview RYAF, October 2025). However, it lacks an explicit strategy for engaging vulnerable rural youth. The NYC, while not food-system specific, plays an important complementary role given the high share of youth employment in food systems and operates through a decentralised structure with representation in all districts (FGD with NYC representatives; NYC, n.d.).

International development partners and United Nations (UN) agencies are key contributors to Rwanda's FST, with the Food and Agriculture Organization (FAO) playing a lead technical role alongside the United Nations Development Programme (UNDP), International Fund for Agricultural Development (IFAD), Agriterra, and the World Food Programme. These actors support livelihoods, climate-smart and controlled-environment agriculture, food-processing, and market access, often prioritising youth and women through preferential co-financing arrangements. The Youth Connekt project, initiated in Rwanda in 2012 by UNDP and later scaled continent-wide, exemplifies this engagement by providing grants, mentorship, and skills development to young entrepreneurs. Since inception, it has supported over 10,000 entrepreneurs, around 25% of whom operate in food-processing (UNDP, n.d.)<sup>2</sup>. As noted by UNDP, there has been growing youth interest in Rwanda in agriculture, particularly in technology-driven and value-added segments (interview with UNDP, September 2025). The idea that agriculture is limited to planting potatoes or other food crops is shifting, and an increasing amount of youth are engaging in export or specialty crops, also because these sectors tend to be more profitable (interview with Government official, October 2025). Local NGOs, civil society organisations and farmers' cooperatives complement these efforts by advocating for producers' interests, supporting grassroots organisation, and promoting more inclusive and sustainable food systems outcomes.

The private sector is positioned as the main driver of FST, with the government playing an enabling and regulatory role. The Rwanda Private Sector Federation (PSF) brings together firms across agriculture, industry, trade, and services, facilitating dialogue with government and development partners. Key private actors, including exporters, processors, agri-tech firms, and service providers, lead commercialisation, innovation, and integration of smallholders into higher-value markets, supported by government incentives such as dedicated zones like the Kigali Special Economic Zone offer pre-serviced land with electricity, water, and fiber optics specifically for agro-processing firms. Detailed incentive schemes are provided on the Rwanda Development Board (RDB) website. However, representation within private sector platforms remains uneven, with larger firms more influential than small-scale, youth- and women-led enterprises. Larger firms have better political connections and have more time to attend platform meetings. Young entrepreneurs starting a business are generally so caught up in the daily running of their company, they have little time to engage in networks and policy meetings. Informal Small and Medium Enterprises (SMEs) in the countryside are even more unlikely to attend due to cost and

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<sup>2</sup> Youth Connekt is a multi-dimensional programme which aims at connecting youth to their role models, peers, resources, technologies, skills and economic opportunities by connecting youth to opportunities for an economically empowering environment (UNDP, n.d.).

transport limitations. Academia and research institutions, including national universities, technical and vocational training centres, research institutes, and international organisations such as International Food Policy Research Institute (IFPRI), contribute evidence generation, policy analysis, and capacity building. While media actors play a supporting role in shaping public discourse, disseminating information, and increasing awareness around food systems issues.

### 3.3. Structural composition of Rwanda's Food Systems

Rwanda's FST is embedded in the country's geographical and demographic reality as a small landlocked country with the highest population density in continental Africa. This has made food security a top priority, spurring intensive agriculture which is focussed on increasing the productivity per square meter of arable land. In 2023, 76% of Rwanda's land area was dedicated to agriculture. Whilst forest area accounts for 11.3%, which is a slight increase since 2010 (10.7%) (World Bank, n.d).

#### 3.3.1. Agric-Food System

The structural composition of Rwanda's food system is dominated by agricultural production as shown in table 3 below. Agriculture production is the single largest contributor to both GDP (26.8%) and employment (55.8%), underscoring its foundational role in the economy.

**Table 3: Rwanda's agrifood system, 2025**

	GDP		Employment	
	Value (\$ billions)	Share of total (%)	Workers (millions)	Share of total (%)
<b>Total economy</b>	<b>12.3</b>	<b>100</b>	<b>4.3</b>	<b>100</b>
<b>Agrifood system</b>	<b>4.7</b>	<b>38.2</b>	<b>2.7</b>	<b>62.8</b>
<b>Primary agriculture (A)</b>	3.3	26.8	2.4	55.8
<b>Off-farm agrifood system</b>	1.4	11.4	0.3	7.0
<b>Agro-processing (B)</b>	0.9	7.3	0.1	2.3
<b>Trade and transport (C)</b>	0.3	2.4	0.1	2.3
<b>Hotels and food services (D)</b>	0.2	1.6	0.1	2.3
<b>Input supply (E)</b>	0.1	0.8	0.0	0.2
<b>Rest of the economy</b>	<b>7.6</b>	<b>61.8</b>	<b>1.6</b>	<b>37.2</b>

Source: Diao et al. 2025

The agricultural sector plays a critical role in absorbing the working age population, including the youth (FAO, 2024). It occupies 63% of the workforce (sum of employment and subsistence agriculture) (NISR, 2018a) and for more than 60% of young people, it is their main job (NISR, 2018b). The food system, including both farm and off-farm activities, contributed \$4.7 billion to Rwanda's GDP in 2025, which is 38.2% of the total economy. It employed 2.7 million workers, accounting for 62.8% of total national employment (Diao et al., 2025). The off-farm sector accounts for nearly one-third of agrifood GDP. For every dollar generated on-farm, an additional US\$0.47 is generated off-farm in related value chains.

The agricultural sector mainly comprises small-scale farmers which produce 83,1% of Rwanda's agricultural production. The average plot size is estimated at 0.4Ha (NISR, 2024). Most of the farmers practice rain-fed agriculture, making them vulnerable to climate shocks such as droughts (IFAD, n.d.). Rwanda's food systems are organized around a set of strategic value chains that connect smallholders to domestic and regional markets. The dominant crops that underpin sustainable livelihoods in Rwanda include beans, cassava, potatoes, sweet potatoes, banana, reflecting the subsistence orientation of most farming operations (Bird et al., 2022). Recent agricultural policies have promoted specific crops, with wheat, rice and maize experiencing the highest growth rates in cultivated areas during intensification programmes (Nambajimana et al., 2019).

In 2021, 41% of Rwandan agricultural workers were employed in market-oriented farming, most of whom work on daily contracts and low salaries (GIZ, 2022). However, market-oriented agricultural participation remained broadly stable in 2025Q2, accounting for 38.7% of main jobs, while exclusive subsistence farming continued its gradual decline. This indicates that more people are engaging in cash-crops, selling their agricultural produce whilst the amount of people farming for household use only is declining. Overall engagement in agriculture rose to 52.8% of the working-age population, driven partly by a notable increase in subsistence farming as secondary work. These trends suggest steady involvement in market-linked production but a widening reliance on subsistence agriculture among those whose primary employment lies outside the sector (NISR, 2025). But agriculture remains also characterised by significant decent work deficits such as high levels of informal and casual labour and lack of social protection schemes which cover unemployment or work-related accidents/illnesses (Huyse & Simpunga, 2023). This is corroborated by the AU & OECD (2021), which indicates that many green-aligned activities in Rwanda's food systems continue to operate within largely informal labour markets, offering limited contractual security and social protection, especially for rural youth.

### **3.3.2. Non-Agriculture Food Systems**

Non-agricultural activities, comprising processing, storage, transport, trade, food service delivery and consumption, are the primary drivers of sustained income growth in middle- and high-income economies. Over the past decade, Rwanda's non-agricultural food systems have expanded steadily, reflecting gradual transformation within the agri-food economy. Drawing on Diao (Diao et al., 2025) analysis on Rwanda Social Accounting Matrix (SAM), between 2009 and 2022, non-agricultural food systems increased their contribution to total GDP from roughly 10.4% to 11.3% with the trend confirming that value addition beyond the farm gate is growing, albeit slowly, and that agriculture still dominates the food system despite more than a decade of structural change. In terms of total GDP, Rwanda's non-agricultural food systems account for 11.3%, close to the low-income countries (LIC) average (11.9%), but well below lower-middle-income countries (LMICs) at 16.3%, upper-middle-income countries (UMICs) at 10.6%, and high-income countries (HICs), where food systems are smaller overall but far more productive and diversified. This positioning indicates that Rwanda's food-related non-farm economy has not yet expanded at the pace typically associated with transitions into middle-income status, with food processing accounting for 2.6% of total employment and 5.5% of GDP (Diao et al., 2025).

