



RESEARCH REPORT

**SUSTAINABLE FOOD VALUE CHAINS AS A PATHWAY OUT OF POVERTY:
A CASE FOR SOUTH AFRICA**

MARCH 2023



RESEARCH REPORT
SUSTAINABLE FOOD VALUE CHAINS AS A PATHWAY OUT OF POVERTY:
A CASE FOR SOUTH AFRICA
MARCH 2023

National Development Agency
26 Wellington Road
Parktown
Johannesburg
2193

Email: info@nda.org.za

Website: www.nda.org.za

Tel: 011 -018 5500

The findings, interpretations, views and conclusions expressed in this publication do not necessarily represent NDA policies or those of partner institutions who contributed to this publication. The NDA does not guarantee the accuracy of the data included in this report and accepts no consequence of its use. The NDA encourages wide dissemination of its work and will normally grant permission to reproduce portions of the work. The NDA is not liable for any views expressed or misprinted in the publication.

© 2023 National Development Agency Publications



Table of Contents

List of Figures	3
List of Tables	3
Acknowledgements	6
Abbreviations and Acronyms.....	7
Executive Summary	8
1.Introduction	11
1.1 Overview of: South African food value chains	12
1.2 Problem Statement.....	14
1.3 Research Questions.....	15
1.4 Purpose and Research Objectives	15
1.5 Structure of the report	16
2. Mixed Methods Approach.....	16
Introduction.....	16
2.1 Desktop analyses	17
2.2 Key Informant Interviews (KIIs)	17
2.3 Civil Society Organisation survey.....	19
Sampling.....	20
Data analysis	23
Missing information and complexities in administering the questionnaire.	23
3. CSOs in Sustainable Food Value Chains	24
Introduction.....	24
3.1 Agrofood value chain concepts, principles and insights for theory	25
3.2 Value chain restructuring: illustrative examples.....	26
3.3 Civil Society Organisations: Definitional debates	28
3.4 CSO categories and roles	29
3.5 CSOs in South Africa's agrofood value chains	31
4. Thematic analysis of Key Informant Interviews (KIIs)	32
4.1 Understanding of agrofood value chains and sustainability.....	33
4.2 Engagement with CSOs	36
4.3 Role of CSOs	36
4.3 CSO challenges	37
4.4 Poverty reducing potential of agrofood systems.....	38
4.5 Barriers to making agrofood value chains inclusive	40
5. CSO Survey Results and Discussion	41

Introduction.....	41
5.1 Characteristics/features and primary socioeconomic activities of the CSO	41
5.2 CSO Food Distribution Services - Consumption	56
5.3 CSO Food Production Activities	69
5.4 Input costs, Suppliers and Sustainability	80
6. Conclusions and recommendations	97
7.References	100
ANNEXURES	105
Annex 1: CSO Agrofood Activities - a rapid purposeful web-based scan	105

List of Figures

Figure 1: How CSOs contribute to SFVCs	14
--	----

List of Tables

Table 1: Key Informant Interviews	19
Table 2: National Comparison of Proposal, Actual and Preparation Data (CSO Survey)	21
Table 3: Provincial Comparison of Proposal, Actual and Preparation Data (CSO Survey)	23
Table 4: Mean and Median CSO age in years at time of data collection (2022), by Province.	42
Table 5: CSO age distribution by category	43
Table 6: CSO age distribution by age category per province.....	43
Table 7: Duration of CSO affiliation status by Province.	44
Table 8: CSO affiliation age distribution by category.	45
Table 9: CSO affiliation age category by Province	45
Table 10: In which areas did you produce and/or distribute food in 2019 and 2021?	46
Table 11: In which areas did you produce and/or distribute food in 2019 and 2021?	46
Table 12: Production within local Municipality by Province in 2019.	47
Table 13: Production within local Municipality by Province in 2021.	47
Table 14: Production in areas beyond local municipality by province in 2019.	48
Table 15: Production in areas beyond local municipality by Province in 2021.....	48
Table 16: Number of workers the CSOs employed in 2019 and 2021.	49
Table 17: Number volunteers that helped the CSO to perform its core activities in 2019 and 2021.	49
Table 18: CSO main income source for 2019.	50
Table 19: CSO main income source for 2021.	50
Table 20: CSO self-reported state and non-state sources of income in 2019 and 2021.	52
Table 21: Mean, Median and total income CSOs received from state and non-state sources, 2019 (in ZAR).....	53
Table 22: Mean, Median and total income CSOs received from state and non-state sources, 2021 (in ZAR).....	53
Table 23: State and non-State incomes CSOs received by Province in 2019 (mean and total amounts, ZAR).....	55
Table 24: State and non-State incomes CSOs received by Province in 2021 (mean and total amounts, ZAR).....	56
Table 25: What period does your main funding source/agreement cover?	56
Table 26: CSO main recipient group.....	57
Table 27: CSO main recipient group by Province	58
Table 28: Main Criterion that the CSO uses to identify food recipients.	59
Table 29: Main Criterion that the CSO uses to identify food recipients by Province	60
Table 30: Main source the CSO uses to identify main recipient	60
Table 31: Main source the CSO uses to identify main recipient by Province	61
Table 32: Food items distributed to main recipients in 2019	62
Table 33: Food items distributed to main recipients in 2021.....	63
Table 34: Food categories distributed to main recipients in 2019	64
Table 35: Food categories distributed to main recipients in 2019 by Province	65
Table 36: Food categories distributed to main recipients in 2021	66
Table 37: Food categories distributed to main recipients in 2021 by Province	67

Table 38: CSO Review or assessment type (formal and informal)	67
Table 39: CSO review or assessment type by Province	68
Table 40: CSO success in direct or indirect poverty reduction between 2019 and 2021	69
Table 41: Likelihood of success in direct or indirect poverty reduction by Province.....	69
Table 42: CSO Food production, distribution and information sharing activities since inception	70
Table 43: CSO activities by agrofood value chain segment and information sharing activities since inception	71
Table 44: CSO involved in dual agrofood value chain segments since inception.....	72
Table 45: Agrofood value chain activities of CSOs by Province.....	73
Table 46: Main place where the CSO practices crop farming.....	74
Table 47: Main place where the CSO practices crop farming by Province.....	75
Table 48: What is the average size of land used for...?	75
Table 49: Who owns the place where the crop/livestock takes place on?	76
Table 50: If the CSO does not own the land, what permission, do they have to use the land?	76
Table 51: What was the approximate monetary value of crops and livestock outputs in 2019 and 2021	77
Table 52: What was the approximate monetary value of crops and livestock distributed in 2019 and 2021	77
Table 53: How often does the CSO use organic or chemical inputs for its farming?	78
Table 54: What is the main place where this organization makes, processes and packages the food?.....	78
Table 55: Who owns the food processing facility where this CSO makes the food items?	79
Table 56: If the CSO does not own the food processing facility, how best would you classify the permission to use the land?	79
Table 57: Approximately what was the monetary value of food produced and distributed 2019 and 2021?.....	80
Table 58: What is the main source of electricity/energy that this CSO uses to operate the food processing facility?	80
Table 59: CSO mean, median and total input costs annualised in 2019, ZAR	82
Table 60: CSO mean, median and total input costs annualised in 2021, ZAR	83
Table 61: CSO fixed and variable working capital input annualized for 2019 (mean, median & total), ZAR	84
Table 62: CSO fixed and variable working capital input annualized for 2021 (mean, median & total), ZAR	84
Table 63: CSO primary crop farming inputs (seeds, seedlings, fertilisers, pesticides, etc.) suppliers	85
Table 64: CSO livestock farming inputs (chicks, calves, medicine, vaccine, fodder etc.) suppliers	86
Table 65: CSO cooking ingredients inputs (mixed produce, meat, bread, juice, etc.) suppliers	86
Table 66: Suppliers of crop farming inputs by Province.....	87
Table 67: Shares of suppliers of livestock farming inputs (chicks, animal medicine, feedstocks etc.) to CSOs by Province	88
Table 68: Shares of cooking ingredient inputs (mixed produce, bread, fruit juice, etc.) to CSOs by Province	89
Table 69: In your interactions with your main input suppliers, to what extent have you experienced...?	90

Table 70: In your interactions with your main input suppliers, to what extent have you experienced postive/negative interaction facet...?	91
Table 71: In 2019 and 2021, did this CSO cut/reduce its food assistance activities (farming, processing, or delivery) due to...?	92
Table 72: In 2019 and 2021, did this CSO cut/reduce its food assistance.....	94
Table 73: Reduction in food drivers by Province (2019)	95
Table 74: Reduction in food drivers by Province (2021)	96
Table 75: In 2019 and 2021, how often did this CSO throw away any food not healthy for human consumption as food waste?.....	96
Table 76: What was the main way this CSO disposed of its 'food waste' in 2019 and 2021?	97

Acknowledgements

The HSRC team acknowledges the financial contribution and research management guidance from the NDA research unit. Project governance mechanisms and regular progress review meetings of the NDA research unit aided the team to monitor all project milestones and reach the objectives of this study. Without the participation of CSO representatives, key informants, and fieldwork enumerators it would not have been possible to bring together this unique information on the neglected issues that this report discusses in detail. They all contributed immensely to the substantive core of this research, and we appreciate their time and invaluable inputs. Dr Vuyo Mjimba, Dr Rodney Managa and Ms Elsie Maritz were instrumental in securing a good group of enumerators at extremely short notice.

Primary data collection in mixed methods inquiries is a complex undertaking, irrespective of the scale of the research. Completing such a nationwide exercise without jeopardising fundamental methodological principles and scientific best practices demands systematic management and administration of all aspects of the research. Working against tight deadlines and the pressures of severe time constraints, Antonette Richardson and Nomonde Mathambo provided the team with effective and efficient administrative assistance. We thank them for their standout administrative patience and excellence during the most trying moments of moving this study towards completion. Our gratitude extends to the editor for refining the quality of this report, especially the coherence and clarity of the narrative, layout, and recommendations.

Abbreviations and Acronyms

COVID-19	An infectious disease caused by the SARS-CoV-2 virus ¹
CSO(s)	Civil Society Organisation(s)
DSD	Department for Social Development
ECD	Early Childhood Development centre
EC/FS/GP/NC/NW/WC/LP/MP/KZN	Eastern Cape; Free State; Gauteng; Northern Cape; North-West; Western Cape; Limpopo; Mpumalanga; KwaZulu Natal
ERRP	Economic Reconstruction and Recovery Plan
EUAFR	European Union Agency for Fundamental Rights
FAO	Food and Agriculture Organization
FNS	Food and Nutrition Service
HSRC	Human Sciences Research Council of South Africa ²
KI(s)	Key Informant
KII(s)	Key Informant Interview(s)
NDA	National Development Agency
NDP	National Development Plan
REC	Research Ethics Committee
SADC	Southern Africa Development Community ³
SDG	Sustainable Development Goals
SFVCs	Sustainable Food Value Chains
TOR	Terms of Reference
UNHRC	United Nations Human Rights Commission
WEF	World Economic Forum

¹ https://www.who.int/health-topics/coronavirus#tab=tab_1

² <https://hsrc.ac.za/>

³ <https://au.int/en/recs/sadc>

Executive Summary

The National Development Agency (NDA), in line with its legislative mandate, commissioned this study to explore how to make agrofood value chains more sustainable and as pathways out of poverty and food and nutrition insecurity, with special emphasis on the contributions of Civil Society Organisations (CSOs). The rationale for this study is grounded in the national commitment to an inclusive society which places higher human wellbeing and living standards at the forefront.

The NDA seeks to use the findings and evidence generated through this research project to inform policies, strategies and programmes that promote agrofood value chains that are sustainable and pro-poor whilst also being more inclusive of CSOs.

Specific project objectives included:

- To define the concept of a sustainable agrofood value and explore ways in which food value chains can offer important pathways in assisting Civil Society Organisations (CSO) and local farmers to reduce poverty.
- To identify strategies to help local enterprises such as CSOs to compete and to improve earning opportunities.
- To identify the factors that are hindering progress towards sustainable agrofood value chains.
- To recommend how key stakeholders such as the private sector and Government can play a crucial role in strengthening agrofood value chains, especially to benefit the CSOs.

Analytically, this study builds on a novel conceptual approach which integrates the principles of agrofood value chains, sustainability dimensions, and civil society organisations. Agrofood value chains refer to the traditional farm-to-plate pathways of food as well as how actors relate to each other within and across each value chain segment. Overlaying each segment are the economic, ecological, social, and institutional governance dimensions of sustainability. The analysis concentrates on the instrumental value of sustainable agrofood value chains as it deliberately explores their anti-poverty and food and nutrition security outcomes.

The mixed methodology used in this study combined a desktop review of agrofood value chain literature, open-ended interviews with key informants and a survey of civil society organisations. The desktop review adopted a purposive collection of academic literature and policy documents. It also scanned the websites of multilateral agencies like the Food and Agricultural Organisation (FAO) for relevant studies. With a focus on case studies in the Global South, the overview allows for a comparative synthesis of farm-to-plate value chains of fresh produce and processed foods across countries mainly in Asia, Africa, and Latin America. The qualitative interviews used exploratory questions to better understand the intersections of the dimensions of sustainability (economic, ecological, social, and institutional governance) and agrofood value chain segments. Open-ended interviews probed ways in which CSOs can realise the poverty eradication potential of sustainable agrofood value chains. Surveyed CSOs were identified mainly but not exclusively from administrative databases obtained from the National Development Agency and the Department of Social Development. Major gaps in this dataset prevented the team from generating a nationally representative dataset that would allow for random probability sampling and extrapolating the findings to the master sample of roughly 17,000 CSOs across all provinces.

While CSOs are present in all segments of agrofood value chains, those surveyed in this study are not all equally involved in farming, agroprocessing, and food distribution. CSOs that mainly farm with crops and livestock make up slightly less than 42% of all study participants. In sharp contrast, CSOs that primarily process foods, including the preparation of cooked meals, form 64% of those surveyed. When exploring CSOs that are active in at least two segments of the value chain, which commonly happens, it was revealed that distributing food and sharing Food and Nutrition Service (FNS) information were the most frequent ways in which they serve needy people. Ninety-five per cent of the CSOs that produce and distribute food for the benefit of needy people rarely do so beyond the borders of their local municipalities.

The upstream value chain linkages of CSOs, especially their networks with input suppliers, make for interesting reading. CSOs that farm, for instance, get their seeds, fertilizers, and pesticides mainly from agrobusiness corporations, donors, wholesalers, and supermarkets. CSOs that prepare and distribute cooked food, the dominant value chain activity in this study, get their ingredients mainly from retailers and wholesalers.

Despite their roles in countering malnutrition crises, CSOs often struggle to sustain or upscale their food and nutrition services due to multiple obstacles. Funding obstacles remain decisive determinants of the economic sustainability of CSOs as their actual expenditures exceed the funds they receive from government and other private donors. Related to the funding problem is the lack of enough land for those that seek to expand their farming activities. Inadequate education/skills also hinder them from successfully applying for funding in instances where it is available.

The report concludes with the following recommendations.

- Government should strengthen institutional governance, particularly working on reducing corruption, and assist CSOs more effectively during crises that result in economic instability and rising prices. This will help to ensure that CSOs maintain or expand their work to cater for a potential increase in people who fall on hard times or find themselves with no incomes and/or food.
- There is a lot that needs to be done before agrofood value chains can be expected to act as a pathway out of poverty. CSOs in the agrofood systems should be supported adequately so that they not only provide a humanitarian relief kind of service but also contribute to poverty reduction. The humanitarian relief aspect of CSOs' work should only be prioritised during times of disaster.
- The work of CSOs should be strengthened by providing them with the necessary and sufficient resources, particularly funding, upskilling their personnel, and creating a conducive environment for them to operate productively.
- As the state is the main source of funding for CSOs, increasing state support is likely to have a major impact on CSOs' ability to perform. Assistance with performance monitoring and evaluation would help to provide evidence of returns on investment, which in turn could be used to secure more funding from both state and non-state actors.

1. Introduction

When the COVID-19 pandemic was declared in South Africa, the government put in place lockdown measures to try and contain the spread of the disease. The successive lockdown measures caused business closures that ultimately resulted in loss of earnings, worsening already high unemployment levels, consequently deepening levels of poverty, and increasing food insecurity, hunger, and malnutrition. The health and economic crises that persisted from the beginning of 2020 to early 2022 saw a dramatic rise in hunger prevalence across the urban and rural divide. The surge in the number of people going hungry not only signalled a food affordability crisis but was an indication of the failure of key elements of the food value chain, as the workings and structure of agrofood value chains (or food systems) is represented by the incidence of food and nutrition insecurity.

For all people in South Africa to realise the right to sufficient food, as enshrined in country's constitution, programmes and plans to provide food to the poor and underprivileged must continue. Civil Society Organisations (CSOs), with funding and support from the public and private sectors, are a key section of society that plays critical roles along the agrofood value chains by providing food and nutrition relief as well as information. Despite the proliferation of anti-poverty and anti-hunger initiatives by government and CSOs, enduring hunger at levels much higher than in comparable middle-income countries, persist in South Africa. It is against this background that the National Development Agency (NDA) commissioned this study into sustainable food value chains, to investigate the roles and experiences of CSOs and understand their social purpose and operational needs in order to provide them with meaningful support, to explore available options that improve the sustainability of food value chains as a pathway out of poverty, and to identify ways in which policies can assist in reducing poverty through scaling up of anti-poverty potential of sustainable food value chains.

The findings of this study show that there is potential for agrofood systems to reduce poverty in South Africa if they are strengthened and scaled up. The current state of agrofood value chains only serves to provide relief in the humanitarian sense, but without capacity to contribute to wealth creation and subsequently reduction in poverty.

CSO's role in alleviating hunger and starvation seems to be limited and, their sustainability hampered, by social unrest (protests and food riots), rising input costs, and inadequate or absent institutional support by the state. Challenges to economic and institutional sustainability were found to be key drivers of reducing food provision by CSOs while social and ecological factors do not seem to adversely affect the operations of CSOs.

CSOs are key players in the agrofood value chains that provide food to the poor and vulnerable, thereby alleviating hunger and starvation. The effectiveness of the critical role they play is constrained by the numerous challenges they have to deal with in their line of work. These include lack of funding and other inputs, an unfavourable regulatory environment, inadequate skills and education among their personnel and competition among themselves which hinders collaboration.

Before providing the detailed findings of the study and discussing insights from the findings, this section first presents an overview of food value chains in South Africa, followed by the problem that necessitated this study together with the research questions and objectives that the study sought to address.

1.1 Overview of: South African food value chains

The food value chain consists of two components which are the upstream supply of inputs into primary production (farming) and the downstream sequence of agroprocessing, manufacturing, wholesaling, and retailing, by which agricultural commodities reach the end consumer (Neves, 2020; Jacobs & Ngandu, 2011). The upstream agricultural input supply value chain is dominated by extensive commercial agriculture and large-scale agrobusinesses. The upstream pattern is affected by agricultural market deregulation and economic liberalization. These dominant agrobusinesses with market power and global links have deep patterns of concentration within the market characterized by high levels of capitalizations, mechanization, and increasing productivity (Neves, 2020).

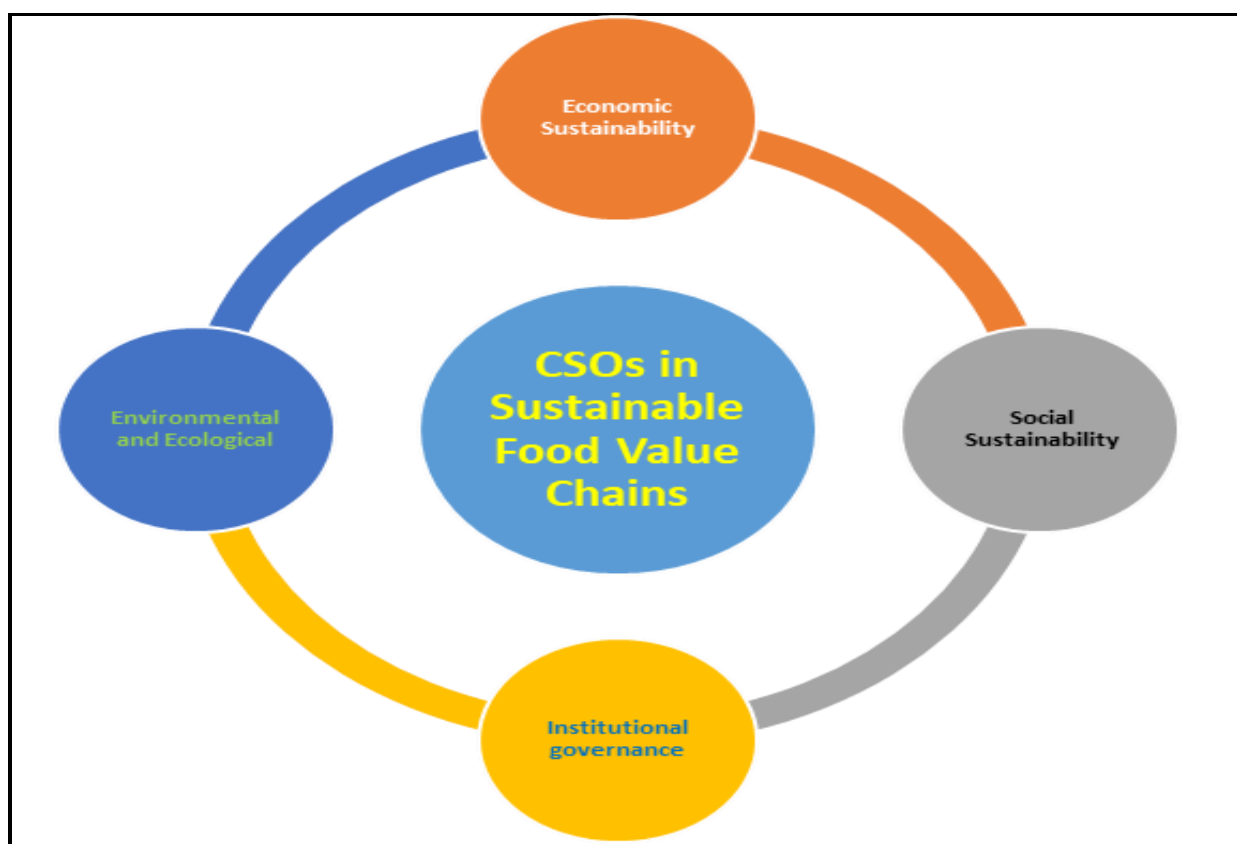
According to Aliber et al. (2013), in South Africa, the current interest in value-chain focuses on establishing more ways of making sure that the small-scale farmers who are marginalized and the poor, can connect into the already existing value chains. Aliber et al. (2013) state that the National Development Plan: Vision for 2030,

developed by the National Planning Commission, put forward that one million employment opportunities could be made through targeted investments in agriculture (Aliber et al., 2013).

