

SCOPING REPORT



Agricultural Finance Scoping

An Agriculture Finance Scoping Exercise in Lesotho

DISCLAIMER:

This document was prepared by Imani Development International Ltd, and should in no way be considered to represent the views and opinions of FinMark Trust and/or any donors, organisations, or persons.



Prepared by Imani Development International Ltd

www.imanidevelopment.com

About FinMark Trust

FinMark Trust is an independent non-profit trust whose purpose is 'Making financial markets work for the poor, by promoting financial inclusion and regional financial integration'. We pursue our core objective of making financial markets work for the poor through two principle programmes. The first is through the creation and analysis of financial services consumer data to provide in depth insights on both served and unserved consumers across the developing world. The second is through systematic financial sector inclusion and deepening programs to overcome regulatory, supplier and other market level barriers hampering the effective provision of services. Together, these programmes unlock financial inclusion and sector development through a symbiotic relationship between rigorous data collection and research activities. Our work can be found in South Africa, throughout the SADC region and the global arena.

For more information:

Visit our website at www.finmark.org.za

Email info@finmark.org.za

Call us on +27 11 315 9197



ACKNOWLEDGEMENTS

This report was authored jointly by FinMark Trust and Imani Development.

We would like to thank all the individuals who participated in this project in their personal and institutional capacity, without which the project would not have been successful. These stakeholders included government institutions, donor agencies, financial service providers, private sector players and industry associations. Most notably, we would like to extend our gratitude to colleagues from Mineworkers Development Agency, Amakharanate Pomegranates, Delegation of the European Union to Lesotho, Lesotho National Development Corporation, International Fund for Agricultural Development (IFAD), World Bank, Catholic Relief Services, SaveAct, Lesotho Post Bank, CARE for Basotho, Potatoes Lesotho Association, and Seeds 365 Agric.

Lastly, we would like to thank the Ministry of Finance for its continued partnership. As well as the Ministry of Agriculture and Food Security for their engagement on this project.

TABLE OF CONTENTS

LIST OF FIGURES	2
ACRONYMS AND ABBREVIATIONS	3
1. LESOTHO COUNTRY OVERVIEW	4
1.1 Introduction	4
1.2 Environmental and Natural Resource Base	4
2. AGRICULTURAL OVERVIEW	6
2.1 Primary Production	6
2.2 Imports and Exports	9
2.3 Food and Nutritional Security	9
2.4 Public Institutional, Legal, Regulatory, and Policy Framework; Gender Equality	11
2.5 Development Partners, Organisations, and Initiatives	16
2.6 Private Sector and Civil Society Role Players	20
2.7 Value Chains Selected for Evaluation and Research	21
3. WOOL AND MOHAIR	22
3.1 The Importance for Rural Livelihoods and Poverty Reduction	22
3.2 Current status of value chain	23
3.3 Current, Past, and Planned Initiatives to Address Challenges	31
3.4 Recommendations for FinMark Trust	33
3.5 Conclusions and Recommendations	39
4. DECIDUOUS FRUIT	42
4.1 Current Status of Production in Lesotho	42
4.2 Potential for Deciduous Fruit	43
4.3 Structure of the Value Chain	43
4.4 Challenges facing the Value Chain and Responses to Date	44
4.5 Conclusions and Recommendations	48
5. VEGETABLES	50
5.1 Potential for Vegetables	51
5.2 Structure of the Value Chain	52
5.3 Challenges, Responses, and Stimulating Development	52
5.4 Conclusions and Recommendations	58
Notes from sections	60
6. LESOTHO APPENDICES	70
6.1 Appendix A - Value chain selection longlist	70
6.2 Appendix B – Lesotho value chain scoring matrix	72
7. REFERENCES	89

LIST OF FIGURES

Figure 33: Lesotho’s four agro-ecological zones 5
Figure 34: Wool and Mohair Value Chains 23

ACRONYMS AND ABBREVIATIONS

Acronym	In full
APPSA	Agricultural Productivity Programme for Southern Africa
BEDCO	Basotho Enterprise Development Corporation
BKB	Boeremakelaars Kooperasie Beperk
CGA	Community Grazing Association
CRS	Catholic Relief Services
DWMGA	District Wool and Mohair Growers' Association
EU	European Union
FAO	(UN) Food and Agriculture Organization
FSDZ	Financial Sector Deepening Zambia
GAP	Good Agricultural Practices
GDP	Gross Domestic Produce
GoL	Government of Lesotho
IFAD	(UN) International Fund for Agricultural Development
LEHOFA	Lesotho Horticultural Farmers' Association
LHDA	Lesotho Highlands Development Authority
LIMAP	Lesotho Integrated Catchment Management Program
LNDC	Lesotho National Development Corporation
LNWMGA	Lesotho National Wool and Mohair Growers' Association
LPMS	Lesotho Product Marketing Services
M	Maloti
MAFS	Ministry of Agriculture and Food Services
MAP	Making Access Possible
MG	Marketing Group
NAMBOARD	National Agricultural Marketing Board (eSwatini)
NGO	Non-Governmental Organisation
NSDP	National Strategic Development Programme
PLA	Potatoes Lesotho Association
PSCEDP	Private Sector Competitiveness and Economic Diversification Project
SACCO	Savings and Credit Cooperative
SADC	Southern African Development Community
SADP	Smallholder Agriculture Development Project
SADPMA	Sustainable Agricultural Development Programme for the Mountain Areas
SANREMP	Sustainable Agriculture and Natural Resources Management Programme
SMME	Small, Micro, and Medium Enterprise
SSA	Shearing Shed Association
UN	United Nations
UNDP	United Nations Development Programme
WAMPP	Wool and Mohair Promotion Project

1. LESOTHO COUNTRY OVERVIEW

1.1 Introduction

Lesotho is a small mountainous country with a population of about 2.35 million² surrounded entirely by the Republic of South Africa. Lesotho's economy is dominated by and tightly integrated into South Africa's and the Southern African regional economy. Its currency, the Maloti, is linked on a one-to-one basis with the South African Rand; the largest single source of revenue for public expenditure in most years – averaging about 22%³ between 2015/16 and 2019/20 – is its share of revenue derived from the Southern African Customs Union (SACU) agreement; remittances from migrant citizens employed mainly in South Africa constitute one of the country's largest sources of income; commodities produced in Lesotho have to compete with those produced in South Africa, which benefits from a far larger, more diverse resource base and far greater economies of scale; the mountains of Lesotho form the main water catchment system for the region, yet, beyond annual payments for water from its neighbours, Lesotho benefits little from its water resources⁴.

Developments over the past decade have made Lesotho's dependence on the region and especially South Africa increasingly precarious. With SACU revenues in turn heavily dependent on the performance of South Africa's economy and the steady deterioration in the latter over the decade, Lesotho's public sector budget has become increasingly constrained. From 25% of GDP in 2014/15, SACU's contribution declined to 13,6% in 2016/17⁵ and has probably fallen further since then. South Africa's increasingly restrictive immigration policies and the continued decline of its mining sector led to remittances from migrant citizens falling from 25% of Lesotho's GDP in 2010 to 15.4% in 2018⁶. And climate change is putting Lesotho's water revenues increasingly at risk⁷. Unemployment was reported as being 23.5% in 2019⁸.

As a constitutional monarchy governed by a parliamentary democracy, Lesotho has been beset by on-going political volatility in recent years, with several changes of government and numerous changes of prime minister and cabinet ministers. This has both made for instability within ministries and in inter-governmental relations, negatively affecting donor support programmes⁹.

Agriculture in Lesotho is being required to absorb a disproportionate part of these negative developments and is being put under enormous strain. Most of the migrants who were employed previously in South Africa's mines come from Lesotho's rural areas and, with the diminishing growth rate of both South Africa's and Lesotho's economies, have been obliged increasingly to try to make a living from the land. This is occurring at the same time as climate volatility is making farming more difficult and the capacity of the fiscus to support agriculture is yet more tightly constrained. Compounding this is the difficult environment political and public service environment within which donor programmes focusing on agricultural development have had to operate.

1.2 Environmental and Natural Resource Base

From an agricultural perspective, Lesotho has a difficult resource base. While about three quarters of the country's 23 120 square kilometre surface area is classified as 'agricultural', only about 10% (about 308 000ha) has significant arable potential¹⁰. Permanent natural pastures cover about two thirds of the country, while forests account for about 1.5%¹¹. Despite being the catchment area for most of Southern Africa's rains, only about 0,5% (12 500ha) of agricultural land is potentially irrigable¹².

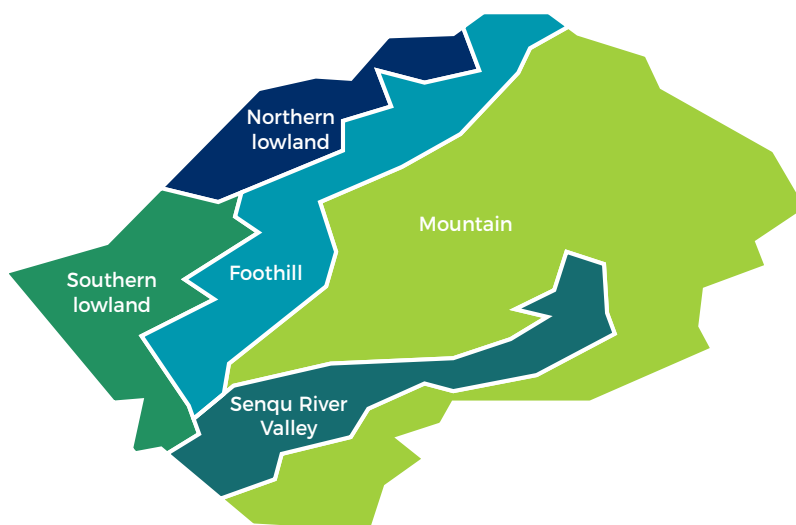
With the understating that the agricultural sector is very dynamic with constant opportunities and threats rising from different angles from time to time, FinMark Trust conducted an agriculture scoping study to identify areas for intervention related to agriculture finance in supporting agricultural 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 nature of agricultural activities is defined by the four broad agro-ecological zones (AEZs) into which Lesotho is divided:

Figure 33: Lesotho's four agro-ecological zones



Source: FAO, Lesotho Country Programming Framework, 2013-2017

The northern and southern lowlands together make up about 17%, the foothills of the Maloti mountains which lie on the north-western side of the Senqu (Orange) River 15%, the Senqu River valley 9% and the Maloti/Drakensberg mountains the remaining 59%. Most of the land suitable for annual crops lies in the lowlands, which are also best supplied with roads and value adding infrastructure. The northern lowlands tend to receive better annual rainfall than the southern, though both are subject to major variations from one year to the next³³. The Senqu River valley offers the best irrigation possibilities. The mountains and the foothills are mostly suited only for livestock farming. About 70% of the country's population live in the lowlands and foothills.

While topography and soils are important determinants of agricultural potential, climate is no less important. Recent weather patterns have seen extremes of drought and floods in Lesotho³⁴ and projections indicate an increasing likelihood of higher temperatures and above and below average rainfall³⁵. As a country that already has a relatively extreme climate and whose agriculture is almost entirely rainfed, Lesotho is inherently vulnerable to climate change. This is compounded by poverty and land degradation. All agricultural activities are expected to be adversely affected to a greater or lesser degree, wheat, potato and vegetable production most noticeably so³⁶.

'There is an acute awareness in government and in communities that climate change is already impacting on the lives of the people of Lesotho and threatening their future ... government is requesting all donors to support the climate proofing of its agricultural production system.'³⁷ Climate change, commodity risk and the need to support interventions to increase the resilience, particularly of low income agricultural communities, will be key considerations throughout this study.

2. AGRICULTURAL OVERVIEW

2.1 Primary Production

In terms of the value of output, agriculture is a small and diminishing contributor to GDP. From the roughly 80% of GDP that it contributed in the 1960s¹⁸, agriculture's percentage fell to no more than 4.38% in 2018 and 2019¹⁹. Productivity in Lesotho agriculture is low by almost any comparison, with the value added per worker averaging only about \$400 p.a.²⁰.

Despite this, almost 40% of the economically active population were still employed in agriculture in 2010²¹, revealing just how poor most households that rely on agriculture as a major source of income are relative to those whose income is derived mainly from other economic activities – mainly services and industry²². 57% of those economically active in agriculture are women²³. Women therefore make up a disproportionately large percentage of the poorest economically active group in the country. Lesotho had a Gini Coefficient of 52.5 in 2011 – not as unequal as South Africa's 57.8 or Botswana's 60 – but a Gender Inequality Index of 0.564, compared to South Africa's 0.520 and Botswana's 0.525²⁴.

MAP Lesotho estimated that there were 140 000 active farmers in 2011, but found, surprisingly, that their average monthly income was as high as M1 392, only about 60% of what salaried employees earned, but still well above that of small business owners and piece job workers²⁵. 22% (18 700) of the country's 85 000 SMMEs²⁶ are in agriculture, forestry and fishing²⁷, 15% of which grow crops and 53% rear livestock²⁸. The estimated annual turnover of these SMMEs was M39.5 million in 2016²⁹. Access to finance was the most widely reported obstacle to development³⁰, with 'business being too small' being by far the most important barrier to banking³¹.

At 52%, livestock production is the dominant contributor to agricultural GDP by value, followed by crops (28%) and – surprisingly, given the very small percentage of land under forests – forestry at 20%³². In the early 2000s, when agriculture still contributed more than 6% of GDP, livestock production accounted for about 4.8% of GDP and crops for about 1.9%³³.

Most smallholder families keep small and/or large livestock for food security, to complement their annual crops, and, in some instances, for marketing, but, especially in the mountains and foothills, sheep and goats are kept primarily for income generation. While all livestock are kept partly for store-of-value purposes, being readily saleable when cash is needed, as well as for domestic or local, informal market slaughter, cattle, horses and donkeys also still provide transport and draught power for crop production widely³⁴.

Sheep and goats dominate herd numbers, with numbers averaging around 1.3 million for sheep, 800 000 for goats and 500 000 for cattle in recent years³⁵. Wool sales grossed R192 million in 2012/13, while mohair grossed R29 million. Lesotho is the second largest mohair producer in the world, after South Africa³⁶. Jointly, wool and mohair account for about 95% of Lesotho's agricultural exports by value³⁷. Most of these two products are exported in greasy form, along with skins, with little value being added domestically³⁸. The only textile mill in Lesotho does not use wool or mohair in the fabrics that it produces, relying instead on imported cotton lint, although it is reported that '(Lesotho's) knit garment industry could readily support up to two fabric knitting mills, each with a capacity of 400 MT per month'³⁹.

Almost all sheep, goats and cattle are reared by smallholder farmers on extensive commonage rangeland, the carrying capacity of which is mostly considerably exceeded. Overstocking is estimated at between 40% and 80%, equivalent to between 2.8 and 5.7 million livestock units (LU)⁴⁰. This has resulted in progressive land degradation through soil erosion and nutrient

From the roughly 80% of GDP that it contributed in the 1960s¹⁸, agriculture's percentage fell to no more than 4.38% in 2018 and 2019¹⁹. Productivity in Lesotho agriculture is low by almost any comparison, with the value added per worker averaging only about \$400 p.a.²⁰.

depletion, low production and reproduction performance and low yields of all final products⁴¹. Rangeland restoration and maintenance is now the focus of a major government programme.

While cattle make up an important component of the country's livestock, relatively little meat is channelled into formal markets, most being slaughtered informally and consumed in the communities owning the animals. Much the same applies in respect of pigs and poultry. However, the World Bank's Smallholder Agricultural Development Project Phase II has identified small-scale piggeries and poultry production as high potential value chains and will be supporting them in a number of ways⁴². An in-depth study conducted by the African Development Bank concluded that while it would be possible to develop a competitive red meat industry, this could only happen with large-scale support from government and with a radical improvement in rangeland management⁴³. However, it is reported that the Lesotho National Development Corporation is planning a 'large integrated piggery', presumably for the purpose of marketing, with the assistance of a South African firm⁴⁴. Dairy production is reported to be very small, with too little milk again being produced for marketing⁴⁵ to support a dairy industry sustained solely from local sources. Imports from South Africa predominate⁴⁶.

In respect of crops, maize, produced by small and some medium scale farmers, is much the most widely grown, accounting for about 62% of land harvested. Sorghum, (dry) beans, wheat, potatoes, vegetables and fruit follow, at 11%, 10%, 7%, 4%, 2%⁴⁷ and 2%⁴⁸ respectively. Small quantities of high value crops, such as asparagus, garlic and paprika are also produced⁴⁹. Maize is produced mainly by individual smallholders on a dryland basis with only limited inputs of fertilizer and hybrid seed. However, through its 'block-farming' crop-share programme, government has for some years produced both maize and wheat on a standard commercial basis with farmers in a number of districts in the northern lowlands. With government providing all of the inputs except land, a high level of subsidy is involved⁵⁰.

As with livestock, productivity is generally low. For maize, the average yield is only about three quarters of a ton/ha, about a fifth of the average for Southern Africa. Even on block farming projects, at between 1.9 and 3.6 tons/ha, maize yields are still well below the regional average of about 4.2 tons/ha, despite the use of standard commercial inputs. Sorghum and bean yields are about a quarter of the regional average, while wheat is a little better, at about a third of the regional average.

Of the most widely produced crops, the performance of horticultural annual crops – potatoes and vegetables – is best, achieving yields of a little more than half of the regional average. This is noteworthy, given that most production is in home gardens⁵¹. Many households also grow horticultural perennial tree crops, mainly peaches, for primarily for own consumption. Despite its favourable climate for deciduous fruits, almost no fruit is currently produced primarily for commercial purposes⁵². Taking advantage of Lesotho's favourable climate to enter commercial production and generate export income has been the focus of a World Bank programme for most of the past decade and will be a high priority for a major programme now being launched (see 7. below).

A potentially significant addition to this group of long-established crops, from the perspective of income, employment and exports, is cannabis. Although it is being grown in Lesotho – particularly in the mountains and foothills, where it been a major, if illegal, source of income – since time immemorial, changes in the country's legislation on drugs in 2008 opened the possibility of production for more than traditional remedies and illegal recreational use. The recent official recognition of the medicinal properties of cannabis in a number of developed countries has generated widespread interest in production in Lesotho, where it is thought that the relative isolation in which it is grown in the mountains and the fact that fertilizers and pesticides are seldom used, reduce the likelihood of the presence of unwanted impurities in the final product⁵³.

However, for firms wanting to produce cannabidiol (CBD), the substance used for medicinal purposes, this is outweighed by the uncontrolled circumstances in which it produced and, more importantly, by the member of the cannabis family generally grown in Lesotho. While the plant known as cannabis contains more tetrahydrocannabinol (THC), the compound that causes the 'high' that people associate with cannabis use, it is the member of the family generally known as hemp that contains more CBD⁵⁴.

So, while traditional cannabis production in Lesotho can be expected to continue to generate the informal employment and income that it has for so long, it is the potential for the production of hemp for medicinal purposes – hemp also has industrial uses – that is now starting to add to formal employment in deep rural areas. A number of firms now have licenses for primary production and value addition and report investment running into millions of US dollars and permanent jobs for several hundred people⁵⁵.

While this is a welcome development in very poor areas and could in years to come add still more to employment, incomes and exports, the high cost of licenses⁵⁶ and of the tunnels and other equipment needed for controlled environment production⁵⁷, as well as the technical and management skills involved, appear to preclude small growers effectively from participating, even were they to start growing hemp in place of, or in addition to, traditional cannabis.

The challenges facing Lesotho's agriculture are mostly long running and well documented. In a nutshell: Except in a few areas with arable potential, individual smallholder farming predominates⁵⁸, characterized by staple crop production on small plots – typically about 1ha – mostly of maize, mostly for own consumption, but also usually including some large and/or small livestock, also mostly for own consumption or sale, when cash is needed. In mountainous areas with little arable potential, pastoral production on communal land predominates – mainly sheep and goats for wool and mohair, but also for slaughter for own consumption and sale when cash is needed.

Productivity and marketed surpluses are low in crop production because of the inability to reap economies of scale, large areas of land left fallow⁵⁹, partly a consequence of tenure insecurity, the low levels of mechanical technology and management practices used, poor technical skills and extension/research services, the limited use of hybrid seeds, fertilizers and pesticides, soil nutrient depletion, poor public infrastructure and infrastructure-related services and poor access to markets and financial services, particularly credit. In pastoral farming, much the same constraints apply, although in this instance land degradation is caused mainly by chronic, and often acute, overgrazing. All of these are now being compounded by increasing climate volatility⁶⁰, HIV/AIDS and COVID-19, and recently, in the instance of wool, by institutional marketing difficulties⁶¹.

The infrastructural and market access challenges are especially important for horticulture, where much of the potential is located in higher, more remote areas. Over and above the capital, expertise and management demands of producing fruit and vegetables for high value export markets, distance from markets and the poor quality of roads makes the logistical challenges difficult to overcome, especially if the produce concerned is to be able to compete price- and quality-wise with South Africa's highly developed horticultural sector. With donor assistance, Lesotho has already spent considerable sums attempting to achieve this, but with little success to date⁶². Such successes as have been achieved, have been confined almost entirely to larger scale private enterprise initiatives. The renewed attempts that will part of the World Bank's programmes for the coming decade open up new scope for success, but will have to overcome the same challenges.

A spectrum of public sector- and international donor-driven programmes has for many years addressed, and continues to try to address, these challenges. Some details of these are provided in section 7 below.

From the authoritative reports available⁶³, it is not clear how far the COVID-19 pandemic directly affected agricultural production in Lesotho. Although there were some input supply constraints and accompanying price increases because of border closure, as in South Africa, by and large farming operations were permitted to continue as usual, although restrictions on movement made it difficult for smallholders – particularly those involved in vegetable production – to market their produce, leading to income losses and increased wastage⁶⁴. To the extent that there were imported input supply constraints, these are unlikely to have affected cereal production much, because, by the time the lockdown started, the summer crop season was nearing its end. The increase in the incidence of food insecurity estimated by the Lesotho Vulnerability Assessment Committee in 2020 appears mainly to have been ascribed to the aftermath of consecutive droughts in 2018 and 2019⁶⁵, not COVID-19. However, the pandemic will still have had some negative effects on agriculture and rural households, as indicated in sections 7.4 and 7.5.

2.2 Imports and Exports

Lesotho imports more than 10 times more agro-food products than it exports. Exports averaged only about \$36 million in the period 2014-16, while imports averaged around \$385 million dollars. Roughly 80% of food consumed in Lesotho is estimated to be imported⁶⁶, cereals making up the largest component. Even in good harvest years, the country can only produce about 30% (110 000 tons) of its annual cereal needs (360 000 tons)⁶⁷. It is therefore surprising that wheat flour was recorded by the FAO as Lesotho's largest export by value during the same period, contributing \$12,5 million (43%), followed by wool⁶⁸ at \$9,8 million (27%), maize and maize flour (13% and 17% respectively) and dried fruit (3%)⁶⁹. The Ministry of Agriculture and Food Security records 5 million kilograms of wool and 600 000 kilograms of mohair, valued at \$39,5 million, as being exported in 2015⁷⁰. It is noticeable that none of these products are exported fresh, allowing them latitude to negotiate the many logistical and other challenges/delays that plague exports, particularly agricultural exports, from Lesotho.

Maize and maize flour are recorded by the FAO as the largest imports too, comprising 42% and 10% respectively, with wheat and wheat flour adding a further 10% and 8% respectively. Chicken and pork products total only 7%, the balance being made up by small quantities of a wide range of products. As beef and lamb can only be imported in the form of live animals, they are not recorded as agri-foods products, but Lesotho is estimated to import about 60% of its beef and lamb meat needs on the hoof from South Africa⁷¹.

With agricultural production mostly having continued as normal in South Africa during the COVID-19 lockdown, the food import supply constraints that may have been experienced in Lesotho would mostly have been related to slowness of procedures at borders. Wool and mohair exports may have been affected similarly, but most of the build-up of inventories as a result of shipping constraints and lockdowns in China – much the biggest importer of these commodities – seems to have occurred mainly at South African ports⁷².

2.3 Food and Nutritional Security

As import and export data demonstrate, Lesotho is a major net deficit food producer, making it substantially food insecure at a national level. Many of the interventions undertaken by government, notably the subsidies for annual crop farming inputs referred to above, which are by far the largest absorber of public expenditure on agriculture⁷³, are aimed explicitly at reducing Lesotho's dependence on imports.

While national food security is clearly a valid goal, the country's large trade deficit⁷⁴ has no impact on the foreign exchange rate of its currency, as the Maloti is tied on a one-to-one basis to the South African Rand. With almost all imports of food paid for by the private sector, public sector programmes aimed at increasing economic growth and employment generation would

appear to be a more appropriate approach to achieving greater food security at a national level than using large amounts of scarce public funds to produce more food locally, especially as many of the greatest beneficiaries are likely to be individual farmers, who either farm larger areas of land or are fortunate enough to be the traditional owners of the land on which the state's share-crop block farming activities are conducted⁷⁵, rather than the public – particularly poorer farmers – as a whole⁷⁶.