Looking within the food system, Rwanda's non-agricultural food systems account for only 29.6% of GDP, compared with 32.3% in LICs, 42.2% in LMICs, 59.9% in UMICs, and 83% in

HICs. This stark gradient illustrates that Rwanda remains heavily concentrated in primary production relative to comparator countries, even within the food economy itself. Disaggregating the non-agricultural food systems reveals important structural imbalances. Agro-processing is Rwanda's strongest component, accounting for 19.7 percent of non-agricultural food system GDP, higher than the LIC average (14%) and broadly comparable to LMICs (14.4%) and UMICs (16.2%). This suggests that Rwanda has made measurable progress in downstream value addition, likely reflecting policy prioritization of processing industries. Although the processing sector is promoted as a sector with high potential in terms of economic development and employment creation, at present it remains relatively small. The processing sector is characterised by a considerable dependence on government and development partner support, due to the high initial investment costs, and the skills needed, especially for new production techniques such as controlled environment agriculture (interview with young agri-entrepreneur, October 2025; interview with development partner, September 2025). Whilst the sector creates employment opportunities for young people, they are often hired as casual workers, with largely low pay due to Rwanda's high unemployment levels. This and the lack of a national minimum wage in Rwanda creates decent work concerns as many youth are forced to take low paying jobs with limited alternatives (Labour rights Index, 2024). Another challenge faced by the processing sector is the lack of local machinery. Machine and other inputs needed for food processing are dependent on imports, increasing the cost of production but also posing challenges with regards to maintenance and repair. Nevertheless, food-processing has a potential to drive up wages, especially with increasing regional and international markets.

Trade and transport, a critical segment for linking farmers to markets and enabling scale, accounts for only 18 % of Rwanda's non-agricultural food systems. This is less than half the LIC average (41.9 %) and far below LMIC (30.9%) and UMIC (22.5%) levels according to the food systems dashboard. It accounts for 2.24% of total employment and contributes 2.19 % to the GDP (Diao et al. 2025). In most transforming economies, this segment expands rapidly, absorbing labour and reducing transaction costs. Rwanda's unusually small share points to structural and regulatory constraints, particularly affecting informal and small-scale urban food trade.

The food trade in Rwanda is characterised by a dual system: priority crops are sold to government owned depots at fixed prices whilst non-priority crops are sold on local informal markets embedded in territorial food systems. Key informants mentioned how small-scale farmers found it difficult to demand fair prices for priority crops, due to their abundance and high levels of poverty resulting in them accepting whatever they can get. In the worst cases small-scale farmers ask for an advance payment to be able to produce their crops and accept an even lower sale price in return. Big agri-businesses can wait for prices to get better or to sell out of season (Interview with CSO representative, September 2025; Interview with Government official, October 2025).

The territorial markets are key to ensuring access to food and a healthy diet for rural citizens. Whilst most territorial markets have access to water, toilets and electricity, warehouses and cold warehouses are almost non-existent leading to considerable food waste (Fadiji, 2025). Although 70% of the vendors in territorial markets are women, women retailers earn half of what male retailers earn, according to a (FAO) mapping (FAO, 2023).

According to the food systems dashboard, the input supply segment dominates Rwanda's non-agricultural food systems at 62.3 %, far exceeding LIC (38.6 %), LMIC (44.5 %), UMIC (46.3 %), and HIC (29.1%) averages. This suggests a heavy cost structure driven by imported inputs, regulated supply chains, or subsidies, rather than a diversified ecosystem of domestic manufacturing and services. Finally, food services account for just 7.1%, compared with 14.0 % in LICs and 10.3–15.0 % in LMICs and UMICs, reflecting limited urban demand and slow expansion of hospitality and formal retail.

### 3.4. Food consumption patterns

Rwanda's agri-food system has successfully increased agricultural productivity and food availability, significantly reducing child stunting, but food security remains a significant challenge for many Rwandan households. Nutrition outcomes reflect both achievements and ongoing challenges. According to the food systems dashboard, the state of food availability in Rwanda reflects a diet heavily reliant on staple foods, with notable gaps in nutrient-dense options. A significant 55% of dietary energy comes from cereals, roots, and tubers, which is substantially higher than the global average of 45%. While there is relatively strong availability of fruits (272.1 g/capita/day) and pulses (86.4 g/capita/day), other key food groups are in short supply.

Critical deficits exist in vegetables, protein sources, and healthy fats. The availability of vegetables (124.8 g/cap/day) is lower than the regional average, and supplies of meat (18.6 g), fish (14.1 g), and eggs (1 g) per capita per day are also below sub-Saharan African levels. This low national-level availability of diverse, nutritious foods directly limits consumption patterns, reinforcing a high-starch, low-protein diet that underpins the nation's high levels of malnutrition and micronutrient deficiencies, particularly for vulnerable groups like women and children (Food systems Dashboard, 2025).

Government programmes including Girinka have improved access to animal proteins, though malnutrition rates remain elevated in some regions. Dietary diversity has improved in some areas but remains limited for the poorest households. Seasonal food security patterns reflect the dominance of rain-fed agriculture and limited storage capacity (Agritech, 2025). Food prices typically increase during lean seasons, disproportionately affecting poor households with limited purchasing power. The Crop Intensification Program (CIP) has shifted consumption patterns, for example, people's diets have now incorporated maize flour, a key staple, instead of sweet potato. Consuming a diverse set of fruits and vegetables, including both traditional and modern crops, would allow for a more balanced diet.

*“Before CIP, most of Rwanda was growing sweet potatoes, cassava, multi-cropping. When starting the crop intensification, they promoted Maize, because storage is very easy. At the beginning more land shifted to maize, in our culture the main food was beans, sweet potatoes and cassava, they didn't know how to make or eat maize flour. That was an issue. Now when we go to family in rural areas there is always a sack of maize flour, which had not existed before. Shifting from one recipe to another recipe is not easy. But now there is no problem. Sweet potatoes became a business. Before, the price was too low. Most producers used them for animal feed. But when we promoted the maize the land occupied by sweet potatoes was reduced and traditional crops became another business”* (interview with RAB official, November, 2025).

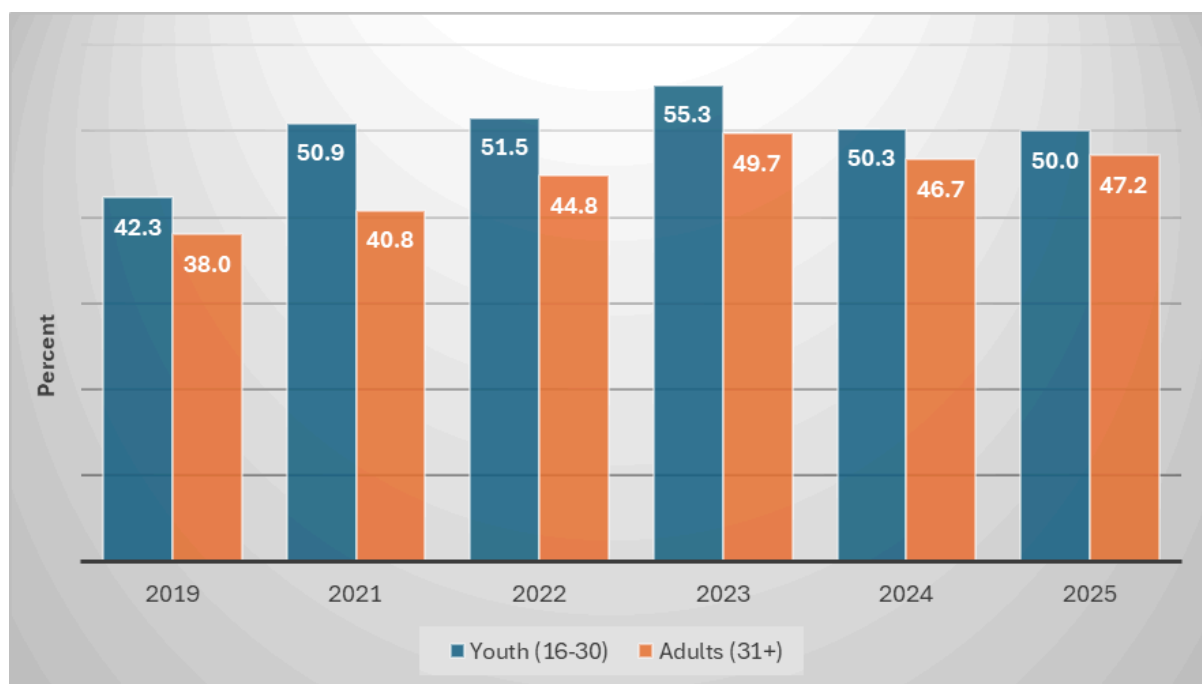
## 4. THE JUST FOOD SYSTEM TRANSITION: CROSS-CUTTING FINDINGS

### 4.1 Youth and gender analysis of Rwanda's FST

Rwanda's food systems are profoundly shaped by the demographic weight of youth and women, who remain the backbone of agricultural labour but continue to face structural disadvantages within the sector. According to the Seventh Integrated Household Living Conditions Survey (EICV7), 53.3% of working youth are employed in agriculture, a figure that climbs to 69.1% among rural youth compared to 16.1% for urban youth, underscoring the centrality of food systems for rural livelihoods. Yet this participation is marked by vulnerability: 28% of all youth are unpaid family workers, with young women disproportionately represented, reflecting persistent gender gaps in access to land, capital, and productive assets. Young women also participate in agriculture at higher rates than young men, 61.1% versus 45.5%, but remain largely concentrated in subsistence-oriented, low-return activities. Off-farm opportunities in agri-processing, logistics, retail, and agri-services are expanding, yet youth and women remain underrepresented in these higher-value segments; only 13.3% of youth work in industry—where most agri-processing jobs lie—and 33.4% in services, with rural youth particularly excluded. The pressure to seek better livelihoods is evident in mobility patterns: 31.5% of youth who migrated did so to look for work, signalling the limited diversification of rural food economies. Overall, the data paint a picture of a food system that is labour-absorbing but not yet structurally transformative, with young people, especially rural young women, locked in low-productivity roles despite emerging opportunities in modern value chains.

