

SCOPING REPORT



Agricultural Finance Scoping

An Agriculture Finance Scoping Exercise in eSwatini

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For more information:

Visit our website at www.finmark.org.za

Email info@finmark.org.za

Call us on +27 11 315 9197



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ACRONYMS AND ABBREVIATIONS

Acronym	In full
AfDB	African Development Bank
AGOA	Africa Growth & Opportunity Act
CMA	Common Monetary Area
COMESA	Common Market for Eastern Southern Africa
DFID	Department for International Development
ESA	eSwatini Sugar Association
ESWADE	eSwatini Water & Agricultural Development Enterprise
EU	European Union
FAO	Food and Agricultural Organisation
FMT	FinMark Trust
FSDU	Farmer Support & Development Unit
GM	Genetically Modified
HVCHP	High Value Crop & Horticultural Project
ICAC	The International Cotton Advisory
IFAD	International Fund for Agricultural Development
IPC	Infection Prevention & Control
IPP	Independent Power Producers
KDDP	Komati Downstream Development Programme
LUSIP	Lower Usuthu Smallholder Irrigation Project
MEO	Marketing Extension Officers
MFA	Multi-Fibre Agreement
MSME	Micro Small & Medium Enterprises
NAMBoard	National Agricultural Marketing Board
NDP	National Development Plan
NDS	National Development Strategy
NMC	National Maize Corporation
RSSC	Royal Swazi Sugar Corporation
SACU	Southern African Customs Union
SADC	Southern African Development Community
SADP	Swaziland Agricultural Development Project
SAPP	Southern Africa Power Pool
SEZ	Special Economic Zones Act
SNAIP	Swaziland National Agricultural Investment Plan
SNL	Swazi National Land
SSDIG	The Strategy for Sustainable Development & Inclusive Growth
SSFA	Small Scale Farmers Associations
TDL	Title Deed Land
UNEP	United Nations Environmental Programme
US	United States

1. ESWATINI COUNTRY OVERVIEW

1.1. Introduction

1.1.1. Overview

The Kingdom of eSwatini is a landlocked country bordering Mozambique to the east and South Africa to the north, west and south.

The state of eSwatini is the only absolute monarchy remaining in Africa. King Mswati III and the Queen Mother Nthombi rule as monarchs and have veto powers over the three branches of government. The bicameral parliament consists of the Senate and House of Assembly, comprising of both elected members and members appointed by the king. The king also appoints the prime minister.

Even though the landscape is partly rough and the infrastructure poor, the monarch as head of state rules through the traditional system of chiefs and headmen. This system is accepted with little resistance in the most rural areas. Thus, there is a complete monopoly on the use of force by the government.

Key facts are included below:

- Capital: Mbabane
- Region: Southern Africa
- Official language: Swazi and English
- Independence Day: September 06, 1968
- Area: 17,000 sq. km
- Population (2018): 1.14 million
- REC membership: SACU, SADC
- World Trade Organisation (WTO) membership: January 1, 1995
- GDP (2018): US\$ 4.711 billion
- GNI per capita (2018): US\$ 3 930
- Currency: Lilangeni¹

Poverty is prominent in eSwatini with approximately 58.9% living under the national poverty line in 2017. Based on international poverty standards, 39.7% of Swazis lived below the 2017 purchasing power parity (PPP) of \$1.90 per person per day.

eSwatini has many challenges to poverty reduction which include:

- Slowing economic growth,
- Adverse weather patterns,
- The High prevalence of HIV/AIDS,
- High unemployment, and
- High inequality.

The economy of eSwatini has close economic linkages to South Africa (Approx. 85% of its imports and 60% of its exports) and is a member of the Common Monetary Area (CMA), with includes Lesotho, Namibia, and South Africa. The domestic currency is pegged at 1:1 to the South African rand, which is also legal tender in the country².

With the understanding that the agricultural sector is very dynamic with constant opportunities and threats rising from different angles from time to time, FinMark Trust conducted an agriculture scoping study to identify areas for intervention related to agriculture finance in supporting agricultural value chain activities. The aforementioned scoping study was undertaken in the following SADC countries, namely Botswana, Eswatini, Lesotho and Malawi.

This study identified areas for targeted intervention in agricultural finance, with focus on:

- *Identifying and mapping key value chains, understanding blockages especially access to finance,*
- *Improving agricultural productivity and employment;*
- *Improving incomes and welfare for vulnerable groups (including women and youth), and*
- *Leveraging on technological innovation in relation to clean energy.*

The eSwatini government relies heavily on customs duties from the Southern African Customs Union (SACU) for almost half of its revenue. It is a lower to middle-income country, with more than one-quarter of the adult population infected by HIV/AIDS. Having the world's highest HIV prevalence rate, places huge financial strain on the country and a constant source of economic instability.

The manufacturing sector diversified in the 1980s and 1990s, but has not grown much in the last 10 years. Sugar and soft drink concentrate are the largest foreign exchange earners. Overgrazing, soil depletion, drought, and floods are persistent problems in the agricultural sector. The mining sector has declined in recent years and coal, gold, diamond, and quarry stone mines are small scale. Due to an estimated 28% unemployment rate, eSwatini's is in urgent need to increase the number and size of small and medium enterprises and to attract foreign direct investment.³

From April to August 2019, the inflation rate fell below 3% as a result of the government keeping the price of housing and utilities constant for more than 12 months. During the first eight months of 2019, inflation averaged 3% compared to 4.6% recorded during the same period the previous year. Due to decreasing inflation the Central Bank of eSwatini maintained a favourable monetary policy for this period, with further interest cuts of 25 basis points to 6.5% in July 2019.

The GDP contribution by sector for 2017 was estimated at 6.5% for Agriculture, 45% for industry and 48.6% for services⁴.

eSwatini's national development strategy up to 2022, prioritises increases in infrastructure, agriculture production, and economic diversification, while aiming to reduce poverty and government spending.

eSwatini's revenue from SACU receipts are likely to continue to decline as South Africa pushes for a new distribution scheme, making it harder for the government to maintain fiscal balance without introducing new sources of revenue.

1.1.2. Outlook

The main obstacle to economic, political and development transformation in eSwatini is the lack of democratic governance. This affects all aspects of government as the population does not have any meaningful mechanism to decide which development path they want to pursue. Any future development is decided by a small elite group surrounding the king. The priorities of the national budget on economic and social policies passed through parliament are not necessarily the ideal representation of the population's needs, which in turn affects the ability to attract sustainable investments and create jobs.

Primary infrastructure (roads, electricity, water, and telecommunications) is relatively well developed and modern. Macroeconomic performance has continued to stagnate, with real GDP growth averaging 0.5 percent in 2018. (Central Bank of eSwatini Annual report 2018)⁵

Recent positive developments include the country's January 2018 reinstatement under the African Growth and Opportunity Act (AGOA) and the enactment of the Special Economic Zones (SEZ) Act.

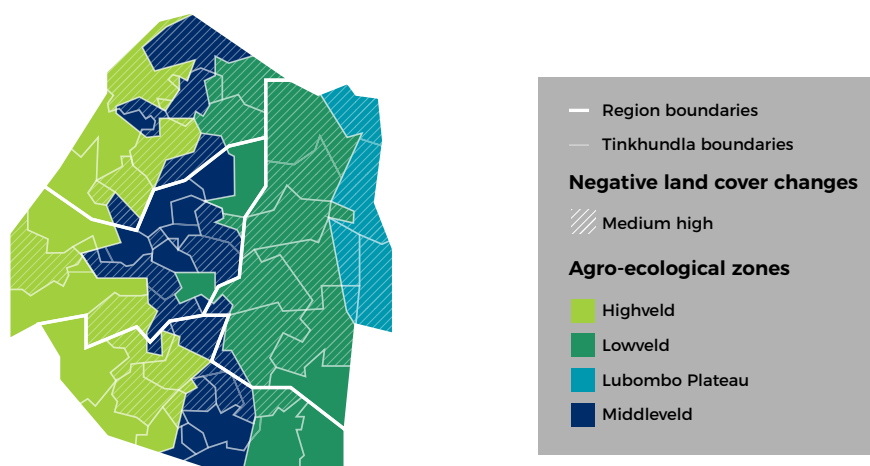
1.2. Environmental and Natural Resource Base

1.2.1 Agro-Ecological Zones

The country is divided into four agro-ecological zones, which run longitudinally North to South. Located west to east is the are: (See figure 17)

- The Highveld (Green),
- The Middleveld (Brown) which is further divided into wet and dry, due to the amount of precipitation received by the sub-zones,
- The Lowveld (Yellow), and
- The Lubombo Plateau (Purple) to the extreme east of the country.

Figure 17: ICA eSwatini, 2019 – Agro-ecological zones (2016)



The Highveld

The Highveld area consists of approximately 5 029.5 square kilometres and lies along the western border of the country. The average elevation of this area is between 910 and 1830 meters above sea level (asl) and has a humid to near temperate climate. The Highveld zone is ideal for growing a variety of crops as the high rainfall and moderate temperatures are conducive to relative higher yields. Unfortunately, excessive leaching of nutrients, high soil acidity and low soil fertility have a negative effect on increased productivity.

Maize is usually grown as a monocrop (cropping system), with other crops such as sweet potato and a variety of legumes being second choice in most cases. The Highveld areas provide good quality grazing during summer, but grazing quality reduces dramatically during winter. Due to this fall off, livestock will require feed supplementation for about 4 - 6 months of the year to avoid severe weight losses⁶.

The Middleveld

The Middleveld climate is sub-tropical and has an average rainfall of between 762 and 1 193 mm per annum, the majority of this (between 610 and 994 mm) falls during the summer months. The soils are characterised by low soil fertility, high soil acidity and deficiencies in molybdenum. They are usually deep and mostly red clay to clay loamy soils. This zone is suited for the production of a variety of agricultural crops including maize, beans, cowpeas, groundnuts, pineapples and sweet potato. The drought tolerant crops such as cassava, sorghum and cotton are recommended for the dry Middleveld. Maize is mainly mono-cropped. The veld is mixed veld i.e., it is intermediate between palatable and unpalatable grass species. Livestock require supplementation for 3 - 4 months in winter in order to prevent severe weight loss.

The Lowveld

The Lowveld has a land area of about 6 416.2 square kilometres and is gently undulating, with an altitude range of between 60 and 730 m above sea level. The annual rainfall is between 508 and 890 mm. It has a semi-arid to arid climate often very prone to drought. The soils range from the red soil found in the Middleveld to the deep, very fertile black vertisols, that crack heavily when dry and are very sticky when wet. Saline soils and saline sodic soils, which are characterised by high soluble salts of sodium (Na+) and sulphate SO⁻ are very common in this region. The most grown crops in the Lowveld are the drought-tolerant crops such as cotton, citrus and sugarcane grown under irrigation. The Lowveld has sweet grass species which are mostly palatable and nutritious in summer, and even remain fairly palatable in winter. The grazing lands can support livestock throughout the year without the need for supplements, at the recommended stocking rate.

The Lubombo Plateau

The climate of the Lubombo plateau is similar to the Middleveld. The land area is about 1 321.2 km², with an average altitude of 700 m ASL. This zone lies along the border with Mozambique to the extreme east of the country. The soils are deep red and medium to heavy texture. The main crops grown in the region include maize, a number of grain food legumes sorghum, sweet potato, cassava and cotton⁷.

1.2.2. Arable Land

Arable land has is essential to the people of eSwatini for primary agriculture. Agriculture is one of the leading sectors in the country. In 2014, arable land consisted of approximately 10.17% of the country's total land area. It has been estimated that up to 70% of the country's labour force is employed in the agricultural sector. In spite of this, the agricultural sector only contributed 8.2% of the country's gross domestic product in 2011.

Some of eSwatini's most important crops include sugarcane, corn, and citrus fruits. Agriculture in eSwatini is practiced on both small scales and large scales with most local farmers engaging in small-scale farming while foreign investors engage in large scale. The country's agriculture sector faces several challenges with the most significant one being the variation in climatic conditions that limit the number of crops that farmers can harvest⁸.

1.2.3. Minerals

eSwatini has various valuable minerals such as diamonds, coal, and gold among others. The mining industry is controlled by the King who has delegated his responsibility to the Minerals Committee. It is estimated that the mining industry contributed only 2% of the country's gross domestic product. Most of the minerals produced in eSwatini are sold to other nations, and the government estimated that mineral exports made up 2% of the country's total exports.

1.2.4. Land Tenure

Land tenure in eSwatini is divided mainly into types, Swazi National Lands (SNL- 54%) and Title Deed Land (TDL- 46%).

The two types of land tenure are described as follows:

- Swazi National Lands - Tenure over SNL is not defined by legislation and the land is held in trust and controlled by the King and allocated by tribal chiefs according to traditional arrangements. This is characterised by large scale land areas.
- Title Deed Land – TDL is comprised of small-scale portions of land which is predominantly used by smallholder agriculture. Sixty-one per cent of these farms are small and usually less than one hectare in size⁹.

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Due to the rapid population increase in eSwatini, there is pressure on land availability for cropping and grazing, forcing households to produce crops on increasingly marginal lands.

The Land Policy drafted in 1999 was intended to address issues such as:

- Improving gender equity in land allocation and protection of property rights;
- The use of SNL as collateral for loans, and
- The introduction of an efficient, effective and comprehensive system of land administration, rangeland management issues.

The Land Policy was never formally endorsed and land tenure and land reform still remain a highly contentious national policy issue.

With no formalised Land Policy, this results in large irrigation schemes such as LUSIP having many complex issues concerning land and water allocations. Land and water rights issues that have arisen due to the lack of new policy and legal framework concerning land tenure security have included

- The resettlement of people affected by infrastructure development,
- The displacement of other people from grazing land,
- How to conduct land use planning exercises and
- How to guarantee secure tenure for members and other local residents.

Traditionally, SNL held under customary tenure cannot be bought, mortgaged, leased or sold and can only be acquired through *kukhonta* or by inheritance¹⁰ in which case it would be passed on to the oldest male heir. By 2000, this system accounted for about 55 % of the country’s land area and supported about 80,000 homesteads estimated at 62 % of the total population¹¹. Under SNL, land and other resources are communal hence community members have open access to these. Also included under SNL is land that is leased mainly to private companies engaged in agriculture or forestry under highly capital intensive and well managed estates specialising in export commodities such as sugarcane, pineapple, citrus, beef, dairy, poultry and timber¹². SNL constitutes about 60 % of the total land area whilst TDL accounts for the bulk of the remaining land area. Table 1 shows a breakdown of land tenure categories in eSwatini. The eSwatini Government holds title over Crown Land¹³ which is mainly used for construction public structures, including offices and residential housing for public servants.

The main land use categories in eSwatini are crop agriculture, animal husbandry, forestry, extraction and collection, nature protection, settlement and industry, and unused land.

Table 24: Breakdown of land tenure categories in eSwatini

Land Tenure Type	Control	Area (Km2)	% of total land area
Swazi Nation Land	Communal under chiefs	9480	54.6
	Non-communal under chiefs	140	0.8
	Controlled by Tiboyo	500	2.9
	Controlled by Swaziland National Trust Commission	460	2.7
	Leased to companies or individuals	1120	6.5
	Controlled by Ministry of Agriculture	1180	6.8
Title Deed Land, Urban Areas	130	0.7	

Title Deed Land, Rural Area	4240	24.4	
Crown Land	70	0.4	
Water Reservoirs	40	0.2	

Source: Modified form eSwatini Environment Authority 2002

Some of these land use categories are complex. An example here is small-scale traditional farming which is closely associated with communal grazing. Another consideration is that there is often a primary and secondary use of the same land. Extraction and collection take place in savannas and woodlands where animal husbandry is the primary use. Similarly, the primary use of national parks is nature protection, but recreation is an important secondary use³⁴. The main land use categories and the area under each are shown in Table 25.

Table 25: Main land use categories and the area under each category

Land Use Category	Code	Area (Km2)	% of total land area
Small-scale subsistence crop agriculture (rain-fed annual field cropping)	SA	2140	12.3
Large-scale commercial crop agriculture (irrigated and rain-fed field/tree cropping)	LA	1040	6.0
Extensive communal grazing	CH	8670	50.0
Ranching	RH	3320	19.1
Plantation Forestry	F	1400	8.1
Parks, Wildlife Management	P	670	3.9
Residential, Industry, Recreation	S	80	0.5
Water Reservoirs	Q	40	0.2

Source: Modified form eSwatini Environment Authority 2002

Just less than 4% of the country is covered within the protected area network (GOS-SEA, 2013; GOS-SEA, 2016). This is significantly lower than the internationally agreed target in the Biodiversity Strategy and its Aichi targets³⁵. The current country's protected area network is composed of small and vulnerable protected areas which also have the limitation of being poorly distributed across the country's ecosystems.

1.2.5. Water Resources

Supply and Demand

eSwatini can be classified as a water scarce country where water supply comes from rainfall, surface water resources (rivers, dams, reservoirs) and groundwater. A variety of rivers traverse through eSwatini including Mlumati, Komati, Lusutfu, Ngwavuma and Mbuluzi Rivers, with an estimated 4.5km³/year of surface water, half of which originate in South Africa. Water bodies make up only 4% of the land surface area, which is about 160 km² of the total area of 17,364 km². About 50% of the country is classified as dry sub-humid to moist semi-arid (see figures below)²⁶

Water Resources and irrigation development is vital for agriculture production, especially in the face climate variability where dependency on rainfall is no longer sustainable for ensuring household and national food security. Two major dams have been constructed, the Maguga dam and Lubovane dam which support the irrigation development of 6 000ha in the KDDP as well as the construction of Phase II of the LUSIP scheme which will irrigate an additional 5 200 Ha making 10 000 ha in total including the area covered under Phase I.

The Ministry had prioritised the construction of Small and Medium Sized Earth dams, under the Water Harvesting Programme which have a capacity to irrigate between 20 to 200 ha size area of land. These are being constructed mainly in the high rainfall areas where there are perennial streams with a capacity for establishment reservoirs and or weirs to harvest water for irrigation purposes. These schemes are mainly for horticulture production.

In the Lowveld, the objective of the Ministry under the same Earth Dam construction programme, is to harvest rainfall water for livestock drinking purposes. Due to food insecurity levels and lack of income generating activities downstream, 1ha gardens have been development for the communities to grow vegetables for both household consumption and selling to local markets.

In response to the frequency and intensity of recurring drought conditions and the economic losses incurred by the agriculture sector and by extension the country's economy, the ministry is continuing the water harvesting and irrigation initiatives. Significant support is provided by development partners including the African Development Bank, European Investment Bank, Kuwait and the Arab Bank (LUSIP II), IFAD and the GEF (SMLP), and the European Union support under the 11TH EDF (WHDP and HVCHP).

In order to improve water use effectiveness and efficiency in agriculture production there is need to consider implementation of the following strategies:

- Undertake a national water resources assessment and identification of associated irrigable areas to develop an agriculture water resources and irrigation master plan, and further develop according to the findings and priorities of the subsequent plan
- Prioritise and accelerate implementation of existing water harvesting programmes financed by Development Partners
- Mobilise resources for investment in prioritised large scale water harvesting infrastructure development such as the Mkhondvo- Ngwavuma Water Augmentation Scheme and concretise studies to assess viability for construction of the Silingane Dam
- Collaborate with Ministry of Natural Resources and Energy and the private sector to promote modern water serving technologies to improve water use efficiency
- Promote improved watershed management for all river basins in the country in partnership with the Ministry of Natural Resources²⁷

Water bodies make up only 4% of the land surface area, which is about 160 km² of the total area of 17,364 km². About 50% of the country is classified as dry sub-humid to moist semi-arid

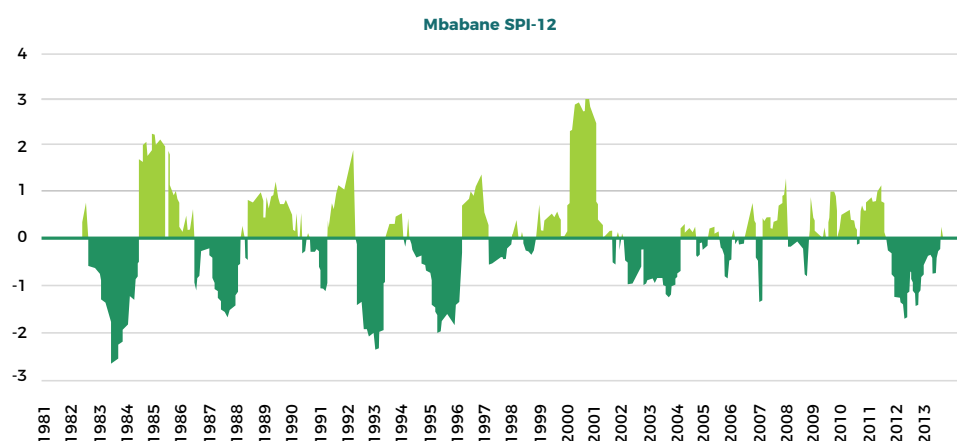
Drought

eSwatini is vulnerable to drought and other extreme natural and human induced hazards. Between 1980 and 2014, about ten drought events have been recorded with varying periods and intensity (see figure 18 below). Drought is a natural disaster of significant concern in eSwatini since prediction by the IPCC (2016) indicate that future drought events will be longer, more frequent and more intense in southern Africa, including eSwatini.

eSwatini has a sub-tropical climate with rainfall ranging from 400 - 1,500 mm per year, but a modest drop in normal rainfall can result in water shortages. Recent droughts of 2015 to 2016 resulted in major losses in the agriculture, wildlife, and forestry sectors and affected human health in all the country's regions. eSwatini's drought vulnerability assessments indicate an increasing trend in the frequency of very hot days exceeding 36°C in the country, which may induce more frequent and intense droughts in future. It is, therefore, critical that the eSwatini citizens be well prepared in the event of a drought.

Drought vulnerability in eSwatini is compounded by the poor economy and the subsistence nature of agriculture, as most farming is done on small scale basis and is often insufficient to feed a farmer's immediate household. Thus, preparing for drought, reducing the risk and mitigating the impacts of drought are very important given the significant vulnerabilities in the country²⁸.

Figure 18: Record of drought events in eSwatini from 1981 to 2013.



Source: National Disaster Management Agency

Climate Change and Drought

Climate change has generally accelerated the hydrological processes to make them set in quicker and become more intense, with many consequences. The impacts of climate change have been felt in many economic sectors of eSwatini including land, agriculture, water, forests and health, due to sharp reduction in crop yields in recent years.

1.2.6. Clean Energy

The country imports about 80% of its power requirements from South Africa (64.5%) and 16.1% from the Southern Africa Power Pool (SAPP). Total installed generation capacity is 69.6 megawatts, of which 60.1 megawatts is from hydropower, which contributes to 16.4% to the total country's energy consumption while local Independent Power Producers (IPPs) contribute 4.75%. Average electricity demand increased to 236 megawatts in 2018 from 221 megawatts in 2014. The proportion of households with access to electricity nationally, increased from 69% in 2014 to 78% in 2018. The main challenges facing the energy sector include the reliance on power imports from South Africa; which is also facing its own power generation problems; lack of clarity in roles for procurement between the eSwatini Energy Regulatory Authority and eSwatini Electricity Company; lack of incentives to improve electricity service performance and system to track performance standards and limited ability to provide credit enhancement. The country is implementing an updated energy policy that incorporates the use of renewable energies supplied by IPPs and full exploitation of renewable energy has huge potential to decrease eSwatini's exposure to energy supply risks.

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Renewable Energy

The concern on Climate Change and diminishing power capacity and be addressed through renewable energies. Renewable energy offers nearly unlimited supply of energy if one considers the energy needs of mankind compared to the energy we receive from the sun. Renewable energy resources include traditional biomass e.g., firewood, wood-waste from the forest industries, bagasse from the sugar industries; hydropower from water and new renewables such as solar and wind. There is a significant scope for increased renewable energy use in eSwatini. Renewable energy will play an important role in the world's energy supply in the near future mainly because of environmental concerns associated with conventional energy use. The Ministry will therefore continue to initiate, implement and support renewable energy projects and initiatives³⁹.

Solar and Wind Generation

Solar Energy has great potential for widespread use in eSwatini. Experience through Pilot Projects has demonstrated that careful planning and consultation when developing rural solar installations are very important. In particular, community participation and ownership are key ingredients to success and sustainability. Investigations are underway with a view to developing a large-scale grid-connected demonstration PV plant in eSwatini.

Preliminary investigations have shown that there is a large potential for the use of solar water heaters in residential and commercial buildings. Presently, water heating in residential and commercial buildings is carried out through electric water heaters, which in turn creates a large electricity demand that could otherwise be reduced. Government will encourage a wider use of solar water heaters in residential and commercial buildings through promotional means for private sector initiatives.

The Ministry is currently undertaking a feasibility study and Action Plan for a solar energy programme for the country. The study will look at the sustainable use of solar technologies in the country. Funding is being sought for a solar schools programme to develop and implement a programme for electrification of ten schools in rural areas using solar technologies.

Pre-Electrification Using PV Systems

This programme involves the electrification of remote areas where it is still too costly to bring in grid electricity. It will involve the evaluation of private sector participation and identify possible areas for co-operation in the marketing and distribution of solar home power systems. This programme will also be undertaken with SEC to test the technical, financial and operational feasibility of offering solar home systems in lieu of the main electrical connections as well as

enlightening the public on how the two technologies complement each other. It is anticipated that the cost of solar photovoltaic systems will continue to fall; yet even at present prices it still makes economic sense to use solar electricity for small applications such as lighting. An important aspect of the project would be to investigate ways in which the private sector can assist in the project perhaps by operating as sub-contractors.

Government and SEC will work together on technical requirements for PV systems to ensure that electricity and solar systems are able to coexist and complement each other.

Wind and Solar Resource Assessment

The Ministry of Energy is working in close collaboration with the National Meteorological Service, on to determine whether there is any realistic potential for effective utilisation of solar and wind energy in the country.

A wind and solar resource monitoring programme has been initiated to focus on the Lubombo Plateau plus one other moveable station for identifying areas that are particularly windy to make an accurate assessment of the wind power generation potential. Local funding will be required to monitor the project and to obtain external assistance when preliminary data is being analysed during the plan period.

There is an ongoing project that will install wind measuring equipment at strategic points along the Lubombo Plateau for data collection regarding wind power generation.

Biofuels

Biofuels are plants that can be grown specifically for oil extraction to use as a fuel, e.g., maize, rape seed, sunflower seed, and *Jatropha Curcas*. Some of the oils can directly substitute petroleum fuels like paraffin and diesel, although blending with other fuels is the predominant method of using bio-fuels. Ethanol can be produced from molasses, a by-product of sugar manufacturing and from maize. There are presently two companies in the country producing ethanol from molasses; Royal Swaziland Sugar Corporation (RSSC) and USA Distillers.

Ethanol can be used as a supplement for petroleum; but it must be ensured that the blended fuel meets the required specifications for the country's vehicles. The use of ethanol will have positive environmental effects and also benefit the balance of payments and economic development in the industries concerned. Ethanol blending with petroleum takes place in some countries and many of the technological problems have been resolved. The commercial introduction of this option at a 10% blend of ethanol with unleaded petrol (E10) in the local market is therefore the main issue.

In the short-term Government will conduct further investigations on blending ethanol with petrol with a focus on introducing products in the local markets.

A "Farming for Energy" study was conducted by the Ministry. The aim of this study was to identify suitable crops for a Biofuels market in the country with our current land availability, rain patterns and soil conditions. The study recommended the following crops as suitable for the production of biofuels in the country: sunflower, safflower, Soya beans, sesame seeds and *Jatropha Curcas* for bio diesel and sugar cane, sweet sorghum, maize and cassava for the production of ethanol. The study further recommended that the blending ratios be 5% bio diesel with 95% mineral based diesel and 10% ethanol with 90% unleaded petrol. The production of Biofuels will provide the country with a chance to diversify its agriculture.

A Biofuels Task Force was approved by Cabinet. The Task Force is responsible for the development of the Biofuels Industry in eSwatini. It will also advise Government on the legislation that is required to ensure sustainability of the Industry.

The Ethanol Blending pilot project is a joint venture between eSwatini Government and Royal Swaziland Sugar Corporation (RSSC). The project entails testing a fuel blend consisting of 10% ethanol (without water) with 90% unleaded petrol on a selection of Government and RSSC vehicles. To make it suitable for use in vehicles, it goes through a water removal process in an anhydrous plant, before the anhydrous (water free) ethanol is blended with unleaded petrol. Ethanol produced in eSwatini is a by-product of the sugar production process therefore does not compete with food security.

Aim of project:

- To introduce a locally produced and environmentally friendly component into the fuel pool,
- To reduce reliance on fuel imported from South Africa as well as to reduce fossil fuel emissions.
- To serve as a public awareness campaign for bioethanol

The project began in 2007. Government, along with RSSC, have also are using a selection of its vehicles to be used in this pilot project. These cars will only run on the E10 blend and will be monitored at various service intervals. The vehicles being used in the project are normal vehicles and no modifications have been made to them. The National Association of Automobile Manufacturers in South Africa (NAAMSA) also gave Government a go ahead to blend with 10% ethanol. This blend ratio is suitable for vehicles and does not require cars to make modifications to their engines.

Various parameters will be tested during this project which includes fuel consumption, engine wear and tear, power output and emissions. The ultimate aim of this project is to introduce a locally produced and environmentally friendly component into the fuel pool, to reduce reliance on fuel imported as well as to reduce fossil fuel emissions.

The Ministry is also developing a National Biofuels Strategy and Action Plan, with the assistance of UNDP, which will ensure that a sustainable (social, economic and environmental) biofuels industry is developed in the country.

Bagasse-Fired Thermal Power Station

eSwatini has abundant sources of waste from agro-industries that could be used for power production. These industrial wastes include bagasse from processing sugar-cane and wood-waste from the timber processing industries. A pre-feasibility study for a 100 MW bagasse-fired power plant concluded that a 54 MW plant could be built at Simunye sugar factory, an 85 MW plant at Mhlume sugar factory and a 30 MW plant at Ubombo Sugar Plant. A recent study (2007) conducted by AFREPREN/FWD, supported by the Global Environment Facility through the United Nations Environmental Programme (UNEP) and the African Development Bank (AfDB) under the Cogen for Africa project, indicated that the potential for cogeneration in eSwatini can be as high as 185 MW. Indications show that the bagasse and wood-waste may have to be supplemented by other forms of fuel such as coal and Natural Gas.

Natural Gas

A feasibility study into the construction of a natural gas pipeline from Mozambique to eSwatini and a gas study market was undertaken to assess the amount of gas required in the country. Natural gas can replace the imported coal in the industry generating power and paraffin in the industrial site at Matsapha. A cross border agreement between the two countries will be entered into once a company is identified that will invest in the pipeline. Government has to invest in a public – private sector partnership on this project.

Hydro-Power Generation- Mini- Micro Schemes

The goal for the Ministry is that access to electricity is made available to all citizens of the country by 2022. The Ministry established a database on the potential of developing mini-micro hydropower electricity schemes. The target was to pinpoint specific sites around the country where the river basin that exist can be used to generate electricity and further quantify the cost related to establishing the respective electricity schemes. A report was produced from the study and 35 sites were identified. The capacity of the schemes identified ranged between 0.032MW to 1.525MW.