However, it is at a household level that food insecurity has most meaning and is most concerning, given its negative impact on health and thereby on individuals' and the country's earnings/economic growth potential. Almost half of the population (49,7%) were classified as living in poverty in 2017 and a further 25% were reckoned to be vulnerable to poverty. More than 60% of those classified as poor (60,7%) reside in rural areas, in the Senqu River valley more than two thirds (67,8%) – an increase of more than 10% since the previous assessment in 2002.⁷⁷

The Agricultural Public Expenditure Review being presently conducted by the World Bank for and with the Government of Lesotho describes the causes and impact succinctly: 'Low agricultural productivity and poverty are closely linked with food insecurity and malnutrition in Lesotho. About one third of children under five are stunted in Lesotho and malnutrition is closely linked to poverty: almost one half of children under five are stunted in the lowest income quintile, compared to 10% of children in the highest. The burden of malnutrition doesn't just fall on the individual, but affects the economy as a whole: it's estimated that over 7% of GDP is forgone annually, due to lower educational outcomes, decreased productivity, poor health and child mortality and premature deaths as a result of malnutrition. Margins are small for Lesotho's poor, as 41% spend more than one-half of their income on food and recent extreme weather events have exposed the population's vulnerability to food insecurity. Adverse weather impacts on agricultural production left around 709 000 people (about a third of the country's population) food insecure in 2015/16; over 200 000 people were in need of humanitarian assistance in 2017; and over 485 000 were reported being at risk of food insecurity in May 2019.'⁷⁸ The high national incidence of HIV/AIDS – 25% of the total population, 59% of whom are women – both exacerbates and is exacerbated by food insecurity⁷⁹.

Malnutrition may not be just the result of insufficient food intake. It may also be caused by poor dietary diversity. Dietary diversity is generally low in Lesotho: only 20% of households with acceptable overall levels of food intake are reported to have adequately diverse diets, while only 11% of children between the ages of 6 and 59 months meet this criterion. With staple cereals being the core of most household diets, fresh fruit and vegetable intake averages less than a third of the World Health Organisation's daily intake. While poverty is certainly responsible to a large degree, inadequate local availability, and lack of awareness of good practices are also important factors⁸⁰.

With almost 40% of the economically active population employed in agriculture, despite the sector generating barely 4% of GDP, it is critical for government's and donors' interventions focused on farming to use scarce resources effectively to raise productivity and crop diversity on a sustainable basis for the benefit of communities rather than individuals, typically through improvements in and broader access to public infrastructure – roads and irrigation, services – amongst others, research and extension and financial, and resource conservation⁸¹.

While COVID-19 may not have had a seriously negative impact on agricultural production in Lesotho, the effects on food security will have been significant. Many Lesotho citizens who have relied on employment in South Africa will have lost their jobs⁸² and have had to return home, while the remittances of many who were fortunate enough to have retained their jobs will probably have diminished. Both will have impacted negatively on incomes and household food insecurity in Lesotho. With economic recovery expected to be slow in South Africa, this is likely to continue for some years. Government's capacity to assist through social grants, already limited, will be constrained further by the negative effect on Lesotho's share of SACU revenue (see section 7.1).

2.4 Public Institutional, Legal, Regulatory, and Policy Framework; Gender Equality

With agricultural production, value addition and marketing/trade including primary, secondary and tertiary economic activities and with the inputs and outputs being so many and varied, the public institutional infrastructure governing agriculture has a wide span in most countries. Lesotho, despite its small size, is no exception. However, it is the FAO's view that 'policy and programme analytical work, including monitoring and evaluation are very weak. Technical capabilities in key technical departments are eroding as a result of unsustainable brain drain and the operational capacity is progressively weakening due to declining budgets.¹⁸³ Policies and programmes may be sound in principle, but all too often implementation is poor.

At national government, or ministry, level, depending on the nature of the commodity and value chain, the ministries and the specialist departments and other public entities falling under them most likely to be involved, include:

Table 53: Public institutions governing and serving agricultural value chains in Lesotho

Ministry	Department	Public entities
Agriculture and Food Security	<ul style="list-style-type: none"> • Crop Services • Livestock Services • Field Services • Agricultural Research • Planning and Policy Analysis 	<ul style="list-style-type: none"> • Food and Nutrition Coordinating Office • Lesotho Agricultural College • Farmers' Training Centers • Lesotho National Dairy Board • National Agricultural Research Systems
Forestry, Range and Soil Conservation	<ul style="list-style-type: none"> • Soil and Water Conservation • Forestry • Rangeland Resources Management 	<ul style="list-style-type: none"> • Lesotho Soil Information System
Water Affairs	<ul style="list-style-type: none"> • Water Affairs • Rural Water Supply 	<ul style="list-style-type: none"> • Water Commission • Lesotho Lowlands Water Supply Scheme Unit
Energy and Meteorology	<ul style="list-style-type: none"> • Energy • Meteorology 	<ul style="list-style-type: none"> • Lesotho Meteorological Services
Finance	<ul style="list-style-type: none"> • Budget • Economic Policy • Private Sector Development 	<ul style="list-style-type: none"> • Central Bank of Lesotho (independent) • Lesotho Post Bank (independent)
Trade, Industry, Cooperatives and Marketing	<ul style="list-style-type: none"> • Livestock Products Marketing Services • Standards and Quality Assurance 	<ul style="list-style-type: none"> • Lesotho National Development Corporation • Basotho Enterprise Development Corporation • (both corporations offer development finance services)

Other ministries, part of whose capacity is directed to serving agriculture, are:

- Health, which conducts sanitary/phyto-sanitary tests on incoming and outgoing animal and plant products
- Public Works, which is responsible, inter alia, for rural roads construction and maintenance
- Development Planning, which designs the national development plans within which agricultural development is located; includes Bureau of Statistics
- Small Business Development, which may assist the development of rural enterprises
- Local Government and Chieftainship, which oversees the traditional authorities that govern

access to communal land for grazing and that, de facto, continue to determine women's access to and ownership and use of land and other natural resources⁸⁴

- Tourism, Environment and Culture, which may assist agro-/eco-tourism development.

Each of these ministries is responsible for designing, enacting in the instance of legislation, and implementing laws, regulations and policies that govern the structure and functioning of agricultural value chains. As comprehensive coverage of these is beyond the scope of a zero draft country report, only a selection of some of the more important of these is mentioned here. In-depth coverage will follow the selection of value chains for detailed research.

Table 54: Key development policies and laws in Lesotho

Focus	Content
Economy-wide growth and development	<ul style="list-style-type: none"> • National Strategic Development Plan, 2018/19-2022/23 (NSDP II) <ul style="list-style-type: none"> » Theme: Employment and Inclusive Growth: In Pursuit of Economic and Institutional Transformation for Private Sector-Led Jobs and Inclusive Growth » Emphasis on building commercial and climate resilient agriculture » Three main areas for strategic action: sustainable commercialisation and diversification of agriculture; a well-functioning agri-food system; rehabilitation of range lands and wetlands » Priorities for action include: improving technology and infrastructure, especially through irrigation and climate-smart agriculture; increasing output of high-value crop and livestock products; developing institutional frameworks for producer and value chain organisations; building the capacity of farmers to benefit from these organisations; developing value chains and markets » Emphasis also placed on improving nutrition and expanding water harvesting for raising productivity and on gender and climate resilience as overarching considerations⁸⁵ • District Economic Strategies (DES)⁸⁶ <ul style="list-style-type: none"> » Bottom-up approach to economic development » Grounded in districts' resource bases » Commercial agriculture one of four anchor growth sectors » District investment programmes for agriculture built into National Agricultural Investment Programme (NAIP) • Legal Capacity of Married Persons Act⁸⁷ <ul style="list-style-type: none"> » Before the Act was passed in 2006, women were considered minors in the eyes of the law. The act revoked this status, increasing married women's rights to include entering into a contract and owning property. » It also legally established that married women hold equal powers in their marriage, allowing them, inter alia, to acquire and dispose of assets and contract debts using joint assets. • Lesotho Bank Savings and Development Act <ul style="list-style-type: none"> » 2008 amendment gave all women, married and unmarried, the right to open and operate a bank account. • Constitution of Lesotho <ul style="list-style-type: none"> » Despite the 2006 and 2008 improvements to their legal status, women are still under-represented in ownership of small enterprises in Lesotho and the majority of their businesses are regarded as 'survivalist', rather than 'developmental'. This is seen as the result both of long-standing discrimination before the changes to the two acts and because the Constitution still allows customary law to take precedence (see Land Act, below). This has particular relevance in rural communities.

Focus	Content
<p>Agricultural development (regional, national levels)</p>	<ul style="list-style-type: none"> • Agriculture Sector Strategy (2003) <ul style="list-style-type: none"> » Goals: food security, poverty reduction, sustainable environmental management and conservation, improved efficiency, improved income distribution and increased share of agriculture in GDP • African Union (AU) Maputo Declaration <ul style="list-style-type: none"> » Commits government to spend at least 10% of national budget on agricultural development, of which 3%+ should be on livestock, to help achieve 6% or more growth p.a. in agriculture's contribution to GDP; affirmed updated by Malabo Declaration (2014) • SADC Regional Agricultural Policy (RAP) (2013) <ul style="list-style-type: none"> » 'Intended to give real effect to pragmatically implement existing declarations and frameworks » Develops a 'legally binding' instrument to stimulate sustainable agricultural development and food security in the SADC region » Defines common agreed objectives and measures to guide and promote actions at regional and national levels in support of regional integration⁸⁸ • National Agricultural Investment Programme (NAIP) (2015) <ul style="list-style-type: none"> » Part of Comprehensive Africa Agriculture Development Programme's (CAADP) 'investment compact' for Lesotho » Incorporates goals and strategies of NSDP II, DES, RAP • Land Act (2010) <ul style="list-style-type: none"> » Establishes autonomous Land Administration Authority (LAA) » Improves security of tenure for all occupants by prohibiting arbitrary eviction; the World Bank does not consider insecurity of tenure a major constraint to the development of commercial agriculture⁸⁹ » Enhances gender equality in land ownership and land transactions » However, the Land Act conflicts with other statutes and practices, e.g. Deeds Registry Act (1968) which prohibits registration of land ownership by married women married in community of property⁹⁰; National Gender and Development Policy of Lesotho (2003), based on Chapter 2 of the National Constitution, calls for equal access to and control over resources, such as land and credit, for all citizens, regardless of gender; but the Constitution also gives priority to customary law, which relegates women to the status of legal minors, under their male relatives; for example, under customary law, women may not enter into land leasing agreements without the consent of male members of their extended family, even if they are head of their immediate household⁹¹; the Land Act provides for the removal of this inferior status, but it is reported to remain in place in practice in many instances, social structures being what they are, and appears particularly to prejudice women in respect of the inheritance of land on the death of their spouse⁹². » In rural areas, local councils, in consultation with local traditional authorities, still have the power to allocate land⁹³. » Almost all extensive rangeland is subject to communal tenure and is held in trust by the King; the Act transfers the administration of communal land from traditional authorities to the LAA's Land Commissioner⁹⁴. » In addition to Lesotho citizens, title to land may now be held by Lesotho companies and foreign companies, provided the latter have a local shareholding of at least 20%⁹⁵.

Focus	Content
	<ul style="list-style-type: none"> • Lesotho Food Security Policy (2006) promotes⁹⁶: <ul style="list-style-type: none"> » Conservation agriculture (CA) with aid from international development partners through adoption of technologies suited to local circumstances, providing CA training and subsidies for innovative approaches to CA » Block farming » Home gardens, particularly organic approaches such as keyhole and trench gardens » Improved livestock production and range land management through combatting stock theft, encouraging small livestock and poultry production at household level and intensive livestock and milk production in urban/peri-urban areas » Basis for institutional responses to food insecurity and vulnerability identified in Lesotho Zero Hunger Strategic Review (2018)⁹⁷ • Lesotho Food and Nutrition Strategy and Costed Action Plan (2019-2023); promotes, inter alia⁹⁸: <ul style="list-style-type: none"> » Adoption of climate-smart agricultural practices (e.g., conservation agriculture, crop rotation, rotational grazing, greenhouses, keyhole gardening) » Adoption of high yielding plant – especially fruit tree/vine seedlings - and breeding materials, as well as organic farming » Manufacture, distribution and adoption of improved post-harvest storage facilities and practices for field crops and vegetables (e.g., hermetic bags, metal silos, vegetable storage markets) » Local production, multiplication, distribution and education about bio-fortified beans, sweet potatoes, maize and underutilized indigenous vegetables » Education about importance of dietary diversity, prevention of micro-nutrient deficiencies and food preparation » Viable livelihood projects, such as cottage industries producing poultry, pigs, fruit and vegetables for sale and offering catering services » Linking farmers to markets and training farmers on market structures and practices » Good agricultural practices (GAP) to increase food safety, e.g. re the use of chemicals, risks of consuming meat not inspected for diseases and organic farming » Strengthening food safety inspection systems for locally produced and imported foods » Veterinary services readily available to all livestock producers » Home gardening, particularly organic approaches such as keyhole and trench gardens
Agricultural development (sub-sectoral level)	<ul style="list-style-type: none"> • Intensive Crop Production Programme (ICP)⁹⁹ <ul style="list-style-type: none"> » By far largest public agricultural programme by value; 27% of total MAFS expenditure¹⁰⁰ » MAFS buys fertilizer (74%), seed (21%), pesticide (5%) packages in SA; sells them to traders at discounted prices; traders sell to producers at subsidized prices; about 24% recouped by MAFS » May only be sold to producers on list prepared by MAFS for district; no criteria for listing of producers disclosed, no transparency about selection; no limit on quantities purchased by individual producers; regressive because large producers benefit most » No evidence of improvement in crop yield; likely to crowd out private sector; no exit strategy • Micro, Small and Medium Enterprise (MSME) Policy (2016): <ul style="list-style-type: none"> » (inter alia) identifies agro-processing as a priority for MSME establishment; seen as contributing to poverty alleviation and job creation for women and youth¹⁰¹

Focus	Content
	<ul style="list-style-type: none"> • Lesotho Livestock Policy (2016)¹⁰² <ul style="list-style-type: none"> » Vision: 'by 2030, Lesotho should have an efficient, sustainable and competitive livestock sector which ensures food security at national and household levels, with increased sector contribution to GDP' » Objectives and issue-specific policies cover wide range of topics, including commercialisation, intensification of production, machinery and inputs, natural resource conservation, veterinary services, genetic material, breeding, marketing, international trade, farmers' associations, extension services, gender and value chain activities » Informed by AU Inter-African Bureau for Animal Resources (I-BAR) Livestock Development Strategy for Africa (LiDeSA), 2015-2035 » Basis for Lesotho Livestock Development Strategic Plan (2018-2022) • Stock Theft Act (2000) and Stock Theft (Livestock Registration and Markings) Regulations (2004) issued in terms of the Act, inter alia: <ul style="list-style-type: none"> » Establish Office of Registrar of Livestock, whose duties include keeping a register of livestock marks, numbers and groups, locality and movements, owners and grazing areas¹⁰³ • Animal Health and Welfare Bill (draft) (2016) <ul style="list-style-type: none"> » Informed by LiDeSA, RAP » Objectives: protection, promotion of animal health, control of animal diseases and veterinary services, production and welfare of animals » Many proposed interventions are laudable, but questions arise re practicality, affordability » Likely negative impact on country's widespread, dominant informal red meat value chain » Proposed allocation of powers to traditional authorities raises concerns re possible abuse
Environmental protection and management¹⁰⁴	<ul style="list-style-type: none"> • National Environment Policy (1998) <ul style="list-style-type: none"> » laid basis for National Environmental Action Plan (1998) and for Environment Act (2008) » provides framework for conservation and sustainable utilisation of natural resources • Disaster Management Act (1997)¹⁰⁵ <ul style="list-style-type: none"> » Lays legislative basis for reducing vulnerability to disasters, particularly regarding food security, caused by climate hazards » Provides for Disaster Management Authority, which undertakes annual country-wide assessments of vulnerability through multi-disciplinary, multi-sectoral Lesotho Vulnerability Assessment Committee • Water Act (2008) <ul style="list-style-type: none"> » Basis for Water and Sanitation Strategy: sets out strategies, objectives, plans, procedures, institutional arrangements for protection, conservation, development, management, control of water resources¹⁰⁶ • National Range Resources Management Policy (2014) <ul style="list-style-type: none"> » Guides development of effective strategies that combat land vegetation degradation and motivates for improved legislation and implementation » Establishes grazing management structures at national, district and community levels • Lesotho Sustainable Land and Water Management Strategic Investment Programme¹⁰⁷ <ul style="list-style-type: none"> » Identifies need for integrated land and small-scale water management through conservation agriculture, soil and water conservation interventions such as donga/gully stabilisation, agroforestry and restoration of degraded wetlands

Focus	Content
	<ul style="list-style-type: none"> • National Climate Change policy (draft, 2017)¹⁰⁸ <ul style="list-style-type: none"> » Identifies need for climate-smart practices » Integrates climate-smart agriculture into national policies » Basis for National Resilience Strategic Framework: eleven pillars, including strengthening preparedness for disaster and climate risks, environmental protection, sustainable natural resource management; identifies roles different organisations will play » Basis for National Climate Change Policy Implementation Strategy (2017) • Water and Sanitation Policy (2007) <ul style="list-style-type: none"> » Provides strategic guidelines for sustainable water resources management and delivery of water supply and sanitation services, including irrigation • Watershed Management Programme ('Fato fato') (2013)¹⁰⁹ <ul style="list-style-type: none"> » Has both environmental conservation and public works cash-for-work antipoverty objectives » Has resulted in local small infrastructural development, e.g. anti-erosion stone lines, water diversion furrows, water harvesting gully structures

Though not a policy per se, it is worth mentioning that the Lesotho National Development Corporation is reported to be planning to resuscitate the dormant Basotho Fruit and Vegetable Canners project at Masianokeng, near Maseru, and to produce a variety of canned products, including asparagus, peaches, baked beans, potatoes, fruit salad and green peas¹¹⁰.

2.5 Development Partners, Organisations, and Initiatives

Over the past decade, a number of the major international multilateral – and to a much smaller extent bilateral – development agencies for whom agricultural and rural development in lower income countries is an important area of focus have been active in Lesotho. Table 55 provides some details.

Table 55: Major international development agencies' agriculture-related programmes and projects in Lesotho

Agency, Programme, Dates	Funding (US\$) ¹¹¹	Description
UNDER IMPLEMENTATION OR COMPLETED		
World Bank: Second Private Sector Competitiveness and Economic Diversification Project (PSCEDPII), 2007-2013	<ul style="list-style-type: none"> • World Bank: \$10.1m • GoL: \$2,0m¹¹² 	<ul style="list-style-type: none"> • Overall objective to contribute to increased private sector investments, firm growth and jobs in non-traditional sectors through, inter alia, supporting investment in new sectors, targeting sectors such as horticulture, and increasing access to finance • Horticulture sub-component focused on fruit tree crop production, upstream activities, such as nurseries, and downstream processing • Funding for assisting transition from cereal production to tree crops, including investment and temporary income loss subsidies¹¹³ • Demonstrating that commercial deciduous fruit production can be competitive and viable, even with much smaller orchards than South • Africa's • Developing a competitive value chain for tree crops including: <ul style="list-style-type: none"> » Selling fresh produce in local and export markets » Establishing value adding capacity for lower quality fruit¹¹⁴
IFAD: Rural Finance Intermediation Programme (RUFIP), 2008-2015	<ul style="list-style-type: none"> • IFAD: grant \$4.35 m, concessional loan \$4.35m • GoL: grant \$2.0m • Total: \$10.7m¹¹⁵ 	<ul style="list-style-type: none"> • Goal: to alleviate poverty, increase income and contribute to overall economic development • Objective: to enhance access to efficient financial services for the rural poor on a sustainable basis • Main programme components: development of (i) member-based financial institutions (MBFIs), (ii) formal financial institutions, (iii) an enabling environment¹¹⁶ • Performance¹¹⁷: <ul style="list-style-type: none"> » Design overambitious, especially regarding capacity of public implementing agencies and firmness of financial sector foundations » Involvement of two international NGOs – CARE and Catholic Relief Services – as replacement implementation partners was successful in developing MBFIs » Major success also achieved in helping Lesotho Post Bank transform into self-reliant, sustainable retail bank with full banking licence, thereby expanding rural formal savings and credit outreach » Overall impact on reducing rural poverty moderate, but benefits expected to be enduring

Agency, Programme, Dates	Funding (US\$) ¹¹¹	Description
IFAD: Wool and Mohair Promotion Project (WAMPP), 2015-2021	<ul style="list-style-type: none"> • IFAD: • Grant \$12.8m, concessional loan \$5.8m • OPEC Fund for International Development: • Grant \$12.0m • Lesotho National Wool and Mohair Growers Association: • Contribution \$1.5m • GoL: • Grant \$3.9m • Total: \$38.9m¹¹⁸ 	<ul style="list-style-type: none"> • Objective: to address rural poverty and food insecurity in context of climate change and increasing vulnerability of poor livestock producers¹¹⁹ • Strategy: <ul style="list-style-type: none"> » Develop integrated value chains to promote sustainable commercialisation and diversification » Build effective support institutions » Improve risk management and reduce stock theft • Priority activities: <ul style="list-style-type: none"> » Produce high value crops and livestock products » Improve quality livestock breeding » Protect animal and plant health » Increase climate resilience¹²⁰
World Bank/IFAD: Smallholder Agriculture Development Project (SADP), 2011-2020	<ul style="list-style-type: none"> • World Bank: \$10m • IFAD: grant \$5m, concessional loan \$5m • Global Environment Fund (GEF): \$4.33m • GoL: \$3.5m • Beneficiaries: \$1.0m • Total: \$28.8m¹²¹ 	<ul style="list-style-type: none"> • Objective: to increase marketed output in Lesotho's smallholder agriculture sector • Followed by Additional Financing phase (SADP II) with same core objective, but in the context of the growing need for climate resilience (see below)
IFAD/GEF: Lesotho Adaptation of Small-Scale Agricultural Production (LASAP), 2017-2020	<ul style="list-style-type: none"> • GEF: \$4.33m¹²² 	<ul style="list-style-type: none"> • Core foci/components: <ul style="list-style-type: none"> » Reduced vulnerability of agricultural production » Enhanced adaptive capacity to support agricultural production in context of climate change¹²³ • Integrated into, supplements SADP design and activities¹²⁴ to respond more fully to climate change • Integrated into line ministries' programmes to ensure continuity; implementation from MAFS district offices¹²⁵
FAO: Emergency Response to El Nino-Induced Drought in Lesotho, 2016-2018; Emergency Assistance to Vulnerable Smallholder Households Affected by El Nino-Induced Drought, 2016-2017; Livestock Emergency response to El Nino-Induced Drought in Lesotho, 2016-2017	<ul style="list-style-type: none"> • Unilateral Trust Fund/ SADP: \$1,1m¹²⁶ • FAO: \$0.97¹²⁷ • FAO: \$0.5m¹²⁸ • EU: \$1.123m¹²⁹ • USA: \$1.0m¹³⁰ 	<ul style="list-style-type: none"> • Objective: improve food security and resilience of vulnerable households in Lesotho through sustainable livelihoods support and complementarities between social protection and agricultural protection • Activities included distribution of livelihoods and veterinary kits, vaccination of livestock, MAFS staff training • Partners: MAFS, MFRSC, MoSD¹³¹, Bureau of Statistics

Agency, Programme, Dates	Funding (US\$) ¹³³	Description
Unspecified donor aid to Lesotho's agricultural sector, 2011-2016 ¹³²	<ul style="list-style-type: none"> • IFAD: \$17.4m • World Bank: \$8.7m • GEF: \$3.2m • Ireland: \$1.1m • UK: \$0.7m • Japan: \$0.5m • Canada: \$0.3m • Korea: \$0.1m • FAO: \$2.9m • Total: \$34.9m 	
PLANNED		
World Bank: Agricultural Productivity Programme for Southern Africa (APPSA), 2018-2025	<ul style="list-style-type: none"> • World Bank: \$20.0m¹³³ 	<ul style="list-style-type: none"> • APPSA established to promote collaboration between Lesotho, Malawi, Mozambique and Zambia in agricultural research and development to encourage technology generation and dissemination¹³⁴ • Lesotho focus: horticulture, including fruit trees, potatoes, vegetables, beans, as well as a cereal crop, sorghum¹³⁵ • Objective: 'to develop plant materials of high economic value, which will exhibit desirable traits (in terms of yield, pest and disease resistance, drought tolerance and market value) and also promote technology transfer through strengthening of institutional linkages, both locally and regionally'¹³⁶
World Bank: Second Phase, Smallholder Agriculture Development Project (SADP II), 2019-2026	<ul style="list-style-type: none"> • World Bank: \$50.0m • Japan Policy and Human Resources Development Fund: \$2.0m • Lesotho beneficiaries: \$5.0m¹³⁷ 	<ul style="list-style-type: none"> • Objective: to support increased adoption of climate smart agricultural technologies in Lesotho, as well as enhancing commercialisation and improving dietary diversity • Major project components: <ul style="list-style-type: none"> » Promoting climate smart agricultural practices and advisory services (partly through assisting the rehabilitation and modernisation of irrigation infrastructure, drafting of national Irrigation Master Plan¹³⁸ and soil- and weather--related institutions) » Improving agricultural commercialisation and nutrition (partly through matching grants for improving the productivity of nutrition-sensitive food production by smallholders)¹³⁹

Beyond these large-scale interventions, many others which involve smaller outlays by donors, but which have also made, or can be expected to make, significant contributions to agricultural development in Lesotho, have also been or are presently being undertaken. Examples of these are:

- The commodity-specific industry feasibility studies commissioned by the African Development Bank, such as the recent one on red meat¹⁴⁰
- The International Trade Centre's Lesotho Horticulture Productivity and Trade Development Programme, which assisted and promoted small-scale greenhouse vegetable production¹⁴¹
- The World Bank's Climate-Smart Agriculture in Lesotho initiative¹⁴².

