

Article

Harnessing Public Food Procurement for Sustainable Rural Livelihoods in South Africa through the National School Nutrition Programme: A Qualitative Assessment of Contributions and Challenges

Clement Mensah * and Abdulrazak Karriem

Institute for Social Development, University of the Western Cape, Cape Town 7535, South Africa; akarriem@uwc.ac.za

* Correspondence: 3280431@myuwc.ac.za



Citation: Mensah, C.; Karriem, A. Harnessing Public Food Procurement for Sustainable Rural Livelihoods in South Africa through the National School Nutrition Programme: A Qualitative Assessment of Contributions and Challenges. *Sustainability* **2021**, *13*, 13838. <https://doi.org/10.3390/su132413838>

Academic Editors: Danny Hunter, Luana F. Joppert Swensson, Florence Tartanac, Sergio Schneider and Mark Stein

Received: 13 October 2021

Accepted: 24 November 2021

Published: 15 December 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Abstract: This paper examines how public food procurements contributes to sustainable rural livelihoods through local sourcing of school food, what has become known as 'home-grown' school feeding. Specifically, it draws on in-depth interviews to explore the contributions and challenges of using local farmers as suppliers for South Africa's National School Nutrition Programme (NSNP) using the case of the Eastern Cape Province, the country's poorest province. The study found that participating schools in rural areas benefit from local sourcing by way of using fresh vegetables in preparing meals thanks to the utilisation of a decentralised catering model in the Eastern Cape Province. Consequently, there is evidence of farmers participating in NSNP food market earning additional income and growing more vegetables on more land in some cases. However, even though the Eastern Cape Province uses a decentralised procurement model, it has no clear-cut programme to optimise the benefits of local sourcing for NSNP. It only 'encourages' schools to buy vegetables grown locally. This calls for pragmatism on the side of government to, through creative procurement and initiatives such as the Agri-Parks, use NSNP as a tool for making the South African food system more inclusive, drive down rural poverty and realise sustainable rural development.

Keywords: public food procurement; home-grown school feeding; food security; national school nutrition programme; local sourcing; rural livelihoods; Eastern Cape Province; South Africa

1. Introduction

Sustainable rural development efforts introduced by the South African government post-apartheid have failed to significantly drive down poverty and transform the rural economy [1–3]. The majority of South Africa's poor still live in rural areas, declining marginally from 60.3% in 2006 to 59.7% in 2015 [1]. As a result, rural poverty dynamics as witnessed in the early years of democratic South Africa have not changed much compared to today. Poor rural South Africans still depend highly on social grants, experience high unemployment levels, have limited access to productive agricultural land and agricultural support services, and are largely food insecure and malnourished [3–5].

Much of the rural development failures witnessed post-1994 lies in the desertion of smallholder agriculture coupled with a rather shambolic land reform programme [3,6]. This has altered the livelihoods pattern of the country's rural economy, with fewer and fewer rural people pursuing agriculture for a livelihood [4]. This notwithstanding, the 'land question' is back on the national agenda as part of efforts to transform the South African economy for the benefit of all. While this renewed political will to address the land question is critical, within the context of agricultural livelihoods and sustainable rural development, this cannot be done independently of other productive resources that should accompany rural peoples' access to agricultural land. These productive resources,

including complementary market access, are necessary for securing smallholder farmers' livelihoods as enshrined in the country's National Development Plan 2030.

For the majority of smallholder farmers in South Africa, the incentive to produce and sell remains low. The rise in market dominance by supermarkets and agro-processors risks the exclusion of smallholder farmers from food markets [7]. A study by the Sustainable Livelihoods Foundation [8], for instance, revealed that five major supermarkets control some 80% of the food retail sector. This situation has consequently trapped many rural farmers in structural poverty and forced some to migrate to urban areas in search of better livelihoods, thus furthering the underdevelopment of the rural economy. Indeed, research shows that while small farmers globally produce most of the food that people eat, many also face hunger and food insecurity [9,10].

Addressing some of these concerns in rural South Africa lies in striking a fine balance between pro-poor policies and pro-market interventions. For example, the advent of creative public food procurement measures such as home-grown school feeding in some developing countries are seen as potent pathways for increasing smallholder farmers' access to markets and revitalizing rural economies [11–13]. For Morgan and Sonnino [14], home-grown school feeding or sourcing food locally for school feeding interventions delivers multiple socio-economic benefits for participating farmers, their families, and communities.

Thus, as a major consumer, the South African government can, through its public food procurements including National School Nutrition Programme (NSNP)—which is estimated to spend more than R7 billion (US\$480.68 million) annually—drive transformation in favour of rural smallholder farmers by way of reliable output markets. Besides positively affecting outcomes for food and nutrition security as well as school enrolment, retention, and performance [13,15], the NSNP has the potential of positively contributing to the welfare of residents in communities hosting NSNP beneficiary schools, where they serve as food suppliers. Indeed, while the NSNP expanded its objectives in 2004 to promote and support food production and improve food security in school communities, no coherent mechanism has been set-up to actualise this leg of the programme's objectives.

In the Eastern Cape Province, however, the use of a decentralized procurement approach, where funds are transferred to schools on a quarterly basis to procure food products for the NSNP, has the potential of opening-up additional market opportunities for many smallholder farmers within the province, thus bolstering farmer livelihoods and promoting rural development. Thus, this study utilises a qualitative research methodology approach to explore how such institutional procurements—which uses local farmers as suppliers for the NSNP—are evolving in the Mbhashe Local Municipality and assesses their implications for sustainable rural livelihoods while drawing policy lessons for sustainable rural development.

2. Background and Context

In South Africa, smallholder farmers, like in other African countries, are confronted with numerous challenges—e.g., lack of access to land and markets—that hinder their growth and capacity to effectively contribute to food security and escape the shackles of poverty [16,17]. This has arisen as a result of the fact that rural development strategies pursued at the onset of the new South Africa have, to a greater extent, been distant from smallholder agriculture, with “welfarist development strategies” being a dominant feature of rural development efforts [18] (p. 2). The government sought to address the vast inequalities within the agricultural sector by introducing the Comprehensive Agricultural Support Programme (CASP) in 2001 to provide among others, access to productive resources and market development; however the support offered by the programme targeted only a minority of smallholder farmers [19].

