

## SOCIO-ECONOMIC IMPACTS OF COMMERCIALISATION OF AGRICULTURE IN THE KINGDOM OF ESWATINI: A CASE OF SIPHOFANENI.

--Manuscript Draft--

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<b>Abstract:</b>	<p>The transformation of subsistence agriculture into market-oriented production as a way to increasing smallholder farmers' income and improving their welfare outcomes, and reducing rural poverty, has been in the policy spotlight for many countries in the global South, including the Kingdom of Eswatini. As a means to fast-track the achievement of the Sustainable Development Goals (SDG 1 &amp; 2), the country has embarked on agricultural commercialization projects as a development strategy aimed at improving rural livelihoods and welfare of the rural population. However, the impact of this development strategy remains unknown due to lack of scientific evidence on its effectiveness towards poverty alleviation and the betterment of rural people. It remains unclear and hence an issue of speculation whether or not rural farmers in the commercialization project area are better-off in welfare outcomes as a result of the agricultural commercialisation initiative. This study aims to contribute to the 'agricultural commercialization and poverty' debate by exploring the socio-economic impacts of agricultural commercialisation in rural Eswatini. A mixed methods approach (qualitative and quantitative methodologies) was adopted and data was collected from a sample of 145 households, selected from the Ngcamphalala, Mamba and Gamedze communities in Sphofaneni, through the simple random sampling technique. Among the key findings of the study was that the commercialisation project in Siphofaneni improved income levels, income sources, and improved employment opportunities in rural Siphofaneni. Access to food was also improved, as well as food consumption patterns (increased in number of meals consumed daily by households). The study concluded that agricultural commercialisation improved the welfare outcomes of rural households in Siphofaneni and reduced poverty levels for some households. The study has made a timely contribution and hence provided some illumination on the contribution and important role of the country's agricultural commercialization project with regards to the improvement of the living conditions of people in Eswatini. The existence of this knowledge gap could potentially lead to the duplication of a less effective initiative or grounding of an effective program in poverty alleviation in the country. The study recommended that the government of Eswatini expands the project into other food deficit and deprived rural areas of the country rather than confining it to the drought-prone areas of Siphofaneni.</p>

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4 **SOCIO-ECONOMIC IMPACTS OF COMMERCIALISATION OF AGRICULTURE**  
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6 **IN THE KINGDOM OF ESWATINI: A CASE OF SIPHOFANENI.**  
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4 **ABSTRACT**  
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6 *The transformation of subsistence agriculture into market-oriented production as a way to*  
7 *increasing smallholder farmers' income and improving their welfare outcomes, and reducing*  
8 *rural poverty, has been in the policy spotlight for many countries in the global South,*  
9 *including the Kingdom of Eswatini. As a means to fast-track the achievement of the*  
10 *Sustainable Development Goals (SDG 1 & 2), the country has embarked on agricultural*  
11 *commercialization projects as a development strategy aimed at improving rural livelihoods*  
12 *and welfare of the rural population. However, the impact of this development strategy remains*  
13 *unknown due to lack of scientific evidence on its effectiveness towards poverty alleviation and*  
14 *the betterment of rural people. It remains unclear and hence an issue of speculation whether*  
15 *or not rural farmers in the commercialization project area are better-off in welfare outcomes*  
16 *as a result of the agricultural commercialisation initiative. This study aims to contribute to*  
17 *the 'agricultural commercialization and poverty' debate by exploring the socio-economic*  
18 *impacts of agricultural commercialisation in rural Eswatini. A mixed methods approach*  
19 *(qualitative and quantitative methodologies) was adopted and data was collected from a*  
20 *sample of 145 households, selected from the Ngcamphalala, Mamba and Gamedze*  
21 *communities in Siphofaneni, through the simple random sampling technique. Among the key*  
22 *findings of the study was that the commercialisation project in Siphofaneni improved income*  
23 *levels, income sources, and improved employment opportunities in rural Siphofaneni. Access*  
24 *to food was also improved, as well as food consumption patterns (increased in number of*  
25 *meals consumed daily by households). The study concluded that agricultural*  
26 *commercialisation improved the welfare outcomes of rural households in Siphofaneni and*  
27 *reduced poverty levels for some households. The study has made a timely contribution and*  
28 *hence provided some illumination on the contribution and important role of the country's*  
29 *agricultural commercialization project with regards to the improvement of the living*  
30 *conditions of people in Eswatini. The existence of this knowledge gap could potentially lead*  
31 *to the duplication of a less effective initiative or grounding of an effective program in poverty*  
32 *alleviation in the country. The study recommended that the government of Eswatini expands*  
33 *the project into other food deficit and deprived rural areas of the country rather than*  
34 *confining it to the drought-prone areas of Siphofaneni.*  
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43 **Key words:** Agriculture, Commercialization, Poverty, Siphofaneni, Eswatini  
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4 **INTRODUCTION**  
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6 The Millennium Development Project’s Hunger Task Force concluded in 2005 that “the world  
7 could meet the MDG of halving hunger by 2015”, and that “development of agriculture is  
8 critical to that goal” (World Bank, 2007:6a). Agriculture is still the largest sector in the  
9 economies of both developed and developing countries since it is the source of most economic  
10 growth, employment and the largest contributor to export revenues and food security. Rural  
11 areas are home to majority of people in Africa and small scale agriculture is the mainstay of  
12 the rural economy, serving mainly as a source of food and income (Govere et al., 1999;  
13 Welteji, 2018; Yeboah et al., 2020). Smallholder agriculture, which is the predominant source  
14 of livelihoods in Africa, and in Eswatini, in particular has proven to be as efficient as larger  
15 farms when farmers have received similar support services and inputs such as seed, fertilizer,  
16 and credit (IFPRI, 2002b cited in World Bank, 2007b).  
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28 Many countries and international development agencies give due concern to intensification  
29 and commercialization of smallholder agriculture as a means of achieving poverty reduction;  
30 and thus have reflected it in their official policies and is root less so even for the Kingdom of  
31 Eswatini (Leavy & Poulton, 2007:2). In Eswatini, for instance, there have been attempts to  
32 integrate the farmers into the market, realising the high levels of poverty in the rural areas.  
33 The emphasis has been on improving productivity and reducing dependence on subsistence  
34 agriculture. The government has prioritized commercialization of agriculture, through policy  
35 and rural development programmes. According to Samuel and Sharp (2007:67), the final  
36 intention of going commercial in agriculture is not just making a shift from subsistence to  
37 market oriented farming, but rather it is to achieve better welfare outcomes for the  
38 smallholders.  
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49 The Government of Eswatini identified the development of smallholder agriculture (from  
50 subsistence farming to commercialization) and intensification of farming as the main element  
51 in its policy to alleviate poverty. Among the most vulnerable to poverty in Eswatini are the  
52 smallholder farmers in the Lower Usuthu Basin. The unfavourable climatic conditions in the  
53 area have triggered and heightened food insecurity levels in the region. A SwaziVAC  
54 Assessment conducted in July 2017 estimated the total number of food insecure people in  
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4 rural Eswatini to be over 137,380, with Lubombo region recording the highest number of the  
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6 food insecure people. It is currently estimated that over 183, 000 people (16% of the  
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8 population) in the country is food insecure and in IPC Phase 3 (Crisis) or worse as of June  
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10 2022, with 14,000 in IPC Phase 4 (Emergency), and the Lowveld region remains the hardest  
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12 hit (KEVAC, 2022).  
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15 The lack of sufficient rainfall is the main contributing factor (Sacolo and Mkhandi, 2021) and,  
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17 as such, the Government of Eswatini established the Lower Usuthu Smallholder Irrigation  
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19 Project (LUSIP). The project, subsistence farms (in which food crops were grown) were  
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21 transformed into sugar cane plantations, resulting to several sugar cane farms. The objective  
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23 of this commercialisation project is to reduce poverty and improve the standard of living of  
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25 the population in the Lower Usuthu Basin (Vasudeva, 2006). LUSIP works closely with the  
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27 country's main sugar mill, ILLOVO Sugar in Big Bend, where the sugar cane from the  
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29 smallholder farmers is sold.  
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32 The main objective of the LUSIP project is to reduce poverty and to improve the standard of  
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34 living of the smallholder farmers in the Lower Usuthu Basin by commercialization and  
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36 intensification of irrigated agriculture. Among the expected outcomes from the agricultural  
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38 commercialisation project include improvement in food security, reduction in unemployment,  
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40 development of small businesses by local people and improvement in household income and  
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42 standard of living (Radchenko and Corral, 2018; Ogutu et al., 2020). While the project was  
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44 implemented and currently running, what remains unknown is whether or not the agricultural  
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46 commercialisation in Siphofaneni helped to improve the standard of living of the LUSIP  
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48 farmers in the area. A claim from the former Minister of Parliament, Mr Gundvwane  
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50 Gamedze, was that this commercialisation project has significantly raised standard of living  
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52 in Siphofaneni (Eswatini.TV news, 06/09/18). There is a need for a study to determine if the  
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54 commercialisation of agriculture in Eswatini helps to improve the living condition of the  
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56 Swazi people.  
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4 The problem to which the study sought to respond, therefore, is that the Lubombo region is  
5 known for its high incidence of poverty and food insecurity driven by, among other things,  
6 droughts, unemployment and to a smaller extent, HIV and AIDS (Dlamini, 2018). The over-  
7 rainfall on rain-fed agriculture in Siphofaneni has resulted in a steep decline in crop yield as  
8 a result of drought (Mamba, 2019). Government's response to this development challenge, as  
9 already noted, was the introduction of agriculture commercialisation and the establishment of  
10 LUSIP aimed to improve the living conditions of Siphofaneni farmers. The agriculture  
11 commercialisation project was piloted at Siphofaneni for expansion to other drought-prone  
12 areas in the Kingdom of Eswatini. This agriculture commercialization is assumed to have  
13 improved the living conditions of the people in Siphofaneni, however, this claim lacks  
14 supporting evidence. It remains a matter of speculation that the commercialisation project has  
15 improved the standard of living of farming households in Siphofaneni.  
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28 There is, therefore, lack of sufficient information on the effectiveness of agriculture  
29 commercialization to alleviate poverty, unemployment, improve income and reduce food  
30 insecurity in Eswatini. Lack of this information limits our understanding of the role of  
31 commercialization in improving the living conditions of people in Eswatini. This may lead to  
32 a duplication of a less effective initiative or grounding of an effective program in poverty  
33 alleviation. This study, then, seeks to fill up this existing information gap by exploring the  
34 socio-economic impacts of agricultural commercialisation in Eswatini using Siphofaneni as a  
35 case study site. This will not only help to give timely feedback to the implementing  
36 organisation (LUSIP) on the effectiveness of the commercialisation project, but will also  
37 provide good feedback to the government on whether to upscale and/or replicate this project  
38 to other drought-prone areas in the Kingdom.  
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### 50 **Commercialisation of agriculture and its impacts in the global South**