2.6 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 below.

Table 56: Organized agriculture, international/regional NGOs involved in agricultural development in Lesotho

Organisation	Description
ORGANIZED AGRICULTURE	
Lesotho National Farmers Union (LENAFU)	<ul style="list-style-type: none"> • Apex body <ul style="list-style-type: none"> » 17 member associations (10 district farmers associations, 5 national commodity farmer associations and 2 national non-state actor associations/cooperatives) » represents 78 000 farmers, 40% of whom are female and 25% youth¹⁴³ • National commodity associations (appear to) include: <ul style="list-style-type: none"> » Lesotho National Wool and Mohair Growers Association (LNWMGA) » Lesotho Horticultural Farmers Association (LEHOFA) » Basotho Poultry Farmers Association (BAPOFA) » Lesotho Dairy Farmers Association (LDFA) » Lesotho Seed Growers Association » (Lesotho Pig Farmers?) • National commodity associations are themselves apex bodies for lower level, district and community voluntary associations of primary producers
INTERNATIONAL/REGIONAL NGOs	
CARE/Care for the Basotho (from March 2015)¹⁴⁴	From 1968, CARE has worked with communities, the private sector, government and local organisations to develop, inter alia, conservation agriculture, village savings and loans associations (see Table 56: IFAD – RUFIP, above), community/home gardens, food security and access to clean water
Catholic Relief Services (CRS)¹⁴⁵	Works with government, other NGOs, private sector and church partners in rural communities to support, inter alia, livelihoods, resilience to climate change, natural resource management, emergency response and microfinance (savings and credit groups) (see Table 56: IFAD – RUFIP, above)
World Vision International¹⁴⁶	Focuses on agricultural development and food security, inter alia, through promoting irrigated vegetable production, training farmers in sustainable farming practices and diversification and constructing greenhouses
Action Aid¹⁴⁷	Training farmers in sustainable agriculture, storage, food preservation
Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN)¹⁴⁸	Non-profit network operating in East and Southern Africa to coordinate policy research and dialogue and recommend strategies for promoting food, agriculture and natural resources
Mineworkers Development Agency (MDA)¹⁴⁹	Provides 'sustainable funding' to mineworkers/former mineworkers and their households, inter alia, to promote permaculture gardens and community gardens for improving food security, as well as 'targeted help for emerging farmers'

2.7 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'¹⁵⁰ in order to facilitate and accelerate agricultural development in Lesotho. 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'¹⁵¹.

In essence, the methodology applied entails conducting a high level, 'zero draft' 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.

Table 57: Outcomes of value chain scoring

Position	Commodity / Value Chain	% Score
1	deciduous fruit	76,4
2	wool	75,1
3	mohair	75,1
4	vegetables	72,6
5	potatoes	72,6
6	poultry/pigs	59,6
7	maize	43,6
8	sorghum	43,0
9	cannabis/hemp	27,7
(-)	(clean energy)	(not scored independently)

The scores divide themselves into two clear groups: commodities ranked 1-5, all with scores over 70%, and commodities 6-9, all with scores below 60%. On consideration, it was decided to regard the closely related commodities, wool and mohair, with identical scores for each sub-criterion, as a single commodity, and similarly, vegetables and potatoes, also with an identical overall score, but with differing scores for a number of sub-criteria, as a single commodity. In addition, it was decided not to score 'clean energy' independently as an agricultural initiative, but to incorporate 'scope for clean energy intervention' into sub-criteria 4a and 4b of the overall 'environment/health/food safety' category in evaluating the nine commodities/value chains in the 'long list'. This approach is also adopted for Botswana and Malawi.

The grouped commodities to be proposed to FinMark Trust to go forward for detailed research for Lesotho are therefore:

- deciduous fruit
- wool, mohair
- vegetables, potatoes.

3. WOOL AND MOHAIR

3.1 The Importance for Rural Livelihoods and Poverty Reduction

For more than a hundred years, wool and mohair production have formed the backbone of the rural economy of Lesotho¹⁵². At over half of the total value of output¹⁵³, the livestock sector dominates the country's agriculture and livestock production is, in turn, dominated by wool and mohair production, which generate about 95% of the value of agricultural exports¹⁵⁴ and contribute 4.85% of Lesotho's GDP¹⁵⁵.

The exact number of farmers active in wool, and mohair production is unknown, given the many who sell their produce informally. However, from the numbers that belong to and market through the Lesotho National Wool and Mohair Growers' Association (LNWMGA), it is known that at least 30 000 farmers produce wool and 18 000 mohair¹⁵⁶. As most produce both, the overlap is extensive, but how extensive is also unknown. But when all components of the value chains are taken into account, it can be concluded that more than 20% of Lesotho's roughly 140 000 farming households¹⁵⁷ and at least 50 000 households – almost all rural – benefit directly from and are dependent on the proceeds of wool and mohair sales¹⁵⁸.

The industry presently employs about 1 300 shearers, 150 classers and 120 recorders at shearing sheds around the country¹⁵⁹ and this does not take into account, among others, herders employed by livestock owners, government staff employed fully or partly in support of the industry – Livestock Product Marketing Services officers and agricultural extension officers – licensed traders and smugglers and transport contractors (see below). IFAD estimates the number of household members as being of the order of 250 000¹⁶⁰ - rather more than 10% of the total population¹⁶¹ and substantially more than 10% of the poorest.

Although these households and wool and mohair production are to be found in all 10 of Lesotho's districts, they are most heavily concentrated in the mountains¹⁶², where the options for farming activity are fewest¹⁶³ and the incidence of poverty is highest¹⁶⁴. Of the 70% of the population that lives in rural areas, 50% or more are in the lowest wealth quintile¹⁶⁵, a disproportionately large percentage of whom rely heavily on income from their herds of sheep and goats.

In recent decades, the importance of wool and mohair farming and dependence on it have grown. However, as Hunter observes, this has been more by default, as opportunities to earn income from employment in South Africa have diminished with the contraction of its mining industry and its increasingly prohibitive immigration laws, than as a result of improvements in the productivity of the sheep and goat sector¹⁶⁶.

'Despite over a hundred years of experience with (Merino sheep and Angora goat farming), a number of problems remain. Productivity, as measured by wool or mohair fleece weight per animal, is low, as is the quality of the clip. Mortality and disease in both young and mature animals are high and external parasitic infestations are periodically a serious problem ... Overgrazing and consequent problems of soil erosion and range degradation, while long lamented, have still to be overcome¹⁶⁷. Through increasing the intensity of rainfall, climate change is almost certainly exacerbating soil erosion and rangeland degradation, while at the same time adding to the likelihood of outbreaks of diseases, such as anthrax, which prevent the export of wool and mohair¹⁶⁸.

The industry presently employs about 1 300 shearers, 150 classers and 120 recorders at shearing sheds around the country¹⁵⁹ and this does not take into account, among others, herders employed by livestock owners, government staff employed fully or partly in support of the industry – Livestock Product Marketing Services officers and agricultural extension officers – licensed traders and smugglers and transport contractors.

Clearly, it is of the utmost importance for Lesotho’s rural economy – and particularly for the mostly poor and increasingly vulnerable households whose homes and livelihoods are in the mountains – that the foundation provided by the wool and mohair industry be maintained and, if possible, its resilience strengthened. While this may not add significantly to job and income creation, it will help fundamentally to conserve livelihoods that are increasingly under threat and to which there are few alternatives.

The sections of the report that follow address:

- the structure of the wool and mohair value chains
- primary production and off-farm value addition: current status and challenges
- current, past and planned initiatives to address these challenges

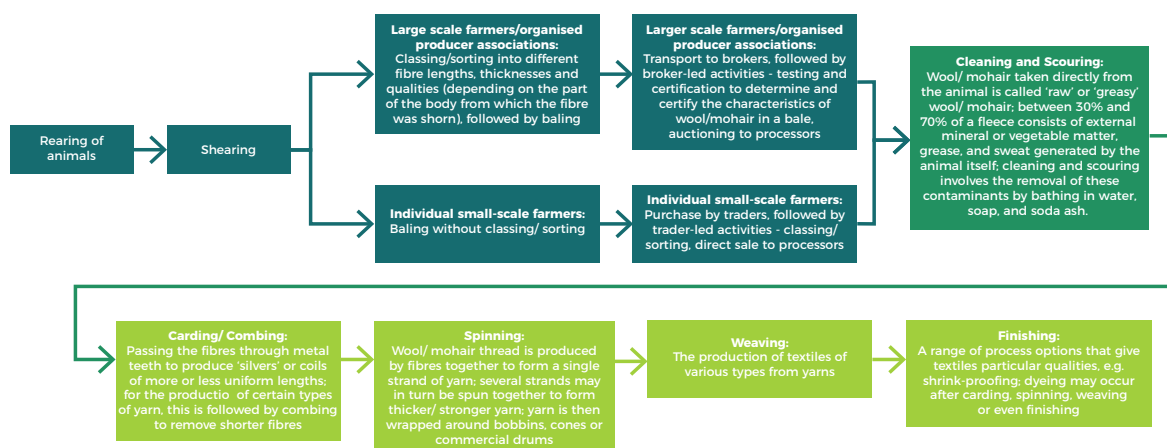
3.2 Current status of value chain

3.2.1 Structure of the Value Chain

As noted above, in Lesotho, most farmers who keep sheep for wool production also keep goats for mohair production. Broadly speaking, the primary production of wool and mohair, the marketing and the subsequent secondary processes involved to produce the textiles from which garments are made are similar and will be treated jointly in this report. Where there are significant differences, these will be noted and two commodities will be considered separately.

If the upstream activities of input production and marketing – typically for semen, feeds, nutritional supplements, veterinary medicines and pesticides and associated services – are extracted, the wool and mohair value chains comprise the following activities¹⁶⁹:

Figure 34: Wool and Mohair Value Chains



All of stages up to baling take place within Lesotho. In the instance of greasy wool exports – which made up just under half of the total mass of wool exports in 2017¹⁷⁰ – and greasy mohair exports – which made up about 90% of the total mass of mohair exports in the same year¹⁷¹ – stage iv(a) was always conducted in South Africa, after the bales had been transported across the border to South African brokers. However, since changes to Lesotho’s agricultural marketing legislation in 2018, some aspects of stage iv(a) have been conducted in Lesotho¹⁷². This is discussed further below. Stage iv(b) may be conducted either within or outside Lesotho.

The other roughly half of Lesotho's wool exports passes through stages v. and vi. in South Africa before being shipped to buyer destinations, mainly as semi-processed wool tops¹⁷³. For mohair, this percentage is much lower – only about 10%. Almost no value addition for either commodity takes place in Lesotho, beyond the very small amount of cottage industry processing of both fibres takes place¹⁷⁴.

About 90% by mass of wool produced in South Africa and imported from Lesotho is exported from South African ports. Of this quantity, 60-70% leaves as semi-processed, cleaned and scoured wool or wool 'tops'¹⁷⁵ and the balance as greasy wool¹⁷⁶. Once a thriving industry under tariff and import protection, little spinning, weaving and finishing takes place in South Africa today. Similarly, as much as 95% of mohair produced in South Africa and Lesotho is exported, with only about 5% processed up to finishing locally¹⁷⁷. As Lesotho wool and mohair do not have their own certificate of origin to enable product source traceability, they are usually blended with South African output when exported¹⁷⁸.

The discussion that follows focuses mainly on stages i., ii. and iii. Attention is also given to stage iv. – because the government of Lesotho has long wanted to bring these components of value addition in-country – and to the possibility of expanding the activities undertaken in Lesotho in stages v. and vi., bearing in mind FinMark Trust's programme to assist SMMEs in light manufacturing in Lesotho to increase their access to finance¹⁷⁹.

3.2.2 Primary production and off-farm value addition

Current status and challenges

Commercial wool in Lesotho and South Africa is produced almost entirely from Merino sheep and commercial mohair from Angora goats. The number of Merino sheep in Lesotho has varied around 1.4 million for some years¹⁸⁰ and is currently reckoned at about 1.6 million¹⁸¹, with the number of Angora goats being around 900 000¹⁸². The increase in numbers in recent years is largely attributable to rising wool and mohair prices¹⁸³ – a boon in terms of income, but a further burden in terms of pressure on the country's rangeland (see below).

These are quite unevenly distributed, both geographically and by household. As already noted, sheep are significantly most heavily concentrated in the mountain districts and the remote Senqu Valley, while rather less so for goats. In terms of distribution by household, ownership of sheep is more evenly distributed in the mountain districts, where more than 50% of households own sheep¹⁸⁴, while in the lowlands only around 20% of households do so. For goats, the distribution is rather less uneven in both instances¹⁸⁵. Herd sizes range from an average of around 50 per sheep-owning household in the mountains and Senqu Valley to an average of between 25 and 30 in other regions¹⁸⁶. For goats, the comparative figures are 25-30 and 20-25 respectively¹⁸⁷.

The distributions indicate the degree of reliance on income from sheep and goats, which is highest in the mountain districts and Senqu valley, reflecting in turn the presence or absence of other agricultural activities as alternative sources of income. As also already noted, in the mountains and Senqu valley, alternative options are fewest. For poor rural communities, particularly in these two regions, sheep and goats are the most important source of income, as well as playing a vital role in food security, both directly, as a source of protein, and indirectly, through income generated¹⁸⁸.

A further measure of distribution is also relevant: though more households own sheep and goats in the mountains and Senqu valley than elsewhere, within the group of households owning small livestock, the distribution of ownership is highly uneven. As few as 5% of sheep-owning households own 50% of the national flock, while for goats the percentage is a little higher at 12%¹⁸⁹. While there are some relatively large, relatively well-to-do smallholders, the great majority of sheep and goat farmers own much smaller herds, earn much less from wool and mohair sales and are probably commensurately more food insecure.

Because data are only collected for wool marketed through channels provided by government (see below), the total mass and value of wool and mohair produced in and exported by Lesotho is unknown. It is estimated that the percentage of wool marketed through government's Lesotho Product Marketing Services (LPMS) varies between 52 and 63% annually, while for mohair it is around 56%¹⁹⁰. Between 2010/11 and 2018/19, wool flowing through this channel fluctuated between about 3.2 million kg and 4 million kg annually¹⁹¹. For mohair, the mass was fairly constant at around 400 000kg (reaching a high of about 430 000kg in 2018/19) for most of the same period, with the exception of 2016/17 and 2017/18, when it dropped as low as 180 000kg (in 2016/17)¹⁹². On this basis, it can be estimated that the total mass of wool produced in Lesotho over the past decade has probably varied between about 5 million kg and about 7.5 million kg per annum, while for mohair the low will probably have been about 320 000kg and the high of about 770 000kg annually.

Recalling that about one half of the wool exported by Lesotho leaves South Africa in greasy form and the other half as 'clean' semi-processed tops, with the price of greasy wool having increased from a low of M41.80/kg in 2010/11 to a high of M82.10/kg in 2016/17¹⁹³ and the price of clean from M73.90/kg to M143.20/kg in the same years, it appears that total gross earnings from wool exports will have risen from about M185 million in 2010/11 to substantially more than double that – about M450 million – in 2016/17.

For mohair, of which only about 10% is exported as clean product, and which started from a low of just more than M50/kg in 2010/11, before reaching a high of M146.1/kg in 2017/18, total gross earnings from exports are more difficult to estimate, as the prices/kg of clean tops are unknown. If the differential between the price of greasy and clean mohair is assumed to be about the same as for wool (1.75x), then total gross earnings from exports can be reckoned to have fluctuated between roughly M38 million in 2010/11 and as much as M98 million in 2015/16, before dropping to around M41 million in 2016/17 and recovering a little thereafter¹⁹⁴.

The average earnings of wool producers, net of off-farm deductions (see below), rose from around M4 000 in 2010/11 to almost M8 500 in 2016/17 to more than M9 300 in 2018/19¹⁹⁵. Mohair farmers did significantly less well, with their average net earnings growing from about M1 250 in 2010/11 to a peak of almost M3 050 in 2017/18, before falling to a little less than M2 600 in 2018/19¹⁹⁶. So, even if the average farmer rears sheep and goats – and most farmers do indeed rear both – his or her average monthly income from both, net of off-farm deductions, but before taking into account on-farm costs, is currently no more than about M1 000. For most, other sources of income – or greater earnings from their animals – are therefore essential.

While job creation in non-agricultural sectors and social grants offer options for increasing wool and mohair farmers' incomes in principle, both appear difficult in practice, given Lesotho's resources and the contrary trends of recent years. A meaningful exploration of both is also felt to fall outside the scope of this study.

The range of strategic options for increasing income that will be examined are:

- increasing the number of animals
- increasing the prices realized for wool and mohair
- increasing the yield per animal
- increasing income in cash or kind from other value chain-related activities.

Increasing number of animals

As noted above, the number of animals has indeed increased in recent years in response to rising wool and mohair prices. However, what has long been abundantly clear is that, in the absence of – and perhaps even with – major reforms to land tenure and land use, it is essential for large-scale destocking to occur. When all livestock are included – taking account of cattle, sheep and donkeys – it is reckoned that Lesotho's natural rangelands are presently 40-80%

overstocked¹⁹⁷, with major, on-going negative consequences for the country's natural resource base. It is estimated that overgrazing leads to the loss of some 39 million tons of topsoil every year¹⁹⁸. This is being exacerbated by climate change through rising average temperatures and the increasing incidence of droughts and floods¹⁹⁹. The result is progressive rangeland degradation and steadily reducing animal carrying capacity.

While it could simply be concluded that aiming to raise farmers' incomes through increasing the number of animals is therefore not a viable strategy, it is important to take note of the causes of overgrazing, because the need to address them influences all of the other options for raising income.

Although there are limited areas of privately owned land in Lesotho, the tenure system that has always applied on all – or almost all – of the extensive rangeland on which the country's sheep and goats graze is communal. In practice, this means that all members of a community have the right to graze their animals on commonly owned land, subject to whatever rules the community adopts. With everyone, starting with government, being well aware of the need to limit and reverse rangeland degradation, both national policies and regulations and community norms on land use apply.

However, more often than not, good land management principles are undermined by, *inter alia*²⁰⁰:

- conflicts between community members and community office bearers arising from unclear norms
- rich and/or influential members of the community disregard agreements because of contests around authority; other livestock owners and herders then no longer respect local authorities and rules/norms
- out-of-date national rangeland regulations which are no longer able to respond adequately to current circumstances
- overstocking because most owners prefer to increase herd numbers rather than try to improve yields as a strategy to increase income; this is exacerbated by the status associated with larger herds
- absence of a meat value chain to increase the attractiveness of slaughtering as an alternative method of increasing income²⁰¹; this is exacerbated by the lack of training and incentives for shearing shed staff to help increase wool and mohair yields.

Over the years, there have been a number of interventions both by government and by external bodies in partnership with government to try to achieve better rangeland management and reduce herd numbers. The most recent of the latter have been initiatives undertaken by USAID in the 1990s and early 2000s and by IFAD, through its WAMPP programme, which commenced in 2016 and is due to terminate in 2022. All are based on recognition of the need for rangeland restoration and smaller herds as the foundation for increasing incomes sustainably.

Increasing the prices realised for wool and mohair

Most farmers, particularly small farmers, worldwide are price-takers. But the prices that they realize may be influenced by, amongst others, the marketing channels that they choose and the costs or deductions these entail. The quality of fibre produced is obviously also an important determinant of price. The potential, requirements and options for improving quality are discussed in 3.3. The focus of this section is on marketing as a determinant of price.

Lesotho's wool and mohair producers have the option of marketing through two main channels: licensed private traders, some of whom own shearing sheds, or government owned shearing sheds. A third, much smaller illegal option is to market through smugglers. Much the largest percentage flows through government shearing sheds – between 53 and 62% in the case of wool and around 56% in the case of mohair, as noted above – and most of the balance through

private traders. The percentage passing through smugglers is estimated at about 5% for wool, but as high as between 15 and 20% for mohair²⁰².

The percentage of farmers using the two main channels is similar in both instances: between 30 and 35% of households use private traders and much the same percentage government shearing sheds for wool and between 32 and 38% respectively for both mohair channels²⁰³. This indicates that larger producers tend to use government shearing facilities – though many smaller producers do too – while traders supply marketing services mainly to smaller producers.

114²⁰⁴ government shearing sheds are spread widely across Lesotho's 10 districts²⁰⁵ and the 70 or so²⁰⁶ sheds owned by 16 or more²⁰⁷ licensed private traders likewise²⁰⁸. Farmers using government's sheds are organized into either Shearing Shed Associations (SSAs), whose members are predominantly larger herd owners, or Marketing Groups (MGs), whose members are mostly smaller producers²⁰⁹. Membership of the Lesotho National Wool and Mohair Growers' Association (LNWMGA) is a requirement for belonging to an SSA and using the association's shed, while affiliate membership is a prerequisite for belonging to a MG. Members of MGs also have the right to use an SSA shed²¹⁰.

All wool and mohair marketed through these channels, as well as through licensed traders, was until 2018 (see below) exported via government's Lesotho Product Marketing Services (LPMS) and sold on the international market at auctions organized by South African brokers in the three seaports through which they were shipped: Port Elizabeth, East London and Durban. Most Lesotho wool and mohair is understood to have passed through Port Elizabeth, with the South African broker, BKB²¹¹, acting as LNWMGA's preferred conduit in all but a few instances²¹².

As wool and mohair marketed through this channel remains the property of farmers until it is auctioned, only being handled on their behalf by LPMS and the broker concerned, the gross price/kg received by farmers is determined by the international market. In the case of wool, this is, in turn, determined primarily by the price paid for Australian wool, Australia being much the largest producer and exporter of the commodity²¹³. Members and affiliated members of the LNWMGA therefore have to wait until their wool and mohair is auctioned before the gross price/kg received is known.

This price, multiplied by the number of kilograms of wool shorn and marketed on behalf of each farmer, determines the gross income received by each farmer. From this amount, deductions made by the broker and permitted by law are for the broker's commission (4%), a dipping levy, insurance, testing costs²¹⁴ and a 2 cents/kg levy to finance the cost of LNWMGA's operations²¹⁵. The value of these deductions determines the net price/kg realized by farmers using this marketing channel. The net amount owed to each farmer was always paid by the broker to farmers via the LNWMGA until 2018²¹⁶. Payment is reported to have been made promptly and received by farmers shortly afterwards, with the entire process from shearing shed to receipt of payment taking 10-11 weeks in most years²¹⁷.

Recognizing both the cashflow difficulties for farmers that may be created by a delay of this duration and its longstanding relationship with LNWMGA, BKB is reported to have made lines of credit available to farmers, though it is not known whether this was only to larger farmers or more generally and what the limits, terms and conditions were. Credit is often urgently needed, perhaps most critically for feeds, as mohair shearing begins with the onset of winter, when natural grazing conditions are at their poorest, and wool shearing begins in spring, often before good rains have fallen to regenerate the grasses²¹⁸. Since the change of marketing legislation in 2018, with BKB and other South African brokers at least temporarily precluded from handling Lesotho wool and mohair, these credit facilities have been withdrawn²¹⁹.

For farmers who are not members of LNWMGA and who market through licensed traders²²⁰, wool and mohair is sold to, and becomes the property of, traders at the shearing shed. In terms of their licences, they are required to pay prices published in the Government Gazette and

their premises, equipment and purchasing are subject to inspection by LPMS²²¹. While it is not known exactly how the prices announced by government are set, they clearly cannot exceed auction prices realized in most years, less the costs of marketing borne by traders, otherwise both traders and government would be out-of-pocket and would be likely to withdraw from the system. Farmers electing to use this marketing channel therefore have to accept lower prices than those belonging to LNWMGA and using government shearing sheds. However, they do have the advantage of knowing the net price/kg payable and of receiving payment immediately, thereby eliminating the need for credit. Immediate payment, as just indicated, can be extremely important, if cash is needed to cover urgent outlays, such as for winter feeds.