Agrofood supply chains in South Africa are characterised by market concentration, with very few large actors involved in the production, processing, distribution, and marketing of food (Von Bormann, 2019; Jacobs & Nyamwanza, 2020; Jacobs & Ngandu, 2011). These big agrofood system players are generally well-organized and are largely efficient in delivering food across the country, including in rural areas (BFAP, 2020; Crush & Frayne, 2011a). The supermarket revolution and the 'mall culture' has seen modern food chains opening branches/franchises even in less developed locations of the country (D'Haese & Van Huylbroeck, 2005; Makhitha & Khumalo, 2019; Weatherspoon & Reardon, 2003). Despite this expansion of modern food value chains, informal traders continue to play a crucial role in the informal economy, particularly in high-density suburbs, informal settlements, and rural areas (Crush & Frayne, 2011b; Makhitha & Khumalo, 2019).

Figure 1 summarises the foregoing overview and its main messages are easy to explain. At a conceptual level, Sustainable Food Value Chains (SFVCs) build on and extend the global value chain literature. The Food and Agriculture Organization (FAO) has synthesised most of this literature in order for it to develop its own framework (FAO, 2014). In the FAO framework, the emphasis is on economic, social, and environmental sustainability. It does not offer explicit attention to institutional governance, which incorporates policy variables and civil society roles. Institutional governance is not just implicit in social sustainability. If institutional governance arrangements break down, they can disrupt the entire food value chain and undermine its sustainability. To explore and document the poverty reduction effects of SFVCs an approach which gives attention to all the dimensions in Figure 1 is needed.

Figure 1: How CSOs contribute to SFVCs



1.2 Problem Statement

South Africa has made progress in reducing poverty but poverty rates and unemployment remain high for an upper-middle-income country. The country is faced with the greatest challenge of ending hunger and poverty by 2030, according to the National Development Plan 2030, while transforming the corporate concentrated agricultural sector and the food value chain to make it inclusive, efficient, and sustainable. What are the ways in which the involvement of CSOs in agrofood value chains contribute to their sustainability and maximise the potential of SFVCs to promote food and nutrition security for all and eradicate poverty? There is an urgent need to explore how to make food value chains more sustainable and a pathway to eradicate poverty, with special emphasis on the contributions of CSOs.

1.3 Research Questions

The key research questions that guided this research project are as follows:

- What are the available options to improve the functioning and interconnectedness of the many CSOs that are proliferating along the 'hidden middle' of food value chains in storage, logistics, transportation, and distribution?
- How can policies help smallholder farmers connect to this 'hidden middle' in more gainful ways and help them climb out of poverty as well?
- What lessons can be learned from food value chains in South Africa?
- What lessons can agrofood value chain restructuring in South Africa learn from global best practices?
- What role has the private sector and Government played in strengthening the food value chain, especially to benefit the CSOs?

1.4 Purpose and Research Objectives

The main purpose of this research project was to produce a body of evidence and information from a range of sectors (government, civil society, and business). This also included literature from local and international sources on how we can use evidence to inform policies, strategies, and programmes, in addressing development and sustainable ways to strengthen the food value chain processes inclusive of CSOs.

The research objectives for this project were as follows:

- To define the concept of a sustainable food value chain and explore ways in which food value chains can offer important pathways in assisting CSOs and local farmers to reduce poverty.
- To identify strategies to help local enterprises such as CSOs to compete and to improve earning opportunities.
- To identify the factors that are hindering the sustainable food value chain progress.
- To recommend how key stakeholders, such as the private sector and government, can play a crucial role in strengthening the food value chain, especially to benefit CSOs.

1.5 Structure of the report

The report has the following structure:

Part 1, the introduction (see above) introduces the research project, followed by an overview of the South African food value chain system, the problem statement, research questions, research purpose, and research objectives.

Part 2 leads with a discussion of the mixed-methods approach which this study adopted. This comprised firstly, a desktop analysis, followed by Key Informant Interviews (KII). The information addresses (1) the purpose of the KIIs, (2) how the Key Informants were chosen and (3) the total number of Key Informant Interviews (KII) that took place. This is followed by the quantitative data collection method with the selected CSOs. The discussion covers (1) the reasons for choosing the CSO survey questionnaire, (2) the data collection process and (3) the data collection timeline.

Part 3 provides a more in-depth synthesis of the role of CSOs in the Sustainable Food Value Chain. The literature review synthesis in this section highlights the main issues within the SFVC by focusing on global, regional, and national case studies.

Part 4 further discusses the qualitative research methodology. This includes a discussion on the thematic analysis of Key Informant Interviews (KIIs).

Part 5 covers the quantitative research methodology. Here, the results of the CSO survey are discussed and shown in great depth using tables created from the data collected by the CSOs.

Part 6 comprises of the conclusion and recommendations. Part 6 also covers the potential of agrofood value chains in reducing poverty, the role of CSOs in decreasing poverty levels in South Africa, the influence CSOs have on governance, and challenges that affect CSOs in South Africa.

2. Mixed Methods Approach

Introduction

As outlined in the introductory section of this report, this study seeks to understand how agrofood value chains can be made more sustainable and a pathway to eradicate poverty, with special emphasis on the contributions of CSOs. To respond to this question, guided by the Terms of Reference (TOR), the HSRC proposed a mixed

methods approach, which combined qualitative and quantitative methods. The qualitative and quantitative design comprised of three elements: desktop review of literature; Key Informant Interviews (KIIs); and a CSO survey. The mixed methods approach was a useful because it allowed the study to consider multiple sources of data to improve the validity and reliability of the findings. This method was particularly useful for gaining a more comprehensive understanding of the CSOs and their involvement in the food value chain, rather than relying on a single type of information (qualitative or quantitative). Various studies (Creswell & Plano Clark, 2011; Dawadi, Shrestha & Giri, 2021; Enosh, Tzafrir & Stolovy, 2014; Alasmari, 2020) support and emphasise the value of the mixed methods approach as it enables researchers to answer research questions with sufficient depth and breadth and helps generalise findings and implications of the researched issues to the whole population.

2.1 Desktop analyses

A review of documents on legislation, policy documents, academic literature, case studies, media articles and other grey literature related to sustainable agrofood value chains in South Africa was conducted. This analysis helps to provide an overview of the field, stakeholders involved, sustainability sphere, and case studies of different segments of the food value chain. The key search terms used in the literature review included “the development of sustainable food value chains” “the role of sustainable food value chains in job creation” “poverty reduction through inclusive food value chains” among other terms. South African and international documents relevant to the study were reviewed. In addition, descriptive analysis of relevant national surveys on the food value chain form part of this desktop analysis as they are crucial to contextualise the spatial spread and operations of CSOs. The documents reviewed include academic publications, opinion pieces, reports on relevant government websites and South African policies and legislation. Furthermore, a synthesis of literature which includes AFVC – concepts, principles and insights for theory, primary production, agro-processing, wholesale trade, retail trade, and consumption was conducted.

2.2 Key Informant Interviews (KIIs)

The study conducted KIIs, which were exploratory in-depth discussions with officials who are knowledgeable about the role of the CSOs in the sustainability of food value chain and poverty reduction. The study proposed to interview at least two but no more

than five agencies for each major segment of the food value chain. These interviews served the objective of gathering data from a variety of officials who have direct experience and knowledge of the CSOs. Moreover, these experts shed light on the understanding of, and involvement in, agrofood value chain by CSOs, inclusivity and sustainability in food value chains, government policy, and the role of civil society related to food value chain processes. KIs were undertaken with officials from relevant government departments, private sector, civil society sector, including academics and relevant non-governmental organisations that play a role in the food value chain. The purpose of these KIs was to provide a better landscape of how key players view the state of the food value chain and its effects on poverty in South Africa.

The key informants were identified and interviewed through NDA and HSRC sources using a snowball sampling procedure. The principle of this sampling procedure includes the identification, done by the researcher, based on specific reasoning, of a number of respondents to be interviewed, and which in their turn, shall indicate (recommend) other respondents which will achieve the object of the research (Braun & Clarke, 2013). An open-ended instrument was used to obtain the perceptions of different stakeholders regarding the involvement of CSOs in the agrofood value chain.

Eighteen key informant interviews were completed with various stakeholders. The table below provides a snapshot of the interviews conducted with key informants at both national and provincial level.

Table 1: Key Informant Interviews

Sector (Kills Level)		Stakeholders	Total interviews
Public	National	Dept Social Development, Department of Agriculture, Land Reform and Rural Development	2
	Provincial	Northern Cape Provincial Government, Free State Dept. Social Development, Western Cape Dept. of Agriculture (2)	4
CSO		Citrus Academy, Ikhala Trust, Kagiso Trust, Seeds for Life Urban Farm, Food on the Table	5
Academic		University of the Western Cape, Stellenbosch University, University of Pretoria, African Centre for Biodiversity	4
Private Sector		AFGRI Agri Services, AgriMentor	2
Individual (former CSO staff)		Ms.Lesego Mosweu	1
Total			18

2.3 Civil Society Organisation survey

As part of primary data collection, a survey of CSOs was conducted to gain insights into policy issues that promote or impede the development of sustainable food value chains in South Africa. Data was collected by experienced fieldworkers together with the HSRC team across the country. Fieldworker training took place from 14 to 17 November in Cape Town, where the HSRC's team reflected on the pilot survey lessons, went through each item in the questionnaire, explained the importance of Research Ethics Committee protocols and control forms, and finalised logistical plans (travel, accommodation, vehicle bookings, allowances, etc.) with the new fieldworkers. In this study, data was collected using the traditional paper and pen mode of data collection where fieldworkers were thoroughly trained on how to record participants' responses accurately.

Data collection started on November 21 and was completed on December 15, 2022, with provinces divided into two clusters to allow fieldworkers to collect data more efficiently. The first cluster, which comprised of EC/FS/GP/NC/NW/WC, was

completed between 21 November and 2 December, while the second cluster, which comprised LP/MP/KZN was completed between 2 and 15 December, 2022. Following re-sampling, the team increased telephonic calls to secure 'willingness to participate' from more CSOs. Fieldwork was selectively extended in the Western Cape, Gauteng, and Eastern Cape, where teams reported good prospects for increasing the realized samples.

Sampling

The CSOs involved in various segments of the food value chain were selected using a random sampling procedure. Prior to data collection, the NDA and DSD databases were consolidated, cleaned, grouped according to different segments of the food value chain, and sampled. Following database consolidation, the CSO population engaged in food-related poverty reduction activities was 16 840, which was a suitable population size for a random sampling strategy. A random sample of 1 015 CSOs was drawn from this population using a Microsoft Excel sample size calculator, with every tenth CSO in the population being selected.

Table 2 shows the provincial comparison of proposed, actual and preparation data (CSO Survey). The table shows that the targeted sample from the random sampling (1015) was more than double the number specified in the proposal (405). However, the fact that confirmed calls only went through to 856 CSOs, indicated deficiencies in the administrative databases and justified an oversampling to ensure adequate responses.

Table 2: National Comparison of Proposal, Actual and Preparation Data (CSO Survey)

Study Phase	Information classification	CSO (N)
PROPOSAL	TOR CSO Sample	384
	CSO Targeted Sample	405
ACTUAL	Questionnaires received	337
	Interviewee Refusal / can't be reached on day of interview	18
	Spoiled/invalid questionnaires	2
	Valid questionnaires	335
PREPARATION	CSO Population	16840
	Random Sample	1015
	Confirmed Calls	856
	Interviews secured	355

Source: CSO Survey, November-December 2022 (Fieldwork control register)

As stated in the research proposal, a stratified random sample was chosen as the best method for this study, with each province serving as a stratification variable. Fieldworkers were instructed to randomly select 45 CSOs, on average, in each province. This stratified sampling approach is summarised in the 'Proposal' column in **Error! Reference source not found..**

A comparison of the 'Actual' and 'Preparation' columns in **Error! Reference source not found.** shows that the samples in Free State and Mpumalanga are valid in terms of the 'stratified approach'. Western Cape, Eastern Cape and Limpopo returned samples that are marginally below the targeted average. Northern Cape and Gauteng returned extremely low samples, at 30 and 31 respectively, with higher numbers of outright refusals (NC=5 and GP=2).

A sub-activity in the 'Preparation' column is listed as 'Confirmed Calls' which refers to the telephone calls fieldworkers made to schedule in-person interviews with CSO representatives. 'Confirmed Calls' is also a proxy for the effort and cost invested in securing an interview with survey participants. It helps to answer a basic data collection question: what realised sample did the number of confirmed calls yield? In

KwaZulu-Natal, for instance, even though fieldworkers made 126 confirmed calls, this only returned a sample of 34. Consider another case: 120 confirmed calls in North West, realised a sample of 33. Using KwaZulu-Natal as an example to provide the full picture of the outcomes of all calls made: of the total 126 calls made, 35 resulted in interviews being secured (with one having consented but then withdrew before completion of the interview), 37 were not answered or the line was busy, 41 went to voicemail and 13 had incorrect details (with the contact person no longer working there or the CSO had closed down or the number was invalid or did not exist). Calls that were not answered or that were on voicemail were tried again at least five times.

Table 3 displays a national snapshot of the data collected from 337 CSOs in all provinces. To grasp how the researchers got to this sample size, a closer description of this snapshot is necessary.

Table 3: Provincial Comparison of Proposal, Actual and Preparation Data (CSO Survey)

Province	PROPOSAL		ACTUAL		PREPARATION		
	TOR CSO Sample	CSO Targeted Sample	Questionnaires received	Interviewee Refusal	CSO Population	Random Sample	Confirmed Calls
Eastern Cape	43	45	40	1	1613	161	110
Free State	42	45	49	2	2125	151	100
Gauteng	43	45	31	2	1819	60	56
KZN	43	45	34	1	2277	126	126
Limpopo	43	45	38	1	2749	125	90
Mpumalanga	43	45	42	0	1627	77	73
Northern Cape	42	45	30	5	1129	67	67
North West	42	45	33	1	1716	121	120
Western Cape	43	45	40	0	1785	127	114
Total (SA)	384	405	337	13	16840	1015	856

Source: CSO Survey, November-December 2022 (Fieldwork control register)

Data analysis

The collected data was manually entered into an SPSS database and then cleaned prior to data analysis to detect errors and missing variables. Following a thorough data cleaning and troubleshooting, the team discovered two questionnaires with significant missing information and inconsistent question answers. The two questionnaires were then deemed invalid, reducing the number of valid questionnaires from 337 to 335. Furthermore, using the respondent code and going through each questionnaire that may have been incomplete, all inconsistencies and missing variables from the completed dataset were addressed. The cleaned dataset was then exported to STATA for analysis. This study used descriptive analysis to provide an overview of CSO's contributions to the food value chain and poverty reduction.

Missing information and complexities in administering the questionnaire.

The missing information and complexities in administering the questionnaire was a serious challenge for this study. However, the extensive fieldwork training and pilot survey contributed immensely to mitigate these problems. Missing information and

complexities experienced in administering the research instrument are a pervasive concern as some of the parameters of interest and skipping patterns were not properly followed or recorded. The missing information and complexities in administering the instrument can in part be attributed to the time period when the data was collected. During the time of the fieldwork (November/December), the majority of the CSOs interviewed were already busy with end-of-year functions, while others were already closed. This was a significant challenge because management staff or people knowledgeable about CSO involvement in the food value chain had limited time, forcing some fieldworkers to rush through the request for information.

Although the fieldworkers tried to reduce the likelihood of this problem by designing and updating a tracking sheet and going through each questionnaire after data collection, this study still suffered from missing information because some of the respondents were uncomfortable answering some of the questions, while others could not recall the CSO activities in 2019 and 2021.

A possible solution to avoid missing data in future studies is to evaluate the data collection period prior to its start. Targeting the appropriate data collection would aid future studies in producing high-quality data, as data collection during the holidays is likely to be compromised. Furthermore, the use of traditional paper and pen⁴ data collection methods should be reviewed since a smoother data collection process can be achieved using REDCap⁴ and tablet computers.

3. CSOs in Sustainable Food Value Chains

Introduction

What conceptual and analytical principles underpin what an agrofood value chain is and how to make it more sustainable? This section answers this question through a review of foundational concepts in thinking about sustainable agrofood value chains. To illustrate the meaning and use of these concepts, it selectively incorporates the experiences of countries in the Global South.

⁴ <https://www.project-redcap.org/>

3.1 Agrofood value chain concepts, principles and insights for theory

According to Reardon (2015), the concept of a value chain is a hybrid construct which incorporates the useful qualities of a product and supply-side efficiencies. Furthermore, Reardon (2015) argues that emphasis should be put on the midstream segment of agrofood value chains to go beyond the traditional preoccupation with the primary output and final consumption outer ends of value chains. Midstream segments are not only affected by upstream and downstream forces of value chains, but, in turn, also exert far-reaching impacts on the workings of agrofood systems. In addition, Jacobs and Ngandu (2013) also call for a more realistic and meaningful view beyond use-value and efficiency that also ground it in power relations, upgrading, and institutional governance.

The FAO (2010) defined sustainable food as “those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources.”

Globally, scientists, policymakers, development practitioners and activists are deeply worried that agrofood value chains and systems are falling short of complex global economic, social, and environmental demands (Jacobs & Msulwa, 2019). Current food production and distribution systems account for more than a quarter (26%) of global greenhouse gas emissions (Poore & Nemecek, 2018). Going forward, sustainability needs to be treated as prerequisite to ensuring food security for the future (Berry et al., 2015).

Whilst an agrofood value chain is about the routes that food moves along from the farm to the final consumer, the sustainability of these food pathways incorporates ecological, social, and economic facets (Ikerd, 2011; Shukla, Tak & Sen, 2021). Agrofood value chains are sustainable if they provide food and nutrition security today without compromising the environmental, economic, and social bases to produce, distribute and consume food among future generations (HLPE, 2020; Jacobs & Msulwa, 2019). This means that production techniques are as important as structure and composition. Jacobs and Msulwa (2019), for instance, highlight the differences between smallholder versus large commercial farms as well as agroecological versus

fossil fuel methods of farming. Loss of traditional knowledge and food practices, lack of nutrition education, limited access to affordable fresh and nutritious foods, and targeted advertising of ultra-processed foods all contribute to poor quality food environments (HLPE, 2020).

Extreme weather events and climatic disasters pose escalating threats to the agricultural sector's sustainability. Infestations of pests or diseases, for instance, will be more prevalent and significantly cut yields in crops and livestock (Kahan, 2013). Minimizing and mitigating disease outbreaks between livestock and crop products would go a long way toward keeping the agricultural system running and limiting disruptions in the livestock value chain. Furthermore, global warming has been shown to impact food safety, specifically the frequency and severity of food-borne diseases (Gitz et al., 2016).

3.2 Value chain restructuring: illustrative examples

In India, according to Kachru (2010), a large number of agroprocessing technologies were developed. These agroprocessing technologies range from (1) the development of a drier using by-products, solar energy, and residues from agriculture, (2) the development of machinery which assists in agroprocessing activities such as juice extracting and flour mills, as well as the improvement of storage structures, (3) equipment which processes and produces high quality spice mixes and ground spice, and many more (Kachru, 2010).

Smith and Barker (2013) state that various small-scale agroprocessing cottage-industrial activities can be found in the communities of Sandy Bay, Fancy, and Owia, in North-East St Vincent and the Grenadines Islands. The products which can be found are coconut oil produced from coconuts, *doucana* manufactured from sweet potatoes, and cassava bread produced from cassava, etc. (Smith & Barker, 2013). Smith and Barker (2013) state that each traditional/indigenous agroprocessing activity forms part of a crucial cultural foundation.

Cottage-scale agroprocessing practiced by specific households, supplies them with income through sales made within the markets (Smith & Barker, 2013). Cottage-scale agroprocessing and other agroprocessing activities have also been found to be useful because they allow farming produce to be utilized instead of it going to waste (Smith & Barker, 2013).

In 1990, when the production of coconut oil stopped due to closure in St Vincent's, the farmers were negatively impacted. Cheaper and healthier substitutes (for example, corn and soya oil) was the reasoning behind the closure (Smith & Barker, 2013). According to Smith and Barker (2013), coconut oil production fell victim to trade liberalization and economic competitiveness.