A desktop approach was used to identify these sites hence there was a need to further investigate the sites and quantify the capacities practically. The Ministry in 2006 engaged the consultants to investigate two sites that were seen to be having a high capacity at a reasonable cost. The sites were along the Ngwempisi River. The objective of the Ministry was to develop one these sites into a pilot project. Unfortunately, before the study was completed the consultants noted that the environmental conditions would not permit that either of these sites could be developed into the pilot project. The river was found to be one of the rivers that is protected as it still has its habitat intact and undisturbed.

The Ministry then changed the scope of the consultants to now determine from the remaining sites the feasibility of developing them into the electricity schemes. The study will cover the environmental investigations, and the actual cost that would be required to develop each of these sites. With that information, it would be then possible to identify the right project to be used as a pilot. The report will further rank the sites according to their capacity, cost and impact to the community should the site be approved as the pilot project.

The three sites identified were Mbuluzi, Lusushwana and Mnjoli Dam. In the feasibility study all these sites were investigated and ranked accordingly. Mnjoli was cheaper to develop compared to the other sites as a result Mnjoli has picked as the pilot project site. The developments are ongoing to build a 0.5 MW mini hydro scheme at Mnjoli Dam.

2. AGRICULTURAL OVERVIEW

2.1. Primary Production

2.1.1. Primary Production Introduction

The eSwatini primary sector recovered from four years of negative growth with a 7.4 per cent increase in 2018, from -4.1 per cent in 2017. This increase in performance has been largely from a significant increase in crop production and forestry output. Favourable weather conditions also resulted in an increase in output for all major crops in both rain-fed and irrigated farms.

Sugarcane production increased by 14.7 per cent to 6.20 million metric tonnes in 2018, from 5.41 million metric tonnes in 2017. Maize output rose by 34.0 per cent to 113,039 metric tonnes in 2018 while cotton output increased by 23 per cent to 759 metric tonnes. Pineapple and banana production also grew over same period. Citrus production declined but forestry output increased by 8.1 per cent in 2018, from a decline of 10.3 per cent in the previous year.

The 'animal production' and 'mining and quarrying' subsectors both performed poorly. The livestock sector fell to a slower rate of 3.7 per cent in 2018, from 15.6 per cent in 2017. This decline was a result of the second-round effects of the 2015/16 El Nino induced drought. Farmers continued to restock (mainly cattle) which was wiped out by the drastic effects of the drought. Cattle population was recorded at approximately 502,000 in the 2018 livestock census, which is 25 per cent lower than the population levels recorded during the predrought period. The replenishing ratio (calf-birth relative to mortalities) has, however, been improving over the past two years benefiting from favourable weather conditions.²⁰

Table 26 shows the production of selection of the major crops in eSwatini. As expected, the largest crop is sugar cane with close to 58 000 hectares (5.6 million tonnes), with maize in second place with 78 523 hectares (95 000 tonnes) under crop.

Table 26: Selection of the main crops produced in eSwatini (2019)

Crop	Area (ha)	Production (tonnes)
Sugar Cane	57 870	5 596 146
Cereals	79 881	92 676
Roots and Tubers	15 870	79 943
Primary Vegetables	1 702	13 762
Oil crops	7 650	851
Maize	78 523	95 000
Rice (Paddy)	26	83
Citrus	11 987	93 306
Bananas	1 151	6 857
Pineapples	1 076	30 982
Avocados	158	954
Cotton (Seed)	1 974	N/A

Source: Knoema World Data Atlas

The 'animal production' and 'mining and quarrying' subsectors both performed poorly. The livestock sector fell to a slower rate of 3.7 per cent in 2018, from 15.6 per cent in 2017. This decline was a result of the second-round effects of the 2015/16 El Nino induced drought.

2.1.2. Sugarcane

The sugar industry has shown continuous recovery from the 2015/16 El Nino drought after an improvement in climate conditions, as well as continuous expansion in the Lower Usuthu Smallholder Irrigation Project (LUSIP) for sugar cane production. Favourable weather conditions resulted in improved cane yields per hectare, from 97 tonnes in 2017/18 to 108 tonnes in 2018/19 harvesting season. As a result, sugar cane production rose by 14.7 per cent to 6.20 million metric tonnes in the 2018/19 harvesting season, from 5.41 million metric tonnes the previous season. Sugar production grew by 15.1 per cent to 747,981 metric tonnes in the 2018/19 season from 650,126 metric tonnes the previous season. Total sugar sales volumes increased by 36.8 per cent to 755,556 metric tonnes in the 2018/19 marketing year from 552,135 metric tonnes the previous year, with both SACU and non-SACU sales recording significant increases.

Despite the significant growth in sales volumes, the marketing landscape remained challenging, a development which compelled eSwatini Sugar Association (ESA) stockpile sales. Inventory levels stood at 144,866 metric tonnes at the end of the 2018/2019, slightly lower than a closing stock of 156,233 in the previous year but significantly higher than the targeted inventory of approximately 65,000 metric tonnes.

Table 27 shows the production and export sales for the past four seasons in eSwatini. Production has been steadily growing over the period, especially the bumper crop in 2018/2019 as a result favourable rainfall conditions.

Table 27: Sugar production and sales in eSwatini

	2015/16	2016/17	2017/18	2018/19
Production (Mt)	695410	586085	650126	747981
Exports (Mt)	299936	237582	220403	343641
Value of Exports (E' Million)	1709.60	1155.10	1213.20	1590.02
Domestic (SACU) Sales (Mt)	400081	383582	331732	411915
Value of Domestic (SACU) Sales (E' Million)	2573.00	3008.80	2800.70	3218.13

Source: eSwatini Sugar Association - ESU

eSwatini exports outside the SACU market and predominantly destined for the EU market. This market has increased significantly by 55.9 per cent to 343,640 metric tonnes in 2018/19, from 220,403 metric tonnes in 2017/18. Sales to the EU market have increased in the past two marketing seasons despite lower prices and an oversupply of sugar to the same market. The ESA continues to look for new markets in regional blocks such as SADC and COMESA, despite the difficulties associated with penetrating these markets.

The industry is facing competition from the cheaper world sugar, coupled with ongoing expansions in the sugar producing countries in the region, a development that leads to these countries not opening up their markets for regional sugar. Overall sales revenue from the non-SACU market amounted to E1.590 billion in 2018/19 from E1.213 billion received in 2017/18, as a result of both increased production volumes and a weaker exchange rate over the period.

Domestic sales volume increased by 24.2 per cent from 331,732 metric tonnes in the 2017/18 marketing season to 411,925 metric tonnes in the period under review. Due to unfavourable global market conditions, the ESA has promoted the increase of sales volume into SACU and regional markets as they yielded better returns than the other markets. The influx of sugar from other low-cost producing countries such as Brazil, however, limits the penetration of the lucrative SACU market. This into the SACU market continues unabated even though there was an increase of the SACU import tariff on sugar. Even with this influx, sales revenue from the SACU market grew by 14.9% to E3.218 billion.

The industry is facing competition from the cheaper world sugar, coupled with ongoing expansions in the sugar producing countries in the region, a development that leads to these countries not opening up their markets for regional sugar.

Molasses, a bi-product of sugar production and a major input to ethanol production for distillers increased by 3.3 per cent to 250,956 metric tonnes in 2018/19 from 242,889 in the previous season. Revenues from molasses sales were also higher at E189 million for the 2017/2018 season from E185.1 million the previous marketing season.

Production will continue to benefit from continued investment in developing irrigation infrastructure in the LUSIP areas, facilitated by the eSwatini Water and Agricultural Development Enterprise (ESWADE). Sugar production is projected to increase, on average, by 2 per cent annually, for the next five years.

The oversupply of sugar particularly within the EU region, as a result as the abolition of beet sugar quotas in September 2017, has eliminated the lucrativeness of the EU market as prices dropped significantly. For this reason, the ESA has continued to diversify away from this market. The world market prices also remain suppressed with the oversupply of sugar, thus making it difficult for eSwatini sugar to compete effectively. Furthermore, the ESA is faced with competition from the influx of sugar from other markets into the region. Lower world sugar prices have paved a way for an increase in sugar imports into the SACU region, thereby reducing the market share for ESA. This means that both domestic (SACU) market and non-SACU market for sugar, face challenges that could potentially lower sales returns in the short-to-medium-term. Despite the negative developments, there is expectation that sugar prices might pick up gradually in the medium-term.

2.1.3. Livestock

The livestock sector in eSwatini is characterised by a two-fold dualism between “commercial” and “communal” livestock and between “modern” and “traditional” systems. The ruminant sector is dominated by cattle, which are an important source of food and cash income, for different wealth categories in various areas. The proportion of homesteads owning cattle is between 40% and 50%, with considerable regional variations. Small-scale production follows two objectives:

- Food and livelihood security, and
- Milk and meat production for national and international markets.

The national cattle herd currently stands at around 600,000 heads, thought to be in line with the national carrying capacity. The majority of beef exported from eSwatini goes to neighbouring countries and to Norway through formal trade agreements. Nevertheless, lower grade beef imports remain relatively high to satisfy the growing local demand ²¹.

Approximately 89% of cows, heifers, and calves are kept in the SNL systems, while 11% are on TDL systems (Table 28). The communal systems are characterised by open grazing, low off-take rates (probably less than 10%), and low technical efficiency (calving rates, mortality rates, etc.). Cattle for SNL smallholders are kept for multiple purposes (tradition, manure, food, milk, security, draught, etc.), of which cash for sales into the beef VC is merely one.

Table 28: Estimation of the mature bovine population in 2016

	SNL	TDL
Beef Calves	194 019	23 595
Beef Heifers	63 113	7 277
Dairy Cows	2 153	1 495
Dairy Heifers	779	408
Calves	59 952	8 387
Total	320 016 (89%)	41 162 (11%)

Source: EU, VC4D, 2019

The ruminant sector is dominated by cattle, which are an important source of food and cash income, for different wealth categories in various areas. The proportion of homesteads owning cattle is between 40% and 50%, with considerable regional variations.

Main stages of the VC

The value chain (VC) could be divided into four stages: a primary stage for cattle production, characterised by nonmarket and market-oriented small producers and ranches on SNL and TDL; a secondary one for fattening operations by feedlots, and state-owned or private ranches; a tertiary one for the slaughtering and processing operations (abattoirs, butchers); and a fourth dealing with distribution operations (retailers, supermarkets, butchers, meat shops, etc). Some integrated ranches operate at various stages and each group differs as to expectations, norms and daily practices.

Cattle production and fattening

In non-market-oriented small-scale farming most cattle are managed in extensive systems on common grazing land. Farmers lack secure land tenure. Grazing prevails when pasture is available, with supplementation of crop residues, fodder, and feed during the dry season. In the market-oriented small-scale farming, cattle are raised for beef production and do not produce milk. Production systems are medium- to high-input with use of improved genetics and careful attention to improved health and nutrition. Commercial producers also rely heavily on grazing on natural pasture and crop residues to fatten their animals, but they supplement this with manufactured feed concentrates, especially in winter. Most of them have their own support services, including private veterinarians for vaccination against diseases and treatment for parasites. Stocking rates are optimised to ensure that animals reach slaughter weight rapidly and cost-effectively. Feedlots and ranches are larger holdings where food producing animals are kept for fattening for a specified period, usually 90 days. They have the potential to address the feed shortages caused by overgrazing and add considerable value to cattle for sale. Feedlots are used by smallholders operating on SNL and by commercial farmers operating on TDL²².

Slaughtering and processing

Home slaughtering represented 57% of slaughters in 2017, meaning that, for the domestic market, cattle continue to be slaughtered in often unhygienic places. Commercial slaughterers (33%) process about 16 carcasses per slaughter slab per week, which are then introduced into the cold chain. However, many small butchers are not able to meet the basic requirements in terms of hygiene and processing standards for marketing beyond the national borders. The state-owned Swazi Meat Industries (SMI) is the only licenced export slaughterer and the price maker at the national level, this industry forces competitors to develop strategies to lower their overheads and operating costs.

Table 29 shows the production and slaughter of livestock in eSwatini for the four-year period from 2015 to 2018. The national herd fluctuates between 500 000 and 600 000 animals, depending on market and climatic conditions.

Table 29: Livestock production in eSwatini

	2015	2016	2017	2018
Total Population	594240	531450	501369	501643
-Beef Herd	589405	525667	496094	496610
-Dairy Herd	4835	5783	5275	5033
Calves Birth	80602	66437	84196	93771
Total Slaughters	70280	75200	48416	44017
-Commercial Slaughters	42783	46306	20940	17737
-Home Consumption Slaughters	27497	28894	27476	26280
Deaths	57796	46123	33039	24256
Mortality Rate (%)	9.7	8.6	6.6	4.8

Source: Ministry of Agriculture

Markets and policies

The Economic Partnership Agreement has secured eSwatini's duty and quota free market access into the EU since October 2016, providing potential to further develop exports and promote agricultural value chains.

eSwatini has a relatively limited average number of cattle annually slaughtered for the domestic and export markets (50,000). Given the demand of niche export markets and the limited amount of available grassland, to raise this number would require an increase in the efficiency of grass-fed beef production. Export markets for beef products from Southern Africa are slowly opening in the EU and internationally. In their foreign trade policy, the Swazi public authorities identified market opportunities for the beef VC both in the Southern African region and the EU, promoting favourable deals for boneless beef, thus enabling the payment of premium prices to farmers. The main external destination of Swazi livestock products is currently Norway (57%), which observes the EU's import standards and offers preferential access and tariff free quotas. The challenge for the Swazi livestock sector is to comply with the required export market standards. In addition to the potential for export of higher quality meat, there is also a shortfall of beef to meet the strong local demand, which is now satisfied by imports of lower-grade beef. The country remains highly dependent on imports, particularly from South Africa and Mozambique.

Table 30 shows the total exports of beef for the period 2015 -2019 (Estimated), which shows a sharp decline over the period.

Table 30: Beef exports in eSwatini

	2015	2016	2017	2018	2019 (Est)
Exports (Mt)	1126	983	573	216	400
Value of Exports (E'000)	77804	86578	47055	12882	33035

Source: eSwatini Meat Industries

Other livestock figures for eSwatini are listed in Table 8. As expected, the Beef sector is the largest. Pigs, goats and sheep production have remained relatively constant at around 40 000, 500 000 and 16 000 head over the three-year period. The production of broilers has decreased dramatically by approximately 200 000 chickens from 2016 to 2018. The fastest growing sector is the egg layer sector which has more than doubled over the three-year period.

Table 31: Other Livestock – Pigs, Goats, Sheep and Poultry in eSwatini

	2016	2017	2018
Pigs	42852	38335	40689
Goats	501496	478919	480678
Sheep	16841	16264	16103
Broilers	660967	586190	435030
Layers	170092	119202	387264
Pigs Slaughters	3624	20279	26949
Goats Slaughters	325	935	1095
Sheep Slaughters	17	587	538

Source: Ministry of Agriculture

2.1.4. Maize

Maize is the staple food for the Swazi people and the most important crop grown in eSwatini. It is grown both on Swazi Nation Land (SNL) and Title Deed Land (TDL). The Swazi Nation Land is held in trust by traditional authorities for the Swazi people and about 90 % of the crop is grown primarily under this system. On SNL maize is often produced by smallholder farmers with no access to irrigation and production fluctuates depending on climatic conditions. SNL comprises of over 60 percent of the total arable land and less than 10 % of total production on it is available for sale. Maize yields on SNL are very low and are heavily dependent on rainfall. The average yield per ha on SNL is 4.42 tonnes of maize. Yields vary among the four agro-climatic zones in eSwatini, with the highest yields obtained in the Highveld and moist Middleveld.

The land area under cultivation and output varies each season. Maize farming on Swazi Nation Land is mainly to meet households' requirement with little intention for commercial purposes. Thirty percent of eSwatini's population lives on TDL and most of the farms on TDL are large, modern and well equipped and produce most of the agricultural produce that eSwatini exports. Title Deed Land covers an area of 40 % of the total arable land in eSwatini. The average land holding is 4.9 hectares on TDL, while the average maize yield per ha is approximately 9.75 tonnes (irrigated lands)²³.

The country is a net importer of cereals, mostly maize, rice and wheat, with imports satisfying about three quarters of domestic consumption needs. The cereal import requirement in the 2020/21 marketing year (May/April) is estimated at about 260 000 tonnes, nearly 30 percent above the fiveyear average, mainly resulting from a second consecutive annual decrease in the 2020 domestic production. Imports of maize (both for human consumption and livestock feed) are forecast at an above average level of 170 000 tonnes, almost entirely sourced from neighbouring South Africa. Imports of rice and wheat are expected at nearaverage levels, forecast at about 40 000 tonnes and 50 000 tonnes, respectively²⁴.

Prices of maize meal increased in the first quarter of 2020 due to domestic demand at the onset of the COVID19 pandemic. This prompted customers to increase household stocks, similar to trends in South Africa, the country's main supplier of cereals. Prices levelled off from April, mostly reflecting an adequate supply situation on account of the recent harvest and aboveaverage quantities of imports. As of May, retail prices of maize were about 12 percent higher than their yearearlier values.

According to the last official estimates from the Southern African Development Community (SADC), an estimated 366 000 people were assessed to be food insecure between July 2020 and the end of March 2021, which would mark the start of the main harvest period for the subsequent cropping season. Of this number, 335 000 people reside in rural areas and the remaining 31 000 are in urban areas. This level is about 60 percent above the previous estimate for the October 2019 March 2020 period. The higher prevalence of food insecurity reflects

Prices of maize meal increased in the first quarter of 2020 due to domestic demand at the onset of the COVID19 pandemic. This prompted customers to increase household stocks, similar to trends in South Africa, the country's main supplier of cereals.

the elevated prices of food and the reduced cereal harvest in 2020, which are estimated to have negatively affected farming households' food supplies and reduced income-generating opportunities from crop sales in rural areas, while the lockdown measures due to the COVID19 pandemic are estimated to have reduced incomes, particularly for casual labourers who were reliant on daily wages. Furthermore, the economic slowdown underpinned by the COVID19 pandemic has curbed remittances, further constraining households' income. On the supply side, the increased reliance on imports remains a concern as potential disruptions to trade channels, due to COVID19 related restrictions, might result in supply bottlenecks and increased price volatility particularly in the informal markets²⁵.

Local maize purchases by the National Maize Corporation (NMC) from farmers increased to 9,074 metric tonnes in the 2017/18 crop season, from 1,586 metric tonnes during the 2016/17 season. This improvement from local purchases by NMC mainly benefitted from the good yields of an average of 3 tonnes per hectare received by farmers. Due to the Government gazetted, pegged maize price of E2 600 per tonne, the NMC is able to offer the highest price for maize with the aim of encouraging producers to supply their local maize them.

Even though there was plenty rainfall during the 2018/19 agricultural planting season; the timing, frequency and distribution of rainfall received between November and December 2018 was too erratic and thus unfavourable for maize production. As a result, maize production in the 2018/19 season is anticipated to be lower than the previous season. The total area under maize cultivation declined by 13.3 per cent to 70.2 thousand hectares in 2018/19, from 81 thousand hectares in the previous season. In line with these developments, maize production is estimated to decrease by 22% ²⁶ to 88,000 metric tonnes in the 2018/19 season (according to the Ministry of Agriculture's Rapid Assessment Report of March 2019). Furthermore, during the course of the season, the country experienced hailstorms, heatwaves and persistent crop pests such as the fall armyworm that affected mostly the Lubombo and Shiselweni regions.

The latest 5-year maize production and areas planted are listed in table 32, expressly showing the bumper season in 2017/2018 of 113 000 tonnes.

Table 32: 5-year eSwatini Maize Production tonnes and area (2014/2015 to 2018/2019)

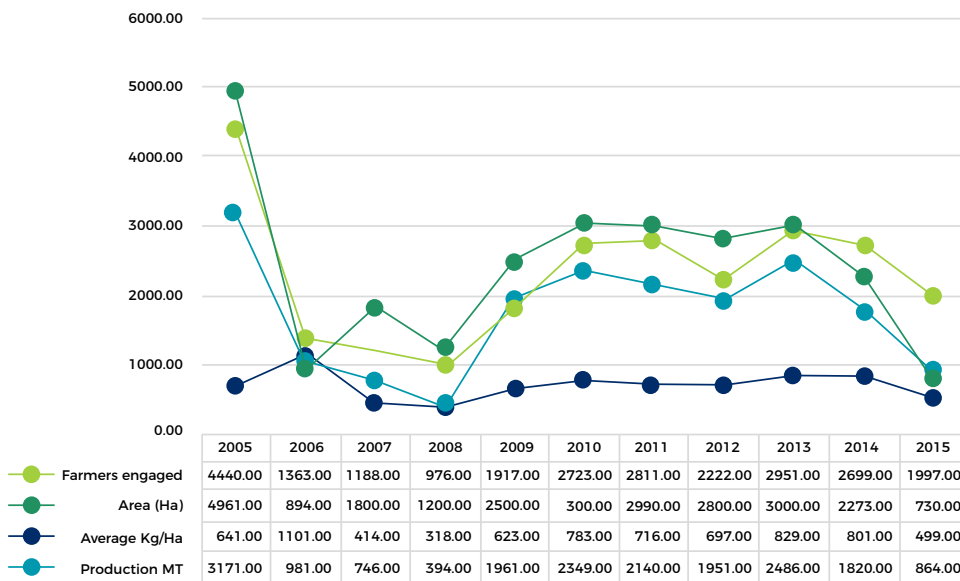
	2014/15	2015/16	2016/17	2017/18	2018/19 (Forecast)
Area ('000 ha)	87.2	46.0	69.9	81.0	70.2
Production ('000MT)	81.6	33.5	84.3	113.0	88.0

Source: Ministry of Agriculture (National Maize Corporation)

2.1.5. Cotton

Cotton has traditionally been the most important cash crop in the smallholder sector. It is cultivated in the drier parts of the country i.e., the Lowveld and Dry Middleveld. The number of farmers engaged has declined from 4440 in 2005 to just less than 2000 in 2015. This has been accompanied by a drastic reduction in the area under cotton from 4961ha to just 730ha over the same period. Major challenges that have been reported in cotton production include drought, sap sucking pests including Mealy Bugs and Aphids. Another factor that has resulted in a drop in the number of farmers engaged in cotton production is the lack of suitable varieties that can withstand the increasingly drier and longer droughts. In 2014/15, Alba QM 301 accounted for 99.1% of the plantings with Delta Opal accounting for the balance. The previous year, Delta Opal accounted for 32% of the area cultivated but the variety is no longer available as conventional seed- only the GM variety is listed in South Africa's Varietal List (Department of Agriculture, Forests and Fisheries, 2015). The country's cotton supports the country's textile industry which is a contributor to the country's Forex earnings ²⁷.

Figure 19: Cotton Production Statistics (2005-2015)



Drought and a drop in the price of cotton have essentially crippled the industry, leading to the subsequent shutdown of ginneries. The main closure has been the cotton ginnery in eSwatini, a 25 000-metric ton ginning capacity that employed 500 people. The government of eSwatini started investigating options to revitalise the cotton industry, which is prone to regular droughts in regions where cotton farmers mainly reside.

Source: Data from Swaziland Cotton Board

Table 33: Cotton production in eSwatini

	2014/15	2015/16	2016/17	2017/18	2018/19 (Forecast)
Production (Mt)	873	87	317	759	1500
Area (ha)	1733	283	1700	1082	1328
Value for Growers (E' million)	4.4	0.5	3.7	4.6	9.0
Average Price (E/kg)	5.15	6.0	6.0	6.0	6.0

Source: Ministry of Agriculture (Swaziland Cotton Board)

Drought and a drop in the price of cotton have essentially crippled the industry, leading to the subsequent shutdown of ginneries. The main closure has been the cotton ginnery in eSwatini, a 25 000-metric ton ginning capacity that employed 500 people. The government of eSwatini started investigating options to revitalise the cotton industry, which is prone to regular droughts in regions where cotton farmers mainly reside. South Africa has been planting and enjoying the benefits of GM cotton since 1998, and eSwatini is considering following suite. This will entail the adoption of regulations that would allow it to apply biotechnology. The kingdom passed the Biosafety Act in 2012 and released its first GM product, Bt cotton, in 2018. The introduction GM cotton has improved the profit margin as it eliminates over 10 (insecticide) sprays per season, and the yields are much higher. Since the introduction of the GM cotton, the ginnery has been able to double its consumption, meaning production has doubled by only planting an additional 250 hectare of cotton under irrigation²⁸. The ginnery throughput has doubled from 750 tons to 2 000 tons in a season by only increasing the cultivated area by 250 hectares. In addition to this, the ginnery has employed 120 seasonal workers. The lint that is produced by the ginnery is consumed locally by spinners who are expected to increase the employment from 850 to 1,400 for the 2019 season.

The spinners further supply textile for weaving and fabric in eSwatini to supply the market for the African Growth Opportunity Act (AGOA).

The final advantage from the GM cotton is that the companies will be paying tax revenue to the eSwatini government.

2.1.6. Layer production (Eggs)

Egg Producers are part of the Layer Chicken Stakeholder Forum, which consists of Eagles Nest, Usuthu Poultry, Kitale and Ngwane Poultry. The egg industry is controlled mostly by these players and is relatively stable in the country. The local egg production is able to supply the local demand sufficiently as well as the export market.

The factors that affected the 2017/2018 production year were as follows:

- However, within the year a number of deliberations were engaged to foster an enabling environment for Outbreak of avian influenza virus in South Africa has halted production and supply of layer chickens or pullets. Import ban for all poultry and poultry products during the avian influenza virus outbreak.
- Certification process of clean or avian influenza virus free companies in South Africa by the Department of Veterinary and Livestock Services in eSwatini and the Department of Agriculture, Forestry.
- Sharing of egg and pullet stock among players to stay in production and retain customers.
- Monitoring and hedging of egg prices in local retail outlets.

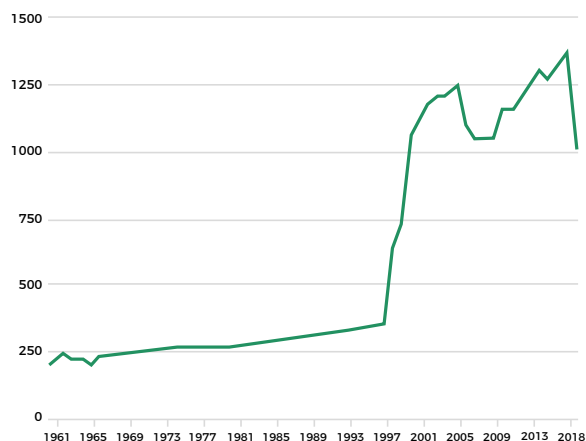
eSwatini production of eggs primary was at level of 1,001 tonnes in 2018, down from 1,375 tonnes previous year, this is a change of 27.20%²⁹.

Egg production is one of the largest animal production industries in the country and the primary source of income for smallholder farmers. There is a focus on the egg production sector with the aim to promote the egg production industry in eSwatini to lessen the demand of imports from South Africa. The aim by the government of eSwatini is to improve the quality of life for the people on the following sectors:

- To ensure food security.
- To alleviate poverty.
- To provide income generation.
- To drive towards self-sufficiency in poultry and poultry products.

Egg production is one of the largest animal production industries in the country and the primary source of income for smallholder farmers. There is a focus on the egg production sector with the aim to promote the egg production industry in eSwatini to lessen the demand of imports from South Africa.

Figure 20: eSwatini annual egg production (10-year period)



DATE	VALUE	CHANGE,%
2018	1001	-27.20%
2017	1375	4.17%
2016	1320	4.35%
2015	1265	-2.69%
2014	1300	4.00%
2013	1250	4.17%
2012	1200	3.45%
2011	1160	0.00%
2010	1160	10.48%
2009	1050	0.00%

Source: Knoema World Data Atlas

Egg Nutritional Value

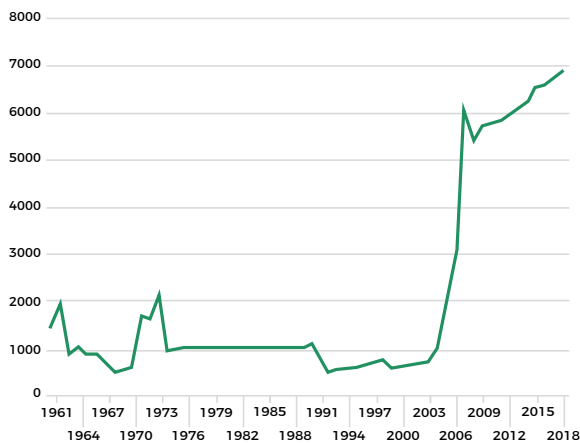
- A Large-sized egg supplies 12.6% of the Daily Reference Value (DRV) for protein. A little over half of the egg’s protein is in the white and the rest is in the yolk. The egg’s protein is the highest quality protein of any food. One egg of any size equals one ounce of lean meat, poultry, fish or seafood in the food groups.
- High-quality protein, like the protein in eggs, can benefit people of all ages in many ways, including forming muscle tissue, building muscle strength, repairing muscles after exercise and warding off the loss of muscle tissue as we age.
- Egg yolks are an excellent and important source of choline. A Large egg yolk contains 125 mg of choline and provides 23% of a pregnant woman’s daily needs. Choline intake during pregnancy may be a key factor in the development of infants’ memory functions and, later in life, choline may improve memory capacity.
- The yolk gets its colour from the yellow-orange plant pigments called lutein and zeaxanthin. Lutein and zeaxanthin have been shown to reduce the risks of cataracts and age-related macular degeneration, the leading cause of blindness in those 65 and older. A Large egg yolk contains 166 mcg of lutein and zeaxanthin.
- Incredibly, eggs are also a good source of vitamin B12 (10.8 % of the DRV) and riboflavin (14% of the RDI) and supply varying amounts of many other nutrients, including a wide variety of other vitamins and minerals. The yolk contains a higher percentage of the eggs’ vitamins than the white, including all of the eggs’ vitamins A, D and E. Egg yolks are one of the few foods that naturally contain vitamin D.

2.1.7. Bananas

In 2018, bananas production for eSwatini was 6,857 tonnes. Banana production in eSwatini increased from 520 tonnes in 1969 to 6,857 tonnes in 2018 growing at an average annual rate of 9.49%.

Banana production in eSwatini increased from 520 tonnes in 1969 to 6,857 tonnes in 2018 growing at an average annual rate of 9.49%

Figure 21: Banana production in eSwatini



DATE	VALUE	CHANGE,%
2018	6857	2.05%
2017	6719	2.08%
2016	6582	1.18%
2015	6505	4.94%
2014	6199	1.76%
2013	6122	2.03%
2012	6000	3.45%
2011	5800	0.87%
2010	5750	0.88%
2009	5700	6.68%
2008	5343	-10.95%

Source: Knoema World Data Atlas

The banana producers’ stakeholder forum comprises of United Plantations, Nisela, ESWADE, Kubuta among other banana producing co-ops. The industry is self-sufficient and most of its banana feed the export markets. The following was agreed upon at the National Agricultural Marketing Board (NAMBoard), Annual Report- 2017/2018in regard to the banana industry:

- Local banana market was dominated by imported banana which rendered small-scale banana producing companies not able to sell their banana in the country.
- Regional banana market was congested as most regional banana producers were back in production after recovery from the El Nino drought period. This situation made local banana producers to have a large unmoved stock of banana.
- The need for the National Agricultural Marketing Board to control borders for the large volumes of banana coming into country while there was ample supply locally.
- Local banana prices per crate was higher than prices from the region – southern Africa region (mostly Mozambique and South Africa).
- Small and emerging farmers were severely affected by the imports since they were only serving local market³⁰.