More seriously, smallholder farmers' access to output market remains limited [7,16,17,20]. This is underscored in the 2014 National Policy on Food and Nutrition Security, which noted that “[t]here is limited access to processing facilities or markets for smallholder primary producers, including farmers, fishers and foresters” [17] (p. 4). The current state policy to support smallholders in South Africa is skewed towards corporate value chains. Besides the

strategy to incorporate smallholder farmers into corporate value-chains, there is no clear-cut policy on supporting smallholders' livelihoods through other complementary policies.

This phenomenon has placed smallholder agriculture and smallholder farmers at a disadvantage, especially black farmers, since "[t]he restructuring of the food markets has led to the rearrangement of the food supply chains characterized by the rise in market dominance by supermarkets and agroprocessors" [7] (p. 16). This development, according to Chikazunga [7] (p. 16), "... risks the exclusion of smallholder farmers from food markets." Such shifts in the market structure negatively affects smallholder farmers' livelihoods. In this regard, the so-called inclusion agenda of smallholders into value-chains is not delivering the necessary impact that smallholders so much need. Instead, the imposition of private standards by supermarkets, for example, has tended to adversely affect smallholder benefits for their inclusion in value chains. In other words, there is much skepticism surrounding the positive impact that may accrue to smallholders for their involvement in corporate value-chains. Besides, opportunities for smallholder farmers to participate in the food market are limited [17].

Consequently, the country's 2014 National Policy on Food and Nutrition Security emphasised government food procurement as one viable avenue for increasing market access for smallholder farmers [17]. Specifically, as part of its Zero Hunger Programme, the South African government through the Department of Agriculture, Forestry and Fisheries (DAFF) has identified the NSNP as an important government food purchase outlet through which it intends to incorporate smallholder farmers as suppliers to the NSNP. To this end, the policy seeks to leverage "[g]overnment food procurement to support community-based food production initiatives and smallholders" [17] (p. 6).

In fact, the need to leverage public food procurement to increase emerging and smallholder farmers' market participation is gaining popularity amongst governments. A number of other developing country governments are implementing varying forms of public food procurement initiatives as a strategy to realise multiple socio-economic policy goals [21]. The 2021 Rural Development Report—*transforming food systems for rural prosperity*—for instance notes that such public procurements offer market access opportunities to smallholder farmers and have "... proven effective in responding to immediate needs and providing opportunities for linking local and regional food economies towards more sustainable consumption patterns" [22] (p. 80).

In other words, when it comes to fixing the food system, public food procurement could be a useful development tool to leverage. In this context, the goal of public food procurement, according to Miranda [23] (p. 9), will be to "... reduce some of the uncertainties and risks associated with market participation by providing an accessible market channel and a source of income to farmers." That is, it can be used to extend new market opportunities to rural farmers, boost rural economies and promote secure rural livelihoods. Public food procurement initiatives are a vital pathway to sustainable food systems and from the realm of the Sustainable Development Goals (SDGs); it could be a pathway for realizing SDG target 12.7 of 'promoting public procurement practices that are sustainable, in accordance with national policies and priorities' [24].

Over the last decade, many countries—both developed and developing—have implemented various forms of public food procurement (PFPs) initiatives as a strategy to realise varying socio-economic policy goals [21]. Food campaigns in the USA and Europe recognise public procurement as a powerful tool in 'recalibrating' the relationship between production and consumption [14]. This is intended to reform farm policies to promote health and wellbeing rather than frustrate it [14]. For example, the Italian public food procurement system is more than a strategy or development tool, it's a culture. For years, it has used school meals to pursue social and environmental goals including promoting healthy eating habits amongst school children and the consumption of fresh fruits through local sourcing [14,25,26]. These experiences thus point to the potential of PFPs to nurture and foster linkages between 'local food systems, smallholder farmers and better nutrition' [11,23]. Often, legal instruments for pursuing such socio-economic or horizontal policies under

PFPP initiatives include preferencing schemes as is the case for farm-to-school in the USA and reservations or set-asides like the case of Brazil's Food Acquisition Programme and the National School Feeding Programme (PNAE) [23].

The Brazilian government has since 2003 supported institutional procurement models in the implementation of its PNAE [27]. More specifically, the national school feeding legislation (Law no. 11947/2009) determines that 30% of food purchases for school feeding must be reserved for family farmers using a special procurement method that waives competitive bidding requirements. International organizations such as the World Food Programme in partnership with the UN Food and Agriculture Organization have equally explored this approach under the Purchase from Africans for Africa initiative (PAA Africa) since 2012 in Ethiopia, Malawi, Mozambique, Niger and Senegal. Thus, Miranda [23] (p. 9) notes that in developing countries, public food purchases target smallholder farmers for two main reasons: first, to ensure greater 'economic inclusion' and second, to "...strengthen local food systems."

In South Africa, the inclusion of agriculture development as a key objective of the NSNP offers immense potential for expanding markets for smallholder farmers. Since 1994, the implementation of the National School Nutrition Programme (NSNP), formerly referred to as the Primary School Nutrition Programme, has made a significant contribution towards improving food and nutrition security for schools across all nine provinces [19,28]. The NSNP is financed by the National Treasury through a Conditional Grant given to provinces, and forms part of a broader social safety net aimed at improving the educational and health outcomes of children from poor socio-economic backgrounds [11,19]. With an initial annual budget of R477.8 million (US\$ 134.49 million) in 1994, more than R7.19 billion (US\$ 436.87 million) was spent on the programme in the 2019/2020 financial year (see Figure 1).