51 Agricultural commercialization is a process involving transformation of subsistence  
52 agriculture to market oriented production which tends to impacts income, consumption and  
53 nutritional setup of the farm households (Braun, 1995). There are two conflicting views  
54 regarding the effects of commercialization of subsistence agriculture. The argument is that  
55 commercialization raises income, increases food availability, and improves the health and  
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4 nutritional status of rural households (Tabe et al., 2022; Dzanku, 2022; Isinika et al., 2022),  
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6 and the critics claim that shifting resources from subsistence to commercial crops reduces  
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8 food security and increases women's work burden, thereby affecting the health and nutrition  
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10 of farm families, especially that of women and children (Fischer and Qaim, 2012; Bolarinwa,  
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12 2020).  
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15 A study by Sharma (1999), which investigated the effects of farmers' participation in a  
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17 USAID-sponsored vegetables, fruits, and cash crops (VFC) programme on the nutritional  
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19 status of children in western Nepal, found that the agricultural commercialisation programme  
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21 had a positive impact on the nutritional status of children, only in terms of standardized  
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23 weight-for-age and weight-for-height measures. Though the programme had positive impacts  
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25 on the nutritional status of the children, there are other contributing factors to household  
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27 nutrition besides agricultural commercialisation. Factors such as the household demographics,  
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29 the nutrition and demographics of mothers, individual child demographics, and a complex set  
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31 of other unknown factors play a greater role in children's nutritional performance than  
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33 household economic strategies. The study recommended that these factors should be carefully  
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35 considered in the design of any programme to improve health and nutrition.  
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37 Commercialisation of agriculture is more than producing surplus output to the market and  
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39 thus includes household's decision behaviour on product choice when shifting from  
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41 traditional crop to cash crop (Afework and Endrias, 2016). The underlying assumption behind  
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43 this shift is that markets allow households to increase their incomes by producing those  
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45 commodities that generate the highest returns, then use the cash to buy household  
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47 consumption items (Timmer, 1997). Studies indicate that smallholder commercialization has  
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49 a significant effect on the income of households. In his study conducted in East Africa,  
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51 Tirkaso (2013) observed that commercialization has direct effect on household income, which  
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53 possibly leads to an increase in food and non-food expenditure. The author argues that better  
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55 access to food depends on income growth, particularly in most African societies where  
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57 agriculture is the main source of income. What Tirkaso was implying is that, improving the  
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59 degree of market participation can have a big impact on access to food.  
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4 Tirkaso's research was assessing the potential role of commercialization for smallholder  
5 agricultural productivity and access to food in Ethiopian farm households. Econometric model  
6 based on stochastic frontier analysis was used as the main technique in addressing the author's  
7 predetermined research question. A 2009 Ethiopian rural household survey compiled by  
8 International Food Policy Research Institute was used. His findings showed that variables  
9 related to factors such as the educational level, access to radio, access to cell phone and level  
10 of commercialization are positively linked. Tirkaso (2013) suggested that policy makers and  
11 international donors should prioritize their effort on increasing smallholder commercial  
12 agriculture as one of the main instrument in improving agricultural productivity and food  
13 security. From the study, Tirkiso suggested that since commercialization of agriculture is  
14 supposed to bring a large impact on increasing farmer's income level which can be used as a  
15 source of fund for food purchase, exogenous factors such as price changes and climate change  
16 may reduce the consumption, which is why they must be considered. Using econometric  
17 modelling the net effect of commercialization on food expenditure with respect to variation  
18 in market price and household income level can be measured. Tirkiso's study could not  
19 differentiate this interaction between food expenditure, market price variation and household  
20 income, but rather He put it as a future potential study.  
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37 Transforming the subsistence-oriented production system into a market-oriented production  
38 system as a way to increasing the smallholder farmer's income and thus its welfare outcomes,  
39 and reducing rural poverty, has been in the policy spotlight of many developing countries for  
40 some time now. Abera (2009) in his study in Ethiopia found that the level of food and cash  
41 crop production (in value terms), gender, technology use (irrigation, improved seeds), use of  
42 fertilizer and the number of oxen owned per household are important factors determining the  
43 level of commercialization of smallholder farms. The study concluded that farm households  
44 with high degree of commercialization enjoyed better welfare outcomes (represented by  
45 consumption of basic non-grain consumables and expenditure on education, shoes and  
46 clothes, durables and housing). Therefore, these findings indicate that farmers with high level  
47 of commercialization are better-off in welfare outcomes.  
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4 In the like manner, Babu and Sanyal (2014) who investigated the impacts that  
5 commercialization of agriculture has on household food availability in Malawi found that  
6 commercialization of agriculture can produce a considerable real income, thus enhancing a  
7 household's capacity to acquire food. Babu and Sanyal, however, observed that income and  
8 food consumption relationship is not so direct, it is influenced by many other factors such as  
9 who controls the income, the proportion of money spent on food and non- food items and  
10 whether the increased income results in higher intake of calories. Furthermore, on the negative  
11 side, when the household shifts from the traditional crop production to cash crop production,  
12 it allocates majority of its land to the commercialization process thus in the absence of non-  
13 farm income, the household's food supply maybe affected negatively in the short and medium  
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### 26 **Commercialization of Agriculture in Eswatini**