Youth are increasingly driving the shift from subsistence to market-oriented agriculture, embracing their roles as “agripreneurs”. This is evidenced by their engagement rate growing from 42.3% in 2019 to a peak of 55.3% in 2023—a 31% increase (NISR, 2025). This notable shift is largely driven by the National Strategy for Transformation (NST2) and PSTA 5 frameworks, which have institutionalized “agripreneurship” through digital innovation and anchor-farmer hubs. The increase reflects a transition where youth leverage advanced digital skills and inclusive financial systems to move from primary production into high-value midstream activities like processing and mechanical support (MINAGRI, 2025). Furthermore, the professionalization of the sector, supported by platforms like the Youth FAST Forum, has repositioned agriculture as a competitive, market-linked business rather than a subsistence default (NISR, 2025). Critically, youth have consistently shown higher participation than adults (31+), with the gap being most pronounced in 2021, where youth engagement led by 10.1 percentage points (NISR, 2025). This trend suggests that young people are not just involved but are more active in commercial, market-focused agriculture, positioning them as key agents in modernising the sector (see Figure 4).

**Figure 4: Trend of proportion of workers in market-based agriculture by age group**



Source: National Institute of Statistics of Rwanda (NISR), Labour Force Survey, 2025, Q2

#### **4.2. Youth Perspectives of Rwanda’s Food System Transformation**

The focus group discussions revealed diverse youth perspectives on just food systems transformation. Youth largely defined the food system in narrow terms, focusing on agricultural production and local market trade, with some inclusion of transport. Activities such as food processing, hospitality, catering, and consumption were rarely considered. Most participants engaged in the food system primarily as farmers, combining subsistence production with income generation. Contrary to dominant narratives portraying agriculture as a fallback option, several youths described farming as a deliberate strategy to differentiate themselves and build future opportunities. In other instances, young urban youth engage in farming as a “side hustle”. *“Agriculture is an opportunity for progress, enabling us to build homes or meet needs.”* (FGD participant, Gakenke, August 2025). This view of agriculture as a stepping stone rather than an endpoint was echoed in key informant interviews and the literature, including cases where young farmers used agricultural income to diversify into non-farm enterprises, such as transport services supported through IFAD programmes (IFAD, 2025).

Participants consistently highlighted the need for improved training and knowledge of modern agricultural techniques to increase productivity and reduce costs. Digital technology use remained limited, largely confined to basic mobile phones, WhatsApp, and, in one district, small-scale processing machinery. While youth broadly acknowledged government support, particularly for climate change adaptation, such as tree-planting and terracing, many also pointed to persistent structural barriers, including poor road infrastructure, limited market access, constrained access to land and finance, inadequate vocational training, and ongoing gender inequalities. The Smart Nkunganire System (SNS) was frequently cited across FGDs as a positive intervention with potential for expansion.

### Box 1: Smart Nkunganire System to enhance access to agriculture inputs

The Smart Nkunganire System (SNS) is an innovative tool to link and empower stakeholders involved in the subsidy programme that handles fertilisers, improved seeds, pesticides, mechanization and small-scale irrigation technology, among other items. The system, built by Rwanda Agriculture Board (RAB) in collaboration with BK TechHouse in 2018, also enables farmers to receive advisory messages from experts on best practices, as well as warnings or general notification from different stakeholders. The platform is accessible to farmers and other stakeholders via a Mobile App or a Web-Based App (MINAGRI, 2025).

SNS has enabled over 1.9 million farmers to access essential inputs like fertilisers and seeds. The real-time data tracking, farmer empowerment tools, and market development initiatives have fostered transparency, efficiency, and inclusivity in the agricultural sector (Sartas, et al., 2024). Some challenges remain in areas such as digital supply chain management, financial processes, and user experience, as well as accessibility as vulnerable farmers without smartphones cannot access the app unless they have access to a computer. Only 8% of female farmers have access to smartphones and 17% of men, resulting in access to agricultural advice through apps being minimal, lower than 2% (CGIAR, 2024). To increase accessibility among vulnerable groups, RAB should consider increasing access to digital tools and exploring alternative, low-tech methods such as radio, which remains a key source of agricultural information for rural populations (ibid).

Fostering collaboration, investing in capacity building, and maintaining a steadfast commitment to user-centric design are essential to ensure the system's long-term sustainability and effectiveness (Sartas et al., 2024).

Climate change emerged as a universal concern, with participants recognising that current food system practices are environmentally harmful.

*“ In Bugesera we see that the food system, from farming to processing, transporting, and selling affects our environment in many ways. Deforestation, soil-erosion, pollution from transport, and waste from markets all harm the land and water. To protect our future, we need a food system that cares for both people and nature.” (FGD participant, Bugesera, August 2025)*

Table 4 below illustrates the climate-related challenges youth are facing and the adaptation strategies they have adopted. Flooded roads restricting market access, droughts, and increased pest prevalence linked to erratic rainfall patterns were commonly reported. Youth described adaptation strategies such as irrigation, tree planting, terracing, crop rotation, intercropping, and bicycle use for market access, often supported by government programmes. The positive reception of climate change adaptation government programmes by youth in both rural and urban settings, support their uptake. Through in-depth community

vulnerability mapping, the government should make sure that such programmes are also benefitting the most vulnerable groups, such as young people with disabilities.

**Table 4: Climate Change & Risk Mitigation**

District	Impact	Adaptation
Musanze	Bad roads, heavy rain affect yields	Irrigation, bicycles
Gakenke	Late rains, poor ventilation (100%)	Tree planting, terraces
Huye	Delayed planting, droughts (100%)	Rotation, irrigation
Gisagara	Erosion, water scarcity	Terracing, irrigation
Rwamagana	Heavy rain & sun reduce yields	Timely planting, irrigation
Bugesera	Heavy rains/sun cause failure	Community adaptation
Gasabo	Reduced productivity, high losses	Government sensitization

Source: developed by authors

From a distributive justice perspective, young FGD participants broadly agreed that food should be accessible to everyone and framed access to food as a universal right. However, many noted that this right is constrained by structural barriers, including low incomes and poor road infrastructure that limit access to markets. Youth also highlighted how the Crop Intensification Programme (CIP) can restrict dietary diversity by limiting farmers to priority crops in designated areas, leaving little land available for growing food for household consumption.

Recognition justice emerged as a key concern, with participants emphasising that youth are not a homogeneous group. Differences in representation were noted between rural and urban youth, as well as among those engaged in different segments of the food system. Urban youth were perceived as more visible in food systems governance, while young farmers, transporters, women retailers, and service providers were seen as underrepresented.

*“It’s not the same, youth from urban areas receive more attention, while youth from rural areas are the ones who need more support.” (FGD participant, Bugesera, August 2025)*

*“Representation should include the whole chain – farmers, traders, and delivery services.” (FGD participant, Gisagara, August 2025)*

Perceptions of procedural justice varied across districts. Around 60% of FGD participants reported some level of participation in government-led consultations or workshops, particularly at the sector level.

*“Yes, we played a role in developing those guidelines by participating in sector-level meetings that discussed farming best practices we should follow.” (FGD participant, Gakenke, August 2025)*

At the same time, youth expressed a nuanced understanding of participation. While they valued opportunities to share their views, many emphasised the importance of learning from elders and technical experts, including government officials and development practitioners.

Respect for seniority and experience shaped expectations of engagement, suggesting that youth do not seek participation for its own sake but rather as a pathway to skills development, resilience, and improved livelihoods within the food system.

Views on distributive justice differed across locations. In some districts, participants felt that youth and women were benefiting from food systems transformation due to targeted government and donor programmes. Others argued that benefits accrued disproportionately to those with capital, who are better positioned to invest in change. Several youth pointed to the role of middlemen and large retailers in weakening smallholder bargaining power, while inadequate transport infrastructure was consistently cited as a major barrier to equitable benefit-sharing, excluding those without reliable market access from food systems transformation.