The communities process the coconut using the following method: the dry coconuts are broken open and the fruit is then extracted. The fruit is then grated by hand while the squeezing and separation of the juice takes place. The juice is generally put aside overnight and then is boiled the next day. Lastly, the removing of the oil occurs, followed by the bottling and selling of the oil (Smith & Barker, 2013).

While transformation in the wholesale trade segment has been constant globally, the rate at which transformation occurs differs from one country to the next. Africa, for instance, is catching up with other regions of the Global South. Evidence from some African countries, despite their 'late developer' categorisation, show the expanding involvement of multinational companies in agrofood wholesale (Reardon et al., 2021; Bellemare et al., 2021).

Faster urbanisation and investments in better infrastructure stand out as the instrumental shapers of the wholesale segment. Furthermore, revolutions in logistics, road infrastructure and transportation have also reconfigured the agrofood wholesale segment in cities (Reardon, 2015). Combinations of demand and supply pressures have also shaped the urbanisation of wholesale. On the demand side, this is due to new lifestyles and cultural practices promoted through more sophisticated advertising and nurtured urban consumption revolutions (Reardon, 2015). New urban dietary trends, which intensified supply-side competition, encouraged investments in and adoption of technological and institutional innovations.

The supermarket revolution, alongside the explosive growth of fast-food outlets and restaurants, has radically overhauled longstanding modes of agrofood procurement as powerful supermarkets have switched to specialised wholesalers and direct buying from farmers. This switch has radically shortened traditional value chains for perishable fruits, vegetables, and meats, shrinking or bypassing conventional wholesale markets (Viteri & Arce, 2010).

The current global food consumption and consequently its production has dire sustainability impacts on the planet and people's health and wellbeing. By 2050, the global population is likely to increase by 35%, and to meet the growing demand for food, crop production will need to double. Because agriculture is one of the biggest contributors to greenhouse gas emissions, this increase in crop production will also need to be environmentally sustainable (WEF, 2022). This population increase will further increase diet-related environmental pressure (FAO, 2020).

Zhang, et al. (2016) conducted a study that analysed the extent to which consumers have trust in food management and supervision in Beijing. The study included 400 households randomly sampled from six residential communities with varying income levels (low, middle and high), housing prices, and infrastructure and facilities. The survey was conducted in 2013. According to Zhang, et al. (2016), in Beijing, information on food safety is derived from government more than from non-state actors such as the private sector or civil society. Government continues to be regarded the most reliable source of information and food safety supervisor by Chinese consumers, but European consumers have significantly higher trust in market actors and especially civil society organisations. This is attributed to limited knowledge in China about NGOs which are also said to be less professional and less developed there. Zhang, et al. (2016) further pointed out that currently, the primary strategy of the Chinese government to enhance food safety is by increasing the scale of food production and strengthening the leading responsibility of larger businesses in national food supply chains while minimising the role of the several, difficult to monitor smallholders.

3.3 Civil Society Organisations: Definitional debates

CSOs have multiple definitions. The NDA (2008:6) defines CSOs as “the sphere of organizations and/or associations of organizations located between the family, the state, the government of the day, and the prevailing economic system, in which people with common interests associate voluntarily.” Amongst those organizations, they may have common, competing, or conflicting values and interests. Van Rooy (1998) says CSOs are a population of groups formed for collective purposes primarily outside of the state and marketplace. They can also be described as individuals and groups who voluntarily engage in forms of public participation and action around shared interests, purposes, or values (UNHRC, 2014). CSOs can be grass-roots organizations, citizen's

movements, trade unions, cooperatives, and NGOs, and other ways in which citizens associate for non-politically partisan and non-profit motives (Alokpa, 2015).

An NDA (2008:7) report listed the characteristics of CSOs as follows:

- For public benefit
- Having a common purpose, usually (but not exclusively) around service delivery, social watch, advocacy, research or education;
- Private (occupying the space outside of the state or market);
- Self-governing; and
- Does not distribute profit.

CSOs play several significant roles in society. CSOs can influence certain decisions, policies and activities of either government or other groups within the state (Alokpa, 2015). CSOs also mobilize, campaign, and launch initiatives that seek social justice, respect for human rights and a life with dignity without poverty and hunger (FAO, 2013). The FAO further states that CSOs initiate dialogues with other actors contributing their capacities and expertise to higher quality policy and normative discussions. They also act as the voice of the people on issues that matter to them, assist rights holders, monitor government and parliament's activities, give advice to policymakers, and hold authorities accountable for their actions (EUAFR, 2017). CSOs collect and channel views of communities so that decision-making on public policies can be informed (UNHRC, 2014). They also fulfil services for those who are at risk and vulnerable on multiple fronts (UNHRC, 2014). The NDA (2008) report highlights that CSOs promote development by assisting the building of a society to enable citizens to live in a society where basic needs are met. The report further highlights that CSOs fill the gaps by providing socio-economic and basic services that government is failing to provide and, in some cases, have taken over the functions of the state.

3.4 CSO categories and roles

CSOs are vital to the social, economic, and democratic development of a country. They play an important role as a bridge between citizens and the state, advancing the needs and interests of the society. Different CSOs have taken an active role in the South African context in ensuring government accountability, service delivery, and

protection of the most vulnerable from unfair laws and state action, such as preventing evictions and demolishing low-income earners' homes (HSRC, 2020). This note will explore various types of CSOs, and their roles as defined in the *Civil Society Organization Sourcebook* (ADB, 2009).

- **Community-Based Organizations (CBOs)** – These are small organizations that do not have the registered status of an NGO but are a structured group of civil society, non-profits that operate within a single local community. CBOs are generally organized to directly address the immediate concerns of their members (ADB,2009). They perform a wide range of functions, including economic, social, religious, and even recreational activities. Neighbourhood associations, tenant associations, community development organizations, water-user groups, and credit associations are examples of CBOs.

- **Faith-Based Organizations** – These are religious-based groups organized around a place of religious worship or congregation, a specialized religious institution, or a registered or unregistered institution with a religious character or mission. Faith-based organizations participate in community development activities (Shirley, 2001). They bridge the gap between the supply and demand for welfare provisions to meet a variety of community needs (Vodo, 2016).

- **Foundations** – These are philanthropic or charitable organizations established as a legal entity (a corporation or trust) by individuals or institutions to support causes consistent with the foundation's goals. They can also be organized as charitable organizations that accept donations to fund specific activities that are often cultural or socially beneficial.

- **Labour Unions** - These are formally organized groups of workers who have banded together to advance their collective views on wages, working hours, and working conditions. Labour unions are frequently organized by industry or occupation. They frequently work with umbrella federations, congresses, and networks. According to Khan (2008), unions have also played a social role for workers and society in areas such as public health, poverty alleviation, and worker training and education.

- **Nongovernmental Organizations (NGOs)** – These are legally constituted organizations formed by natural or legal persons that operate independently of any government, and it is a term commonly used by governments to describe entities that

do not have government status. They are recognized as key players in the landscapes of development, human rights, humanitarian action, the environment, and a variety of other public action areas (Lewis, 2010). NGOs are best known for two distinct but often interconnected types of activity: providing services to those in need and organizing policy advocacy and public campaigns aimed at social transformation.

- People's Organizations (POs) – According to ABC (2009), These are grassroots volunteer organizations that advance the economic and social well-being of their members. POs can become more open and inclusive through POs' activities and interactions with NGOs (Tatebe & Miyamoto, 2021). They play vital roles in receiving and assisting with project implementation, encouraging member independence, and providing solutions to community issues such as poverty and development.
- Professional Associations – These organizations represent the interests of their members, who typically work in a specific occupation or profession. Professional organizations may also impose standards pertaining to the professions practiced by their members.
- Research Institutes – These organizations typically conduct research and analysis relating to public policy issues and disseminate their findings and recommendations in hopes of influencing decision makers and opinion formers (ABC, 2009). According to Philbin et al., (2014), research institutes are an important part of the innovation landscape, which also includes industrial, academic, and government organizations.
- Social Movements – are large, often informal groups of people who band together against power holders in response to perceived inequality, oppression, and/or unmet social, political, economic, or cultural demands (Ruzza, 2006). Social movements are not permanent institutions; rather, they form, pursue their goals, and then disband (ABC, 2009).

3.5 CSOs in South Africa's agrofood value chains

The focus of many CSOs is on serving poor communities, without assistance from government in some cases. According to Graham, et al. (2008), in South Africa the civil space is dominated by CSOs that largely focus on service delivery or advocacy. In most of their interventions on food security and nutrition security, CSOs operating in South Africa are guided by policy plans and relevant strategies, working in close collaboration with government or through state institutions like the NDA (NDA, 2016).

CSOs in the food value chain in South Africa include Community Action Networks (CANs), Community-based Organisations (CBOs), Faith Based Organisations (FBOs) and large Non-Governmental Organisations (NGOs), and they work several thematic perspectives including agricultural and farming, social development, and homeless charities. Adelle and Haywood (2021) pointed out that CSOs in the food sector within the Western Cape focus on service delivery, with very few of them engaging in raising awareness or advocacy, and most of them are in the health sector and also operate at the national level.

Food insecurity is deemed to be closely related to poverty and inequality as food security can only be achieved when people have enough income and no longer need food relief (Adelle & Haywood, 2021). CSOs work on the ground and have networks and systems in place not only to identify needs within poor communities but also to reach those most affected by poverty (Graham, et al., 2008). The role of CSOs in poverty reduction is through their activities that contribute to making food accessible to vulnerable and poor households that include supporting communal gardens and smallholder farming, distributing food parcels to poor and vulnerable households, and feeding programmes in crèches and schools. CSOs should also promote dietary diversity and assist with public awareness campaigns on the importance of dietary diversity and household nutrition security (NDA, 2013).

Annex 1: CSO Agrofood Activities - a rapid purposeful web-based scan includes a rapid and purposeful selection of CSOs involved in agrofood value chains. It documents the names of CSOs, the provinces in which they are present and operate and a brief description of their activities.

4. Thematic analysis of Key Informant Interviews (KIIs)

The study tapped the vast in-depth knowledge of people who are involved in agrofood value chains and/or work with CSOs in agrofood value chains using KIIs. The interviews included discussions on the Key Informants' (KIs) understanding of agrofood systems and of sustainability. The discussions also sought to understand the extent to which the organisations the KIIs work for incorporate CSOs in the agrofood value chains they are involved in; and to obtain their views on how the policy environment supports or hinders sustainability of agrofood value chains, the role of

CSOs in reducing poverty, and how the challenges faced by CSOs can be addressed to enhance their poverty reducing potential, as well as barriers to making agrofood value chains inclusive and the measures necessary to address that.

4.1 Understanding of agrofood value chains and sustainability

There is a sound understanding of the agrofood value chains. Those in senior positions and those in academia seem to have a deeper understanding of the concept, with one academic in the area of nutrition and food security suggesting that food waste should be considered as part of agrofood value chains. Public sector institutions are involved in multiple phases of the agrofood value chains, including provision of financial and technical support such as education on farming and information on markets.

While overall, sustainability is understood by the KIs, it is the economic aspect of sustainability that is well understood by all participants; with ecological sustainability also relatively well understood by a significant number of the KIs. The area in which one is experienced seems to influence the extent to which participants articulated the issues. For example, an experienced (5 years) senior person in the rural development space, remains biased towards the economic aspect of sustainability even after the other three aspects of sustainability were brought into the discussion. It is interesting to note that in some instances, even when the four aspects of sustainability were not well articulated, there was knowledge of the multifaceted nature of sustainability, with one KI pointing out that:

“there are obviously different lenses that one can view sustainability, but certainly ‘sustainability’ means that you have minimal disruptions to food production in the food value chain. And whatever is produced, is produced sustainably. And that whatever you need is always available; that will ensure that production is available.”

Another KI suggested the inclusion of a health aspect in the sustainability discussion, so that people can be steered in the right direction to help them make healthier food choices every day, through the right policies and programs.

Conflicting sustainability aspects

The conflict between sustainability aspects stands out from the interviews, mainly between economic sustainability, ecological sustainability, and social sustainability. For example, one KI argued that:

“from an economic sustainability point of view...when you are paid in dollars and pounds and whatever else, euros, versus being paid in rands, it just makes more economic sense to produce for the export market, yet so many of our people go to bed hungry at night.”

The existence of such conflict, it was suggested, highlights the importance of initiatives like food gardens, to encourage communities to produce their own food so that they not only reduce reliance on markets but also produce in response to their specific needs. However, the effectiveness of food gardens in achieving food security was questioned as it is said to be highly dependent on the availability of land as well as the size of the available land, as pointed out by a KI who said:

“[Because] a lot of our economy is driven by the fact that we do have these large-scale farmers that are producing those foods... we do become a taker of whatever is produced. But if you take the cost, if you consider the cost of producing it yourself, it simply doesn't make...it's economy of scale — it doesn't make sense. You can do it because it's a pleasure for you, but most of the time you are not able to sustainably feed your family twelve months out of the year. You need a certain amount of land to be able to do that... very good example of that in South Africa... is the island in the Orange River where they gave the poor white farmers, after the Boer War, they gave them a plot of land. And the plot of land was too small for them to survive and to produce their own food...you need a certain critical amount of land of a certain quality to be able to produce sustainably on that. And then, if you are looking at cattle and chickens and small livestock, they also, for grazing, they need a certain amount of fodder — which is not necessarily available if you only have a small piece of land.”

In addition, ecological sustainability conflicts with social sustainability. While it was acknowledged that climate change is a reality that calls for environmentally sound use of resources, one KI pointed out that it is difficult for the poor to think about sustainability when they do not have the basics to live on now.

“And sometimes I think if you are on the borderline of poverty (or under the borderline of poverty) your focus is much more on day-to-day survival than on really thinking about long-term sustainability. But who can blame you? It is simply a matter of, you know, you cannot expect a certain level of future perspective if you don't have food or water today”.

Another KI argued that economics is the driver of agrofood value chains, meaning that other aspects of sustainability become secondary.

“I think one very important thing is that we must recognise the fact that agrofood systems or value chains...it’s not nutrition driven; it is mainly economic driven. So that is something that, for me, is a little bit sad. Because unfortunately, what is being produced is what is being consumed. Because that is what is available. So, we limit people’s food choices by not actually producing a wider variety of the foods that contains the nutrients that people need. And if we think about dietary patterns, the developing world like in Africa, has in one generation moved away from traditional food eating patterns to highly westernised eating patterns. And that is not sustainable”.

Thus, government needs to put in place policies that address situations when some aspects of sustainability are compromised by others. This is highlighted by a KI who pointed out that:

“economic profitability is still driving our food system — and it will continue to do so. Because, if a farmer can produce five times more [white] sweet potatoes than orange flesh sweet potatoes, which is high in beta-carotene and can assist children not to become blind, then they will continue to plant the white variety. Unless there is a policy that pushes them to produce those products that are highly nutritious”.

[Agrofood value chains and the policy environment in South Africa](#)

Most of the KIs did not have knowledge or understanding of both the National Food and Nutrition Policy and the Agricultural Marketing Policy, with most having knowledge of one of the two policies or neither of them.

Effectiveness of policies was argued to be hindered by lack of funding as well as lack of collaboration among key government departments. This was pointed out by a KI who argued, regarding the National Food and Nutrition Policy, that:

“...unfortunately, the limitation is the funding. And of course, also the pulling of strings of ...‘who will be implementing?’ Is it the health workers? Is it the Agricultural Officers? So there is a tension between the departments as to ‘who gets the money to be able to roll it out’ and that is something that is, to me, very sad; because that was never the idea of the policy. The policy was actually that all the departments will work together as one team....so that the agricultural worker will work with the health worker and the

social worker together to accomplish the same outcomes. And not that it is a battle for who will get the funding.”

4.2 Engagement with CSOs

Most of the organisations represented by the KIs work with CSOs, however, it seems they mainly involve the big CSOs in the agrofood systems they operate in; the likes of Food Forward SA, Muslim Youth in Chatsworth Welfare Organisation, and Nourish to Flourish. It was pointed out that there seems to be a concentration of CSOs in the food preparation and distribution phase. The reason for this being that, even organisations that are involved in the primary phase of agrofood systems largely work with CSOs that prepare food and distribute to people in need in their respective communities. CSOs are said to be concentrated in primary production and in the distribution of food while processing is argued to only involve cooking food and distributing cooked food on a largely humanitarian/soup kitchen type of basis. However, another KI was of the view that CSOs seem to be more supported in the primary stage because the skill and infrastructure requirements are less. The views on the concentration of and support to CSOs across the value chain appear to be influenced by the realities of each KI, as they know mostly about the segment(s) of the agrofood value chain they work in.

4.3 Role of CSOs

There was a consensus among KIs that CSOs have a role to play in making agrofood value chains more sustainable. CSOs are seen as having more scope in playing an oversight role or acting as a link between communities and government. In this role, they are seen as a voice for the communities and a platform for engagement and a conduit of information from government to communities. In addition, the role of CSOs is deemed to be an educational one, informing and educating communities about navigating the agrofood systems practises. This includes information about markets, proper marketing/logistics procedures, safe practises at farm level and why it is important to look after our land, water, and the environment. One KI pointed out that:

“We found that civil society organisations are critical to influence and to shape and to guide consumers or the consumption process...civil society organisation in Worcester or Zwelethemba, for example...have assisted in early childhood development and recognising the importance of healthy and nutritious food for children, especially those in pre-school. And they’ve been involved in making sure that...children at preschool

level or early childhood development level are...that those kids are supplied with [food]. So that's just one example."

The need to capacitate CSOs, was emphasised by many participants, as it is believed to be necessary to strengthen the potential of CSOs to contribute to poverty reduction in South Africa. In addition to working with government, the potential of CSOs could also be strengthened by them working with the research community, as pointed out by one KI who said:

"I do think that civil society organisations can really work hand-in-hand with government and with — and in fact, with research organisations...[they] have so many tertiary research institutions right on [their] doorstep, why don't [they] include these clever scientists in [their] programs so that they can guide [them]."

4.3 CSO challenges

CSOs are not adequately institutionalised and there are many small disparate CSOs each with their own little mandate. This becomes very difficult to unite or institutionalise. Another challenge is lack of coordination among CSOs and their working in isolation. They could achieve more if they organise themselves better and collaborate with other relevant stakeholders. One KI argued that:

"...lack of coordination. I think that is a serious thing. I think that civil society organisations should not work in isolation. It's really very important that if they are working on...improving a food value chain, they should try and work with as many actors as possible. And be that the local agricultural officer working in the area — or the health worker working in the area, you know, working with a clinic in that particular area, working with the schools, whoever is in the area — that they should really take hands with all the other players. And then it becomes something like 'all of us' instead of 'me and myself'. [For example], in Maputo when I was assisting FAO to roll out a program there... there were so many NGOs and civil society organisations working in parallel, but with the same basic outcome... Everyone just working in their little way, and there is no coordination between them."

CSOs' main challenge, according to one KI, is the lack of access to the resources necessary for them to become part of agrofood value chains. As an example:

"They might not have access to ground or to land in order to farm or to have these food gardens etc... access to land and proper infrastructure is another thing. Access

to proper support and ongoing support is another thing. Access to...financial resources as well”.

To enhance the potential of CSOs in their contribution to agrofood value chains and poverty reduction, it was suggested that they need accelerated capacitation through training or mentoring. The reason for this is that, for CSOs to be able to pass knowledge and skill over into their communities, they first need to be capacitated themselves. The need for upskilling them is highlighted in one KI's argument that:

“We all speak about civil society groupings and representatives in communities and leaders, but those people don't have the skills and emotional intelligence to lead those communities. Every community you go to, there is infighting; the people that should be doing the work, they don't have the capacity to do the work, they are not equipped, they are not equipped emotionally, they don't have the project management skills – so it's a whole host of...it's a package of capacitation that they need”.

Another measure viewed as important to make agrofood value chains inclusive of CSOs is to address a stringent regulatory environment. One KI mentioned that regulations are necessary, but sometimes they are too strict, not supportive and become counter development:

“...there must be regulations, but there are stringent ones and that they apply to people that are just trying to get things off the ground that are not even completely literate, and they need to comply with those type of regulatory requirements, permits, water licences, etc. And that, in itself, is not supportive of development.”

4.4 Poverty reducing potential of agrofood systems

The high rates of unemployment, poverty and inequality make it impossible for all to benefit from agrofood value chains. Production in the country is adequate at a macro level, however, at the micro level there is glaring inadequacy and food poverty. This is due to inaccessibility because people cannot afford food when they do not have money to buy. One KI said that:

“...let me start off by saying, the one advantage we have not only in the Western Cape, but I think [in] South Africa at large, is that we don't have a problem, say, with agricultural production. We actually are able to produce more food than what we are able to consume. And the biggest challenge that we have is therefore not on the production side or availability of food, it's about the accessibility to food. And that,

[affects] the price on the shop...on the shelf; the ability of our communities to afford the food...that is produced”.

Food value chains are deemed to have potential to get people out of poverty, especially in the rural areas. However, as argued by one KI who works in rural development, it can help reduce hunger and vulnerability but not contribute to wealth creation, unless if it is modified:

“I don’t think that the scale of sustainable food value chains that we’re speaking about in rural communities at the moment, has the ability to eradicate poverty – it is there. It is almost like a plaster to patch something in the short-term. A lot of the food gardens and...food value chains etc...[are] not happening at commercial scale. That is not to relieve poverty, that is really just about enabling people to survive and provide some sort of relief to starving communities. For it to reduce poverty, it needs to be upscaled tremendously; it needs to be able to feed a lot more people; it needs to be able to supply quality food at very reasonable prices to people in those communities. I don’t see how food value chains in itself can get people out of poverty – it can help reduce hunger and vulnerability and those type of things – but I don’t see how it’s a wealth generating thing.”