Research conducted in 1983, when the two marketing channels functioned on much the same basis as until 2018²²², indicates that LNWMGA farmers received slightly higher net prices/kg than their counterparts marketing through traders, the former realizing 66.3% of the average gross price/kg for wool and 80.8% for mohair, against the 64.8% and 77.8% respectively realized by the latter²²³.

It is not known what prices farmers choosing to market through smugglers receive, but the two main apparent reasons for doing so suggest that they are likely to compare unfavourably to both of the above. These relate, on the one hand, to location: farmers in very remote areas, far enough from government- or trader-owned sheds to make it uneconomical to transport their animals for shearing, may have little alternative than to accept the services of a shearer operating without a licence and who is therefore precluded from using legal marketing channels. Given both the transport costs entailed for the shearer and his/her having to on-sell to dealers of similarly dubious legal standing, the price that the farmer receives is likely to be low²²⁴.

The second motivation for choosing this marketing channel relates to farmers' own legal standing: farmers must have a certificate of ownership of livestock to be able to shear at government- and trader-owned sheds. As farmers who keep stolen sheep are unable to meet this requirement, they again have little alternative but to sell to a smuggler, who is equally aware of this shortcoming and therefore has little incentive to pay a market-related price²²⁵.

The conclusion that emerges is that, at least until 2018, the net price/kg that Lesotho's farmers received for their wool and mohair was indeed influenced by the marketing channel that they chose, but only marginally so for the great majority of farmers who operate legally and market through legal channels. Those who are not members or affiliate members of LNWMGA could have increased the net price that they received a little by joining and marketing through government shearing sheds, but to the detriment of their cashflow. The weight given to the latter by farmers may often rationally have outweighed the former. However, being a member or an affiliate member of LNWMGA carries other benefits that are likely to have a significantly more positive effect on price and yield. These are considered in 3.3 below.

It was noted earlier that government had long wanted to bring the processes of brokering, testing and auctioning in-country. The Agriculture Marketing (Wool and Mohair Licensing) Regulations, 2018 and subsequent amendments attempted to do just that, by prohibiting the sale of wool and mohair through brokers and auctions based outside Lesotho and by restricting the issues of licences for shearing, testing trading and auctioning wool in Lesotho to Basotho only²²⁶.

The objectives articulated for this were²²⁷:

- to increase the bargaining power of Lesotho farmers
- to reduce what were viewed as high deductions by South African brokers
- to increase value addition in Lesotho
- to increase tax revenue accruing to the Lesotho government from in-country value addition
- to increase employment in Lesotho
- to ensure value addition skills transfer.

While these were valid enough in themselves, the way in which the regulations were implemented – through the award of a licence for brokering, testing and auctioning to a single firm, with manifest lack of capacity, thereby setting up a monopsony²²⁸ – led to suspicion that there may also have been less valid motives²²⁹.

A legal challenge by LNWMGA was eventually upheld and the regulations ruled *ultra vires* on the grounds that they required 'licences for wool and mohair brokering, testing, trading, auctioning and processing when such facilities (did) not exist in Lesotho'²³⁰. Following subsequent amendments, licences were issued to a number of other firms, including South African brokers that established offices in Lesotho²³¹, but most of the activities that the 2018 regulations intended to bring into Lesotho remain in South Africa, at least for the present. More importantly, the marketing and pricing mechanisms that operated previously and that most farmers clearly supported²³² have largely been reinstated, also at least for the present.

Little or no progress has been made towards achieving the new regulations' declared objectives. Indeed, a careful analysis by IFAD concluded that in most cases the outcome was precisely the opposite. In respect of the first, if the objective is re-interpreted as realizing higher prices for wool and mohair, relative to international prices, those paid to Lesotho farmers fell²³³. The only objective that was partly achieved was the reduction in the level of deductions – but at the cost of the cessation of a number of key services, such as dipping, for which the deductions had always been used²³⁴. Indeed, participation in wool and mohair production contracted, the volume of product delivered through legal channels dropped and smuggling very likely increased²³⁵.

Another important adverse consequence – the withdrawal of the credit facilities offered by brokers – has already been noted, made worse by the much longer wait that most farmers experienced to receive payment and that government eventually took it upon itself to pay many who had not received payment at all²³⁶. The impact of all these developments on employment – especially of herders and at shearing sheds – and on the quality of rearing – especially supplementary feeding and medication – was predictably negative²³⁷.

A second important conclusion is that interventions to try to increase the prices of wool and mohair for farmers need to be particularly carefully and competently designed and implemented if they are not to achieve the opposite, together with other negative outcomes for the value chains.

Increasing the yield per animal

A comparison of the relative performance of members of SSAs – all of whom are required to be members of LNWMGA – and members of MGs, who are entitled to use SSAs' sheds, but may or may not be members of LNWMGA, indicates that the former, on average, produce fleeces which are about 10% heavier and fetch prices/kg which are about 10% higher than those of the latter²³⁸. Though this could be the result of a number of factors, one would appear to be the training and extension courses provided by LPMS officers to members of SSAs²³⁹. To the extent that this accounts for the difference – and it seems logical that it should at least be a contributing factor – one method of doing so is to encourage more farmers to join LNWMGA and SSAs. A second, non-mutually exclusive option is for LPMS to offer its courses to a broader range of farmers. Considerable emphasis has been placed on skills and management improvement by external interventions (see below).

A further factor affecting yield and price is geo-climatic zone. Sheep, and particularly goats, raised in the mountain districts tend to produce heavier fleeces and realize better prices/kg than animals reared in other regions²⁴⁰. Again, this could be attributable to a number of factors²⁴¹. But for most households in non-mountain areas, moving animals to the mountains is not a practical option.

However, whatever the causes of differences in yield and price/kg between different groups in Lesotho, what is striking is that while the quality of Lesotho's wool and mohair is quite comparable with South Africa's, yields per animal are far lower than just across the border: the average fleece weight for sheep is 2.74kg, compared to 4.0kg in South Africa, while for mohair, it is 0.87kg in Lesotho and 1.5-2.0kg in South Africa²⁴². Though the challenges for improving yields in Lesotho may be substantial, so too clearly is the scope.

IFAD's WAMPP design document sums up the challenges as follows²⁴³: 'Low yields result principally from poor genetics, animal management practices (which, critically, relate to the quantity and quality of feeds provided) and shed practices. The majority of growers focus on herd quantity rather than off-take quality to drive wool/mohair income, for a variety of reasons including, but not limited to: social status derived from herd size; limited financial means to invest in animal husbandry; lack of an appropriate breeding strategy ... ; antiquated shearing technology ... and lack of training of shed staff to maximize wool/mohair value. This results in a large share of lower quality wool and mohair, which lowers the revenue per animal. Financial means are stretched further by logistics bottlenecks, particularly in getting baled product from shed to auction, which delays payment to the grower; the delayed cashflow cycle limits grower ability to invest in supplemental feed or shelter to nurture animal health and production. Livestock feed is derived from the already overgrazed rangeland.'

To assess the scope for increasing farmers' incomes through addressing the variables under their direct control, 'a (hypothetical) start-up farm with high-yielding breeds and supplemental feeding was ... analysed. After the target herd size of 50²⁴⁴ is reached and loan repayment²⁴⁵ achieved, the sheep farming operations (wool and livestock sale) can expect to generate an annual cashflow of M40 858 per farm and an annual profit of M817 per head as opposed to M283²⁴⁶ for a traditional farm, indicating (substantial) potential for (increasing incomes in) the sector, provided adequate investment is made in breeding, feeding and animal care.'²⁴⁷

The greater part of external interventions to increase incomes in the wool and mohair in recent years have focused on addressing these causes of poor yields identified.

Increasing income in cash or kind from other value chain-related activities

In addition to income earning opportunities in the production and marketing of wool and mohair, as described above, there is a small cottage industry that adds value locally, that is, in Lesotho. This comprises about 11 small enterprises, with 82 members, who in 2014 employed only about 130 workers. With most weaving still done by hand; labour productivity is generally low – to the point of earnings falling below the national minimum wage²⁴⁸. The scope for and attractiveness of employment in the industry is therefore limited at present.

The enterprises mostly use waste material – wool and mohair that does not meet export quality requirements – to produce handicraft products that sell either to tourists or are marketed through outlets in South Africa. Despite the formation of an export association and efforts to mobilize the necessary financial resources, little of the output reaches export markets, both because of failure to meet quality standards and because the product mix is not well attuned to international market demand. Beautiful as many are, the woven products, especially traditional tapestries, have limited international appeal, while the knitted products that evidently sell best require technology and skills that Lesotho lacks²⁴⁹.

The industry is 'constrained by lack of access to (the) medium- and longer-term finance required to access high quality inputs, ... increase working capital and scale up production. (IFAD's) Rural Financial Intermediation Programme (which terminated in 2016) and (the World Bank's) Smallholder Agriculture Development Programme (which ended in 2020) have had limited success in linking cottage producers with the financial sector'²⁵⁰.

Though only indirectly related to the wool and mohair value chains, domestic vegetable and fruit gardens are an agricultural activity open to most households, even in less fertile mountain areas. The capital required is minimal and, in addition to meeting own-consumption needs, many generate some supplementary income. The 'keyhole gardens' based on domestic compost form an integral part of the package of activities promoted by the NGOs that have enabled the spread of accumulating savings and credit associations in rural areas²⁵¹ – Catholic Relief Services (CRS) and CARE for Basotho.

More than 400 such associations have now been established in Lesotho's mountain districts as part of a CRS-led integrated watershed management programme for the restoration of highlands rangelands²⁵². Between them, the savings and credit groups and the vegetable and fruit gardens have significantly helped reduce the need for households to slaughter sheep and goats to meet cash needs, thereby conserving households' income-earning assets, if at the cost of not lightening the burden of grazing on the rangelands²⁵³.

3.3 Current, Past, and Planned Initiatives to Address Challenges

Interventions by government and external donor organisations/development partners have a long history, stretching back into colonial times. In the post-independence period, the GoL policy, legislation and interventions focused primarily on rangeland management and restoration. The many legal and administrative measures implemented by government have so far failed to stem the decline in the quality of rangelands ultimately because of the constitutional right of every Lesotho citizen to graze livestock on communal rangelands. This has been compounded by weak institutional coordination between elected and traditional authorities²⁵⁴.

Given the intractability of these issues, interventions by USAID and others in the 1990s and early 2000s focused instead on wool and mohair marketing, USAID through its Lesotho Agricultural Production and Institutional Support Project²⁵⁵.

IFAD's Sustainable Agricultural Development Programme for the Mountain Areas (SADPMA), which operated from 2000 to 2006, was designed to increase income in these areas *inter alia* through better farming methods, improved wool and mohair production, reduced stock theft and stabilized rangelands, achieved by strengthened institutional capacity and greater beneficiary participation in programme planning and implementation²⁵⁶. Among the more successful aspects of SADPMA was the construction of woolsheds and dipping tanks, which were reported to have increased the number of producers, as well as the quantity and quality of yields and, consequently, incomes²⁵⁷.

This was followed by IFAD's Sustainable Agriculture and Natural Resources Management Programme (SANREMP), which aimed to support poor rural households by engaging them in rangeland regeneration projects and land and water management activities to improve livestock production²⁵⁸. While the programme was assessed broadly to have failed, the importance of rangeland regeneration and land and water management were seen as being so great that they were carried forward, with the successes of SADPMA in woolshed and dipping tank construction, to lay the foundation for IFAD's Wool and Mohair Promotion Project (WAMPP).

Lesotho's first National Strategic Development Plan (NSDP), 2012/13-2016/17, identified agriculture as a key sector for increasing economic growth. The strategic framework to accelerate development had three main pillars:

1. sustainable commercialisation and diversification through the development of integrated value chains
2. building effective support institutions and infrastructure
3. improving risk management, particularly to respond to climate change and, in the livestock industry, to reduce stock theft.

Priority activities identified to put this strategy into effect include:

- promoting the production of high value crops and livestock products
- improving livestock breeding
- developing viable marketing and distribution systems
- protecting animal and plant health
- increasing climate resilience to reduce the vulnerability of producers.

The second NSDP, 2019-2023, retains agriculture a key sector for development. A core principle is for the economy to shift progressively from government-led to private sector-led growth.

Launched in 2016 and planned to terminate in 2022, WAMPP was designed to implement national strategy and priorities in the context of the wool and mohair industry²⁵⁹. The project's three core components relate to:

1. climate-smart rangeland management to improve the quality of pastures on a sustainable basis: this first component focuses on working with communities to establish users' rights, responsibilities and associations, grazing area delineation/management and stocking rates
2. improved livestock production to increase yields and raise quality: this second component focuses on improving animal nutrition, genetics and health and access to/quality of extension services
3. wool and mohair handling, processing, and marketing to improve the quality of product delivered and increase value addition: this final component focuses on promoting shearing shed associations, increasing the efficiency and extent of fibre handling and grading at shearing sheds, improving shed and road infrastructure and encouraging the growth of cottage industries using locally produced fibre.

The project is being implemented in partnership with a number of Government of Lesotho (GoL) ministries, led by the Ministry of Agriculture and Food Security (MAFS), local government structures and office bearers, notably traditional chiefs, and NGOs. NGOs of pivotal importance are the LNWGA, with its District Wool and Mohair Growers Associations (DWMGAs), Community Grazing Associations (CGAs) and Shearing Shed Associations (SSAs). A parastatal/public entity of special importance is the Lesotho Highlands Development Authority (LHDA), within whose geographical ambit and development mandate the greater part of the districts targeted primarily by WAMPP – Mokhotlong, Thaba Tseka, Quthing, Maseru and Butha-Buthe – fall.

While the broad target group for the project is resource-poor wool and mohair producers who depend largely or entirely on degraded highland pastures for grazing, other groups that the project aims to assist include poor rural residents who do not own sheep or goats, but who are involved in wool and mohair value-adding activities – shepherds, shearers, classers, transporters and those involved in handicraft enterprises, among others – or who have the potential to do so or to become producers. Growing the beneficial inclusion of women and youth is specifically identified as an objective²⁶⁰.

With only one year left before WAMPP's termination, IFAD's country management team are now focusing on a sustainable exit strategy²⁶¹ and short- to medium-term country intervention strategy for the period ahead²⁶². Building on the experience and lessons of WAMPP, the strategy adopted will continue and deepen IFAD's contribution to development and poverty alleviation in three core areas²⁶³:

1. climate-smart rangeland management
2. improved livestock production and management
3. wool and mohair processing and marketing.

Among the principles on which this strategy is based are that:

- interventions are needed to support the development of value chains, strengthen market linkages, and increase the opportunities for the entry of private sector service providers
- project designs will strongly emphasize post-project sustainability, through strengthening rural institutions and focusing on administrative ownership and maintenance of effective administrative systems.

In addition to the continuation of its financial and other support for the World Bank-led SADP II programme, with its focus on the commercialisation of vegetable and fruit production, two new IFAD-led programmes are in the process of design:

1. the Lesotho Integrated Catchment Management Programme (LIMAP), due to operate from 2021 to 2027, to be undertaken in close collaboration with GIZ and the EU²⁶⁴. The programme aims to address the causes of environmental degradation holistically by developing and implementing models which recognize the intimately integrated nature of rural communities' natural, financial, social, physical, and human capital and that the use of rangeland depends substantially on the diversity of income sources. The importance of the role of voluntary savings and credit groups in enabling diversification forms part of this understanding²⁶⁵.
2. the Wool, and Mohair Sector Development Project (WMSDP), scheduled for 2023-2029, which is intended to build on the achievements of WAMPP, but with a focus on value addition and efficiency gains at national level, as opposed to WAMPP's focus on farm-level development²⁶⁶.

3.4 Recommendations for FinMark Trust

3.4.1 Credit: a financial services priority – potential sources

FinMark Trust's core mandate is to make financial markets work for the poor. The essence of this is to help increase low-income households' and producers to financial services and make financial services respond more effectively to the needs of these groups. Although financial services span a wide range – credit, savings, transmission/transactions, insurance, trade finance, etc. – in the context of Lesotho's wool and mohair industry, in which almost all value creation and addition takes place at farm level, at shearing sheds and in transport to the border, the financial service which primary producers and value adders most need and find most difficult to access is without question credit. This is almost universal across agricultural value chains for small producers in developing countries, given the inherent risks of agricultural production and the prevalence of land tenure systems that allow few opportunities for using land as loan collateral.

It is precisely these risks and the inadequacy or absence of affordable tools to address them that limit the appetite of formal financial institutions to operate in the smallholder credit market. Bank lending to actors in Lesotho's wool and mohair value chains is confined almost entirely to larger players involved in the trade of wool²⁶⁷.

By way of example, Lesotho Post Bank is now establishing its presence in the agricultural credit market and during the third quarter of 2020 advanced almost half (48%) of its loans by value (more than M11 million) to the wool and mohair industry. But most of this is reported to have been lent to private traders, stimulated by the changes in marketing legislation that were enacted in 2018. The average value of these loans exceeded M320 000, far above the amount that even the largest wool and mohair farmers would ever be likely to seek.

This draws attention to another constraint on bank lending to most farmers in Lesotho: high transaction costs relative to loan size. Most banks find the time and effort of lending directly to smaller farmers too great to justify doing so, even where adequate collateral is available²⁶⁸. To address this, lines of credit for on-lending to farmers may be advanced to intermediaries

who know their respective sub-sectors well, can more readily assess individual farmers' loan worthiness and, with some financial support from the bank advancing the credit, can provide technical and business guidance to increase the likelihood of repayment of loans²⁶⁹.

The intermediaries best placed to do this are typically large agribusiness off-takers and input suppliers, in whose interest it is to promote output in the sub-sector²⁷⁰. Not only are they well equipped to provide technical and business guidance, but, perhaps most important, their balance sheets are strong enough to absorb losses from non-performing loans, as they are usually liable for the repayment of the credit advanced for on-lending by the bank concerned. However, few such large agribusinesses currently operate in Lesotho and the only larger players in the wool and mohair value chains that have provided off-taker credit to farmers in the past – South African brokers – are, as noted earlier²⁷¹, presently no longer doing so.

One might ask whether LNWGA would not be well placed to take on this role in collaboration with a Lesotho bank, given its apex role in the value chains. With regret, it has to be concluded that, even with its knowledge of the value chains and individual farmer members, in common with most commodity associations, it does not and probably never will have a balance sheet which is anywhere near strong enough to absorb the losses incurred from non-performing loans. More than likely, too, its capacity to administer credit would need substantial strengthening – a matter that is returned to below.

In the near absence of bank credit, the participation of other credit providers and the deployment of credit instruments other than land-collateralized loans is essential for primary producers and other value chain players to realize the potential of which they are capable and, in many instances, to be able to function at all. Beyond informal loans from family and friends – probably still the most important source of credit for most very small producers – two main alternatives offer themselves for commodities such as wool and mohair: off-taker credit – which is often informally collateralized against product delivered – and, where a body can be found to provide the initial capital, revolving fund credit – which is seldom collateralized. Both forms of credit are, or have until recently been, playing an important role in Lesotho's wool and mohair industry.

Other possibilities, such as warehouse receipt finance, while available for non-perishable products such as wool and mohair in principle, are unlikely to work in practice because of the way in which wool is marketed, i.e., through auctions, in bales comprised of fibre shorn from animals owned by a number of producers, baled according to quality. This does not articulate with the individualized basis on which warehouse receipt systems and warehouse receipt loans operate, even were Lesotho farmers able to sell their output through an agricultural commodity exchange such as the South African Futures Exchange (SAFEX) – which, presumably for the same reason, does not offer futures contracts for wool or mohair.

3.4.2 Specific need for credit

To a greater or lesser degree, all of the activities undertaken by farmers and others in Lesotho's wool and mohair value chains up to the point of auction, included in the three core components of WAMPP, need finance. While once-off fixed capital investments with community-wide benefits, such as upgraded shearing sheds and roads, have generally been funded through grants from WAMPP, recurrent expenses, whether individual or collective, cannot be funded sustainably on this basis.

In such instances, WAMPP has either set up a revolving credit fund with an initial capital injection from the project or is looking to some other mechanisms to provide ongoing access to the funds required for primary producers and other entities in the value chains to operate.

Recurrent production expenses for individual farmers

Recurrent production expenses for individual farmers include the costs of items such as feeds/ food supplements and veterinary medicines. For farmer communities/CGAs grass seed is an important annual outlay. Though the precise mechanisms and administrative processes remain to be clarified, a revolving credit facility, capitalized by IFAD, has been set up to provide credit to farmers and farming communities for these expenses²⁷². It is understood that the facility has required topping up from time to time²⁷³.

The need for such a facility has increased since the change in the country's agricultural marketing legislation in 2018. The latter has, at least for the present, shut off the lines of off-taker credit that South African brokers advanced to many Lesotho wool and mohair growers²⁷⁴. It is unknown, at the time of writing, whether any of the credit now being advanced by Lesotho Post Bank to wool and mohair traders²⁷⁵ is in turn being advanced by traders to growers, or whether, now that South African brokers have been allowed to re-enter the marketing system through the offices that they have opened in Lesotho²⁷⁶, they have resumed the advance of credit or plan to do so. One would expect that this would be the case, both because of the competitive advantage that this would give them over new entrant intermediary off-takers, and, more important, because of the familiarity and popularity of such credit facilities among Lesotho producers, who were very vocal in their opposition to the abolition of the pre-2018 dispensation²⁷⁷.

However, even before this source of off-taker credit was disrupted, there was – and remains – an acute need for faster access to credit. The long chain of processes through which even unimproved greasy wool bales have to pass before they reach the point at which brokers have determined the quality of wool or mohair to be auctioned and can advance credit on an informed basis, means that farmers usually have to wait 10-12 weeks before receiving payment²⁷⁸.

With the shearing of goats taking place in May, as winter starts, and of sheep in September-October, when temperatures are still low, supplementary feed and shelter are essential to keep stock losses in check²⁷⁹. Farmers simply cannot wait 10-12 weeks for money to reach them from brokers before buying feed. Similarly, when an outbreak of disease or pests is detected, farmers need immediate access to credit for the veterinary medicines required. The main sources of supplementary feed are South African farms. In 2020, cross-border movement restrictions to slow the spread of COVID19 prevented the transport of feed and is thought to have exacerbated winter stock losses in Lesotho, despite WAMPP having contracted more trucks to fetch feed after the restrictions eased²⁸⁰.

The revolving credit fund set up by WAMPP plays a vital role in filling these gaps. With WAMPP terminating in 2022, it is critical that the facility continue to operate and that its functionality be maintained. The project's exit strategy assigns responsibility for operating the fund to LNWMGA and attention is understood to being given to building the necessary capacity in the Association. However, if experience with even well-established, large scale agribusinesses which have taken on such a financial intermediary role is anything to go by²⁸¹, more often than not, specialist technical assistance is needed both in the design and initial capacity-building process and for some while in the post-transfer period.

This is a role that FinMark Trust should be well equipped to take on. WAMPP's Project Director, who is also IFAD's Lesotho Country Director, has indicated keenness to discuss the possibility of FinMark's assistance in this respect²⁸², as part of WAMPP's strategy to develop a network of NGOs to assist in sustaining the gains of the project after termination in 2022²⁸³. He also undertook to try to arrange a discussion with LNWMGA in this regard, but this has not been possible so far.

A further, much smaller, but nevertheless valuable source of both recurrent inputs and credit in some communities is rural shops. These may stock goods such as more widely used veterinary medicines, licks, food supplements and even fodder bales, in winter months. For trusted customers, these may be available on credit, unsecured.

A recent experimental intervention in Zambia is indicating some initial success in assisting and incentivizing rural shop keepers to advance credit to trusted customers through making concessionary loans available to them, financed jointly by local informal savings and credit groups and commercial banks²⁸⁴. Finding sustainable, mutually beneficial ways of connecting these two, very different sets of players in financial services markets has proved a challenge, as FinMark Trust is aware from its collaboration with South Africa's SaveAct²⁸⁵.

With such savings and credit groups now widely established in Lesotho's main wool and mohair producing districts²⁸⁶, another intervention that FinMark Trust could consider is to work with the promoters of these groups, in particular Catholic Relief Services²⁸⁷, and one or more commercial banks to introduce an initiative similar to the one in Zambia in rural communities in Lesotho. This has the potential to benefit other kinds of agricultural activity, such as vegetable production, and rural communities in general, not just wool and mohair farmers.

Recurrent production expenses for district and community grazing associations

At the time of writing, it is unclear whether district and community grazing associations have also been able to make use of this revolving loan facility for credit for recurrent inputs from which all members may benefit, such as grass seed. If not, it would seem logical to consider extending the ambit of the facility to do so.

However, lending to a communal body is seldom as straightforward as lending to an individual²⁸⁸. It may therefore be better for LNWMGA to avoid the potential difficulties by ruling that purchases such as these should be made in cash and by assisting its member associations to operate sustainable mechanisms, such as members' contributions, to make timely purchases possible.