2.1.8. Groundnuts

In 2018, eSwatini supplied groundnuts (peanuts) worth 0.01m USD, an increase of -1800% from 2017’s total groundnuts (peanuts) exports value of 0.19m USD. The annual growth value of eSwatini groundnuts (peanuts) between 2017 to 2018 was -76%.

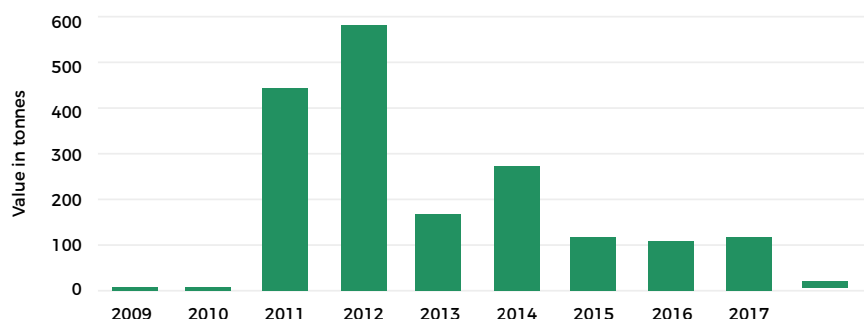
eSwatini sold 9 tonnes of groundnuts (peanuts) in 2018. The groundnuts (peanuts) exports are categorised as:

- Groundnuts, shelled, whether or not broken (excluding seed for sowing, roasted or otherwise cooked)
- Groundnuts, in shell (excluding seed for sowing, roasted or otherwise cooked)
- Shelled groundnuts, whether or not broken (excluding roasted or otherwise cooked)
- Groundnuts in shell, not roasted or otherwise cooked
- Groundnut seed, for sowing

In 2018, eSwatini supplied groundnuts (peanuts) worth 0.01m USD, an increase of -1800% from 2017’s total groundnuts (peanuts) exports value of 0.19m USD. The annual growth value of eSwatini groundnuts (peanuts) between 2017 to 2018 was -76%.

The annual change in the volume of eSwatini groundnuts (peanuts) between 2015 and 2018 was -1177.78 percent when compared to the growth rate between 2017 and 2018. eSwatini's share of the world's total groundnuts (peanuts) exports in 2018 was less than 1%.

Figure 22: 10-Year production cycle for Groundnuts in eSwatini



As seen in Figure 22, the 10-year production cycle for eSwatini ground nut has been moving in a negative direction, especially from the highs of 2011 and 2012.

2.1.9. Sweet Potatoes

The market potential for sweet potatoes, can be seen in table 34 and largely lies with the export market, according to TechnoServe's Industry Strategy Plan carried out in 2012³¹. There are currently no exports of sweet potato with almost all the market demand taken up by the informal markets. There is a potential local market for 60t/annum that local farmers can produce and supply. Based on reliable information, Shoprite indicated that they source up to 900kgs per week of white fleshed sweet potatoes throughout the year (equivalent to 46.8tonnes). This amount is what the retailer would be willing to purchase from farmers, based on table 34, should farmers be able to produce the required quality. The preferred variety is Ligwalagwala and Kenya White. These need to be supplied in crates. Beaugaurd is a variety that farmers could plant for the export market.

Table 34: Demand, Local Consumption and Exports of Sweet Potato

Agriculture Commodity	Market Demand (t/annum)	Farmer Production/ Supply to Market (t/annum)	Deficit (t/annum)
Sweet Potatoes ³²	600	540	60
	960 - RSA	0	960
	1 920 Europe	0	1 920

Source: ESWADE – Smallholder Market-led Project/Climate Smart Agriculture for Resilient Livelihoods

The market opportunity from Shoprite alone can be estimated to be E327,600.00 with other opportunities lying with the other major retail stores such as Pick n Pay (LoJaf) and OK Foods. Game Discount in Matsapha also purchases sweet potatoes from farmers in crates and suppliers to the retail stores such as Boxer. The value of the export opportunity, at a price of E3,000.00/t, would be E2.8 million for the South African market and E5.76 million for the European market³³.

There is potential for farmers to grow for export when assessing the figures presented in the table above and in that sweet potato farming is not new to farmers. The climate for sweet potato production in eSwatini is also favourable. Farmers would need to be sensitised on this opportunity and organised to meet this market demand. This would also require that they be

assisted to establish an apex organisation to organise production and marketing throughout the year. The apex organisation would need to collaborate with NAMBoard in order to access the external market.

Sweet potatoes can be processed into a puree for making bread, scones and buns. The potential for processing has been demonstrated by women-led cooperatives in Ludzeludze (Inzuzo Yemandla Etfu Multipurpose Cooperative) and Mbekelweni (Bambanani Bomake Multipurpose Cooperative). The farmers cook the potatoes and make them into a puree that is mixed with other ingredients and sold was to Pick n Pay to make bread, scones and buns using recipes developed by the Ministry of Agriculture's Home Economics section. This value addition intervention was driven by Taiwan Technical Mission and FAO to stimulate a market for the processed product as a new product to be offered rather than it being informed by market demand. The Cooperative received support from FAO towards the procurement of baking equipment (flour processing equipment and stoves) and used up structures owned by cooperative unions to carry out their operations.

Unfortunately, the existing machinery and equipment is insufficient as it had to be partitioned appropriately as well as be fitted with the appropriate electrical installations. The Ludzeludze cooperative had a market, but due to poor quality product, poor business management understanding and limited mentoring support on the value chain operations the cooperative lost a dough supply deal with Pick n Pay (commanding 2.6t of sweet potatoes a week) after the project ended.

Adequate product promotion was also lacking, including locating the operations where there is a higher consumer presence as opposed to being in the rural areas. Shiselweni region does have the potential to establish this operation due to the high production of sweet potatoes coming out of this area. A possible location would be closer to Hlathikhulu or Nhlangano towns.

2.2. Imports and Exports

The eSwatini economy is strongly linked to the South African Economy. eSwatini receives more than 90% of its imports from South Africa. Approximately 65% of its exports are traded in South Africa. Due to eSwatini having good resources, it makes them a favourable trading partner³⁴.

2.2.1. Regional integration³⁵

eSwatini is well integrated in the region and closely linked with neighbouring South Africa, its biggest trading partner. The country is a member of SADC (290 million people), the Common Monetary Area (CMA), SACU (60 million people) and the Common Market for Southern and East Africa (COMESA - 390 million people). Other key trading partners are the United States under the African Growth and Opportunity Act (AGOA) and the European Union (EU) under the Economic Partnership Agreement (EPA), both of whom accord eSwatini preferential trade terms. The country is a signatory to the 27-member state SADC-COMESA-East African Community (EAC) Tripartite Free Trade Area (TPA) agreement and also signed and ratified the Africa Continental Free Trade Area (AfCFTA) Treaty. On the Africa Regional Integration Index, eSwatini performs fairly in all dimensions. Overall, eSwatini is ranked 13th out of 20 members in COMESA (score 0.36) and ranked fifth in SADC (score of 0.52). In 2016, the country signed the World Trade Organization's (WTO) Agreement on Trade Facilitation although not yet implementing commitments in full. On the World Bank's 2020 Doing Business Report, eSwatini greatly improved on trading across borders dimension, from the rank of 127/189 in 2015 to the rank of 35/190, a good measure of progress on trade facilitation.

The SACU region, at about 66% market share (South Africa 60%), is the dominant export market for eSwatini's products. The US, EU and the Asian markets are also important export trading partners. In 2018, miscellaneous edibles (soft drink concentrates, caramel colour and sweets) constituted 48% of exports, followed by sugar (20%), textiles (13%) and wood (6%). The

The climate for sweet potato production in eSwatini is also favourable. Farmers would need to be sensitised on this opportunity and organised to meet this market demand. This would also require that they be assisted to establish an apex organisation to organise production and marketing throughout the year

SACU region is also the major source of imports for eSwatini, accounting for about 72% of the total (with South Africa dominating), followed by the Asian region (16%) and the Eurozone, Sub-Saharan Africa and North America (12% collectively). Inputs for domestic industries accounted for 33% of total imports, followed by final consumption goods (23%), food (15%) and fuel and capital goods (12%). High concentration in a few large markets and key products expose the country to external shocks, which buttresses the need for greater economic diversification. This is compounded by the country's limited influence in tariff policy setting under SACU due to slow operationalisation of the National Body as provided for under the SACU Agreement. The ineffectiveness of the National Body, responsible for carrying out preliminary investigations at country level and recommending any tariff changes necessary to the SACU Tariff Board, curtails eSwatini's ability to invoke SACU tariffs as a policy instrument for furthering national trade, industrial and economic development policy needs.

2.2.2. Intra-Africa trade profile for 2018

In 2018, eSwatini's exports to Africa were worth US\$1.7 billion, while imports from Africa were valued at US\$1.5 billion. Intra-Africa exports accounted for 93% of eSwatini's global exports, while intra-Africa imports accounted for 78% of eSwatini's world imports for 2018. Between 2017 and 2018, eSwatini's intra-Africa exports increased by 2%, while intra-Africa imports increased by 13%.

- In 2018, eSwatini's main intra-Africa export product was mixtures of odoriferous substances (an additive used in the food and beverage industry), accounting for 36% of eSwatini's total intra-African exports. However, exports of mixtures of odoriferous substances fell by 1% between 2017 and 2018.
- Other main intra-Africa export products were prepared binders for foundry moulds or cores accounting for 13% of total Africa exports, cane or beet sugar (13%), female suits (4%) and wood (3%). The top 10 intra-African export products accounted for 79% of eSwatini's total exports to the rest of Africa.
- In 2018, eSwatini's main destination market was South Africa – importing 74% of eSwatini's intra-Africa exports. Other main destinations were Kenya (5%), Mozambique (4%), Tanzania (2%) and Angola (2%). The top 10 destination markets had a combined intra-Africa export share of 96% in 2018.
- Petroleum oils (not crude) was eSwatini's main import product in 2018, accounting for 12% of eSwatini's total intra-Africa imports. Other main intra-Africa import products were electrical energy (3%), personal effects (2%), and goods vehicles (2%). The top 10 intra-Africa imports accounted for 28% of eSwatini's total intra-African imports.
- South Africa was eSwatini's main source market in 2018, accounting for 95% of eSwatini's imports from the rest of Africa. Other source markets included Mozambique (2%), Lesotho (1%), eSwatini (1%),¹ and Mauritius (1%). The top 10 source markets had a combined intra-Africa import share of 99% in 2018.
- In terms of total trade (exports + imports), South Africa was eSwatini's main trading partner, accounting for 84% of total trade, followed by Kenya (3%), Nigeria (3%), Mozambique (3%), Tanzania (1%) and Angola (1%).

Intra-Africa import tariffs

Most of the goods imported into eSwatini from other SADC member states enter duty-free. The only exceptions are sugar, second-hand clothes and original equipment components. African imports from outside SACU and SADC are levied the MFN applied duty which is the SACU common external tariff (CET). In 2018, 15% of eSwatini's intra-Africa exports were to the members outside SACU and SADC, while only 0.56% of its intra-African imports were from these countries.

In 2016, the country signed the World Trade Organization's (WTO) Agreement on Trade Facilitation although not yet implementing commitments in full. On the World Bank's 2020 Doing Business Report, eSwatini greatly improved on trading across borders dimension, from the rank of 127/189 in 2015 to the rank of 35/190, a good measure of progress on trade facilitation.

2.2.3. eSwatini trade figures (Imports & Exports)

As per Table 35, raw sugar is eSwatini's largest export. As seen from the table, eSwatini is not a significant exporter of agricultural goods, with pineapples, oranges and bananas the other primary agricultural products in the top 10 of the list.

Table 35: Top 20 Export Commodities for eSwatini – 2018

No	Commodity	Amount (Tonnes)
1	Sugar raw centrifugal	570,227
2	Food wastes	60,608
3	Sugar refined	45,642
4	Grapefruit (Including Pomelos)	20,195
5	Sugar Confectionery	19,019
6	Oranges	18,986
7	Fruit Prepared nes	9,180
8	Bananas	8,920
9	Sugar nes	8,567
10	Beverages, distilled alcoholic	8,144
11	Pineapples canned	6,396
12	Beverages, non-alcoholic	3,358
13	Nut prepared (Excl. groundnuts)	3,348
14	Plantation and Others	3,237
15	Cider etc.	2,703
16	Molasses	2,100
17	Lemon & Limes	1,825
18	Food Prep nes	1,746
19	Juice, pineapple concentrated	1,456
20	Chocolate products nes	1,299

Source: FAOSTAT

Table 36 shows the top twenty import commodities of eSwatini, with Maize by far being the most important for food security. Wheat, Milled Rice, Soybean cake, Barley and Potatoes are also in demand do due lack of local production.

Table 36: Top 20 Import Commodities for eSwatini – 2018

No	Commodity	Amount (Tonnes)
1	Maize	117 832
2	Wheat	47 730
3	Beverages, non-alcoholic	38 715
4	Milled rice	32 952
5	Soybean cake	28 837
6	Barley for beer	16 975
7	Glucose & Dextrose	16 542
8	Potatoes	11 142
9	Fresh milk	10 659
10	Food prep nes	9 946
11	Sunflower cake	8 038
12	Dry Beans	7 181
13	Breakfast cereals	6 188
14	Apples	6 142
15	Food wastes	6 095
16	Dry onion	5 481
17	Pastry	5 221
18	Bananas	5 073
19	Grapefruit	5 027
20	Cider etc.	4 882

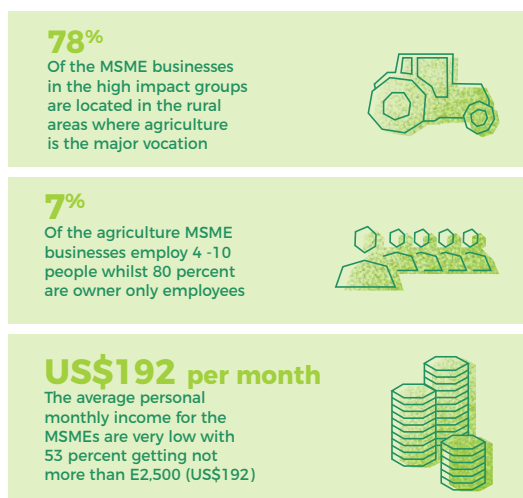
Source: FAOSTAT

2.3. Finance for Agriculture

The contribution of the agriculture sector to the GDP of the country has been declining from a high of 23 percent in 1980 to an estimated nine percent in 2016³⁶. To enhance the segmentation and targeting of the MSME businesses, the Centre for Financial Inclusion (CFI) is supporting the implementation of the Business development Measure (2017) to categorise the businesses to Least Developed (Low Impact), Emerging (Medium Impact) and the Most Developed (High Impact) businesses. Least developed businesses are characterised by low business sophistication (no employees, not licensed, no business records and no amenities) whilst the developed businesses have the business systems and strategy to respond to changing business environment. According to the FinScope MSME Swaziland Report (2017), 78 percent (See figure 23) of the MSME businesses in the high impact groups are located in the rural areas where agriculture is the major activity.

Although MSMEs in agriculture or farming are the second largest sector to wholesale or retail, the sector contributes the highest monthly turn-over at E134 million (US\$10.3 million). Only seven percent of the agriculture MSME businesses employ 4 -10 people whilst 80 percent are owner only employees. The average personal monthly income for the country's MSMEs is very low with 53 percent getting not more than E2,500 (US\$192), whilst seven percent reported to be making no income at all. Access to finance for the agriculture sector can improve employment at a comparatively lower capital cost than the bigger industries, and can address the inequitable imbalance between employ the rural and urban areas. Agriculture is one of the sectors that the Government of the Kingdom of eSwatini (GoE) has prioritised within the small and medium business enterprises, in order for this sector to contribute towards improved livelihoods and employment creation. According to the Kingdom of eSwatini Household Income & Expenditure (2010), only 4.2 percentage of local households could produce sufficient food for own consumption.

Figure 23: Showing 78% of MSME business, in high impact groups are located in rural agricultural areas



Source: Agriculture Finance Intervention (AFI) in the Kingdom of eSwatini, 2018

Even though important role of the small businesses as the key engine for economic growth is recognised, through the creation of employment opportunities, the lack of access to finance for these businesses has been identified as a key issue for the growth of the MSMEs.

Access to finance is the biggest challenge in the effort to promote the commercialisation and growth of the smallholder farmers. Access to finance for the smallholder farmers continues to be a major constraining factor for the development of the sector. At least 67 percent of the adults in the country live in the rural areas, where farming is a major vocation. Although 66 percent of the population is involved in farming but only three percent rely on farming as their main source of income (FinScope Swaziland, 2014). The Enterprise Surveys (World Bank, 2006) established that only 14.9 percent of the SME firms reported to have had bank loans for their businesses. However, this improved with the size of the firm, as 30.9 percent of the larger businesses had a loan. The IFAD (2011) asserted that although the local banks in the Kingdom of eSwatini are high on liquidity, the deposits were not being transformed to credit for the private sector. It further elaborates that lack of access to finance was a result of limited bankable projects, low business and financial management skills from the entrepreneurs, as well as the lack of capacity within the financial institutions staff to deal with the sector. In addition, information asymmetry from both the demand and supply side highlighted issues of imperfect information with the small and medium enterprises, which result in financial institutions opting for stringent mechanisms for loan approval. The lack of collateral and insufficient documentation also does not allow the lenders to appropriately assess the credit risks with each project³⁷.

2.4. Food and Nutritional Security

Food and nutrition security is the key pillar towards attaining the country's vision of a 1st World Status in 2022 the Malabo commitment of Zero hunger by 2025. The country has further committed to work towards achieving the Sustainable Development Goals where goal number 2 is targeting eliminating hunger by 2030 in the Global setting. The current situation in the country is such that food and nutrition security is mostly influenced by individual capacity to either produce their own food or access or afford quality and sufficient food all the time. Another key issue is that of food preparation and utilisation to nourish the body.

Although MSMEs in agriculture or farming are the second largest sector to wholesale or retail, the sector contributes the highest monthly turn-over at E134 million (US\$10.3 million).

eSwatini conducts an annual vulnerability assessment where the major issue is determining the level of food and nutrition security at national level through assessing the conditions at selected households across the country.

The availability and access to maize, a staple food in the country, is the major indicator of food security. The country produces 80 000 metric tonnes of maize on average against a national consumption requirement of 140 000 mt. This usually results in an estimated number of 20 000 to 40 000 exposed to food shortages and requiring emergency support to maintain their food security status. The high incidence of poverty where 28% of the population's labour force is unemployed and have no alternative income to buy food in cases of crop failure or during the lean season exacerbates the situation.

Food and nutrition security is more than just the production and access to staple food. It also relates more to diversified nutrition diet available and consumed by individuals at household level. Hygiene and sanitation at household and community level, Child feeding and ensuring availability of micronutrients is key to ensuring a holistic approach to food nutrition security.

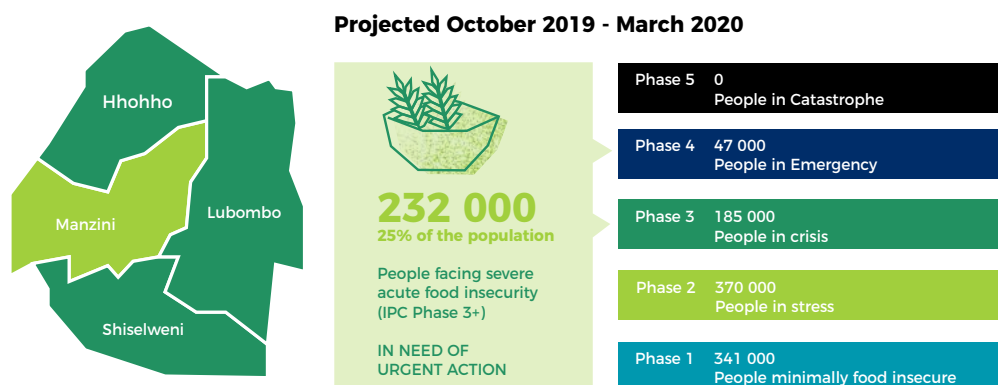
Key strategies that need to be implemented include:

- To improve knowledge and attitudes of the population on healthy eating and appropriate food choices.
- To increase the consumption of diversified foods across the lifecycle with more focus on the vulnerable groups such as infants & young children, adolescents, women of childbearing age and the ageing population.
- To improve the health environment within households in order to reduce the spread of infections within household and communities; and
- To promote income generation interventions to support other household nutritional needs³⁸

Between June and September 2019, it is estimated that over 200,000 people (20% of the rural population) are experiencing severe acute food insecurity and require urgent humanitarian action. Between October 2019 and March 2020, around 232,000 people (25% of the rural population) are estimated that they will likely experience severe acute food insecurity (See Figure 24), out of which an estimated 185,000 people will likely face a crisis situation (IPC Phase 3), and 47,000 people will likely be in an emergency situation (IPC Phase 4). Around 370,000 people will also be in a stressed situation (IPC Phase 2). Assuming that rainfall will be better in this year's rainy season, all regions will maintain the same phase classification in the projected period. However, it is likely that around 28,000 people will slip into Crisis (IPC Phase 3), since all households will run out of food stocks before the end of the year, and due to the usual increase in human and livestock disease outbreaks and crop pest incidences in the rainy season³⁹.

Food and nutrition security is more than just the production and access to staple food. It also relates more to diversified nutrition diet available and consumed by individuals at household level.

Figure 24: IPC Acute Food Insecurity



Source: VAC and IPC Technical Working Group, eSwatini⁴⁰

2.5. Impact of COVID-19

Impact of COVID-19 on Women's Customary Land Rights and Livelihoods in Southern Africa

In eSwatini, rural women farmers and artefact traders were equally impacted by the COVID-19 regulations and the restrictions on movement. Following the promulgation of the Corona Virus (COVID-19) Regulations 2020, the Ministry of Industry and Commerce prescribed essential services in terms of Section 23 (1) of the regulations. The list of essential services included "food and agriculture" as well as "retail and consumer goods suppliers" such as "food retailers, food outlets and farmers" as well as "those involved in the transportation, logistics and packaging" of these essential goods. The use of terms such as "retail" and "outlets" denoted formal trading spaces as opposed to vending stalls that are used by most rural women or the people that they supply their produce to in urban areas. In addition, most rural women use informal means of transport such as taxis to take their produce to the markets as opposed to the formal transportation and logistics routes that were envisaged by the legislation. As a result, many rural women farmers were stuck with their produce during the COVID-19 outbreak as the movement of people and taxis were both constrained during the period. The Swaziland Rural Women Assembly highlighted some of the challenges that rural women farmers in eSwatini were experiencing as a result of COVID-19 and the attendant regulations and restrictions. Many of them were stuck with their produce because of limited movements, especially in the Shiselweni region where they farm sweet potatoes and sell in Manzini.

The Swaziland Rural Women Assembly also reported that some of the women in the country sell their produce at the bus stations in the main cities but were unable to do so as a result of the lockdown. Some also feared COVID-19 infection as they did not have personal protective equipment to protect themselves, and therefore decided not to venture out to sell at their usual points. Under normal circumstances, some of the women distribute and sell their produce on credit and collect their money at the end of the month when urban workers receive their monthly salaries. The initial lockdown in eSwatini came towards the end of the month in March 2020 and many of the women were unable to travel to the urban areas to collect their money. The Swaziland Rural Women Assembly reported that this impacted the women's household incomes, leading to domestic violence as family members, especially men demanded food, which the women were unable to provide. The impact of the lockdown in this case therefore went beyond loss of income for the rural women farmers, but also had secondary effects in the form of domestic violence⁴¹.

The Swaziland Rural Women Assembly highlighted some of the challenges that rural women farmers in eSwatini were experiencing as a result of COVID-19 and the attendant regulations and restrictions. Many of them were stuck with their produce because of limited movements, especially in the Shiselweni region where they farm sweet potatoes and sell in Manzini.

2.6. Public Institutional, Legal, Regulatory, and Policy Framework

Table 37: Public institutions governing and serving agricultural value chains in eSwatini

Department	Responsibilities	Relevant Information
Ministry of Agriculture		
NAMBoard	<p>NAMBoard has two main units to help small scale farmers. These are the FSDU and the Encabeni Fresh Produce Market:</p> <ul style="list-style-type: none"> • Logistic Support • Quality Assurance • Cold Chain Management • Training – farmers are trained on production methodology, pest and disease control, irrigation management, quality assurance, harvesting and post-harvest handling; • Information dissemination – This includes price trends, production innovations, future demand, changes in consumer preferences and further training opportunities; and • Linking the markets and farmers - provide the farmers with information on when to harvest, collection schedules from Encabeni fresh produce market and follow up on payments due to farmers. 	
ESWADE	<ul style="list-style-type: none"> • Government parastatal mandated to assist small holder farmers. The eSwatini Water and Agricultural Development Enterprise is a government company established by the Government of eSwatini in 1999 to facilitate the planning and implementation of the Komati Downstream development Project (KDDP) and Lower Usuthu Smallholder Irrigation Project (LUSIP) and any other large water and agricultural development project. • Facilitate development, project implementation and management rather than participate. This allows for the benefiting communities to participate fully and largely control the development in their areas. • The ESWADE projects teams are composed of multi-disciplinary personnel, advisors and trainers who ensure that the development is holistic at all times. • Own marketing division known as LnL Management Unit which helps farmers with extension and marketing expertise. • Small-scale farmers and co-ops can be part of the farmer business support scheme administered through ESWADE which provides extension services and access to packhouse facilities. 	

Department	Responsibilities	Relevant Information
Veterinary & Livestock Production Services	<ul style="list-style-type: none"> Commercialisation of beef, dairy, poultry, pig and goat production. Encourage diversified livestock production Promote proper management of farm animal genetic resources. Encourage conservation, improvement and utilisation of indigenous livestock resources. Promote proper management of grazing lands and monitor range resource utilisation. Facilitate marketing and trade of livestock and livestock products. Strengthen marketing information and information systems Improve access to finance and credit for farmers Promote development of agro- based industry through value addition initiatives. 	<ul style="list-style-type: none"> The Animal Disease Act, 1965 Veterinary Public Health Act, 2013 Stock Diseases Regulations, 1933 Livestock Development Policy, 1995 APD-DVLS Annual Report 2015 DVLS Livestock Census Summary 2017 FMD Expert Mission 2013 GNVS April 2013 Legal Notice 35_2006 Zeranol Notifiable Diseases 0001 PVS- Final Report-Swaziland 2007 (1) The Cruelty To Animal Act Veterinary Drugs Regulation gazette 0001
Agricultural & Extension Services		
Fisheries Development	<ul style="list-style-type: none"> Attract and retain highly skilled professionals in the fisheries science Provide a staffing that will ensure effective and efficient performance of the Fisheries Science. Promote an efficient, effective and sustainable fish farming industry. Ensure the protection of the fisheries resources Develop and conduct fisheries research programmes on aquaculture and fisheries management (e.g., fish surveys, exploitation in the country's water bodies, screening of potential aquaculture species, water ecology and fish biology) <p>Promotion of ecotourism⁴²</p>	
Economic Planning & Analysis Division	<ul style="list-style-type: none"> Planning and Budgeting Monitoring and Evaluation Marketing Advisory Unit (MAU) National Early Warning Unit (NEWU) Rural Sociology Unit 	

Department	Responsibilities	Relevant Information
Agricultural Research and Specialists	<ul style="list-style-type: none"> • Identification of adaptable crop varieties that can be grown successfully in the different agro-ecological zones of the country. • Identification of the most efficient crop production methods. • Screening and identification of cost-effective fertiliser/ manure material and their best application practices across the country. • Development and identification of cost effective, user and environmentally friendly crop protection technologies. • Development of appropriate water management practices in crop production to minimise the adverse effects of drought. • Implementation of phytosanitary, quarantine and food safety measures. • Collection, conservation and characterisation of cultivated crops and their indigenous relatives. • Analysis of food safety and development. • Monitoring of plant health and risk surveillance.⁴³ <p>Services offered:</p> <ul style="list-style-type: none"> • Cereals Agronomy • Horticulture Section • Soil Fertility and Plant Nutrition • General Entomology Section • Food Science and Technology Section • The Socio - Economic Section • Plant Pathology Section • Cotton Breeding Service • Grain Legumes Section • Roots and Tubers Section • Weed Science Service • National Plant Genetic Resource • Irrigation Agronomy Section 	
Home Economics	<ul style="list-style-type: none"> • Business Management and Leadership Skills • Child Care and Development Section • Food Security and Nutrition Section • home Management, Sanitation and Hygiene • Information communication • Skills development for income generation • Business Management and Leadership Skills⁴⁴ 	

Department	Responsibilities	Relevant Information
Ministry of Natural Resources and Energy		
Property Evaluation ⁴⁵	<ul style="list-style-type: none"> • Providing Real Estate consultancy services to all government departments; • Monitoring the Valuation profession in the kingdom to meet international standards; 	
Land Administration ⁴⁶	<ul style="list-style-type: none"> • Minister (Section 10 of the Subdivision of Land Act, 1957) the Minister has power to decide appeals by any person whose application for subdivision of land has been refused by the Natural Resources Board. • The Natural Resources Board (Section 3 of the Natural Resources Act, 1951) • The Land Control Board (Section 3 of the Land Speculation Control Act, 1972) • The Land Control Appeals Board (Section 3 of the Land Speculation Control Act, 1972) • The Central Farm Dwellers Tribunal (Farm Dwellers Control Act, 1982) • The District Farm Dwellers Tribunal for each district (Section 7 of the Farm Dwellers Control Act, 1982). 	
Surveyor General ⁴⁷	<ul style="list-style-type: none"> • Provide a high standard of advice to government departments and others on all surveying and mapping matters. • Fulfil efficiently all statutory requirements to supervise and control surveys of land for registration purposes. • Provide surveying services to the eSwatini Government to effectively support the development and management of its land. • Maintain and make available accurate and up-to-date mapping services to meet the needs of the nation. • Maintain the survey control frameworks of eSwatini which underpin the development of the nation. 	
Department of Water Affairs (DWA) ⁴⁸	<ul style="list-style-type: none"> • The Water Resources Section – management and development of surface resources which includes the development of dams, monitoring river flows and the control of water pollution. • The Rural Water Supply Section- design, construction and maintenance of rural water schemes. • The Hydrogeology and Drilling Section – exploration, drilling and management of groundwater resources. 	Swaziland Water and Agricultural Development Enterprise (SWADE) Swaziland Water Services Corporation (SWSC)

Department	Responsibilities	Relevant Information
Geological Survey⁴⁹	<ul style="list-style-type: none"> • Research on major groundwater systems (aquifers) of eSwatini. • Groundwater resources assessment and monitoring changes in groundwater levels and quality. • Advice on the protection of groundwater resources from pollution. • Advises on investigations, management and planning of the use of groundwater resources in eSwatini. • Disseminates hydrogeological information to interested parties. • Administers the country's Boreholes Regulation of 1995. • Maintains an updated database of boreholes and wells in eSwatini. 	
Conveyancing⁵⁰	<ul style="list-style-type: none"> • Research in the Deeds Registry -information about property, its owner and holding title deed, etc. • Documentation to support transactions (diagrams of property from the Surveyor General, Rates Clearance Certificates and Certificate of Payment of Dues from local authorities). • Advising Ministries on agreements relating to land (Deeds of Sale, Deeds of Donation, Deeds of Exchange). • Preparing deeds and documents for execution and /or registration in the Deeds Registry, including Powers of Attorney to Pass Transfer, Deeds of Donation, Deeds of Exchange, Applications for certified copies of lost title deeds, Applications for Certificates of Registered Title, Applications for Certificates of Consolidated Title, Certificates of Registered Title, Certificates of Consolidated Title, Deeds of Transfer; • Signature of deeds, documents and applications by Ministers; • Lodging deeds, documents and applications for execution and registration in the Deeds Registry; • Appearing before the Registrar of Deeds to execute Deeds of Transfer; • Hold custody of all title deeds registered in favour of Government, His Majesty the King and Ingwenyama in trust for the Swazi Nation. 	
Deeds⁵¹	<ul style="list-style-type: none"> • Examine all Deeds or other documents submitted for execution or registration, and, after examination execute or register them as by law permitted. • Take charge of and preserve all the records of the Deeds Registry in a document processing system that will provide an effective storage and retrieval system as well as maximum safety and security. 	