In addition, it was pointed out that interest in agrofood value chain activities is reduced if there is no commercial edge to ensure potential for making money, because they are then regarded as trivial projects and are not taken seriously. Furthermore, agrofood value chain activities should be at a scale that enables people participating in them to produce for a wide range of customers including the local market in the respective communities, retailers, and spaza shops.

Food gardens

Food gardens were praised for contributing to poverty reduction, if families, communities, and provinces can learn from one another:

“...for instance in the Western Cape...after I criticised the food basket that they handed out during lockdown as having not enough fruits and vegetables...they...planted 125 000 gardens since I brought in that into their conversation at provincial level. Because they realised if they have those vegetable gardens in the communities, in the schools, then everyone will have the benefit of that. Now, if one province can do that, other provinces can also roll that out...I always say, ‘we have to learn from...’ in any

community you have people that have the same resources, but some families are better off than others. And you have to study what are those families doing that the other families are not doing right and learn from them the lessons that they can implement with the same resources available to them...Where provinces are doing well, then we have to learn from what policies and programs did they put in place in the Western Cape for vegetable gardens that we can roll out to all the other provinces so that everyone will have more of that available”.

4.5 Barriers to making agrofood value chains inclusive

Lack of control over external factors like drought, climate change and shocks such as the COVID-19 pandemic and the energy crisis manifesting through loadshedding, hamper the sustainability of agrofood systems.

“...[the] current energy crisis is really something that came as a double whammy on top of COVID. So, although the agricultural sector was allowed to function, the reality is that you know yourself, when you went to the supermarket you would sometimes find just an empty shelf because the value chain was not functioning well.

I think that disruption in the food system and how vulnerable the food system actually is, were very clearly shown to us through COVID. And now, with the energy crisis, there are just so many farmers that say, ‘we just cannot continue. There is no way that we can afford to continue to farm because it’s ruining us, it’s taken all our savings, and it cost us millions’ because there is so much food waste because they can’t keep the refrigerators going, they can’t process the food as it is harvested”.

Inclusivity of agrofood value chains is further obstructed by inadequate education and skills among community members, as one KI pointed out:

“...there is no program that [does a] hand holding, mentoring program that enables people on the ground to apply for funds; to apply for training; to apply for implements. The incentives are there, but the people on the ground aren’t able to access them. Why? – because they are not literate, because they are not motivated, because they are not educated...So, in order for them to access it, they almost need to be kick-started, handheld, taken to spaces, informed how to apply, and given support throughout those things”.

Another KI concurred, on the importance of education and skills to help people benefit from agrofood value chains, stating that:

“...teach[ing] people how important it is to have skills and that you use those skills towards attaining own food security. And if you can teach people that...many of our indigenous green leafy vegetables and indigenous foods...[and] indigenous livestock as well, is in fact adapted to climate change and will proliferate in harsh conditions”.

5. CSO Survey Results and Discussion

Introduction

This section of the report provides a detailed analysis of the data gathered from the CSOs interviewed. The section is divided into four subsections: characteristics and primary socioeconomic activities of the CSO; food distribution services; CSO food production activities; and input costs, suppliers and sustainability.

5.1 Characteristics/features and primary socioeconomic activities of the CSO

Table 4 describes how long the CSOs had been in existence relative to their respective provinces in 2022. The national mean age of CSOs was 15 years. About 55% (5) of the CSO ages were equal to or above the national average, these included Free State, Limpopo, Mpumalanga, North West, and Northern Cape. Forty-five per cent (4) of the CSOs had ages that were below the national average, these were found in the Eastern Cape, Gauteng, KwaZulu-Natal, and Western Cape.

The national median age of the CSOs was 12 years. The majority of the CSO median ages were equal to or above the national median age. Seventy-eight per cent (7) had median ages that were above the overall median age and only 22% (2) were below the median age across all provinces. Comparing both the mean and the median in Table 4, the mean is larger than the median, therefore, one can infer that the data on the age of CSOs is positively skewed. This also tells us that there is not a very large variation in the ages of the different CSOs.

Table 4: Mean and Median CSO age in years at time of data collection (2022), by Province.

Province	Valid Observations (N)	Mean age (years)	Median age (years)
Eastern Cape	39	13	10
Free State	46	17	14
Gauteng	31	13	12
KwaZulu-Natal	31	13	12
Limpopo	38	17	16
Mpumalanga	42	16	15
North West	33	15	13
Northern Cape	30	17	14
Western Cape	40	13	10
All Provinces	330	15	12

Note: Only 330 participants answered this question

Table 5 and **Error! Reference source not found.** display the ages of the CSOs according to different categories and according to their respective provinces. According to Table 5, most of the CSOs (95 or 22.79%) are between 11 and 20 years old and the least amount of CSOs (21 or 6.36%) are 31 years or above.

With respect to the provincial distribution of the CSO ages, the categorical average for ages across all provinces was 20% for CSOs from 0 – 5 years, 23.64% for 6 – 10 years, 28.79% for 11-20 years, 21.21% for 21 – 30 years and lastly, 6.36% for CSOs that are 31 years or above. On closer inspection, the majority of the CSO ages were above the provincial averages, with the 0 – 5 years' age category having the most CSOs that are above the provincial average. Furthermore, KwaZulu-Natal (35.48%) had the highest numbers of CSO's that were five years old or younger, whereas, Northern Cape (13.33%) had the largest number of CSOs that were 31 years or above. In other words, the majority of the oldest CSOs were found in Northern Cape and the youngest in KwaZulu-Natal.

Table 5: CSO age distribution by category

Age category	Valid Obs. (N)	%
<5years	66	20.00
6-10 years	78	23.64
11-20 years	95	28.79
21-30 years	70	21.21
>31 years	21	6.36
Total	330	100.00

Note: Only 330 participants answered this question

Table 6: CSO age distribution by age category per province

Province	Age Categories				
	<5years	6-10 years	11-20 years	21-30 years	>31 years
Eastern Cape	20.51	41.03	20.51	7.69	10.26
Free State	23.91	13.04	34.78	15.22	13.04
Gauteng	3.23	41.94	38.71	16.13	0.00
KwaZulu-Natal	35.48	12.90	19.35	32.26	0.00
Limpopo	15.79	15.79	31.58	28.95	7.89
Mpumalanga	14.29	23.81	28.57	28.57	4.76
North West	9.09	30.30	33.33	24.24	3.03
Northern Cape	23.33	16.67	26.67	20.00	13.33
Western Cape	32.50	20.00	25.00	20.00	2.50
All provinces	20.00	23.64	28.79	21.21	6.36

Affiliation with regard to CSOs is described as the relationship a CSO has with a board of directors that supports the activities in which they are engaged. However, it is important to note that being affiliated with a board is not compulsory for CSOs to function. In this study 138 CSOs were part of an affiliation network.

The CSO affiliation age is derived from the year in which the CSO first became affiliated to a network to the time of the study (2022). According to Table 7 the national average years of affiliation was eight years and the median affiliation age was six

years. The mean is larger than the median, indicating that the distribution is positively skewed. Furthermore, the gap between the mean and median is not very large, which shows that there is little variation in the affiliation ages of the CSOs.

Interestingly, the Western Cape province had the most CSOs which were affiliated, and the Northern Cape had none that were affiliated. About 55% of the CSOs had affiliation ages that were above the mean and about 45% below the average. Similarly, the median affiliation age of the CSOs was reported as six years. Approximately, 67% of the CSO's affiliation ages were above the median affiliation age across the provinces and about 33% were below the affiliation median age.

Table 7: Duration of CSO affiliation status by Province.

Province	Valid Obs. (N)	Mean (years)	Median (years)
Eastern Cape	8	7	6
Free State	17	9	6
Gauteng	20	8	8
KwaZulu-Natal	13	7	6
Limpopo	4	8	5
Mpumalanga	28	9	6
North West	14	5	5
Northern Cape	n/a	n/a	n/a
Western Cape	34	10	8
All Provinces	138	8	6

Note: Only 138 participants answered this question

Table 8 and **Error! Reference source not found.** describe the CSO affiliation age by categories and also according to the provincial spread of the CSOs. The majority of the CSOs that were affiliated had become so within the last 5 years (relative to the date of interview, 2022). These were 64 CSOs or 46.38% of the affiliated CSOs. Only 18 CSO's or 13.04% of the CSOs had been affiliated for 16 years or longer.

With regards to the provincial distribution of the affiliation ages of the CSOs, **Error! Reference source not found.** shows that the North West had the most affiliated CSOs, amounting to 71.43%, these were officially affiliated in the last 5 years. As

previously mentioned, the Northern Cape had no CSO's that were affiliated to any larger network.

Table 8: CSO affiliation age distribution by category.

Age category	Valid Obs. (N)	%
<5years	64	46.38
6-10 years	36	26.09
11-15 years	20	14.49
>16 years	18	13.04
Total	138	100.00

Note: Only 138 participants answered this question

Table 9: CSO affiliation age category by Province

Province	Age categories			
	<5years	6-10 years	11-15 years	>16 years
Eastern Cape	50.00	37.50	0.00	12.50
Free State	41.18	23.53	17.65	17.65
Gauteng	35.00	40.00	20.00	5.00
KwaZulu-Natal	46.15	30.77	15.38	7.69
Limpopo	50.00	25.00	0.00	25.00
Mpumalanga	46.43	17.86	21.43	14.29
North West	71.43	21.43	0.00	7.14
Northern Cape	-	-	-	-
Western Cape	44.12	23.53	14.71	17.65
All Provinces	46.38	26.09	14.49	13.04

The mandate of CSOs is to provide a service to individuals in need, be it within the borders of their local municipality or beyond. In the context of beyond local municipalities, this includes CSOs who provide services to all local municipalities in the district municipality, CSOs that serve individuals across their respective province, and CSOs that serve people on a national scale.

According to **Error! Reference source not found.** and Table 11, the majority of the CSOs interviewed operated within the jurisdiction of their local municipality in both

2019 and 2021 (97.12% and 96.79% respectively) and only 6.27% and 5.97% operated beyond their local municipalities in 2019 and 2021 respectively. A slight decrease (0.33%) can be noticed in the number of CSOs operating within the borders of their local municipalities. This could possibly be due to the effects of the COVID-19 pandemic but the recent pandemic did not appear to have a substantial negative impact on the functioning of the CSOs either within or beyond the local municipality.

Table 10: In which areas did you produce and/or distribute food in 2019 and 2021?

CSO activity area	2019					2021				
	Valid Obs. (N)	Yes	%	No	%	Valid Obs. (N)	Yes	%	No	%
Local municipality	313	304	97.12	9	2.88	312	302	96.79	10	3.21
All LMs in this DM	178	16	8.99	162	91.01	177	16	9.04	161	90.96
Across this province	160	5	3.13	155	96.88	158	5	3.16	153	98.84
Nationally in all provinces	156	2	1.28	154	98.72	155	4	2.58	151	97.42
Others	153	2	1.31	151	98.69	151	1	0.66	150	99.34

Table 11: In which areas did you produce and/or distribute food in 2019 and 2021?

CSO activity area	2019					2021				
	Valid Obs. (N)	Yes	%	No	%	Valid Obs. (N)	Yes	%	No	%
Local municipality	313	304	97.12	9	2.88	312	302	96.79	10	3.21
Beyond local municipality	335	21	6.27	314	93.73	320	20	5.97	315	94.03

In taking this analysis further, the activity areas in which the CSOs served was compared for the nine provinces of South Africa. **Error! Reference source not found.** and Table 13 depict the provincial spread of CSOs that operated within their local municipalities for the years 2019 and 2021. As mentioned above, the majority of the

CSOs operate within the borders of their local municipalities. The average per province was 97.12% and 96.79% for 2019 and 2021 respectively. More than 60% of the CSOs in the provinces were above the national average in both years. These provinces were, KwaZulu-Natal, Limpopo, Mpumalanga, North West, Northern Cape, and Western Cape.

Table 12: Production within local Municipality by Province in 2019.

Province	Valid Obs. (N)	Yes	%	No	%
Eastern Cape	38	37	97.37	1	2.63
Free State	44	39	88.64	5	11.36
Gauteng	27	25	92.59	2	7.41
KwaZulu-Natal	31	31	100.00	0	0.00
Limpopo	35	35	100.00	0	0.00
Mpumalanga	40	40	100.00	0	0.00
North West	32	32	100.00	0	0.00
Northern Cape	30	30	100.00	0	0.00
Western Cape	36	35	97.22	1	2.78
All Provinces	313	304	97.12	9	2.88

Table 13: Production within local Municipality by Province in 2021.

Province	Valid Obs. (N)	Yes	%	No	%
Eastern Cape	38	36	94.74	2	5.26
Free State	44	39	88.64	5	11.36
Gauteng	27	25	92.59	2	7.41
KwaZulu-Natal	31	30	100.00	0	0.00
Limpopo	35	35	100.00	0	0.00
Mpumalanga	41	41	100.00	0	0.00
North West	31	31	100.00	0	0.00
Northern Cape	30	30	100.00	0	0.00
Western Cape	36	35	97.22	1	2.78
All Provinces	312	302	96.79	10	3.21

Table 14 and **Error! Reference source not found.** show the provincial distribution of the CSOs that operate beyond their local municipalities. Only 20 and 21 CSOs provided a service outside their local municipalities in 2019 and 2021, respectively. The provincial average of these CSOs was 6.27% and 5.97% for 2019 and 2021 respectively. Forty-four per cent of the CSOs had averages that were above the provincial average. These CSOs were mostly located in Free State, Gauteng, Northern Cape, and Western Cape for both 2019 and 2021.

Table 14: Production in areas beyond local municipality by province in 2019.

Province	Valid Obs. (N)	Yes	%	No	%
Eastern Cape	39	0	0.00	39	100.00
Free State	48	7	14.58	41	85.42
Gauteng	31	4	12.90	27	87.10
KwaZulu-Natal	34	0	0.00	34	100.00
Limpopo	38	2	5.26	36	94.74
Mpumalanga	42	0	0.00	42	100.00
North West	33	1	3.03	32	96.97
Northern Cape	30	4	13.33	26	86.67
Western Cape	40	3	7.50	37	92.50
All Provinces	335	21	6.27	314	93.73

Table 15: Production in areas beyond local municipality by Province in 2021.

Province	Valid Obs. (N)	Yes	%	No	%
Eastern Cape	39	1	2.56	38	97.44
Free State	48	7	14.58	41	85.42
Gauteng	31	3	9.68	28	90.32
KwaZulu-Natal	34	0	0.00	34	100.00
Limpopo	38	2	5.26	36	94.74
Mpumalanga	42	0	0.00	42	100.00
North West	33	0	0.00	33	100.00
Northern Cape	30	4	13.33	26	86.67
Western Cape	40	3	7.50	37	92.50
All Provinces	335	20	5.97	315	94.03

Table 16 shows the number of workers that were employed by the CSOs. In the context of CSOs, workers refers to individuals that were employed by the respective CSOs and were paid a wage or salary for the duties they perform. The numbers of workers employed for administrative functions as well as food production/delivery and other job categories were approximately the same, with those that work as admin officers being 61.79% and those working on food production/deliveries and other job categories at 62.39%. In 2021, the number of people employed in administration decreased from 207 to 204 while the number of workers for food production/deliveries and other job categories increased from 209 to 214.

Table 16: Number of workers the CSOs employed in 2019 and 2021.

General Job Category	N	2019	%	2021	%
Administration office	335	207	61.79	204	60.90
Food Production/Delivery and others (security, cleaner, etc.)	335	209	62.39	214	63.88

Table 17 shows the number of volunteers that assisted CSOs perform their core activities between 2019 and 2021. Volunteers do not receive any wage or salary but occasionally receive in-kind assistance in the form of food, transportation costs or a

small stipend. In-kind transfers are not the primary motivation for volunteers to help the CSOs. The results reveal that in both years the number of people who volunteered in CSOs for food production/delivery and other activities (134 and 142 volunteers respectively) is larger compared to the number of people who volunteered for admin office activities (89 and 93, volunteers respectively). The number of people who volunteered for food production/delivery and other activities increased by 2.38% between the 2019 and 2021, whereas the number of people who volunteered for administrative work increased by only 1.19%.

Table 17: Number volunteers that helped the CSO to perform its core activities in 2019 and 2021.

Volunteer activity group	N	2019	%	2021	%
Admin office	335	89	26.57	93	27.76
Food Production/Delivery and others	335	134	40.00	142	42.38

Table 18 and Table 19 depict the CSOs' main income sources for 2019 and 2021. The main income source for CSOs was the state/government (149 and 155) for both years, followed by (25 and 21). The results also reveal that the number of CSOs who rely on the state/government for main income increased from 47.76% in 2019 to 49.52% in 2021. This can be explained by the COVID-19 crisis where the government expanded its support for the most vulnerable through social grants, the distribution of food parcels, and vouchers. On the contrary, the number of CSOs who rely on donors and the private business sector as their main income source decreased between 2019 and 2021 (8.77% to 7.47% and 6.41% to 4.29%, respectively). This can also be explained by the COVID-19 crisis where individuals started giving less to the poor in response to the pandemic. Most private business experienced a deficit in their revenues and for that reason, they may have been discouraged from donating to CSOs.

Table 18: CSO main income source for 2019.

Income Source	Valid (N)	Obs.	Yes		No	
			n	%	n	%
State/Government	312		149	47.76	163	52.24
Donors	285		25	8.77	260	91.23
Private Business Sector	281		18	6.41	263	93.59
Community	283		15	5.30	268	94.70
Other non-state	265		24	9.06	241	90.94

Table 19: CSO main income source for 2021.

Income Source	Valid (N)	Obs.	Yes		No	
			n	%	n	%
State/Government	313		155	49.52	158	50.48
Donors	281		21	7.47	260	92.53
Private Business Sector	280		12	4.29	268	95.71
Community	281		15	5.34	266	94.66
Other non-state	266		16	6.02	250	93.98

Table 20 shows the provincial spread of CSOs' main source of income for 2019 and 2021. The results show that in 2019, on average, 47.8% of CSOs in each province depend on the state as their main source of income. Whereas, on average, 20.3% of CSOs in each province depend on non-state income as the main source of income. Moreover, CSOs that rely on the state for main income in the Eastern Cape, Free State, Limpopo, Mpumalanga, and Northern Cape were above the average with 52.63%, 82.86%, 55.26%, 51.22%, and 60% respectively. The remainder of the provinces were below the average. On the other hand, CSOs that rely on non-state income sources in the Free State, North West, Northern Cape, and Western Cape provinces were above average with 29.17%, 27.27%, 36.67%, and 22.5% correspondingly.

In 2021, the average of CSOs that depend on state source of income per province increased to 49.2% whilst the average of CSOs that depend on non-state sources of

income decreased to 16.9%. As in 2019, CSOs that rely on the state as their main source of income in the Eastern Cape, Free State, Limpopo, Mpumalanga, and Northern Cape provinces exceeded the average with 57.89%, 81.85%, 56.76%, 50%, and 56.67% respectively. But, in almost all provinces CSOs that rely on non-state income as the main source of income were below average except for Free State and Northern Cape provinces (20.83% and 50% respectively).

Table 20: CSO self-reported state and non-state sources of income in 2019 and 2021.

Province	State income				Non-State Income Sources			
	2019		2021		2019		2021	
	N	%	N	%	N	%	N	%
Eastern Cape	20	52.63	22	57.89	5	12.82	3	7.69
Free State	29	82.86	31	81.58	14	29.17	10	20.83
Gauteng	11	37.93	12	41.38	5	16.13	4	12.9
KwaZulu-Natal	11	36.67	12	42.86	5	14.71	5	14.71
Limpopo	21	55.26	21	56.76	5	13.16	4	10.53
Mpumalanga	21	51.22	21	50.00	4	9.52	3	7.14
North West	13	40.63	11	34.38	9	27.27	5	15.15
Northern Cape	18	60.00	17	56.67	11	36.67	15	50.00
Western Cape	5	12.82	8	20.51	9	22.50	5	12.50
Average per province	16.6	47.8	17.3	49.2	7.5	20.3	6	16.9

*The mean, median and total income CSOs received from state and non-state sources for 2019 and 2021 is shown in **Error! Reference source not found.** and*

Table 22 respectively. The results show that on average the mean income received by CSOs in 2019 was R144 940. In 2019, the mean state income (R214 105) exhibited a mean that was greater than the average mean value while the mean for non-state income of R139 525 was smaller than the average mean value. Similarly, in 2021, the mean state income was larger than the average mean value and the non-state mean was below the average mean value. The results also show that the total income from

all income source for CSOs in 2019 was R38 913 932 and this increased to R44 310 462 in 2021.

The findings also suggest that state income contributes the largest share of income compared to non-state income for both years (R30 402 917 in 2019 and R37 996 185). On the other hand, income received from donors and the private sector constituted the second largest share of income for CSOs with R2 497 333 and R2648074 (2019 and 2021 respectively) received from donors as well as R 4 024 396 and R1 334 800 (2019 and 2021 respectively). From the results it is also evident that income received from the private sector decreased by R2 689 596 in 2021 which might have a negative impact on the economic sustainability of CSOs.

Table 21: Mean, Median and total income CSOs received from state and non-state sources, 2019 (in ZAR).