### **4.3. Gender Roles and Women's Participation**

There is a high level of informality in Rwanda's labour market with 90% of women (compared to 88.3% of men) working in the informal economy (NISR 2025b). As shown in the figure 4 below, most women in Rwanda work in agriculture (UN WOMEN, 2023). Despite the government emphasis on gender equality and high representation of women in Rwanda's legislative institutions (63.75 % of the seats in the Chamber of Deputies are held by women) women face a considerable wage gap (38.5 per cent at the monthly level). The unadjusted gender pay gaps are seen across all educational levels, being widest among secondary-educated individuals (UN WOMEN, 2023).

Gender dimensions of food systems reveal significant disparities in access to resources and decision-making power. Female participation in the food system differs across the different sub-sectors with women being predominantly present in the processing and trade sub-sectors. Despite women being the majority of informal food retailers, they earn half as much as their male counterparts (FAO, 2023). Female youth are significantly more likely to be engaged in part-time or reduced schedules, with 52.4% working 30 hours or less weekly. This division reflects a gendered labour pattern that limits economic recognition and autonomy, while young men are overrepresented in higher-hour work, granting them greater financial independence (NISR, 2025b). Women and youth both experience higher levels of unemployment at 23.4% and 29.4% respectively, both approximately 7 percentage points higher than their male counterparts (NISR 2025b). Additionally women 16 years and above on average earn only 63% of their male counterparts (NISR 2025b).

Women farmers are more likely to have lower education levels and practice subsistence farming than their male counterparts. Women farmers face barriers to land ownership, credit access, and participation in agricultural value chains, though government policies increasingly emphasize gender equity. Additionally, most juggle unpaid household work, like cooking, cleaning and raising their children, amounting to less time in the field. And they have less access to land and tools that can get them ahead, including financing, farming services, and markets (WFP, 2024). Cultural norms continue to influence women's participation in agricultural activities and market engagement. Key informants and FGD participants for instance mentioned how it is culturally difficult for women to engage in agri-business and make good money. If women become the primary breadwinner, men fear

their household decision power will diminish (Farnworth et al., 2023).

*“Women are working more in agriculture, but they are not the small-holder farmers. In the rural areas of Rwanda, there is some activity for men and some for women. Women are more in agriculture, they are more in agriculture for feeding the family, if it’s a cash crop the men come. The man gets the money, but (most of) the activity is done by the women”* (Interview, RAB official, October 2025)

Women's cooperative participation has increased substantially, providing platforms for collective action and resource access. However, due to structural barriers such as cultural norms and inequality in access and control over resources, leadership roles in cooperatives remain male-dominated in many areas, limiting women's influence in decision-making processes (FGD cooperatives, October 2025). The FGDs held with women demonstrated a diverse set of reasons for entering the food system. Motivations included reducing household expenses, generating income, continuing family tradition, and lack of other job opportunities. For example, in Gisagara, 40% cited lack of opportunities and 60% cited scarcity of income, while in Huye, 60% joined farming due to unemployment and 40% for savings and knowledge. The distributive justice analysis of female FGD participants emphasised the need to address structural inequalities such as access to finance, land and knowledge, to improve equal distribution. Related to procedural justice, perceptions among female FGD differed. Rwamagana women mentioned they felt informed but not consulted *“They only tell us what to do...”*. Whilst female farmers in Gasabo and Huye stated they have the freedom to decide directly. In Gakenke, women highlighted dependence on their husbands' support. When discussing recognition justice, across all FGDs women felt traditional practices such as terracing were respected and that women's role was acknowledged although lingering inequalities related to access to farm resources, capital and knowledge of modern farming techniques, limited inclusive FST by undermining distributive justice. Women across the FGD emphasised the need for training and cooperative empowerment to tackle structural inequalities and achieve restorative justice, whereby women are seen and respected as equal actors throughout Rwanda's FS. In some cases, the participation of women in the food system increased their role in family decision making.

#### **4.4. Digital transformations and FST**

Digital transformation is a central pillar of Rwanda's food systems transformation, supporting productivity growth, market integration, and service delivery across agrifood value chains. National strategies, including NST2 (2025–2029) and the Five-Year Youth Sector Strategic Plan, position digitalisation as a driver of structural transformation, youth employment, and the shift toward more commercial, knowledge-intensive agriculture (UNDP, 2024; World Bank, 2025; MINECOFIN, 2024; MoYA, 2025). Among Rwanda's flagship digital interventions, e-Soko stands out as an early and influential public market-information system. Developed by MINAGRI under the e-Rwanda Project, the platform provides real-time commodity price data through SMS, web, and IVR services, aiming to reduce information asymmetries, strengthen farmers' bargaining power, and improve market efficiency. Over time, e-Soko has evolved into a critical public data infrastructure, informing policy analysis, food security planning, and assessments of market performance nationwide (MINAGRI, 2025). Its extensive network of trained market agents generates high-frequency

price data across 65 markets and more than 140 commodities, contributing to evidence-based interventions and positioning Rwanda as a regional benchmark for digital market-information systems (MINAGRI, 2025).

Despite these strengths, e-Soko's impact remains uneven. Structural digital divides—linked to income, location, gender, literacy, and connectivity—limit effective access, particularly for rural and low-income youth. National data show that internet use among youth aged 16–30 remains low at 28%, with pronounced urban–rural, gender, and wealth disparities (NISR, 2025b). Usability challenges, language barriers, limited digital literacy, inconsistent network coverage, and data costs further constrain uptake. Youth consultations indicate strong interest in price-information platforms, but also highlight the need for simpler, more accessible, and locally relevant formats (Youth FGD, August 2025). Moreover, reliance on SMS-based delivery models and mobile operators has raised concerns about commercial incentives and the limits of information provision where farmers lack transport, finance, or market access. Nonetheless, e-Soko remains a strategic public good with significant potential to advance distributive, procedural, recognition, and restorative justice within Rwanda's food systems by democratizing access to market information and integrating smallholder realities into national planning processes.

Beyond e-Soko, Rwanda's digital ecosystem includes complementary platforms addressing production, climate resilience, and regulation. The FAO Digital Services Portfolio (DSP) provides localized weather alerts, crop calendars, livestock guidance, and advisory services, supporting climate adaptation in a highly climate-exposed sector (FAO, 2024). While promising, uptake remains constrained by limited smartphone ownership, weak rural connectivity, and digital skills gaps—particularly among young women—prompting recent efforts to expand access through AI-enabled advisories, device distribution, and farmer training (FAO & MINAGRI, 2024).

At the institutional level, IremboGov Rwanda digitizes over 100 public services, including 19 directly linked to agriculture, trade, and natural resource management. By streamlining licensing, permits, tax exemptions, and land and forestry services, the platform reduces transaction costs and strengthens regulatory efficiency across the food system (Irembo, n.d.). Input access has been further digitized through the Smart Nkunganire System (SNS), developed by RAB to manage subsidized fertilisers, seeds, mechanization, and irrigation technologies. SNS has reached over 1.9 million farmers, improving transparency and coordination in subsidy delivery (Sartas et al., 2024; MINAGRI, 2025). However, limited smartphone access, particularly among women, continues to restrict inclusivity, underscoring the need for complementary low-tech channels such as radio (CGIAR, 2024).

Cross-cutting implementation efforts, including the Digital Ambassadors Programme and targeted digital-skills initiatives for youth and women, aim to strengthen digital literacy, financial inclusion, and market participation (FAO, 2023; FAO & RDB, 2023; FtMA, 2024). Yet, overall adoption of agritech remains modest. While approximately 45% of Rwandan youth engage in agriculture, only 18% use digital agricultural technologies, reflecting persistent barriers related to skills, costs, connectivity, and weak integration between agritech platforms, finance, and extension services (World Bank, 2025; Heifer International, 2021).

Overall, Rwanda's digital transformation agenda has established strong institutional foundations and flagship platforms for food systems transformation. However, without sustained investment in digital access, user-centred design, skills development, and systemic integration, digital innovations risk reinforcing existing inequalities rather than delivering inclusive, youth-responsive, and resilient food systems.

## 5. JUSTICE & YOUTH ENGAGEMENT WITHIN RWANDA'S FST

### 5.1. Justice within Rwanda's FST

#### 5.1.1. Distributive Justice

From a distributive justice perspective, food system benefits should be accessible to all. However, Rwanda's strong policy emphasis on productivity has left some social groups behind. As one key informant noted:

*"Rwanda is a landlocked small country so reduction of imports and increasing export is a key goal: to be as self-sufficient as possible and reduce the import-bill so productivity comes front and foremost in the hierarchy [of policy goals]"* (interview with IFAD country manager, October 2025).