27 The main objective of smallholder sugarcane growing is to reduce poverty and increase food  
28 security through increased household income as a result of sugarcane production. Dlamini  
29 and Masuku (2012) investigated the productivity of smallholder sugarcane farmers'  
30 associations under Komati Downstream Development Programme (KDDP) and the factors  
31 affecting sugarcane productivity. The study used data from 2004 to 2011 production seasons  
32 for 15 smallholder sugarcane farmers' associations under KDDP. Production records for the  
33 farmers' associations were obtained from the Swaziland Water and Enterprise Development.  
34 The Authors suggested that Farmers should take note to use labour according to the industry  
35 standards in order to get good yields. Good crop husbandry practices like timely weeding,  
36 fertilization, irrigation should be adopted to produce a good crop which will enhance  
37 productivity. Based on the results and recommendations made by the authors this study  
38 reveals an absence or lack thereof of good cash crop husbandry and technical services in order  
39 to improve productivity. This raises the question of whether or not the commercialization of  
40 agriculture is somehow expensive for some of the smallholder farmers than the subsistence  
41 farming they had practiced before, another question raised is that does commercialisation of  
42 agriculture improve the standards of living of these rural households.  
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4 It can be rightly concluded, therefore, that commercialisation of agriculture is a global issue.  
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6 Both the global North and global South countries are practicing commercial agriculture, but  
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8 the reasons for engaging in commercial agriculture are not the same. For some countries in  
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10 the global South, commercialisation of agriculture is for nutritional and financial purposes.  
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12 Whist in some parts of Africa agriculture is commercialised in the attempt to reduce poverty.  
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14 What is known about commercialisation of agriculture is that, in one way or the other, it  
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16 improves the livelihood of households in terms of income, consumption, access to food and  
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18 employment, and employment. Turkiso (2013) mentioned that there are exogenous factors  
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20 that may affect households' access to food that must be considered besides commercial  
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22 agriculture. This goes to say that whether or not commercialisation of agriculture has  
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24 improved the lives of households, other contributing factors must be considered before  
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26 drawing conclusion. For example, when assessing income levels of households, other jobs  
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28 that also bring income into the households, besides commercial agriculture, must be  
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30 considered.

## 31 **MATERIAL AND METHODS**

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33 The study was conducted in Siphofaneni in the Lubombo region and used Ngcamphalala,  
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35 Gamedze and Mamba chiefdoms as case study sites (Figure 1). These chiefdoms were selected  
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37 on the basis of being the highly populated and highly commercialised chiefdoms out of the  
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39 six chiefdoms under the project (see Table 1 below). The study drew from both the positivistic  
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41 and interpretivistic traditions and employed the mixed method approach (combined the  
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43 quantitative and qualitative approaches). While the qualitative approach provided insight to  
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45 the depth of the research problem, quantitative approach helped to quantify the issues under  
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47 investigation. The variables considered in this study included, food accessibility, income and  
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49 employment opportunities among others. The target population were the heads of households  
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51 or breadwinners under the commercialization program in the chiefdoms of Siphofaneni.

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53 Multi-stage sampling was used. Firstly, it was purposive sampling of Ngcamphalala,  
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55 Gamedze and Mamba Chiefdoms, because these three are the highly populated and  
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57 commercialised out of the six chiefdoms under the project as shown in Table 1 below. The  
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59 second step was random sampling of 145 households from the selected chiefdoms:  
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61 Ngcamphalala (40), Gamedze (70) and Mamba (35). To determine the sample size, a formula

for calculating a sample for proportion was used:  $n=N/(1+N(e)^2)$  (Israel, 1992). Where (N) is the size of the population from each chiefdom, (e) is the level of precision and (n) is the sample size. The confidence level as set at 95%.

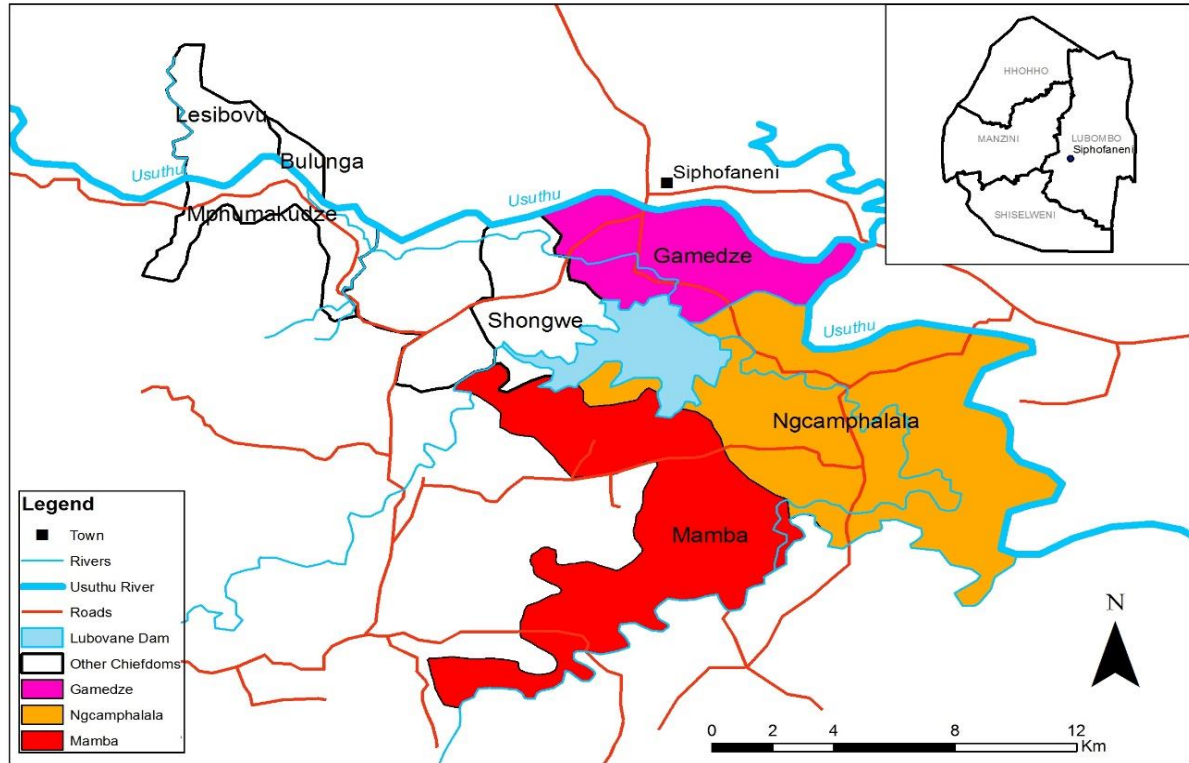


Figure 1: Location of surveyed areas (Ngcamphala, Gamedze and Mamba) in Siphofaneni

Table 1: The Population size and the number of households under the LUSIP project areas and the three sampled chiefdoms

CHIEFDOM	POPULATION SIZE	NUMBER OF HOUSEHOLDS
Lesibovu	195	136
Mphumakudze	1347	183
Shongwe	1541	235
Ngcamphalala	3692	569
Gamedze	6568	986
Mamba	3505	491
<b>Total</b>		<b>2046</b>

Source: SWADE, 2018

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4 Data was collected from the selected chiefdoms using a three steep procedure involving a  
5 questionnaire survey, in-depth interviews, and key informant interviews. The targeted  
6 population were the household heads involved in the commercialization project. Information  
7 was also sought from the LUSIP project officials. The researcher also engaged the observation  
8 method approach to capture additional information about the level of commercialization and  
9 its effects in the study areas.  
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### 15 16 17 **Ethical considerations**

18 Since the study involved human subjects, all necessary precautions were taken into  
19 consideration to ensure adherence to all ethical protocols that guide academic investigations.  
20 The researchers requested for permission to undertake the research in the study area, after  
21 being granted ethical clearance by the University of Eswatini. The intention of the study was  
22 clearly explained to all participants, and the researchers ensured that all potential participants  
23 are also fully informed about the purpose of the research, its desired outcomes and what was  
24 expected of them before their input was solicited. An information letter and consent form  
25 were given to participants in which they appended their signatures (in agreement to  
26 participate) after reading the contents. Participation was strictly voluntary and participants  
27 were informed of their right to refuse participation in the survey and/or to withdraw in any  
28 stage of the interview and data collection process. The right to privacy was also observed  
29 throughout the research process to ensure that the rights of participants are respected as  
30 Creswell (2003) advises.  
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## 44 **RESULTS AND DISCUSSION**