Income Source	Valid Obs. (N)	Mean	Median	Total
All Income Sources	182	R213 813	R136 450	R38 913 932
State Income	142	R214 105	R150 000	R30 402 917
Non-State Income	61	R139 525	R39 000	R8 511 016
Donor Income	20	R124 867	R25 500	R2 497 333
Private Sector	18	R223 578	R73 500	R4 024 396
Community Income	13	R10 408	R5 000	R135 300
Other Sources	21	R88 285	R34 000	R1 853 987
Average	335	R144 940	R66 207	R12 334 126

Table 22: Mean, Median and total income CSOs received from state and non-state sources, 2021 (in ZAR).

Income Source	N	Mean	Median	Total
All Income Sources	185	R239 516	R121 840	R44 310 462
State Income	149	R255 008	R150 000	R37 996 185
Non-State Income	51	R123 809	R22 000	R6 314 277
Donor Income	19	R139 372	R20 000	R2 648 074
Private Sector	14	R95 343	R38 000	R1 334 800
Community Income	11	R68 746	R7 500	R756 206
Other Sources	15	R105 013	R48 000	R1 575 197
Average	335	R146 687	R58 191	R13 562 172

The provincial spread for both 2019 and 2021 of state and non-state income received by CSOs (mean and total amounts) is presented in Table 23 and **Error! Reference source not found..** On average, in 2019, CSOs across all provinces had a mean from all income sources of R220 652 and a total income of R4 323 770. Whereas in 2021 the mean for all income sources increased to R239 516 and the total income increased to R44 310 462.

With regards to income received from the state in 2019, the average mean value was R209 396 in 2019, the mean state income for the Gauteng province (R523 950) followed by Mpumalanga (R279 762) was greater than the average mean value. On the contrary, Western Cape (R55 225) and Limpopo (R97 486) had a mean that was below the average mean value. The mean average value for non-state income in 2021 was R150864. Like the mean of state income, Gauteng (R507 490) and Mpumalanga (R157 560) had a mean that was above the average mean value. KwaZulu-Natal (R21100) and Free State (R64 200) provinces had a mean that was below the average mean value.

During the 3-year period, on average, CSOs received R3 378 102 in 2019 and R 37 996 185 in 2021 as total income from the state. While on average CSOs received R945 668 in 2019 and R6 314 277 in 2021 as non-state total income. From these

results it is evident that the income received by CSOs from either state or non-state has increased over the years.

Table 23: State and non-State incomes CSOs received by Province in 2019 (mean and total amounts, ZAR)

Province	All Income Sources		State Income		Non-State Income	
	Mean	Total	Mean	Total	Mean	Total
Eastern Cape	R213 127	R4 262 535	R222 085	R3 997 535	R88 330	R265 000
Free State	R208 815	R7 308 541	R248 998	R6 473 941	R64 200	R834 60
Gauteng	R553 393	R8 300 902	R523 950	R5 763 452	R507 490	R2 537 450
KwaZulu-Natal	R120 926	R1 692 958	R144 314	R1 587 458	R21 100	R105 500
Limpopo	R100 274	R2 406 583	R97 486	R2 144 683	R87 300	R261 900
Mpumalanga	R303 954	R6 383 032	R279 762	R5 595 232	R157 560	R787 800
North West	R232 102	R3 713 637	R168 267	R2 019 200	R211 810	R1 694 437
Northern Cape	R137 312	R3 570 116	R144 473	R2 600 516	R88 150	R969 600
Western Cape	R115 966	R1 275 629	R55 225	R220 900	R131 840	R1 054 729
Average	R220 652	R4 323 770	R209 396	R3 378 102	R150 864	R945 668

Table 24: State and non-State incomes CSOs received by Province in 2021 (mean and total amounts, ZAR)

Province	All Income Sources		State Income		Non-State Income	
	Mean	Total	Mean	Total	Mean	Total
Eastern Cape	R91 149	R2 005 279	R95 337	R2 002 079	R3 200	R3 200
Free State	R224 311	R8 299 507	R258 724	R7 503 007	R72 409	R796 500
Gauteng	R670 693	R10 731 080	R859 443	R10 313 320	R104 440	R417 760
KwaZulu-Natal	R148 662	R2 081 265	R167 464	R2 009 565	R14 340	R71 700
Limpopo	R91 923	R2 206 148	R92 757	R2 040 648	R55 167	R165 500
Mpumalanga	R401 220	R8 425 622	R440 033	R8 360 622	R32 500	R65 000
North West	R367 316	R4 775 103	R253 696	R2 536 960	R447 629	R2 238 143
Northern Cape	R155 003	R4 340 084	R166 940	R2 837 984	R93 881	R1 502 100
Western Cape	R144 637	R1 446 374	R56 000	R392 000	R263 594	R1 054 374
Average	R239 516	R44 310 462	R255 008	R37 996 185	R123 809	R6 314 277

Lastly, Table 25 shows the duration of the main funding agreement. From the total of 196 CSOs who responded to the question, 87.24% of them stated that their main funding agreement does not go beyond one year with only 12.75% of CSOs having a funding agreement covering more than one year.

Table 25: What period does your main funding source/agreement cover?

Funding period	Frequency	Percentage
Up to 1 year	171	87.24
1 year and above	25	12.75
Total	196	100.00

5.2 CSO Food Distribution Services - Consumption

This section addresses information from CSOs active in different segments of agrofood value chains. It begins with a rapid overview of who directly receives food from the CSO. Table 26 shows the main recipient groups of the interviewed CSOs. The main recipient group is seen as the immediate recipient of the food that the CSO

produces or distributes to. The findings indicate that the majority of the CSOs (179 or 53.43%) targeted children at schools and Early Childhood Development centres (ECD). The least frequent food recipient group (38 or 11.34%) was CSO members.

Table 26: CSO main recipient group

Food Recipient Groups	Valid Obs. (N)	Yes		No	
		N	%	N	%
CSO members	335	38	11.34	297	88.66
Poor and hungry families in a neighbourhood	335	77	22.99	258	77.01
Children at schools and ECDs	335	179	53.43	156	46.57
Other food recipient groups	335	41	12.24	294	87.76

Table 27 analyses the main recipient groups of the CSOs by their respective provinces. The average per province for the children at school and ECDs was 53.75%. Six provinces (Eastern Cape, Free State, KwaZulu-Natal, Limpopo, North West, and Northern Cape) had individual averages that were above the average per province. Western Cape (52.50%), Mpumalanga (23.81%) and Gauteng (16.13%) had averages that were below the average per province. The majority of CSOs that targeted children and ECDs were found in KwaZulu-Natal. CSO members were generally the least frequent recipients of food with the average per province being 12.43%. Mpumalanga CSOs (45%) had the highest number of CSO members as their main food recipients followed by the Western Cape (27.50%). The average for poor and hungry families was 26.70%. Western Cape (52.50%) and Northern Cape (30.00%) are above the average per province. Free State had the least CSOs that targeted the poor and hungry (10.42%).

Table 27: CSO main recipient group by Province

Province	CSO Members		Poor & hungry		Children at school & ECDs		Other food recipient groups	
	n	%	n	%	n	%	n	%
Eastern Cape	6	15.38	9	23.08	21	53.85	3	7.69
Free State	1	2.08	5	10.42	27	56.25	15	31.25
Gauteng	5	16.13	16	51.61	5	16.13	5	16.13
KwaZulu-Natal	1	2.94	6	17.65	25	73.53	2	5.88
Limpopo	1	2.63	7	18.42	27	71.05	3	7.89
Mpumalanga	19	45.24	9	21.43	10	23.81	4	9.52
North West	0	0.00	5	15.15	22	66.67	6	18.18
Northern Cape	0	0.00	9	30.00	21	70.00	0	0.00
Western Cape	5	27.50	21	52.50	21	52.50	3	7.50
Average per province	4.22	12.43	9.67	26.70	19.89	53.75	4.56	11.56

Table 28 shows the main criteria that the CSOs use to identify their food recipients. It is clearly good practice for CSOs to have a mechanism to help identify their recipients because they often cannot produce enough to meet all demands and therefore cannot distribute food without some level of targeting. The targeting criteria are not just about how efficiently and sustainably a CSO uses its resources. Having a clear basis for giving food to the main recipient group also helps to determine the success and impact of the CSO. Findings indicate that almost half (48.04%) the CSOs identified children at schools as their recipients. People below the national poverty line were the least frequently used criterion that CSOs used to identify their food recipients.

Table 28: Main Criterion that the CSO uses to identify food recipients.

Target/Socioeconomic criteria	Valid Obs. (N)	Yes		No	
		N	%	N	%
Poor people below the national poverty line	331	37	11.18	294	88.82
Children at schools and ECDs with feeding schemes	331	159	48.04	172	51.96
Hungry individuals and families in a community	331	40	12.08	291	87.92
Another target/criterion	331	95	28.70	236	71.30

Note: 331 CSOs responded to this question

Table 29 demonstrates the main criteria that the CSOs used to identify food recipients by province. The average per province for children at school and ECDs was 48.47%. Findings show that Gauteng (26.67%), Western Cape (20%) and Eastern Cape had individual averages that were below the average per province for children at school and ECDs. KwaZulu-Natal had the most (75%) CSOs targeting schools and ECD followed by Limpopo (71.05%) and Northern Cape (66.67%).

The average per province for the criterion of being below the poverty line is 11.39%. Results revealed that Mpumalanga (23.81%) had the most CSOs that targeted recipients below the poverty line followed Gauteng (23.33%) and North West (12.12%) respectively. The average per province for hungry individuals and families is 12.47%. Furthermore, Gauteng had the most CSOs (23.33%) that targeted hungry individuals, followed by Western Cape (17.50%) and Northern Cape (16.67%). North West had the least CSOs that targeted hungry individuals at 3.03%.

Table 29: Main Criterion that the CSO uses to identify food recipients by Province

Province	Below poverty line		Children at school & ECDs		Hungry individuals & families		Another target	
	n	%	n	%	n	%	n	%
Eastern Cape	4	10.53	2	5.26	5	13.16	27	71.05
Free State	4	8.33	27	56.25	3	6.25	14	29.17
Gauteng	7	23.33	8	26.67	7	23.33	8	26.67
KwaZulu-Natal	3	9.38	24	75.00	3	9.38	2	6.25
Limpopo	0	0.00	27	71.05	6	15.79	5	13.16
Mpumalanga	10	23.81	23	54.76	3	7.14	6	14.29
North West	4	12.12	20	60.61	1	3.03	8	24.24
Northern Cape	3	10.00	20	66.67	5	16.67	2	6.67
Western Cape	2	5.00	8	20.00	7	17.50	23	57.50
Average per province	4.11	11.39	17.67	48.47	4.44	12.471	10.56	27.67

Table 30 focuses on the main source CSOs uses to identify their main recipients. The aim of this question was to understand how the CSO identifies its beneficiaries and also reveal the relationships the CSO has with other stakeholders. Findings indicates that the majority (56.36%) of CSOs depended on word of mouth, random walk-ins and expression of need. Results also reveal that 43.64% used their own self-maintained database and other sources to identify their recipients.

Table 30: Main source the CSO uses to identify main recipient

Information Sources	Valid Obs. (N)	Yes		No	
		n	%	n	%
The CSO's self-maintained database & other	330	144	43.64	186	56.36
Word of mouth, random walk-ins & expression of need	330	186	56.36	144	43.64

Table 31 focuses on the main source the CSOs use to identify their main recipients according to their provinces. The average for CSOs using a self-maintained database

is 44.14%. North West (96.97%) had the most CSOs that used their own databases followed by Limpopo (84.21%) and Eastern Cape (73.68%) respectively. KwaZulu Natal had the least (9.68%) CSOs that used their own database. The average for word of mouth is 55.86%. Northern Cape (53.33%), Eastern Cape (26.32%), Limpopo (15.79%) and North West (3.03%) are below the average. Kwa Zulu Natal (90%) had the largest share of CSOs that depended on word of mouth as their main source used to identify recipients followed by Gauteng (86.67%) and Free State (85.42%). North West had the least (3.03%) organizations relying on word of mouth.

Table 31: Main source the CSO uses to identify main recipient by Province

Province	CSO's self-maintained database & other		Word of mouth, random walk-ins & expression of need	
	N	%	n	%
Eastern Cape	28	73.68	10	26.32
Free State	7	14.58	41	85.42
Gauteng	4	13.33	26	86.67
KwaZulu-Natal	3	9.68	28	90.32
Limpopo	32	84.21	6	15.79
Mpumalanga	16	38.10	26	61.90
North West	32	96.97	1	3.03
Northern Cape	14	46.67	16	53.33
Western Cape	8	20.00	32	80.00
Average per province	16	44.14	20.67	55.86

Table 32 shows the kind of food items that the CSOs distributed to their main recipients in 2019. The number of valid observations varies according to the food items listed. Results indicate that fresh green leafy vegetable (80.38%) were the most distributed food item in 2019, followed by fresh tuber and root vegetables (78.34%) and bread (77.24%). Food parcels containing a broad mix of food items (42.45%) and fresh red meat (43.54%) were the least distributed food items in 2019.

Table 32: Food items distributed to main recipients in 2019

Food Items	Valid Obs.(N)	Yes		No	
		n	%	n	%
Maize and cereal grains (maize on cobb, meal, etc.)	316	243	76.90	73	23.10
Fresh green leafy vegetables (spinach, etc.)	316	254	80.38	62	19.62
Fresh tuber and root vegetables	314	246	78.34	68	21.66
Legumes (beans, lentils, peas, etc.)	303	197	65.02	106	34.98
Fresh fruits (apples, oranges, bananas, etc.)	308	220	71.43	88	28.57
Other fresh fruits and vegetables	304	187	61.51	117	38.49
Fresh red meat (beef, mutton, lamb, pork, etc.)	294	128	43.54	166	56.46
Fresh poultry (chicken, duck, etc.)	303	208	68.65	95	31.35
Eggs and dairy products (milk, etc.)	307	185	60.26	122	39.74
Prepacked and canned food items	307	209	68.08	98	31.92
Bread	312	241	77.24	71	22.76
Food parcels with a broad mix of food items	278	118	42.45	160	57.55
Fruit juices, soft drinks & beverages	310	192	61.94	118	38.06
Freshly cooked meals	305	235	77.05	70	22.95
Other (Specify)	6	5	83.33	1	16.67

Table 33 shows the food items distributed to main recipients in 2021 which was similar to 2019. Fresh green leafy vegetables had the largest share (81.21%) followed by fresh tuber and root vegetables (78.03%) and freshly cooked meals (74.84%). Findings further reveal that food parcels with a broad mix of food items (38.04%) and fresh red meat (41.89) were the least distributed food items in 2021.

Comparing 2019 and 2021, fresh green leafy vegetables are the most distributed food items in both periods, with a slight of increase of 0.38% in 2021. Distribution of fresh tuber and root vegetables declined by 0.31% in 2021 however it still remains the second most distributed food in both periods. Food parcels with a broad mix of food

items and fresh red meat remain the least distributed food items in both periods. Slightly more freshly cooked foods were distributed in 2019 (77.05%) compared to 2021 (74.84%).

Table 33: Food items distributed to main recipients in 2021.

Food Items	Valid Obs.(N)	Yes		No	
		n	%	n	%
Maize and cereal grains (maize on cobb, meal, etc.)	316	235	74.37	81	25.63
Fresh green leafy vegetables (spinach, etc.)	314	255	81.21	59	18.79
Fresh tuber and root vegetables	314	245	78.03	69	21.97
Legumes (beans, lentils, peas, etc.)	302	202	66.89	100	33.11
Fresh fruits (apples, oranges, bananas, etc.)	308	217	70.45	91	29.55
Other fresh fruits and vegetables	309	195	63.11	114	36.89
Fresh red meat (beef, mutton, lamb, pork, etc.)	296	124	41.89	172	58.11
Fresh poultry (chicken, duck, etc.)	303	208	68.65	95	31.35
Eggs and dairy products (milk, etc.)	307	186	60.59	121	39.41
Prepacked and canned food items	309	203	65.70	106	34.30
Bread	312	240	76.92	72	23.08
Food parcels with a broad mix of food items	276	105	38.04	171	61.96
Fruit juices, soft drinks & beverages	309	184	59.55	125	40.45
Freshly cooked meals	306	229	74.84	77	25.16
Other (Specify)	3	3	100.00	-	-

Table 34 groups the food items that were distributed by CSOs to their main recipients into different food categories such as processed/packaged foods, prepared/cooked meals, and perishable vegetables and fruit. The number of valid observations vary according to the food categories. The results indicate that prepared/cooked meals were the most (70.09%) distributed food categories in 2019. This is followed by

processed and packaged foods at 54.74%. Perishable vegetables and fruits had the least share of distributed food in 2019 at 44.44%.

Table 34: Food categories distributed to main recipients in 2019

Food categories	Valid Obs.(N)	Yes		No	
		n	%	n	%
Processed & Packaged Foods	95	52	54.74	43	45.26
Prepared/Cooked Meals	331	232	70.09	99	29.91
Perishable Vegetables & Fruits	54	24	44.44	30	55.56

Table 35 focuses on the food categories distributed to main recipients in 2019 by province. The average for processed and packed foods is 55.41%. Eastern Cape (38.24%) and Gauteng (33.33%) are below the average and distributed the least processed food in 2019. Mpumalanga did not distribute any processed food in 2019. Limpopo distributed the most processed food at 100% followed by KwaZulu Natal at 77.78%. The average per province for prepared/cooked meals is 70.87%. North West distributed more prepared food (93.94%) followed by North West (90%) and Limpopo (86.84%). Mpumalanga distributed the least prepared meals by 33.33%. North West distributed 71.43% perishable vegetables and fruits followed by Gauteng (66.67%). Kwa Zulu distributed the least share in the distribution of perishable foods at 14.29%.

Table 35: Food categories distributed to main recipients in 2019 by Province

Province	Processed & Packaged Foods		Prepared/ Cooked Meals		Perishable Vegetables & Fruits	
	n	%	n	%	N	%
Eastern Cape	13	38.24	33	84.62	5	41.67
Free State	5	55.56	30	63.83	2	25.00
Gauteng	1	33.33	13	41.94	2	66.67
KwaZulu-Natal	7	77.78	23	67.65	1	14.29
Limpopo	5	100.00	33	86.84	-	-
Mpumalanga	0	0.00	14	33.33	0	0.00
North West	12	57.14	31	93.94	10	71.43
Northern Cape	2	66.67	27	90.00	1	33.33
Western Cape	7	70.00	28	75.68	3	50.00
Average per province	5.78	55.41	22.78	70.87	3	37.80

Table 36 shows food categories distributed to main recipients in 2021. Prepared/cooked meals are most distributed food in 2021 by 68.86% followed by processed & packaged foods by 46.53%. Results further reveal that perishable vegetables and fruits were the least distributed in 2021 by 36.21%.

Observing the 2019 and 2021 period, findings reveal a similar pattern. Freshly cooked remain the most distributed food category in both periods however a slight decline of 1.23% is observed in 2021 compared to 2019. Distribution of processed foods has also declined by 23.56% in 2021 compared to 2019. Perishable foods remain the least distributed food category in both periods, distribution had also declined by 8.23% when comparing the two periods.

Table 36: Food categories distributed to main recipients in 2021

Food categories	Valid Obs.(N)	Yes		No	
		n	%	N	%
Processed & Packaged Foods	101	47	46.53	54	53.47
Prepared/Cooked Meals	334	230	68.86	104	31.14
Perishable Vegetables & Fruits	58	21	36.21	37	63.79

Table 37 shows food categories distributed to main recipients in 2021 by province. The average per province for processed and packed food is 58.64%. Northern Cape (100%), Limpopo (80%), KwaZulu Natal (72.73%) and Gauteng (66.67%) are above the average. Free State distributed the least processed foods by 22.22%. The average for prepared/cooked meals is 69.95%. It can be observed that Northern Cape distributed the most (100%) cooked meals followed by North West (90.91%) and Limpopo (81.58%). The average per province for perishable vegetable and fruits is 33.11%. Gauteng (50%) and Limpopo (50%) distributed the most vegetables and fruits. No fruits and vegetables were distributed in Mpumalanga.

Comparing both periods in 2019 Limpopo had the largest share of distributed processed and packaged foods by 100% while in 2021 Northern Cape distributed the most processed food by 100%. In 2019 Mpumalanga did not distribute any processed foods while in 2021, 50% was distributed. In 2019 North West distributed most (93.94%) of cooked meals while in 2021 Northern Cape distributed the most (100%) cooked meals. Mpumalanga did not distribute any perishable vegetables and fruits for both periods.

Table 37: Food categories distributed to main recipients in 2021 by Province

Province	Processed & Packaged Foods		Prepared/Cooked Meals		Perishable Vegetables & Fruits	
	n	%	n	%	n	%
Eastern Cape	12	34.29	31	79.49	5	38.46
Free State	2	22.22	29	60.42	2	22.22
Gauteng	2	66.67	12	38.71	1	50.00
KwaZulu-Natal	8	72.73	24	70.59	1	14.29
Limpopo	4	80.00	31	81.58	1	50.00
Mpumalanga	1	50.00	13	30.95	0	0.00
North West	10	43.48	30	90.91	8	47.06
Northern Cape	1	100.00	30	100.00	-	-
Western Cape	7	58.33	30	76.92	3	42.86
Average per province	5.22	58.64	25.55	69.95	2.63	33.11

Table 38 aims to establish whether any formal or informal reviews have been conducted on the CSOs. This is mainly to identify whether there is any interest in or capacity for monitoring the impact of the CSO activities. With regards to impact, this is simply a reference to improving the wellbeing of the main food recipient group. The findings indicate that over half (53.77%) of CSOs conducted formal assessments in their organizations while 33.33% indicated that they conducted informal assessments.