Recurrent production expenses for cottage enterprise processors

To date, individual cottage enterprise processors have not been able to use the facility for their recurrent production inputs, such as raw materials for spinning and weaving²⁸⁹. Access to finance remains a challenge for the industry's many women entrepreneurs²⁹⁰. Again, it would seem logical to examine making the necessary amendments to the revolving fund's rules to allow this. If allowed, it would also be important to develop the requisite credit evaluation capacity in LNWMGA, as the body of borrowers and the nature of the industry – value adding manufacturing and marketing – is quite different to primary wool and mohair production, with which LNWMGA is familiar.

From a gender perspective, this is a particularly promising opportunity to increase the beneficial inclusion of women in the wool and mohair value chains, as most of the entrepreneurs and employees involved in cottage industry value addition are women²⁹¹. And, in contrast to primary wool and mohair production, the addition of more producers would not add to the strain on the natural resource base. Indeed, it might even lessen it by helping diversify participating households' income sources.

To achieve this, it will be necessary for the revolving fund's capital to be topped up. With IFAD's focus shifting from primary production to promoting value addition in the 2023-29 phase of its support for the wool and mohair industry in Lesotho²⁹², a grant for this purpose would appear to fit well with the shift of focus. A relatively small amount, complemented by marketing and technical assistance – as well as a mechanism to facilitate the acquisition of appropriate capital equipment²⁹³ – could be expected to result in a significant addition to livelihoods, income and income diversity and rangeland restoration.

Recurrent operating expenses for shearing sheds

As service providers, shearing sheds' main recurrent expenses derive from the costs of shearing, classing, and baling, management, administration, electricity and shed maintenance. It is understood that LNWMGA's intention for the sheds for which it is responsible, is that these should operate on a full cost recovery basis, with all costs being recovered from shearing charges paid in cash by farmer-clients²⁹⁴. This suggests that there should be no need for credit. However, amortization of the cost of capital equipment for shearing, baling and administration also needs to be taken into account and built into shearing charges.

A sound business model needs to be designed, training provided and central management and administration capacity at LNWMGA developed for sheds to realize this goal²⁹⁵. Technical assistance to upgrade systems may also be needed periodically. WAMPP has given priority to providing training for shed staff on shearing, recording, classing and baling, while shearing is dominated by men, about 2/3 of trainees for recording and classing have been women²⁹⁶. Training has been delayed by COVID19²⁹⁷.

While FMT could consider including these roles as part of a package to assist the sustainability and development of Lesotho's wool and mohair industry – given that to the extent that the model is successful the need for access to credit will be avoided – the logical provider of expertise and support in this instance would seem to be the Basotho Enterprise Development Corporation (BEDCO), into whose mandate these activities fall. It is understood that BEDCO has expressed willingness to assist the industry but has not engaged to date²⁹⁸.

Capital outlays for individual farmers

To assist with upgrading the genetics of individual farmers' herds and at the same time address the need for reducing stocking levels, a breeding and exchange programme funded by WAMPP has been established. Farmers are encouraged to exchange four genetically inferior animals (most of which are likely to be females) for one genetically superior ram²⁹⁹. Initially rams were purchased from South African breeders, but increasingly these are to be raised at centres in the Lesotho highlands³⁰⁰. Animals exchanged in this way are marketed, most successfully through auctions, to local buyers for slaughter, thereby helping achieve the project's culling or stock reduction objective³⁰¹.

The intention was for this component of the project also to be funded through a revolving fund capitalized on a once-off basis by WAMPP. In practice however, the proceeds from the sale of culled animals have generally been insufficient to cover the costs of ram breeding/purchase, leading to a shortfall and the need for periodic top-ups³⁰². To date, these appear to have been provided by IFAD, but with IFAD's involvement due to end in 2022, a new, more sustainable mechanism will be needed if the shortfalls persist, as can be expected³⁰³.

If either LHDA – which has expressed interest in taking over the breeding-exchange-culling programme on the termination of WAMPP³⁰⁴ in partnership with LNWMGA and, ideally, other, better resourced private sector players in the wool and mohair value chain³⁰⁵ – or MAFS³⁰⁶ are willing and able to provide top-ups, as and when required, this would obviously be the preferred solution. But the appetite and capacity of these two bodies to do this is unknown.

With some farmers already reluctant to participate in the exchange programme because of the temporary loss of income that the loss of four animals represents, eliminating the revolving fund deficit by requiring farmers to exchange more inferior animals for one superior one is not viable.

The most obvious alternative mechanism is for a balancing loan component to be built into the exchange, secured against the superior animals provided to farmers. This would perhaps be less of a disincentive to farmers to participate than increasing the exchange ratio, but how determined LHDA would be to repossess a superior animal supplied to a farmer in the

event of default would need to be tested. In the absence of a general livestock identification and traceability system in Lesotho and with theft³⁰⁷ and the slaughter of animals at informal 'abattoirs' so widespread³⁰⁸, LHDA might be reluctant to use animals supplied for collateral.

Sustaining the breeding, exchange and culling programme also involves ensuring that the operation of the studs that are being developed to take over the supply of superior animals progressively from South African suppliers is informed by, and implements, well designed business and financial models³⁰⁹. Providing technical assistance to help achieve this and designing a financial model to underpin the sustainability of the exchange and culling programme are roles that FinMark Trust should be well equipped to play.

The World Bank's Smallholder Agriculture Development Project (SADP I) has assisted through its support for the development of a local sheep-breeding stud farm. The improved breeds generated yields of up to 5kg per fleece – 75% higher than the current average³¹⁰. But it does not appear that this aspect will be carried through into the second phase of the project (SADP II), now commencing³¹¹.

Like LNWMGA, it is likely that capacity will need to be built within LHDA to manage both the technical and the business aspects of the breeding-exchange-culling programme, a key component of which is the revolving fund. IFAD's Country Director for Lesotho also undertook to try to arrange a discussion with LHDA to explore the role that FinMark Trust could possibly play to assist, but, at the time of writing, this had not yet taken place.

The training of LNWMGA staff that WAMPP plans to undertake to help build capacity in LNWMGA has been delayed by COVID19³¹². It is notable that two of the most important decision-making positions involved with the project – MAFS's National Breeding Manager and LNWMGA manager – are occupied by women³¹³ and that 30% of Community Animal Health Workers being trained by the project are women³¹⁴.

Capital outlays for district and community grazing associations

As voluntary bodies with relatively low recurrent expenses, grazing associations are funded mainly from members' subscriptions. However, many will experience the need for capital items from which members as a whole will benefit, typically to build and maintain shelters, but possibly also for items such as single strand, solar-powered mobile fencing for grazing control³¹⁵.

Being capital items, which are not easily paid off in a single year, it is not clear that these could be financed through the revolving loan fund for recurrent inputs, which should require the annual settlement of outstanding loans. The complications of lending to a voluntary entity, such as a grazing association, noted earlier³¹⁶, make this still more unlikely. Accumulated funds from subscriptions remain the most likely source of finance. But these may sometimes not be on hand when there is an urgent need to undertake capital improvements, e.g., the repair of storm damage to shelters.

Technical assistance of the nature that FinMark Trust could provide could be very valuable to design and develop the capacity to implement a sustainable source of credit for this purpose.

Capital outlays for cottage enterprises

As with recurrent expenses, WAMPP's support for cottage enterprise processors has not included a facility to address enterprises' needs for access to finance for capital expenses. Most support has related to product design and marketing³¹⁷.

Perhaps even more than lack of access to working capital, lack of access to longer term capital for the acquisition of equipment for mechanical knitting and weaving has constrained the growth of the industry. While attractive products are produced using existing low-tech/by-hand technology, the input of labour relative to the price at which items can sell is so high that

wages are extremely low. This makes the industry unattractive to work-seekers, except as a supplementary source of income to primary wool and mohair production³¹⁸.

In addition, market demand for hand-woven goods – mostly traditional tapestries, blankets, and bags – is evidently limited and confined largely to the relatively small number of tourists visiting Lesotho. Market research carried for WAMPP indicates that much larger export markets tend to favour knitted and felted goods that the cottage industry in Lesotho is currently poorly equipped to produce. Present products are unable to meet international quality, quantity, and certification standards³¹⁹.

If the industry is to develop, it will be essential for it to be able to equip itself with the technology and skills needed to access offshore markets through producing appropriate lines of product. It was noted earlier³²⁰ that, with IFAD's focus from 2023 onwards shifting to in-country value addition to the primary outputs whose production it has so far been supporting, a strong argument can be made for the establishment and capitalization of a revolving credit fund to meet the needs of cottage processors for recurrent inputs. This would be of special advantage to women.

Without the addition of new capital equipment to enable them to produce export-appropriate goods, the benefits to cottage enterprises of being able to access credit for recurrent inputs are likely to be small. Logically, then, IFAD should include a facility to finance the industry's needs for longer term capital in the design and implementation of its Wool and Mohair Sector Development Project³²¹. Again, FinMark Trust should be well equipped to provide technical assistance.

Capital outlay for shearing sheds

Like any service provider, shearing sheds will need to replace and/or expand their stock of capital equipment every so often. If the business model discussed in 5.2.4 has included adequate provisions for amortization, there should be little need to borrow for replacement. For expansion, well run sheds, with foreseeable recurrent income streams and stocks of collateralizable assets, should be highly creditworthy clients for standard commercial loans. Or it might well be worth LHDA's while to top up the revolving fund for farmers' livestock capital outlays to enable it to lend to shearing sheds, as much less risky borrowers. If FinMark Trust were to assist WAMPP/LHDA with the design and implementation of this fund, this should be taken into account.

Among the most notable successes of WAMPP to date has been the construction and equipping of sheds³²² - inter alia with solar power³²³ - in spite of the delay caused by COVID-19³²⁴. The World Bank's SADP I project has assisted³²⁵. However, with the former terminating in 2022 and the latter having done so in 2019, the onus will now be on SSAs, supported by LNWMGA, to implement capital replacement and upgrades going forward. This will depend heavily on the viability and operational efficiency of their and LHDA's business and financial models, which will hinge, inter alia, on management capability.

3.5 Conclusions and Recommendations

The wool and mohair value chains play a pivotal role in the rural economy of Lesotho. Not only do they account for the greatest part of the country's agricultural exports, but they provide livelihoods for the majority of the community in most rural districts, especially in the mountain areas which are home to the highest percentage of poor households. All of Lesotho's wool and mohair is produced by smallholders of varying sizes on communally owned rangelands.

Given that there are so few alternative ways of sustaining livelihoods, the natural resource base of mountain areas has been used to the maximum by rural communities to graze sheep and goats. Indeed, Lesotho's rangelands are overstocked and overgrazed. So, there is little potential

for expansion in the wool and mohair industries. However, there is an ever-present danger of contraction. Farming in these areas is always a challenge and when the wool and mohair value chains are not doing well, poverty and out-migration deepen significantly.

Consequently, efforts have been made down the years by government and by international development partners to assist the industries. The most recent of these, IFAD's Wool and Mohair, Promotion Project (WAMPP), begun in 2016, has engaged in greater depth with the challenges facing primary producers and in-country value adders than any of its predecessors. Much has been, or is being, achieved in the areas of climate-smart rangeland management; improved livestock production and management; and wool and mohair processing and marketing.

To a greater or lesser extent, all of the activities conducted by farmers, individually or collectively, and downstream value adders need access to credit for their sustainability. Yet few, if any, can currently reckon on being able to source this reliably from an established financial or commercial non-financial service provider. Until Lesotho's wool and mohair marketing legislation changed in 2018, some farmers were provided with credit and technical support by South African brokers. It would be of great value to the industry for private sector-led support of this nature to be re-established and the shortcomings of pre-2018 arrangements – the delay in accessing credit and its availability only to some farmers – ameliorated.

To address the gap not only in respect of production credit, but also relating to farmers' longer-term needs, WAMPP has set up and capitalized revolving loan funds to assist farmers to meet their needs for recurrent and capital expenses timeously. Grants cannot sustainably be used for these purposes. These funds are now being used widely. The project is also assisting some value chain players to meet their needs for finance through designing and implementing appropriate business models. It is vital that these initiatives be sustained and that the benefits being derived be broadened.

With little more than a year left before WAMPP terminates, attention is being focused on ensuring that the exit strategy included in the design of the project achieves this objective. The essence of this strategy is for in-country organisations with an on-going presence in the wool and mohair industries assume responsibility for the continuation of the project's initiatives.

In respect of the revolving loan funds and other finance-related initiatives, the organisations that have agreed in principle to take on this role are the Lesotho National Wool and Mohair Growers' Association (LNWMGA), a voluntary commodity association, and the Lesotho Highlands Development Authority (LHDA), a public entity. Though both are well established, respected bodies, and LNWMGA has been intimately involved in WAMPP since the project's inception, neither is understood to have expertise in the areas of lending and credit recovery.

A further component of exit strategy has been to develop a network of NGOs and other organisations to provide support for the wide range of activities that LNWMGA, LHDA and other successor organisations will be taking on. The Basotho Enterprise Development Corporation (BEDCO) has indicated willingness to assist business model development, but is also unlikely to have expertise in respect of small client loans. In addition, it is known to have substantial capacity limitations of its own and may welcome the presence of external technical assistance, if it called on by LNWMGA or LHDA to help develop their loan administration capacity. There is an important role for an NGO with expertise in the area of financial services to play.

Given its mandate to make financial markets work for the poor and its proven capacity and long-standing commitment in Lesotho to facilitate this, FinMark Trust is uniquely well positioned to provide the expertise that WAMPP, LNWMGA, LHDA and the many households in Lesotho who depend on wool and mohair for their livelihoods urgently need. The analysis above identifies a number of very specific, concrete opportunities for doing this and IFAD Country Director for Lesotho has expressed keenness to explore the possibility of collaboration.

Practical advantages for FinMark that suggest themselves include:

- the specificity of the context for possible interventions
- the breadth of the beneficiary producer and low-income household populations
- directness of connection with the real economy
- a strong anchor partner to work with
- a short gestation period
- easily identifiable measures for monitoring and evaluating performance
- meaningful impact assessment possible well within a 5-year planning time horizon
- relatively modest funding needed.

This appears to be an opportunity well worth examining.

4. DECIDUOUS FRUIT

4.1 Current Status of Production in Lesotho

Fruit growing has a long tradition in Lesotho, but almost always for owner-consumption. Many, perhaps most, rural households will have a small number of trees in the garden, which add pleasantly to dietary diversity, with little attention. But only a small number of households try to earn significant income from growing fruit, despite the widespread suitability of climate and soils. No less than 550 000 hectares have been identified as having good potential for fruit production³²⁶. The area of Lesotho best suited to deciduous fruit production in terms of climate and soils is the northern lowlands and foothills³²⁷, although these are reported to be among the most vulnerable to climate change in the form of higher temperatures and lower rainfall³²⁸. Most commercial production is in the Leribe and Maseru districts³²⁹.

Statistical data are hard to come by. With so little production being for the market, little attempt has been made to keep records. The survey conducted by the Bureau of Statistics in 2015/16 was the first occasion on which data were collected. The focus of the survey was on production primarily for commercial purposes, defined as the propagation of 100 or more trees by a single producer. On this basis, there were reckoned to be 109 commercial fruit producers in Lesotho – typically operating on between 1 and 8 hectares³³⁰ - and about 36 000 commercial fruit trees³³¹, close on 90% of which were either apple (more than 45%) or peach (more than 40%). Other varieties grown in much smaller numbers were apricot, plum, cherry, pear, and quince.

No data were collected by the survey on employment, hectareage, tonnages, yields, production costs or income, but the number of trees appears to be growing steadily, with about 33 000 planted on 41,5 hectares by 2016 in two villages in the Leribe district alone under the World Bank's Private Sector Competitiveness and Economic Diversification Project³³². Almost all production in 2016 was marketed domestically, exports accounting for only about \$12 000 of income.

Fruit producers in Lesotho fall into three broad categories³³³:

1. Traditional farmers, who operate on a low input-low output basis and who produce mainly for own consumption; the great majority of fruit producers currently fall into this category
2. 'Modernizing' farmers, who produce mainly for the informal market, but in some instances also for formal sector retailers; typically, they have between 1 and 8 hectares of land, use some fertilizers, sprays, etc., have a higher level of technical and business skills and keep some records; a small but growing proportion of fruit producers fall into this category
3. Commercial farmers, who use conventional commercial inputs and techniques, even if on a sub-optimal scale (seldom more than 10 hectares), who regularly supply supermarkets, hotels and restaurants and operate as sustainable businesses; only 3 or 4 producers presently fall into this category.

The national commodity association representing fruit and vegetable farmers is the Lesotho Horticultural Farmers' Association (LEHOFA).

Given the demanding requirements to enter commercial deciduous fruit production successfully, outlined in sections 4 and 5 below, it is assumed that interventions may be related to assisting 'modernizing' farmers to become commercial producers and in helping both groups expand their numbers and their output of fruit for the formal domestic and export markets. As the size of Lesotho's domestic market is so small, despite its potential for growth, by far the largest market opportunity lies in exports – provided importers' quality and other requirements can be met.

On this basis, there were reckoned to be 109 commercial fruit producers in Lesotho – typically operating on between 1 and 8 hectares³³⁰ - and about 36 000 commercial fruit trees³³¹, close on 90% of which were either apple (more than 45%) or peach (more than 40%). Other varieties grown in much smaller numbers were apricot, plum, cherry, pear, and quince.

4.2 Potential for Deciduous Fruit

For a sub-sector that is so small, one has to ask: why has so much emphasis been given to developing it that it has featured prominently in GoL's First and Second National Strategic Development Plans and has been a focus of major World Bank interventions in agriculture and the broader economy since 2007 and will remain as such at least until 2026³³⁴?

- Lesotho's comparative natural advantage for deciduous fruit production: relative to the main deciduous fruit producing region in South Africa, the Western Cape, its high altitude makes it less pest prone, reducing costs³³⁵; its geographical location and climate enable harvesting about three weeks earlier, allowing a significant window to realize price premiums³³⁶; it has abundant sources of water
- large areas of the country that are suitable for deciduous fruit growing that have not yet been taken advantage of
- much higher value that can be derived from deciduous fruit than is being realized from present land use – typically, more than 15 times the income from maize, when fruit is in full production³³⁷ - and, consequently, much higher incomes for growers
- much greater employment – about 1.3 jobs per hectare, against 0.01 for maize³³⁸
- potential for substantial additions to agricultural export revenue and reductions in imports
- household nutritional gains
- light environmental footprint, relative to many other present and potential uses.

In the face of this substantial potential, why is it that so little appears to have been done to realize it? What are the challenges? What is, in fact, being done to address them? What more needs to be done?

4.3 Structure of the Value Chain

To catalogue the challenges constraining the development of a deciduous fruit industry in Lesotho, it is helpful first to understand the essential structure and functioning of fruit value chains³³⁹.

Table 58: Deciduous Fruit Value Chain

Upstream pre-primary production activities	Primary production activities	Downstream post-harvest activities
<ul style="list-style-type: none"> • Climate and soils research • Breeding • Plant development • Nursery production • Orchard development 	<ul style="list-style-type: none"> • Soil management and mineral nutrition/fertilisation • Irrigation • Spraying/pest, disease control • Pruning and shoot growth • Thinning • Picking 	<ul style="list-style-type: none"> • Grading • Packing • Transport • Fresh local markets <ul style="list-style-type: none"> » fresh produce markets » retailers/informal markets • Export markets <ul style="list-style-type: none"> » cold storage » phyto-sanitary certification » freight, etc. ... • Processing <ul style="list-style-type: none"> » canning/juicing/drying/slicing » local retail market/export, etc.

4.4 Challenges facing the Value Chain and Responses to Date

4.4.1 Upstream pre-primary production activities

There is little research in Lesotho involving the development of fruit varieties adapted to local agro-climatic conditions. This hurts the entire industry as root stocks imported from South Africa are not always well adapted for the environments in which they are propagated, which vary widely in terms of soil, irrigation, and microclimate. Public and private expenditure on research and development is very low, equipment is poor or non-existent, few specialized positions are available and few graduates have the required level of skills, as tertiary educational institutions in Lesotho do not offer degrees in fruit or vegetable growing³⁴⁰.

As these shortcomings are not unique to Lesotho in the Southern African region, to address this, the World Bank has funded the Agricultural Productivity Programme for Southern Africa (APPSA), which commenced in 2013 and terminate in 2020. The objective is 'to put in place mechanisms to encourage technology generation and dissemination across national borders of participating countries in the SADC region by (i) supporting regional collaboration in agricultural research, technology dissemination and training, (ii) establishing Regional Centres of Leadership on commodities of regional importance, and (iii) facilitating regional sharing of agricultural information, knowledge and technology among participating countries'³⁴¹.

Having joined the programme some while after it started, Lesotho chose to specialize in horticulture and has been developing capacity at MAFS's Department of Agricultural Research stations spread across the country's four ecological zones. One, focusing on deciduous fruit, is in Mahobong in the Leribe district³⁴², but work conducted to date with the assistance of a South African university appears to have concentrated on cereal and pulse crop improvements³⁴³. It is still too early to expect that these developments will have been able to produce any new plant material specially adapted to Lesotho, so nurseries in Lesotho will still be supplying South African root stocks.

While this is a constraining factor for the industry, a far more fundamental constraint relates to the land on which orchard development takes place. Most land is occupied on a traditional basis by communities and most land transactions (renting in or out) only have informal status. Just a few more than 200 farmers are currently recorded as 'owning' land on the 90-year transferable leasehold basis introduced by GoL over the past decade³⁴⁴. There is also no comprehensive land registry, nor a database of agricultural land parcels³⁴⁵. This effectively prohibits the use of land for collateral³⁴⁶, especially given the uncertainty relating to the transferability of leases and the reputational risk that a lending institution would incur were it to have to repossess land.

Although, subject to the approval of traditional authorities, communities may agree to make substantial blocks of land available to enterprises wishing to enter or expand commercial production³⁴⁷, this has not been sufficient to attract either commercial investors or commercial lenders into tree crop agriculture. Both the uncertainties just referred to and concerns about the effective ownership of fixed improvements such as trees, in the instance of loan default, business failure or the desire to exit a farming enterprise operating on leased land for any reason can be expected to block any such investment by external partners in the foreseeable future. This is likely to be compounded by indigenisation regulations shortly to be put to Parliament by GoL, in terms of which foreigners may only participate in a wide range of business activities, including the growing and selling of fruit and vegetables, as minority shareholders³⁴⁸.

In these circumstances, it has been necessary for the development of orchards to be financed either by individual farmers who feel they have sufficiently secure tenure or by grants to such farmers or communities. The World Bank has been active in this regard – having made eight grants to fruit producing enterprises under its Smallholder Agriculture Development Project I, three of which were still active when the project ended in 2020³⁴⁹ - as has been GoL. As much as 38% of fruit farmers had received some external funding from government by 2016. A World

Bank report remarks: 'Such support has contributed to increased horticultural production and will likely remain essential for further development of the industry'³⁵⁰.

Scale is no less important in respect of orchard development. A rule of thumb is that a block of unfragmented, contiguous or closely adjacent parcels of land totalling at least 10 hectares is required for the expense of developing a commercial orchard to be worthwhile³⁵¹. But only 1.4% of agricultural households in Lesotho have farms of 6 hectares or more³⁵². With World Bank assistance, three block farms with an average size of almost 14 hectares, each involving 9 or 10 individual farms, have been assembled in the Leribe district. However, the absence of legal framework for collective long-term leases for both local and foreign investors is a disincentive to pursuing this approach³⁵³.

To facilitate the formation of such blocks, the Bank is providing annual subsidies equivalent to the estimated value of maize output forgone by participating farmers for the first three years of the projects³⁵⁴. But this and all of the other support given do not come without another constraint, namely, community tensions. To some degree these derive from the internal governance issues that are inherent to most collective projects, but tensions between those who were fortunate enough to be included in the projects and those who were not have also needed to be managed and some form of redress provided³⁵⁵. What has occurred in the World Bank projects can be expected to occur and need effective management in other group-based orchard development initiatives.

For commercial orchard establishment, which entails a range of fixed improvements to land – bush/rock clearing, flattening/contouring, soil preparation, rootstock purchase, planting, trellising, irrigation infrastructure, fencing, etc. – long-term finance is required, especially because of the multi-year gestation period before revenue starts to come on-stream. And, it should be noted, this list of fixed improvements does not take into account others, such as hail/shade netting, that Lesotho's increasingly extreme weather variations suggest are advisable. A single hailstorm will often destroy an entire year's crop³⁵⁶. A significant part of the World Bank's support under SADP II will be for on-farm irrigation and hail/shade netting³⁵⁷.