### 45 46 **Effects of commercialisation of agriculture on occupation and employment**

47 One of the objectives of the study was to determine the impact of the agriculture  
48 commercialization project on the lives and wellbeing of smallholder farmers in Siphofaneni.  
49 It was important, therefore, to determine any changes in occupation following the introduction  
50 of the agriculture commercialization project in the study area. The results indicate that before  
51 the introduction of the commercialisation project, a larger proportion (48.3%) of the farmers  
52 were working on off-farm related employment, with very few (11.7 %) who were employed  
53 on-farm and those who were self-employed. Following the introduction of the agriculture  
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commercialization project, an increase (29.7%) (from 11.7% to 41.4%) in the number of farmers who were employed on on-farm related jobs was observed, with a corresponding decline in the number of farmers who were employed on off-farm related jobs (from 48.3% to 20%) (Figure 2).

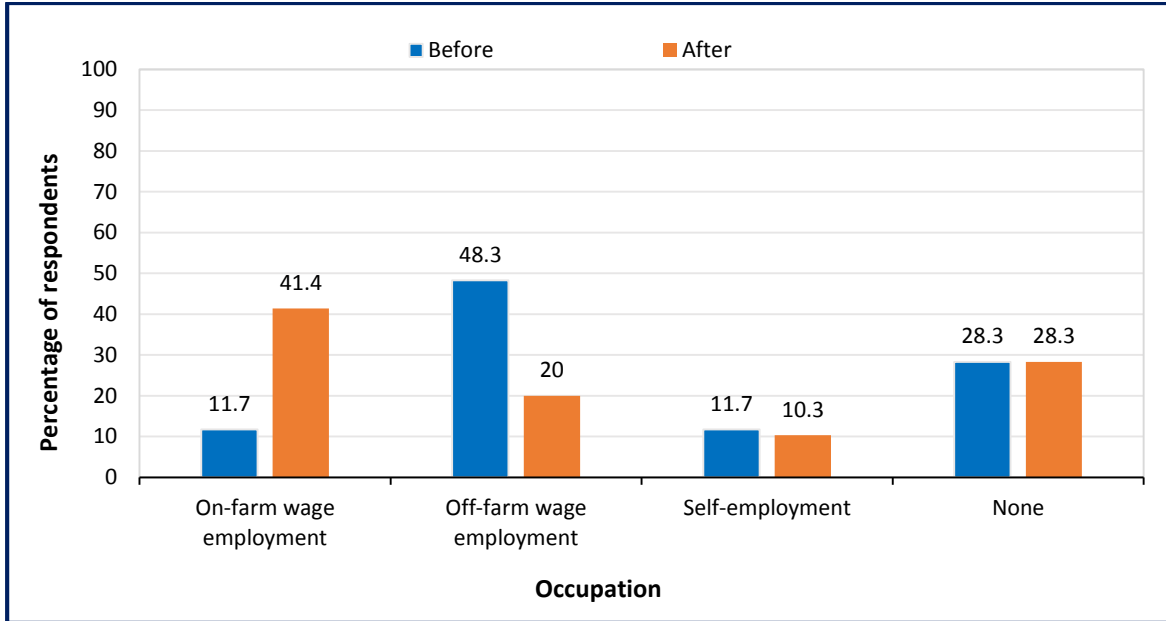


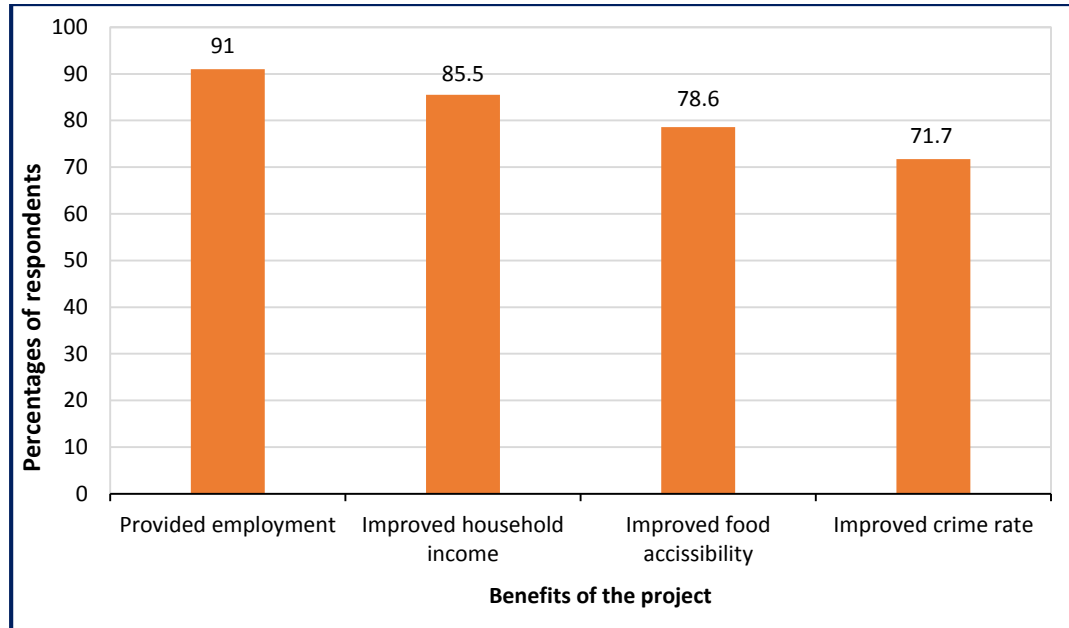
Figure 2. Occupations of farmer before and after the commercialisation project in the communities.

This was also supported by one respondent in an interview who had this to say:

*...we thank the government for this project. It has really helped us in this area, especially in reducing the high level of unemployment in this place. Now our children are employed in the farm (sugarcane plantation) and we are able to survive. The situation is much better and we want to appreciate government and the partners who made this possible. Life is much better now. (Male farmer – kaNgcamphalala)*

The extract above reveals the gratitude of the local farmers in Siphofaneni with regards to employment provision, owing to the introduction of the commercialization project in the area. The project, according to respondents (and results in general), had resulted in job creation and increase in employment opportunities for the local people. These findings support Moshia et al. (2022) and Binswanger and Braun (1991) findings who also noted that commercialization of agriculture increase employment opportunities.

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4 With the introduction of cash-crop production, there increased demand for labour in the farms.  
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6 This increased demand for labour created on-farm employment for household members. This  
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8 was further confirmed when respondents were responding to a question where they were  
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10 asked to state the benefits that came with the project in the area where majority (91 %) noted  
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12 that the project provided them with employment, in addition to improving their household  
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14 income (85.5%) and improving their access to food (78.6%), among other benefits (Figure 3).  
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37 *Figure 3. Benefits of the commercialisation project*