Table 38: CSO Review or assessment type (formal and informal)

Review/Assessment Type	Valid Obs. (N)	Yes		No	
		n	%	n	%
Formal	318	171	53.77	147	46.23
Informal	318	106	33.33	212	66.67
Review total	318	277	87.1	41	12.9

Table 39 analyses the CSOs review or assessment type by province. Eighty-seven per cent of CSOs in Gauteng conducted formal assessment followed by Northern

Cape (73.33%) and Kwa Zulu Natal (62.07%). North West had the least (4.55%) CSOs that conducted formal assessments but 95.45% of CSOs in North West conducted informal assessments, as did Limpopo (64.86%) and Mpumalanga (45.24%). Northern Cape had the least CSOs that conducted informal assessments by 6.67%.

Table 39: CSO review or assessment type by Province

Province	Formal		Informal	
	n	%	n	%
Eastern Cape	24	61.54	4	10.26
Free State	25	52.08	13	27.08
Gauteng	27	87.10	3	9.68
KwaZulu-Natal	18	62.07	10	34.48
Limpopo	12	32.43	24	64.86
Mpumalanga	18	42.86	19	45.24
North West	1	4.55	21	95.45
Northern Cape	22	73.33	2	6.67
Western Cape	24	60.00	10	25.00
Average per province	19	52.88	11.78	35.41

Table 40 shows the CSOs degree of success in direct or indirect poverty insecurity interventions between 2019 and 2021. To be food poor means to be well below the lower-bound poverty line. Being successful against food poverty is therefore a first proximation of winning the war on poverty, but with a focus on the consumption end of the food value chain. Indirect indicators of success could explore the results of CSO involvement in income transfers and job creation. Results shows that 90.75% of the CSOs made direct poverty reduction while 82.09% made indirect poverty reduction. These results are consistent with a study conducted in Amathole District in the Eastern Cape focusing on the role of CSOs in poverty reduction which revealed that the CSOs made a direct contribution to poverty alleviation through job creation (Ngumbela & Mle, 2019).

Table 40: CSO success in direct or indirect poverty reduction between 2019 and 2021

Anti-poverty descriptor/indicator	Valid Obs.(N)	Successful		Unsuccessful	
		n	%	n	%
Direct poverty reduction	335	304	90.75	31	9.25
Indirect poverty reduction	335	275	82.09	60	17.91

Table 41 shows the likelihood of success in direct and indirect poverty reduction by province. Mpumalanga contributed 100% direct poverty reduction followed by North West (96.97%) and Gauteng (96.77%) respectively. Western Cape (82.505) contributed the least in direct poverty reduction. Results also show that Mpumalanga (100%) have contributed indirectly to poverty reduction followed by Gauteng (96.77%) and Western Cape (95%) respectively. Eastern Cape contributed the least in indirect poverty reduction by 38.46%.

Table 41: Likelihood of success in direct or indirect poverty reduction by Province

Province	Direct poverty reduction		Indirect poverty reduction	
	n	%	n	%
Eastern Cape	36	92.31	15	38.46
Free State	42	87.50	33	68.75
Gauteng	30	96.77	30	96.77
KwaZulu-Natal	29	85.29	28	82.35
Limpopo	34	89.47	35	92.11
Mpumalanga	42	100.00	42	100.00
North West	32	96.97	29	87.88
Northern Cape	26	86.67	25	83.33
Western Cape	33	82.50	38	95.00
Average per province	33.78	90.83	30.56	82.73

5.3 CSO Food Production Activities

The following section aims to show out how many CSOs have participated in different agrofood value chain activities since their inception. The survey classified agrofood

value chain activities into well-defined groups that range from food garden crops to raising awareness of healthy food consumption practices.

The results show that the provision of cooked meals to communities is the dominant activity (75.80%), whereas livestock farming (2.91%) and agrofood processing (3.355) are the least likely activities of surveyed CSOs. Also, the results reveal that most CSOs provide nutritional information (56.89%) and healthy eating awareness programmes (58.215).

Table 42: CSO Food production, distribution and information sharing activities since inception

Agrofood activity	Valid Obs. (N)	Yes		No	
		n	%	n	%
Farm Food Crops	245	139	56.73	106	43.27
Livestock farming	172	5	2.91	167	97.09
Process farm produce	179	6	3.35	173	96.65
Cooked meals for community	281	213	75.80	68	24.20
Food delivery-CSO members	266	111	41.73	155	58.27
Food distribution-communities	273	135	49.45	138	50.55
Provide nutritional information	283	161	56.89	122	43.11
Healthy eating awareness programmes	280	163	58.21	117	41.79
Food assistance - other	222	21	9.46	201	90.54

In contrast to the micro-level activities in shown in Table 42 above, the activities in Table 43 are grouped into discrete elements of the agrofood value chain. This higher-level aggregation confirms the main agrofood value chain segments in which the surveyed CSOs are involved. CSOs predominantly process agrofoods (such as cooking meals for delivery to local communities, etc.).

Table 43 shows the CSO activities by agrofood value chain segment and information-sharing activities since inception. The majority of the CSOs (63.88%) have been involved in agrofood processing since their inception, followed by food distribution, and sharing of information about food and nutrition security. The results reveal that

less than half (41.49%) of the CSOs interviewed have been involved in food crop and livestock farming since they have been established. This shows that there is a need to enhance and promote primary production within the CSOs so that they can produce food to feed their targeted vulnerable groups and ensure the long-term sustainability of their organizations.

Table 43: CSO activities by agrofood value chain segment and information sharing activities since inception

Value chain activity	Valid Obs. (N)	Yes		No	
		n	%	n	%
Food crop & livestock farming	335	139	41.49	196	58.51
Agrofood processing	335	214	63.88	121	36.12
Distribute/deliver food	335	157	46.87	178	53.13
FNS Information Sharing	335	157	46.87	178	53.13

As mentioned, CSOs are not only limited to one activity in the agrofood value chain. At times, their activities spill over into another value chain segment. Table 44 shows the proportion of CSOs involved in dual agrofood value chain segments since inception. This table further explores the extent to which CSOs have participated in these activities with emphasis on backward and forward linkages. Backward production linkages refer to linkages from the farm to the part of the non-farm sector that provides inputs for agricultural production, for example, agrochemicals. Forward production linkages refer to the part of the non-farm sector that uses agricultural output as an input.

According to this table, a greater proportion of those involved in farming is also involved in agroprocessing compared to those primarily involved in agroprocessing. The link from farming to processing is stronger than the link from processing to farming; with this, it can be established that the forward linkages are stronger for those involved in farming. Further, the backward linkages are weaker for those in processing. This is also consistent with the findings above where most CSOs interviewed mainly provide members within the boundaries of their local municipality with cooked meals.

Table 44: CSO involved in dual agrofood value chain segments since inception

Value Chain Segments Intersect	n $= A \cap B$	Var(A) %	Var(B) %
[Food crop & livestock farming]∩[Agrofood processing]	93	66.91	43.46
[Food crop & livestock farming]∩[Distribute/deliver food]	78	56.12	49.68
[Food crop & livestock farming]∩[FNS Information Sharing]	78	56.12	49.68
[Agrofood processing]∩[Distribute/deliver food]	112	52.34	71.34
[Agrofood processing]∩[FNS Information Sharing]	112	52.34	71.34
[Distribute/deliver food]∩[FNS Information Sharing]	157	100.00	100.00

Table 45 demonstrates the results of the agrofood value chain activities of CSOs by provinces. On average per province, less than half (40.9%) of the CSOs are practicing food crop and livestock farming in their organization. Amongst this category, the majority (73.53%) of the CSOs involved in food crop and livestock farming were in KwaZulu-Natal, followed by Mpumalanga and Eastern Cape, with 52.38% and 51,28% respectively. Furthermore, the primary survey result indicates that CSOs in the Northern Cape are not involved in food crop and livestock farming, which can be attributed to warm weather conditions in the province and a lack of resources such as the availability of enough space for farming within the local communities and capital.

Table 45 also shows that on average per province, more than half (65.1%) of the CSOs are processing the agricultural commodities that they produce, with North West (93.4%) and Western Cape (87.5%) accounting for the highest proportion of CSOs involved in Agrofood processing. Only 21.43% and 35.48% in Mpumalanga and Gauteng, respectively, are involved in agrofood processing. In conclusion, the results presented in Table 45 reveal that on average per province less than half (47.6%) of the sampled CSOs are distributing food and sharing information about FNS, with Western Cape (97.5%) and North West (66.7%) representing the largest share compared to Limpopo (23,68%) and Free state (16.67%) with the smallest proportion of CSOs involved in food distribution and FNS Information Sharing.

Table 45: Agrofood value chain activities of CSOs by Province

Province	Food crop & livestock farming		Agrofood processing		Distribute/de liver food		FNS Information Sharing	
	N	%	N	%	N	%	N	%
Eastern Cape	20	51.28	25	64.10	12	30.77	12	30.77
Free State	18	37.50	25	52.08	8	16.67	8	16.67
Gauteng	15	48.39	11	35.48	12	38.71	12	38.71
KwaZulu-Natal	25	73.53	22	64.71	21	61.76	21	61.76
Limpopo	15	39.47	29	76.32	9	23.68	9	23.68
Mpumalanga	22	52.38	9	21.43	22	52.38	22	52.38
North West	9	27.27	31	93.94	22	66.67	22	66.67
Northern Cape	0	0	27	90.00	12	40	12	40.00
Western Cape	15	37.50	35	87.50	39	97.50	39	97.50
Average per province	15.5	40.9	23.8	65.1	17.5	47.6	17.5	47.6

Table 46 focuses on the main place where the CSO practices crop farming. More than half (57.14%) of the CSOs practice their crop farming in the ECD school land portion, while 23.31% and 19.55% practice their crop farming in backyard plots and unused public and other lands, respectively. The high proportion of CSOs practicing their crop farming on ECD schools' land suggests that ECD schools are producing their food to feed their targeted beneficiaries. Furthermore, this provides more health benefits to the beneficiaries as they would be eating more fresh fruits and vegetables.

Table 46: Main place where the CSO practices crop farming

Crop land location	Valid Obs. (N)	%
ECD School land portion	76	57.14
Backyard plots	31	23.31
Unused public & other lands	26	19.55
Total	133	100.00

Table 47 shows the main place where the CSOs practices crop farming by province. On average, 57.15% of CSOs practice their crop production in ECD/School land portions. CSOs in the Free state (87.50%), followed by Gauteng (84.62%) and Limpopo (80%) had percentages higher than the average value per province. Although, Eastern Cape (14.29%) and North West (25.00%) were below the average. With regards to CSOs that practice their crop production in backyards, the average per province was 23.31%. More CSOs in the North West and Western Cape practiced crop production in backyards than the average value per province, whereas Limpopo (6.67%) was less, and Gauteng had zero (0.00%). Lastly, on average 19.55% of CSOs practice crop farming on unused public and other lands. The Eastern Cape (47.62%) and North West (25.00%) had percentages higher than the average while Mpumalanga (8.70%) was below the average and Free State was at 0.00%.

Table 47: Main place where the CSO practices crop farming by Province

Province	N (Valid Obs.)	ECD/School land portion (%)	Backyard plots (%)	Unused public & other lands (%)
Eastern Cape	21	14.29	38.10	47.62
Free State	16	87.50	12.50	0.00
Gauteng	13	84.62	0.00	15.38
KwaZulu-Natal	22	63.64	13.64	22.73
Limpopo	15	80.00	6.67	13.33
Mpumalanga	23	60.87	30.43	8.70
North West	8	25.00	50.00	25.00
Western Cape	15	40.00	40.00	20.00
Total	133	57.14	23.31	19.55

Table 48 presents the results of the average size of land used for growing crops and livestock grazing in 2019 and 2020. This information reveals the size and resources of the CSO. The total size of land used to grow crops declined by 5.45 ha, from 99.72 ha in 2019 to 94.27 ha in 2021. This decline in the total land used for crop farming can be attributed to the closure of some CSOs and the reduction of food distribution activities to vulnerable groups due to COVID-19 restrictions. In addition, the results show the total size of land used for livestock grazing increased by 0.51 ha, from 2.37 ha in 2019 to 2.88 ha in 2021.

Table 48: What is the average size of land used for...?

Farming category	Valid Obs. (N)	Mean	Median	Sum
Growing crops in 2019	113	0.88 ha	0.25 ha	99.72 ha
Livestock grazing in 2019	3	0.79 ha	0.25 ha	2.37 ha
Growing crops in 2021	93	1.01 ha	0.25 ha	94.27 ha
Livestock grazing in 2021	5	0.57 ha	0.25 ha	2.88 ha

The CSOs were asked about the type of ownership of the place they use for crops and livestock farming in order to reveal the working relations CSOs have with other

relevant stakeholders. Table 49 shows that the majority (76%) of the CSOs use their own land for crops and livestock farming, while a small proportion use farms owned by somebody else. The high proportion of CSOs practicing crop and livestock farming on their land suggests that CSOs have enough resources in terms of land to contribute to farming and the long-term sustainability of the agrofood value chain.

Table 49: Who owns the place where the crop/livestock takes place on?

Farmland owner	Valid Obs.(N)	%
CSO owns the land	84	76
Farm owned by somebody else	26	24
Total	110	100.00

The CSOs that do not own the land for crops and livestock farming were asked about the permission they have to use the land. A high proportion (70%) of the CSOs have a written and legally binding agreement to use the land, while only 30% have no written and legally binding agreement.

Table 50: If the CSO does not own the land, what permission, do they have to use the land?

Land use permission	Valid Obs.(N)	%
Written and legally binding agreement	32	70
No written and legally binding agreement	14	30
Total	46	100.00

Table 51 presents the approximate monetary value in rands (ZAR) of crops and livestock outputs produced in 2019 and 2021. The total output value of crops declined by R734 423 from R1 589 662 in 2019 to R855 239 in 2021. This decline could imply the negative impact of COVID-19 on the CSOs involved in crop production. However, the results suggest that livestock production by the CSOs was not affected by COVID-19, instead, there is an improvement in the total value of output from R35 500 in 2019 to R49 000 in 2021.

Table 51: What was the approximate monetary value of crops and livestock outputs in 2019 and 2021

Farming category	Valid Obs. (N)	Mean	Median	Sum
Crops output value in 2019	99	R 16 057	R 2 000	R1 589 662
Livestock output value in 2019	3	R 11 833	R 4 000	R 35 500
Crops output value in 2021	95	R 9 003	R 1 500	R 855 239
Livestock output value in 2021	3	R 16 333	R 6000	R 49 000

Table 52 shows the approximate monetary value of crops and livestock distributed in 2019 and 2021. The objective of this table is to understand the amount of output distributed to beneficiaries. The results show that a decline in output value of crops significantly affected the monetary value of the crops distributed in 2021. The total monetary value of the crops distributed in 2021 declined by R834 601 compared the crops distributed in 2019. Table 52 also shows that improvement in the output value of livestock produced in 2021 contributed to the increase in the monetary value of the livestock distributed in 2021 by R500 compared to R2 000 distributed in 2019.

Table 52: What was the approximate monetary value of crops and livestock distributed in 2019 and 2021

Farming category	Valid Obs. (N)	Mean	Median	Sum
Crops distribution value in 2019	82	R 19 861	R 2 000	R 1 628 626
Livestock distribution value in 2019	2	R 1 000	R 1 000	R 2 000
Crops distribution value in 2021	81	R 9 803	R 2 000	R 794 025
Livestock distribution value in 2021	2	R 1 250	R 1 250	R 2 500

The use of organic inputs has been prevalent amongst CSOs. CSOs were asked how often they use organic or chemical inputs for their farming as depicted in Table 53. The results of this table are relevant to understand the sustainability practices of the CSO. According to the results of the survey, 47% and 40% of CSOs indicated that they use organic inputs always and occasionally depending on the needs of their

crops, while only 13% reported that they always use fossil fuel as inputs. The use of these organic inputs includes organic fertilizers to enhance the topsoil structure and its capacity to keep moisture and essential micronutrients longer and enhance the productivity of CSOs.

Table 53: How often does the CSO use organic or chemical inputs for its farming?

Farming method/type	Valid Obs.(N)	Always		Occasionally		Do not use	
		n	%	N	%	N	%
Organic input	134	65	47	55	40	14	10
Fossil fuel inputs	133	18	13	36	26	78	56

Table 54 depicts the primary location where CSOs prepare, process, and package their food. More than half (57%) of the CSOs involved in food processing process and package their products in a kitchen inside a private household, while less than half (43%) use other facilities. The use of private kitchens is because the majority of the CSOs interviewed are in rural provinces with limited resources in terms of shelter, and most of them do not have well-structured facilities.

Table 54: What is the main place where this organization makes, processes and packages the food?

Food processing place/facility	Valid Obs.(N)	%
Kitchen inside a private household	43	57
Other facility	32	43
Total	75	100.00

The ownership status of the food processing facilities where the CSOs make the food items is shown in Table 55. The majority (80%) of the CSOs involved in food processing used their own food processing facilities, while only 20% of them used facilities owned by somebody else to make, process, and package their food products.

Table 55: Who owns the food processing facility where this CSO makes the food items?

Facility Ownership	Valid Obs.(N)	%
CSO owns food processing facility	59	80
Facility owned by somebody else	15	20
Total	74	100.00

Table 56 shows the types of permission to use the facilities for the CSOs that do not own the food processing facilities. The majority (78%) of CSOs that use other people's food processing facilities have no written and legally binding agreement to use those facilities, while 22% have a written and legally binding agreement.

Table 56: If the CSO does not own the food processing facility, how best would you classify the permission to use the land?

Processing facility use arrangement	Valid Obs.(N)	%
Written and legally binding agreement	2	22
No written and legally binding agreement	7	78
Total	9	100.00

The approximate monetary value of food produced and distributed in 2019 and 2021 is shown in Table 57. CSOs are not required to report income from selling food as they are not-for-profit entities. The monetary value of food produced decreased by more than 50% between 2019 and 2021, from R599 453 in 2019 to R241 854 in 2021. The monetary value of the food distributed has also decreased by R817 698, from R3 422 600 in 2019 to R2 604 902 in 2021. The significant decline in the monetary value of food produced between 2019 and 2021 can be attributed to movement restrictions and the closure of some CSOs as a result of COVID-19.

Table 57: Approximately what was the monetary value of food produced and distributed 2019 and 2021?

Food activity	Valid Obs. (N)	Mean	Median	Sum
Food produced in 2019	18	R 33 303	R 1 400	R 599 453
Food distributed in 2019	50	R 68 452	R 28 500	R 3 422 600
Food produced in 2021	17	R 14 227	R 750	R 241 854
Food distributed in 2021	51	R51 077	R 30 000	R 2 604 902

The source of electricity or energy plays a significant role in the sustainability of CSOs in terms of food production and distribution activities. Table 58 provides important information about the environmental sustainability practices of the CSO. More than half (51%) the CSOs rely on fossil fuels or Liquified Petroleum Gas, with 38% and 10% using electricity from ESKOM/municipal grid and other primary energy sources, respectively.

Table 58: What is the main source of electricity/energy that this CSO uses to operate the food processing facility?

Energy source	Valid Obs.(N)	%
Electricity from ESKOM/municipal grid	30	38
Fossil fuels or LP Gas	40	51
Other primary energy source	8	10
Total	78	100.00

5.4 Input costs, Suppliers and Sustainability

Error! Reference source not found. and Table 60 show the CSOs' mean, median, and total input costs annualized for 2019 and 2021, respectively. The results reveal that the average mean value for input costs in 2019 was R59 151. The mean spending for salaries (R321 243) and farm implements (R118 174) was larger than the average mean value while the mean spending for telecommunication costs (R8 186) and registration fees (R8 790) was smaller. On other hand, the results show that in 2021 the average mean value for input costs decreased to R40 313. In 2019, the mean spending for farm implements was greater than the average mean value (R99 871), this was followed by mean spending for meal ingredients which was R93 956. The mean spending for water and sanitation (R10 300), as well as the mean spending for energy (R10 690), were less than the average mean spending value.

The results also show that the total input costs for salaries (R60 072 528) and meal ingredients (R28 984 064) were greater in 2019 and they significantly dropped in 2021 to R15 555 248 and R24 428 484, respectively. The smallest share of total input costs was that of registration fees to the government (R210 956) which increased to R267 440 in 2021. This result is surprising because CSOs' main objective is to assist the poor in our communities, and they solely depend on donations for income as they are not-for-profit organisations.

Lastly, the differences between the mean and median input costs show the reality of CSOs' inequality. Most spending items have a mean that is much larger than the median value which means that some CSOs spent much more than others between 2019 and 2021. This is evident throughout the spending items with the exception of the registration fees, energy, and telecommunication costs, where the mean input costs were (R8 790, R9 104, and R8 186, respectively) not very much higher than the median input costs (R5 400, R5 460, and R4 200, respectively).