In addition to the in-orchard improvements just mentioned, off-farm farm infrastructure is also relevant, and its absence may make on-farm improvements difficult. Chief among these in this context are public irrigation and electricity supply infrastructure. Despite the overall abundance of water in Lesotho, the ability to exploit this is often limited by local topography, making it necessary to construct dams to irrigate relatively small numbers of trees³⁵⁸. The large dams constructed in the highlands to capture water for export to South Africa are not available for local orchard irrigation and, though major improvements are planned, the supply of dam water for irrigated agriculture in Lesotho is presently very limited³⁵⁹. Only 67 hectares is reported to be irrigated for crop production of all kinds³⁶⁰. In many situations, this adds the cost of drilling a borehole and operating a pump to a farm's fixed and variable costs. Securing and maintaining connection to the power grid adds similarly³⁶¹.

At the time of writing, no costings for commercial orchard establishment in Lesotho had been found, but the order of magnitude of capital required can be gauged from the calculation for a hectare of plums in the Western Cape, which was nearly R160 000 as long ago as 2012, excluding the cost of land³⁶². This had risen 70% from four years earlier. So, in 2021, nine years after the 2012 calculation, it has probably more than doubled.

This is confirmed by another Western Cape study in 2017, which estimated the cost of an established hectare of stone fruit (peaches, plums, nectarines, ...) to be R350 000 and of pome fruit (apples, pears, ...) to be R450 000³⁶³. Although it is not clear whether the latter included a component for unimproved land, these figures are indicative of the very large sums of capital required to develop even the 10 hectares needed for adequate economies of scale – of the order of R4 million (= M4 million), before taking into account the cost of other fixed and moveable improvements – buildings, machinery, equipment, etc. – needed to make orchards operational.

These, the study suggests, comprise about 14% of the total capital requirement – about a further R65 000 per hectare or R650 000 for a 10 mixed pome/stone fruit hectare farm.

It is clearly beyond the resources of farming communities in Lesotho to establish commercial deciduous fruit orchards without a large grant or equity partner.

4.4.2 Primary production activities

If the fixed costs of orchard establishment are substantial, the operating costs for the activities listed in 3.2 are still larger. With no data for these available for Lesotho at the time of writing either, the estimates in the plum study just referred to again provide an order of magnitude guide. In the non-bearing years, the first four, average annual maintenance costs per hectare were about R47 000 in 2012, with this quadrupling to about R200 000 for full-bearing trees³⁶⁴. As with orchard establishment costs, operating costs can also be expected to have at least doubled since then, indicating the need for annual working capital roughly equal to the amount invested in fixed capital – more than R4 million for a mature 10-hectare farm.

No less than orchard establishment, competent on-going operation clearly requires deciduous fruit farming enterprises in Lesotho to be able to access substantial amounts of working capital. Because annual production costs should be recoverable from annual revenues, they are usually funded through credit, as opposed to the one-off equity, or grant capital needed for orchard establishment. Well established farms with a proven track record and a strong balance sheet are often able to source production credit from banks. However, it does not appear that banks in Lesotho have engaged in lending to fruit farms yet. Very likely, they will remain reluctant to do so, unless the constraints on using land for collateral described above are relaxed. Only 7% of all commercial farmers in Lesotho report having access to credit³⁶⁵. Lesotho Post Bank started lending to farmers in 2019, but only 7 loans, totalling less than M1 million, have so far been advanced for horticulture³⁶⁶, evidently all for vegetable production³⁶⁷

For many fruit farming enterprises, off-takers/aggregators/processors are the main source of production credit. But no such firms operate in Lesotho at present, because output is too small, and it is doubtful that the off-takers in South Africa that have purchased the very small volume of exports that Lesotho has so far been able to generate will have established a stable line of credit. Retailers who often act as off-takers do not supply production credit³⁶⁸.

The Lesotho National Development Corporation (LNDC) established a fruit and vegetable cannery near Maseru some years ago, which might have offered production credit, but this has never proved able to operate for more than short periods and is presently still inactive. Lack of adequate supply volumes has been one of a number of problems³⁶⁹.

To address this chicken-and-egg situation, the World Bank's SADP II programme will provide matching grants for off-takers/aggregators that include deciduous fruit in their catchment to establish themselves in Lesotho³⁷⁰, but it remains to be seen how successful this approach will be. The grants that the World Bank offered in SADP I to compensate for the loss of income from maize production will have gone some way towards covering orchard maintenance costs, if they were not used entirely for living expenses, but were small and of limited duration. It is not known where the balance of the working capital deployed by farmers will have come from.

Beyond access to working capital, a number of other factors also constrain primary deciduous fruit production in Lesotho. Few farmers have the technical and business skills needed to produce fruit that meet formal commercial or export standards. Most do not apply fertilizers or sprays – partly because of the high cost of inputs, which are mostly imported from South Africa – and where they do, this is seldom done optimally. Few keep the records needed. SADP II is allocating funds to improve the use of inputs³⁷¹.

Extension services are generally poor, and few extension workers have specialist fruit growing skills. Internet connectivity is also poor in rural areas. This inhibits on-line extension, as well as

the dissemination of knowledge via farmer groups³⁷². SADP II will be making matching grants available to help rebuild these 'horizontal alliances'³⁷³, but it is not clear how effective this will be without the necessary connectivity improvements.

Most of these constraints are best addressed by linking farmers to capable off-takers – typically core estates in contract farming schemes, exporters, or processors – who have a vested interest in developing farmers' skills, ensuring that appropriate techniques and inputs are used and supplying the credit necessary. Retailer off-takers supply neither credit, nor technical assistance³⁷⁴. The absence of these 'vertical alliances' and the approach being used by the World Bank to attract them in have been noted.

4.4.3 Downstream post-harvest activities

Most deciduous fruit farmers do not have the capacity to either class fruit or package it on-farm and deliver loose to retail stores or informal outlets. This tends to reduce prices received³⁷⁵. Getting unpackaged fruit to sellers undamaged is also a challenge, as roads are often poor and distances long. Only two fruit producers were reported to be able to meet supermarkets' quality, quantity, and reliability requirements in 2018, one of whom also exported small quantities³⁷⁶.

An additional possible on- or off-farm activity is cold storage. If fruit are handled, distributed, and marketed quickly enough by producers and downstream players in the value chain, but often this is not the case, making cold storage necessary, if produce is not to deteriorate before reaching market. Only one farm in Lesotho is currently reported to have the necessary facilities for on-farm storage³⁷⁷. Off-farm, the only facility that had come to light at the time of writing is at the government-owned market centre near Maseru (see below), which is presently inoperative.

However, the World Bank's PSCEDP II project has helped a number of fruit producers to become GLOBAL GAP (Good Agricultural Practice) certified, which enables their output to comply with South Africa's phyto-sanitary standards for import³⁷⁸, even if only one has exported so far.

Another largely unexploited development that could assist exports in the future is the state-of-the-art market centre that has been built near Maseru. In the expectation that substantial quantities of fruit and vegetables produced in Lesotho through SADP I and other interventions³⁷⁹ would be able to meet export quality, quantity and phyto-sanitary requirements, a UN International Trade Centre project built the centre in 2015. It was designed to handle all post-harvest activities, including pre-cooling, washing, and grading, classing, packaging and distribution and was intended to operate as a public-private partnership, with LNDC having a 60% shareholding and a private sector partner 40%. In the event, neither the partner nor the fresh produce have materialized, and the centre currently stands empty³⁸⁰. Such exports as have taken place, appear to have been facilitated through direct arrangements with South African importers.

The LNDC's cannery, mentioned in 4.2, has also suffered from not being able to secure a reliable private sector partner to manage and ensure supply³⁸¹. Both in this instance and in respect of the market centre, failure to a large degree reflects what is arguably the most fundamental constraint on expanding production – particularly fruit production – that is, the disincentive to private sector investment posed by Lesotho's land tenure legislation. The implications of this were discussed in 4.1.

With both Gol's and the World Bank's capacity to provide start-up grants limited, there is no alternative to bringing in capital, expertise, and market linkages through external equity partners. There would probably be some appetite for playing this role in the South African fruit industry, were changes in Lesotho's land law to facilitate it³⁸². But until such time, the likelihood of substantial growth in the deciduous fruit industry seems small.

4.5 Conclusions and Recommendations

The World Bank's analysis sums up succinctly:

'The horticulture industry remains in the start-up stage due to skill constraints, poorly functioning land markets, lack of linkages within the supply chain and weak access to finance. There are few large, well-managed horticulture farms that can serve as role models and mentors for smallholders.

'Building a competitive horticulture industry in Lesotho will require incentivizing the establishment of new, large-scale commercial farms and upgrading existing smallholders. Land titling and improving access to serviced land are the key measures for encouraging foreign and large-scale domestic investment in commercial farming. Incentivizing private investment in aggregators and supporting productive alliances are the most important measures to support smallholders. It will also be necessary to strengthen the availability of specialized skills to provide better technical support to smallholders and develop crop varieties that are adapted to Lesotho's high-altitude conditions³⁸³.

The most important of these requirements – land titling and improving access to serviced land – fall almost entirely within the realm of public policy and programmes, as do strengthening the availability of specialized skills and developing appropriate crop varieties, though external partners could also assist.

As noted in 4.2, off-takers/aggregators/processors are usually the main source of production credit for farmers, as well as inputs and expertise. But without an adequate scale of supply of primary product, it is unprofitable for aggregators to set themselves up – at least within Lesotho. However, a viable alternative appears to be for one or more of the off-takers/aggregators/processors that serve fruit and vegetable producers in the eastern Free State, just over the border, to play the same role for primary producers in Lesotho. It is likely that this is the mechanism that has been used for the small volume of deciduous fruit that Lesotho has been able to export to date.

The World Bank's SADP II programme will provide matching grants for off-takers/aggregators that include deciduous fruit in their catchment basket to establish themselves³⁸⁴. Though the design document does not say so explicitly, it is assumed that these are envisaged to be located in Lesotho. However, the document also states that 'start-up (aggregator) enterprises will not be eligible for project support³⁸⁵. As there are no firms that currently play this role for any horticultural crops in Lesotho, production and exports being so small, the most likely well-established enterprises that could do so are South African ones.

Bearing this in mind, it would not be unreasonable for the Bank to consider making South African aggregators eligible for at least some of the purposes for which the grant is designated, if they undertake to source certain, increasing quantities of fruit and vegetables from Lesotho. While the grants are intended to incentivize the setting up of physical facilities for aggregation and/or value addition in Lesotho and South African firms might not be prepared to do this until a greater level of scale has been achieved, they are also intended to elicit the supply of production credit, inputs and expertise. This South African firms might be more willing to provide, as it would simply entail extending existing activities over the border. As the SADP II programme is being conducted in collaboration with GoL, any such amendment to the design would need government's support, but it would seem in the interests of the fruit and vegetable industries in Lesotho for it to do so.

There might be a valuable role for an external agency with an interest in increasing access to finance for smallholder farmers to play by lobbying for this, helping broker mutually acceptable arrangements for the supply of production credit, inputs, and expertise between GoL, the World Bank and one or more South African aggregators and by helping bed implementation down, especially in respect of the advance and repayment of credit. However, it may be that both the Bank and the aggregators would feel that they have the capacity to take these functions on themselves.

If South African firms are drawn in to play these roles for vegetables, it would be logical to extend the arrangement to include vegetables. In both instances this would not only provide competent technical and business support for producers, but also open up or enlarge an existing channel for export, thereby addressing another of the challenges facing the two value chains – although there is no reason why the produce purchased could not be marketed in Lesotho. Furthermore, as banks are almost always more willing to provide a line of credit to a single intermediary with a proven track record for on-lending to smallholders than to lend direct, using South African off-takers/aggregators could overcome the challenge of gaining access to bank finance to provide working capital for the value chains.

If no opportunity of this nature arises, it is questionable whether other interventions aimed at increasing smallholder farmers' access to finance would be likely to bring about the growth of commercial fruit production in Lesotho, in the absence of other important changes needed, notably those relating to land tenure and the development of a land market.

5. VEGETABLES

Like deciduous fruit, vegetables have long been produced in Lesotho. Over time many of the traditional indigenous varieties have been replaced by the commercial varieties for which seeds, and seedlings are readily available, though most are imported from South Africa and are not especially suited to Lesotho's climate and soils³⁸⁶. Vegetable growing is probably even more widely spread than domestic fruit growing, with an estimated 70% of rural households active³⁸⁷, but as with fruit, almost all output is for own consumption³⁸⁸.

An even larger part of Lesotho than the 550 000 hectares reckoned to be suitable for fruit is suitable for vegetables – roughly a quarter of the country – spread across all 10 districts, even in parts of the cold highlands³⁸⁹. Yet only between 5 and 6% of the area harvested, totalling about 25 000 hectares, is under vegetables, if potatoes, which account for about 2/3 of this area, are included³⁹⁰. A variety of other vegetables is produced, with green leaf crops, such as spinach and traditional spaile, amongst the most widely grown³⁹¹. Market demand is greatest for cabbages, potatoes, carrots, beetroots, and tomatoes, which together account for 87% of the roughly 1 400 tons traded on the Maseru market³⁹². Much of this is imported from South Africa³⁹³, which indicates that if more were produced locally, it would be easily absorbed without depressing prices unduly.

Vegetable producers in Lesotho fall into the same three broad categories as for fruit³⁹⁴:

1. Traditional farmers, who operate on a low input-low output basis and who produce mainly for own consumption; the great majority of fruit producers currently fall into this category
2. 'Modernizing' farmers, who produce mainly for the informal market, but in some instances also for formal sector retailers; typically, they have between 1 and 8 hectares of land, use some fertilizers, sprays, etc., have a higher level of technical and business skills and keep some records; a small but growing proportion of fruit producers fall into this category
3. Commercial farmers, who use conventional commercial inputs and techniques, even if on a sub-optimal scale (seldom more than 10 hectares), who regularly supply supermarkets, hotels and restaurants and operate as sustainable businesses; only a handful presently fall into this category.

The national commodity association representing vegetable farmers is the same as for fruit, namely, the Lesotho Horticultural Farmers' Association (LEHOFA).

Also in common with fruit, a national survey to collect statistical data on vegetable production – focusing mainly on commercial aspects – was conducted for the first time only in 2016. No data were collected by the survey on employment, tonnages, yields, production costs or income³⁹⁵.

Of the 300 000 or more households that produce vegetables³⁹⁶, all but a tiny number are traditional producers. Using production mainly for the market, as well as having both irrigation equipment and access to water, as yardsticks, the survey identified just under 200 vegetable farmers that qualified as either 'modernizing' or commercial, spread over a broad age spectrum³⁹⁷. Almost all will have sold output to supermarkets once or twice a year, but only 3 or 4 were reported by major supermarket chains to be able to supply on a continuous basis³⁹⁸ and therefore to qualify as commercial farmers, as defined above. These, and a few more, also supply restaurants, hotels and public institutions such as schools and hospitals³⁹⁹.

Together, the commercial and 'modernizing' groups cultivate a little more than 600 hectares in the August-October quarter, indicating an average per farmer of about 3 hectares at the height of the season. This drops to around 150 hectares in the following three months and less than 10 hectares for the rest of the year⁴⁰⁰, when the market is supplied almost entirely by imports from South Africa. All but a small percentage of local production feeds into the domestic market. Exports of vegetables in 2016 were valued at only \$24 000⁴⁰¹.

Market demand is greatest for cabbages, potatoes, carrots, beetroots, and tomatoes, which together account for 87% of the roughly 1 400 tons traded on the Maseru market³⁹².

Given the small overall volume of production, especially for export, and the ready market for good quality vegetables provided by shops, the hospitality industry and public institutions, there are no large-scale locally based aggregators at present⁴⁰² and no functioning large-scale processors⁴⁰³.

Information on the impact of COVID-19 specific to vegetable production is difficult to find. It appears that smallholder output will have been⁴⁰⁴ more negatively affected by the droughts of 2018 and 2019 than by COVID-19. However, the restrictions on movement and on informal markets imposed under the lockdown will have reduced or even prevented the marketing of output⁴⁰⁵ and, consequently, smallholders' income from sales will have decreased and wastage increased. To the extent that smallholders were able to market vegetables, the sharp increase in prices, caused both by the drop in local supply and by the suspension of imports resulting from the Lesotho-South Africa border closure, will have offset the impact on producers' incomes. Grants for agricultural inputs to rural households form an important component of EU assistance to Lesotho to address the damage caused by drought and COVID-19⁴⁰⁶. With about 70% of rural households active in vegetable production, it is assumed that vegetable growing will benefit from this programme

5.1 Potential for Vegetables

Vegetable production in Lesotho shares several of the potential advantage of deciduous fruit production. These include:

- prioritisation in the National Strategic Development Plans I and II
- vegetable production has been a focus of major World Bank interventions in agriculture in Lesotho since 2012 and will remain as such at least until 2026⁴⁰⁷
- the extensive areas of the country well suited to growing vegetables, climatically and in terms of soils; the comparative absence of pests and diseases at high altitude, of special importance for seed potato production
- abundant, largely unexploited water resources
- much higher value that can be derived from vegetables than is being realized from present land use and, consequently, higher incomes for growers
- much greater employment – about 1.3 jobs per hectare, against 0.01 for maize
- household nutritional gains.

In addition, vegetable production also has a number of important advantages that deciduous fruit production does not share:

- scale neutrality: economies of scale are limited in vegetable production, meaning that even very small farms of less than a hectare can operate profitably, if efficiently managed; it is therefore not necessary for farmers to group together to assemble a large block of land, with all of the challenges that accompany collective ownership and operation
- owner-operation is almost always best in farming; smallholder vegetable farms almost always operate on this basis
- traditional land tenure seldom poses a problem, because in most cases it is fairly secure and it is not necessary to look for large external equity partners who are reluctant to invest in an asset that they cannot own or sell
- vegetables have a much shorter cashflow cycle (3-6 months) than deciduous fruit, both relative to when orchards are fully established (12 months) and especially during the long orchard development period (3-5 years); together with the generally lower input costs per hectare⁴⁰⁸ than deciduous fruit, this reduces the volume and cost of production capital needed greatly
- vegetables' fixed costs per hectare are usually lower than deciduous fruit's unless high-end techniques such as greenhouses/tunnels are being used.

5.2 Structure of the Value Chain

The analysis of the challenges facing fruit production was developed around the outline that was provided of the structure and functioning of fruit value chains. This is similar for most vegetable chains – except in the instance of field development, which is usually less elaborate for vegetables, and some in-field activities, such as pruning and thinning, which are largely absent for vegetables, while weed control is a much more important task. Clearly, too, value chain activities will vary by vegetable type. So, for a number of commodities which develop above ground, e.g., tomatoes and cucumbers, trellising may be involved, whereas for others that develop in the soil, e.g., potatoes and carrots, stone removal or cover crops and furrow and mound development, perhaps using plastic sheeting, may be involved. The description that follows is generic.

Table 59: Vegetables Value Chain

Upstream pre-primary production activities	Primary production activities	Downstream post-harvest activities
<ul style="list-style-type: none"> • Climate and soils research • Breeding • Plant development • Nursery production • Field development 	<ul style="list-style-type: none"> • Soil management and mineral nutrition/fertilisation • Irrigation • Spraying/pest, disease control • Weed control • Picking 	<ul style="list-style-type: none"> • Grading • Packing • Transport • Fresh local markets <ul style="list-style-type: none"> » fresh produce markets » retailers/informal markets • Export markets <ul style="list-style-type: none"> » cold storage » phyto-sanitary certification » freight, etc. ... • Processing <ul style="list-style-type: none"> » canning/juicing/drying/slicing » local retail market/export, etc

5.3 Challenges, Responses, and Stimulating Development

5.3.1 Upstream pre-production activities

Many of the upstream challenges faced by deciduous fruit production in Lesotho affect vegetable production similarly. Very limited in-country research and development mean that few of the varieties of seeds and seedlings that are available are adapted specifically for Lesotho’s often harsh conditions and microclimates. Most are imported from South Africa and, while some may indeed be fairly well adapted to the areas in which they are planted, farmers and agricultural extension staff are often not sufficiently well informed to make the right choices⁴⁰⁹.

One farmers association, Potatoes Lesotho Association (PLA), has developed a strong working relationship with Wesgrow, a South African supplier of seed potatoes. The company provides technical advice and training for the association’s 500+ members before planting season⁴¹⁰. As seed potatoes make up much largest component of potato farmers’ input costs⁴¹¹, it is a pity, but not surprising, that these goods and services are not accompanied by supplier credit. Large-scale off-takers/aggregators/processors, often through contract farming arrangements, are usually more willing to do this against the assurance of crop delivery⁴¹², payment for which is then made net of the balance on a farmer’s loan account. Input suppliers do not have this advantage.

Unfortunately, no such off-takers/aggregators/processors or contract farming arrangements exist either for fruit or for vegetables in Lesotho. One of PLA's member associations, Seeds 365 Agric, reports having tried to attract a large commercial partner into Lesotho to act as anchor for a contract farmer-outgrower model. Despite some of its members having offered land for the partnership, as with efforts to attract external investment for commercial-scale fruit farms, the attempt was abandoned because of land tenure constraints⁴¹³.

As with all other agricultural sub-sectors in Lesotho, credit, both for annual production and for longer term needs, is hard to come by, though the entry in agricultural finance by Lesotho Post Bank in 2019 is starting to help meet this need. By the end of 2020, the bank had advanced 7 loans for horticulture. Since these totalled less than M1 million, they would probably mainly have been for small-/medium-scale vegetable production capital, although it is possible that some fixed capital items could also have been financed. Although it is early days, the experience appears so far to have been positive, with a zero non-performing loan rate reported⁴¹⁴. On this basis, an expanding role for the bank in this critically under-supplied field of credit looks likely.

The need to build domestic research and development capacity is being addressed by MAFS's Department of Agricultural Research and the National University of Lesotho, in collaboration with some South African universities, assisted by World Bank funding through the Agricultural Productivity Programme for Southern Africa (APPSA)⁴¹⁵. However, breeding and plant development activities so far have focused on cereals and pulses, not vegetables⁴¹⁶. In time, it is to be hoped that this will lead to the development of a locally-appropriate seeds and seedlings industry.

Although seeds and seedlings are a significant expense, vegetable producers do not have to find the capital to plant trees or, with some exceptions, invest in trellising. However, no less than orchards, vegetable fields need irrigation, if even the most basic level of commercial production is to be engaged in, and still more than orchards, they need protection from heat and hail. Climate change predictions indicate the urgency of the need for on-farm and off-farm irrigation infrastructure and for hail/shade netting, as well as for improved, drought and heat resistant crop varieties⁴¹⁷. Even with these, the area planted with fresh vegetables and potatoes and yields are predicted to decline over the coming 30 years⁴¹⁸.

Deficiencies in the provision of complementary off-farm infrastructure, most importantly in respect of bulk irrigation, roads and electricity, were identified and discussed in the report on deciduous fruit production and apply equally to vegetables.

Greenhouses offer a high-tech solution to the need for a protected environment and limited water supplies, as well as the capacity to produce high quality vegetables all year round – important to take advantage of counter-cyclical import substitution and, possibly export, opportunities. But a high capital outlay and a high level of skills are required. A substantial number of greenhouses have been established under international grant programmes over the past decade⁴¹⁹, but they have so far not been able to capitalize significantly on these opportunities. This is discussed further in 4.3.

Since many vegetable farmers with commercial potential do not have the resources to invest in these capital improvements, to help expand commercial production, the World Bank's SADP I programme made competitive grants available to 435 small horticultural enterprises between 2012 and 2020. These received similar packages of assistance, which either included a greenhouse, or more often shade/hail nets and the installation or upgrade of irrigation infrastructure, including boreholes and drip or sprinkler systems. Of these, 408 were operational at project closure in 2020⁴²⁰ – a high rate of success (more than 90%) that indicates the value of these improvements. About a quarter of the projects were proving commercially viable⁴²¹.

Both the competitive grants awarded in SADP I⁴²² and the smaller matching grants (of less than USD 10 000) to be awarded under SADP II⁴²³ require an equity contribution of 20% by recipients and larger grants (of between USD 10 000 and USD30 000) a 25% contribution. Perhaps surprisingly, it is clear that many applicants are able to find the required own contribution.

5.3.2 Primary Production Activities

Whatever the cost of fixed improvements and the source of funding for them, much the greatest part of costs for vegetable farmers is the recurrent outlays needed for annual – sometimes more frequently than annual – planting and crop raising. For vegetables such as potatoes and tomatoes, if they are produced using conventional intensive commercial techniques, the cost are roughly comparable to deciduous fruit, that is of the order of R200 000 per hectare.

If produced on a much lower input-output/yield basis, but that, with competent management, should still result in good quality vegetables and favourable gross margins, the costs are far lower. For example, indicative smallholder producer budgets for Bushbuck Ridge, Mpumalanga, South Africa in 2016⁴²⁴ were:

Table 60: Indicative Costs of Production, Income and Gross Margins/ha for Certain Vegetables

Vegetable	Cost/ha	Income/ha	Gross Margin/ha
tomatoes	R38 444	R157 700	R119 056
cabbages	R18 620	R160 000	R141 380
spinach	R11 416	R60 000	R48 584
beetroot	R9 978	R45 000	R35 022

For 2021, these estimates should probably be adjusted upwards by 30-40% for costs. The data for low-/medium-tech smallholder potato planting provided by Seeds 365 Agric for Lesotho for 2021 – R10 000 per hectare, before taking into account the costs of field management during the growing season – are roughly consistent with these cost estimates. Even if the yield and income assumed per hectare are significantly discounted to allow for sub-optimal management, the order of magnitude of costs is likely still remain the same.