Given Rwanda's food security context, this prioritisation is understandable; yet an overriding focus on productivity risks sidelining justice, inclusivity, and environmental sustainability.

Young FGD participants consistently affirmed that food should be accessible to all and framed it as a universal right. However, they highlighted structural barriers that undermine this right, including low incomes and poor road infrastructure limiting market access. Participants also pointed to the Crop Intensification Programme (CIP) as constraining dietary diversity by preventing households from planting crops for their own consumption. While young farmers frequently cited low farm-gate prices, rural youth across districts emphasised high food prices as a major barrier to equal access (FGDs, August 2025).

These concerns resonate with broader scholarship on Rwanda's Green Revolution, which has strengthened the role of middlemen at the expense of smallholders (Ansoms, 2020). While the CIP has stabilised staple food prices at the national level, contributing to food availability for the wider population, it has in some cases undermined food security at the household level. Several key informants noted that crop specialisation increased vulnerability, as farmers became dependent on a single crop rather than diversified production for household needs. One agri-influencer explained:

*"The transition was not easy; farmers were not made aware of the long-term benefits of crop intensification. I understand them. The government should improve sensitization around the CIP."* (interview with agri-influencer, November 2025).

By contrast, government representatives often framed these challenges as expected features of transition, emphasising farmers' responsibility to adapt (interview with government representative, September 2025). However, primary data suggest that income instability and low profitability are central reasons why many young Rwandans are reluctant to enter agriculture. Climate change further exacerbates this uncertainty, exposing farmers to weather-related shocks and undermining productivity gains (Musafiri & Sjölander, 2018). Although preferential credit schemes for young agri-entrepreneurs have recently been introduced (interview with development partner, October 2025; interview with government

official, November 2025), qualitative findings suggest limited awareness among youth and an uncertain impact to date.

Empirical evidence shows uneven income outcomes from the CIP across regions and crops. Farmers in the Western Province record the lowest revenues, while wheat production remains economically unviable without sustained subsidies (Miklyayev et al., 2021). Although land consolidation can increase revenue per hectare, results are mixed and transitions uneven (Del Prete et al., 2019). Rwanda thus faces a persistent tension between diversified subsistence systems and market-oriented agriculture, and between national food security objectives and household-level food security.

Key informants reflected this tension. Some argued that incomes from priority crops such as maize are insufficient to meet household food needs (interview with CSO representative, September 2025), while others highlighted gains such as improved capacity to pay school fees or purchase uniforms (interview with development partner, September 2025). These divergent experiences underscore the uneven distributive outcomes of food systems transformation.

Given limited profitability in domestic food markets, several key informants observed that youth increasingly aspire to engage in export-oriented agriculture (interview with development partners, October 2025; interview with RYAF, November 2025). However, young agri-entrepreneurs highlighted substantial entry barriers, including access to finance, limited regulatory knowledge, and compliance with health and safety standards (interview with young agri-entrepreneur, October 2025).

Subsidies under the CIP—intended to support small holders during transition—were described by some informants as creating unintended distortions. One government representative explained:

*“When a small farmer gets some small money they create some business, they buy a machine for making floors, get a motorcycle or start a SME. In the eastern region we are seeing a shift to big farms, because small holders are moving out. I think the subsidy will stop, because when they make money, they leave agriculture.”* (interview with government institution representative, November 2025).

This suggests a paradox whereby subsidies may accelerate exit from small holder farming rather than long-term agricultural upgrading.

Gendered distributive inequalities were evident across interviews and FGDs. Men were perceived to control land, capital, and labour, with dominance particularly pronounced in food distribution and brokerage—patterns consistent with World Bank (2025). Brokers benefit from privileged access to information and markets, capturing value through low farm-gate prices and higher consumer prices, while women remain concentrated in subsistence farming and small-scale trade. Digitalisation has reinforced these disparities, with young men better positioned to exploit digital tools, while young women face barriers related to access, skills, and affordability.

Spatial inequalities further shape distributive outcomes. FGDs confirmed that youth opportunities vary significantly across districts, with peri-urban and urban-adjacent areas offering greater access to markets, services, and infrastructure. In rural districts, smallholders often produce maize, yet profits disproportionately accrue to large farmers based in urban areas who own extensive rural landholdings (EC, 2024). Value-added activities such as milling, packaging, and marketing are similarly concentrated in urban centres where electricity and market access are more reliable.

Finally, development partner interventions face inclusivity challenges. Evidence suggests a concentration of donor support among a small group of well-connected “donor darlings”, enabling them to capture repeated funding opportunities, while less-connected youth are excluded (interviews with young agri-entrepreneur, October 2025; development partner, October 2025). A critical reassessment of selection criteria and targeting mechanisms is therefore needed to ensure that distributive justice objectives are realised across Rwanda’s food system.

### **5.1.2. Procedural Justice**

Procedural justice refers to the meaningful inclusion of diverse stakeholders, particularly youth and women, in food system transformation governance, spanning policy design, implementation, monitoring, and evaluation. In Rwanda, the state plays a central role in shaping food system policies, strategies, and programmes. Strong central leadership has driven agricultural transformation and digitalisation, as reflected in current policy frameworks. However, the highly centralised, top-down governance of Rwanda’s food system risks constraining the influence of vulnerable youth, especially those in rural areas and those less connected to formal government structures.

Policy implementation is largely coordinated between central and district governments, reflecting Rwanda’s decentralised administrative system. While consultative forums exist at local levels, development remains predominantly top-down. Youth engagement is formally channelled through the National Youth Council (NYC), which undertakes consultation, advocacy, and sensitisation activities to promote youth participation in governance and development processes. With representation across provinces, NYC has the potential to reach both rural and urban youth. In practice, however, outcomes are mixed. Some FGDs reported participation in government consultations, while others indicated limited or no involvement.

RYAF also plays a key role in representing youth perspectives in the food system. One of its stated objectives is to make public policy more youth-friendly. However, its effectiveness is constrained by its funding relationship with MINAGRI, which limits its ability to take a more critical stance. Moreover, RYAF primarily represents agri-entrepreneurs with established businesses, excluding young smallholder farmers in rural areas and youth operating informal enterprises.

To strengthen extension services, the government—supported by development partners—organised farmers into cooperatives. Since 2014, the farmer-to-farmer agro-extension model known as *Twigire-Muhinzi* has facilitated the rapid dissemination of improved farming practices (Miklyayev et al., 2021). Despite these gains, cooperatives face structural weaknesses due to their top-down formation, including weak leadership, poor internal governance, limited financial accountability, and clientelism, with well-connected farmers leveraging cooperatives for personal advantage (interview with CSO representative, October 2025).

Primary data indicate that many stakeholders feel inadequately involved in policy design, monitoring, and evaluation. Although consultations are held, participants noted that their views are considered only insofar as they align with pre-defined national strategies. Several development partners and local NGOs acknowledged that they “work with the government,” but highlighted limited space for critical engagement beyond official discourse. As one participant noted:

*“No, we have never had a role in formulating those policies”* (FGD participant, Gakenke, August 2025). In addition, the Crop Intensification Program (CIP) has limited supplier diversification, with specialisation reducing the bargaining power of smallholder farmers.

Divergent perceptions of youth participation reveal persistent gaps in policy processes. While government efforts to promote participation were recognised, FGDs emphasised that key decisions remain centralised, particularly in districts where NYC representation is weaker. Survey data suggest age-based disparities: 53% of youth aged 26–35 and 49% aged 20–25 agreed or strongly agreed that youth are accorded equal decision-making opportunities in agroecology value chains, indicating that older youth—often more independent from parents—have greater influence. Nonetheless, youth participation is frequently confined to low-power roles as workers or micro-entrepreneurs, with limited influence over pricing, resource allocation, or governance. In rural areas, only 47% of youth perceived equal decision-making opportunities compared to 53% in urban areas (EOA, 2023).

During the 2024 Africa Youth in Agribusiness Forum, the Chair of RYAF underscored this gap, stating: *“We don’t want to be beneficiaries, target numbers; we want to be actors and contribute”* (FAO, 2024). At the same time, some youth emphasised the importance of listening to government officials and experts, recognising their experience and knowledge as valuable for skills development.

Development partners and local CSOs noted that inclusivity is embedded in policy frameworks (interviews with local NGOs, October 2025). However, they stressed that youth inclusion often remains rhetorical and insufficiently translated into practice. Greater farmer and youth representation in district planning processes, structured engagement with youth-led cooperatives, and clearer links between participation and access to finance, land, and markets were suggested as ways forward (interview with young agri-influencer, October 2025).

At local levels, institutions such as the Rwanda Agriculture Board (RAB) maintain closer relationships with farmers and rural communities. RAB officials acknowledged that farmers, despite limited formal education, possess deep contextual knowledge of their land and crops. While farmer feedback is incorporated during local implementation, farmers have minimal influence over national policy directions (interviews with government officials, October 2025).