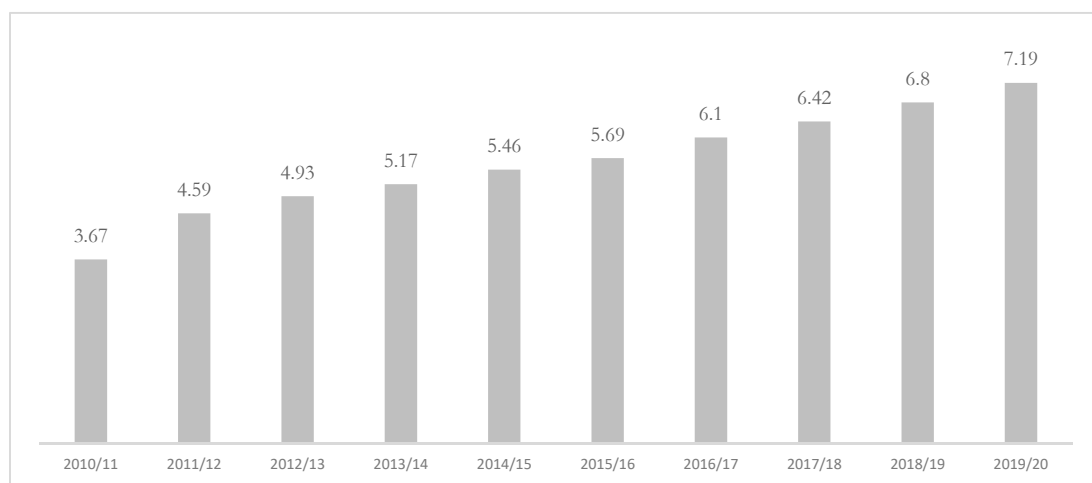


Figure 1. Annual NSNP Expenditure Estimates (in billion Rands) Source: National Expenditure Estimates retrieved from www.treasury.gov.za (accessed on 24 July 2021).

While it originally targeted learners in poorly resourced and non-fee paying public primary schools from Grade R to Grade 7, the NSNP has been extended to cover learners in secondary schools [29]. Currently, more than 9 million learners are benefiting from the programme in about 20,000 schools [30,31]. The NSNP is implemented at the provincial level, where food ingredients are procured using a centralized procurement system in the majority of provinces and a decentralized procurement system in the Eastern Cape Province for example [11].

To extend these benefits beyond education and nutrition outcomes, the NSNP objectives were expanded in 2004 to promote and support food production and improve food security in school communities. Consequently, the inclusion of smallholder agriculture development as a key objective of the NSNP since 2004 has presented a positive outlook

for smallholder farmers in terms of expanded and reliable markets for their food produce. Besides being designed to “improve the health and nutritional status of South African primary school children, to improve levels of school attendance and to improve the learning capacity of children” [28] (p. viii), the NSNP also seeks to promote and support food production and improve food security in school communities.

While rigorous empirical studies on the impact of the NSNP on smallholder farmers’ livelihoods are limited, few case studies and anecdotes reveal mixed results. In addition to positively affecting outcomes for food and nutrition security and school enrolment, retention and performance [13,15], the NSNP is contributing positively to the welfare of residents in communities hosting NSNP beneficiary schools, where they serve as food handlers and suppliers. For instance, the procurement of locally produced vegetables for preparing food for beneficiary schools has increased ready markets for farmers in Limpopo [28]. In KwaZulu-Natal province for instance, local cooperatives serve as food suppliers for a substantial number of beneficiary schools even though several of these cooperatives have not been efficient at food supplies [32]. Within the same province, the engagement of women farmer groups in the supply of food items is highly encouraged [29].

In spite of this, the procurement of agricultural produce from “local small farmers is currently not a central strategy of the NSNP [29] (p. 7). That is, the need to link NSNP to smallholder farmers’ livelihoods has not received the necessary policy attention. In addition, coordination with key stakeholders such as the Department of Agriculture, Forestry and Fisheries on how best to integrate smallholders in NSNP supply-chains have been poor [29]. More so, according to an evaluation undertaken by the Public Service Commission [28], the NSNP is highly centralized at the provincial level, particularly in the case of procuring food for beneficiary schools.

3. Materials and Methods

The study was conducted in July 2017 in the Mbhashe Local Municipality of the Eastern Cape Province of South Africa. Mbhashe is predominantly rural, with agriculture being the major economic activity. About 36,377 households live-off agriculture. The areas of the municipality are mostly under communal land tenure, and agriculture in the Mbhashe area is mostly smallholder crop farming and open grazed livestock. There are various concentration points on agricultural development such as: maize production, vegetable production, livestock improvement, poultry and citrus fruit [33]. One major challenge that farming households face is the marketing of their produce. Poverty is prevalent, about 63% in rural areas compared to 22% in urban areas [33]. As a result, there is high dependence on social grants as a form of income [34].

Thus, a case study design was used, where a total of 12 NSNP beneficiary schools (10 primary and 2 senior secondary schools) were randomly selected from across six communities as shown in Table 1.

In the selected schools, Principals as well as other informants such as school-based NSNP Coordinators (who are normally teachers) were interviewed to elicit their views on the NSNP in general and more specifically, on procurement administration and food sourcing practices.

Based on interviews with the schools, 19 smallholder farmers (63% women) who served as food suppliers to 9 out of the 12 schools were purposively interviewed to ascertain their views on their motivations for supplying food to the schools, its contribution to their livelihoods, and challenges they faced, amongst others. In addition, key informant interviews were held with the government officials from the education and agriculture departments of the Mbhashe Local Municipality and the Basic Education Department at the level of the Eastern Cape Province.

Table 1. Communities and number of schools and farmers interviewed.

	Community	No. of NSNP Beneficiary Schools Interviewed	No. of Smallholder Farmers Interviewed
1.	Agakaxha	2	7
2.	Colosa	1	2
3.	Duff	1	1
4.	Elliotdale	2	3
5.	Dutywa	3	1
6.	Willowvale	3	5

Source: Field survey, July 2017.

ATLAS.ti version 8 was used to generate codes and key themes from all the interviews and based on these, narratives were developed. The study had two main limitations. First, given that the research targeted only 12 schools from six communities, the results presented can neither be generalized for the Mbhashe Local Municipality nor the Eastern Cape Province as a whole. Second, with regards to the operationalization of sustainable rural livelihoods, the analysis presented in this study focuses primarily on economic/financial spin-offs that smallholder suppliers derive from participating in the NSNP food market.

4. Results

4.1. Sourcing of Food for NSNP Schools

A variety of food stuffs are procured from different sources. As shown in Table 2, food stuffs procured can be categorised into vegetables and fruits such as spinach, cabbage and butternuts; starch such as rice and maize meal and protein which includes sour milk, beans and chicken. These foods are mainly based on the provincial (Eastern Cape) menu by the Department of Education which entails a mix of fruits and vegetables, proteins and starchy foods served every school day. School-based NSNP Coordinators follow the menu prepared by the Department of Education albeit in some cases the days are swapped. For example, a Principal of one of the beneficiary schools had this to say:

Table 2. Main food stuffs procured, their sources and degree of use.