For most smallholders, outlays of this size are beyond their cash resources, so borrowing is required if inputs and management are not to fall far below these 'medium-tech' levels, with yields and income falling accordingly. Loans from family and friends are the most likely and cheapest source, but if these are not available, or can only cover part of the costs, other sources have to be found. Loan sharks ('mashionisas') are out of the question because of the high interest rate charged⁴²⁵ and the duration of credit needed⁴²⁶.

As was noted earlier, bank credit is also usually not available, although Lesotho Post Bank is now starting to lend in this market. Nor are there any agriculturally focused development finance institutions in Lesotho, and the only public entities that do operate in the agricultural finance space – the Lesotho National Development Corporation (LNDC) and, to a small extent, the Basotho Enterprise Development Corporation (BEDCO) – generally provide equity and/or loan finance only to relatively large agribusinesses. Furthermore, given the recurrent nature of annual production costs, grants and subsidies from government and well-resourced donors/development partners cannot be relied on either, though these are sometimes available for short periods, particularly after natural disasters⁴²⁷.

As also noted earlier, the types of organisation best geared for lending for production expenses to commercial and smallholder producers – off-takers/aggregators/processors – are also currently absent in Lesotho. Possible and planned responses, being related to downstream, post-harvest aspects of value chains, are discussed in 4.3.

For very small producers, mainly for own consumption, but also possibly for some producers in this 'subsistence' category who want to produce enough to be able to market regularly, small voluntary savings and credit associations have the greatest potential to provide credit or annual production capital for which no borrowing is necessary. The models that best meet this requirement are those that make capital pay-outs annually, such as the 'savings and internal lending communities' (SILCs) promoted by Catholic Relief Services (CRS) and the 'village savings and loan associations' (VSLAs) promoted by CARE for Basotho and World Vision. Not only is credit for up to three months – longer, if groups agree on this – available, which can be used to purchase recurrent vegetable production inputs (usually for up to 3x a borrowing member's savings at the time of application, although sometimes more), but if groups are formed around the need to save for annual inputs, say for seed potatoes, the pay-out of annual capital can be timed to come in the month when these are needed, typically September for summer crops. With pay-outs most often made in proportion to individual members' savings, members who want to invest in fixed improvements to start producing surpluses of vegetables for marketing, can accumulate the amount required by saving more during the annual cycle.

It was mentioned in the report on wool and mohair how popular and widespread the associations have now become in Lesotho, inter alia, because of their stability – based on the simplicity and transparency of their method of operation and the knowledge members have of fellow members, all of which lead to trust – their capacity to meet small credit and capital needs of any kind, and the high rate of return that they generate for their members⁴²⁸. Many of these are engaged, either on an individual or a collective basis, in vegetable production as an income-generating activity⁴²⁹.

A further possible intervention arose in the key informant interview with PLA⁴³⁰. To address potato producers' needs for access to credit, the association is exploring setting up a commodity-based savings and credit cooperative (SACCO) for the industry in Lesotho. In the 1960s and 70s SACCOs were established by commodity associations and others in many countries, developing and developed⁴³¹. Some still survive, and indeed thrive, today. Kenya's dairy cooperatives are a case in point. But they are exceptions. Most have suffered from governance shortcomings – often involving corruption – and/or administration and human resources deficiencies, as well as government interference, that made it difficult to compete with other service providers and have gone out of existence.

Attempts have been made in recent years to rehabilitate and strengthen the SACCO movement, but without much success. One such initiative formed part of IFAD's Rural Financial Intermediation Programme (RUFIP), which was implemented in Lesotho between 2008 and 2015. It is notable that this aspect of the programme was not rated as a success by the performance evaluation, whereas collaboration with CRS and CARE to promote SILCs and VSLAs was⁴³².

Once more, as with fruit growing, at the primary production level, it is not only access to finance that is needed, but also technical and business skills. It is one thing to produce a good crop of cabbages, tomatoes or potatoes once a year, but is quite another to produce them on a repeat basis, on schedule and to scale, market variety and size specifications. And to do so profitably.

The World Bank's SADP I programme included technical and business skills training as a compulsory component of all of its grants for capital inputs for horticultural farming⁴³³. SADP II⁴³⁴ and the Bank's proposed Supplier Development Programme will continue this practice⁴³⁵. Many other NGO and private sector initiatives also provide technical and business training and support, inter alia, for smallholder vegetable production⁴³⁶. To a degree, these compensate for

the public sector's weak extension services⁴³⁷. But the best support is almost always provided by private sector service providers, employed or contracted by off-takers/aggregators/processors/anchor contract farmers, or by input suppliers themselves. It is one or more of these that ideally need to be attracted in.

5.3.3 Downstream Post-Harvest Activities

Beyond washing/cleaning, which is generally undertaken by hand⁴³⁸, few smallholders, even in the 'modernizing' category, have the capacity to perform the immediate post-harvest activities – classing and packaging – which precede transport to market. Lack of packaging and long distances on poor roads may result in a significant proportion of crops not meeting retailers' or even informal sellers' standards and consequently in reduced income for farmers.

However, arguably the biggest disadvantage that most smallholders suffer from is poor access to markets. Over and above to the physical access challenges just mentioned, few vegetable producers can generate the quantity, quality and continuity that retailers need to sign contracts at pre-determined prices⁴³⁹. This means that they always have to search for outlets and accept fluctuating spot prices. While the informal market is always there, competition is usually intense, prices low and surpluses, especially of rapidly perishing vegetables such as tomatoes, often remain unsold and have to be disposed of or used for livestock feed. Because many smallholders are capable of producing good quality vegetables in season, retailers find themselves having to ration purchases from producers without contracts⁴⁴⁰.

Prices are effectively set largely by South African fresh produce markets. Even during the growing season, about 80% of vegetables on retailers' shelves are imported from South Africa⁴⁴¹. In the face of the volume of production in South Africa and the continuity of supply of good quality vegetables – the nearby eastern Free State is one of South Africa's largest vegetable producing areas – small Lesotho producers are always on the competitive backfoot. So, while they have the ability to produce good quality vegetables, finding buyers at prices that generate the returns needed to encourage and enable investment to increase production is a major challenge.

Fruit and vegetable production has, nevertheless, grown over the past five or so years, mainly driven by the investment in greenhouses, shade/hail nets and irrigation made possible by international donor interventions⁴⁴². But even this increase in output has not yet been sufficient to draw in a key missing element: large scale off-takers/aggregators/processors/anchor contract farmers. Without the latter, another key missing element, access to production credit, remains an on-going challenge for all but a few vegetable producers. As explained earlier, while it has provided grants for one-off capital improvements and training, the World Bank has so far not been willing to engage in the difficult, risky, open-ended exercise of offering production credit. And banks and input suppliers have been equally unwilling.

To address this, three approaches suggest themselves:

1. To persuade the World Bank, as the dominant external player assisting the development of fruit and vegetable production in Lesotho, to establish and perhaps partly capitalize a mechanism to provide production credit for smallholders, such as the revolving credit facility set up by IFAD in the wool and mohair industries for this purpose.
2. To set up a parastatal marketing agency, such as eSwatini's NAMBOARD, which not only helps market smallholders' output, but also supplies inputs and production credit – which NAMBOARD does only on limited scale.
3. To incentivize the establishment of large scale commercial off-takers/aggregators/processors/contract farmers in Lesotho.

In respect of the first, it is clear from the World Bank's proposed Supplier Development Programme (SDP) for vegetable farmers in Lesotho, that it is reluctant to set up or capitalize

a production credit facility. Rather, 'the proposed SDP pilot focuses on technical assistance for beneficiary farmers and no financial support is envisaged. The programme will provide training on optimizing cashflow and strengthening financial management, which (it is hoped) will increase farmers' ability to access bank loans'⁴⁴³.

As IFAD has found with wool and mohair, revolving credit funds are a good idea in principle – it is in both lenders' and borrowers' interests for loans to be repaid – but difficult to run sustainably in practice, for all the agricultural risk-related reasons that make banks and input suppliers unwilling to engage, as well as because of the need for ethical, competent, efficient loan assessment, award and recovery. Even if a founding donor, such as IFAD, is able to fulfil these requirements, it is a challenge to find and adequately capacitate a capable successor. Parastatals and NGOs are seldom able to play this role without external technical assistance. And founding donors are usually reluctant to provide such assistance after the termination of the initial intervention.

This identifies one of the reasons why the second approach is also unlikely to succeed. Another is that parastatals find it difficult to provide the same quality of market information, technical and logistical support and administration that private sector off-takers/aggregators/processors/anchor contract farmers do. eSwatini's NAMBOARD has found it difficult to deliver all of this support at a level of efficiency that retains and attracts smallholder vegetable producers⁴⁴⁴. No similar agency presently exists in Lesotho and it would not seem well-advised to establish one, let alone charge it with the responsibility of administering and sustaining a credit facility. Even if LNDC were to find a private sector partner with whom to bring the Market Centre now standing empty near Maseru to life⁴⁴⁵, it would be unlikely to.

The last of the three approaches was considered in the report on deciduous fruit. It is worth repeating the findings:

'The World Bank's analysis sums up succinctly:

"The horticulture industry remains in the start-up stage due to skill constraints, poorly functioning land markets, lack of linkages within the supply chain and weak access to finance. There are few large, well-managed horticulture farms that can serve as role models and mentors for smallholders.

"Building a competitive horticulture industry in Lesotho will require incentivizing the establishment of new, large-scale commercial farms and upgrading existing smallholders. Land titling and improving access to serviced land are the key measures for encouraging foreign and large-scale domestic investment in commercial farming (such as anchor contract farming enterprises)⁴⁴⁶. Incentivizing private investment in aggregators and supporting productive alliances are the most important measures to support smallholders. It will also be necessary to strengthen the availability of specialized skills to provide better technical support to smallholders and develop crop varieties that are adapted to Lesotho's high-altitude conditions"⁴⁴⁷.

'The most important of these requirements – land titling and improving access to serviced land – fall almost entirely within the realm of public policy and programmes, as do strengthening the availability of specialized skills and developing appropriate crop varieties, though external partners could also assist.

As noted earlier, off-takers/aggregators/processors are usually the main source of production credit for farmers, as well as inputs and expertise. But without an adequate scale of supply of primary product, it is unprofitable for aggregators to set themselves up – at least within Lesotho. However, a viable alternative appears to be for one or more of the large scale off-takers/aggregators/processors/anchor contract farmers that serve fruit and vegetable producers in the eastern Free State, just over the border, to play the same role for primary producers

in Lesotho. It is likely that this is the mechanism that has been used for the small volume of deciduous fruit and vegetables that Lesotho has been able to export to date.

'The World Bank's SADP II programme will provide matching grants for off-takers/aggregators that include deciduous fruit in their catchment basket to establish themselves⁴⁴⁸. Though the design document does not say so explicitly, it is assumed that these are envisaged to be located in Lesotho. However, the document also states that "start-up (aggregator) enterprises will not be eligible for project support"⁴⁴⁹. As there are no firms that currently play this role for any horticultural crops in Lesotho, production and exports being so small, the most likely well-established enterprises that could do so are South African ones.

'Bearing this in mind, it would not be unreasonable for the Bank to consider making South African aggregators eligible for at least some of the purposes for which the grant is designated, if they undertake to source certain, increasing quantities of fruit and vegetables from Lesotho. While the grants are intended to incentivize the setting up of physical facilities for aggregation and/or value addition in Lesotho and South African firms might not be prepared to do this until a greater level of scale has been achieved, they are also intended to elicit the supply of production credit, inputs and expertise. This South African firms might be more willing to provide, as it would simply entail extending existing activities over the border. As the SADP II programme is being conducted in collaboration with GoL, any such amendment to the design would need government's support, but it would seem in the interests of the fruit and vegetable industries in Lesotho for it to do so.

If South African firms are drawn in to play these roles for vegetables, it would be logical to extend the arrangement to include fruit. In both instances this would not only provide competent technical and business support for producers, but also open up or enlarge an existing channel for export, thereby addressing another of the challenges facing the two value chains – although there is no reason why the produce purchased could not be marketed in Lesotho. Furthermore, as banks are almost always more willing to provide a line of credit to a single intermediary with a proven track record for on-lending to smallholders than to lend direct, using South African off-takers/aggregators could overcome the challenge of gaining access to bank finance to provide working capital for the value chains. Although this would probably all be driven from a South African base initially, before too long it could lead to South African investment in Lesotho. Indeed, this could be made a condition for extending the matching grant facility to include such off-takers/aggregators.

5.4 Conclusions and Recommendations

Developing the vegetable value chain in Lesotho faces many of the same challenges as deciduous fruit, most importantly in the present context, in respect of access to credit. However, vegetable production does have some important advantages, notably in respect of land tenure, scale and cashflow. Commercial production can take place on very small areas of land, far less fixed investment is needed – thereby side-stepping the need for major external investors who look to land ownership for security – and cashflow cycles can be as short as three months. In addition, because vegetable production is so widely engaged in across Lesotho, the number of potential beneficiaries from such interventions is far greater and reaches right down to the vast majority of growers who produce mainly for own consumption. It also impacts positively on food security, nutrition and income from sales.

At a commercial/commercializing production level, the most promising opportunity for external intervention relates to playing the lobbying, brokering and technical support roles just discussed, to help realize the potential that well established South African firms operating in the fruit and vegetable industries offer to assist smallholders in Lesotho.

At a commodity association level, a further valuable role could be to work with Potatoes Lesotho Association to guide it in respect of the SACCO that it is hoping to establish. This could also help prove a model for replication in other value chains.

At a household level, whether to improve own consumption/nutrition or to help those that want to climb onto the lowest rung of the commercial ladder by earning more from marketing vegetables, FinMark Trust could play a valuable role by collaborating with Catholic Relief Services and CARE for Basotho to enhance the innovations that they have they have introduced, or that savings and credit groups have initiated themselves, to provide working capital for individual and group vegetable production and value addition.

As women make up about 90% of the membership of these groups, an intervention of this nature could be expected to be of particular advantage to women. This could be amplified by collaboration to explore the possible replication in Lesotho of FSD Zambia's Working Capital Access pilot that has had success in increasing rural shopkeepers' access to credit by using a blend of capital from savings and credit groups and formal sector finance. This, too, would be of particular advantage to women, both because they make up the majority of rural shopkeepers and because increased access to credit for shopkeepers can be expected to translate into increased credit for vegetable production.

All of these interventions are worth FinMark Trust's serious consideration.

Notes from sections

- ² Estimated from FAO, Lesotho Country Programming Framework, 2013-2017, p2 and Global Forum for Rural Advisory Services (GFRAS), Lesotho, March 2014
- ³ World Bank, Kingdom of Lesotho, Public Expenditure Review: Improving Expenditure Efficiency for Inclusive Development and Growth, Report no. 127317, June 2018, pp10-12
- ⁴ IFAD, Kingdom of Lesotho, Country Strategic Opportunities Programme, 2020-2025, p1
- ⁵ World Bank, *ibid.*
- ⁶ IFAD, *ibid.*
- ⁷ World Bank, Lesotho Water Security and Climate Change Assessment, 2016a, p4
- ⁸ Trading Economics, Lesotho Unemployment Rate, 1991-2019 Data, tradingeconomics.com/lesotho/unemployment-rate
- ⁹ IFAD, *ibid.*
- ¹⁰ GFRAS, *ibid.*
- ¹¹ World Bank, Climate-Smart Agriculture in Lesotho, 2019a, p3
- ¹² *Ibid.*
- ¹³ FAO, *op. cit.*, p2
- ¹⁴ IFAD, Kingdom of Lesotho, Wool and Mohair Promotion Project (WAMPP), Final Project Design Report, September 2014, pviii
- ¹⁵ World Bank, *op. cit.*, 2016a, p5
- ¹⁶ World Bank, Kingdom of Lesotho, Agriculture Public Expenditure Review, 2019b, p8
- ¹⁷ IFAD, *ibid.*
- ¹⁸ World Bank, 2019a, p2
- ¹⁹ Statista, Lesotho: Distribution of Gross Domestic Product (GDP) Across Economic Sectors from 2009 to 2019, 2020
- ²⁰ World Bank, 2019a, p3. By comparison, average productivity is just over \$10 000/worker, across all Southern African countries.
- ²¹ GFRAS, *ibid.*
- ²² Statista, *ibid.*
- ²³ GFRAS, *ibid.*
- ²⁴ FAO, *op. cit.*, p9
- ²⁵ Jefferis, K., et al., Making Access Possible (MAP) Lesotho: Demand, Supply, Policy and Regulation, Diagnostic Report, FinMark Trust/CENFRI/UNDP, 2014, p13; data for farmers derived from Lesotho FinScope Consumer Survey, 2011 (*ibid.*, p2)
- ²⁶ FinMark Trust, FinScope Micro, Small and Medium Enterprises Survey Lesotho, 2016, Pocket Guide, p3
- ²⁷ *Ibid.*, p6
- ²⁸ *Ibid.*, p7
- ²⁹ *Ibid.*, p12
- ³⁰ *Ibid.*, p21
- ³¹ *Ibid.*, p38
- ³² World Bank, 2019b, p15
- ³³ IFAD, *op. cit.*, p9
- ³⁴ *Ibid.*, p25
- ³⁵ African Development Bank, Red Meat Production Feasibility Study in Lesotho – Detailed Feasibility Study Report and project Implementation Plan, February 2019, p66
- ³⁶ IFAD, *ibid.*
- ³⁷ World Bank, 2019a, p2
- ³⁸ African Development Bank, *op. cit.*, p21
- ³⁹ USAID Trade Hub Southern Africa, Lesotho Textile and Apparel Brief, (undated), pp1-2, sattradehub.org/stories/downloads/pdf/brochures
- ⁴⁰ IFAD, *op. cit.*, p8, where one sheep is reckoned to be equal to one LU, one goat 0,85LU and cattle, horses, and donkeys each 6LUs.
- ⁴¹ *Ibid.*
- ⁴² World Bank, Project Appraisal Document ... for a Smallholder Agriculture Development Project – II, 8 May 2019c, p19
- ⁴³ African Development Bank, *op. cit.*, February 2019, pp12-14
- ⁴⁴ Government of Lesotho, Lesotho Review, Agriculture, (undated), lesothoreview.com/contents/agriculture
- ⁴⁵ Only 3% of milk from the country's 4 500 dairy cattle are reported to be marketed, all for processing at one plant (FAO, Support to NEPAD-CAADP Implementation, vIV, Livestock Development Project, February 2005, p3)
- ⁴⁶ Rantso, T., et al., The Contribution of Lesotho Dairy Products to the Livelihoods of Dairy Farm Households in Maseru and Berea Districts in Lesotho, International Journal of Rural Management, v16, Issue 2, June 2020, Abstract, journals.sagepub.com/doi/abs/10.1177/09730930383

- ⁴⁷ Ibid., p4
- ⁴⁸ World Bank, 2019b, p8
- ⁴⁹ Ibid., p18
- ⁵⁰ See Rantso, T., et al., Agriculture and Food Security in Lesotho: Government-Sponsored Block Farming Programme in the Berea, Maseru and Leribe Districts, Cogent Food and Agriculture, 5(1), 1657300, 2019
- ⁵¹ World Bank, 2019a, p4
- ⁵² World Bank, Lesotho Second Private Sector Competitiveness and Economic Diversification Project (PSCEDPII), Appendix 7 – Horticulture, 2016b, pp7-8
- ⁵³ See, inter alia, Sensi Seeds, Cannabis in Lesotho – Laws and Attitudes, 4 June 2020; Vickers, E., The Small African Kingdom That’s Perfect for Growing Cannabis, but Maybe Not for Regulating It, Quartz Africa, 9 November 2019; Prinsloo, L., et al., One of the Poorest Countries in Africa Wants to Send Its Legal Marijuana All over the World, Bloomberg, 19 December 2019; Wikipedia, Cannabis in Lesotho, (undated).
- ⁵⁴ Dresden, D., What is the Difference between Hemp CBD and Cannabis CBD?, Medical News Today, 23 July 2020, medicalnewstoday.com/articles/hemp-cbd-vs-cannabis-cbd
- ⁵⁵ For example, MG Health reports having invested US\$23 million in a facility which now employs 380 people, growing to 3 000 at full production (Powell, A., Lesotho’s Budding Cannabis Industry Sparks High Hopes, 12 February 2020, voanews.com/science-health/lesothos-budding-cannabis-industry-sparks-high-hopes)
- ⁵⁶ While the formal cost of licences is US\$35 000, because government has at least temporarily stopped issuing licences while it tries to resolve problems arising from the lack of control with which they were initially issued, licences are now reported to trade for several million dollars (see Vickers, op. cit.).
- ⁵⁷ Tunnels appear to cost between R5 million and R7.5 million each (Hart, C., Time to Let Go of That Prejudice against Pot so SA Can Reap the Astonishing Potential, Business Day, 21 September 2020, p7).
- ⁵⁸ Commercial farming accounts for only about 5% of agricultural production (SADC, Regional Agricultural Policy, Country Summary Agricultural Policy Review Reports, 2011, p83)
- ⁵⁹ The average percentage of arable fields left fallow in any year is reported by FAO to be between 20% and 30% (FAO, op. cit., p8)
- ⁶⁰ For succinct statements of these challenges, see, e.g., FAO, op. cit., pp6-10; World Bank, Project Appraisal Document ... for Smallholder Agriculture Development Project II (SADP II), 2019c, p9
- ⁶¹ These arise out of the controversial award of an international wool marketing monopoly to a Chinese firm.
- ⁶² Imani Development, Final Evaluation of the Lesotho Horticulture Productivity and Trade Development Programme, March 2017
- ⁶³ UNDP, Assessment of the Socio-Economic Impact of COVID-19 on the Kingdom of Lesotho, UNDP, 2020; FAO, COVID-19: Channels of Transmission to Food and Agriculture, 2020
- ⁶⁴ USAID, Impact of COVID-19 on Women’s Customary Land Rights in Southern Africa, December 2020, p15
- ⁶⁵ UNDP, op. cit., p3
- ⁶⁶ World Bank, 2019b, p9
- ⁶⁷ Office of the Prime Minister, Kingdom of Lesotho, Zero Hunger Strategy Review, 2018, p36
- ⁶⁸ It is unclear if this includes mohair.
- ⁶⁹ World Bank, 2019b, p9 (derived from FAOSTAT data for 2019).
- ⁷⁰ African Development Bank, op. cit., p19. (Average exchange rate for 2015 (\$1.00 = Lesotho Maloti 12.77), www.exchangerates.org.uk). Of this amount, wool made up \$33.6 million dollars and mohair \$5.9 million.
- ⁷¹ Ibid., pp23, 26
- ⁷² Mkhabela, T., How COVID-19 is Impacting on South Africa’s Agriculture, IOL, 19 March 2020, iol.co.za/business-report/opinion/how-covid-19-is-impacting-on-sas-agriculture-45196311
- ⁷³ World Bank, 2019b, pp22, 34
- ⁷⁴ Imports were about three times the value of exports in 2017 (World Integrated Trade Solution (WITS), Lesotho Trade Statistics, 2017, wits.worldbank.org/CountryProfile/en/LSO)
- ⁷⁵ Government pays for inputs, other than land, but the traditional owners of the land share the income on a 40:60 (maize) or 50:50 (wheat) basis with government (Rantso, op. cit., pp11, 12, 14).
- ⁷⁶ The state’s input subsidy programme does not the amounts of subsidized inputs that individual farmers may purchase, making larger farmers likely to benefit more. The unequal distribution of land is described in World Bank, 2019b, p36. The subsidy programme also tends to crowd out private sector competition, particularly in the local seeds industry, with negative consequences, especially in drought years, for the roughly 80% of households that are unable to afford subsidized hybrid seed (FAO, Seed Security Assessment, Lesotho 2016 – Response to Drought Effects Related to El Nino, 2016, px)
- ⁷⁷ World Bank, Lesotho Poverty Assessment: Poverty and Inequality Remain Widespread Despite Decline, 18 December 2019
- ⁷⁸ World Bank, 2019b, px
- ⁷⁹ World Bank, 2019a, p4
- ⁸⁰ Ibid., p10
- ⁸¹ Ibid., p40
- ⁸² More than 2 million jobs are reported to have been lost in South Africa during the second quarter of 2020 (Business Day, 30 September 2020, p1)