Development partners also face challenges in fostering genuine participation. Although quota systems have improved youth and women's inclusion, treating them primarily as beneficiaries rather than co-creators raises sustainability concerns. Examples were cited of greenhouse projects failing due to weak ownership, leading to deterioration and abandonment (interview with CSO representative, October 2025).

Low education levels and limited access to information remain the most significant barriers to meaningful participation. This was strongly emphasised during FGDs with cooperative representatives. According to the Agricultural Household Survey 2024, 82.7% of farmers have not progressed beyond primary education, including 14.6% with no formal education (NISR, 2024). While collective organisation can theoretically enhance political leverage, limited skills, fragile trade unions, and restrictions on collective bargaining constrain farmers' and young workers' ability to engage in social dialogue and advocate for improved working conditions across the value chain.

### **5.1.3. Recognition Justice**

Recognition justice refers to the need to include the heterogeneous set of youth voices, needs, and aspirations in Rwanda's FST. It implies taking into account and tackling existing inequalities and power-imbalances and being aware of multiple articulations of sustainability. For recognition justice to take place diverse stakeholders should take part in the FST, having the freedom to share their views, and express their needs. A just FST from a recognition justice point of view is the result of a consensus between various stakeholders, across the FS, with competing views. Recognition justice plays out differently in Rwanda depending on the scale of analysis. At the national level, there is limited space for freedom of speech and recognition of grassroots opinions. Yet an increasing number of farmers, at district levels are finding ways to express their opinions and sometimes question government policies through their interactions with local level government officials. RAB officials interviewed value the knowledge and experience of farmers and sometimes adapt their programmes based on farmer inputs. A RAB official, for example, mentioned:

*“For our smallholder farmers, the problem is not the low education. At the village level, there are farmers of over 50 years, who have been working for about 30 years. They know how to grow their crops, how to manage their crops. They (the farmers) challenge us”.*

He went on to give an example of potato farmers working on volcanic soil, who questioned the amount of fertiliser that was suggested by RAB, stating their soil type required a higher dose. RAB went back to do lab analysis of the fertilisers per soil type and reaffirmed what

the farmers knew from their own experience. Overall, however, key policies focus on market-oriented agricultural development, undermining traditional farming practices. Although climate change has pushed the government to re-incorporate some indigenous farming practices such as terracing and inter-cropping.

Whilst many government and development partner programmes are specifically geared towards youth, extra effort could be made to ensure that vulnerable youth are equally benefitting, and youth with disabilities or those living in remote areas are also included. Recognition justice does not only depend on the government opening up space for young people to express their opinions. It requires an educated, active citizenship which feels empowered to question the hegemonic government discourse, if this goes against their interests. Yet, most young FGD participants indicated they rely on the opinions of elders and government officials, indicating many young people, especially in rural areas, do not feel confident enough to go against the status quo.

Lastly, Rwanda also has some of the most gender-progressive policies globally. Women's representation in the public sector has been instrumental in advancing policies to combat domestic violence and promote gender equity in economic participation (Singh, 2024). Their participation in public institutions has facilitated the development of policy and institutional frameworks that support women's empowerment in food systems. However, women's participation in the private sector remains low, particularly in high-paying industries and food system activities. The progressive policy framework has not adequately addressed the barriers that hinder women's involvement in these areas. Young women's participation in food value chains is largely confined to low-value activities on farms and in small markets, as they often lack the resources needed to move up the value chain. Their choices are shaped by limited access to inputs and the need to meet household consumption demands. In contrast, young men emphasized favourable climatic conditions and market demand as the primary determinants of their participation in food system activities (Rutabagaya et al., 2025).

#### **5.1.4. Restorative Justice**

Restorative justice signifies that damages done to people and the planet by the food system are restored. For example, with farmers being compensated for income losses related to agricultural transitions or programmes to re-wild, or re-forest to restore natural ecosystems that have been damaged by crop intensification. Like all other justice aspects, restorative justice is framed by the context of Rwanda's FS:

*“The biggest challenge is the relation between the large population, more than 14 million people, and limited amount of arable land. In crop rotation systems there is normally a rest period. (In Rwanda) due to the high demand soils are constantly planted on and chemical fertilisers are used in a bad way, so we actually see yields declining due to bad use of chemicals”* (Key Informant Interviews, CSO).

The above illustrates that the focus on increasing productivity has a detrimental impact on the environment. Although the government has increased its focus on restoring the natural

habitat by promoting agri-forestry and terracing to combat erosion, its priority on market-oriented agriculture risks undermining such efforts due to the negative impact intensive agriculture has on soil-erosion and biodiversity. There is growing interest in sustainable agricultural approaches such as conservation agriculture, with specific university courses dedicated to such techniques, yet the socio-economic reality of many small-scale farmers does not allow incorporating such practices. They live so close to the poverty line that they do not want to risk a decrease in yields due to a transition away from chemical fertilisers or pesticides. As one young agri-influencer practicing conservation agriculture stipulated:

*“Conservation agriculture is the way forward but sadly it is not yet applicable for small-holder farmers as they do not have the sufficient amount of land to make the transition without jeopardising their livelihoods”* (interview with agri-influencer, September 2025).

A national shift towards sustainable agriculture requires the creation of an enabling environment supported by government interventions, such as: providing financial support to farmers during the transition away from chemical fertilisers and pesticides (as yields often decrease during this period; providing access to land where young farmers can experiment regenerative farming techniques or conservation agriculture; promoting natural fertilisers and multicropping (a natural way of decreasing pests); and expanding current courses and degrees in sustainable agriculture. Importantly, these efforts should be embedded in the reality, experience and knowledge of traditional Rwandan farmers and to a lesser extent by introducing “foreign” climate smart agricultural practices such as, controlled environment agriculture, which risk undermining recognition justice and making young farmers dependent on expensive inputs which, yet, are not being developed nationally (key informant interview, young agri-entrepreneur).

REMA, which is mandated with protecting Rwanda’s natural environment, has a key role to play in refocusing restorative justice within Rwanda’s FST. Whilst MINAGRI clearly holds increasing productivity as its key objective, if needed to the expense of the natural environment, REMA’s priority is environmental protection. Interestingly, government officials noted that within the hierarchy of policies and government ministries the power of REMA is considerable.

*“The main aim is to increase productivity but as environmentally friendly as possible. This is difficult, some technologies we cannot implement or introduce due to environmental considerations; For example, if we want to import plastics to build greenhouses: we must pass by REMA to ask the authorisation to import the plastic for the greenhouses. If there is some conflict with the environment, the technology cannot be adopted, and we must comply with the Environment regulations.”* (Interview with RAB official, November 2025).

On the other hand, restorative justice is about addressing structural inequalities. In this regard the government has implemented various programmes to improve youth and women’s empowerment, with substantial support from development partners such as UNECA, UNDP, and FAO, among others. For instance, UNDP has supported

climate-resilient, youth-led agricultural projects, including horticulture, fruit farming, and cash crops, that contribute to climate change mitigation and adaptation while also creating employment opportunities for young people (Uwimana, 2023). UNECA has played an active role in strengthening the capacity of young people, including women, to benefit from market opportunities created by the AfCFTA. These initiatives, provided at the request of the Rwandan government, have improved understanding of the AfCFTA, export requirements, and compliance with standards, issues that are particularly critical for effective participation in regional and global trade. Promoting youth employment in agri-food systems has also been a key priority for development partners. Given the dominance of potatoes and maize as staple crops, FAO has engaged youth groups and start-ups to foster innovation and incubation in these agri-food systems, with a particular focus on women. Despite these efforts, the high level of rural poverty, low levels of education among farmers and limited access to land and capital remain key obstacles, which inhibit addressing existing power-imbalances within Rwanda's food system (FAO, 2024). Interestingly, FGDs as well as key informant interviews indicated that small-scale farmers who manage to move out of poverty tend to invest their extra income in businesses outside crop production, such as construction. One key informant mentioned that the government input subsidies designed to aid small-scale farmers is effectively pushing many away from farming because the generated extra income is often used to start-up SMEs, in other sectors (key informant interview, government official, October 2025).

## **5.2. Opportunities for youth engagement in Rwanda's FST**

There are numerous opportunities for youth engagement within Rwanda's food system transformation. First, the growing urbanisation has created a tremendous demand for Irish potatoes, maize and maize products, and fruits and vegetables in the domestic market. Urban dwellers rely on the market for their food security needs, hence increasing demand for food across the entire value chain. Moreover, the growing hospitality industry has created demand for fresh fruits and vegetables, especially products from controlled environment farming (interview with young agri-entrepreneur, October 2025). Relatedly, large retailers and the hotel industry have played a transformative role in expanding production and markets, but their dominance diminishes the bargaining power of smallholder farmers. Poverty-related challenges force smallholders to act as price takers, often selling their products at low prices to meet urgent financial needs. Moreover, large retailers and hotel industry players sometimes delay payments to suppliers, discouraging young entrepreneurs who rely on timely payments to sustain their enterprises (interview with young agri-entrepreneur, October 2025).