Table 59: CSO mean, median and total input costs annualised in 2019, ZAR

Spending Item (Group)	Valid Obs. (N)	Mean	Median	Total
Land, Buildings & Essential Equipment	87	R24 529	R12 000	R2 134 020
Farm implements (durable)	28	R118 174	R9 000	R3 308 880
Farm inputs (working capital)	84	R33 850	R3 600	R2 843 373
Registration Fees (government)	24	R8 790	R5 400	R210 956
Water & Sanitation	115	R18 671	R4 800	R2 147 160
Energy (electricity)	248	R9 104	R5 460	R2 257 903
Salaries (Admin staff)	187	R321 243	R31 080	R60 072 528
Wages (production workers)	217	R83 064	R25 440	R18 024 923
Equipment food cook/process	87	R25 296	R12 000	R2 200 728
Meal ingredients	257	R112 778	R45 600	R28 984 064
Food distribution stands	20	R18 200	R6 000	R364 008
Transportation & fuel	268	R14 343	R6 000	R3 843 852
Telecommunication costs	201	R8 186	R4 200	R1 645 434
Other expenditures	62	R31 885	R10 698	R1 976 892
Average spending	335	R59 151	R12 984	R10 786 646

Note: The survey solicited monthly expenditures in 2019 that were converted into yearly spending during the analysis

Table 60: CSO mean, median and total input costs annualised in 2021, ZAR

Spending Item (Group)	Valid Obs. (N)	Mean	Median	Total
Land, Buildings & Essential Equipment	89	R27 409	R12 000	R2 439 420
Farm implements (durable)	23	R99 871	R8 400	R2 297 040
Farm inputs (working capital)	79	R30 620	R4 200	R2 418 960
Registration Fees (government)	23	R11 628	R6 000	R267 440
Water & Sanitation	115	R10 300	R6 000	R1 184 508
Energy (electricity)	258	R10 690	R6 000	R2 758 140
Salaries (Admin staff)	190	R81 870	R35 400	R15 555 248
Wages (production workers)	224	R92 103	R26 940	R20 631 083
Equipment food cook/process	70	R23 573	R12 000	R1 650 132
Meal ingredients	260	R93 956	R56 760	R24 428 484
Food distribution stands	13	R17 345	R7 200	R225 480
Transportation & fuel	273	R16 986	R8 400	R4 637 148
Telecommunication costs	210	R12 511	R5 580	R2 627 254
Other expenditures	61	R35 526	R12 000	R2 167 092
Average spending	335	R40 313	R14 777	R6 899 542

Note: The survey solicited monthly expenditures in 2021 that were converted into yearly spending during the analysis

Table 61 and Table 62 show CSOs' fixed and variable working capital input annualised for 2019 and 2021. The average mean value for both fixed and variable working capital input costs in 2019 was R 111 776. The mean for labour costs (R316 184) was greater than the average mean value, whereas meal ingredients (R112 778) was approximately the same as the mean value and the agroprocessing/distribution mean (R26,997) was the smaller. As far as the total of CSOs' fixed and variable capital inputs costs are concerned labour costs (R78 097 451) as well as meal ingredients (R28 984 064) were the largest components in 2019. This was the case for 2021 as

well although labour costs decreased to R36 186 331 and meal ingredients decreased to R24 428 484.

Table 61: CSO fixed and variable working capital input annualized for 2019 (mean, median & total), ZAR

Cost category	Valid Obs. (N)	Mean	Median	Total
Farming - Fixed Capital	98	R55 540	R12 000	R5 442 900
Agroprocess/Distribution - Fixed Capital	95	R26 997	R12 000	R2 564 736
Wages & Salaries - Labour Costs	247	R316 184	R58 800	R78 097 451
Meal ingredients	257	R112 778	R45 600	R28 984 064
Variable Working Capital – Other	315	R47 383	R20 400	R14 925 570
Average (mean, median and total)	335	R 111 776	R29 760	R26 002 944

Table 62: CSO fixed and variable working capital input annualized for 2021 (mean, median & total), ZAR

Cost category	Valid Obs. (N)	Mean	Median	Total
Farming - Fixed Capital	94	R50 388	R13 800	R4 736 460
Agroprocess/ Distribution - Fixed Capital	77	R24 359	R12 000	R1 875 612
Wages & Salaries - Labour Costs	251	R144 169	R61 200	R36 186 331
Meal ingredients	260	R93 956	R56 760	R24 428 484
Variable Working Capital – Other	318	R50 505	R25 200	R16 060 542
Average (mean, median and total)	335	R72 675	R33 792	R16 657 486

Table 63 shows the CSO primary crop farming inputs (seeds, seedlings, fertilisers, pesticides, etc.) suppliers. The results reveal that, from the 112 CSOs that use seeds and seedlings for crop farm inputs, 34.82% of them are supplied by agrobusiness

corporations whereas only 7.4% are supplied by smallholder farmers. Similarly, a large number (36.84%) of CSOs that use fertilisers and pesticides for crop farm inputs are supplied by agro-business corporations while the minority of them are supplied by smallholder farmers.

Table 63: CSO primary crop farming inputs (seeds, seedlings, fertilisers, pesticides, etc.) suppliers

Input Suppliers	Crop Farm Inputs			
	Seeds, seedlings, etc.		Fertilisers, pesticides, etc.	
	N	%	N	%
Agrobusiness corporations, etc.	39	34.82	21	36.84
Smallholder farmers	8	7.14	4	7.02
Supermarkets, Wholesalers, etc.	37	33.04	14	24.56
Donors & Other Input Suppliers	28	25.00	18	31.58
Total	112	100.00	57	100.00

As previously mentioned, the provision of cooked meals to communities in their local municipalities is the dominant activity among the CSOs interviewed with livestock farming being the least common activity. According to Table 64, the majority of the CSOs involved in livestock farming received their farming inputs from agrobusiness corporations and smallholder farmers (5 or 71.43%). Supermarkets and wholesalers were the least input suppliers for livestock farming, with only one CSO using this type of supplier.

Furthermore, Table 65 reveals the input suppliers of cooking ingredient inputs that CSOs commonly use. Many CSOs purchase their cooking ingredients from supermarkets and wholesalers with only a few receiving these from donors and other input suppliers including farmers. Over 92% of CSOs purchase their mixed produce and meat from supermarkets, 83.69% purchase their bread baking ingredients such as flour and oil, and 86.99% from fruit juice ingredients and others from supermarkets and wholesalers.

Table 64: CSO livestock farming inputs (chicks, calves, medicine, vaccine, fodder etc.) suppliers

Input suppliers	Livestock farm inputs					
	Chicks, calves, and lamb		Animal medicine & vaccines		Fodder & other feedstocks	
	N	%	N	%	N	%
Agrobusiness corporations and smallholder farmers etc.	5	71.43	0	0.00	1	50.00
Supermarkets, Wholesalers, etc.	0	0.00	1	50.00	0	0.00
Donors & Other Input Suppliers	2	28.57	1	50.00	1	50.00
Total	7	100.00	2	100.00	2	100.00

Table 65: CSO cooking ingredients inputs (mixed produce, meat, bread, juice, etc.) suppliers

Input suppliers	Cooking ingredients inputs					
	Ingredients for cooked meals (mixed produce and meat)		Bread baking and confectionary ingredients (flour; oil)		Fruit juice ingredients and other	
	N	%	N	%	N	%
Supermarkets, Wholesalers, etc.	253	92.68	77	83.69	107	86.99
Donors & Other Input Suppliers (inclusive of farmers)	20	7.33	15	16.30	16	13.01
Total	273	100.00	92	100.00	123	100.00

Table 66, Table 67 and Table 68 display the provincial distribution of the suppliers of crop farming inputs, livestock farming inputs, and cooking ingredients commonly used by CSOs. With regard to crop farming inputs (Table 66), the average percentage for agrobusiness corporations was identified as 31.30%, 6.96% for smallholder farmers, 31.30% for supermarkets and wholesalers, and 30.43% for donors and other input suppliers. Four provinces (Eastern Cape, KwaZulu-Natal, Mpumalanga, and North West) had individual averages that were above the total average for agrobusiness corporations and four provinces (Free State, Gauteng, Limpopo, and Western Cape) were below the total average. Similarly, with attention to smallholder farmers,

supermarkets and wholesalers and donors, and other inputs, more than 50% of the listed provinces had averages that were above the supplier averages.

Table 66: Suppliers of crop farming inputs by Province

Province	Agrobusiness corporations etc.	Smallholder farmers	Supermarkets, Wholesalers, etc.	Donors & Other Input Suppliers
Eastern Cape	31.58	10.53	47.37	10.53
Free State	7.14	0.00	71.43	21.43
Gauteng	18.18	9.09	0.00	72.73
KwaZulu-Natal	33.33	8.33	25.00	33.33
Limpopo	16.67	16.67	33.33	33.33
Mpumalanga	54.55	0.00	22.73	22.73
North West	66.67	0.00	0.00	33.33
Western Cape	0.00	20.00	40.00	40.00
Average per province	31.30	6.96	31.30	30.43

As mentioned previously, very few CSOs partake in livestock farming. However, according to Table 67 the average for agrobusiness corporations was calculated as 1.49%, 0.30% for smallholder farmers, and 0.60% for donors and other input suppliers. Three provinces (Free State, KwaZulu-Natal, and North West) were above the agrobusiness and corporations' average. Gauteng and KwaZulu-Natal were above average for donors and other input suppliers. Lastly, the Free State province was the province with the highest average for smallholder farmers.

Table 67: Shares of suppliers of livestock farming inputs (chicks, animal medicine, feedstocks etc.) to CSOs by Province

Province	Agrobusiness corporations, etc.	Smallholder farmers	Donors & Other Input Suppliers
Eastern Cape	0.00	0.00	0.00
Free State	4.17	2.08	0.00
Gauteng	0.00	0.00	3.23
KwaZulu-Natal	5.88	0.00	2.94
Limpopo	0.00	0.00	0.00
Mpumalanga	0.00	0.00	0.00
North West	3.03	0.00	0.00
Western Cape	0.00	0.00	0.00
Average per province	1.49	0.30	0.60

Table 68 describes the provincial spread of the input suppliers for cooking ingredients that CSOs frequently use. Supermarkets and wholesalers had a total average of 85.37% and donors and other input suppliers had an average of 9.55%. Five provinces (Gauteng, Limpopo, Mpumalanga, North West, and Northern Cape) had averages that were above 85.37% and four provinces (Eastern Cape, Free State, KwaZulu-Natal, and Western Cape) had averages below 85.37%. Mpumalanga had the largest number of CSOs whose main ingredient supplier was supermarkets and wholesalers, with the Eastern Cape being the lowest.

With regards to donors and other input suppliers, two provinces (Northern Cape and Western Cape) had averages above 9.55%, and seven provinces (Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga, and North West) averaged less than 9.55%. Furthermore, the Western Cape had the largest number of CSOs that received cooking ingredients from donors and other input suppliers, whereas the North West received the least ingredients from donors and other input suppliers.

Table 68: Shares of cooking ingredient inputs (mixed produce, bread, fruit juice, etc.) to CSOs by Province

Province	Supermarkets, Wholesalers, etc.	Donors & Other Input Suppliers (inclusive of farmers)
Eastern Cape	69.23	5.13
Free State	77.08	4.17
Gauteng	96.77	6.45
KwaZulu-Natal	76.47	8.82
Limpopo	92.11	7.89
Mpumalanga	97.62	7.14
North West	93.94	3.03
Northern Cape	93.33	10.00
Western Cape	77.50	32.50
Average per province	85.37	9.55

Table 69 shows the type of supplier interaction facet the CSOs had with their main input supplier. The results reveal which is the dominant characteristic of how the CSO relates to another actor in food production and distribution processes. The number of valid observations for each supplier interaction facet varies. Many CSOs always experience an increase in input prices without being notified in advance by their suppliers (58.18%) and are excluded from voicing their food input decisions (53.28%). Also, 60.71% of the CSOs never get timely delivery of vital inputs supplies at no extra costs meaning that every time they request for inputs to be delivered on time, they must pay an extra amount. And most of them never get encouragement to use reliable alternative suppliers when necessary (59.68%). These negative experiences of suppliers by CSOs might contribute to factors that hinder sustainable food value-chain progress.

Table 69: In your interactions with your main input suppliers, to what extent have you experienced...?

Supplier interaction facet	Valid Obs. N	Always n	%	Rarely n	%	Never n	%
Marginalisation or exclusion of CSO voices in food input decisions	274	146	53.28	50	18.25	78	28.47
Increased input prices without notifying the CSO in advance	275	160	58.18	42	15.27	73	26.55
Communication breakdowns with suppliers	259	78	30.12	72	27.80	109	42.08
Incurred higher transportation costs due to geographic distance to input suppliers	221	104	47.06	63	28.51	54	24.43
Timely delivery of vital inputs supplies at no extra costs	196	42	21.43	35	17.85	119	60.71
Encouragement to use reliable alternative suppliers when necessary	253	53	20.95	49	19.37	151	59.68
Suppliers proactively seeking and responding to CSO needs	262	87	32.21	96	36.64	79	30.15
Cooperative and participatory engagements with input suppliers	262	92	35.11	87	33.21	83	31.68
Other supplier interaction facet	83	7	8.43	32	38.55	44	53.01

Table 70 categorizes the above-mentioned supplier interaction facets into two groups. One group is negative supplier interaction facets, and the other is the positive supplier interaction facets. Over 69% of CSOs always experience a negative supplier interaction facet whereas only 35.52% of CSOs always experienced a positive

supplier interaction or other supplier interaction facets. On the other hand, 48.36% of CSOs never experienced a negative supplier interaction whereas 58.51% of CSOs experienced a positive supplier interaction facet. Based on the results presented, it is clear that many CSOs experience negative supplier interactions such as marginalization or exclusion of their voices in food input decisions, an increase in input supply costs without being notified, communication breakdowns with their suppliers, etc. And, only a few of them experience positive supplier interactions and, as stated above, this might contribute to factors that hinder the growth and sustainability of CSOs.

Table 70: In your interactions with your main input suppliers, to what extent have you experienced postive/negative interaction facet...?

Supplier interaction facet	Valid Obs.(N)	Always		Rarely		Never	
		N	%	n	%	N	%
Negative supplier interaction facet	335	232	69.25	131	39.10	162	48.36
Positive supplier interaction facet and other supplier interaction facet	335	119	35.52	151	45.07	196	58.51

Table 71 below shows the ways in which the CSO had to cut or reduce their food assistance activities in 2019 and 2021. In 2019, 79.38% of CSOs experienced social unrest and protests (food riots, strikes, etc.) which led them to reduce their food assistance activities whereas, in 2021, only 15.77% of CSOs experienced any form of social unrest and protests (food riots, strikes, etc.) that prevented them from carrying out their food assistance activities.

In 2019, 52.29% of CSOs experienced rising input costs that made it unaffordable to operate (increased input costs to produce and distribute food) whereas, in 2021, 54.00% of CSOs experienced rising input costs that made it unaffordable to operate (increased input costs to produce and distribute food). It is evident that CSOs had to spend more money on rising input costs in 2021 than in 2019.

In 2019, 45.25% of CSOs had to cut or reduce their food assistance activities because of weak or non-existent institutional support from state agencies. In 2021, 46.86% of CSOs had to cut or reduce their food assistance activities because of weak or non-existent institutional support from state agencies. This means that from 2019 to 2021,

1.61% of CSOs had experienced some form of weak or non-existent institutional support from state agencies.

Table 71: In 2019 and 2021, did this CSO cut/reduce its food assistance activities (farming, processing, or delivery) due to...?

Food assistance reduction drivers	Valid obs. N	2019				Valid obs. N	2021			
		Yes	%	No	%		Yes	%	No	%
Social unrest and protests	291	231	79.38	60	20.62	279	44	15.77	235	84.23
Violent crime and vandalism of infrastructure and equipment	294	78	26.53	216	73.47	286	59	20.63	227	79.37
COVID-19 pandemic restrictions of physical interactions	n/a	n/a	n/a	n/a	n/a	300	209	69.67	91	30.33
Decline in soil quality and lack of grazing	167	38	22.75	129	77.25	166	34	20.48	132	79.52
Prolonged drought and water scarcity	194	62	31.96	132	68.04	193	58	30.05	135	69.95
Above normal rainfall and flooding	188	18	9.57	170	90.43	186	19	10.22	167	89.78
Penalised for overusing fertilizers and pesticides	141	1	0.71	140	99.29	141	2	1.42	139	98.58
Operations fail to meet food safety and anti-pollution rules	201	11	5.47	190	94.53	195	10	5.13	185	94.87
Electricity blackouts, infrastructure, and public utility breakdowns	298	100	33.56	198	66.44	297	112	37.71	185	62.29
Weak or non-existent institutional support from state agencies	167	138	45.25	167	54.75	303	142	46.86	161	53.14
Operations do not meet more restrictive food industry/sector regulations and standards	273	22	8.06	251	91.94	268	21	7.84	247	92.16
Rising input costs that make it unaffordable to operate	306	160	52.29	146	47.71	300	162	54.00	138	46.00
Workers (or volunteers) not available for CSO food production and distribution activities	308	45	14.61	263	85.39	308	45	14.61	263	85.39

Closure of main input suppliers to produce and distribute food	262	28	10.69	234	89.31	262	25	9.54	237	90.46
Cuts or total withdrawal of donor support or funding	292	72	24.40	220	75.60	292	86	29.21	206	70.79
Shortage of skills, education, and training to produce and distribute food	294	61	20.75	233	79.25	290	63	21.72	227	78.28
Other	204	14	6.86	190	93.14	204	16	7.84	188	92.16

Table 72 shows the reduction of food assistance drivers in 2019 and 2021. The food assistance reduction drivers are categorized according to the four types of sustainability namely: social, environmental and ecological, institutional governance, as well as economic sustainability. The results show that the number of CSOs that reduced food assistance due to social as well as environmental and ecological sustainability reasons remained the same between 2019 and 2021 (34.03% and 21.49%, respectively). In contrast, CSOs that reduced food assistance due to institutional and economic sustainability reasons increased over the years (57.61% and 57.01% in 2019 to 60.30% and 58.51% in 2021). These results are not surprising, the level of corruption has increased over time in South Africa which in turn could explain the reduction in food assistance due to institutional governance. In addition, COVID-19 negatively impacted the economy which, to some extent, can explain why food reduction drivers increased in 2021 due to economic sustainability.

Table 72: In 2019 and 2021, did this CSO cut/reduce its food assistance

Reduction in food assistance drivers: 2019					
Food assistance reduction drivers	Valid Obs. N	Yes	%	No	%
Social sustainability	335	114	34.03	221	65.97
Environmental and Ecological sustainability	335	72	21.49	263	78.51
Institutional governance	335	193	57.61	142	42.39
Economic sustainability	335	191	57.01	144	42.99
Other	204	14	6.86	190	93.14
Reduction in food assistance drivers: 2021					
Food assistance reduction drivers	Valid Obs. N	Yes	%	No	%
Social sustainability	335	114	34.03	221	65.97
Environmental and Ecological sustainability	335	72	21.49	263	78.51
Institutional governance	335	202	60.30	133	39.70
Economic sustainability	335	196	58.51	139	41.49
Other	204	16	7.84	188	92.16

Tables 73 and 74 show the reduction of food drivers per province for 2019 and 2021. On average, 34.03% of CSOs in each province experienced some form of social sustainability reduction driver in 2019. The Free State (50.00%) and Gauteng (48.39%) provinces had percentages that were above the average for social sustainability and Limpopo (23.68%) and Western Cape (22.50%) recorded percentages that were around the average value. On average, 21.49% of CSOs in 2019, experienced a form of Environmental and Ecological sustainability reduction driver. KwaZulu-Natal (58.82%) and Mpumalanga (35.71%) had percentages that were above the average score. Also, North West (18.18%) and Limpopo (13.16%) were the two Provinces located closest to the average.

Table 73 shows that 57.61% of CSOs on average experienced an institutional governance food reduction driver in 2019. Gauteng (87.10%) and Mpumalanga (73.81%) were the two provinces whose figures were above the average (57.61%). Whereas CSOs in Western Cape (55.00%) and Eastern Cape (53.85%) were closer to the average. On average, 57.01% of CSOs noted Economic sustainability as a food reduction driver in 2019. The Gauteng (93.55%) and Mpumalanga (83.33%) provinces recorded a percentage higher than the average. While Northern Cape (56.67%) and

Limpopo (34.21%) were the two Provinces that had percentages closest to the average.

Table 73: Reduction in food drivers by Province (2019)

Province	Valid obs. N	Social sustainability		Environmental and Ecological sustainability		Institutional governance		Economic sustainability	
		n	%	n	%	n	%	n	%
Eastern Cape	39	6	15.38	2	5.13	21	53.85	1	2.56
Free State	48	24	50.00	6	12.50	31	64.58	36	75.00
Gauteng	31	15	48.39	7	22.58	27	87.10	29	93.55
KwaZulu-Natal	34	14	41.18	20	58.82	18	52.94	20	58.82
Limpopo	38	9	23.68	5	13.16	12	31.58	13	34.21
Mpumalanga	42	14	33.33	15	35.71	31	73.81	35	83.33
North West	33	12	36.36	6	18.18	10	30.30	9	27.27
Northern Cape	30	11	36.67	1	3.33	21	70.00	17	56.67
Western Cape	40	9	22.50	10	25.00	22	55.00	31	77.50
Average per province	335	114	34.03	72	21.49	193	57.61	191	57.01

Table 74 shows the reduction of food drivers by province for 2021. On average, 34.03% of CSOs per province experienced some form of social sustainability reduction driver. In 2019, CSOs in the Free State (50.00%) and Gauteng (48.39%) had percentages higher than the average. While in contrast CSOs in Limpopo (23.68%) and Mpumalanga (33.33%) recorded percentages closer to the average.

On average, 21.49% of CSOs experienced a form of environmental and ecological sustainability reduction driver. The results indicate that the two KwaZulu-Natal (58.88%) and Mpumalanga (33.33%) percentages were above the average. Whereas North West (18.18%) and Western Cape (17.50%) were closer to the average.