Table 38: Other important departments

Other Important Departments		
Deputy Prime Minister’s Office	<ul style="list-style-type: none"> National Disaster Management Agency (NDMA) Disaster Management Agency (DPMO) 	<p>Specific objectives:</p> <ul style="list-style-type: none"> Strengthen Disaster Risk Reduction governance, legal and institutional framework at all levels Identify and monitor national risks, enhance early warning systems, and establish DRR programming Strengthen Research, information and Knowledge management on disaster risk management Promote disaster risk reduction as a National Priority and Strengthen its Coordination
<ul style="list-style-type: none"> Dept of Gender & Family Issues 		<p>Responsibility areas:</p> <ul style="list-style-type: none"> Family and Socialisation, Poverty and Economic Empowerment; Health, Re-productive Rights and HIV/AIDS; Education and Training; Legal and Human Rights; Politics and Decision Making, Gender Based Violence; Information, Communication and Arts, Environment and Natural Resources

Table 39: Key development policies and laws in eSwatini

Focus	Content
Economy-wide growth and development	<p>eSwatini National Development Strategy (NDS) 1997-2022</p> <p>Provides a set of social and economic strategies for the 25-year period 1997-2022 that have been further analysed, refined and detailed in the 2008 Poverty Reduction Strategy and Action Plan (PRSAP). The PRSAP envisages an intensified effort on the commercialisation of Swazi Nation Land (SNL), where most the country’s population resides, and especially to organise farmers into efficiently run groups, to channel extension services to them, and to provide marketing information. It is furthermore recognised that there is significant underproduction on SNL, which contributes only about 6% to the country’s GDP. The National Development Strategy (NDS) has focal areas:</p> <ul style="list-style-type: none"> Sound economic management and empowerment; Human resources and agricultural development and; Industrialisation, research, and environmental management. <p>The need for safe and sustainable environmental management is understood as paramount. The NDS has a key focus on agriculture, land and rural development and stresses the need for food security, research and to generate employment opportunities, especially for the disadvantaged smallholder farmers⁵².</p>

Focus	Content
	<p>National Development Plan (NDP) 2019/20 – 2021/22</p> <p>The key objectives of the National Development strategy are:</p> <ul style="list-style-type: none"> • Promote equality and empower women • Develop global partnership for development • Eradicate extreme poverty and hunger • Achieve universal primary education • Reduce child mortality • Improve maternal health • Combat HIV / AIDS malaria and other diseases • Ensure environmental sustainability⁵³ <p>The Kingdom of eSwatini Strategic Road Map: 2019-2022⁵⁴</p> <p>The Kingdom of eSwatini faces a number of challenges that need to be addressed to ensure economic growth & stability, these being:</p> <ul style="list-style-type: none"> • Widening Fiscal Deficit • Declining Growth Rate • Low Ranking on Ease of Doing Business <p>The key factors required for the Government to successfully implement the Strategic Road Map were identified as:</p> <ul style="list-style-type: none"> • Rapid policy response is required to deliver the strategic road map • Collaboration & response to deliver a social safety net • Promotion of Information, communication & technology • Accountability to its citizens • Outcome oriented • Focus on private sector growth • Commit to streamlining & re-prioritising Government expenditure <p>Other Policies of Importance are listed below:</p> <ul style="list-style-type: none"> • The Strategy for Sustainable Development and Inclusive Growth (SSDIG) • Post COVID-19 Economic Recovery Plan • National Water Policy – August 2018 • Land Act, 1999 • Food Security Policy • Food and Nutrition Strategy
Agricultural Specific	<p>Enhancing agribusiness and agro-processing is one key area if the economy is to be linked up with the global value chains in the medium- to long-term. The value of agricultural and forestry products will be greatly increased by processing them rather than exporting them in raw forms. Without greater value-addition, it will be challenging for the economy of eSwatini to increase incomes, create decent jobs and wealth and enhance the role of the private sector in the economy.</p> <p>To be able to achieve these, it will require new skills, technology, infrastructure and a climate that supports the growth of industries, entrepreneurship, and that can attract foreign investments. Growth in agro-business and agro-processing will no doubt support vibrant entrepreneurial activities by the youth, as well as the expansion of micro, small and medium enterprises (MSMEs)⁵⁵.</p>

Focus	Content
	<p data-bbox="549 266 1054 293">Ministry of agriculture strategic plan (2018- 2023)</p> <p data-bbox="549 320 868 347">Priority Livestock Value Chains</p> <ul data-bbox="549 374 1353 898" style="list-style-type: none"> <li data-bbox="549 374 683 400">• Beef cattle <ul data-bbox="596 414 1353 663" style="list-style-type: none"> <li data-bbox="596 414 1353 472">» Implementation of Institutional arrangements for sustainable rangeland management <li data-bbox="596 486 1238 512">» Strengthen beef cattle breeding & improvement programmes <li data-bbox="596 526 1083 553">» Upscale feed & fodder production & utilisation <li data-bbox="596 566 1083 593">» Improvement of marketing in beef value chain <li data-bbox="596 607 1353 663">» Strengthen animal health & veterinary support services to combat animal diseases & improve food safety standards <li data-bbox="549 676 868 703">• Goat production & marketing <li data-bbox="549 716 794 743">• Pig & pork production <li data-bbox="549 757 762 784">• Poultry production <li data-bbox="549 797 778 824">• Fisheries production <li data-bbox="549 837 820 864">• Bee & Honey production <li data-bbox="549 878 868 904">• Dairy production & marketing <p data-bbox="549 931 663 958">Field Crops</p> <ul data-bbox="549 985 1406 1758" style="list-style-type: none"> <li data-bbox="549 985 932 1012">• Sugar cane production & processing <ul data-bbox="596 1025 1406 1326" style="list-style-type: none"> <li data-bbox="596 1025 1406 1084">» Explore bilateral & regional markets to export the country's sugar product at competitive prices <li data-bbox="596 1097 1353 1155">» Explore further processing & value chain addition to local sugar into more value-add products <li data-bbox="596 1169 1406 1258">» Support establishment of enabling environment for profitable utilisation of sugar cane by-products & marketing for beneficiation of all players in value chain <li data-bbox="596 1272 1353 1326">» Improve water efficiency in sugar cane production & support initiatives for reinvestment in water resources to ensure water security in the industry <li data-bbox="549 1339 916 1366">• Maize production and other grains <ul data-bbox="596 1379 1406 1758" style="list-style-type: none"> <li data-bbox="596 1379 1331 1406">» Improve soil fertility through proper use of fertilisers & improved access <li data-bbox="596 1420 1406 1478">» Improve access to affordable & improved seed varieties through strengthening of maize seed value chain <li data-bbox="596 1491 1406 1550">» Improve the value chain to reduce post-harvest losses through supporting establishment of aggregation and processing enterprises at community level <li data-bbox="596 1563 1331 1621">» Improve the management efficiency of the tractor hire service and input subsidy programme <li data-bbox="596 1635 1406 1693">» Conduct research for adoption & adaptation of short maturing maize varieties which are high yielding & drought tolerant <li data-bbox="596 1706 1406 1758">» Conduct research to improve agronomic practices such as land preparation, planting strategy, crop timing, within climate variability

Focus	Content
	<ul style="list-style-type: none"> » Increase utilisation of fallow lands on SNL through organised engagement with communities » Promote contract farming for maize under irrigated agriculture » Promote production of yellow maize for animal feeder & fodder purposes » Improve the outreach & efficiency of extension services for targeted producers <ul style="list-style-type: none"> • Beans <ul style="list-style-type: none"> » Increase production & access to bean seed through promoting bean seed multiplication & marketing » Promote expansion of bean production through mixed cropping & expansion to fallow lands » Promote improved technologies to reduce post-harvest losses & mechanisation » Promote aggregation & collective marketing of produce » Conduct research on improved seed varieties & agronomic practices to enhance yields » Prioritise irrigation development for bean production • Groundnuts <ul style="list-style-type: none"> » Support investment in groundnuts processing facilities & strengthen active participation of women groups » Build capacity of all actors in the value chain to improve productivity & value addition, including yields, pests and disease control » Improve access to affordable seed <p>Horticulture Production</p> <ul style="list-style-type: none"> • Conventional vegetables – Most common products include cabbages, lettuce, broccoli, tomatoes, potatoes, peppers, onions and butter nuts. The local demand for these fresh vegetables is imported from neighbouring countries. <ul style="list-style-type: none"> » Need to build capacity of local producers to produce quality produce for the market » Need to invest in packaging & processing facilities to add value & reduce post-harvest losses » Need for the availability and accessibility to good quality plant material & inputs • Baby vegetables – mainly produced by emerging and large-scale producers who have the technology to manage high value products, which are mainly for export. eSwatini has the potential to increase the production & marketing of these hi-tech products through protected and irrigated agriculture. Capacity building and providing investment support for infrastructure development for production and marketing finance are the biggest challenges faced. • Fruit – This sector has been promoted heavily in the past 5 years to implement a fruit tree planting project where more than 10 000 fruit trees have been planted annually in individual households. Traditional, eSwatini has been known for the production of citrus fruits, pineapples and bananas. Other fruits such as avocado, pitaya, mangoes and paw-paw must also be pursued.

Focus	Content
	<p>Development of this sub-sector will be addressed in the following ways:</p> <ul style="list-style-type: none"> • Promote & support infrastructure development targeted for irrigation of horticulture products • Build capacity & knowledge on protected agriculture • Improve surveillance & monitoring of pests & diseases for horticultural products, especially fruits • Invest in establishment of facilities for production of disease-free tissue culture for various horticultural products • Improve availability & access to planting material for horticulture products including the investment in establishing nurseries • Promote & support establishment of large-scale orchards for fruit production to act as anchor farms for processing enterprises • Promote & support investment in establishment of processing facilities for various fruits & vegetable products • Build capacity & improve extension support for targeted producers under specific horticulture value chain products • Invest in construction and operation of produce aggregation centres (pack houses) in strategic locations • Conduct research on desirable horticulture product varieties for fresh consumption and for processing purposes • Conduct research on pests & disease control measures & tolerant varieties to the various agro-ecological regions of the country • Establish out-grower production model to facilitate smallholder farmer linkages to existing & future horticulture production & marketing • Engage financial institutions to establish minimum risk credit products for horticulture producers and traders • Cotton – Cotton used to be the most lucrative for farmers situated in the dry areas of the country. The number of farmers and production quantities have been declining over the past years and this sector is struggling to optimise the supply of cotton to operate the cotton ginnery. For this reason, the Swaziland Cotton Board is actively trying to rejuvenate this sector. The existence of the ginnery and the active textile industry in eSwatini are strong incentives to re-develop this sub-sector again. <p>The following strategies are recommended to uplift the cotton industry:</p> <ul style="list-style-type: none"> • The adoption of improved seed technologies to improve production & productivity • Increase area under cotton production to meet the demand of the ginnery through leasing and or contracting large scale producers • Provide support services to smallholder producers • Improve marketing & value addition for cotton products <p>The review and update of the Livestock Development Policy (LDP) of 1995 - It proposes that the livestock sector should strive to achieve an efficient and sustainable industry that is capable of meeting the needs of local and international markets.</p>

Focus	Content
	<p>Swaziland National Agriculture Investment Plan (SNAIP) - Comprehensive African Agricultural Development Programme (CAADP), finalised with EU support (2015), promote the development of a sector wide approach in the agricultural sector and provides the investment framework for which the 11th EDF is a key catalyst. Government and donor funded projects collectively work together towards the attainment of the SNAIP objectives, private sector investment need to be attracted in order to deliver SNAIP objectives in full⁵⁶.</p> <p>Commercialisation of Agriculture Land Bill - is in preparation for years, it is unlikely to be acted soon, hence the prevailing land tenure is: (i) freehold known as Title Deed Land (TDL) on around 40% of the land; and (ii) Swazi Nation Land (SNL) on for 60% of the land, held in trust by the King for the Swazi Nation. TDL is mainly used for commercial farming with significant areas under irrigation, whilst SNL is mainly used for rainfed cropping and grazing. SNL cropland is allocated by the chiefs to individual households while SNL grazing land is communal.</p> <p>Financial Inclusion Strategy (2018) - The importance of the numerous MSMEs in the country for developing its economy and addressing poverty challenges particularly in rural areas. About 26% of MSMEs are involved in agriculture. eSwatini has a moderately well-developed commercial banking sector, yet most firms, including SMEs, have limited opportunities to access commercial financing for investment and working capital. Poor business and financial literacy of entrepreneurs, a lack of information and experience in assessing SMEs outside of the sugar sector in financial institutions limit access to finance, and the strategy aims to address these⁵⁷.</p> <p>11th EDF National Indicative Programme (2014-2020) is to address the institutional, production and marketing challenges holding back eSwatini agriculture potential, building on previous interventions and promoting environmentally-sound climate change-adapted agricultural practices. The EDF¹¹ NIP relates to the EU Agenda for Change emphasis on smallholder agriculture and rural livelihoods, formation of producer groups, and the supply and marketing chain.</p> <p>Livestock Development Strategy for Africa (LiDeSa), 2015 – 2035, African Union, Inter-African Bureau for Animal Resources (AU-IBAR) has been subscribed to by the Government of eSwatini and has the goal of transforming the African livestock sector for enhanced contribution to socio-economic development and equitable growth by:</p> <ul style="list-style-type: none"> • Attracting public and private investments along the different livestock value chains; • Enhancing animal health and increasing the production, productivity, and the resilience of livestock production systems; • Enhancing innovation, generation and utilisation of technologies, capacities and entrepreneurship skills of livestock value chain actors; and • Enhancing access to markets, services and value addition. <p>Other Policies of Importance</p> <ul style="list-style-type: none"> • The Comprehensive Agriculture Sector Policy (2005); and • The National Food Security Policy for Swaziland (2005).

Focus	Content
Other major Agencies and Trade Alliances	<p>AGOA - eSwatini has been re-admitted to the Africa Growth and Opportunity Act (AGOA) and is among the countries that benefit from AGOA, a trade initiative by the US Government for Sub-Saharan Africa. This initiative enables products from qualifying countries to be imported into the US Duty Free Quota Free. AGOA III came into force in 2004, and benefits to eligible countries have been enhanced by the extension to 2012 of the Third Country Fabric Provision, which allows raw materials to be sourced from third parties. The take-on by the private sector since re-admittance has been slow and the economic slowdown has not made it easy for private companies to resume taking advantage of the US market.</p> <p>SACU - The Southern African Customs Union (SACU) continues to be the key economic integration agreement with more than 60 per cent of the country's exports destined for the customs area while over 80 per cent of imports originate from this market. Further, eSwatini's revenue receipts from the SACU revenue pool contribute more than half to annual fiscal revenues, boosting the country's official reserves and contributing significantly to the financing of the country's balance of payments.</p> <p>COMESA - Negotiations for the Tripartite FTA were first discussed when the Heads of State and Government of COMESA, EAC and SADC met in Kampala on 22nd October 2008, where they conveyed their message through a communiqué. They called for the establishment of a single Free Trade Area covering the 26 countries of COMESA, Eastern African Community (EAC) and SADC. These are 26 out of the 54 countries that make up the continent of Africa. The Tripartite was launched with three main pillars, namely: the market integration, industrial development, and infrastructure development pillar.</p> <p>SADC - The Southern African Development Community (SADC) is a Regional Economic Community comprising 16 Member States; Angola, Botswana, Comoros, Democratic Republic of Congo, eSwatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe.</p> <p>EU - The European Union is a political and economic union of 27 member states that are located primarily in Europe. Its members have a combined area of 4,233,255.3 km² and an estimated total population of about 447 million⁵⁸.</p> <p>EPA - The Environmental Protection Agency is an independent executive agency of the United States federal government tasked with environmental protection matters.</p> <p>TPA - A legislative procedure, written by Congress, through which Congress defines U.S. negotiating objectives and spells out a detailed oversight and consultation process for during trade negotiations.</p> <p>AfCFTA - The African Continental Free Trade Agreement (AfCFTA) was signed by 44 African countries in Kigali, Rwanda, in March 2018. The agreement creates a single continental market for goods and services as well as a customs union with free movement of capital and business travellers. Five more countries signed the AfCFTA at the African Union (AU) summit in Mauritania in June, bringing the total number of countries committing to the agreement to 49 by July's end.</p>

Focus	Content
	<p>CMA - The CMA, an important anchor for monetary policy for eSwatini, continued to play its role in influencing monetary developments in eSwatini. In 2018 the Governors of the CMA held three meetings on a rotational hosting basis. In these meetings and as customary the main agenda item was the progress in the four member countries, eSwatini, Lesotho, Namibia and South Africa. Other standing issues discussed were the common risks and challenges confronting member countries, performance of the countries against policy guidelines as well as updates on exchange controls, progress on the revised Multilateral Monetary Agreement and cross border oversight committee. Another issue that the CMA dealt with during the year was the idea of drawing up a financial stability map for the CMA.</p> <p>FTA - The SADC Free Trade Area (FTA) came into effect on 1st January 2008 and it was launched in August of the same year. Since 1st January 2008, trade among SADC member states has been 85 per cent duty free, with the remaining 15 per cent including sensitive products and exclusion lists for member states' schedules of commitments to the FTA. Some of the benefits of SADC/FTA include the reduction and elimination of tariffs and non-tariff barriers, easy cross-border trade, growing market opportunities, the creation of a value chain across the region, the lowering of input costs, creating regional competition to reduce consumer prices, and the possible increase of employment opportunities.</p> <p>GSP - Generalised System of Preference. The kingdom of eSwatini is a beneficiary of the Generalised System of Preference (GSP) scheme, which provides for goods that originate from developing countries to be imported into industrialised countries at reduced customs duty. The countries that grant GSP include some of the European Union (EU) member states, US, Canada, Japan, Australia, Russia and New Zealand. A wide range of export products from eSwatini enjoys market access through the GSP scheme.</p> <p>SACU-EFTA FTA - eSwatini is party to other trade arrangements under SACU, with third party configurations. These include the SACU-EFTA (European Free Trade Association), which comprises Norway, Switzerland, Iceland and Liechtenstein. The EFTA agreement has been ratified by all member states and became operational in May 2008.</p> <p>SACU-MERCOSUR PT - The other agreement at SACU level is the SACU- MERCOSUR (Common Markets of the South) Preferential Trade Agreement with Brazil, Argentina, Uruguay and Paraguay, which came into force in 2016 after ratification by all Parties</p> <p>SACU-India Preferential Trade Agreement - SACU-India, negotiations are ongoing, requests and offers have been exchanged between the parties.</p>
	<p>SACU-United States Trade Investment and Development Cooperation Agreement (TIDCA) - SACU-United States TIDCA (Trade, Investment and Development Cooperation Agreement), this is an agreement on possible areas of cooperation such as Customs and Trade Facilitation, Standards and Technical Barriers to Trade, Sanitary and Phytosanitary measures, trade and investment promotion and technical capacity building.</p> <p>SADC-EU Economic Partnership Agreement - SADC has concluded negotiating an Economic Partnership Agreement with the European Union. Other members of the SADC/EPA configuration include Angola, Botswana, Lesotho, Mozambique Namibia and South Africa. Challenges to be faced are the exiting of the UK from the EU⁵⁹.</p>

2.7. Development Partners, Organisations, and Initiatives

Table 40: Major international development agencies' agriculture-related programmes and projects in eSwatini

Agency, Programme, Dates	Funding (US\$m)	Description
Komati Downstream Development Project (KDDP) 2002-2015	Government of eSwatini, AfDB and EU SZL1012 (US\$111)	Located at Tshaneni in the north eastern part of the country. To provide water for the irrigation of crops and rearing of livestock for the surrounding communities. The project has developed about 5 206 hectares, for sugarcane and other crops production. The source of water is the Maguga Dam. Typology: Small scale irrigation development (70%) and others (30%)
Lower Usuthu Smallholder Irrigation Project (LUSIP) Phase 1 2004-2016	Government of eSwatini, IFAD, OPEC and GEF SZL3472 (US\$563)	Lowveld of eSwatini and areas around Siphofaneni. Known as LUSIP Phase 1. Aim to reduce poverty levels by transforming the local economy from subsistence farming to sustainable, irrigated, commercial agriculture. This phase of development is intended deliver water to 3 357 hectares of irrigated land. The source of water is the Lubovane Dam. Typology: Small scale irrigation development (70%) and others (30%)
Mdzimba Producers Multi-Purpose Cooperative Society (Ltd) 2014-2015	Government of eSwatini SZL0.5 (US\$0.047)	Middle-veld part of the country. Irrigation infrastructure to 27 farmers at the Malkerns area for vegetable and livestock production. Aim to provide water to about 270ha for irrigation. Typology: Small scale irrigation development (65%) and others (35%)
Earth Dam Construction Project 2014-2018	Government of eSwatini SZL1.84 (US\$0.17)	Located in the low rainfall areas. To provide water for irrigation to about 1 hectare of land for vegetable production once a dam has been constructed. Target to construct at least 5 medium sized earth dams per annum, with one dam irrigating about 1 hectare. Typology: Small scale irrigation development (30%) and others (70%)
Climate Smart Agriculture Project 2014-2015	Government of eSwatini and COMESA SZL4.005 (US\$0.38)	Located among areas such as Mpatheni, Nhletjeni and Nkhungwini that have farming schemes. Designed to rehabilitate pack and farmhouses to upscale vegetable and to convert existing or primitive irrigation system over 52 hectares. Typology: Rehabilitation and modernisation of irrigation scheme (47%) and others (53%)
Water and Irrigation Development Project at Sigangeni, Mpuluzi and Gege. 2010-2016	Government of eSwatini SZL147.5 (US\$20.9)	Government of eSwatini initiative to harness water for irrigation development and other farming activities at Sigangeni, Mpuluzi, Gege, Ngcoseni, Maseyisini and Nyamane. Involves the construction of medium sized earth dams and downstream irrigation development, deliver water for irrigation to about 205 hectares. Typology: Small scale irrigation development (90%) and others (10%)

Agency, Programme, Dates	Funding (US\$m)	Description
SADP Dam Rehabilitation and SADP DAM Rehabilitation and Construction 2012-2014	European Union Euro1.1 (US\$1.4)	The rehabilitation of three earth dams and construction of an earth dam, weir and borehole for irrigation development on all sites. Involves the rehabilitation of three earth dams and construction of an earth dam, weir and borehole for irrigation development on all sites. Typology: Rehabilitation and modernisation of irrigation schemes (100%)
SADP Food and Nutrition Garden 2013-2014	EU Euro0.141(US\$0.19)	Assists households with 7m x 7m garden materials including a 5000L water harvest tank for irrigation. This project supports about 800 households to provide water for the irrigation of to about 3.92 hectares combined. Typology: Small scale irrigation development (100%)
Purchase of Heavy Plant and Earth Dam Construction Equipment 2009-2015	Government of eSwatini and Taiwan SZL259.6 (US\$34)	The purchase of heavy plant material for construction of small and medium earth dams for irrigation development among local communities in eSwatini. Dams located among high to medium rainfall areas in the country. Typology: Small scale irrigation development (100%)
Madwaleni Community Irrigation Scheme 2014-2015	World Vision USA and EU Euro0.0064 (US\$0.0078)	This project is located at Maseyisini in the Shiselweni region. The project provides water for irrigation development which is meant for commercial vegetable production. This project is meant to deliver water to about 1 ha of irrigated land from a perennial stream. Typology: Small scale irrigation development (100%)
Simemeni Garden Scheme 2014-2015	World Vision USA and EU Euro 0.0064 (US\$0.0078)	Located at Mahlalini area in the Shiselweni region. To provide water to improve the quality and market linkage for irrigated crops covering 10 ha. Typology: Small scale irrigation development (40%) and others (60%)
Mphilo Isachubeka Irrigation Scheme 2014-2015	World Vision USA and EU Euro 0.0075 (US\$0.009)	Commercial vegetable production located at Maseyisini area in the Shiselweni region. To provide water for irrigation development by Country investment brief. Water for Agriculture and Energy: Swaziland Irrigation Scheme modernising the current irrigation system to a sprinkler type over 0.6 hectare. Typology: Rehabilitation and modernisation of irrigation scheme (100%)
Mbukwane Garden Scheme 2014-2015	World Vision USA Euro 0.0045 (US\$0.0055)	Located at Mbukwane in the Shiselweni region. Provides water tanks for the irrigation of 3.25 hectares of land suitable for commercial vegetable production. Typology: Small scale irrigation development (100%)
Letindze Garden Scheme 2014-2015	World Vision Australia US\$0.05	Located in the Ngudzeni and Nokwane in the Shiselweni region. To provide irrigation water for commercial vegetable production over 24 hectares through an electric irrigation system from a perennial stream. Typology: Small scale irrigation development (100%)

Agency, Programme, Dates	Funding (US\$m)	Description
Masibini Garden Scheme 2014-2015	World Vision USA Euro 0.0075 (US\$0.009)	Located at Maseyisini area in the Shiselweni region. To upgrade the existing irrigation system to a sprinkler type to provide for the irrigation of 3 hectares of commercial vegetable production. Typology: Rehabilitation and modernisation of irrigation scheme (100%)
Khethokuhle Garden Scheme 2011-2015	World Vision Germany and EU US\$ 0.0147	Located at Matsanjeni area in the Shiselweni region. To provide water for irrigation development for fruits and commercial vegetable production over 8 hectares. Typology: Small scale irrigation development (100%)
Integrated Food Security and Livelihoods 2014-2015	Finnish Red Cross SZL5.0 (US\$0.47)	Located in Mpofu, Nyakatfo, and Zinyane communities under Mhlangatane constituency in the northern Hhohho region. 415 households identified for backyard gardening and 40 volunteers to support the gardens. Aim to improve availability and accessibility to food at household level, improve nutritional practices and to strengthen Red Cross in programming and operations. This will be achieved by supporting households with agricultural inputs such as drums for water harvesting. Typology: Small scale irrigation development (6%) and others (94%)
Adapting National and Transboundary Water Resources Management in eSwatini to Manage the Expected Impacts of Climate Change 2014-2015	GEF US\$0.45	Located at KaBhudla, Luve, Ntjanini, Matsanjeni and Mbelebeleni. To ensure that the management of Swaziland's water resource is adapted to take into consideration the anticipated impacts of climate change. Focus on adaptation measures in communities and improving access to water in rural communities using two methods, namely; <ul style="list-style-type: none"> • piloting improved land use practices that increase rates of water infiltration into soils, and • introducing rainwater harvesting techniques. Aim to have long-term effect of recharging ground water levels and increasing surface water flow in rivers and streams during the dry season as well as providing communities with improved access to water for both irrigation and drinking purposes. Typology: Small scale irrigation development (41%) Rehabilitation and modernisation of irrigation scheme (48%) and others (11%)
Mitigation of Negative Impacts of Climate Change in Swaziland 2012 - 2014	USAID SZL6.5 (US\$0.75)	IRD is working with farmers from 15 community vegetable gardens averaging 2 ha serving over 950 households in the target geographical area (15 tinkhundla in the Lowveld of eSwatini: Somthongo, Matsanjeni, Sigwe, Lubuli, Mpolonjeni, Hosea, Ngudzeni, Sithobela, Nkilongo, Hlane, Shiselweni 1, Dvokodveni, Mkhiweni, Mandlangempisi and Mahlangatane) to increase their vegetable production under small scale irrigation schemes supported by technical support and limited provision of agricultural inputs. Typology: 100 % Small scale irrigation development

Agency, Programme, Dates	Funding (US\$m)	Description
Mini-Micro Hydropower study and pilot projects 2007-2015	Government of eSwatini SZL31.55 (US\$4.39)	Located in the LUSIP areas. To determine the hydropower potential for the Lubovane dam. Purposes is to inform investors of the potential hydropower to be generated as well as how to generate electricity. Typology: Large scale hydropower project (100%)
Smallholder Market-led Project 2015 – 2022 (6 Year project)	IFAD US\$10.1 Co-finance (International) Global Environmental Facility US\$7.21 Co-finance (Domestic) National Government US\$6.6 Total – US\$24.5	Will use the availability of confirmed markets as a driver for promoting smallholder production for household nutrition and sale of marketable surplus. Goal to contribute to national poverty reduction, to enhance food and nutrition security and incomes among smallholder producer families through diversified agricultural production and market linkages. Aim for rural poverty to be reduced by 20 per cent in the targeted chiefdoms and food insecurity reduced by 50 per cent in currently food deficient households. The project's three major outcomes are: <ul style="list-style-type: none"> • the project chiefdoms engage in effective planning and decision-making; • soil and water resources are sustainably managed for market-led smallholder agriculture in the project chiefdoms; and • smallholder producers in the project chiefdoms supply crop and livestock products to market partners, while subsistence farmers are enabled to produce sufficient nutritious food for themselves. The project will be implemented over a six-year period in 25 chiefdoms in the rainfed Middleveld and Lowveld areas of the Lubombo and Shiselweni regions. It will target poor smallholder farmers that are <ul style="list-style-type: none"> • food-deficient and living at a subsistence level; and • economically active and able to sell surplus production. The farmers will be assisted in increasing their farm productivity and production through access to irrigation, inputs, training and access to services. Economically active farmers will sell surplus production to wholesalers to increase income. Along selected value chains, employment opportunities will be created for young people, for example in managing collection and information centres. The activities are tailored to the capacities of smallholders, including women and families affected by HIV/AIDS.