At the regional level, Rwanda, being part of the EAC, has access to regional markets constituting over 174 million people, with a combined GDP of the region of about US\$163.4 billion (EAC, n.d.). The market size offers opportunities for increasing intraregional trade, which is also facilitated by COMESA and the AfCFTA. The regional markets have seen more collaboration initiatives; for instance, in 2024, Botswana reached out to Rwanda as an alternative source of their food imports to diversify from South Africa as a primary source, with controlled environment agriculture seen as providing a solution (interview with young agri-entrepreneur, October 2025). Beyond immediate neighbours, regional markets also

exist in countries such as Zambia, Mozambique, and Somalia. These regional trade agreements allow Rwanda to expand its market and import products from other countries, all of which offer tremendous opportunities for youth participation, especially with logistics support at the various ports of entry and exit.

Internationally, Rwanda is also linked with markets in developed countries, notably the EU which imports fruits and vegetables from the country. The government has taken up steps to increase connectivity with the national airline and investment in airports, all which ease transportation (IATA, 2025). With increased digitalisation and exposure, Rwandan youth can play a role in these value chains through production, transportation, sale, and marketing, among others, both within the country and outside. Support from government and donors provides an opportunity for technical support, funding, and research, which are all crucial for food systems transportation. The government, through the RDB and MINAGRI provides different opportunities and different programmes that support youth, especially those who work primarily in rural areas, although urban areas also get general support. Development partners such as FAO and United Nations Economic Commission for Africa (UNECA) have also been active, especially through capacity building and research (interview with development partner, October 2025). Besides, groups like the Tony Elumelu Foundation provide startup support that is more tailored to women and youth who may want to engage in the food systems, and once their project gets approval, they receive funding (interview with young agri-entrepreneur, October 2025). This support also allows for the growth of incubation centres, which provide opportunities for learning.

### **5.3. Challenges for youth engagement in Rwanda's FST**

At the same time, several obstacles undermine youth and women's participation in the food system despite increasing market opportunities domestically, regionally, and internationally. Rwanda's food system dashboard reveals interconnected challenges that underscore the urgency of a just transition.

At the production level, low average crop species richness (6.7 crops/ha) indicates a dominance of simplified, likely monoculture systems, which reduces dietary diversity, agroecological resilience, and soil health. This is compounded by significant post-harvest losses, especially for nutrient-rich fruits (8%) and vegetables (6%), representing wasted resources, income, and food that never reaches consumers. These supply chain inefficiencies contribute to a constrained food environment. While dietary energy supply is below regional averages, the core crisis is one of affordability and quality. A staggering 75% of the population cannot afford a healthy diet, with its cost consuming 175% of the average food budget. This economic barrier fuels high rates of undernourishment (24%) and forces a reliance on calorie-dense, nutrient-poor staples. Environmental pressures add another layer of vulnerability, with agricultural lands containing only 8% natural vegetation, below the 10% threshold for ecosystem integrity. Together, these metrics paint a picture of a system struggling with productivity gaps, economic inaccessibility, and environmental strain—a context where engaging youth and women as agents of change is not just ideal but essential for building a resilient and equitable food future.

Limited access to financing, technical skills, and market information hinders youth from taking up the available opportunities (interview with young agri-entrepreneur, October 2025),

with women even more affected due to their domestic roles and other systemic gender-associated institutional setups. Accessibility of rural areas remains difficult due to infrastructural constraints and increasing transport and communication costs. Moreover, even on a small scale the urban food system actors face competition from larger commercial farms owned by the few, which undermines inclusion.

Among the FGD participants across the seven districts, transport was cited as one of the key challenges in Rwanda's FS, restricting access to markets and contributing to food waste (Youth FGDs). Infrastructure like roads is gradually improving, strengthening the connection between rural production and urban demand, though costs for moving food remain high. 40% of the food produced goes to waste along the value chain. Decreasing food loss and waste (FLW) has a significant potential to improve Rwanda's food system by increasing food yields without having to exhaust additional environmental resources. If food loss and waste were reduced only by half, it would already help with food availability using the same farm and water resources already being used (World Bank, 2020). Interestingly, key informants on the ground did not cite food loss and waste as a key challenge or mention it as an opportunity for youth to engage in innovative FLW solutions. Improving the food system was generally approached from the perspective of increasing productivity not improving storage, transport, processing to decrease FLW. Building the capacity of youth and women to play an active role in food storage, transport, and processing would strengthen their position and benefits within the value chain, thereby enhancing their development outcomes.

The issue of trust is one of the crucial challenges for youth participation in the food systems across the entire value chain (interview with young agri-entrepreneur, October 2025). Markets, for instance, in the hospitality industry need suppliers who hold liquidity and can be trusted to regularly supply their products without advance payments. In some instances, the payments are delayed, which discourages the youth who usually do not have other sources of income and require quick payments to sustain their businesses. Patience is key in building trust since it can take 3 or 5 years and is difficult to build, especially for controlled environment agriculture, which needs money to pay for electricity to maintain the field. Potential delays reduce the nutrients and threaten the entire business.

Market entry remains a challenge despite the trade liberalization initiatives on the continent and in the international markets. Several non-tariff barriers, including poor connectivity and prohibitive sanitary and phytosanitary measures that require certification and documentation in addition to the logistics costs, all of which undermine youth participation. Even the opportunities for collaboration and using third parties that youth can explore to enter markets require connections and information that they may lack (interview with young agri-entrepreneur, October 2025).

In terms of financing, there remains a gap between the needs of young people, especially women, and the available options from the government and development partners (interview with development partner, October 2025). Despite government support through collaboration with development partners to promote research and development, for instance, in Irish potato and maize seeds, updates remain difficult for youth. Besides, there is a growing demand for access to finance, knowledge, and digital skills. Private sector financing has largely been in commercial farms and export-oriented horticulture products, which offer limited opportunities for the youth to participate in.

Furthermore, many processing plants do not meet general health and safety standards. A 2021 report by the Rwanda Food and Drugs Authority (FDA) warns that without regulation the industry might pose a threat to national health. The report further mentions that many processing firms have issues sourcing packaging materials, lack of skilled personnel, potable water, electricity, and technology were other challenges mentioned in the report (FDA, 2021).

Climate change was acknowledged as a key challenge by FGD participants as well as key informants across the board. A spokesperson of RYAF mentioned:

*“During the start it wasn’t there, but the way it is now, if we don’t control our environmental impact we will face problems. We encourage youth to not impact nature negatively, to look for sustainable solutions”* (interview with RYAF spokesperson, November 2025).

The impact of climate change was perceived to be worse on young women according to the FGDs. Because girls are the last ones to eat, if the crops fail and the family consumption decreases, girls will suffer most. Extra workload related to climate change, such as fetching water, also falls on women, sometimes leading girls to leave school because of increased household chores. As climate impacts make farming more challenging, young women frequently take on additional responsibilities such as tending to crops, fetching water, and caring for livestock adding to their physical workload. Young women and girls often bear the brunt of food shortages, facing increased hunger and malnutrition. Young girls might have to leave school to help with household chores or to support livelihood activities, hindering their education and career prospects, this was acknowledged in all FDGs. (Youth FGDs across 7 districts).

## 6. CONCLUSION

Rwanda's food systems transition (FST) offers a significant opportunity to expand SDG 8, generating green and decent employment for youth, yet engagement remains uneven and marked by persistent structural constraints, particularly for young women. Despite strong national commitments under NST2 (2024–2029) toward climate-resilient agriculture and job creation, youth continue to face limited access to land, finance, agronomic training, and decision-making spaces, while gendered norms restrict the ability of young women to move beyond subsistence roles. Nevertheless, emerging cooperative structures, digital agriculture initiatives, and youth-centred extension programmes demonstrate potential pathways for inclusive transformation.

Digital innovations, including e-Soko, a strategic public good, can, if strengthened, play a much greater role in advancing distributive, procedural, recognition and restorative justice within Rwanda's FST. To maximise the contribution of these digital innovations to a just food systems transition, future efforts could focus on improving user experience, integrating youth-friendly interfaces, expanding digital literacy programmes, strengthening offline accessibility (e.g., voice-based systems), and linking price information to broader youth employment pathways such as digital extension, e-commerce, or smart logistics. With such enhancements, e-Soko can evolve beyond a market-information tool into a transformative digital ecosystem that empowers young people, especially young women and marginalised rural youth, to participate meaningfully and equitably in Rwanda's food system.