Food Group	Main Foodstuff Procured	Food Source and Extent of Use		
		Local Farmers from Community	Supermarkets (Spar, Shoprite, Superspar)	Small-Scale Outlets
Vegetables and Fruits	Spinach, cabbage, carrots, pumpkin, butternuts, green paper	+	+	+
Starch	Rice, maize meal, potato, samp	-	++	+
Protein	Canned fish, sugar beans, sour milk, chicken, beans	-	++	+

Source: Field survey, July 2017.

“ . . . the menu is supplied from the department, for example we prepare Pap (a traditional porridge made from maize meal) on Monday. Then Tuesdays samp [crushed maize kernels] and cabbage. Wednesday we prepare sour milk and mealie meal [maize porridge]. For Thursdays, samp and cabbage are prepared. And then on Friday, rice and pilchards [canned fish].”

Table 2 presents details on the main food stuffs procured by schools and their respective sources.

The foods are procured from three main sources—supermarkets, local farmers from within the communities where schools are located and small-scale outlets in or outside of communities. As shown in Table 2, the majority of foods are sourced from supermarkets including Shoprite, Spar, Superspar and Empumalanga Wholesale & Supermarket. The extent to which schools buy starchy and protein foods from supermarkets is high compared to those from local farmers and small-scale outlets. Regarding vegetables and fruits, the degree of use is even across the board. That is, for local farmers, even though the degree of sourcing is low for both starchy and protein foods, it is somewhat high for vegetables and fruits.

Frequency of sourcing depends on the type of food but mostly ranges from weekly to monthly. A school-based NSNP Coordinator for instance noted the following: “We buy monthly [for] example for rice but the chicken, sour milk and veggies we buy weekly because we don’t have a refrigerator.” Given that the Eastern Cape Province uses a decentralised catering model, funds are given to schools to administer the NSNP including the hiring of food handlers to prepare the foods procured. Specifically, the funds are deposited in the bank account of beneficiary schools. An official of the Department of Education in the Mbhashe Local Municipality indicated that:

“ . . . during the start of the financial year, we provide schools with paper budget so the schools will know how to spend money that is deposited in their accounts. The system we [are] using as a programme is a decentralization of budget to schools and then they buy the stuffs themselves.”

4.2. Buying from Local Farmers for NSNP

The majority of the NSNP schools interviewed (9 out of 12) practiced some form of local sourcing of food stuff to feed an average of 460 learners per school. These schools procure some of their NSNP foods from local farmers from within the communities where the schools are situated. The remaining three schools—all located in Dutywa—procured all of their food stuffs from supermarkets such as Spar and Shoprite, given that Dutywa is a major town in the Mbhashe Local Municipality and plays host to a number of supermarkets.

Vegetables and fruits constitute the main food stuffs grown and supplied by farmers to schools. These include spinach, carrots, pumpkin, beetroot, cabbage, banana and apples. Occasionally, some supply starchy foods mainly potatoes and proteins such as sour milk and beans. Frequency of supply normally depends on the demand expressed by schools but often ranges from weekly to monthly. That said, supply is seasonal depending on the type of food. For example, when asked how often they buy from local farmers, a Principal had this to say:

“We buy [vegetables] all the time, when they have them available but its seasonal for them. For example, the cabbage we get is season-based even the pumpkin we get it when they are harvesting, but if they run out, we get it from town”

Another had this to say in response to the frequency of supply.

“For example, the school calls and they say, “Please send this amount of vegetables”. I bring that. Every month. Three times a week. For my milk it’s just one day a week.”

This means that seasonality has the tendency to affect farmers’ regular supply of fruits and vegetables to NSNP schools. This is further compounded by the severity of drought faced by farmers in the Eastern Cape province. Reflecting on this, one school Principal said:

“There was one lady who supplied us with cabbages. I don’t know maybe it’s because of the drought, she has not come back to supply us again and so we buy from the big shops.”

This is further corroborated by farmers, who mentioned drought as a major challenge to their small farms or gardens, with one farmer pointing out that “getting water to farm the veggies is one of the biggest issues farmers face”. This clearly is a disincentive to buying from local farmers even though on the average, NSNP schools tend to look within local

communities for suppliers, and when unavailable, proceed to purchase from supermarkets in towns.

Nonetheless, the quality of food supplied by farmers is perceived as good even though not always. This is particularly so for vegetables. A school principal noted that the supplies they get from farmers is “ . . . of good quality sometimes because they tend to be fresh compared to those we buy from town” with another adding that “vegetables from farmers is very good and fresh. Even better than the one we buy from one supermarket”. Another principal echoed: “The [food] quality is okay. In fact, what we do is to request for a sample before we buy. In fact, when they deliver the supply we check the food.” Based on interviews with both school principals and farmers, there are two main pathways by which local sourcing for NSNP emerge: direct linkages and intermediary interventions.

4.3. Direct Linkages Pathway

These comprises two aspects: schools reaching out to farmers and farmers reaching out to NSNP schools. For some of the local sourcing practices, they were first initiated by schools reaching out to farmers. When asked their reason for taking such step, Principals offered multiple reasons with the main ones being the creation of jobs and its contribution towards poverty reduction. For example, some school Principals had this to say:

“Yes, we buy from local farmers because in our communities there are no jobs. So, buying from them provides them with money to support their families.”

“It is very good to buy from [local farmers] because it could provide employment for the community. It’s not good to buy from town. We suppose to buy from the community members even if it’s a small quantity of spinach- also you will know that it is fresh . . . ”

“Although there is no written document [to] tell us to use local farmers, the [Eastern Cape Province’s Basic Education Department] has emphasized that it’s important to make use of the local sources because this is a way to reduce poverty in our communities.”

For some schools, their decision to buy from local farmers derives from the Eastern Cape Province’s Basic Education Department’s call encouraging them to buy locally. A school Principal stated that:

“We buy from the local farmers because at first, we were told to use the people around us before going out. So it is what we are doing, when they have stuff available we buy from them but if they run out we go to town.”