Agency, Programme, Dates	Funding (US\$m)	Description
Financial Inclusion and Cluster Development Project 2018-2025	IFAD US\$8.95 Co-finance Private sector local – US\$7.46 Beneficiaries – US\$13.81 National government – US\$2.94 Finance GAP – US\$5.07	Aims to increase returns from sustainable farm and non-farm enterprise by targeting poor rural women and youth aged 18-35 through efficient public and private sector investment. Implemented nationwide, based on cluster development for impact, it will focus on five commodities: red meat (beef and goats), poultry, pigs, vegetables and legume seeds.
Swaziland Agricultural Development Project (SADP) 2014 (5 Years)	SADP is a 5-year programme with more than €14 million in funding from the EU and almost € 350,000 from FAO.	To improve the food security and nutrition of vulnerable rural households and contribute to equitable and sustainable economic development by supporting the creation of a vibrant commercial agricultural sector. Main results: <ul style="list-style-type: none"> • Reached more than 20,000 farmers • Trained more than 2,000 farmers in good agricultural practices • Established 800 backyard vegetable gardens for vulnerable households • Established 60 youth groups reaching 2,250 youngsters • Improved infrastructure in the livestock sector, water management and government services • Established € 1 million Marketing Investment Fund (MIF) • Established the Swaziland Livestock Identification and Traceability System (SLITS) • Contributed to a National Agricultural Extension Policy and a National Agricultural Research Policy Contributed to the Swaziland National Agricultural Investment Plan (SNAIP) within the CAADP process
Project Canaan – Egg Laying Operation	Heart of Africa (Non-for-profit Organisation) feeding Programme & International Egg Foundation (IEF) and Egg Farmers of Canada (EFC)	<ul style="list-style-type: none"> • The newly built egg laying operation at Project Canaan welcomed its first flock of pullets this month. The egg barns, built in partnership with the non-for-profit organisation Heart for Africa as part of their larger development initiative, will deliver thousands of nutritious eggs to orphaned children.
Lower Usuthu Smallholder Irrigation Project (LUSIP) Phase II 2015-2022	Government of eSwatini and Development Partners SZL2 100.00 (US\$200.5)	The LUSIP Phase 2 is an extension of LUSIP Phase 1 covering areas that were not catered for in the development of the region. Located at the Lubombo region, the project will link at the point of departure of the St. Philips canal from the Main Canal South extending to Nsoko development area. The project is expected to deliver irrigation water to about 11 000 hectares. Typology: Small scale irrigation development (70%) and other (30%)

Agency, Programme, Dates	Funding (US\$m)	Description
Ethemba Downstream Irrigation development 2016-2025	Government of eSwatini US\$150.00	Mkhondvo river basin, new irrigation development for 4 500ha. To help subsistence farmers in the poor communities downstream of the dam to undertake commercial farming, to improve their livelihoods and to supply domestic water to the Hlatikhulu town and nearby communities. Typology: Small scale irrigation development (80%) and others (20%)
Ngwempisi Hydropower project (pre-feasibility study) 2015-2016	Government of eSwatini and AfDB US\$ 0.51	Pre-feasibility study to determine how much hydropower can be harnessed from the Ngwempisi river. Project located along the Ngwempisi river in Mankaye. Typology: Small and medium scale hydropower development (100%)
Feasibility Studies for Nsilingane Dam 2021-2023	Government of eSwatini US\$3.60	Northern part of the country in the Komati river basin, avail about 797 million cubic meters of water, to provide irrigation of about 5 500 hectares and water for the generation of hydro-energy. Typology: Large scale irrigation development (70%), and small and medium scale hydropower (30%)
Medium Scale Earth Dams 2016-2025	Government of eSwatini US\$15.20	Construction of medium scale dams to increase irrigation water availability in the high and upper middle-velde agro-ecological zones. Aim to construct 15 medium scale dams with combined capacity to irrigate more than 750 hectares of non-sugar crops. Typology: Small scale irrigation development (75%) and others (25%)
Small Earth Dams 2016-2025	Government of eSwatini US\$4.50	Construct small earth dams to provide livestock, drinking water and downstream gardening in the dry regions of the country. 45 small earth dams to 9 constituencies, each with 5 dams. One earth dam to provide water to irrigate 1 hectare of land per constituency for vegetable production. Typology: Small scale irrigation development (30%) and others (70%)
Rooftop Water Harvesting 2016-2025	Government of eSwatini US\$8.0	Countrywide project to provide water harvesting material and train communities on roof top water harvesting techniques to supplement domestic water needs and development of food and nutrition gardens. Target to harvest about 5000 litres of water per household and improve food nutrition status. Typology: Small scale irrigation development (50%) and others (50%)
Construction and Rehabilitation of Irrigation Schemes 2016-2025	Government of eSwatini US\$15.20	Targeting the development of downstream irrigation infrastructure, new dams will be constructed and dilapidated irrigation schemes rehabilitated. To provide land equipped with irrigation infrastructure in excess of 1 000 hectares excluding areas irrigated by large-scale dams. This is expected to benefit 1 000 households. Typology: Rehabilitation and modernisation of irrigation scheme (90%) and others (10%)
Ethema Dam Construction 2016-2025	Government of eSwatini US\$200.00	368 million cubic meters reservoir which will be located at the Mkhondvo river basin. Construction of a dam to provide water for irrigation, sanitation and hydropower generation. Potential to generate about 3MW of hydropower and develop 2 500 hectares of irrigated land. Typology: Small scale irrigation development (45%), Small-medium –scale hydropower (31%) and others (24%)

Agency, Programme, Dates	Funding (US\$m)	Description
Technical Cooperation Programme (TCP) 2019-2021	FAO Projects in eSwatini	Technical Assistance for Management of Aflatoxins in eSwatini
	US\$339 000	TCPF: Strengthening the Swaziland National Agricultural Research Authority
	US\$58 000	Technical Assistance for Enhanced Maize and Vegetable Production in support of Smallholder Farmers
	US\$302 000	Technical Assistance to develop the Green Climate Fund Resilient Lubombo Ecosystems Adaptation Project (ReLEAP)
	US\$56 000	Technical Assistance to develop the Green Climate Fund Resilient Lubombo Ecosystems Adaptation Project (ReLEAP)
	US\$50 000	Assessing the Impact of COVID-19 on the Food Systems and Food Security
	US\$336 000	Assessing the Impact of COVID-19 on the Food Systems and Food Security
	US\$79 000	Support to Local Nutrition Needs Led Climate Smart Production and Marketing in the Hhohho, Lubombo and Shiselweni Regions
US\$65 000	Support to the institutional strengthening of the Swaziland National Nutrition Council	
		Strengthening technical and organisational capacity of the Agribusiness Unit

2.8. Private Sector and Civil Society Role Players

A very short list of higher profile organisations, excluding individual private sector firms is listed in the table 41 below.

Table 41: Organised agriculture, international/regional NGOs involved in agricultural development in eSwatini

Organisation	
Organised Agriculture	International / Regional NGOs
<ul style="list-style-type: none"> National Farmers Unions & Agencies National Agricultural Marketing Board (NAMBoard) National Maize Corporation Swaziland Cotton Board Swaziland Dairy Board Swaziland Water and Agricultural Development Enterprise (SWADE) Small-Scale Farmers Associations (SSFAs) Small Enterprises Development Company - www.sedco.biz Swaziland Investment Promotion Agency (SIPA) University of eSwatini - www.uniswa.sz National Industrial Development Corporation of eSwatini (NIDCS)- www.nidcs.org.sz 	<ul style="list-style-type: none"> IFAD USAID Finnish Red Cross EU OPEC AfDB DFID World Vision International (USA, Germany, Australia) Baphalali Swaziland Red Cross

2.9. Value Chains Selected for Evaluation and Research

The objective of the scoping study is to identify the most promising opportunities for interventions by FinMark Trust 'to make markets work for the poor by promoting financial inclusion and regional financial integration'⁶⁰ in order to facilitate and accelerate agricultural development in eSwatini. The primary purpose of the zero draft country review is to provide the basis for making an informed decision about which commodities and value chains to select in each of the three countries to research in depth 'to best identify areas for support and provide appropriate guidance on the types of interventions or efforts necessary in the target countries, to whom these should be provided, and in what manner they are best delivered'⁶¹.

In essence, the methodology applied entails conducting a high-level review of agriculture in each of the three countries to identify a 'long list' of commodities/value chains/initiatives to evaluate, in order to select a 'short list' to propose to FinMark Trust for in-depth research. The 'long list' evaluated included the nine commodities listed in Table 42 below. An essential requirement for inclusion in the 'long list' was that the production should already be well established in eSwatini.

The choice of value chains to be researched in depth entailed narrowing down a 'long list' of ten potential value chains to a 'short list' of three. A key requirement for inclusion in the 'long list' was that production of the commodity had already to be well established in eSwatini.

The mechanism used to select the three proposed involved:

- identifying criteria most suitable for the needs and objectives of this assignment
- developing a scoring model against the criteria identified, by allocating a weight to each criterion in accordance with its perceived importance
- scoring and ranking all 'long list' value chains in an internal research team workshop, with the assistance of an in-country expert
- selecting three value chains (based on scoring and value chain profiles) to go forward for presentation to and consideration by FinMark Trust.

The criteria adopted were:

- market demand, growth potential, competitiveness
- in-country value addition potential
- income, employment, beneficial inclusion
- environmental/health/food safety risks
- food and nutrition security
- national priority
- access to finance/ additionality (for FMT).

Table 42: Outcomes of value chain scoring

Position	Commodity / Value Chain	% Score
1	Sugar Cane	73%
2	Bananas	70%
3	Vegetables	66%
4	Macadamias	61%
5	Cotton	60%
6	Livestock - beef	59%
7	Pineapples	58%
8	Maize	52%
9	Poultry Layers	51%

On the basis of the scoring, the commodities proposed to FinMark Trust to go forward for detailed research for eSwatini were sugar cane, bananas and vegetables. However, on consideration and after consultation with FinMark Trust, sugar cane was eliminated from the 'short list' on the following grounds. The cane industry sector is by far the largest agricultural contributor in eSwatini. The industry is well established with multiple sugar mills distributed throughout the country. These mills source their cane from both large sugar estates and from many outgrower farmers. The industry is already well structured and organised, including access to markets and to small grower finance. For these reasons it was felt that there would be limited opportunities for FMT to add value by intervening in this sector.

It was also decided to eliminate macadamias because macadamia production is not widespread in eSwatini and is mostly farmed by commercial farmers due to the high input cost demand. Very few small producers are involved. Based in discussions conducted with Ministry of Agriculture officials, macadamias are also not seen as a priority crop in the Ministry's present strategy, as they do not have much impact on small holder farmers.

The commodities that went forward for detailed research were therefore:

- Cotton
- Bananas
- Vegetables

3. COTTON

3.1. Cotton Overview

The planting of cotton in the Northern Hemisphere, which accounts for 90% of the global cotton production, is currently in full swing. The International Cotton Advisory (ICAC) expects that world cotton area for the 2019/20 will increase by about 3% compared to 2018/19, whilst global cotton production is expected to increase by about 5% to 27.5 million tons, the second biggest crop on record. In India, currently the largest global cotton producer, cotton production is expected to increase by 5% to 6.1 million tons whilst cotton production in China, the world's second largest cotton producing country, is expected to increase by about 1% only.

The ICAC projects that cotton production in the USA and Pakistan, the world's 3rd and 4th largest cotton producers will respectively increase by 12% and 18% in 2019/20. Together these 4 countries account for about two thirds of global production.

The ICAC expects world consumption to continue growing steadily by about 2% in 2019/20 to a record level of 27.1 million tons. Although cotton consumption is expected to remain stable at 8.5 million is expected in both India and Pakistan, the world's 2nd and 3rd biggest cotton consuming countries.

The USA will remain the world's largest cotton exporter with a projected export figure of 3.3 million tons for 2018/19. However, the change in the nature of subsidies for US cotton producers in recent years can be expected to continue to reduce the volumes exported in the medium term⁵⁸. According to the ICAC, China imported 560 000 tons of US cotton during the 2017/18 season with an expected 250 000 tons of cotton to be imported from the USA during the current 2018/19 season. Until the trade dispute between the United States and China is resolved, US cotton exports to China will continue to be subject to the additional 25% tariff imposed in July 2018. Other major cotton exporting countries have increased quantities to China, with Australia already having exported 440 000 tons of cotton to China so far this season, exceeding the 280 000 tons exported in 2017/18. Brazil has exported 380 000 tons of cotton to China so far this season exceeding the 82 000 tons exported in the 2017/18 season. Cotton exports to China have increased from almost all other cotton exporting countries and West African countries.

Although world cotton stocks for 2019/20 is expected by the ICAC to remain more or less unchanged from the previous three seasons at 18.5 million tons, world cotton stocks outside of an expected 10.3 million tons in 2019/20⁶³.

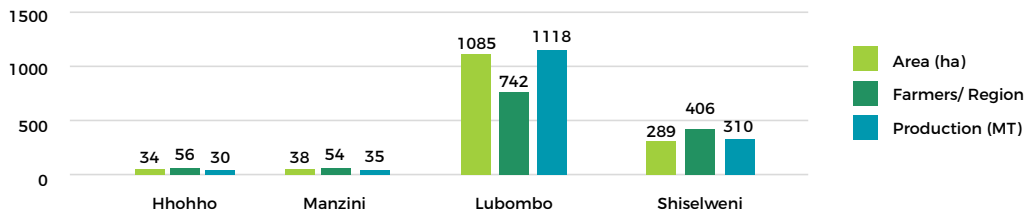
The medium-term outlook for international cotton prices is for the slow, but steady, upward trend of the past decade to continue until the end of the 2020s. This is encouraging for sub-Saharan African countries, who jointly contribute 18% of international cotton exports, making them the third largest exporting region⁶⁴.

3.2. The Importance for Rural Livelihoods and Poverty Reduction

The Kingdom of eSwatini has been farming cotton since the mid 1900's. Cotton farming was once considered to be one of the country's best crops to grow for farmers for its ability to withstand hot and dry weather, especially in the low veld where maize farming was not so productive. Due to the unpredictable weather conditions, the distribution of cotton farming and production is predominately scattered around the low veld and dry middle veld. The country's farming distribution is illustrated in figure 25 here below.

The ICAC expects world consumption to continue growing steadily by about 2% in 2019/20 to a record level of 27.1 million tons.

Figure 25: eSwatini Cotton farming distribution

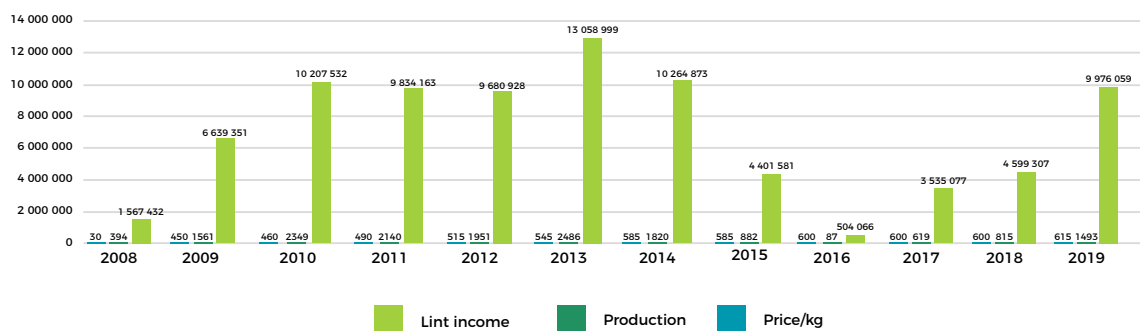


Source: Swaziland Cotton Board Annual Financial Report, 31st March 2019

Cotton farming in the past 10 years has not been fruitful as in previous years such as 1990/91 when the cotton yield reached a high of 26 341 metric tonnes or 1998/99 when it reached 16 885 metric tonnes. Even though Cotton Board has not been able enable growers to reach these tonnages, cotton output has increased substantially in recent years, as indicated on the graphs below. A summary of the performance of the cotton industry’s recent activity is shown here below in Figure 26, including price variations, seed cotton received and income from sale of lint.

Cotton has traditionally been the most important cash crop in the smallholder sector. It is cultivated in the drier parts of the country i.e., the Lowveld and Dry Middleveld. The number of farmers engaged declined from 4440 in 2005 to just less than 2000 in 2015. This has been accompanied by a drastic reduction in the area under cotton from 4961ha to just 730ha over the same period. Major challenges that have been reported in cotton production include drought, sap sucking pests including Mealy Bugs and Aphids. Another factor that has resulted in a drop in the number of farmers engaged in cotton production is the lack of suitable varieties that can withstand the increasingly drier and longer droughts. In 2014/15, Alba QM 301 accounted for 99.1% of the plantings with Delta Opal accounting for the balance. The previous year, Delta Opal accounted for 32% of the area cultivated but the variety is no longer available as conventional seed- only the GM variety is listed in South Africa’s Varietal List (Department of Agriculture, Forests and Fisheries, 2015). The country’s cotton supports the country’s textile industry which is a contributor to the country’s Forex earnings ⁶⁵.

Figure 26: eSwatini - Ten Year Summary of Cotton Production



Source: Swaziland Cotton Board Annual Financial Report, 31st March 2019

Table 43: Cotton production in eSwatini

	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019 Forecast
Production (Mt)	873	87	617	759	1,500
Area (ha)	1,733	283	1,700	1,082	1,328
Value to Growers (E' Million)	4.4	0.5	3.7	4.6	9.0
Average Price (E/kg)	5.15	6.0	6.0	6.0	6.0

Source: Ministry of Agriculture (Swaziland Cotton Board)

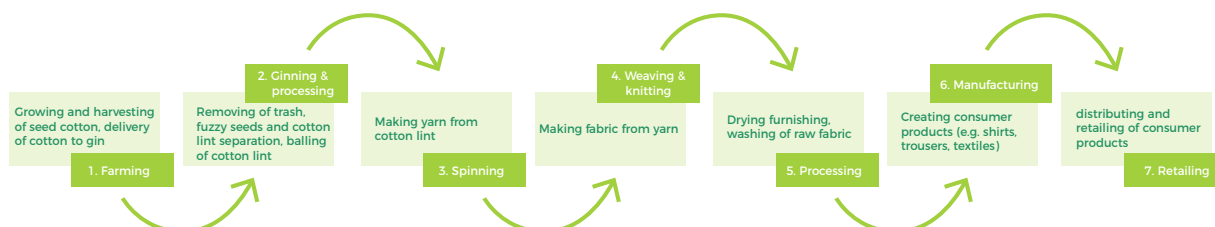
Drought and a drop in the price of cotton have essentially crippled the industry, leading to the subsequent shutdown of ginneries. The main closure has been the cotton ginnery in eSwatini, a 25,000-metric ton ginning capacity that employed 500 people. The government of eSwatini started investigating options to revitalise the cotton industry, which is prone to regular droughts in regions where cotton farmers mainly reside. South Africa has been planting and enjoying the benefits of GM cotton since 1998, and eSwatini is considering following suite. This will entail the adoption of regulations that would allow it to apply biotechnology. The kingdom passed the Biosafety Act in 2012 and released its first GM product, Bt cotton, in 2018. The introduction GM cotton has improved the profit margin as it eliminates over 10 (insecticide) sprays per season, and the yields are much higher. Since the introduction of the GM cotton, the ginnery has been able to double its consumption, meaning production has doubled by only planting an additional 250 hectare of cotton under irrigation⁶². The ginnery throughput has doubled from 750 tons to 2 000 tons in a season by only increasing the cultivated area by 250 hectares. In addition to this, the ginnery has employed 120 seasonal workers. The lint that is produced by the ginnery is consumed locally by spinners who are expected to increase the employment from 850 to 1,400 for the 2019 season. Another advantage from the GM cotton is that the companies will be paying tax revenue to the eSwatini government.

3.3. Current status of value chain

Structure of the Value Chain

Table 44 shows the cotton value chain flow from the initial grower, through to the ginning and processing, the spinning, weaving and knitting, processing, manufacturing and finally the retailing.

Table 44: Cotton Value Chain Diagram



Stakeholder Involvement

The key stakeholders involved in the cotton value chain are as follows:

- eSwatini Government;
- Ministry of Agriculture;
- eSwatini Environment Authority;
- Cotton Farmers;
- Farm input Suppliers;
- Cotton Spinners;
- Cotton Board Staff;
- Buyers of fuzzy seed;
- Buyers of cotton lint;
- Financial Institutions;
- Textile Factories;
- Retailers of cotton-based material;
- Cotton farming communities; and
- The general public.

3.4. Past Challenges and Planned Initiatives

The cotton industry has encountered many problems over time and the SWOT and PESTAL analysis in Tables 45 and 46 highlight many of the shortfalls presently in this sector. In addition to this, the SWOT analysis also shows potential opportunities and strengths of the sector.

3.4.1. Industry SWOT Analysis - Cotton Sector

Table 45 list many of the strengths, weaknesses, opportunities and threats faced by the cotton industry.

Table 45: eSwatini Cotton Industry SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • Having a ginnery for internal revenue generation; • Location of ginnery is close to predominate cotton farming regions; • Accessible ginnery with road infrastructure; • Enabling legislation; • Availability of Revolving fund to support cotton farmers; • Government guarantee for additional loan financing; • Market for the ginnery products (fuzzy seed & lint); • Reliable suppliers for farm inputs and seed cotton; • Sole market for seed cotton; • Effective SMS communication system with farmers; • Availability of largescale farmers for irrigated farming; • New high yielding varieties; • Available land and favourable climatic conditions for cotton production. 	<ul style="list-style-type: none"> • Absence of research policy; • Disintegrated Information System (IFMIS); • Inadequate and outdated working resources (i.e., office space, officer equipment, vehicles and others); • Low ginnery throughput as a result of not using modern technologies; • Low ginnery throughput resulting in low economies of scale; • Dependence on fluctuating world market prices and currency exchange rates; • Inadequate Loan Revolving Fund (expanding sector-more demand for funds); • Inadequate extension services; • Inadequate funding for research; • Poor feeder roads to cotton farms; • Delayed amendment of Act; • Delayed approval of Bio Safety Bill.
Opportunities	Threats
<ul style="list-style-type: none"> • Introduction of GMO cotton to improve cotton yield and stimulate the industry; • Partnering with private farmers for irrigated cotton farming; • Reducing production costs through usage of generic chemicals; • Increasing cotton production in the dry middle-veld (Manzini and Hhohho region); • Acquiring more local and international markets for ginnery products; • Reviving the cotton spinning industry; • Partnering with stakeholders in the cotton industry for promoting the local cotton value chain. 	<ul style="list-style-type: none"> • Adverse climatic conditions (i.e., drought, storm, global warming and other unfavourable weather conditions); • Pest outbreaks; • Competition of farmland with other high return crops; • Ever increasing costs of production especially at the ginnery; • Extinction of the Revolving loan fund out to new repayment by farmers; • Low participation of youth in cotton farmers; • Inadequate support from government; • Reliance on other countries for a market; • Discontinuance of AGOA Agreement with USA.

3.4.2. PESTEL Analysis – Cotton Sector

Table 46 shows how political, economic, social, technological, environmental and legal factors influence the cotton industry.

Table 46: eSwatini Cotton Industry PESTEL analysis

Political	<ul style="list-style-type: none"> • Delayed conclusion / amendment of the Bio Safety Act, which would allow the introduction of seed technology; • Cotton production to growers is a major factor in National Strategic road map; • VAT on factory material and Agricultural equipment is increasing over-head costs; • Lack of control on levy's (oil levy); • Advocate for farmers to be subsidised by the government rather than the credit scheme – (see economic factors).
Economic	<ul style="list-style-type: none"> • Dependence on fluctuating world market prices and currency exchange rates; • High production of cotton by external markets affects the world price resulting in low cotton prices; • Weakening of the local currency impacting on production costs because farm inputs are imported; • Improvement of buying power through subvention; • Uncertainty of the AGOA agreement; • Increased costs of production at ginning due to escalating import prices; • Reliance on other countries for supply of planting seeds; • Financers prefer sugar cane production compared to cotton production because the farmer receives financial support.
Social	<ul style="list-style-type: none"> • Less than 1% of the country population is involved in cotton production; • The Youth lacks interest in in cotton farming; • Swazi farmers believe in maize production as a staple food and thus shun from cotton farming even in areas where maize does not do well; • Cotton is not a subsidised commodity; • The culture of men owning family finances as the head of the family, discourages other family members from participating in cotton farming; • The availability of social grants has caused farmers to refrain from cotton production; • People perceive cotton production as labour intensive, which leads farmers to opt for alternative crops; • People prefer sugar cane production compared to cotton production because the farmer easily receives financial support and repayment terms.
Technological	<ul style="list-style-type: none"> • Introduction of New cotton GM varieties in eSwatini; • Delayed conclusion / review and approval of the Bio Safety Act denies farmers the opportunity of using Biotechnology which would result in high cotton yields; • Inadequate finance for research facilities and programmes delays the approval of technology; • Increase in the cost of seed due to intellectual property rights attached to the technology.
Environmental	<ul style="list-style-type: none"> • Global warming affecting weather; • Use of Red label pesticides for cotton production; • Ungoverned disposal of chemical containers; • Delay in issuing of permits; • Heavy reliance on natural precipitation.
Legal	<ul style="list-style-type: none"> • Cotton Act requires review and amendment; • Amendment of Bio Safety Act in Parliament; • Cotton Board activities affected by other legislation; • Cross Border restrictions on agricultural inputs.

Source: Swaziland Cotton Board

Table 47 shows the Cotton Board strategic plan for development up until 2023. Their main foci will be: seed production, increased resource mobilisation, improved ginnery throughput, improving operational capacity and efficiency of the Board and expanding business growth. The table highlights actions to be taken to improve the growth of the cotton sector.

Table 47: Cotton Board strategic plan – 2023

Strategic Focus Area	Strategic Objective(s)	Strategic actions
Seed cotton production	<ul style="list-style-type: none"> Increasing the volume of seed cotton supply to ginnery 	<ul style="list-style-type: none"> Provide technical training to farmers Provide finance assistance to farmers Recruiting more local farmers in all 4 regions on eSwatini Nation Land to grow cotton Secure farmers with irrigated land
	<ul style="list-style-type: none"> Improving the quality of seed cotton supply 	<ul style="list-style-type: none"> Encouraging the use of suitable varieties Introducing the use of new technologies Obtaining Government assistance to improve and intensify the quality of on-farm extension services
Resource mobilisation	<ul style="list-style-type: none"> Increasing financial resources for operations 	<ul style="list-style-type: none"> Secure additional funding from local and internal financial institution Lobby Government for Operational Recapitalisation
	<ul style="list-style-type: none"> Increasing financial resources for Capital Expenditures 	<ul style="list-style-type: none"> Establish Private Public Partnerships (PPP) Mobilise for donor funding
	<ul style="list-style-type: none"> Raising funds for new projects and investments 	<ul style="list-style-type: none"> Establish Private Public Partnerships (PPP) Mobilise for donor funding
Ginnery throughput	<ul style="list-style-type: none"> Improving the quality of ginnery products 	<ul style="list-style-type: none"> Introduce quality control Develop plant maintenance and repair scheduled Enhance grading process Introduce cost saving mechanism to ginnery
Operational capacity and efficiency	<ul style="list-style-type: none"> Improving operational efficiency 	<ul style="list-style-type: none"> Develop and review operational, finance and HR policies Procure and integrate financial management system
	<ul style="list-style-type: none"> Improving internal capacity 	<ul style="list-style-type: none"> Procure new equipment Introduce the use of new technologies and automated systems Introduce staff retention and incentive scheme Apply for PEU re-categorisation of Cotton Board
	<ul style="list-style-type: none"> Enhancing human capital skills 	<ul style="list-style-type: none"> Recruit competent and qualified staff Conduct skills audit Develop Continuous Professional Development (CPD) plan

Strategic Focus Area	Strategic Objective(s)	Strategic actions
Business growth	<ul style="list-style-type: none"> Expanding current plant for processing of seed cotton products 	<ul style="list-style-type: none"> Conducting feasibility study and cost benefit analysis of plant expansion Mobilise resources for plant enhancement Obtain government approval Appoint contractor and /or private partner
	<ul style="list-style-type: none"> Venturing into other new businesses in cotton value chain 	<ul style="list-style-type: none"> Carry out research on available opportunities within the cotton value chain Engage other industry players Mobilise resources for plant enhancement Obtain government approval Identify and appoint contractor and /or private partner

Source: Swaziland Cotton Board

Performance objectives of cotton stakeholders and customers are listed in table 48. This includes increasing the volume of seed cotton supply to ginnery, improving the quality of seed cotton supply, increasing the volume of seed cotton supply to ginnery and improving the quality of seed cotton supply.

Table 48: Customer and Stakeholder Performance

Strategic Objectives	Strategic actions
<ul style="list-style-type: none"> Increasing the volume of seed cotton supply to ginnery 	<ul style="list-style-type: none"> Provide technical training to farmers Provide finance assistance to farmers Recruiting more local farmers in all four regions on eSwatini Nation Land to grow Cotton Secure farmers with irrigated land
<ul style="list-style-type: none"> Improving the quality of seed cotton supply 	<ul style="list-style-type: none"> Encouraging the use of suitable varieties Introducing the use of new technologies Obtaining Government assistance to improve and intensifying on-farm extension services
<ul style="list-style-type: none"> Increasing the volume of seed cotton supply to ginnery 	<ul style="list-style-type: none"> Provide technical training to farmers Provide finance assistance to farmers Recruiting more local farmers in all four regions on eSwatini Nation Land to grow cotton Secure farmers with irrigated land
<ul style="list-style-type: none"> Improving the quality of seed cotton supply 	<ul style="list-style-type: none"> Encouraging the use of suitable varieties Introducing the use of new technologies Obtaining Government assistance to improve and intensifying on-farm extension services

3.4.3. The Textile Sector

eSwatini Textile Sector Overview

The textile industry in eSwatini consists of one operational spinner (Spintex), one knitting mill (Texray), and the YKK zip manufacturing plant. It is unlikely that there will be any significant increase in textile capacity in the near future.

Spintex

Spintex is the only spinner currently operational in eSwatini, producing a diverse range of cotton and poly yarns primarily for the SACU market with approximately 10% of output exported to the EU. The product range includes:

- 100% Cotton Carded and Combed Ringspun yarns
- Poly/cotton Carded and Combed Ringspun yarns
- 100% polyester Ringspun yarns for sewing thread and knitting/weaving
- Core yarns both Poly/Poly and Poly/Cotton
- 100% Cotton Open End yarns for the Knitting and Weaving industries – Spun on Rieter R4.0
- Open End waste yarns

Currently the spinning capacity of 380 ton per month is fully utilised. Future expansion would be dependent on investment incentives in the form of capital availability at favourable interest rates to upgrade technology and expand production.

Spintex takes up the total current cotton lint production output of Sikhulile Ginnery and sources the balance from within SADC.

Texray

Texray is eSwatini's largest apparel & textile group employing 5,000 staff in a number of factories in Matsapha. Whilst knit apparel manufacture is the main activity, Texray does have a vertically integrated spinning and knit fabric capability in excess of its own needs. Texray is managed from Taiwan.

Table 49 shows a summary of the strengths, weaknesses, opportunities and threats in the Textile sector.

Table 49: SWOT analysis of the apparel and textile sectors in eSwatini

Strengths	Weaknesses
<ul style="list-style-type: none"> • Government support for the sector to attract investment is business friendly • Good industrial infrastructure • Existing premises at competitive rentals • Favourable market access arrangements to U.S., EU & Africa and proximity to South African market • Plentiful supply of suitable trainable labour at globally competitive rates 	<ul style="list-style-type: none"> • Absence of industry institutional structures to address macro challenges collectively • High level of labour turnover
Opportunities	Threats
<ul style="list-style-type: none"> • Existing demand and production capacity available for an increase in cotton lint production and therefore cotton growing • South African retailer interest in sourcing from eSwatini 	<ul style="list-style-type: none"> • High level of foreign ownership entirely reliant on AGOA extension • Currency strength / volatility against US\$

eSwatini owes the existence of its apparel and textile industries to the Multi-Fibre Agreement (MFA)⁶⁷ and AGOA and exports to the U.S. With one exception, all apparel manufacturers in eSwatini were established post 2000 following the enactment of AGOA.

Even the South African investors who have established apparel manufacturing facilities in eSwatini to supply the South African market were to some extent influenced by the success achieved by Taiwanese investors in establishing globally competitive apparel manufacturers in eSwatini.

Between 2000 and 2004, the eSwatini apparel sector grew phenomenally mainly as a result of investment by Taiwanese companies to take advantage of the duty-free quota free access to the U.S. market under AGOA. At its peak in 2004, the clothing & textile sectors employed an estimated 30,000 employees in 27 establishments.

Like garment manufacturers located in many countries around the world, eSwatini's clothing industry experienced a major decline following the termination of the MFA in 2005. Employment declined significantly to reach a low of 11,500 by December 2005.