Evaluated through the four justice dimensions, Rwanda's FST reveals a mixed picture. Distributive justice is constrained by unequal access to productive assets, income-generating opportunities, and value-chain participation for youth and young women. Gendered inequalities within dual-headed farming households need to be addressed to increase household market participation and contribute to the process of agricultural transformation. Procedural justice is gradually improving, with more participatory governance mechanisms, although youth voices remain underrepresented in policy processes and value-chain decision-making. Recognition justice continues to be undermined by persistent stereotypes and social norms that frame youth—especially young women—as inexperienced or secondary contributors, limiting their ability to benefit from emerging opportunities. Restorative justice shows early but uneven progress, with targeted programmes working to redress historical exclusions, though these efforts remain small relative to the scale of structural disadvantage.

Unlocking the full potential of Rwanda's FST will require stronger policy, institutional, and financial enablers that expand youth-friendly financing, improve gender-responsive land access, reduce bureaucratic barriers to agribusiness entry, and scale climate-smart agricultural training. Community-driven, cooperative, and innovative models already demonstrate the feasibility of inclusive pathways when aligned with youth needs and aspirations. Critically, addressing the aforementioned inequalities in dual-headed farming households, particularly around land ownership, resource control, and decision-making, remains essential for increasing women's market participation and sustaining long-term agricultural transformation.

## 7. POLICY RECOMMENDATIONS

To deliver a *just* food systems transition and ensure that distributive, procedural, recognition, and restorative justice become embedded in FST implementation rather than aspirational and FST interventions are not only productive but also equitable and socially responsive, we suggest the following policy recommendations.

### Government of Rwanda

**Strengthen mechanisms that enable meaningful youth engagement across the entire FST policy cycle.**

- **Justice failure addressed:** procedural justice
- **Implementation pathway:** by strengthening young people's access to NYC activities at both national and district levels, and by partnering with the private sector and civil society to create inclusive platforms for meaningful youth participation in policy design, monitoring, and implementation.

**Increase youth representation in district agricultural committees, cooperatives and value-chain governance platforms.**

- **Justice failure addressed:** procedural justice
- **Implementation pathway:** establish mandatory youth representation quotas in district agricultural committees, cooperatives, and value-chain governance platforms.

**Scale youth-targeted climate-smart agriculture (CSA) initiatives, with special emphasis on traditional agricultural practices, business incubation, green skills training, and practical field demonstrations that respond to youth-identified gaps in knowledge and technology adoption.**

- **Justice failure addressed:** distributive and restorative justice
- **Implementation pathway:** the government could increase its cooperation with agricultural departments in colleges/universities as well as with RYAF to develop CSA-courses which are linked to food-businesses wherein young students can do internships

**Incorporate REMA within FST multi-stakeholder management and task them with ensuring restorative justice principles and environmental concerns are embedded with the FST.**

- **Justice failure addressed:** recognition and restorative justice
- **Implementation pathway:** MINAGRI, as food system convener, should invite REMA to be part of the multi-stakeholder FST policy dialogues and REMA could develop a FST pathway based on its mandate of protecting the natural environment. This document could then be used to find a consensus on how to align MINAGRI's priority of ensuring food security and REMA's priority of safeguarding the natural environment.

**Improve land access for youth.**

- **Justice failure addressed:** distributive justice
- **Implementation pathway:** institutionalise secure leasing frameworks; scale cooperative and group-based land access models through targeted support (legal

recognition, governance training, and access to finance); prioritise land-efficient, high-value agrifood systems (e.g., horticulture, intensive livestock, agro-processing) through aligned extension services and market linkages; integrate land access with complementary inputs—credit, irrigation, extension, and structured markets—so that access translates into productivity and income gains.

**Expand rural connectivity and formally integrate digital literacy and tool usage into agricultural extension programmes delivered through cooperatives and farmer groups.**

- **Justice failure addressed:** distributive justice
- **Implementation pathway:** expand rural internet connectivity with the support for DPs, integrate digital literacy in primary education.

**Institutionalise justice across policies—through gender-responsive budgeting, youth-sensitive land reform measures, and routine inclusion audits.**

- **Justice failure addressed:** distributive, procedural, recognition, and restorative justice
- **Implementation pathway:** assign a justice “watchdog” within the multi-actor team which would be responsible for streamlining justice principles throughout FST policies and implementation. Justice assessments should also be incorporated within M&E activities for FST policies and programmes.
- Establish a dedicated blended finance facility with a ring-fenced window targeting youth- and women-led enterprises, anchored at Cabinet level and governed through a public–private structure to ensure scale, accountability, and alignment with national green growth priorities.

### **Development partners**

**Support mentorships, internships, practice-oriented field experience across the FS.**

- **Justice failure addressed:** distributive, procedural
- **Implementation pathway:** linking young graduates to food system businesses and farmer organisations where they can obtain hands-on experience.

**Finance large-scale, evidence-backed green jobs programmes that support youth entry into high-value and climate-resilient value chains.**

- **Justice failure addressed:** distributive and restorative justice
- **Implementation pathway:** technical assistance including enterprise development, financial literacy, and pipeline building, green skills development, linked to expanded market access opportunities, including regional trade under the African Continental Free Trade Area, ensuring that green enterprises are not only financed but also commercially viable and scalable.

**Support the government to mainstream justice considerations**

- **Justice failure addressed:** procedural, distributive, recognitional, restorative
- **Implementation pathway:** through joint policy reviews, capacity-building for local officials, and targeted support to women-led youth groups

## Private Sector (particularly agribusinesses)

**Create dignified employment by designing inclusive contract-farming and aggregation models that intentionally integrate youth.**

- **Justice failure addressed:** distributive justice
- **Implementation pathway:** Develop youth-targeted contract schemes with transparent pricing, fair terms, and embedded support (inputs, extension services, and guaranteed off-take), ensuring stable incomes and reduced market risk.

**Offer micro-contract schemes, flexible supply agreements for youth cooperatives, and tailored financial products linked to guaranteed off-take.**

- **Justice failure addressed:** distributive justice
- **Implementation pathway:** Banks and development banks design and deploy tailored financial products—including seasonal loans, asset financing for climate-smart technologies, and value-chain financing—supported by performance-based incentives linked to job creation, gender inclusion, and sustainability outcomes.

**Invest in green technologies, such as: solar-powered irrigation, climate-resilient storage, and digital market platforms to further reduce entry barriers for youth while expanding green job opportunities.**

- **Justice failure addressed:** distributive and restorative justice
- **Implementation pathway:** Scale adoption of solar-powered irrigation, climate-resilient storage, and digital platforms, using shared-access models (e.g., leasing, pay-as-you-go) to make technologies affordable for youth and small enterprises.

**Create mentorships, apprenticeships, and on-farm learning arrangements particularly for young women who face restricted mobility and limited exposure to market opportunities.**

- **Justice failure addressed:** distributive justice
- **Implementation pathway:** Create structured apprenticeship and mentorship programmes, with targeted inclusion of young women, including safe mobility support, flexible schedules, and exposure visits to strengthen skills, confidence, and market integration.

## Civil society organisations (CSOs)

CSOs are essential in safeguarding justice across Rwanda's FST. In Rwanda's state-led governance context, the most feasible role for CSOs is to strengthen inclusion and implementation accountability through practical action. This includes:

- Facilitating community dialogue that challenges restrictive gender norms affecting women's participation in markets and leadership,
- Documenting barriers faced by youth and young women, including unequal access to land, extension services, finance, and public agricultural resources,
- Promoting transparent and equitable farmer-support programmes,
- Monitoring whether youth inclusion targets are being met in practice, and

- Feeding local evidence into district and programme platforms to improve responsiveness and accountability.

Collectively, these actions can help transform Rwanda's food systems transition into a just food system transition. A process that not only enhances productivity and climate resilience, but also delivers fair opportunities, meaningful participation, and equitable outcomes for the country's young population. By aligning policies, investments, and community-driven innovations with justice principles, Rwanda is well positioned to build a food system that is socially inclusive, economically empowering, and environmentally sustainable for future generations.

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## **Annex 1 List of Key informant Interviewees' Affiliations**

Ministry of Agriculture and Animal Resources (MINAGRI)

Rwanda Agriculture Board (RAB)

National Youth Council (NYC)

Local Government Authorities (District level: Musanze, Gakenke, Bugesera, Kayonza, Huye, Nyanza, Gasabo)

Rwanda Youth in Agribusiness Forum (RYAF)

Agri Influencer

Founder, Greenrev Group

Rwanda Improved Seed Company (RISCO)

MINIMEX Ltd (Maize)

Hollanda FairFoods Ltd (Potato Chips, Musanze Cyanika Road)

Bahage Food Ltd (Rwamagana)

UNECA

UNDP

Agriterra

WSM INSPIRE

FAO

IFAD

FMP Agric Cooperatives

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