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40 In relation to employment opportunities and occupation, it can be concluded that the  
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42 agriculture commercialization project provided jobs for Siphofaneni residents who were now  
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44 mainly employed in agriculture-related jobs as opposed to off-farm employment. The  
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46 findings, therefore, show that the commercialization project increased chances of  
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48 employment. Before the commercialisation project, the most common job occupation was off-  
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50 farm wage employment as shown by the results. Relying on agriculture was mostly for those  
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52 who had retired. This was not because people did not own farms, but rather the farms did not  
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54 produce enough for the market, which necessitated other means of survival, and as such, most  
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56 people resorted to off-farm livelihood strategies. Very few people worked in the farms. The  
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58 results show how farming for money was not popular before the commercialisation project  
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60 due to loss of crop to extreme heat and lack of adequate rainfall. Respondents needed to secure  
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62 jobs that did not rely on rainfall, but jobs that would guarantee pay cheques when the month  
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4 ended. As a results, it was gathered that most of the respondents migrated to ‘seek refuge’ in  
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6 the factories in Matsapha.  
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10 Following the establishment of the project, however, most people from Siphofaneni  
11 abandoned the low paying jobs in Matsapha and retuned home where they got employed in  
12 the sugarcane farms. Majority of respondents mentioned that the project provided  
13 employment opportunities, not just for the household heads, but also other household  
14 members. Farmers formed farmer companies where they were entitled to shares. These  
15 companies employed many people in the communities to work as farm labourers, farm clerks  
16 and farm supervisors, among others. These job occupations accommodated every person’s  
17 educational attainments, hence many people were employed. The increased employment rate  
18 also decreased the crime rate in the communities since people were employed and could afford  
19 a minimum living standard, and better livelihood. These findings mirror those by Ken (2017)  
20 in a similar study on the impacts of commercialisation of cassava in Cambodia where he found  
21 that the commercialisation of cassava expanded employment opportunities because the  
22 demand for labour increased after commercialisation and labour was needed for farm work  
23 such as weeding and irrigation.  
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### 36 **Agriculture commercialization and changes in household income**

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38 The introduction of commercial agriculture brought about some changes to the main source  
39 of income for most farmers in the study area. Before the commercialization project, the main  
40 source of income was salary (wage off-farm), and a larger proportion (44.8 %) was receiving  
41 salary (wage off-farm) compared to fewer (20.7 %) who were in the same salary (wage off-  
42 farm) after the commercialisation project. Majority (39.3 %) were receiving salary (wage on-  
43 farm) after the commercialisation project. The results also indicate that after the  
44 commercialisation project only a few (11 %) were unemployed and depended solely on the  
45 project shares (Figure 4). The respondents were receiving project shares after harvest, in  
46 addition to the wage received. These shares were the main point and intent of the  
47 commercialisation project, which were assumed to change or improve the income of the  
48 communities, and true to this assumption, the income of the participating farmers was  
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improved, which also alludes to the effectiveness of the agriculture commercialization project in improving the wellbeing of the people of Siphofaneni.

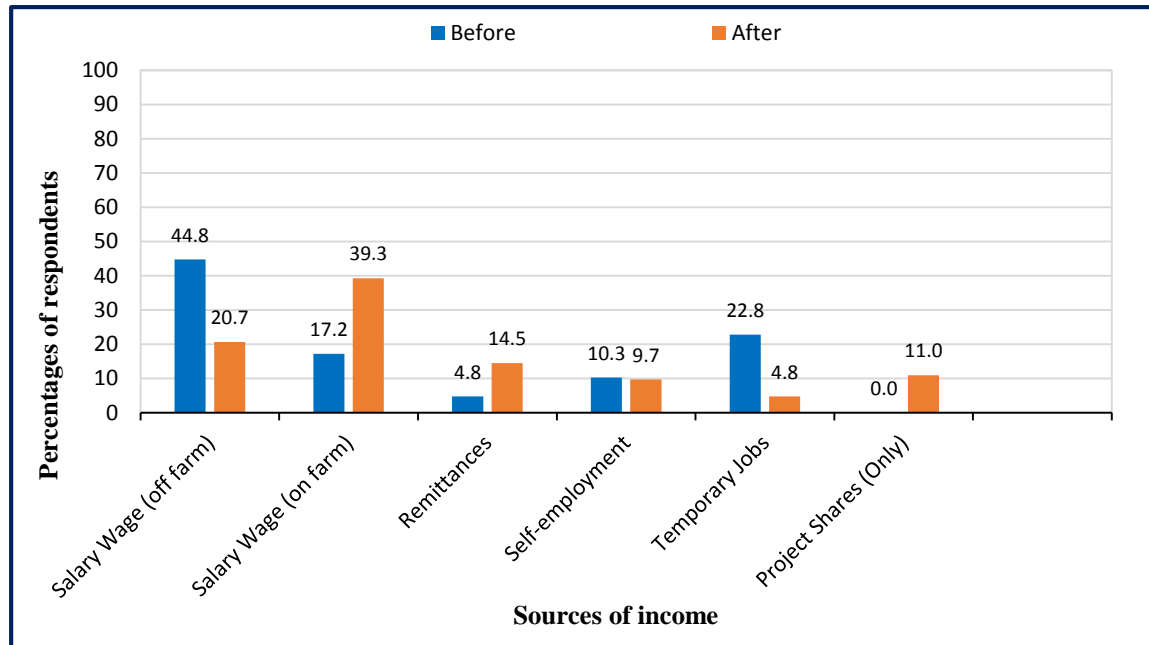


Figure 4: Sources of income before and after the commercialisation project in the communities.

Changes in income levels were also observed in the study area and this was captured when comparing household income levels before and after the commercialisation project. Before the project, majority (49.3 %) received an income less than E1000, and after the project, a drastic decrease to 1.4 of respondents with a monthly income of less than a thousand was recorded (Figure 5). The results also reveal that after the project, majority (23.6%) of the respondents received a monthly income between the ranges of E1000 – E 1500. A reasonable proportion (22.1%) received an income between E1600 – E 2000 with a reasonable number (21.4%) receiving between E2100 – E2500 which shows a drastic increase from the 2.9 percent received before the commercialization project. There was also a substantial increase (15%) of respondents receiving a monthly income of between E 2600 – E3000. There was also an increase (from 0.7 % to 4.3 %) to those earning E5000 and above. This shows the impact of the commercialization project on improving the income of the farmers in Siphofaneni. .