The demise of the MFA was not the sole reason for the decline. A significant strengthening of the local currency against the dollar coincided with the demise of the MFA seriously impacting global competitiveness.

The Lilangeni is linked to the South African rand at parity. The SA Government's monetary policy favours a floating currency with the Reserve Bank's role focused on inflation targeting. An unfortunate result has been an extremely volatile exchange rate. At its weakest the rand traded at R13.85 / US\$1 in 2001 and at its strongest traded at R5.92 / US\$1 in 2005. Throughout 2005 & 2006 the rand averaged R6.00–R6.50 / US\$1.

Since 2005, the eSwatini apparel sector has experienced some employment growth due to South African investors establishing apparel manufacturing facilities in eSwatini to take advantage of the infrastructure and trained labour available as a result of the decline in exports. Employment in July 2010 was 16,950. Despite favourable market access to the EU via the recently signed EPA, exports of apparel to the EU have been negligible. This is primarily as a result of the Taiwanese owned companies having their established customer bases in the U.S. and no market presence in the EU, whilst the South African and Swazi owned companies are focused on the South African market.

Following the demise of MFA in January 2005, 9 foreign owned manufacturers closed down virtually halving employment in a single year, with employment declining from 30,000 employees in mid-2004 to 15,000 in mid-2005.

Swazi exporters are already facing a number of challenges in 2010. The continuing strength of the currency against the U.S.\$ as a result of the Lilangeni being linked to the South African Rand at parity, is adversely impacting on their competitiveness.

The demise of the export incentive scheme, the Duty Credit Certificate Scheme, in March 2010 had a major impact on profitability from 2011 onwards. Current exports are almost exclusively focused on the U.S. market and benefits substantially from AGOA. The predominant business model of the Taiwanese owned companies is for the eSwatini subsidiaries to be purely production facilities with product development, marketing and sales being conducted out of Taiwan. The product range appears to focus on long run basic knits. The prospects for the extension of AGOA after the termination of the current phase of the Agreement in 2025 appear to have improved substantially recently, as President Biden is thought to be likely to prioritise the growth of US-Africa trade⁶⁸.

The textile industry is also earmarked to contribute significantly on job creation. Over and above the expansion of existing investments, the textile industry will also expand into rural eSwatini to create employment opportunities for rural people in their localities. In total, the textile sector will invest E1.202 billion to create the largest number of jobs compared to all the other sectors, that is, 11,900 jobs for eSwatini in Bhunya, Nhlanguano, Mhlabanyatsi, and Matsapha. An increase in textile production will help the country take full advantage of the United States of America (USA) African Growth Opportunity Act (AGOA) as well as attract spin-off industries around the textile economic zones⁶⁹.

The apparel & textile sectors are significant employers in eSwatini and have a positive impact on other sectors such as transport operators, freight forwarders, commuter transport providers & street vendors.

3.5 Recommendations for FinMark Trust

Cotton has long been a very strong value chain in eSwatini, but has been through a bad patch during which it has lost most of its producers and major private sector players, Clark Cotton and Cotona. Both companies used to run large ginnery operations and provided farmers with production credit and technical assistance, as well as provide a guaranteed market. There were always problems around side-selling, but generally the system worked well. Large strategic agribusinesses such as these are usually the best partners as they have the resources, expertise and capacity needed, as well as a vested interest in seeing the system work.

Both operations have closed down because they became unprofitable to operate. The parastatal Cotton Board (which has been around since the 1960s, but not in an operational role) took over the gins, in order to keep the industry alive.

Access to Finance

This has put the Cotton Board into the roles of credit and technical assistance provider. Parastatals are seldom as well equipped to play either of these roles as the private sector, but with government's backing they are making it work. In respect of credit, government appears to be guaranteeing a line of credit that eSwatini Bank is advancing to the revolving loan fund that the Board is operating, not for on-lending to farmers in the form of cash, but to purchase fertiliser, cotton seed, chemicals, etc., which are delivered to farmers, who repay the costs incurred from the revenue payable to them on delivery of the crop. There is no risk of side-selling because the Boards' gin is the only one operating. Based on information gained through an interview with the CEO of the Cotton Board, it appears that the rate of non-performing loans

(NPL) is low, so government has not had to make good on the guarantee so far. Thus, it can be surmised that the weakness of the revolving loan fund being undercapitalised, identified in the Board's SWOT analysis, seems not to be related to the 'leakage' from non-performing loans, which is probably the challenge most often encountered by state-operated revolving loan funds. Instead, it seems to be because there are now more farmers wanting inputs and technical support from the Board. As this is a problem of success, rather than failure, it is not clear that FMT can add much value by offering technical assistance to improve the operation of the fund.

However, it is of great importance for the Board to bring production up again, both to help make the gin profitable again and to regain first best status, i.e., to attract more private sector players back into the ginning and downstream businesses – spinning, textile manufacture, etc. World cotton prices seem to be gradually strengthening and, off a very low base, production is starting to increase again. This will help attract farmers back into cotton production.

Bt Cotton

Another major plus is that growing Bt cotton is now permitted by legislation in Eswatini. This will help reduce cotton's vulnerability to drought, even though this risk still remains. If the outlook for cotton is strong enough for some LUSIP2 land to be used for cotton, that will significantly reduce the drought risk. Based on these developments, eSwatini Bank can be expected to be willing to lend more money to the Board for irrigated cotton production. But to really get production up, as well as to include many less fortunate, unirrigated smaller farmers, it is going to be key to attract a substantial number of traditional dryland cotton farmers back into production. One of the major obstacles that they have always faced is access to credit and eSwatini Bank, as well as the Ministry of Finance or Agriculture i.e., whoever is underwriting the line of credit, may feel less inclined to provide a line of credit to the Cotton Board for on-lending to such farmers.

Weather Indexing Insurance

An alternative in these circumstances, is to get crop insurance to cover the drought risk. This requires the presence of a low-cost insurer, i.e., an organisation that is using weather Indexing to reduce transaction costs. There does not seem to be one at in Eswatini at present. Among the requirements for a company to come in to fill this gap is scale and, and initially, a significant degree of subsidy from government. Undesirable as the latter may be, if government is interested in seeing dryland cotton production increase again, this may be the least cost way of doing it. Regarding scale, there may be other commodity opportunities, either in eSwatini or in other countries in the region, e.g., in Malawi, where there is extensive dryland cash crop production, inter alia, in the soya and groundnut value chains that are included in the Imani study, that could help to achieve sufficient scale to make insurance a worthwhile option. If FinMark Trust has an interest in weather index insurance (WII), it may be valuable to undertake a study of the potential for cross-country WII insurance in the region.

4. BANANAS

4.1. Overview

Banana is considered a food crop and cash crop in eSwatini and is grown throughout most parts of the county. Banana is such a promising miracle crop with the potential to eradicate hunger and poverty in Africa in general since it is not a seasonal crop, it is very nutritious (Potassium, Vitamin A) and has multiple dietary uses such as desert, beer brewing, fruit juice as well as for medicinal use.

Bananas have a low resistance to drought and show a rapid physiological response to soil water deficit making them sensitive to even slight variation in soil water content. This is because of banana's poor ability to draw water from dry soil due to shallow spreading root distribution. Banana as a tropical crop requires 2000 to 2690 mm of water, depending on the prevailing climate. Due to drought conditions and the nature of the root system of banana, irrigation is a critical solution to combat water stress.

Good quality commercial clean planting material, fertiliser and pesticide are essential to produce high quality bananas. In many cases, major constraints to the production of bananas within eSwatini, particularly for smallholder farmers, is lack of quality extension services. Although there is active research taking place on improving disease and drought resistant banana varieties, the dissemination of information and training to farmers is problematic. This is likely to be due to limited funding and a shortage of suitably qualified extension officers

An enabling environment could include factors such as government policy, dialogue and transport services. Government monitoring of the bananas is limited, thus information for harvest forecasting and planning is not readily available.

Apart from the four large commercial growers, banana production is fairly fragmented and small-scale, thus preventing efficient bulk transport to the markets. The inefficiency of the transport system is not cost effective and impacts negatively on the quality. Bananas do not transport well and are easily damaged, thus affecting the quality of the final delivered product and ultimately affects the end value of the product. High levels of damage and spoiling due to poor packaging and protection result in a poorer quality product.

The banana sector is growing constantly in eSwatini and trade is split into the formal and informal market channels. The informal market trade is off-farm selling or roadside side and to mini-markets. Formal market channels are comprised of farm gate sales directly to vendors who purchase large quantities to supply to the main markets in the cities, the second is to supply their produce directly to NAMboard for processing and distribution or thirdly, supplying directly to chain stores.

The country has four main commercial producers in United Plantations (Tambuti, Ngonini), Kubuta, Nisela and Canterbury. Canterbury, in Nsoko, does their own packaging, but uses United Plantation brand for logistics, branding and marketing purposes for the "green" export market to South Africa. At present, due to legislation, bananas can only be exported green to South Africa due to the prevalence of fruit fly in eSwatini. ESAWDE is currently promoting the planting of bananas on irrigated small holder farms on LUSIP 2 irrigation scheme.

Approximately 5 – 20% of the banana produced by large scale producers is sold in the local market through formal retail outlets. About 19,347 tons per year of banana is exported (A- grade) per annum, mainly to South Africa, Mozambique, Europe, China, Taiwan and Netherlands. eSwatini imports approximately 25,266 tons per annum of B and C grade bananas,

An enabling environment could include factors such as government policy, dialogue and transport services. Government monitoring of the bananas is limited, thus information for harvest forecasting and planning is not readily available.

via hawkers and traders, from South Africa (Mpumalanga) and Mozambique. This is sold through the informal market sector. Most of the bananas in eSwatini are sold fresh. Value-add processors are insignificant i.e., driers and flavour processors in the value chain.

Some large-scale producers have their own ripening facilities. NAMBoard provide ripening services for small scale banana producers.

Currently approximately 5,868 tons of bananas are sold to the supermarket chains, but this is only a small percentage of the total annual procurement by the chain stores. The majority of the bananas procured by the chain stores (South African) are procured in South Africa and brought into eSwatini. In many cases, the country's produced "green" bananas end up back in the chain stores in eSwatini after initially being exported to South Africa municipal markets in Johannesburg. The two main facilitators for promoting the banana sector in eSwatini are ESWADE and NAMBoard, both government parastatals.

ESWADE

ESWADE is a government parastatal, mandated to assist small holder farmers. The eSwatini Water and Agricultural Development Enterprise is a government company established by the Government of eSwatini in 1999 to facilitate the planning and implementation of the Komati Downstream development Project (KDDP) and Lower Usuthu Smallholder Irrigation Project (LUSIP) and any other large water and agricultural development project that government may assign.

Initially the company was called the eSwatini Komati Project Enterprise (SKPE) and was solely responsible for the planning, facilitating and development of the KDDP. When the LUSIP came on board, the company's name was changed to the SWADE to ensure that the name was inclusive.

The SWADE's approach to development, project implementation and management is to facilitate rather than participate which allows for the benefiting communities to participate fully and largely control the development in their areas. The ESWADE projects teams are composed of multi-disciplinary personnel, advisors and trainers who ensures that the development is holistic at all times.

Projects ESWADE are involved in:

- Komati Downstream Irrigation Development Project (KDDP)
- Lower Usuthu Smallholder Irrigation Project (LUSIP)
- Lower Usuthu Smallholder Irrigation Project 2 (LUSIP II)
- LUSIP – GEF Sustainable Land Management Project
- High Value Crop & Horticultural Project (HVCHP)
- Small holder Market-led Project

ESWADE has their own a marketing division known as LnL Management Unit which helps farmers with extension and marketing expertise.

For small-scale farmers and co-ops can be part of the farmer business support scheme administered through ESWADE which provides extension services and access to packhouse facilities.

Table 50 shows the areas that have been planted by banana by small holder farmers, close to 145 hectares.

The SWADE's approach to development, project implementation and management is to facilitate rather than participate which allows for the benefiting communities to participate fully and largely control the development in their areas.

Table 50: Farm company's areas under bananas (highlighted) overseen by ESWADE

No	Farmers Company	LOTS	Total Area (HA)	Crop Type	No of Members	Male	Female
	LOT 1						
1	Sidzakeni	Lot 1	96.5		54	38	16
			15	Maize			
			0.5	Chillies (Fury)			
			2.34	Guava			
			34.64	Banana			
2	Sivumelwano	Lot 1	64		55	38	17
			30	Maize			
			0.45	Chillies (Fury)			
4	Vuka Mabhekula	Lot 1	70.3		48	32	16
5	Kuyasentjenta Emeni	Lot 1	18.3		12	9	3
			15	Maize			
			1	Green Pepper			
	Lot 2						
6	Bulwanti	Lot 2	32		20	14	6
7	Sigcwelegcwele	Lot 2	52.2		30	20	10
			9.17	Banana			
8	Vukudle	Lot 4	15.07		15	9	6
9	Maphisholo	Lot 4	13.6		25	16	9
10	Masalemphini	Lot 4	9		10	7	3
11	Ekugcineni	Lot 4	4.2		7	4	3
12	Blessor	Lot 4	14.4		10	4	6
13	Asilime	Lot 4	8.1		7	5	2
14	Khwica Make	Lot 4	18.2		23	13	10
	Lot 3						
15	Kabhokweni	Lot 3	33.6		174	129	45
16	Luphiko		73		34	15	19
			43.5	Banana			
17	Babili		38		18	8	10
			21.2	Banana			
18	Lomveshe		71		42	30	12
			43.8	Banana			
			2.6	Guava			
			0.8	Pitaya			
			5.6	Paw paw			
	Total		1123.17		629	414	215
	Tunnels		44				
	LUSIP 2		1273		Still to be developed and will be planted July 2022		
	KK Farmers		250		Individual Growers		
	Total Area Available		2646.17				

NAMBoard

NAMBoard currently supports 300-400 banana smallholder farmers which are grouped into small associations (cooperation's). Currently there are 15 associations, each with 10-15 members. These farmers are currently producing on non-irrigated land and NAMBoard gives them access to processing facilities (sorting, ripening and packaging) and marketing assistance before the produce is passed on to the vendors.

NAMBoard has two main units to help small scale farmers. These are the FSDU and the Encabeni Fresh Produce Market:

The FSDU operate a marketing extension service that forms part of Farmer Support and Development through marketing Extension Officers (MEO's). This service helps farmers make better economic decisions on the production and marketing of vegetable, fruit and other fresh produce. The services include:

- Programming Farmers – The MEOs assist farmers to make informed production decisions, production according to market requirements, including product specifications, varieties, time of planting and profitability of selected crops;
- Training – farmers are trained on production methodology, pest and disease control, irrigation management, quality assurance, harvesting and post-harvest handling;
- Information dissemination – MEOs are a conduit for transmitting market related information to farmers. This includes price trends, production innovations, future demand, changes in consumer preferences and further training opportunities; and
- Linking the markets and farmers – MEOs provide the market with information on production, expected yields and farmer locations. They also provide the farmers with information on when to harvest, collection schedules from Encabeni fresh produce market and follow up on payments due to farmers.

The Encabeni Fresh produce market is a marketing facility to facilitate access to markets for farmers. This entails linking the various market channel needs and matching farmers' capability to produce for a basket of markets based on size and agroclimatic conditions.

Encabeni fresh produce market provides a marketing channel for various types of fresh produce, this includes conventional vegetables, baby vegetables, chicken, and in future, other lines as demanded by the market. To ensure that farmer access to market is improved, the following actions are in place:

- Training – As part of ensuring that farmers handle produce correctly during and after harvest, the market facilitates training of farmers on their farms or at the Encabeni fresh produce market, which has a fully equipped demonstration plot. These training is meant to ensure that farmers receive good prices for their vegetables as post-harvest handling is as important as production. This ensures that all produce reaches the consumer in safe and high-quality mode.
- Logistic Support – Encabeni provide transportation in suitable vehicles from farmers' fields to Encabeni fresh produce market in appropriate packaging or transit containers. The transport system, consisting of a well-managed fleet of vehicles is coordinated to ensure that produce is as fresh as possible up to the end user.
- Quality Assurance – Exceptional quality is the heartbeat of fresh produce profitability, thus quality control at the heart of our business. Strict quality standards are implemented, that includes farmer training and feedback on their produce, as they work towards world class fresh commodities. Our demo is certified to Global GAP and the Packhouse is certified to HACCP.

- Cold Chain Management – This is the backbone of fresh produce value chains, to compete at the world stage, produce should have long product shelf life. Encabeni offer the following services as part of cold chain management:
 - » Refrigerated Transportation to ensure preservation of shelf life;
 - » Cold Storage Facilities in various locations within the country;
 - » Centralised Cold Storage Solutions for marketing and distribution purposes;
 - » Training on cold chain management.

4.2. Structure of the Value Chain in Eswatini

Figure 27: Example Banana Value Chain Map for Malawi (Similar to eSwatini)

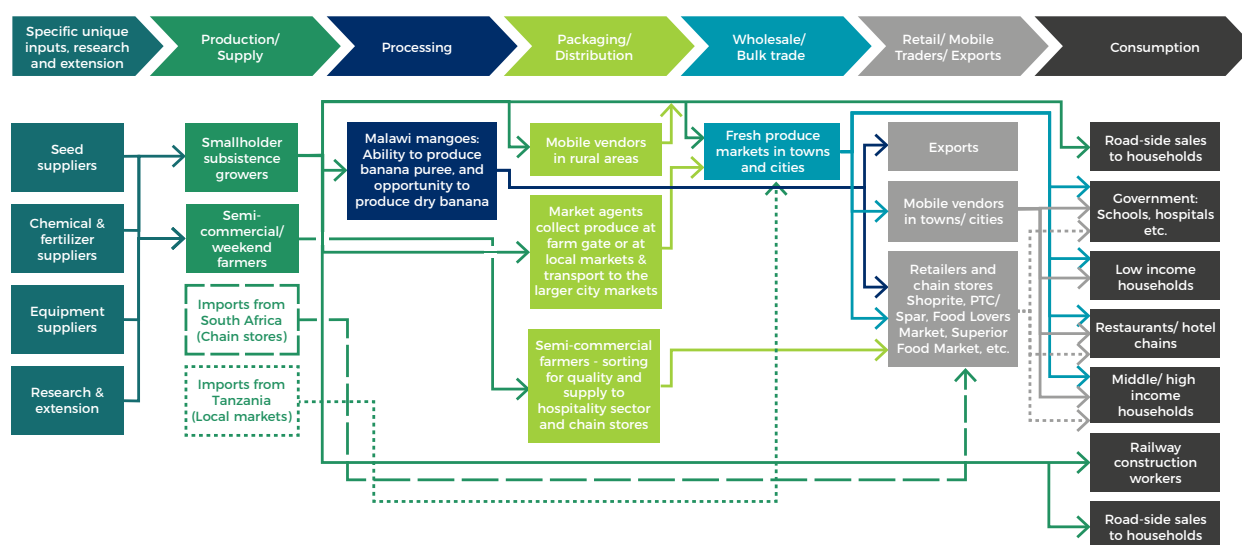


Figure 27 shows the value chain flow of bananas in Malawi which is very similar to the marketing flow in eSwatini. Each step is clarified more clearly as follows:

1. Specific unique Inputs, research, and Extension – can be provided by Government parastatals such as NAMBoard, ESWADE and research institutions as well as private sector players such as fertiliser, chemical, equipment suppliers.
2. Production/Supply – Four main commercial producers, United Plantations (Tambuti, Ngonini), Kubuta, Nisela, ESWADE, Canterbury), numerous small-scale farmers and imports from South Africa and Mozambique.
3. Processing – some larger producers have sorting, and ripening (Nisela) facilities to enable them to supply to the local market. NAMBoard also supplies a ripening facility for small-scale producers.
4. Packaging and Distribution – NAMBoard and the larger producers have packaging and logistics infrastructure. United Plantations for example package, transport and market their bananas for the “green” export market.
5. Wholesale Bulk trade –. ESWADE has established its own marketing division called LnL Management to assist small scale farmers with the marketing of their produce. NAMboard is also a major player in the procurement, logistics, storage, ripening and marketing of small-scale produce. Traders also import large quantities of lower quality bananas for domestic consumption.

6. Retail, Mobile traders, Exports - the lower grade bananas, B and C grade form part of the wholesale bulk market, including vendors, traders and market agents. The larger producers export their A- grade bananas mainly to South Africa, but to other countries such as Mozambique, Europe, China, Taiwan and Netherlands as well.
7. Consumption (Final consumer) – the final consumers are the chain stores clients, local population via the street traders, hospital, government institutions etc.

4.3. Past, Present Challenges

Past Projects

A few banana projects were implemented in the past (2003-2005) that were unsuccessful. ESWADE was involved in the planting of approximately 5 ha of banana on the early KDDP programme. A packhouse was erected by ESWADE on the border at Mananga to facilitate and store the bananas. At the time, financing was based on the sugar model, which did not ideally fit with the production of bananas. The finance provided by ESWADE, through the government was insufficient to cover all the banana production costs. Due to the lack of produce from the farmers, the packhouse was completely inefficient and closed down. The packhouse is still standing idle at present.

At the time of these initial plantings, there was a distinct lack of knowledge and understanding of banana husbandry which resulted in poor production, from lack of expert advice on fertiliser, pest control and other husbandry practices.

The three main reasons for the project failure were:

- Access to the correct type of finance
- Lack of technical skills, and
- Lack of economies of scale of the packhouse.

Since then, ESWADE now has qualified advisors that can help the small holder farmers with the husbandry required for the bananas, as well as the logistics and marketing of the final produce. Access to finance is also not as much of a problem as before, as there is a better understanding of the requirements for banana production. Many of the proposed farmers are already producing sugar cane, that are trying to move to more higher value crops such as bananas.

SWOT Analysis of the banana industry

Table 51 below lists the Strengths, Weaknesses, Opportunities and Threats identified for the eSwatini banana value chain.

Table 51: SWOT Analysis of the Banana value chain in eSwatini

Strengths	Weaknesses
<ul style="list-style-type: none"> • Political/ government will to improve banana small scale farmer production, improved varieties and extension services via ESWADE; • NGO funds possibly available for value chain development for specific projects • New, higher yielding varieties such as Williams/ Cavendish and Grand Nine available; • Banana viewed as a good staple food by development agencies to eradicate poverty; • Strong development agency, ESWADE to help develop new small-scale farmers and to help extension with existing farmers • Many new irrigation schemes LUSIP, LUSIP II, small farm dams projects etc 	<ul style="list-style-type: none"> • Poor market system, inadequate handling and cold storage facilities and transport; • Disease Infestations; • Poor farm management practices: crop maintenance, pest and disease chemical applications and lack of supplementary irrigation during drought times when the plants are stressed; • Poor country infrastructure: power, roads and communication (poor cell phone reception) • Poor harvesting and post-harvest (loading, packaging and transporting) techniques lead to spoilage and production losses; • Limited access financing from banks as farmers are seen as high risk; high interest rates prevail; • Poor/ very limited market information: farmers and markets do not communicate on regular basis; poor internet and cell phone reception; and farmers/vendors cannot easily redirect excess product to destinations that may need them; • Entrenched cultural practices often limit farmers from communicating with each other and town/city markets.
Opportunities	Threats
<ul style="list-style-type: none"> • Improved drought/disease tolerant seeds to improve yields (hybrid seeds); • Overwhelming and ever-increasing demand for bananas; • Donor community has huge interest in this sector as a food staple; • Change in eating habits – more focus on fresh products; • Potential for increase in yields through irrigation and water storage to reduce reliance on erratic rainfall; • Opportunity to supply directly to supermarket chains if quality and consistent supply issues are addressed; • Potential formation of farmer organisational structures to facilitate greater bargaining power and access to higher levels on the value chains, due to pooled resources; • Potential introduction of simple extension services at ground level to improve quality and yields (by both GOE and NGOs); and • GOE investment in marketing infrastructure such as fresh produce markets and cold storage facilities have the potential to assist farmers improve product quality and shelf-life. 	<ul style="list-style-type: none"> • Poor infrastructure, that is not maintained, which leads to higher transport, distribution and transactions costs among value chain actors • Climate Change – warmer and dryer seasons that are associated with more pests and diseases • Lack of integration of smallholder farmers into the value chain resulting in low prices paid at farm gate; • Disorganised, segregated farmers that are reluctant/ distrustful to form farmer groups to increase bargaining power for inputs as well as the sale of final produce; • Reliance on imported inputs such as chemicals and fertilisers; • Lack of Government funding and extension support and lack of suitably qualified banana specialists at ground level; • Lack of funding for chemicals during pest and disease outbreaks, resulting in high production losses.

Opportunities

As with vegetables a EUR 36.4 million loan from the European Investment Bank (EIB), in conjunction with the Ministry of Finance, has been approved for the second phase of the Lower Usuthu Smallholder Irrigation Project (LUSIP II). This serves as a great opportunity for potential banana farmers as this facility could be used to expand the banana production area, ESWADE is already involved in expanding the small holder banana sector. With the backing of ESWADE with expertise in terms of previous project successes, the likes of the EIB may look favourable on this sector.

4.4 Recommendations for FinMark Trust

The small-scale farmer production is fairly fragmented and prevents the efficient bulk transport to the markets. Bananas do not transport well and spoilage is a huge issue while transporting produce to the markets. There is also a disconnect between producers, the markets and vendors regarding the quality required for the sale of bananas. The larger commercial farmers and some of the small-medium scale farmers, export their A-grade "green" produce directly to the likes of South Africa, Mozambique, Europe, China, Taiwan and Netherlands. This works well for the large farmers as they mainly supply bulk to the South Africa municipals markets, but the small growers suffer when the prices drop and they are forced to try and sell their larger A-grade bananas on domestic markets. This produce often ends up going through NAMBoard who then on sell to vendors, traders etc., but the A-grade bananas are not received well by the traders/vendors as the banana size affects packing numbers and they usually charge per number of bananas in a box. Thus, less bananas per pack, less income, and a lot of the A-grade bananas are wasted.

The small grower produces and sell either to NAMBoard or directly to the traders/vendors. The produce the smaller B and C grade bananas which are accepted by the vendors and domestic households.

Much of the growth in the banana production is happening on irrigated cane land which is slowly being replaced with higher value crops under the High Value Crop & Horticultural Project (HVCHP) under the direction of ESWADE.

Access to finance

Access to finance is similar to that of vegetables, with finance available for the high value conversion crops on irrigated schemes by Eswatini Bank, FINCORP and Nedbank (reinsured product). Changes to the EU's Common Agricultural Policy in recent years have permitted an expansion of sugar beet production in the EU. At the same time, assistance from the EU to African, Caribbean and Pacific countries under the Cotonou Agreement⁶⁹ has been winding down. Recognizing the difficulties that these developments present to sugar cane producers in these developing regions, the EU has instituted a number of initiatives to assist smallholders to diversify out of cane production. In Eswatini, capital grants – for example for irrigation infrastructure – are being offered to small cane-growing communities to help them establish crops such as bananas and vegetables. Successful applications are generally accompanied by technical assistance from ESWADE. This combination of assistance has then frequently opened the door to finance from commercial banks, such as those just mentioned⁷⁰.

Bananas require supplementary irrigation, especially during periods of stress due to lack of rainfall. This affects their risk profiles negatively and lowering the banks' appetite to finance them in the absence of irrigation. Further banana development could make use of the EUR 36.4 million loan from the European Investment Bank (EIB), in conjunction with the Ministry of Finance, for the second phase of the Lower Usuthu Smallholder Irrigation Project (LUSIP II). The new financing has been made available to equip over 5,200 ha of dry land with

irrigation infrastructure and replace inefficient pumping systems for a further 533 ha under the management and supervision of ESWADE.

Access to finance therefore seems to be adequately covered by the main banks and with the aid of grants from EU for cane-growing smallholder communities wishing to diversify into bananas. It appears that EIB assistance to smallholder 'farmer associations' being established on land to be irrigated under the LUSIP II scheme will also enable these groups to access finance from commercial sources. At least 30% of this land is to be used for crops other than sugar cane, such as bananas and vegetables⁷¹. ESWADE will be providing technical support to farmers operating on LUSIP II land.

In both of these instances, it does not appear that assistance of the nature that FinMark Trust is able to provide is needed to improve smallholders' access to finance. However, the question arises: could FinMark Trust constructively intervene to assist other smallholders, not fortunate enough to be included in either of these two groups, to gain access to finance? This was discussed with the CEO, United Plantations⁷², who have expressed interest in sourcing bananas from smallholder groups.

In his view, an essential prerequisite for smallholders or smallholder groups to produce bananas of the quality required by large off-takers – that is, export quality A grade fruit – with the continuity also required is access to water and irrigation infrastructure. He said that, in his experience, it is rare for smallholders/smallholder groups who can meet the access to water requirement not already to be included in some form of irrigation scheme or not to be receiving assistance to install irrigation infrastructure. In the absence of meeting this prerequisite, he felt it would be difficult to convince financial services providers to advance credit. This appears to be confirmed by the interventions referred to above.

United Plantations are not willing to provide off-take arrangements or technical support to smallholders who do not meet these requirements or to assist groups who claim to have access to an adequate supply of water to secure the credit needed to acquire irrigation infrastructure. It is also unwilling to provide credit for this purpose itself. While it is possible that other large off-takers might be less unwilling to do so, there does not appear to be a strong case for FinMark Trust to play a lobbying, broking role on behalf of any such groups, either in principle or given the long-time horizon needed to be able to demonstrate success.

As FinMark Trust does not have the capacity to make grants or to advance loans, as do the EU, the EIB and other major international donors/development partners, the conclusion must therefore be reached that bananas should not be viewed as a priority sector for interventions by FinMark Trust. Perhaps the only qualification that could be added to this is that it is possible that a bank might accept weather index insurance as a substitute for irrigation in parts of eSwatini that have a record of receiving good, reliable rainfall, if indeed there are such regions. There might therefore be a case for including bananas in a cross-value chain study of the feasibility of weather index-based insurance, if such a study, arising out of the rather stronger case of cotton (see above), is to be commissioned.

5. VEGETABLES

5.1. Overview

Vegetables are grown in all four administration regions in eSwatini, namely Hhohho, Manzini, Lubombo and Shiselweni regions. The climate is favourable for year-round production of different vegetables (World Bank 2011). Production is conducted by both small and large-scale farmers. Most of the vegetables are grown under Swazi Nation Land (SNL).

A smallholder farmer is characterised as one that has a farm size of less than a hectare and limited productive resources. Produce is often mainly for subsistence purposes with any surplus being sold to generate additional household income. The smallholder farmers are highly dependent on rainfall for vegetable production. The main vegetables grown include cabbages, spinach, lettuce, green peppers, beetroot, and butternuts. There has also been a noticeable increase in the production of baby vegetables such as baby marrow and patty pan (NAMBoard 2020). In recent production periods, there has been an increase in vegetable imports (particularly from South Africa mainly due to scarce and erratic rainfall (NAMBoard 2020).

Produce is often mainly for subsistence purposes with any surplus being sold to generate additional household income. The smallholder farmers are highly dependent on rainfall for vegetable production.