Conversely, some local sourcing arrangements emerged through the initiative of local farmers reaching out to schools to sell their produce, even for surpluses from those produced primarily for home consumption. For example, one farmer, stated the following: “Well, I approached the school and I asked if I can sell my vegetables to them because I was not motivated to sell them outside my community.” When asked their reasons for selling to communities, farmers mentioned additional incomes as a major reason. Some farmers posited the following reasons for selling their produce in local communities, particularly schools:

“What motivated me to sell to the school is that I harvest a lot of pumpkins. I noticed that even if I were to sell them to the community, there would still be some left. The red and yellow don’t sell a lot in the community. Someone would buy one, maybe two. The school buy in bulk.”

“First we produce the milk for subsistence but the surplus is sold to the schools to generate income”.

The Provincial Basic Education Department and school Principals were therefore central in facilitating the direct local procurement of food for the NSNP in the municipality. Moreover, the empirical data show that the decentralization of food procurement in the Eastern Cape province—in contrast to centralized food procurement in the other provinces—provided school principals with greater freedom to procure food from small farmers, thus promoting local food systems and livelihoods.

4.4. Intermediary Interventions Pathway

Besides schools reaching out to farmers and vice-versa, school-farmer linkages emerge through deliberate intermediary interventions like the Agri-Park Initiative. The Agri-Park initiative was officially launched in 2015 by the Department of Rural Development and Land Reform as part of efforts to kick-start the country's rural economic transformation agenda in all District Municipalities. Prior to its nation-wide launch, Dutywa was one of few school districts selected for piloting over three years (2011–2013/14) where a Memorandum of Understanding was signed in 2010 by the national Department of Rural Development and Land Reform, and the Eastern Cape Departments of Agriculture and Rural Development, Economic Development, Education, Social Development, and the University of Fort Hare, amongst others [35]. The Dutywa pilot was sited in Duff and had a strong market access facilitation component where agricultural produce from farmers within its catchments were to be mobilized for onward supply to NSNP schools.

During interviews in Duff, the Agri-Park pilot was mentioned as having facilitated farmers' access to school food market but could not be sustained. Commenting on the initiative, a young farmer who supplies food to five schools noted that "... initially as per the objectives of [Agri-Park], we were supplying the park with our produce for onward sale to schools but it just died out, it is dis-functional at the moment." He pointed out a number of reasons for this, adding that:

"First, the government did not put the right people there to manage it and so now it's not working and there's been a lot of damage including tractor and other farm implements as well as electricity. But then there have been meetings of reviving them again but nothing has happened yet. And more importantly, the local farmers were not involved in the project, they rather employed someone from outside the community who did not care much about the initiative. There were some locals who were employed at the park and were given some training to continue with the initiative but they also failed."

These claims were further corroborated by an official of the Mbhashe Local Municipality who points out that:

"[The Agri-Park] was a response to farmers cry that they had a lot of produce from their household garden but then there was no market for their produce. That was when the Agri-Park came in. It started and thrived smoothly. But around the year, farmers were taking their produce to the park but it was not selling ... Farmers didn't have ownership so that is where it started to fail ... Only a few community people were employed to work at the park. And then when funding ceased, the park also ceased to operate. As a result, the community members started to vandalize the park because there was no one owning it. It didn't go well."

Thus, the Duff Agri-Park pilot failed due to a multiplicity of factors including funding, farmer ownership, poor coordination, amongst others. That said, it has a strong potential for facilitating local farmers access to NSNP market in a more structured manner.

4.5. How Buying from Local Farmers for NSNP Contributes to Sustainable Rural Development

Buying from local farmers for NSNP contribute to sustainable rural development through increased incomes through stable markets. As noted earlier, one of the primary reason farmers supply to NSNP schools is to raise additional income to boost their household consumption.

On average, farmers accessing the NSNP food market earned R398.82 (US\$30.57 equivalence) monthly from selling their produce to schools. One female farmer indicated that she earns 'R400 [US\$30.66] for cabbage sales per month and R600 [US\$46.00] per month for spinach.' One young farmer opined that "I have been supplying to five schools in the villages over the last few years earning around R3000 [US\$229.95] monthly."

Besides the benefit of income, farmers have been incentivised to produce more and diversify the production of other crops. Some farmers revealed that by accessing the NSNP food market, they have been able to expand their farming business by growing

other vegetables. One female farmer in the Willowvale community said she is able to “... produce more by increasing the size of my plot and the number of crops cultivated.” Others had this to say:

“When I sell my cabbage to the school, it motivates me because they told me to plant more stuff like carrots and other vegetables.”

“The school market is good and very open. If I can get more schools to supply, it will help me grow my farming business.”

“Yes, I am now growing more vegetables and expanding my farming business. Also, since I started working with the school, I needed more land. I had to use more land.”

“When selling to the school, you are guaranteed your money at the agreed upon. Which is not the case when you sell to individuals. The schools give you your money immediately.”

For one farmer, his experience was mixed especially when it comes to payment for produce sold to schools. He said: “My experience has been good and bad. Its good because it’s a good market and the bad side is when sometimes, you have to wait for the payments. It largely, its being a good experience”.

Besides the economic spin-offs to farmers, buying from local farmers for NSNP increases learners’ access to fresh food in particular vegetables and fruits as well as in some cases cuts-down the cost of transportation for food procurement. For instance, a farmer noted said: “I sell to about five schools and sell to them because is to get income and the schools get fresh food”.

A farmer in Duff, a rural community, notes that “... the schools can have access to fresh food and so they can get it cheaper due to savings they make on transport if they were to buy from the supermarket”. He adds that “this community is very far from town and so they buying it from me is easier to deliver because they don’t have to struggle with transport”. This offers an opportunity to NSNP beneficiary schools particularly located in rural communities make savings on their NSNP administration cost.

5. Discussion

Results from the study suggests a steady response to the call to source food from local farmers for NSNP in the Mbhashe Local Municipality of the Eastern Cape Province albeit unstructured and imperfect. Most of these local sourcing arrangements are happening more in remote communities compared to NSNP schools located in urban areas. Unsurprisingly, 3 out of the 12 schools who reported having no local sourcing in place were located in the town of Dutywa where all food stuffs were sourced from supermarkets. This further underscores the potential for exploring such local sourcing arrangements with farmers in rural contexts as such arrangements appear to be birthing organically.