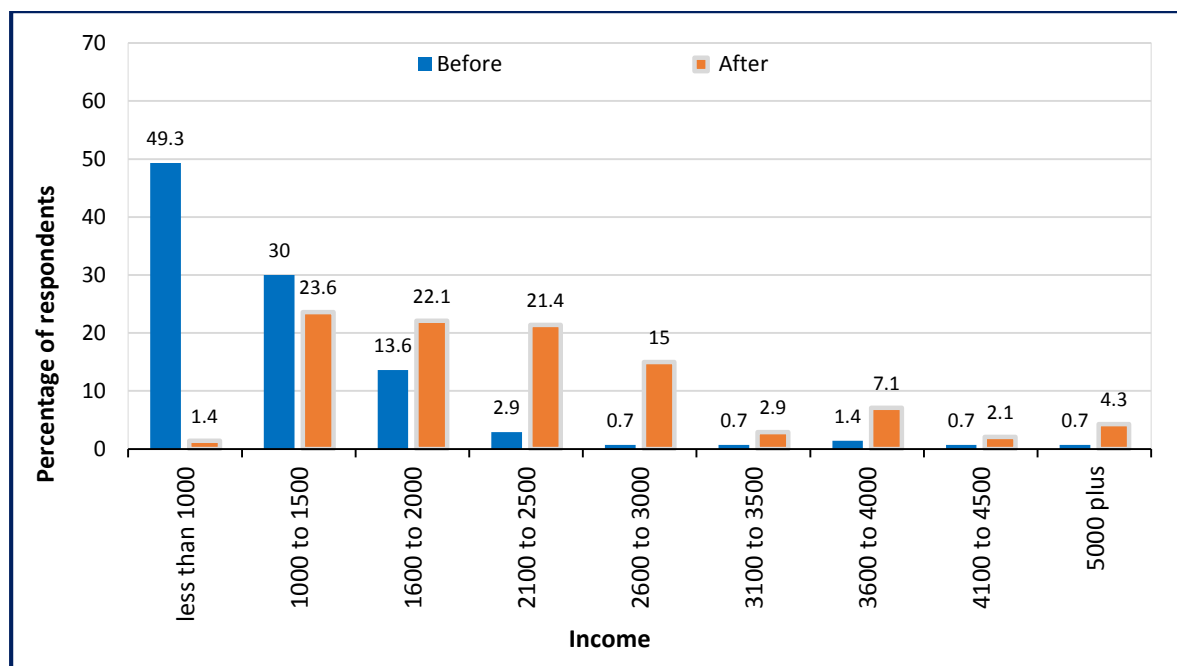


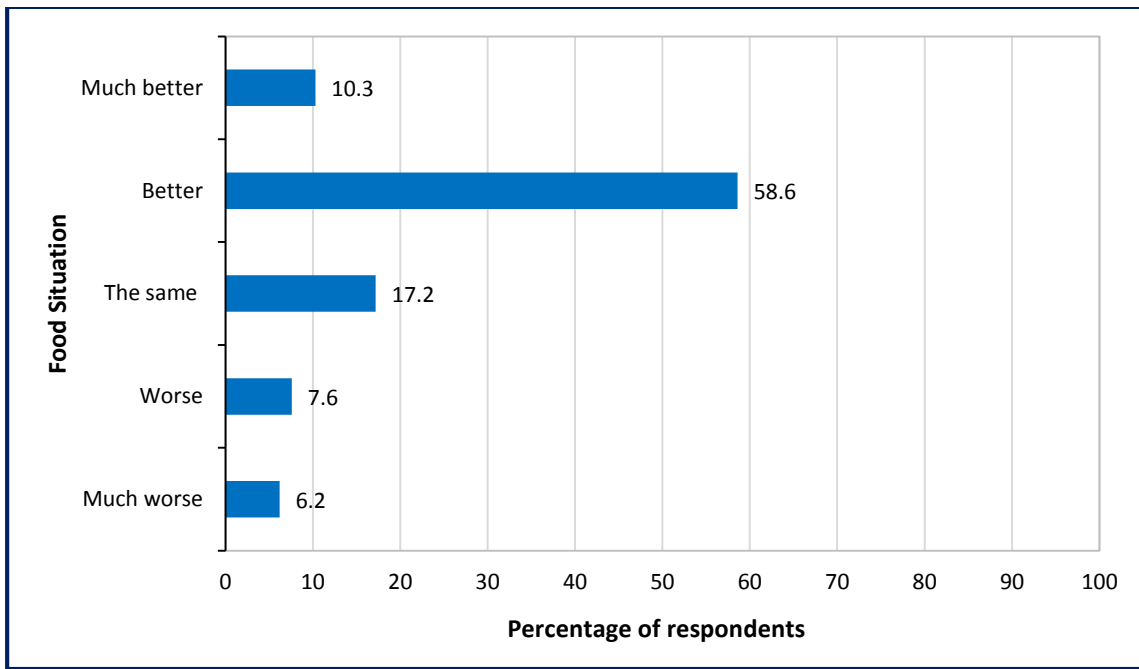
Figure 5: Household income levels before and after the commercialisation project.

The results, as already noted above, indicate that before the commercialisation project, most people depended on temporary jobs and salary employment in the industries, which also had an effect on their income levels. During the investigation, the study found that the highest educational attainment for the respondents was secondary high school, which was not surprising that most of the residents in Siphofaneni could only be employed in low-paying jobs. Before the project, majority of the beneficiaries depended on a monthly salary of less than E1000.00, but after the commercialisation project, incomes improved and majority received incomes between E1000.00 to E2500.00, others earned above E3000.00. The increased income contributed to the improvement of household welfare, which included the affordability to pay school fees, buying household assets and even open businesses. These findings are similar to those obtained by Turkiso (2013) in a study conducted in Eastern Africa who also observed that commercialization has direct positive effect on household's income level which possibly leads to an increase in food and non-food expenditure.

### **Impacts of commercialisation on food accessibility, consumption and sufficiency**

It was necessary to determine the effects of agriculture commercialization on access to food, food sufficiency and farmers' consumption patterns. The results indicate that majority (58.6

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4 %) of the respondents noted that their food situation was better after following the  
5 establishment of the commercialization project, with a few but significant proportion (10.3  
6 %) who reported a much better condition (Figure 6). Some respondents (17.2 %) noted that  
7 their food situation is the same, (has neither improved nor worsened), while others (7.6 %)  
8 reported that their situation is worse and some (6.2 %) reported their food situation to be much  
9 worse. Most of these farmers who are not pleased with the project are those that could afford  
10 a decent life from the subsistence nature of agriculture practised in the community before the  
11 project was implemented. They reported that the loss of their subsistence farming land to the  
12 project was a major downfall for them and it is difficult to wait for shares which will only be  
13 received after harvest.  
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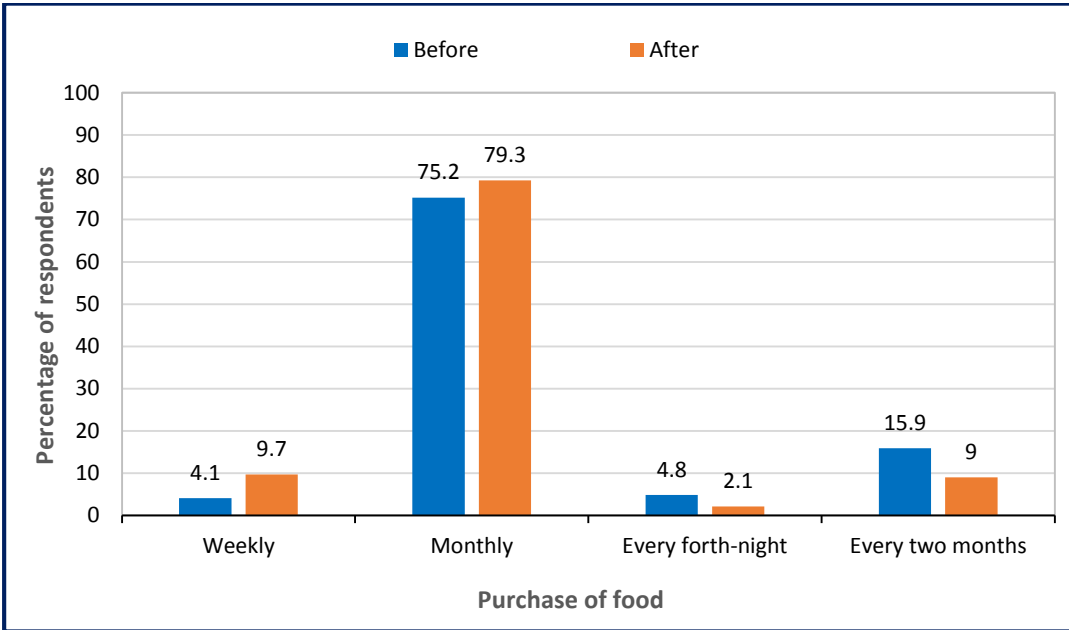


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45 *Figure 6: Household food situation after the commercialisation project.*

#### 46 47 48 **Food accessibility**

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50 The respondents were asked to state how often they used to buy food groceries before the  
51 project and how often do they buy it after the commercialisation project. Most households  
52 showed an improvement in food availability since the commercialisation project was  
53 introduced. For instance, an improvement in food purchases was noticeable in the area. There  
54 is an increase in respondents who bought groceries weekly and 9.7 percent were found to buy  
55 their food weekly, with a decline in the proportion of households who bought their food every  
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4 two months (9 %) (Figure 7). However, some households still reported an inadequate food  
5 supply because most of them could afford monthly groceries and see no difference after the  
6 project; they still purchase their food groceries on monthly bases.  
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31 *Figure 7: Household food purchase before and after the commercialisation project.*