5.2. Structure of the Value Chain

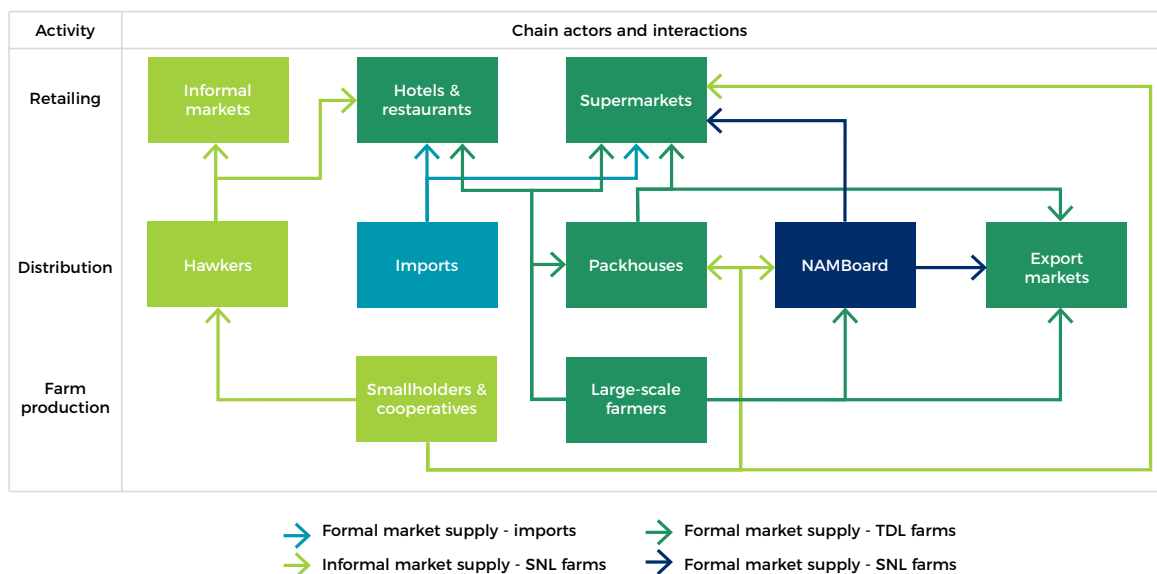
The supply chain for vegetables in eSwatini consists of the input supply, production, distribution, packaging and retailing sub-sectors (Figure 28). Many stakeholders participate in these sector divisions. The produce is channelled through formal and informal marketing channels. From farm-gate, the produce can be sold directly to informal marketing channels comprised of hawkers (vending in local towns and street corners) and individuals. Depending on agreements between the farmer and the trader (vendor), the produce can either be collected directly at farm-gate or the farmer delivers the produce to the vending market station.

Formal marketing channels comprise of selling via market intermediaries (private packhouses, NAMBoard) and directly to supermarkets, the hospitality industry (hotels, fast food restaurants, etc.) and through exports.

Modern and traditional marketing channels have different procurement processes and activities, which attract transaction costs such as post-harvest handling, quality control, transportation or delivery and packaging requirements. Some farmers opt to sell to more than one marketing outlet to increase their revenue and spread their market risk.

The National Marketing Board (NAMBoard) is a government parastatal which was established through the Act of 1985 of eSwatini to provide technical support to farmers to enhance local production and marketing of agricultural produce. Their activities include registration of wholesale distributors, importers and exporters; and to perform various activities in the value chain of agricultural produce from production to selling (NAMBoard website 2020).

Figure 28: Vegetable value chain in eSwatini



The organisation facilitates market linkages, distribution (transportation), training and quality control. It has a fresh wholesale produce market that is located at Ncabeni in the Manzini region (the hub of eSwatini), where produce from farmers is graded, packed and stored for distribution to the local markets (retail stores, large scale vendors) and exports (NAMBoard website 2020). The organisation has the infrastructure, facilities (refrigerated transport, packaging) and man-power to ensure collection from smallholder farmers and distribution to retailers and restaurants countrywide. The extension officers carry out site visits to the farms and issue farmers with production schedules of the types of vegetables demanded by NAMBoard customers before the season resumes. Once the produce is ready, the farmers inform NAMBoard who then conduct quality inspections. Upon completion of inspection at farm-gate, the produce is then taken to the produce market at Ncabeni for final quality inspection, where grading and final packaging according to the specifications of the customers is done. The produce that does not meet the quality standards is returned to the farmer and payment for the produce that was approved during the final inspection is processed and received by the farmer 5-8 weeks later.

The parastatal plays a role in the marketing of vegetables as the produce marketing organisation. Bienabe et al. (2007) suggest that produce marketing organisations strengthen the position of smallholder farmers in traditional and modern markets through the provision of technical support and enabling policies. NAMBoard procured an equivalent of 9.6 million Emalangenis worth of conventional vegetables from local smallholder farmers in 2016; which is equivalent to 2,600 metric tonnes (NAMBoard 2016). Produce purchased by retailers from 14 local suppliers increased from 5,622 to 5,900 metric tonnes in 2016. This translates to an increase from 21.7 million Emalangenis to 45 million Emalangenis (NAMBoard 2016).

5.2.1. The Retail Market

The emergence of chain supermarkets in eSwatini dates back to 1986; however, a majority of the country's supermarkets started operations early in the 21st century. The rapid growth of this sector is, therefore, a fairly recent development and is mostly dominated by South African large chain supermarkets, namely Spar, Pick 'n Pay, Shoprite, Woolworths, Boxer and Savemore, (recently renamed the OK Mini Market). In 2007 there were 21 large chain supermarket outlets in eSwatini; Shoprite and Spar had seven stores each. Table 52 shows that the number of outlets has more than doubled to 49 by 2017, and new chain stores such as Boxer and Food Lovers

Market have entered the market. Shoprite currently has the most outlets (15), followed by Spar (11).

Table 52: Number of food Supermarkets in eSwatini from 2008 and 2017

Store Name	Outlets (2008)	Outlets (2017)	% of Stores (2017)
Shoprite	7	15	30.6
Spar	7	11	22.4
OK Foods	N/A	8	16.3
Pick n Pay	4	6	12.2
Boxer Superstore	N/A	4	8.2
Woolworths	3	4	8.2
Food Lovers Market	N/A	1	2.1

Sources: Emongor (2008); Dlamini-Mazibuko-Bongiwe-Porrie (2017)

A majority of these supermarkets are strategically located in the Manzini-Mbabane corridor, which is a relatively populated area with a mixture of low to moderate-income earners. Figure 29 shows a map of eSwatini and the geographical location of the chain supermarket outlets.

The food retail chains include large chain supermarkets such as Pick n Pay, Spar, Shoprite, Boxer, Food Lover’s Market and Woolworths Foods, under different management. These retailers are mostly located in shopping malls and at city outskirts, i.e., Manzini-Mbabane corridor. Local entrepreneurs have also entered the industry by operating under foreign companies such as OK food market and are also strategically located in the most populated areas with a mixture of low to moderate-income earners, i.e., Matsapha-Manzini corridor.

Figure 29: Map of eSwatini showing the location of chain supermarkets

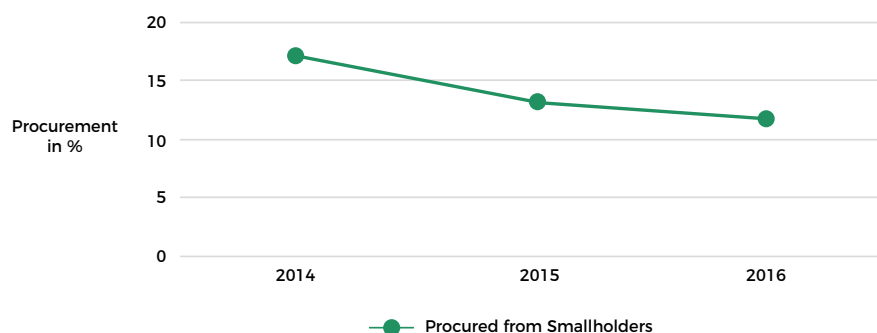


Source: Field Study - Dlamini-Mazibuko-Bongiwe-Porrie

Proportion vegetables procured by supermarkets from smallholders between 2014-2016

The average proportion of green vegetables procured from local smallholders was fairly constant over the past three years ranging from around 17% in 2014 to 12% in 2016 (Figure 30). Some respondents reported that some of their usual suppliers were greatly affected by the El Niño drought that occurred in the 2015-2016 season; hence, the further decrease of supply in 2015-2016.

Figure 30: Proportion of vegetables procured by supermarkets in eSwatini from smallholders in 2014 to 2016



Source: Field Study - Dlamini-Mazibuko-Bongiwe-Porrie

Supermarket procurement practices impact on smallholder farmers

Retailers continuously demand stronger standards for fresh produce and suppliers have no choice but to satisfy these requirements in order to be included in the value chain. The evolution of supermarkets involves strict coordination and integration within a supply chain to meet consumer demands. Supermarkets require good quality packed ready to be shelved produce. Delivery to the outlets requires implementation, maintenance and auditing systems and procedures to be put in place, which may be complex, costly and requires time.

To ensure continued delivery of the promise to consumers, supermarkets opt to engage suppliers that have the ability to deliver the right product at the right time and place. Retailers may monitor suppliers if they are found to be lacking technical competence and market knowledge. Farmers have no choice but to adapt to being included in formal marketing channels. Large-scale farmers have the capacity to meet the quality and quantity requirements set by supermarkets consistently, unlike smallholder farmers. Most often, foreign supermarkets tend to bring their international business practices which include standards, procuring produce through distribution centres, or importing from parent countries they trust. In eSwatini, the active role played by NAMBoard of providing technical support, global Good Agricultural Practices (GAP) skills and transport provides an opportunity for smallholder farmers to supply supermarkets indirectly since NAMBoard also supply retailers.

Traceability in agricultural food supply chains

Changing lifestyle and rising income have resulted in a shift from quantity-oriented agriculture to a “quality, safety, functional and sustainable agriculture”. This has further led to an emphasis on the adoption of traceable supply chains. Modern consumers demand food that is fresh, palatable, nutritious and safe. The link between consumer demands and the reputation of outlets encourages supermarkets to adopt good practices to compete with other marketing outlets. Supply chain traceability is part of good quality management systems in agriculture. The food quality management system integrates traceability for improved product quality, safety management and strengthening overall agribusiness coordination. All participants (producers, processors, manufacturers, distributors) in supply chains have the responsibility

to ensure food safety. They need to ensure that every precaution has been taken to prevent contamination.

Food quality management systems ensure products can be traced back to the inputs and the original producer and any other participant in the supply chain. Nowadays, traceability has become a new index of quality and a basis for trade in agricultural products.

Factors influencing marketing channel selection

Marketing channels involve the integration of smallholder farmers in input and output markets⁷⁹.

- The following factors need to be considered:
- Understanding the factors influencing the choice of marketing channels is important since it could enhance the exploitation of production possibilities, farm income and investment;
- Information helps in the development of mitigation strategies of the factors thereby encouraging farmers to achieve their goals;
- Each marketing channel is characterised by different profitability and cost structures and it is important for smallholder producers understand the characteristics of each channel;
- Producers' marketing choices influence the gross income earned at the end of the season;
- Access to certain marketing channels could be limited by poor infrastructure, poor access to credit and marketing facilities and information.

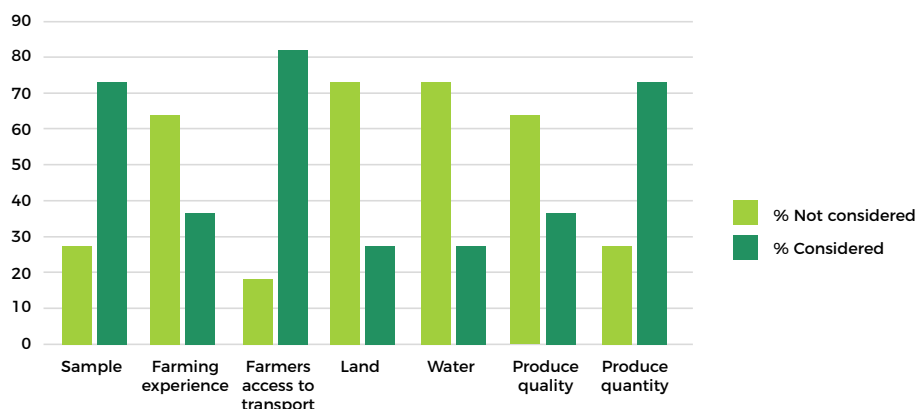
General Criteria for supplying supermarkets

In a market field study conducted by Dlamini-Mazibuko-Bongiwe-Porrie, 2020, figure 31 shows the top three criteria that smallholders need to meet to supply the stores. Farmers in the study were required to supply a sample of their fresh produce, using reliable transport, that met quality and quantity requirements. Samples were assessed and approved and the two parties agreed on the quantity to be supplied. Retailers use observable output characteristics such as size, colour and quantity to select farmers to supply their outlets. It is evident, shown in figure 31, that quantity and access to transport are the most important factors in eSwatini.

None of the supermarkets in this above case study had formal written contracts with the smallholders which is contrary to believed expectations that institutional buyers would engage in contractual agreements with suppliers of produce as a risk management and coordination strategy. Reasons for the lack of written contractual agreements are linked to the challenges faced by the farmers (lack of finance to adhere to the requirements consistently). It appears that procurement from smallholders is seen as more of a social responsibility and following the country's regulations of procuring local produce, than formal procurement agreements.

Transport, quality and quantity factors overshadowed the other factors considered such as farming experience, access to water and access to land.

Figure 31: Sourcing and procurement criteria for vegetables from smallholders by supermarkets, 2017



Source: Field Study: Dlamini-Mazibuko-Bongiwe-Porrie

Factors influencing smallholder farmers’ decisions to participate in supermarket channels

Some factors that influence smallholder farmers’ decisions to participate in supermarket channels, the impact thereof on farm income as well as the supermarket participation dynamics are listed below:

- Farmers participating in supermarket channels generally earn a higher income than those in traditional channels in eSwatini.
- Family labour has a positive influence on participation and effect on farm income, which assists in lowering labour cost.
- Farmer’s level of education, the number of family members working on the farm and owning livestock have a positive effect on farm income for supermarket participants.
- Supermarket participation is also positively associated with male farmers, risk attitude of the farmer and access to marketing information.

Based on earlier studies, supermarket participation has positive heterogeneity effects, which suggest that the effects of participation on farm income for participants are greater than for non-participants. Understanding the potential role of heterogeneity is essential, particularly when devising commercialisation strategies to benefit smallholder farmers.

Based on the conclusion of the study by Dlamini-Mazibuko-Bongiwe-Porrie, 2020, perceived information about the dynamics of selling to supermarkets enlightens supermarkets and other important stakeholders in the vegetable supply chain about the relevance of participation in the livelihood of smallholder vegetable farmers, specifically with regard to gross vegetable income. It could be used as a base to improve procurement arrangements and relationships between smallholder farmers and retailers. Given the marketing opportunities and the perceived benefits of supermarket participation, it is important that the challenges faced by smallholder vegetable farmers be addressed by all stakeholders in the supply chain to promote their income.

The Impact of Supermarkets

Despite the contributions of supermarkets in the economy, such as employment creation and access to a variety of food items to consumers, supplying supermarkets creates many challenges for smallholder farmers. Smallholders struggle to meet procurement requirements set by supermarkets, thereby supplying traditional marketing channels. This informal marketing channel is characterised by random purchases and are, therefore, not sustainable. It is therefore vitally important for the vegetable sector to increase access to modern marketing channels for fresh produce, to subsequently increase farm income.

As discussed above, key challenges identified were inconsistent supply of produce, lack of finance, and transport, high procurement requirements and high transaction costs. The social responsibility approach that supermarkets use for smallholders is attributed to these procurement challenges. Buying from local smallholders is not the main business strategy for retailers. A response could include policy regulations set to limit imports and encourage domestic procurement while developing smallholders to be able meet procurement requirements. However, moves to limit the import of vegetables from South Africa would encounter difficulties in terms of the SACU and SADC Free Trade Agreements.

The relationship between smallholder vegetable producers and buyers of fresh produce is discrete as demonstrated by the flexible non-contractual relationship and low level of relationship commitment between the trading parties. The fact that the supermarket chains in eSwatini are foreign-owned and are importing most of their supplies from the parent country could attribute to the low level of relationship commitment. This is useful information for policy makers to devise policy measures and support structures that would enable smallholder farmers to become important suppliers to supermarket chains, to increase the relationship commitment. The introduction of policies or regulations may stimulate and ensure local production and procurement through the introduction of a quota, i.e. a certain percentage of fresh produce sourced locally, especially from smallholder farmers. Furthermore, to ensure consistent supply of fresh produce to supermarkets, farmers can be organised to work collectively to minimise transaction costs, to enhance marketing access and the establishment of a pack-house that could not only provide a reliable supply of high quality fresh produce to eSwatini supermarkets but also to export to SA via the existing procurement channels of those supermarket chains (backhaul vegetables to SA from eSwatini), including relatively less perishable fresh produce.

In eSwatini there are three main marketing outlets, namely supermarkets, NAMBoard and traditional trading. Smallholder farmers adopt a diversified approach in their quest to increase revenue, maximise profit and reduce marketing risks. The diversified strategy has a potential of enhancing the distribution of produce to more than one marketing outlet thereby increasing farm earnings. The farmers' risk preference, different assets owned, institutional factors, and the duration the marketing outlet takes to make payments for produce influence supermarket channel selection decisions. Policies aimed at establishing institutions and the acquisition of assets, such as improved market information, extension services, mobile phones, transportation and farm size to produce marketable surplus, are critical for the improvement of supermarket participation.

Empirical evidence shows a positive impact of supermarket participation on farm income. Smallholder farmers choose supermarket channels based on their comparative advantage. In most cases, smallholders participating in traditional channels earn lower vegetable income in that channel. Policies aimed at the commercialisation of smallholder farmers, such as the provision of education (skills training), are critical for the improvement of farmers' incomes.

5.3. Challenges and Past and Planned Initiatives to respond

Many projects in the past such as KDDP, LUSIP₁, LUSIP – GEF Sustainable Land Management Project and the High Value Crop & Horticultural Project (HVCHP) that have been grant funded by the likes of the African Development Bank, IFAD and the EU, have had variable results. The sugar cane areas have done well due to the ongoing support by the major industry and international players, but many irrigated vegetables small scale projects have failed to be sustainable in the long term. Informed opinions (Mike Ogg – Country Specialist in eSwatini) suggest that almost zero or very little fresh vegetables are coming out to the fresh produce market from LUSIP₁. Based on numerous conversions within country agricultural experts, a common factor was consistently raised, and that was the fact that traditional subsistence farmers did not have the initial knowledge and skills set to manage a larger farm. Grants were

Based on numerous conversions within country agricultural experts, a common factor was consistently raised, and that was the fact that traditional subsistence farmers did not have the initial knowledge and skills set to manage a larger farm.

handed out for irrigation infrastructure and production inputs, but there was a major shortfall in readiness, training, technical and management abilities of the small-scale farmer. The small-scale farmer was not always a natural businessman with financial and business management skills. These farmers were grouped together into schemes with up to 50 farmers on up to 200 ha farmers and did not have the abilities and training to cope on a sustainable basis.

In addition to this, other key issues between smallholders and supermarkets in the vegetable value chain⁶⁷ were found as follows:

- High procurement requirements of Supermarkets;
- Inconsistent supply of vegetables by smallholders;
- Smallholders poor access to finance;
- Smallholders poor access to transport; and
- High transaction costs for farmers and supermarkets.

These issues are all closely linked to one another and helping with one factor could substantially influence the factors. As an example, inconsistency with supply can be closely associated with the lack of transport. Producers are expected to deliver fresh produce to the market outlets consistently if they want to be included in the marketing channel, which has the potential of providing consistent income to improve their livelihoods.

Lack of finance is closely related to low produce quality and the access to finance that will enable the producer to procure the right quality of inputs and be able to handle fresh produce at farm level to retain quality.

These issues cannot be resolved in isolation; all the other related issues would need to be considered by all stakeholders in supply chains such as policy makers, distributors, retailers, and producers.

Inconsistent supply is directly linked to poor access to finance, transport and high procurement requirements. High transaction costs are directly linked to inconsistent supply, poor access to transport and high procurement requirements.

The following factors directly relate to the inconsistent supply of vegetables by smallholders in eSwatini:

- Poor quality produce;
- Poor access to finance;
- Poor access to transport;
- Long payment duration (long credit period) by supermarkets;
- Seasonal production by farmers,
- Lack of packaging facilities,
- Unavailability of policy regulation governing the industry,
- Global Standards (GAP);
- Low commitment and reliability;
- Limited training and technical support;
- No marketing contracts issued to farmers by supermarkets, and
- Farmer's lack of business acumen.

Bienabe and Vermeulen (2007) agree that supermarkets require a high quality and food safety systems in place at the farm level and pack-houses such as global Good Agricultural Practices (GAP) and Hazard Analysis and Critical Control Points (HACCP). According to Pritchard et al. (2010), producers may be required to acquire specialised equipment, technology and/or

certification to comply with requirements set by the buyers. The cost of compliance with these “regulations” creates a barrier to market entry for many smallholder farmers (Pritchard et al. 2010; Richards et al. 2013).

Issues pertaining to high procurement requirements by supermarkets are as follows:

- Limited produce varieties
- Seasonality of farming;
- Lack of packing facilities,
- Global GAP Standards

These issues pertain to supermarkets demanding a variety of produce that meets international standards, and well-packaged produce. Produce from local producers is seasonal and retailers procure from producers for mainly for social responsibility reasons.

Three options provide possible solutions to the high procurement requirement that can be implemented by smallholder farmers as follows:

- Selling produce to NAMBoard,
 - Produce specialisation strategy; and
 - Implement collective action (farmers group together)
- Transaction costs in the farmer-supermarket relationship are:
- Low produce quality,
 - Lack of packaging material,
 - Inability to adhere to Global GAP standards; and
 - Limited produce varieties.

Transaction costs associated with sourcing produce from smallholders are higher compared to sourcing from larger-scale farmers. Procuring from smallholder farmers increases transport, negotiation and monitoring costs. Supermarkets require high quality and food safety systems in place at the farm level and pack-houses.

Poor access to transport by smallholder vegetable farmers in eSwatini is a big problem. One of the procurement requirements by supermarkets to smallholder producers is to deliver fresh produce at the store location; however, due to limited access to finance and long credit periods by supermarkets, farmers end up delivering low quality produce. There is a vicious cycle between poor access to transport and low-quality produce; and low-quality produce due to lack of finance; and lack of finance resulting in poor access to transport. This means that poor access to transport leads to low produce quality, which is as a result of the lack of finance that further leads to poor access to transport. Improved policy could include providing producers access to finance, which could address the issue of quality produce and transport.

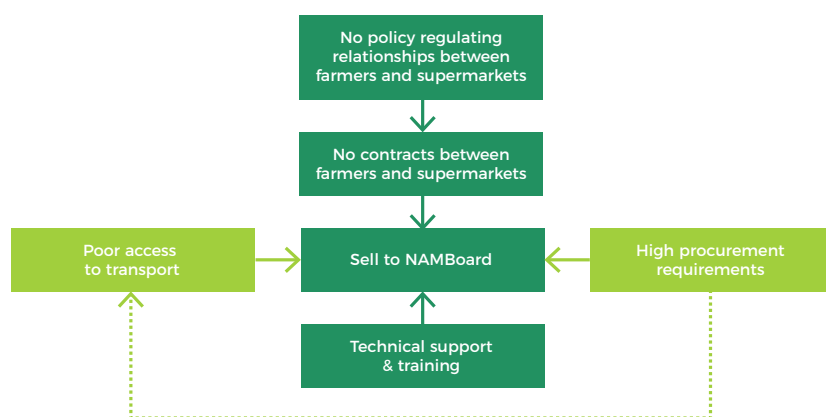
Possible solutions to the transport challenges faces by smallholders, would be to either sell their produce directly to NAMBoard and/ or adopting a collective action strategy. Delivering the produce is one of the requirements that becomes a cost to the farmer and lack of finance becomes a barrier for the farmer to access supermarket channels. Poor access to transport affects the quality of the highly perishable produce that has to be delivered to the supermarkets. Therefore, in order for the farmers to make a sale, they will have to sell their produce to NAMBoard, which has the appropriate transport facility to handle the produce or to market their produce collectively as a way to minimise transport costs.

Smallholder farmers’ poor access to finance is also a vicious cycle between poor access to transport and low-quality produce themes. Late payment by supermarkets to producers often leads to farmers not having sufficient funds to finance their business operations (inputs,

marketing, etc.) leading to inconsistent produce supply and poor access to transport. Poor access to finance results in lower productive investments along the supply chain (World Bank 2007). This implies that access to finance could reduce the pressure for a written contract, as well as reducing delayed payments for produce and inconsistent supply, since farmers will be in a position to purchase adequate relevant inputs and meet supermarket requirements.

Selling to NAMBoard is one of the solutions to the challenges faced by smallholders in eSwatini. NAMBoard being a state-owned institution that has adopted both internationally recognised systems, addresses the transport and other procurement requirements required by supermarkets, such as packaging, storage facilities, technical assistance to farmers supplying the organisation, and Global GAP standards accreditation (See figure 32)

Figure 32: Smallholders’ choice of marketing channels (NAMBoard vs Supermarkets)



Challenges faced by producers and markets are linked to each other and show linkages of possible solutions to the challenges faced.

Inconsistent supply is a key factor in the smallholder-supermarket relationship and is directly linked to the other factors discussed in this text. This emphasises how important consistent supply to suppliers is in the vegetable value chain between smallholders and formal markets in eSwatini.

5.4. Recommendations for FinMark Trust

The analysis above sets out the many challenges facing smallholder farmers who wish to enter commercial production. Although it is certainly true that inadequate access to credit for production and fixed improvements is one, attempting to address this constraint without also overcoming all of the other constraints is unlikely to lead either to the generation of a flow of output of the nature required by retailers – whether through NAMBoard or directly – or to the sustainable provision of credit. NAMBoard and other parastatals, such as ESWADE, play a valuable role in addressing a number of these constraints, but have not added the provision of credit to their activities, being well aware of the multiplicity of the challenges.

The initiatives that have had the most success in addressing these are those led by major international donors/development partners, such as the EU and the EIB, who have the capacity and the willingness to provide substantial volumes of grant and/or concessional loan finance to solve infrastructure challenges, foremost irrigation, as the key to overcoming other challenges. Partnership with ESWADE have dealt with smallholders’ needs for technical and business support. This approach has been successful in prising open access to finance through commercial banks. More details are provided in the analysis of the bananas value chain.

However, as in the instance of the bananas value chain, since FinMark Trust does not have the capacity to make grants or to advance loans, as do these international donors/development partners, the conclusion must be reached that vegetables should not be viewed as a priority sector for interventions by FinMark Trust. On the surface, it may seem logical to make collaboration with retailers to assist small vegetable producers as part of FinMark Trust's Supplier Development Programme, but much as retailers may be willing to buy smallholders' produce, they too will be aware of the multiple challenges that need to be overcome to do so on more than an opportunistic basis. And they will almost certainly not be willing to provide the technical, business, logistical and infrastructural support needed to make offering the credit needed for production.

In addition, while a case can perhaps be made for investigating the feasibility of weather index-based insurance as a substitute for irrigation as a catalyst for accessing finance, this is really not possible for vegetables. Banana plantations can sustain dry periods far longer than vegetables and the areas on which bananas are planted are far more extensive than those used, even for large-scale vegetable production. Such small areas are not amenable to this type of insurance. There is simply no substitute for irrigation for producing vegetables on a commercial scale. So, if FinMark Trust does commission a study of the feasibility of cross-value chain weather index-based insurance in the Southern African region, as suggested in the analyses of the cotton and bananas value chains, it would be hard to argue for the inclusion of vegetables in such a study.

5.5 Conclusions

In summary, there is definitely an identified gap/opportunity in the fresh produce market to enter the chain store procurement system for small holder farmers, but fulfilling this gap will be extremely difficult to be sustainable due to the many complex issues mentioned above. The introduction of Supply Development type programmes is absolutely necessary, but they will be time consuming and require an enormous amount of resources (finance, people, structure, infrastructure etc). Entering this space will definitely not be picking the low-lying fruits for FinMark Trust.

Access to finance for the larger small holder farmers in the vegetable sector who have contracts to supply retailers seems to be adequately serviced by commercial banks. In addition, farmers – mainly groups trying to diversify out of cane farming – fortunate enough to be awarded EU/ African Development Bank/Arab Bank grants and loans for the development of high value crops on LUSIP II land, seem to be able to use these grants, which are accompanied by technical support from ESWADE, to access bank credit.

However, this does not mean that access to finance is fully covered in this sector, i.e., that finance is freely available for smaller dry land farmers, who are high risk and highly dependent on rainfall. These farmers still find it extremely difficult to access commercial financing from banks etc; due to their risk profile. It is a lot easier for established small holder farmers, with irrigation, to access finance opportunities. Trying to increase smallholders' access to credit without addressing the multiple challenges that they face is not worthwhile, because any such intervention on its own is not likely to be sustainable.

We do not recommend that FinMark Trust prioritise trying to improve smallholders' access to finance for vegetable production in eSwatini at present, perhaps through collaborating with retailers, as part of its Supplier Development Programme. Parastatals, such as NAMBoard, and ESWADE have preferred not to undertake this route, given the multiple challenges, resources and risks involved, and international development partners have not been able to achieve a significant degree of success without substantial grants and subsidies, which cannot be sustained after the termination of interventions. There are simply too many issues that need to be addressed, as pointed out above, for FinMark Trust to have any meaningful impact on the existing value chain mechanisms.