Supply arrangements happening between farmers and NSNP schools in 9 out of 12 schools mostly emerged through schools directly approaching farmers or vice-versa. This differs from an ideal home-grown school feeding programme where a deliberate effort is made to first mobilise interested farmers and set up formal agreements (including pricing) where a dedicated percentage of procurement money is allocated to them like the case of Brazil. In a study of a local sourcing initiative for some schools in northern Ghana, Mensah [36] found that with the help of a non-governmental organization serving as an intermediary, local sourcing arrangements between farmers and schools were formalized in a manner that guaranteed the supply of food stuffs. Perhaps, this approach can be likened to the Duff Agri-Park experiment which unfortunately failed due to local ownership and financial constraints.

The farmer-NSNP school relationships or local sourcing favours vegetables and fruits production (Figure 2), which are mostly deemed to be of good quality because they are freshly produced and are delivered in a timely manner. If well structured, a local sourcing component built around vegetable production should help deliver timeous and good quality vegetables for NSNP [37].

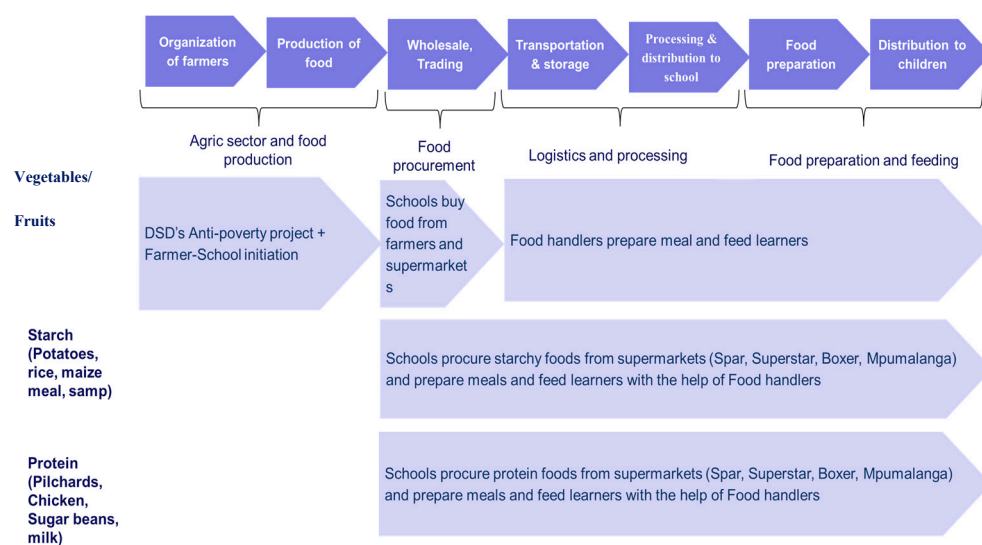


Figure 2. The NSNP food chain in Mbashe Local Municipality.

That said, schools practicing local sourcing principally do so for a variety of reasons including increasing farmers' access to markets, helping contribute to job creation in rural communities as well as boosting their incomes. Schools who engage in local sourcing or home-grown school feeding view such engagement as vital for creating and sustaining jobs and reducing poverty in rural communities. Thus, there is evidence of farmers participating in NSNP food market earning additional income and growing more vegetables on more land in some cases. This is in line with studies conducted in KwaZulu-Natal Province [32] and in Ghana where farmers supplying to the country's national school feeding programme in the Sissala East District of Ghana earned additional income through increased markets [35]. Moreover, in Brazil the Food Acquisition Programme and the National School Feeding Programme have exercised an important role in generating a secure source of income for smallholder farmers as well as addressing the food and nutrition insecurity of school children. In addition, local procurement has incentivised farmers to increase the land devoted to production, plant new varieties of fruits and vegetables, and raise pigs, cows, and chickens, thus leading to greater product diversification and improved farmer livelihoods [38,39].

In spite of this, there are some challenges, bordering largely on the sustainability of supply. The study revealed that food supply from farmers to schools is irregular due to seasonality of production caused by drought. Secondly, the size of food demand tends to outweigh the supply from farmers because most of these vegetables are grown on small plots of land. This is a reason why schools often buy from supermarkets and other small-scale outlets to complement supplies from smallholder farmers.

Another challenge raised has to do with delayed payments to farmers in some instances. This normally arises from delays in the release of funds from the Provincial level to individual schools as noted by the 2016 Implementation Evaluation of the National School Nutrition Programme Report [37]. Such challenges could further strain local sourcing efforts by affecting the regularity of supply.

Finally, key limiting factors include the Department of Basic Education's requirement that schools provide receipts for food procurements as well as the lack of a structured price mechanism to regulate farmer-school purchases.

6. Conclusions

This study has shown that there is some form of home-grown school feeding taking place in South Africa thanks to the use of a decentralised catering model in the Eastern Cape Province where budgets are deposited into the accounts of NSNP schools for food procurement and preparation. With a home-grown model, school feeding programmes

makes a vital contribution to sustainable rural development from the village-level upwards. It becomes an anvil for creating new markets for farmers, generate employment for women and young people, create incentives for small farmer livelihood in rural South Africa, and address food and nutrition insecurity among school children. With the majority of local suppliers being women, it offers a vital pathway to empowering women economically in rural South Africa.

Participating schools in rural areas equally benefit from local sourcing by way of using fresh vegetables in preparing meals as well as saving on administrative costs as regards traveling long distances to procure vegetables. Despite these, there are some challenges. This research found that many small farmers have small plots of land which limits their ability to produce more vegetables and other agricultural products for sale to schools and local markets. The government's land reform programme can assist by making more land available to land-poor small farmers and thereby enable them to produce and supply more food to schools to further enhance their livelihoods and contribute to addressing food and nutrition insecurity among school children.