As seen in Table 74, 60.30% of CSOs on average experienced an Institutional Governance food reduction driver in 2021. Gauteng (87.10%) and Mpumalanga (76.19%) were the two provinces whose figures were above the average (60.30%) for Institutional Governance. Whereas KwaZulu-Natal (58.82%) and Eastern Cape (48.72%) were closer to the average. On average, 58.51% of CSOs noted Economic sustainability as a food reduction driver in 2021. Gauteng (96.77%) and Mpumalanga (85.71%) recorded percentages greater than the average. Whereas Northern Cape (53.33%) and Limpopo (34.21%) were the two Provinces located closest to the average.

Table 74: Reduction in food drivers by Province (2021)

Province	Valid obs. N	Social sustainability		Environmental and Ecological sustainability		Institutional governance		Economic sustainability	
		n	%	n	%	n	%	n	%
Eastern Cape	39	6	15.38	4	10.26	19	48.72	1	2.56
Free State	48	24	50.00	8	16.67	33	68.75	39	81.25
Gauteng	31	15	48.39	8	25.81	27	87.10	30	96.77
KwaZulu-Natal	34	14	41.18	19	55.88	20	58.82	21	61.76
Limpopo	38	9	23.68	6	15.79	12	31.58	13	34.21
Mpumalanga	42	14	33.33	14	33.33	32	76.19	36	85.71
North West	33	12	36.36	6	18.18	10	30.30	10	30.30
Northern Cape	30	11	36.67	0	0.00	22	73.33	16	53.33
Western Cape	40	9	22.50	7	17.50	27	67.50	30	75.00
Average per province	335	114	34.03	72	21.49	202	60.30	196	58.51

Table 75 shows how often CSOs threw away any food that was not healthy for human consumption as food waste in the years 2019 and 2021. The aim of this table is to establish the degree to which food assistance activities were cut for 2019 and 2021. Approximately 17% of CSOs threw away spoiled/expired food which was not fit for human consumption, in 2019, and 17.91% did so in 2021. The reports of spoiled/expired food being thrown away increased slightly between 2019 and 2021 by 0.9%.

Furthermore, 81.19% of CSOs stated that they did not throw away any spoiled/expired food as waste in 2019. The number of CSOs who did not throw away spoiled/expired food remained the same between 2019 and 2021. This shows that CSOs rarely throw away any food.

Table 75: In 2019 and 2021, how often did this CSO throw away any food not healthy for human consumption as food waste?

Food waste option	Valid Obs. N	2019	%	2021	%
Spoiled/expired food thrown away	335	57	17.01	60	17.91
No 'spoiled/expired food' thrown away as food waste	335	272	81.19	272	81.19

Note: 335 respondents answered this question

Table 76 shows the main way that the CSOs disposed of food waste in 2019 and 2021. Soliciting this information from CSOs relates to the sustainability practises of the organisation. The results indicate that in 2019, 4.78% of CSOs dropped their food waste at municipal waste depots or threw their food waste into municipal garbage bins for scheduled pickups. Whereas in 2021, 5.97% of CSOs dropped their food waste at municipal waste depots or threw their food waste in municipal garbage bins for scheduled pickups. Between the years 2019 and 2021, the number of CSOs who dropped their food waste at municipal waste depots or threw their food waste in municipal garbage bins for scheduled pickups increased by 1.19%.

In both 2019 and 2021, 9.55% of CSOs converted their organic waste into onsite composting or fed edible food waste to animals and 'others'.

About 67% of CSOs did not dispose of any 'food waste' in 2019. In 2021, 65.97% of CSOs did not dispose of any 'food waste'. The number of CSOs who did not dispose of any food waste decreased by 0.89% between the years 2019 and 2021.

Table 76: What was the main way this CSO disposed of its 'food waste' in 2019 and 2021?

Food waste disposal method	Valid Obs. N	2019	%	2021	%
Drop food waste at municipal waste depot/throw it in municipal garbage bin for scheduled pickups	335	16	4.78	20	5.97
Convert organic waste into onsite composting/Feed edible food waste to animals and other	335	32	9.55	32	9.55
Did not dispose of any 'food waste'	335	224	66.86	221	65.97

6. Conclusions and recommendations

The work of CSOs in alleviating hunger and starvation seems to be limited and, their sustainability hampered by social unrest (protests and food riots), rising input costs and inadequate or absent institutional support by the state. Economic and institutional sustainability were found to be key drivers of reducing food provision by CSOs while the social and ecological drivers do not seem to adversely affect the operations of CSOs.

Government should strengthen institutional governance, particularly working on reducing corruption, and assist CSOs more effectively during crises that result in economic instability and rising prices. This will help to ensure that CSOs maintain or expand their work to cater for a potential increase in people who fall on hard times or find themselves with no incomes and/or food.

Agrofood value chains have the potential to reduce poverty in South Africa. However, this is not possible in the current state of agrofood systems. Both the analysis of KIIs and the CSO survey found that CSOs are concentrated in the agrofood processing segment while the primary production segment has the least number of CSOs, with the provision of cooked meals to beneficiaries as the major activity of CSOs interviewed.

There is a lot that needs to be done before agrofood value chains can be expected to act as a pathway out of poverty. CSOs in the agrofood systems should be supported adequately so that they not only provide a humanitarian relief kind of service but also contribute to poverty reduction. The humanitarian relief aspect of CSOs' work should only be prioritised during times of disaster.

CSOs play a vital role in providing food to poor communities and giving much needed relief from hunger and starvation. However, their activities are limited by a myriad of challenges, which include inadequate resources (in terms of funding, land, and other inputs critical for their work), a stringent regulatory environment, lack of coordination among themselves and a lack of skills among the staff and volunteers who work for them. The funding challenges are highlighted by the length of funding agreement cover for CSOs. The CSO survey data shows that approximately 87% of the CSOs have main funding agreements for up to one year, while less than 13% of the CSOs have funding agreements for a year or above. This creates a lot of uncertainty for the CSOs' planning.

Lack of land for primary production came out as a problem from the KII discussions as well as the survey analysis. Even though the majority of CSOs (84%) farm on their own land, this land seems to be limited in size. Overall, the average land for farming,

irrespective of the type of land ownership, was less than a hectare for both crop production and livestock farming.

The work of CSOs should be strengthened by providing them with the necessary and sufficient resources, particularly funding, upskilling their personnel, and creating a conducive environment for them to operate productively.

While CSOs get funding from the state, donors and the private sector, close to 50% are mainly funded by the state. Less than 9% of CSOs rely on donors, and less than 7% rely on private businesses. CSOs in the Eastern Cape, Free State, Limpopo, Mpumalanga, and Northern Cape rely relatively more on state funding compared to the other four provinces.

As the state is the main source of funding for CSOs, increasing state support is likely to have a major impact on CSOs' ability to perform. Assistance with performance monitoring and evaluation would help to provide evidence of returns on investment, which in turn could be used to secure more funding from both state and non-state actors.

7. References

- Adelle, C. and Haywood, A. (2021). Engaging Civil Society Organisations in Food Security Governance in the Western Cape: Cape Town: Food Security SA.
- Alasmari, N. (2020) 'Mixed Methods Research: An Overview', *International Journal of Social Science and Human Research*, 03(09). doi: 10.47191/ijsshr/v3-i9-04.
- Aliber, M., Armour, J., Chikazunga, D., Cousins, B., Davis, N., Greenberg, S., Khumalo, L.D., Lewis, M., Louw, A., Nkomo, M. and Paradza, G., 2013. Smallholders and agrofood value chains in South Africa: Emerging practices, emerging challenges. Institute for Poverty, Land and Agrarian Studies, University of the Western Cape.
- Alokpa, M F. (2015). The role of Civil Society Organizations (CSOs) in the Nigerian democratization process, 1999 – 2015. *International Journal of Research in Arts & Social Sciences*. Vol 8, No.2.
- Braun, V. and Clarke, V. (2013) 'Snowball Sampling Completion Irina-Maria Dragan, Alexandru Isaic-Maniu', *Journal of Studies in Social Science*, 5(2), pp. 160–177.
- Crush, J. and Frayne, B., 2011a. Supermarket expansion and the informal food economy in Southern African cities: implications for urban food security. *Journal of Southern African Studies*, 37(4), pp.781-807.
- Crush, J.S. and Frayne, B., 2011b. Urban food insecurity and the new international food security agenda. *Development Southern Africa*, 28(4), pp.527-544.
- D'Haese, M. and Van Huylenbroeck, G., 2005. The rise of supermarkets and changing expenditure patterns of poor rural households case study in the Transkei area, South Africa. *Food Policy*, 30(1), pp.97-113.
- Dawadi, S., Shrestha, S. and Giri, R. A. (2021) 'Mixed-Methods Research: A Discussion on its Types, Challenges, and Criticisms', *Journal of Practical Studies in Education*, 2(2), pp. 25–36. doi: 10.46809/jpse.v2i2.20.
- European Union Agency for Fundamental Rights – (EUAFR). Challenges facing civil society organisations working on human rights in the EU. European Union, Luxembourg. https://fra.europa.eu/sites/default/files/fra_uploads/fra-2018-challenges-facing-civil-society_en.pdf
- FAO (2014) The future of food and agriculture: trends and challenges, The future of food and agriculture: trends and challenges. Available at: www.fao.org/publications%0Ahttp://www.fao.org/3/a-i6583e.pdf%0Ahttp://siteresources.worldbank.org/INTARD/825826-

1111044795683/20424536/Ag_ed_Africa.pdf%0Awww.fao.org/cfs%0Ahttp://www.jstor.org/stable/4356839%0Ahttps://ediss.uni-goettingen.de/bitstream/han.

FAO, 2010. Biodiversity and Sustainable Diets – United Against Hunger. Rome, FAO.

FAO., 2020. The State of Agricultural Commodity Markets 2020. Agricultural markets and sustainable development: Global value chains, smallholder farmers and digital innovations. Rome

Food and Agriculture Organization (FAO). (2013). FAO Strategy for partnerships with Civil Society Organizations.

<https://sustainabledevelopment.un.org/content/documents/2213fao%20strategies%20csos.pdf>

Gitz, V. et al. (2016) Climate change and food security: Risks and responses, Food and Agriculture Organization of the United Nations. doi: 10.1080/14767058.2017.1347921.

Graham, L., Himlin, R., Engel, H., Mathoho, M., Julie, R., Delany, A., . . . Williams, L. (2008). Review of the State of Civil Society Organisations in South Africa. Johannesburg: NDA.

High-Level Panel of Experts (HLPE) (2020). Food security and nutrition: building a global narrative towards 2030. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.

<https://www.fao.org/3/ca9731en/ca9731en.pdf>

HSRC (2020) 'Rapid assessment of the impact COVID-19 on agriculture and the food system in South Africa Prepared by the Human Sciences Research Council (HSRC) October 2020

Jacobs, P and S. Ngandu., (2011). Spatial Dynamics of Agricultural and Non-agricultural value chains. Input Paper Submitted to the National Planning Commission. Rural-Urban Integration Thematic Working Group. (July 2021) Pretoria: Human Sciences Research Council (HSRC)

Kachru, R.P., 2010. Agroprocessing industries in India: Growth, status and prospects. Journal Indonesian Agroindustries, 13(2), pp.167-181.

Kahan, D. (2013) Managing Risk in farming: Farm Management Extension Guide, Food and Agriculture Organization of the United Nations.

Makhitha, K.M. and Khumalo, N.M., 2019. The influence of supermarket attributes on consumer selection of a supermarket: A South African perspective. Journal of Consumer Sciences, 47(1), pp.14-27.

National Development Agency – (NDA). (2008). Review of the state of the Civil Society Organisations in South Africa. <https://www.nda.org.za/assets/resources/CF824421-4FA0-41EE-AB69-4DB10CD0384A/Review-of-the-State-of-CSOs-in-SA-NDA-Audit-of-CSOs1.pdf>

NDA. (2013). Civil Society Organisations participation in food security activities in South Africa. Johannesburg: NDA.

NDA. (2016). Enhancing Civil Society Participation in the South African Development Agenda: The Role of Civil Society Organisations. Johannesburg: NDA

Neves, D., 2020. Thematic study: Agricultural value chains in South Africa and the implications for employment-intensive land reform.

Philbin, S. P. et al. (2014) 'Exploring research institutes: Structures, functioning and typology', PICMET 2014 - Portland International Center for Management of Engineering and Technology, Proceedings: Infrastructure and Service Integration, (February), pp. 2569–2582.

Reardon, T., Liverpool-Tasie, L. & Minten, B., (2021) Quiet Revolution by SMEs in the midstream of value chains in developing regions: wholesale markets, wholesalers, logistics, and processing. *Food Sec.* 13, 1577–1594 (2021). <https://doi.org/10.1007/s12571-021-01224-1>

Reardon., T., (2015). The hidden middle: the quiet revolution in the midstream of agrifood value chains in developing countries. *Oxford Review of Economic Policy*. Vol. 31(1) (Spring):pp. 45-63

Ruzza, C. (2006) 'Social movements', *Sociology: The Key Concepts*, (50), pp. 155–157. doi: 10.7208/chicago/9780226803531.003.0008.

Shirley, D. L. (2001) 'Faith-based organizations, community development, and the reform of public schools', *Peabody Journal of Education*, 76(2), pp. 222–240. doi: 10.1207/S15327930pje7602_10.

Shukla, S., Tak, P., Sen, T. (2021). Strengthening the discourse on good and bad jobs in India's food processing sector. *Cuts International*.

Tatebe, C. and Miyamoto, T. (2021) 'Possible roles of People's Organization for post-disaster community recovery: A case study on recovery process after Philippine Typhoon Yolanda', *Progress in Disaster Science*. The Authors, 11, p. 100184. doi: 10.1016/j.pdisas.2021.100184.

United Nations Human Rights Commission – (UNHRC). (2014). A Practical Guide for Civil Society: Civil Society space and the United Nations Human Rights System.

https://www.ohchr.org/sites/default/files/CS_space_UNHRSysystem_Guide_0.pdf

Viteri, M L and A, Arce., (2010). Commercial Interactions in the Buenos Aires Central Wholesale Produce Market. *Ethnology* 49 (2) (Spring): pp. 149-166

Vodo, T. (2016) 'Faith-Based Organisations The role of Christian Organizations to Social Cohesion in in EU Member States', (July), pp. 1–24. Available at:

[http://ecpm.info/sites/default/files/files/FBOs_Paper\(1\).pdf](http://ecpm.info/sites/default/files/files/FBOs_Paper(1).pdf).

Weatherspoon, D.D. and Reardon, T., 2003. The rise of supermarkets in Africa: implications for agrifood systems and the rural poor. *Development policy review*, 21(3), pp.333-355.

World Economic Forum – (WEF). (2022). Over half the global population can't afford a healthy diet. World Economic Forum. <https://www.weforum.org/agenda/2022/10/healthy-diet-food-agriculture-africa-income/>

Zhang, L., Xu, Y., Oosterveer, P. & Mol, A. P., 2016. Consumer trust in different food provisioning schemes: evidence from Beijing, China. *Journal of Cleaner Production*, Volume 134, pp. 269-279.

8. Contributing Authors

1. Senior Researcher: Ms. Nolukholo Mabharwana
MSc (Development Studies)
2. Co-Investigator: Matume Maila
MSc (Agricultural Economics)
3. Researcher: Ms. Sisonke Mtyapi
M.Com (Economics)
4. Data Analyst: Ms. Siwaphiwe Bala
M.Com (Economics)
5. PhD Research Trainee: Fhumulani Khobo
MSc (Economic Analysis)
6. Junior Researcher: Ms. Jamie-Lee McKay

ANNEXURES

Annex 1: CSO Agrofood Activities - a rapid purposeful web-based scan

The CSOs were selected from an internet search of CSOs involved in agrofood systems. There were no selection criteria, the compilation largely depended on information available from the internet and/or CSOs' web sites. The 'operations' column is information on what a CSO does. The 'agrofood value chain' (AFVC) segment shows the segment(s) in which each CSO is involved, while the 'targeted recipients of assistance' column gives information on their beneficiaries. The agrofood value chains are divided into four segments namely, farming, agroprocessing, wholesale and retail trade, and consumption (distribution/information sharing). The CSOs operate in different provinces across South Africa. Some CSOs serve only one province, while others serve multiple provinces.

The main purpose of this selection was focused on creating a picture of how CSOs are involved in agrofood value chains. The table shows that some of these CSOs have multiple functions within the agrofood value chains; for example, a CSO might farm, cook with the vegetables that they produce, and distribute it in the form of soup.

Furthermore, Annexure Table 1 shows the different recipient groups to which each CSO caters. These groups are CSO members, poor and hungry families in a neighbourhood, children at schools and ECDs, and other food recipient groups. In this case, the CSO can cater to more than one recipient group, although the beneficiaries are all in one category, with the exception of one CSO which catered to two categories.

Annex 1 Table A1: Purposeful selection of CSOs involved in agrofood value chains

CSO Name (description)	Provincial presence	Operations	AFVC segment				Targeted recipients of assistance			
			Farming	Agroprocessing	Wholesale & Retail Trade	Consumption/ Distribution/information sharing	CSO members	Poor and hungry families in a neighbourhood	Children at schools and ECDs	Other food recipient groups
A C F S Community Education and Feeding Scheme	GP	Prepares and serves food to pre-schoolers and school children who have been identified as being at risk. Established communal food garden, where community volunteers grow vegetables for the feeding scheme and for their own use.	✓			✓				
Black Sash	WC, EC, GP, KZN	Works towards the realisation of socio-economic rights, as outlined in the SA Constitution, with emphasis on social security and social protection for the most vulnerable, to reduce poverty and inequality.				✓				✓
Bonteheuwel Development Forum	WC	A community-based NGO consisting of street and block committees that are tackling bread and butter issues of our community in the areas of safety, poverty, health, youth, women, food security.				✓		✓		
Children's Feeding Trust of P E	EC	Raises funds for the feeding of needy children and distributes it to their beneficiaries in the Eastern Cape.				✓			✓	

CSO Name (description)	Provincial presence	Operations	AFVC segment				Targeted recipients of assistance			
			Farming	Agroprocessing	Wholesale & Retail Trade	Consumption/ Distribution/information sharing	CSO members	Poor and hungry families in a neighbourhood	Children at schools and ECDs	Other food recipient groups
Feed The Babies Fund	KZN	Addresses food security, specifically malnutrition, among orphans and vulnerable children by providing fortified, concentrated cereal to babies and children living in the poorest areas of the Province.				✓			✓	
Food And Trees for Africa	GP	Addresses food security, environmental sustainability, and greening; build capacity and skills within agriculture, urban forestry, and climate change adaptation.				✓				✓
Food Gardens Foundation	GP	A socioeconomic project to teach people to help themselves by growing essential food according to sustainable, organic principles.				✓				✓
FoodBank South Africa (FBSA)	GP, EC, KZN, LP, NW, WC	At national level, works with government, food producers, manufacturers, and retailers; at grassroots level, collaborates closely with community leaders, faith-based organisations and non-profit organisations working directly with those who are food insecure.				✓		✓		
FoodForward South Africa	WC	Recovers quality surplus food from farmers, manufacturers, and retailers and redistributes this food to communities in need.	✓	✓	✓	✓	✓			

CSO Name (description)	Provincial presence	Operations	AFVC segment				Targeted recipients of assistance			
			Farming	Agroprocessing	Wholesale & Retail Trade	Consumption/ Distribution/information sharing	CSO members	Poor and hungry families in a neighbourhood	Children at schools and ECDs	Other food recipient groups
		Distributes monthly food provisions to nearly 2,500 registered and vetted beneficiary organisations to ensure we provide nutritious meals to over 875,000 vulnerable people every day.								
Gift of the Givers	GP, KZN, WC	Distributes food parcels, prepares and serves hot meals at own centres, whilst also supporting existing feeding schemes through the provision of meals on a daily basis. Assists in key agricultural projects, supporting subsistence farmers in distress, as well as providing animal feed for needy farmers during crippling drought events.				✓				✓
Manna Community Food Service	WC	To end hunger through food distribution, education, and advocacy.				✓				✓
Meals On Wheels	GP, NW, NC, FS, KZN, EC	Helping poverty-stricken South Africans with nutritious meals and food.				✓				✓
Mustadafin Foundation	WC, EC	Serves the underprivileged communities poverty alleviation project, Feed a Belly, Feed a Mind, provides nutritional meals daily to learners in early childhood development (ECD) centres and pre-schools.				✓		✓	✓	

CSO Name (description)	Provincial presence	Operations	AFVC segment				Targeted recipients of assistance			
			Farming	Agroprocessing	Wholesale & Retail Trade	Consumption/ Distribution/information sharing	CSO members	Poor and hungry families in a neighbourhood	Children at schools and ECDs	Other food recipient groups
Peninsula School Feeding Association	WC	Addresses hunger in young learners and students attending primary, secondary and special needs schools as well as Orphaned & Vulnerable Children Centres (OVCs), Early Childhood Development Centres (ECDs) and Technical and Vocational Education and Training Colleges (TVETS), only in the Western Cape province.				✓		✓		
The Abalimi Bezekhaya	WC	Offering support through urban, organic micro-farming among the poor and unemployed. Abalimi also offers basic micro-farmer training courses to any individual who wishes to start a vegetable garden through mentorship, resources, training, and advice.	✓			✓				✓
Where Rainbows Meet	WC	Soup kitchen nutrition programme, organic garden project.	✓			✓				✓
World Vision International		Focuses on helping the most vulnerable children to overcome poverty and experience fullness of life. Partners with communities to address immediate hunger needs and to grow sustainable food for the future.				✓			✓	