Notes from sections

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- ² <https://www.worldbank.org/en/country/eswatini/overview#1>
- ³ <https://www.cia.gov/library/publications/the-world-factbook/geos/wz.html>
- ⁴ <https://www.cia.gov/library/publications/the-world-factbook/geos/wz.htm>
- ⁵ Central Bank of Eswatini, Annual Economic Review Report, 2018/2019
- ⁶ The Government of the Kingdom of Eswatini – Government Website
- ⁷ The Government of the Kingdom of Eswatini – Government Website
- ⁸ What are the major resources of Swaziland? Joseph Kiprop, Jan 7, 2019 in Economics
- ⁹ Land and natural resources in Swaziland Factsheets, 2012 – IFAD, GLTN, UNHabitat
- ¹⁰ Terry & Ogg, 2017
- ¹¹ Van Wavaren, 2007; Terry & Ogg, 2017
- ¹² Mabuza et al., 2013
- ¹³ Swaziland Environment Authority, 2002; Terry & Ogg, 2017; Mabuza et al., 2013
- ¹⁴ Swaziland Environment Authority, 2002
- ¹⁵ Secretariat to the Convention on Biological Diversity, 2010
- ¹⁶ Eswatini National Drought Plan, The Kingdom of Eswatini Ministry of Agriculture August 2020
- ¹⁷ Ministry of agriculture strategic plan (2018- 2023)
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- ²⁰ Central Bank of Eswatini, Annual Economic Review Report, 2018/2019
- ²¹ EU, VC4D, Beef value chain analysis in eSwatini, N°13 March 2019
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- ²³ Economic Efficiency of Maize Production in Swaziland: The Case of Hhohho, Manzini and Shiselweni Regions
- ²⁴ GIEWS - Global Information and Early Warning System, Country Briefs, Eswatini
- ²⁵ GIEWS - Global Information and Early Warning System, Country Briefs, Eswatini
- ²⁶ WFP Southern Africa Seasonal Update Regional Bureau for Southern Africa (RBJ), 2018/19 Seasonal Performance
- ²⁷ The State of Eswatini's Biodiversity for Food and Agriculture, Mr Thembinkosi R. Gumedze
- ²⁸ Swazi (Eswatini) finds Success with GMO Cotton, Nkechi Isaac – June 6, 2019
- ²⁹ National Agricultural Marketing Board (NAMBoard), Annual Report- 2017/2018
- ³⁰ National Agricultural Marketing Board (NAMBoard), Annual Report- 2017/2018
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- ³⁶ SME Roadmap Eswatini, 2018
- ³⁷ Central Bank of Kingdom of Eswatini, 2015
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- ⁴⁰ IPC Acute Food Insecurity Analysis, June 2019 – March 2020, Issued 2 July 2019
- ⁴¹ Post COVID-19, Economic Recovery Plan-14 August 2020
- ⁴² Ministry of Agriculture Website <http://www.gov.sz/index.php/agriculture-home>
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- ⁴⁴ <http://www.gov.sz/index.php/departments-sp-741563992/home-economics>
- ⁴⁵ <http://www.gov.sz/index.php/departments-sp-623334762/property-valuation>
- ⁴⁶ <http://www.gov.sz/index.php/departments-sp-623334762/land-administration>
- ⁴⁷ <http://www.gov.sz/index.php/departments-sp-623334762/surveyor-general>
- ⁴⁸ <http://www.gov.sz/index.php/departments-sp-623334762/department-of-water-affairs-dwa>
- ⁴⁹ <http://www.gov.sz/index.php/departments-sp-623334762/geological-survey>
- ⁵⁰ <http://www.gov.sz/index.php/departments-sp-623334762/conveyancing>

- ⁵¹ <http://www.gov.sz/index.php/departments-sp-623334762/deeds>
- ⁵² 11th EDF National Indicative Programme (2014 – 2020) for cooperation between the Kingdom of Swaziland and the European Union
- ⁵³ UNESCO – National Development Strategy (NDS) 2022
- ⁵⁴ https://www.cabri-sbo.org/uploads/bia/Swaziland_2019_Planning_External_NationalPlan_NatGov_COMESASADC_English.pdf
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- ⁶² See, e.g., Gro Intelligence, US Cotton Subsidies Insulate Producers from Economic Loss, intelligence.com/insights/articles/us-cotton-subsidies#The, 6 June 2018; IFPRI, 2018 Farm Bill: Protecting the US Cotton Industry Poses Risks for Developing Countries, 31 January 2018, www.ifpri.org/blog/2018-farm-bill-protecting-us-cotton-industry-poses-risks-developing-countries
- ⁶³ Chairman Address: Eswatini Cotton Board Annual Financial Report, 31st March 2019
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- ⁶⁵ Swazi (Eswatini) finds Success with GMO Cotton, Nkechi Isaac – June 6, 2019
- ⁶⁶ The MFA allowed developed countries to impose import quotas on textiles and clothing manufactured in developing countries when such imports were reckoned to be likely to cause serious damage in the former. However, the allocation of such firm quotas enabled the emergence of flourishing textile and clothing industries in many developing countries. The Agreement commenced in 1974, its termination in 2005, under a World Trade Organization phase-out process, led to widespread job losses in countries such as Eswatini. (See, e.g., van Heerden, A, et al., Rags or Riches: Phasing-Out the Multi-Fibre Agreement, International Labour Office, 2003, p1)
- ⁶⁷ As USAID has made strengthening Lesotho's textile and clothing sector one of the objectives of its assistance to that country, it is possible that it may do the same in Eswatini if it is decided that AGOA will extend beyond 2025.
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- ⁷¹ European Investment Bank, Swaziland: Eswatini Farmers to Get Improved Access to Water with EIB Support, 19 July 2018 (eib.org/en/press/all/2018-196-eswatini-farmers-to-get-improved-access-to-water-with-eib-support)
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6. APPENDICES

6.1. Appendix A - Value chain selection longlist

Commodity / VC	Justification
LIVESTOCK	
Beef	<ul style="list-style-type: none"> • Largest agricultural activity in the rural areas on the African continent and in SADC member states is animal husbandry. • The rural livestock farmers do not trade in especially male offspring so they do not have access to value adding facilities. • The handling structures such as veterinary services and traceability systems are deficient • Little real value of the meat products accrues to the people on the ground. • With the planned advanced purchase and trading system, coupled with the provision of basic veterinary services and the creation of grass feedlots, the system is set to be overhauled. • Adding the planned small rural abattoirs and meat, off-fall and hide and skin tanning facilities, the integrated system can serve to change the entire livestock farming and meat processing value chains for the benefit of farming and rural communities. • Constraint on general trading in red meat is posed by especially Foot and Mouth Disease (FMD), Bovine Brucellosis (BB), tuberculosis (TB), but also certain other serious contagious diseases • At all levels of trading consumers seek guarantees that the required inspection services are operational, to safeguard the consumers from contracting the dangerous diseases. Many multilateral agreements have been signed between governments and also between regional groupings whereby all parties would provide guarantees that the inspection services are operating at the required standards, that inspection by skilled practitioners is done at abattoirs and that certification of the meat is done in the correct manner. This includes a guarantee that the health standards at the abattoirs are maintained in a professional manner. This is most often not achieved, and this deficiency serves as an important impediment to trading in meat and other animal products <p>Opportunities</p> <ul style="list-style-type: none"> • Improving the slaughter percentage of animals through grass feedlots • Slaughter percentage of cattle in the rural areas generally around 33% i.e., recoverable meat is very low. • Animals are kept on grazing land and fed on additional grains and feed concentrates, their mass increases and the slaughter percentages increase over a period of 120 days. • Some breeds of cattle, the slaughter percentage can increase to 65 percent. • Intensive feedlots gradually losing popularity due to high incidence of disease and high cost of feeding. • Animals are kept on natural grazing while being fed, the feeding cost per kilogram meat gained is usually much higher. <p>Health considerations</p> <p>Strong opposition growth promoting hormones, the usage of a number of pesticides, large doses of antibiotics and anti-inflammatory injections such as Voltaren and other substances dangers to the health of the end consumers. Guarantees are sought that meat which is exported is free of those substances. This aspect will be promoted in the advancement of high value exports from various countries.</p>

	<p>Strong opportunity for the marketing of meat free of (Bovine dementia or mad-cow disease) and other diseases as well as meat from animals produced on grazing alone or grass feedlots. Large-scale market opportunities are available for producers of beef and goats' meat to benefit from high prices from EU countries.</p>
Poultry (Layers)	<ul style="list-style-type: none"> • The local egg production is able to supply the local demand sufficiently as well as the export market • Egg production is one of the largest animal production industries in the country and the primary source of income for smallholder farmers • There is a focus on the egg production sector with the aim to promote the egg production industry in Swaziland to lessen the demand of imports from South Africa
FIELD CROPS	
Sugarcane	<ul style="list-style-type: none"> • The sugar cane industry sector is by far the largest agricultural contributor in Eswatini. The industry is well established with multiple sugar mills distributed throughout the country. These mills source their cane from both large sugar estates and from many outgrower farmers. The industry is already well structured and organised, including access to markets and to small grower finance. For these reasons, there may be limited opportunities for FMT to add value by intervening in this sector.
Maize	<p>White maize</p> <ul style="list-style-type: none"> • Eswatini staple food • Maize Inputs for are subsidised by government and tractor services are often made available at a reasonable cost, therefore maize has advantage over other field crops. • Productivity needs to be increased with new varietal selection • Irrigating the crop to significantly improve the yields, • Many current farmers infield and bulk infrastructure is limited and water allocation by the authorities needs to be verified. It is • Largely produced for domestic requirements, with surplus being sold informally and to markets that include NMC (E3,100.00/ton) • National demand for white maize (average over a 5-year period) is 136, 045.7 to which local farmers are reported to supply 60%. <p>Yellow maize</p> <ul style="list-style-type: none"> • Huge demand from the dominant animal feed producing companies – Feedmaster, Arrow Feeds and Crane feeds. • Combined these companies import an estimated 191 400 ton/annum, with only approximately 0.08% of this supplied by local farmers. To illustrate, • Feedmaster requires approximately 150t/day. • Yellow maize more is tolerant to water stress than white maize and has higher nutritive value than white maize (Vitamins, especially C), beneficial to both humans and animals. <p>Main ingredient of staple food products in many SADC countries, the maize products represent well placed opportunities to develop a regional value chain in the region. Sometimes demand is higher than production levels due to changes in climatic conditions (low rainfall, hail, cold conditions and frost).</p> <p>There are a number of barriers to cross-border grain trade including regulatory inefficiencies, trade facilitation issues and Non-Tariff Measures.</p> <p>The packaging of processed maize products adds significant value.</p> <p>Commercial level agro-processing activities in the maize value chain are generally dominated by large industrial processing firms</p>

Cotton	<ul style="list-style-type: none"> • Drought and a drop in the price of cotton have essentially crippled the industry, leading to the subsequent shutdown of ginneries • Since the introduction of the GM cotton, the ginnery has been able to double its consumption, meaning production has doubled by only planting an additional 250 hectare of cotton under irrigation • The lint that is produced by the ginnery is consumed locally by spinners who are expected to increase the employment from 850 to 1,400 for the 2019 season. • The spinners further supply textile for weaving and fabric in eSwatini to supply the market for the African Growth Opportunity Act (AGOA) • Limited access to finance • Cotton seed, obtained after the ginning of seed cotton, also contains some vegetable oil and is pressed for edible oil
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HORTICULTURE

Bananas	<ul style="list-style-type: none"> • Demand picking up hugely. • Donor funding for pack sheds, processing, packaging. • Regional product - to JHB market. • Quality is good, supply to shopping chains. Ability to move into SA market. • Can compete well with regional markets. • Bananas sensitive to manage and are similar to cane growing in terms of climatic conditions. • National priority - Market led access – infrastructure development - pack houses, commercialisation of agriculture etc • Opportunity to use renewable solar energy for irrigation etc
Vegetables (Numerous)	<ul style="list-style-type: none"> • Small market for fresh vegetables. • Difficult to piggyback off other regions. • Opportunity in Middleveld farms which produce all year around due to irrigation. • Small dam projects -home gardens. • Winter crops to produce vegetables in rotation with sugar-cane. • Highly competitive market. • Market problem. • Mainly for home consumption
Pineapples	<ul style="list-style-type: none"> • Swazi-can (Rhode's food group). Other value-add process & juice • New farm around Big Ben. • Pineapple responds well under supplementary irrigation. • Canneries looking for new growers. • Malkerns area becoming residential or moving to other crops, so opportunity for pineapples in new areas. • Lighter soils so good as other crops dislike. • Demand in African Region.

Macadamias	<ul style="list-style-type: none"> • Regional - Exponential growth in demand. • High Demand in China. • Definite demand identified internationally. • Large expansion in South African, South Coast (KZN) and White River (Mpumalanga) – 5 000ha. Replacement of marginal sugar cane lands • Can be produced competitively in Eswatini. • Opportunity for smallholders to piggyback off strategic partner (Estate) • Cracking plant in Eswatini proposed. • Nursery facility proposed to grow own plantlings. • High value crop – optimum use of land • Resilient to climatic conditions • More effective use of water, value per m³ water, highly intensive.
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6.2. Appendix B– Eswatini value chain scoring matrix

6.2.1. Livestock - Beef

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Livestock - Beef		Evidence to support scoring
1	CATEGORY	MARKET DEMAND & COMPETITIVENESS	15%	Score	Weighted score	Justification
a	economic	"Market demand prospects (local and/or export). Consider the current demand but growing demand as well."	10%	3	0,3	Most is imported. Export potential, Barry to trade due to disease. Not very competitive. Small EU export, but huge challenge.
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	2	0,1	Communal farming systems inefficient
2	CATEGORY	VALUE-ADDITION	10%	Score	Weighted score	Justification
a	economic	Potential for value addition (up and downstream) - different options exist, there is existing capacity or potential for these different value-added products	10%	2	0,2	Abattoirs and infrastructure already established
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output"	5%	2	0,1	

b	economic	Current and prospective opportunities to integrate a significant number of producers and/or employees into the VC, with positive impact on HH income	10%	1	0,1	Not many opportunities for employment etc
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	1	0,05	
4	CATEGORY	"ENVIRONMENTAL/HEALTH/FOOD SAFETY"	10%	Score	Weighted score	Justification
a	environment	Impact of the value chain functions on the environment (score low for negative environmental impact); scope for clean energy intervention	4%	2	0,08	Overgrazing, land degradation
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall); scope for clean energy intervention	4%	2	0,08	Very sensitive
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	4	0,08	Fairly well regulated
5	CATEGORY	FOOD SECURITY & NUTRITION*	10%	Score	Weighted score	Justification
a	social	Contribution of VC to HH food security i.e. availability of sufficient calories, mainly referring to staple crops	5%	4	0,2	Bank, sold in times of need, higher than expected.
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	3	0,15	High protein, but regularly
6	CATEGORY	NATIONAL PRIORITY & SUSTAINABILITY	20%	Score	Weighted score	Justification
a	Institutional	Donor activity is currently supporting / has recently supported this VC	10%	2	0,2	Climate change, environmental degradation, not specifically the livestock VC
b	Institutional	Coherence with National Policies	10%	4	0,4	Important from a cultural perspective, not the actual VC economical
7	CATEGORY	ACCESS TO FINANCE/ ADDITIONALITY (for FMT)	15%	Score	Weighted score	Justification
a	Institutional	"There is currently good financial inclusion across the VC (therefore less scope for additionality for FMT) (score low for high level of financial inclusion)"	10%	4	0,4	not much scope for additionality
b	Institutional	Opportunities to increase access to finance exist and can be capitalised on	5%	4	0,2	Cattle as collateral for loans (cattle bank). To invest into other VC's. Livestock register - tags/chips)
TOTAL (max score = 5 points)			100%		2,64	

			59%	
Scores:	" 1 = Very poor/Very low ; 2 = Poor/Low ; 3 = Acceptable/Moderate ; 4 = Good/High ; 5 = Very good/Very high"			
	* If applicable - disregard category 5 for non-food commodities			

6.2.2. Sugar Cane

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Sugar-Cane		Evidence to support scoring
1	CATEGORY	MARKET DEMAND & COMPETITIVENESS	15%	Score	Weighted score	Justification
a	economic	"Market demand prospects (local and/or export). Consider the current demand but growing demand as well. "	10%	2	0,2	Market demand always very small. Local is almost zero, local manufacture decreased. Mostly went to South Africa. New SA legislation will limit movement from Eswatini. Lowest cost producer in Region
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	5	0,25	\$420/ton Eswatini, SA \$700/ton input costs/ ton raw sugar. Eswatini yield is double.
2	CATEGORY	VALUE-ADDITION	10%	Score	Weighted score	Justification
a	economic	Potential for value addition (up and downstream) - different options exist, there is existing capacity or potential for these different value-added products	10%	4	0,4	Agricultural park creation- diversify in products. Alcohol demand from cane.
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output "	5%	5	0,25	
b	economic	Current and prospective opportunities to integrate a significant number of producers and/or employees into the VC, with positive impact on HH income	10%	4	0,4	Water limited factor. LUCIP II - 4000 households
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	2	0,1	Very difficult to achieve - cultural barriers
4	CATEGORY	"ENVIRONMENTAL/ HEALTH/FOOD SAFETY"	10%	Score	Weighted score	Justification
a	environment	Impact of the value chain functions on the environment (score low for negative environmental impact); scope for clean energy intervention	4%	4	0,16	Try to limit the impact on the environment. Waterr ussge is a problem. Very NB to prodcue clean energy. Grid tied solar increasing. Bagasse - clean energy/renewable, balanced carbon balance vs coal.

b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall); scope for clean energy intervention	4%	2	0,08	Not very resilient. Erratic rainfall, dams levels - impacts irrigation
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	2	0,04	International risk averse - sugar tax etc
5	CATEGORY	FOOD SECURITY & NUTRITION*	10%	Score	Weighted score	Justification
a	social	Contribution of VC to HH food security i.e. availability of sufficient calories, mainly referring to staple crops	5%	3	0,15	Low if eating crop directly. Sugar industry 100 000 people (10%) depend on this industry and therefore food secure.
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	2	0,1	Indirectly
6	CATEGORY	NATIONAL PRIORITY & SUSTAINABILITY	20%	Score	Weighted score	Justification
a	Institutional	Donor activity is currently supporting / has recently supported this VC	10%	3	0,3	Very big on water resource management - drives donor activity. But more irrigation will result in other crops
b	Institutional	Coherence with National Policies	10%	5	0,5	
7	CATEGORY	ACCESS TO FINANCE/ ADDITIONALITY (for FMT)	15%	Score	Weighted score	Prevalent policies in recent years have been counterproductive
a	Institutional	"There is currently good financial inclusion across the VC (therefore less scope for additionality for FMT) (score low for high level of financial inclusion)"	10%	2	0,2	Renewable energy component is under-serviced - especially Solar component
b	Institutional	Opportunities to increase access to finance exist and can be capitalised on	5%	3	0,15	Scope in the renewable energy sector - Clean energy
TOTAL (max score = 5 points)			100%		3,28	
					73%	
Scores:		" 1 = Very poor/Very low ; 2 = Poor/Low ; 3 = Acceptable/Moderate ; 4 = Good/High ; 5 = Very good/Very high"				
		* If applicable - disregard category 5 for non-food commodities				

6.2.3. Maize

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Maize		Evidence to support scoring
1	CATEGORY	MARKET DEMAND & COMPETITIVENESS	15%	Score	Weighted score	Justification
a	economic	"Market demand prospects (local and/or export). Consider the current demand but growing demand as well."	10%	2	0,2	Cannot produce competitively due to poor rainfall.
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	2	0,1	Cannot get the scale
2	CATEGORY	VALUE-ADDITION	10%	Score	Weighted score	Justification
a	economic	Potential for value addition (up and downstream) - different options exist, there is existing capacity or potential for these different value-added products	10%	3	0,3	
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output"	5%	2	0,1	
b	economic	Current and prospective opportunities to integrate a significant number of producers and/or employees into the VC, with positive impact on HH income	10%	2	0,2	Most farmers produce mostly for own consumption - 6-8 months.
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	2	0,1	Mostly women - own consumption
4	CATEGORY	"ENVIRONMENTAL/HEALTH/ FOOD SAFETY"	10%	Score	Weighted score	Justification
a	environment	Impact of the value chain functions on the environment (score low for negative environmental impact); scope for clean energy intervention	4%	3	0,12	Minimum impact. Little scope for clean energy.
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall); scope for clean energy intervention	4%	1	0,04	Vulnerable to climate
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	3	0,06	

5	CATEGORY	FOOD SECURITY & NUTRITION*	10%	Score	Weighted score	Justification
a	social	Contribution of VC to HH food security i.e. availability of sufficient calories, mainly referring to staple crops	5%	5	0,25	
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	3	0,15	Too many carbs
6	CATEGORY	NATIONAL PRIORITY & SUSTAINABILITY	20%	Score	Weighted score	Justification
a	Institutional	Donor activity is currently supporting / has recently supported this VC	10%	1	0,1	Not on radar
b	Institutional	Coherence with National Policies	10%	4	0,4	Input subsidies
7	CATEGORY	ACCESS TO FINANCE/ ADDITIONALITY (for FMT)	15%	Score	Weighted score	Justification
a	Institutional	"There is currently good financial inclusion across the VC (therefore less scope for additionality for FMT) (score low for high level of financial inclusion)"	10%	4	0,4	Savings & Co-op opportunities
b	Institutional	Opportunities to increase access to finance exist and can be capitalised on	5%	2	0,1	Subsistence nature
TOTAL (max score = 5 points)			100%		2,62	
					52%	
Scores:		" 1 = Very poor/Very low ; 2 = Poor/Low ; 3 = Acceptable/Moderate ; 4 = Good/High ; 5 = Very good/Very high"				
		* If applicable - disregard category 5 for non-food commodities				

6.2.4. Cotton

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Cotton		Evidence to support scoring
1	CATEGORY	MARKET DEMAND & COMPETITIVENESS	15%	Score	Weighted score	Justification
a	economic	"Market demand prospects (local and/or export). Consider the current demand but growing demand as well. "	10%	4	0,4	Move to traceability (Organic) in VC- Standards attain - high demand - high price. Pesticide usage, unsafe use. Child labour not accepted. In verge of rebounded in different form. GM - need different set of rules - higher production

b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	3	0,15	Good growing conditions, climate change bit of issue. Supplementary irrigation good idea.
2	CATEGORY	VALUE-ADDITION	10%	Score	Weighted score	Justification
a	economic	Potential for value addition (up and downstream) - different options exist, there is existing capacity or potential for these different value-added products	10%	4	0,4	Ginnery, textile industry. Potential for spinners. Mr Price etc want to source locally. Oil seed for livestock industry.
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output "	5%	2	0,1	Low at present with great potential to grow.
b	economic	Current and prospective opportunities to integrate a significant number of producers and/or employees into the VC, with positive impact on HH income	10%	4	0,4	Good potential, well adapted for small growers
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	4	0,2	High due to textile industry. Women farmers producing cotton.
4	CATEGORY	"ENVIRONMENTAL/ HEALTH/FOOD SAFETY "	10%	Score	Weighted score	Justification
a	environment	Impact of the value chain functions on the environment (score low for negative environmental impact); scope for clean energy intervention	4%	2	0,08	High pesticide usage.

b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall); scope for clean energy intervention	4%	3	0,12	Still resilient, but also resilience. Affected by cloudy days.
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	4	0,08	Oil seed is consumed, low risk.
5	CATEGORY	FOOD SECURITY & NUTRITION*	10%	Score	Weighted score	Inputs not widely used re residues
a	social	Contribution of VC to HH food security i.e. availability of sufficient calories, mainly referring to staple crops	5%	2	0,1	Indirect benefit
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	1	0,05	
6	CATEGORY	NATIONAL PRIORITY & SUSTAINABILITY	20%	Score	Weighted score	Justification
a	Institutional	Donor activity is currently supporting / has recently supported this VC	10%	1	0,1	Not much at present
b	Institutional	Coherence with National Policies	10%	2	0,2	Only dysfunctional cotton board. Development going forward.
7	CATEGORY	ACCESS TO FINANCE/ ADDITIONALITY (for FMT)	15%	Score	Weighted score	Justification
a	Institutional	"There is currently good financial inclusion across the VC (therefore less scope for additionality for FMT) (score low for high level of financial inclusion)"	10%	4	0,4	Past - Ginnery companies. But market is reviving

b	Institutional	Opportunities to increase access to finance exist and can be capitalised on	5%	4	0,2	Great opportunity, due to new focus on cotton
TOTAL (max score = 5 points)			100%		2,98	
					60%	
Scores:		" 1 = Very poor/Very low ; 2 = Poor/Low ; 3 = Acceptable/Moderate ; 4 = Good/High ; 5 = Very good/Very high"				
		* If applicable - disregard category 5 for non-food commodities				

6.2.5. Bananas

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Bananas		Evidence to support scoring
1	CATEGORY	MARKET DEMAND & COMPETITIVENESS	15%	Score	Weighted score	Justification
a	economic	"Market demand prospects (local and/or export). Consider the current demand but growing demand as well. "	10%	4	0,4	Picking up hugely. Donor funding for pack sheds, processing, packaging. Regional product - to JHB market. Sense of growing market. Quality is good, supply to shopping chains. Ability to move into SA market.
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	4	0,2	Can compete well. Bananas sensitive to manage. Similar to cane growth ito of climatic conditions.
2	CATEGORY	VALUE-ADDITION	10%	Score	Weighted score	Justification
a	economic	Potential for value addition (up and downstream) - different options exist, there is existing capacity or potential for these different value-added products	10%	2	0,2	Not to much potential. Usually sent unripened. Ripened for local consumption. Market too small dried market. Potential to increase local ripening
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output "	5%	2	0,1	High potential. Low at present.
b	economic	Current and prospective opportunities to integrate a significant number of producers and/or employees into the VC, with positive impact on HH income	10%	3	0,3	Some sugar cane farmers move to bananas. New plantings
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	2	0,1	

4	CATEGORY	"ENVIRONMENTAL/ HEALTH/FOOD SAFETY "	10%	Score	Weighted score	Justification
a	environment	Impact of the value chain functions on the environment (score low for negative environmental impact); scope for clean energy intervention	4%	3	0,12	Impact not high. Scope for solar high.
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall); scope for clean energy intervention	4%	2	0,08	Susceptive to climate, water will impact.
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	5	0,1	Nematodes - pesticide, bad practice, not often used.
5	CATEGORY	FOOD SECURITY & NUTRITION*	10%	Score	Weighted score	Justification
a	social	Contribution of VC to HH food security i.e. availability of sufficient calories, mainly referring to staple crops	5%	3	0,15	Household income, average dietary.
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	4	0,2	Balanced nutrition.
6	CATEGORY	NATIONAL PRIORITY & SUSTAINABILITY	20%	Score	Weighted score	Justification
a	Institutional	Donor activity is currently supporting / has recently supported this VC	10%	5	0,5	High. Market led access - infrastructure - pack houses etc
b	Institutional	Coherence with National Policies	10%	4	0,4	Market led & commercialisation of agriculture
7	CATEGORY	ACCESS TO FINANCE/ ADDITIONALITY (for FMT)	15%	Score	Weighted score	Justification
a	Institutional	"There is currently good financial inclusion across the VC (therefore less scope for additionality for FMT) (score low for high level of financial inclusion)"	10%	2	0,2	Commercial banks available for financing. Finance available for irrigated projects - ESWADE
b	Institutional	Opportunities to increase access to finance exist and can be capitalised on	5%	2	0,1	Particularity for the Solar development
TOTAL (max score = 5 points)			100%		3,15	
					70%	

Scores:	" 1 = Very poor/Very low ; 2 = Poor/Low ; 3 = Acceptable/Moderate ; 4 = Good/High ; 5 = Very good/Very high"
	* If applicable - disregard category 5 for non-food commodities

6.2.6. Macadamias

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Macadamias		Evidence to support scoring
1	CATEGORY	MARKET DEMAND & COMPETITIVENESS	15%	Score	Weighted score	Justification
a	economic	"Market demand prospects (local and/or export). Consider the current demand but growing demand as well. "	10%	4	0,4	Region - Exponential growth in demand. Demand in China. Definite demand. Driven by South Coast, White River - 5000ha. Can produce competitively.
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	4	0,2	Driven largely by larger estates. Medium size farms. High value crops -irrigation sensitive.
2	CATEGORY	VALUE-ADDITION	10%	Score	Weighted score	Justification
a	economic	Potential for value addition (up and downstream) - different options exist, there is existing capacity or potential for these different value-added products	10%	4	0,4	Cracking plant in Eswatini proposed. Nursery facility to grown own plantlings.
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output"	5%	2	0,1	Potential to rise
b	economic	Current and prospective opportunities to integrate a significant number of producers and/or employees into the VC, with positive impact on HH income	10%	2	0,2	High value -not much area used
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	2	0,1	
4	CATEGORY	"ENVIRONMENTAL/HEALTH/ FOOD SAFETY"	10%	Score	Weighted score	Justification
a	environment	Impact of the value chain functions on the environment (score low for negative environmental impact); scope for clean energy intervention	4%	2	0,08	Pesticides required - concern. Less water than sugar cane and bananas

b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall); scope for clean energy intervention	4%	4	0,16	Quite resilient to climatic conditions
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	5	0,1	No major risks
5	CATEGORY	FOOD SECURITY & NUTRITION*	10%	Score	Weighted score	Justification
a	social	Contribution of VC to HH food security i.e. availability of sufficient calories, mainly referring to staple crops	5%	2	0,1	Income only. Need to be processed in factories.
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	2	0,1	
6	CATEGORY	NATIONAL PRIORITY & SUSTAINABILITY	20%	Score	Weighted score	Justification
a	Institutional	Donor activity is currently supporting / has recently supported this VC	10%	1	0,1	Not much in tree crops in general due to time lag - 6-7 year return.
b	Institutional	Coherence with National Policies	10%	4	0,4	More value per m3 water, high intensive. Commercialisation. Sub-tropical tree crops
7	CATEGORY	ACCESS TO FINANCE/ ADDITIONALITY (for FMT)	15%	Score	Weighted score	Justification
a	Institutional	"There is currently good financial inclusion across the VC (therefore less scope for additionality for FMT) (score low for high level of financial inclusion)"	10%	4	0,4	No products at present. Need new thinking, type of finance innovative thinking.
b	Institutional	Opportunities to increase access to finance exist and can be capitalised on	5%	4	0,2	Transition for sugar cane to trees - land reform.
TOTAL (max score = 5 points)			100%		3,04	
					61%	
Scores:		" 1 = Very poor/Very low ; 2 = Poor/Low ; 3 = Acceptable/Moderate ; 4 = Good/High ; 5 = Very good/Very high"				
		* If applicable - disregard category 5 for non-food commodities				

6.2.7 Vegetables

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Vegetables		Evidence to support scoring
1	CATEGORY	MARKET DEMAND & COMPETITIVENESS	15%	Score	Weighted score	Justification
a	economic	"Market demand prospects (local and/or export). Consider the current demand but growing demand as well. "	10%	3	0,3	Small market for fresh vegetables. Difficult to piggy back of other regions. One opportunity Middleveld farms produce all around area has irrigation. Small dam projects -home gardens. Winter crops to produce vegetables in rotation with sugar-cane.
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	3	0,15	Competitive - can grow. Market problem.
2	CATEGORY	VALUE-ADDITION	10%	Score	Weighted score	Justification
a	economic	Potential for value addition (up and downstream) - different options exist, there is existing capacity or potential for these different value-added products	10%	3	0,3	Seedling production for nursery, other packaging companies such as McCains etc Frozen veg & chips.
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output "	5%	4	0,2	
b	economic	Current and prospective opportunities to integrate a significant number of producers and/or employees into the VC, with positive impact on HH income	10%	3	0,3	
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	3	0,15	
4	CATEGORY	"ENVIRONMENTAL/ HEALTH/FOOD SAFETY"	10%	Score	Weighted score	Justification

a	environment	Impact of the value chain functions on the environment (score low for negative environmental impact); scope for clean energy intervention	4%	4	0,16	No major environmental hazards - only pesticides
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall); scope for clean energy intervention	4%	1	0,04	Not very resilience. Dams small therefore drought affects. Heat, hail etc.
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	5	0,1	No major risks
5	CATEGORY	FOOD SECURITY & NUTRITION*	10%	Score	Weighted score	Justification
a	social	Contribution of VC to HH food security i.e. availability of sufficient calories, mainly referring to staple crops	5%	5	0,25	
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	5	0,25	
6	CATEGORY	NATIONAL PRIORITY & SUSTAINABILITY	20%	Score	Weighted score	Justification
a	Institutional	Donor activity is currently supporting / has recently supported this VC	10%	2	0,2	Not a lot at present. Market led programme
b	Institutional	Coherence with National Policies	10%	3	0,3	General government attention - small dams projects
7	CATEGORY	ACCESS TO FINANCE/ ADDITIONALITY (for FMT)	15%	Score	Weighted score	Justification
a	Institutional	"There is currently good financial inclusion across the VC (therefore less scope for additionality for FMT) (score low for high level of financial inclusion)"	10%	4	0,4	No. Opportunity for financing
b	Institutional	Opportunities to increase access to finance exist and can be capitalised on	5%	4	0,2	
TOTAL (max score = 5 points)			100%		3,30	

			66%	
Scores:	" 1 = Very poor/Very low ; 2 = Poor/Low ; 3 = Acceptable/Moderate ; 4 = Good/High ; 5 = Very good/Very high"			
	* If applicable - disregard category 5 for non-food commodities			

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Sanofi House, Second Floor,
44 on Grand Central Office Park,
2 Bond Street, Grand Central
Ext 1, Midrand

Tel: +27 11 315 9197
Fax: +27 86 518 3579
info@finmark.org.za
www.finmark.org.za