Even though the Eastern Cape Province uses a decentralised procurement model, it has no clear-cut programme to make home-grown school feeding happen. It only 'encourages' schools to buy vegetables grown locally. The fact that schools in the town of Dutywa procured all their food from supermarkets while schools in rural areas made a concerted effort to procure agricultural produce from small farmers highlights both the strengths and weaknesses of the decentralized school feeding programme in the Eastern Cape. Decentralizing the NSNP opened up possibilities for 'direct linkages pathways' in that rural school principals and small farmers could actively reach out to each other and thereby promote procurement from local food systems. On the other hand, because the NSNP only 'encourages' local procurement, school principals in the town of Dutywa felt no obligation to purchase from small farmers and thus simply resorted to purchasing food from supermarkets. To address this weakness, perhaps the South African government should adopt a legal provision which compels schools to purchase a certain percentage of their food from small farmers as is the case in the Brazilian National School Feeding Programme.

The potential to make space for the smallholders along the school food chain is huge but untapped—about a billion Rands (US\$ 75.44 million) is spent annually on the NSNP in the Eastern Cape Province alone. While the NSNP has been cited in a number of government documents as serving as a potential food output market for smallholder farmers including the 2014 National Policy on Food and Nutrition Security, there is no deliberate effort in mobilizing and incentivising farmers to produce and supply food as is the case of Brazil's Food Acquisition Programme and National School Feeding Programme. This calls for pragmatism on the side of government to, through creative procurement and initiatives such as the Agri-Parks, use NSNP as a tool for making the South African food system more inclusive, drive down rural poverty, promote food and nutrition security, and realise sustainable rural development.

Author Contributions: Conceptualization, C.M.; Data curation, C.M.; Formal analysis, C.M. and A.K.; Methodology, C.M.; Supervision, A.K.; Writing—original draft, C.M.; Writing—review & editing, A.K. All authors have read and agreed to the published version of the manuscript.

Funding: The financial assistance of the National Institute for the Humanities and Social Sciences, in collaboration with the Council for the Development of Social Science Research in Africa (CODESRIA) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the authors and are not necessarily to be attributed to the NIHSS and CODESRIA.

Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Ethics Committee of the University of the Western Cape (Ethics Reference Number HS/16/4/6; 29 July 2016).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data that support the results of this study are not publicly available due to them containing information that could compromise research participant privacy but are available from the corresponding author on reasonable request.

Conflicts of Interest: The authors declare no conflict of interest. The PhD funders (NIHSS and CODESRIA) for Clement Mensah had no role in the design of the study, in the collection, analysis or interpretation of the data, in the writing of the manuscript, or in the decision to publish the results.

References

1. World Bank Group. *Overcoming Poverty and Inequality in South Africa: An Assessment of Drivers, Constraints and Opportunities*; The World Bank: Washington, DC, USA, 2018. Available online: <https://documents1.worldbank.org/curated/en/530481521735906534/pdf/124521-REV-OUO-South-Africa-Poverty-and-Inequality-Assessment-Report-2018-FINAL-WEB.pdf> (accessed on 10 September 2020).
2. Statistics South Africa. *Poverty Trends in South Africa: An Examination of Absolute Poverty between 2006 and 2015*; Statistics South Africa: Pretoria, South Africa, 2017. Available online: <http://www.statssa.gov.za/publications/Report-03-10-06/Report-03-10-062015.pdf> (accessed on 24 July 2020).
3. Gwanya, T.T. *South Africa Position Paper on Rural Development: A Model for the Comprehensive Rural Development Programme*; Department of Rural Development and Land Reform: Pretoria, South Africa, 2010.
4. Daniels, R.C.; Partridge, A.; Kekana, D.; Musundwa, S. *Rural Livelihoods in South Africa*; SALDRU Working Paper Number 122/NIDS Discussion Paper 2013/4; SALDRU, University of Cape Town: Cape Town, South Africa, 2013.
5. Kepe, T.; Cousins, B. Radical Land Reform Is Key to Sustainable Rural Development in South Africa. 2002. Available online: <https://repository.uwc.ac.za/handle/10566/4242> (accessed on 20 July 2020).
6. Karriem, A.; Hoskins, M. From the RDP to the NDP: A Critical Appraisal of the Developmental State, Land Reform and Rural Development in South Africa. *Politikon* **2016**, *43*, 325–343. [CrossRef]
7. Chikazunga, D. Determinants of smallholder farmers' participation in modern food markets: The case of tomato supply chains in Limpopo. In *Smallholders and Agro-Food Value Chains in South Africa: Emerging Practices, Emerging Challenges*; Greenberg, S., Ed.; Institute for Poverty, Land and Agrarian Studies, University of the Western Cape: Cape Town, South Africa, 2013; pp. 15–22.
8. Petersen, L. *Submission to Grocery Retail Sector Market Inquiry*; Sustainable Livelihoods Foundation: Cape Town, South Africa, 2016. Available online: <https://livelihoods.org.za/wp-content/uploads/2018/05/Submission-to-Grocery-Retail-Sector-Market-Inquiry.pdf> (accessed on 30 September 2021).
9. IFAD. *Smallholders, Food Security, and The Environment*; International Fund for Agricultural Development: Rome, Italy, 2013.
10. Paganini, N.; Adinata, K.; Buthelezi, N.; Harris, D.; Lemke, S.; Luis, A.; Koppelin, J.; Karriem, A.; Ncube, F.; Aguirre, E.N.; et al. Growing and Eating Food during the COVID-19 Pandemic: Farmers' Perspectives on Local Food System Resilience to Shocks in Southern Africa and Indonesia. *Sustainability* **2020**, *12*, 8556. [CrossRef]
11. Drake, L.; Woolnough, A.; Burbano, C.; Bundy, D. *Global School Feeding Sourcebook: Lessons from 14 Countries*; Imperial College Press: London, UK, 2016.
12. Sumberg, J.; Sabates-Wheeler, R. Linking agricultural development to school feeding in sub-Saharan Africa: Theoretical perspectives. *Food Policy* **2011**, *36*, 341–349. [CrossRef]
13. Tomlinson, M. *School Feeding in East and Southern Africa: Improving Food Sovereignty or Photo Opportunity*; Equinet Discussion Paper; Health Systems Research Unit, Medical Research Council: Cape Town, South Africa, 2007.
14. Morgan, K.; Sonnino, R. *The School Food Revolution: Public Food and the Challenge of Sustainable Development*; Routledge: London, UK, 2008.
15. Kallmann, K. *Food for Thought: A Review of the National School Nutritional Programme*; Children's Institute, University of Cape Town: Cape Town, South Africa, 2005.
16. Aliber, M.; Hall, R. Support for smallholder farmers in South Africa: Challenges of scale and strategy. *Dev. S. Afr.* **2012**, *29*, 548–562. [CrossRef]
17. Department of Agriculture, Forestry and Fisheries (South Africa). *The National Policy on Food and Nutrition Security for the Republic of South Africa (Notice 637)*; Government Gazette, 37915; Department of Agriculture, Forestry and Fisheries: Pretoria, South Africa, 2014.
18. Greenberg, S. Introduction: Smallholders and value chain integration in South Africa. In *Smallholders and Agro-Food Value Chains in South Africa: Emerging Practices, Emerging Challenges*; Greenberg, S., Ed.; Institute for Poverty, Land and Agrarian Studies, University of the Western Cape: Cape Town, South Africa, 2013; pp. 1–8.
19. McLaren, D.; Moyo, B.; Jeffery, J. *The Right to Food in South Africa: An Analysis of the Content, Policy Effort, Resource Allocation and Enjoyment of the Constitutional Right to Food*; Studies in Poverty and Inequality Institute (SPII): Johannesburg, South Africa, 2015.
20. Thamaga-Chitja, J.M.; Morojele, P. The context of smallholder farming in South Africa: Towards a livelihood asset building framework. *J. Hum. Ecol.* **2014**, *45*, 147–155. [CrossRef]
21. Swensson, L.F.J. *Aligning Policy and Legal Frameworks for Supporting Smallholder Farming through Public Food Procurement: The Case of Home-Grown School Feeding Programmes*; Working Paper No. 177; International Policy Centre for Inclusive Growth (IPC-IG): Brasilia, Brazil, 2018.
22. International Fund for Agricultural Development. *Rural Development Report 2021: Transforming Food Systems for Rural Prosperity*; IFAD: Rome, Italy, 2021.