### 32 33 34 **Consumption**

35 Respondents were also asked to state any changes in their food consumption since they  
36 adopted agriculture commercialisation. Improved food consumption meant better quality food  
37 or higher food intake. A decrease (from 9.7 to 1.4%) in the proportion of the number of  
38 respondents who consume one meal per day after the projects was recorded (Figure 8). In  
39 contrast, an increase in the proportion of households who consume 3 meals and more per day  
40 was noticeable (57.9 vs 65.7% and 2.8 vs 11.2%), respectively (Figure 8).  
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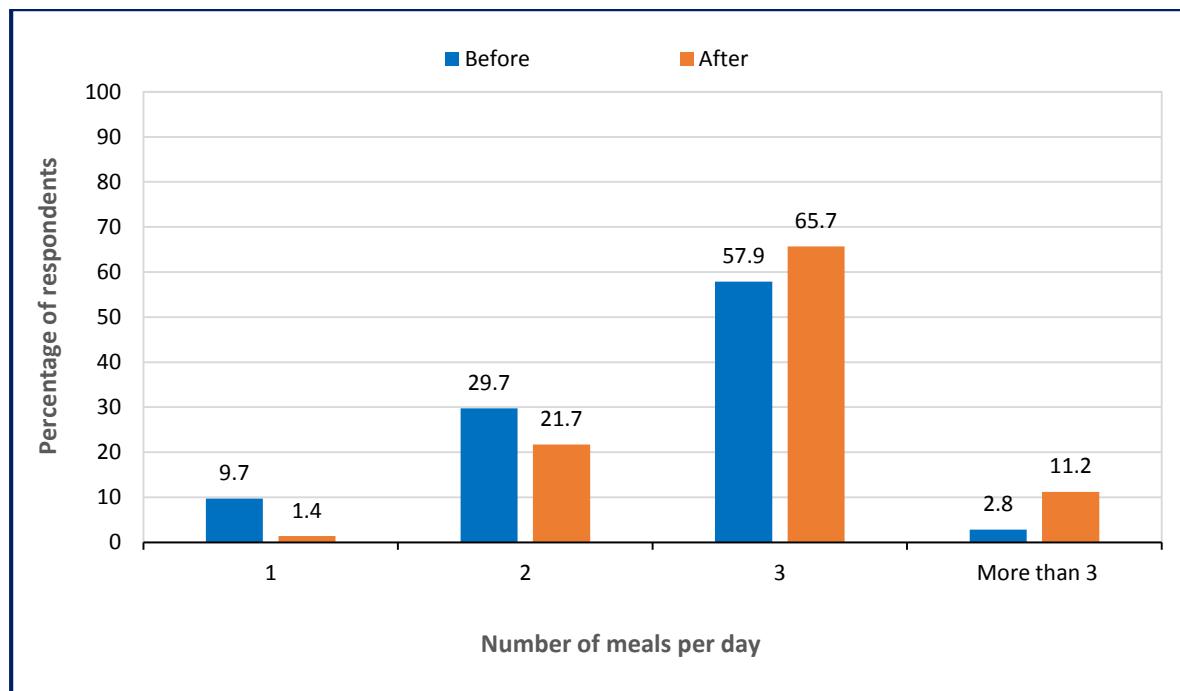


Figure 8: Number of meals consumed in a household daily, before and after the commercialisation project.

The decline (from 9.7% to 1.4%) in the proportion of farmers surviving on one meal per day is indicative of the positive impact of the commercialization project on access to food, particularly with regards to food utilization in the project area. Although some respondents could still afford 3 meals before the project, it was revealed that most of them survived on one type of food throughout the day, which compromised their dietary diversity and food intake. This was confirmed in an interview where one respondent had this to say:

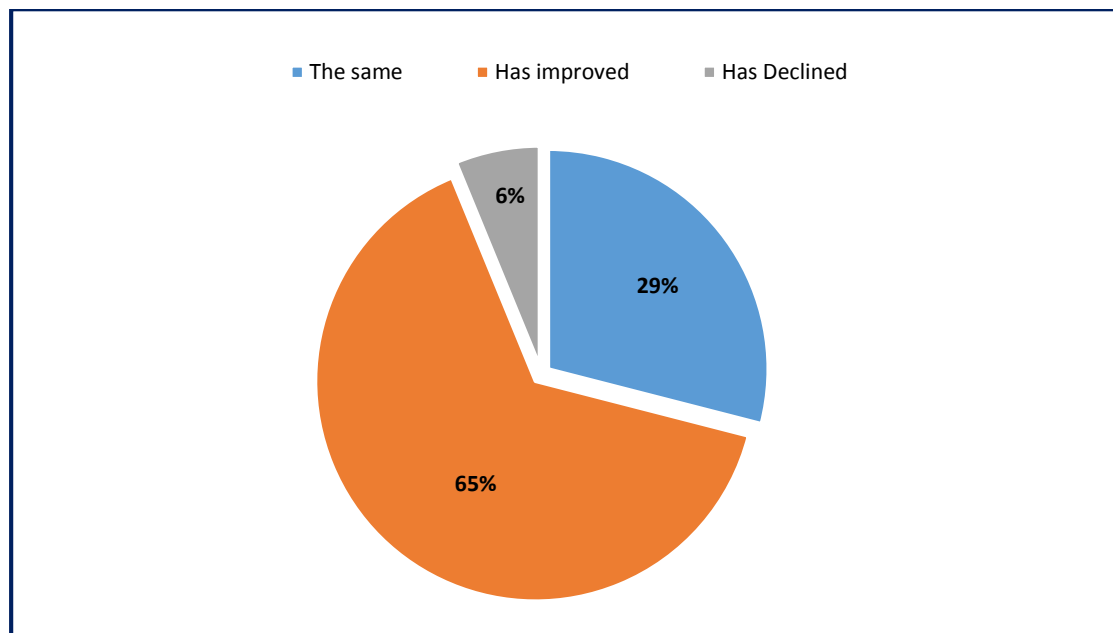
*Before the project, some people in the community ate once a day, but some of us could sometimes eat 3 times a day but the meal was always sour milk (emasi). I never want to eat sour milk ever again because I ate too much of it before the project, even when I did not like it. But I had no option, but to eat what was available (Female farmer – kaNgcamphalala).*

The extract above depict the hopeless situation some of the farmers in Siphofaneni had to endure due to limited access to different food variety. In addition to eating fewer meals per day, some farmers had to rely on one type of food which they were ‘forced’ to eat due to limited food variety. These findings collaborates several scholars’ findings such as Tevera et al. (2012), Tawodzera (2012); KEVAC (2022) and Mabuza and Mamba (2022) who also note

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4 that due to limited access to food and food varieties, households find themselves having had  
5 to rely on fewer meals per day and to eat less preferred food.  
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10 Factors contributing to consumption of few meals per day may also include the household  
11 size and whether or not the head of the household is the only income provider or not. For,  
12 instance a larger household size of 5 – 15 people may have difficulty in consuming more than  
13 3 meals per day.  
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19 Respondents were asked to rate food sufficiency of their household after the project,  
20 considering the factors of consumption, accessibility and household size. Figure 9 indicates  
21 that majority (65 %) of the participants rated food sufficiency to have improved, with only 29  
22 percent who reported that the food situation has not changed (same) and very few (6 %)  
23 reported food Sufficiency to have declined after commercialisation better after the  
24 commercialisation project. This, again attests to the many benefits of the commercialization  
25 project and its ability to change the lives of the rural population in Siphofaneni.  
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54 *Figure 9: Food sufficiency, before and after the commercialisation project.*  
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56 The commercialisation project also improved access to food for most households compared  
57 to before the project. Since the third objective of the study was to assess food accessibility  
58 and sufficiency after the project, this assessment was done by measuring the (i) standard  
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4 number of meals consumed in a day, (ii) Frequency of purchasing food groceries (ii) variety  
5 and rating the entire food situation in the household (improvements).  
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9 The results indicated that the project had an impact on means of accessing food from the  
10 market or shops. After the project, the standard of three meals was common since most  
11 households could now afford to buy sufficient food. Access to food improved much since,  
12 households could now afford even to buy their groceries weekly and monthly. After the  
13 project, majority rated their household food sufficiency as better or much better. Households  
14 with more than one income provider were more food secure, than the households with a sole  
15 income provider. The findings were similar to those by Babu and Sanyal (2014), who also  
16 found that commercialisation of agriculture, improves food accessibility. The project  
17 impacted positively mostly on household income which later improved food access.  
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27 The agriculture commercialization project, as already illustrated above, proved to have  
28 positively impacted on the lives of the people at Siphofaneni and has, to no lesser extent,  
29 improved their living conditions and livelihoods of the community. Responding to a general  
30 question on whether the project has contributed to their welfare, majority of the respondents  
31 in all three selected chiefdoms noted that indeed the commercialization project has improved  
32 their lives and living conditions in the area, although this varied by community (Figure 10).  
33 For instance, all (100%) of the interviewed farmers in kaMamba noted that their lives had  
34 been improved due to the introduction of the project. In kaNgcamphalala and kaGamedze,  
35 over 80% of the farmers indicated that their lives had been improved as well, with very few  
36 (less than 12%) in both chiefdoms who did not see the benefit of the project (Figure 10). This,  
37 therefore, attests to the important of the agriculture commercialization project to the welfare  
38 of farming households in Siphofaneni and its role in improving their livelihoods and welfare  
39 in the drought prone areas on Siphofaneni.  
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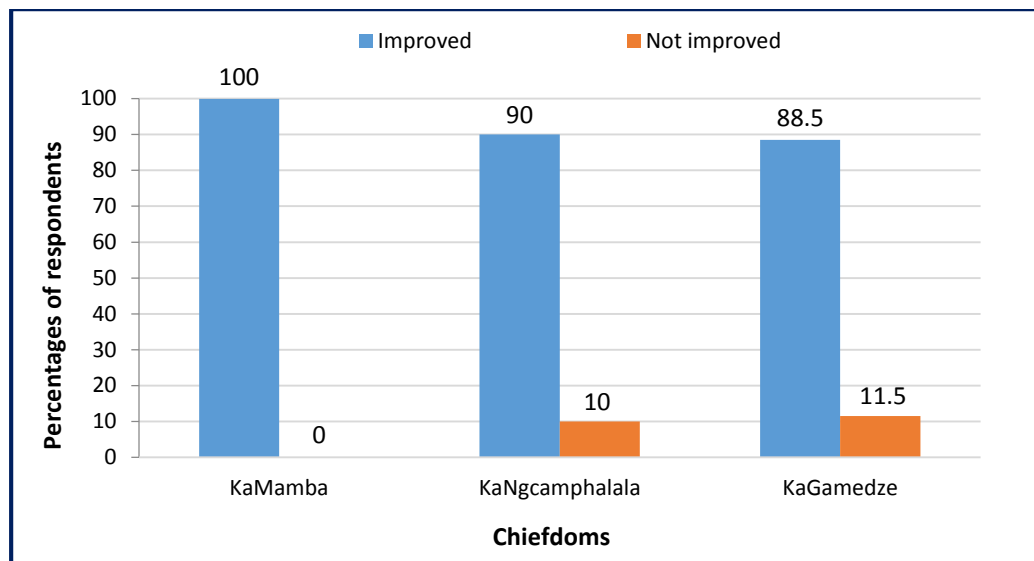