23. Miranda, A. *Public Food Procurement from Smallholder Farmers: Literature Review and Best Practices*; Working Paper No. 176; Food and Agriculture Organization of the United Nations and the International Policy Centre for Inclusive Growth: Brasilia, Brazil, 2018.
24. Swensson, L.F.; Hunter, D.; Schneider, S.; Tartanac, F. Public food procurement as a game changer for food system transformation. *Lancet Planet. Health* **2021**, *5*, e495–e496. [CrossRef]
25. Pagliarino, E.; Santanera, E.; Falavigna, G. Opportunities for and Limits to Cooperation between School and Families in Sustainable Public Food Procurement. *Sustainability* **2021**, *13*, 8808. [CrossRef]
26. Rossi, L.; Ferrari, M.; Martone, D.; Benvenuti, L.; De Santis, A. The Promotions of Sustainable Lunch Meals in School Feeding Programs: The Case of Italy. *Nutrients* **2021**, *13*, 1571. [CrossRef] [PubMed]
27. Schneider, S.; Thies, V.F.; Grisa, C.; Belik, W. Potential of public purchases as markets for family farming: An analysis of Brazilian school feeding program between 2011 and 2014. In *Advances in Food Security and Sustainability*; Barling, D., Ed.; Academic Press: Burlington, MA, USA, 2016; Volume 1, pp. 69–95.
28. Public Service Commission. Report on the Evaluation of the National School Nutrition Programme (NSNP). 2008. Available online: www.info.gov.za/view/DownloadFileAction?id=88572 (accessed on 4 July 2014).
29. Wenhold, F.; Rendall-Mkosi, K.; Sibanda. *Case Study of the National School Nutrition Programme in South Africa*; University of Pretoria: Pretoria, South Africa, 2013.
30. South Africa. National Treasury. Budget Review 2020. 2020. Available online: <http://www.treasury.gov.za/documents/National%20Budget/2020/review/FullBR.pdf> (accessed on 24 July 2021).
31. Devereux, S.; Hochfeld, T.; Karriem, A.; Mensah, C.; Morahanye, M.; Msimang, T.; Mukubonda, A.; Naicker, S.; Nkomo, G.; Sanders, D.; et al. *School Feeding in South Africa: What We Know, What We Don't Know, What We Need to Know, What We Need to Do*; Working Paper No. 004; DST-NRF Centre of Excellence in Food Security: Cape Town, South Africa, 2018.
32. Beesley, A.; Ballard, R. Cookie cutter cooperatives in the KwaZulu-Natal school nutrition programme. *Dev. South Afr.* **2013**, *30*, 250–261. [CrossRef]
33. Mbhashe Local Municipality. *Draft Annual Report 2015/16*; Mbhashe Local Municipality: Dutywa, South Africa, 2015.
34. Mbhashe Local Municipality. *Spatial Development Framework: Currently under Review for Period 2009–2010*; Mbhashe Local Municipality: Dutywa, South Africa, 2009.
35. Dladla, N. Re-Imagining Co-Operative Agency and Community Learning for An Inclusive Economy –Ilima Community Economies and a Design Logic. Centre for Education Policy Development (CEPD)-Wits-Umalusi Seminar on Rethinking ABET and Community Education, 17th April 2013. Available online: <https://studylib.net/doc/5544970/ilima-community-economies-and-a-design-logic> (accessed on 20 November 2019).
36. Mensah, C. Incentivising smallholder farmer livelihoods and constructing food security through home-grown school feeding: Evidence from Northern Ghana. *Braz. J. Int'l L.* **2018**, *15*, 491–504. [CrossRef]
37. Hazell, E. *Report on the Implementation Evaluation of the National School Nutrition Programme*; Pretoria JET Education Services: South Africa, 2016. Available online: <https://www.dpme.gov.za/news/Documents/NSNP%20Report%20Final%2016092016.pdf> (accessed on 16 December 2018).
38. Triches, R.M.; Schneider, S. Alimentacao Escolar e Agricultura Familiar: Reconnectando o Consumo a Producao. *Saude Soc.* **2010**, *19*, 933–945. [CrossRef]
39. Karriem, A. Grassroots Politics and Social Movement Mobilizations for Development in Brazil. In *Poverty and Inequality in Middle Income Countries: Policy Achievements, Political Obstacles*; Braathen, E., May, J., Wright, G., Eds.; Zed Books: London, UK, 2016.