Figure 10: Effects of the commercialization project on the three chiefdoms

This was further supported by one respondent in an interview who had this to say:

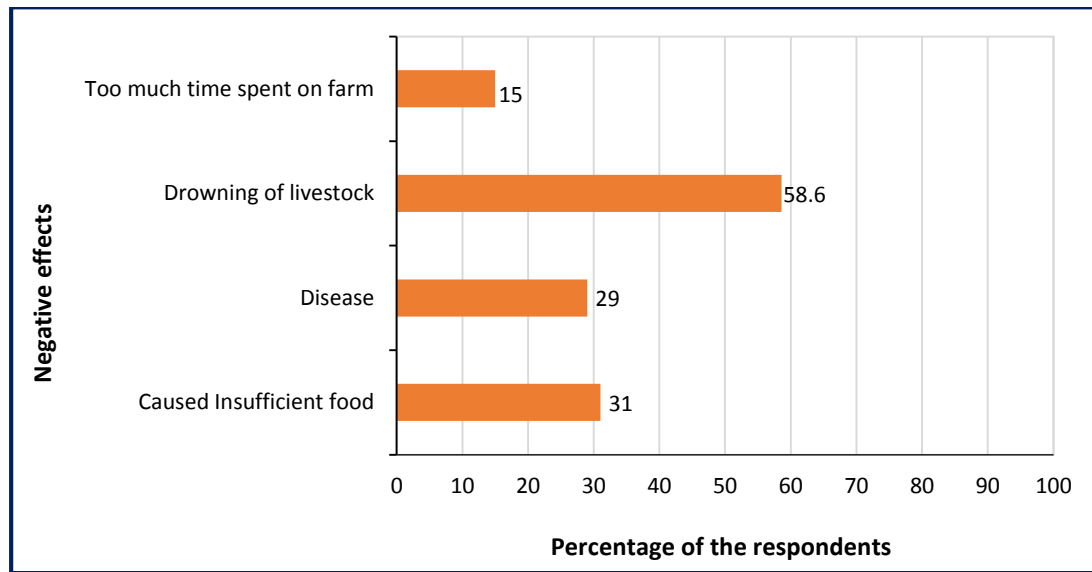
*The project has improved our lives in the areas, especially with regards to our livelihoods. We are no longer reliant on maize farming now, which has been performing poorly in the recent past due to drought. At least now we have other means of survival and we can see the improvement in our households with regards to food and life in general.*

This respondent above, undoubtedly, reveal the benefits of the commercialization project in her households and in the area in general, especially with regards to improving their livelihood. This observation is supported by the findings by Gc and Hall (2020) who also highlighted the advantages and potential of commercialization of agriculture in improving rural livelihoods in rural western middle hills of Nepal.

### Challenges of the commercialisation project

Although the agriculture commercialization project had been very beneficial to most farming households and majority of people in Siphofaneni in general, its introduction was not without challenges. Although the commercial agriculture has improved the rural livelihoods of the people of Siphofaneni area, it also had some negative effects. Among these negative impacts include the drowning of livestock (58.6%) and contributing to food insufficiency for some households (31%), among other negative impacts (Figure 11). This was not surprising since in the commercialization project, the production of the staple crop (maize) was replaced by

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4 production of sugar cane, which meant that households will rely more on purchased food  
5 rather than produced food.  
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27 *Figure 11: Negative effects of the commercialisation project.*

### 28 29 30 **Conclusion**

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32 The LUSIP commercialisation project in Siphofaneni has positively contributed to the  
33 country's effort to reduce the proportion of the poor and food insecure population and in  
34 increasing the country's chances of achieving the Sustainable Development Goals (SDG 1 &  
35 2). The project has improved the lives of the people in the study area in many ways than one.  
36 The project resulted to increased incomes, provided employment opportunities, improved  
37 food accessibility and, at the same time, modernised the agricultural production systems  
38 which resulted in expansion of employment opportunities. As part of the agrarian transition  
39 in the country, the project which involves the transformation of subsistence-oriented farming  
40 systems into systems that are primarily oriented toward maximising cash returns through  
41 production for the market has improved the living standards of Siphofaneni residents and has  
42 increased their resilience against the persistent drought conditions in the area. Agricultural  
43 commercialisation in Siphofaneni has become the households' main income-generating  
44 activity and it has actually become a pathway out of poverty for most rural households in the  
45 study areas. In terms of poverty alleviation, which is a key element and main objective of the  
46 project, it can be rightly concluded that the project is successful in meeting its objective since  
47 the levels of poverty have been significantly reduced in the communities in various ways  
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4 which include job creation, increased access to food and improved living conditions, among  
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6 others.  
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10 On the other hand, the project did contribute to a few challenges to the community such as  
11 death of livestock through drowning, loss of subsistence land and a rise of disputes over  
12 shares. The impacts of agricultural commercialisation on rural livelihoods were generally  
13 positive and have added to household assets derived from the improved income. While the  
14 commercialisation of agriculture had generally positive effects on rural livelihoods, it was not  
15 a pathway out of poverty for every household. Although poverty is still found in some  
16 homesteads, the commercialisation project was a good initiative that was beneficial to the  
17 people of Siphofaneni in improving their lives. The study recommends that the government  
18 of Eswatini expands the project into other areas of the country, not just the drought-prone  
19 areas of Siphofaneni. Agricultural commercialization is not just a good business opportunity  
20 to improve household incomes, but is also an initiative that allows for the use of agricultural  
21 land, which the country has been losing to infrastructure such as roads and buildings, to  
22 mention a few. Appropriate business education is also recommended prior to implementation  
23 of the project to minimize disputes in the schemes and to minimize corruption.  
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38  
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47 Enterprise (ESWADE) for their support, technically and otherwise.  
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### 53 **CONFLICTS OF INTEREST**

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55 The authors declare no conflict of interest.  
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