- ⁸³ FAO, op. cit., p10
- ⁸⁴ Gwimbi, P., et al., A Comprehensive Scoping and Assessment Study of Climate-Smart Agriculture (CSA) in Lesotho, Food, Agriculture, Natural Resources Policy Analysis Network (FANRPAN), 30 April 2014, p14
- ⁸⁵ World Bank, 2019c, p10
- ⁸⁶ African Development Bank, op. cit., p37
- ⁸⁷ Wikipedia, Women in Lesotho, undated, en.wikipedia.org/wiki/Women_in_Lesotho
- ⁸⁸ SADC, op. cit., p1
- ⁸⁹ World Bank, Project Appraisal – Smallholder Agriculture Development Project, 2011, p6 (referred to in African Development Bank, op. cit., p41)
- ⁹⁰ Gwimbi et al., op. cit., p13
- ⁹¹ USAID, Impact of COVID-19 on Women’s Customary Land Rights in Southern Africa, December 2020, p20
- ⁹² Ibid., pp14-15
- ⁹³ African Development Bank, op. cit., p41
- ⁹⁴ Ibid.
- ⁹⁵ Ibid.
- ⁹⁶ Gwimbi et al., op. cit., pp13-14
- ⁹⁷ Office of Prime Minister, Lesotho Zero Hunger Strategic Review, 2018, pp39-42
- ⁹⁸ Government of Lesotho, Food and Nutrition Coordinating Office, Lesotho Food and Nutrition Strategy and Costed Action Plan (2019-2023), March 2019, pp60-62
- ⁹⁹ World Bank, 2019b, p36
- ¹⁰⁰ Ibid, pp21-22
- ¹⁰¹ Bertelsmann-Scott, T., et al., The SADC EPA Opportunities in the Agro-processing Sectors of South Africa and Lesotho, SA Institute of International Affairs, Occasional Paper 282, June 2018, p21
- ¹⁰² African Development Bank, op. cit., pp38-39
- ¹⁰³ Ibid., p41
- ¹⁰⁴ Ibid., pp39-40
- ¹⁰⁵ World Bank, 2019a, p24
- ¹⁰⁶ World Bank, 2016a, p17
- ¹⁰⁷ Ibid.
- ¹⁰⁸ Ibid.
- ¹⁰⁹ World Bank, 2019b, p38
- ¹¹⁰ Bertelsmann-Scott, et al., op. cit., p25
- ¹¹¹ Ibid., pp81-82. Funding in nominal US\$ as in programme/project document.
- ¹¹² World Bank, Project Appraisal Document, Private Sector Competitiveness and Economic Diversification Project, Lesotho (2007); allocation for horticulture promotion component unknown
- ¹¹³ World Bank, 2016b, pp7-9
- ¹¹⁴ Bertelsmann-Scott, T., et al., ibid.
- ¹¹⁵ IFAD, Kingdom of Lesotho, Rural Finance Intermediation, Project Performance Evaluation, November 2017, p50
- ¹¹⁶ Ibid., pv
- ¹¹⁷ Ibid., ppvii-viii
- ¹¹⁸ IFAD, op. cit., 2014, p33
- ¹¹⁹ Ibid., pviii
- ¹²⁰ Ibid., pix
- ¹²¹ IFAD, Lesotho, Smallholder Agriculture Development Project, Supervision Report, 23 August 2019, p3
- ¹²² IFAD, Lesotho Adaptation of Small-Scale Agricultural Production (LASAP), Mid-term Review/Supervision Report, April 2020, p6
- ¹²³ Ibid., pp7-8
- ¹²⁴ Ibid., p17
- ¹²⁵ Ibid., pp15-16
- ¹²⁶ FAO, Emergency Response to El Nino-Induced Drought in Lesotho, fao.org/emergencies/fao-in-action/projects/detail/en/c/454211/
- ¹²⁷ World Bank, 2019b, p81
- ¹²⁸ FAO, Building Resilience to Drought in Lesotho, fao.org/3/ca0143en/CA0143EN.pdf
- ¹²⁹ FAO, Emergency Response to El Nino-Induced Drought in Lesotho, fao.org/emergencies/fao-in-action/projects/detail/en/c/, fao.org/emergencies/fao-in-action/projects/detail/en/c/405006/
- ¹³⁰ FAO, Emergency Response to El Nino-Induced Drought in Lesotho, fao.org/emergencies/fao-in-action/projects/detail/en/c/, fao.org/emergencies/fao-in-action/projects/detail/en/c/435275/
- ¹³¹ Ibid.
- ¹³² World Bank, 2019b, p82

- ¹³³ MAFS, Department of Agricultural Research, Agricultural Productivity Programme for Southern Africa (APPSA), Project Implementation Manual, 15 April 2019, p103
- ¹³⁴ Ibid., p2
- ¹³⁵ Ibid, p15
- ¹³⁶ Ibid., p4
- ¹³⁷ World Bank, 2019c, p2
- ¹³⁸ World Bank, 2019a, p24
- ¹³⁹ Ibid., pp14-23
- ¹⁴⁰ African Development Bank, op. cit.
- ¹⁴¹ Imani Development, op. cit.
- ¹⁴² World Bank, 2019a
- ¹⁴³ lenafu.org.ls
- ¹⁴⁴ CARE, South Africa and Lesotho, September 2014, pp1-2, care.org/wp-content/uploads/2020/06/South-Africa-Lesotho-Factsheet-September-2014.pdf
- ¹⁴⁵ Catholic Relief Services, CRS in Lesotho, crs.org/our-work-overseas/where-we-work/lesotho
- ¹⁴⁶ World Vision, Lesotho, Our Work, wvi.org/Lesotho/our-work
- ¹⁴⁷ Action Aid, Lesotho, What We Do, actionaid.org.uk/about-us/where-we-work/lesotho
- ¹⁴⁸ FANRPAN, Our Approach, fanrpan.org/home
- ¹⁴⁹ Mineworkers Development Agency, micjhb.co.za/mineworkers-development-agency/
- ¹⁵⁰ FinMark Trust, op. cit., p2
- ¹⁵¹ Imani Development (South Africa), Technical Proposal, Agricultural Scoping Study, July 2020, p1
- ¹⁵² Hunter, J, The Economics of Wool and Mohair Production and Marketing in Lesotho, Farming Systems Research Division, Ministry of Agriculture, Lesotho, Research Division Report RD-R-80, 1987, pp9, 22
- ¹⁵³ The World Bank records the percentage of the gross value of agricultural output accounted for by livestock production as 52% in 2016 (World Bank, Kingdom of Lesotho, Agriculture Public Expenditure Review, 2019, p7), while the Government of Lesotho (GoL) estimated it at as much as 62% in 2019 (GoL, Lesotho Review – Agriculture, 2019).
- ¹⁵⁴ World Bank et al., Climate-Smart Agriculture in Lesotho, 2018, p2
- ¹⁵⁵ International Fund for Agricultural Development (IFAD), Wool and Mohair Promotion Project (WAMPP), Final Project Design Report, 2014, p4
- ¹⁵⁶ IFAD (WAMPP), Analysis of the Agriculture Marketing (Wool and Mohair Licensing) Regulations 2018 and Subsequent Amendments 2019 (draft), 2020a, p37
- ¹⁵⁷ Making Access Possible (MAP), Lesotho Financial Inclusion Country Report, 2014, p6
- ¹⁵⁸ IFAD, op. cit., 2014, ibid.
- ¹⁵⁹ Ibid., Appendix 2: Poverty Targeting and Gender, p53
- ¹⁶⁰ IFAD, op cit., 2020a, p3
- ¹⁶¹ Imani Development, Agricultural Finance Scoping Inception Report, 2020, p44
- ¹⁶² IFAD, op. cit., 2020a, p38; Hunter, op. cit., p185
- ¹⁶³ Hunter, ibid.; IFAD, op. cit., 2014, Appendix 2: Poverty Targeting and Gender, p52
- ¹⁶⁴ IFAD, op. cit., 2020a, p38
- ¹⁶⁵ IFAD, op. cit., 2014, p3
- ¹⁶⁶ Hunter, op. cit., p1
- ¹⁶⁷ Ibid., pp1-2
- ¹⁶⁸ IFAD, ibid., p4; see also South African Mohair Cluster, Lesotho Mohair Primary Production Research Report, 2019, PowerPoint, p15
- ¹⁶⁹ Compiled from IFAD, op. cit., 2020, pp39-40; Hunter, op. cit., pp181-2; How Wool is Made, www.madehow.com>Volume1>Wool; Louw, M, Mohair Production and Marketing in South Africa, www.southafrica.co.za/mohair-production-and-marketing-in-south-africa.html; Mohair South Africa, The Fibre, www.mohair.co.za/mohair-fibre/; IFAD, op. cit., 2014, Appendix 1: Country and Rural Context Background, pp47-50
- ¹⁷⁰ IFAD, op. cit. 2020a, pp61-62
- ¹⁷¹ Ibid.
- ¹⁷² Ibid., pp21ff
- ¹⁷³ Wool 'tops' are semi-processed products, ready for spinning, made from greasy wool. Production entails cleaning, scouring, combing, and sorting. (Wikipedia, www.en.wikipedia.org/wiki/Wool_top#mw-head)
- ¹⁷⁴ This was valued at only R1,2 million in 2013 (IFAD, op. cit., 2014, Appendix 1: Country and Rural Context Background, p48)
- ¹⁷⁵ Wikipedia, www.wikipedia.org>wiki>Wool_top
- ¹⁷⁶ South Africa, Department of Agriculture, Forestry and Fisheries (DAFF), A Profile of the South African Wool Market Value Chain, 2016, p7
- ¹⁷⁷ Louw, M, op. cit.
- ¹⁷⁸ IFAD, op. cit., 2014, Appendix 1: Country and Rural Context Background, p46
- ¹⁷⁹ FinMark Trust, 16&30 November Bi-monthly Report, 2020, pp8-9

- ¹⁸⁰ Kingdom of Lesotho, Bureau of Statistics, Lesotho Livestock Report, 2013/2014, p8
- ¹⁸¹ IFAD, op. cit., 2020a, p32, quoting Kingdom of Lesotho, Bureau of Statistics, Lesotho Livestock Report, 2020
- ¹⁸² Ibid.
- ¹⁸³ IFAD, op. cit., pp29ff
- ¹⁸⁴ Hunter, op. cit., p73
- ¹⁸⁵ Ibid.
- ¹⁸⁶ Hunter, op. cit., p79
- ¹⁸⁷ Ibid.
- ¹⁸⁸ IFAD, op. cit., 2014, Appendix 1: Country and Rural Context Background, p45
- ¹⁸⁹ Hunter, op. cit., p73
- ¹⁹⁰ Ibid., pp161-2
- ¹⁹¹ IFAD, op. cit., 2020a, pp32-3
- ¹⁹² Ibid.
- ¹⁹³ Ibid., p29
- ¹⁹⁴ Ibid. pp30-1
- ¹⁹⁵ Ibid., pp33-4
- ¹⁹⁶ Ibid.
- ¹⁹⁷ IFAD, op. cit., 2014, pviii
- ¹⁹⁸ IFAD, op. cit., 2014, Appendix 1: Strategic Context and Rationale (for WAMPP), p1
- ¹⁹⁹ Ibid., pp39-41
- ²⁰⁰ Ibid., pp43-5
- ²⁰¹ Though also influenced by the increasing price of wool, it is significant that sheep number in Lesotho have roughly doubled since the closure of the national abattoir in 2003 (IFAD, op. cit., 2014, Appendix 1, p46)
- ²⁰² Hunter, op. cit., pp181-2
- ²⁰³ Ibid.
- ²⁰⁴ IFAD, op. cit., 2014, Appendix 1, etc., p4
- ²⁰⁵ Hunter, op. cit., pp156-9
- ²⁰⁶ IFAD, ibid.
- ²⁰⁷ Hunter, op. cit., p161. This number refers to 1985. It is not known how many private traders are currently licensed to buy and sell wool and mohair, but it is thought to be larger.
- ²⁰⁸ Ibid., pp161-3
- ²⁰⁹ IFAD, op. cit., 2020a, p25
- ²¹⁰ Ibid.
- ²¹¹ Boeremakelaars Kooperasie Beperk (farmer brokers cooperative limited)
- ²¹² IFAD, op. cit. 2020a, ibid.
- ²¹³ Ibid., p29; Australia produces about 25% of the world's greasy wool annually, more than any other country (www.worldatlas.com>articles>the-world-s-top-wool-producers).
- ²¹⁴ IFAD, op. cit., 2020a, p27
- ²¹⁵ Ibid., p31
- ²¹⁶ Ibid., p26
- ²¹⁷ Ibid., p39
- ²¹⁸ Hunter, op. cit., p139; IFAD, op. cit., 2014, Appendix 1, pp46-7
- ²¹⁹ IFAD, op. cit., 2020a, pp40-1
- ²²⁰ Licensed traders have generally preferred to use another South African broker, CMW/OVK.
- ²²¹ Hunter, op. cit., p161
- ²²² The main difference was the voorskot (pre-payment) and agterskot (post-auction net addition/ deduction) payments that were made until the scrapping of the single channel wool and mohair marketing systems in South Africa in 1997. However, these affected only cashflows, not the net amount received.
- ²²³ Hunter, op. cit., p165
- ²²⁴ Ibid., p169
- ²²⁵ Ibid.
- ²²⁶ IFAD, op. cit., 2020a, p27
- ²²⁷ Ibid., p22
- ²²⁸ Ibid., p24
- ²²⁹ Ibid., p23
- ²³⁰ Ibid.
- ²³¹ Ibid., p24

- ²³² Ibid., pp26, 28, 40
- ²³³ Ibid., pp28-38
- ²³⁴ Ibid., pp37, 40
- ²³⁵ Ibid., p37
- ²³⁶ Ibid., p41
- ²³⁷ Ibid., p42
- ²³⁸ This is the conclusion that Hunter reached in his authoritative study (op. cit., pp83, 159-60); no comparative data are available for farmers who market through traders or smugglers.
- ²³⁹ Ibid. p154
- ²⁴⁰ Ibid., p84
- ²⁴¹ Ibid., pp151-2
- ²⁴² IFAD, op. cit., 2014, Appendix 1, p46
- ²⁴³ Ibid. (Comments in parenthesis are the author's.)
- ²⁴⁴ This is about average for sheep herds in mountain districts (see 3. above).
- ²⁴⁵ No details are given of the purpose, value and repayment terms for the loan.
- ²⁴⁶ This is substantially greater than the actual average realized (see 3. above).
- ²⁴⁷ Ibid. p47 (Comments in parenthesis are again the author's.)
- ²⁴⁸ Ibid., p48
- ²⁴⁹ Ibid., p47
- ²⁵⁰ Ibid., p48
- ²⁵¹ These groups are distinguished from conventional rotating savings and credit associations (ROSCAs) by lending internally and paying out all savings and accumulated credit annually, at a time of year agreed on by members. Very often the month selected for pay-out is determined by a common need, in some instances to provide capital for annual agricultural inputs.5% of groups in a recent survey in Lesotho were engaged in wool and mohair selling (CARE for Basotho, Caritas, et al., Report 1: Empowering Women through Microfinance-Based Entrepreneurial Interventions, 2020, p25)
- ²⁵² CRS, Experience: Restoring Ecosystems and Livelihoods in Lesotho (REAL), 2014-2019, PowerPoint, slide 2
- ²⁵³ CRS, Innovations for Integrated Watershed Management: Approaches, Outcomes and Lessons Learnt from Interventions on Restoring Ecosystems and Livelihoods in Lesotho, 2018, pp4-7
- ²⁵⁴ IFAD, op. cit., 2014, p44
- ²⁵⁵ Hunter, J and Mokitimi, N, The Evolution of the Wool and Mohair Marketing System in Lesotho: Implications for Policy and Institutional Reform, African Livestock Policy Analysis Network, Network Paper no. 20, May 1989
- ²⁵⁶ IFAD, Kingdom of Lesotho, 2018 Country Strategy and Opportunity Paper (COSOP) Results Review, Main Report and Appendices, pp12-13
- ²⁵⁷ Ibid., p14
- ²⁵⁸ Ibid., pp15-16
- ²⁵⁹ IFAD, op. cit., 2014, pp ix-xii
- ²⁶⁰ IFAD, Lesotho, WAMPP Supervision Report, 25 August 2020b, pg
- ²⁶¹ Ibid., p7
- ²⁶² IFAD, Kingdom of Lesotho, Country Strategic Opportunities Programme, 2020-2025, pp3-8
- ²⁶³ IFAD, op. cit., 2014, pxi
- ²⁶⁴ IFAD, op. cit., 2019, p8
- ²⁶⁵ CRS, op's cit., 2018; IFAD, Lesotho, WAMPP Supervision Report, 25 August 2020b, p35
- ²⁶⁶ IFAD, op. cit., 2019, p8
- ²⁶⁷ Personal communication, M. Schriver (World Bank), 8 December 2020
- ²⁶⁸ For this reason, even were FinMark Trust able to facilitate the establishment of a mechanism for remittances from South Africa to flow to Lesotho Postbank (LPB) at low transaction costs, similar to the model currently operating through Shoprite, it is likely that LPB would be willing to use the amounts flowing through such a system for collateral for lending to wool and mohair producers only if the total in an account reached a threshold large enough to justify the transaction costs to the bank of making a loan. This might, nevertheless, be an intervention worth exploring for FinMark Trust, as it would clearly not be confined to wool and mohair producers.
- ²⁶⁹ This model was, until recently, used by South Africa's Land Bank, with a significant degree of success.
- ²⁷⁰ In other value chains, particularly annual and perennial crop value chains, this role may be played by large scale commercial enterprises in core estate-out-grower or contract farming models, with loans to out-growers secured on a crop lien basis.
- ²⁷¹ See 3.2 above.
- ²⁷² IFAD, Lesotho, WAMPP Supervision Report, 25 August 2020b, p8
- ²⁷³ Personal communication, Philipp Baumgartner, IFAD Country Director, Lesotho, 4 December 2020
- ²⁷⁴ IFAD, op. cit., 2020a, pp40-1

- ²⁷⁵ See footnote 112.
- ²⁷⁶ IFAD, op. cit., 2020a, p24
- ²⁷⁷ Ibid.
- ²⁷⁸ IFAD, op. cit., 2020a, p39
- ²⁷⁹ IFAD, op. cit., 2014, Appendix 4, Detailed Project Description, p74
- ²⁸⁰ IFAD, op. cit., 2020b, p14
- ²⁸¹ Author's experience in respect of Land Bank's Wholesale Finance Facility.
- ²⁸² Personal communications, Philipp Baumgartner, IFAD Country Director, Lesotho, 4 December 2020, 29 January 2021
- ²⁸³ IFAD, op. cit., 2020b, pp17, 20
- ²⁸⁴ Financial Sector Deepening, Zambia (FSDZ), Initial Results from Our Working Capital Access Pilot Are Promising, unpublished e-mail, 4 July 2019
- ²⁸⁵ Personal communication, Mr Anton Krone, Director, SaveAct, 15 December 2020
- ²⁸⁶ See 3.4 above.
- ²⁸⁷ Ibid.
- ²⁸⁸ Decision-making, governance, accountability and liability are usually more problematic.
- ²⁸⁹ Ibid., p13; IFAD, op. cit., 2014, p14
- ²⁹⁰ IFAD, op. cit., 2020b, p13
- ²⁹¹ Ibid.
- ²⁹² IFAD, op. cit., 2019, p8
- ²⁹³ Ibid., p13
- ²⁹⁴ IFAD, op. cit., 2020b, p9
- ²⁹⁵ Ibid., pp18, 24, 41
- ²⁹⁶ IFAD, op. cit., 2020b, p13
- ²⁹⁷ Ibid., p10
- ²⁹⁸ Ibid., pp10, 19
- ²⁹⁹ Matebesi-Ranthimo, P., et al., WAMPP, Merino Sheep and Angora Goats Culling and Exchange Manual in Lesotho, undated (2019?), section 2.1.1 (pages not numbered)
- ³⁰⁰ IFAD, op. cit., 2020b, p14
- ³⁰¹ Ibid.
- ³⁰² Personal communication, Philipp Baumgartner, IFAD Country Director, Lesotho, 4 December 2020
- ³⁰³ This depends, on the one hand, on the costs of purchasing or raising genetically superior animals and, on the other, on the price realized for culled animals. Whether purchased in South Africa or bred domestically, there seems to be little reason to expect the cost of superior animals to fall significantly, in the absence of subsidies. In respect of revenue from the sale of culled animals, while one of the reasons that households keep sheep and goats in Lesotho is for slaughter, in most instances the main reason for doing so is for wool and mohair production (Hunter, op. cit., pp89-92). However, the demand for animals to add to existing flocks for wool and mohair production is weak – particularly for low-yielding animals – given the extent of overstocking and the various drives to reduce herd sizes. In the absence of strong formal sector demand for domestically produced mutton and goat meat and with most of Lesotho's mutton catered for through imports from South Africa, the demand for sheep and goats for slaughter is also limited (GoL/African Development Bank, Red Meat Production Feasibility Study in Lesotho, Detailed Feasibility Report and Project Implementation Plan, 2019, pp25-26). For both reasons, a significant rise in the price of, and revenue from, culled animals is not expected in the foreseeable future.
- ³⁰⁴ IFAD, op. cit., 2020b, p17
- ³⁰⁵ Ibid., p19
- ³⁰⁶ IFAD, op. cit., 2014, pxii
- ³⁰⁷ IFAD, op. cit., 2014, Appendix 4: Detailed Project Description, p77
- ³⁰⁸ GoL/African Development Bank, op. cit., pp25-27
- ³⁰⁹ IFAD, op. cit., 2020b, p15
- ³¹⁰ World Bank, Implementation Completion and Results Report, IDA – 50170 and IDA – 61440, ... , Lesotho Smallholder Agriculture Development Project, 25 January 2021, p14
- ³¹¹ World Bank, Project Appraisal Document ... Smallholder Agriculture Development Project II, 8 May 2019, p20. Commencement was scheduled for 2020, but has been delayed by the COVID19 pandemic.
- ³¹² IFAD, op. cit., 2020b, p7
- ³¹³ Ibid., p13
- ³¹⁴ Ibid., p7
- ³¹⁵ While this could be a very helpful rangeland restoration innovation, community grazing associations may prefer to substitute labour for capital by using shepherds for this task. And, the efficacy of any mechanism for grazing control on communal land will always depend on voluntary compliance by members.
- ³¹⁶ See 5.2.2.
- ³¹⁷ IFAD, op. cit., 2014, p14
- ³¹⁸ Ibid., pp47-49

- ³¹⁹ Ibid.
- ³²⁰ See section 4. and footnote 113 above.
- ³²¹ Ibid.
- ³²² IFAD, *op. cit.*, 2020b, p9
- ³²³ Ibid.
- ³²⁴ Ibid.
- ³²⁵ World Bank, *op. cit.*, 2021, p15
- ³²⁶ World Bank, *Unlocking the Potential of Lesotho's Private Sector: A Focus on Apparel, Horticulture and ICT*, 2018a, p36. This section draws heavily on this publication.
- ³²⁸ World Bank, *Environment and Social Management Framework: Lesotho Second Private Sector Competitiveness and Economic Diversification Project (PSCDEP II) – Horticulture*, 2016a, p14
- ³²⁹ World Bank, *Climate-Smart Agriculture in Lesotho*, May 2018b, p8
- ³²⁷⁰ World Bank, *op. cit.*, 2018a, p39
- ³²⁷¹ Ibid., p40
- ³²⁷² Ibid., p37
- ³²⁷³ World Bank, *Project Helps Lesotho's Rural Farmers Become Certified Exporters*, feature article, 9 November 2016 (2016b)
- ³²⁷⁴ World Bank, *op. cit.*, 2018a, p40
- ³²⁷⁵ Deciduous fruit production is also expected to be a focus area for EU support for the period ahead. (source: personal communication, Tomas Pallas, EU Delegation, Lesotho, 2 December 2020)
- ³²⁷⁶ World Bank, *op. cit.*, 2018a, p36
- ³²⁷⁷ These are substantial. For example, apricots and plums marketed 3 weeks earlier than South Africa is able to, could expect to realize double the price of early season South African fruit. (World Bank, *op. cit.*, 2018, p46)
- ³²⁷⁸ World Bank, *op. cit.*, 2018a, p36
- ³²⁷⁹ Ibid., p37
- ³²⁸⁰ Value chains vary by fruit type, but most have similar essential features. The discussion here is based on the value chains for table grapes, as depicted in National Agricultural Council/ComMark Trust, *Sub-Sector Study, Deciduous Fruit*, 2007 (p4), adapted for apples in World Wildlife Fund, *Understanding Climate Risk to South Africa's Agri-Food System: A Commodity Value Chain Analysis of Apples*, 2016 (p4). Also referenced: *Optimizing the Pre-Harvest Management of Orchards to Maximize the Storage and Eating Quality of Fruits* (www.ahbdapples.azurewebsites.net/post-harvest-section1a.asp)
- ³²⁸¹ World Bank, *op. cit.*, 2018a, pp42-3
- ³²⁸² MAFS, Department of Agricultural Research, *Agricultural Productivity Programme for Southern Africa (APPSA), Project Implementation Manual*, 15 April 2019, p2
- ³²⁸³ Ibid., p4
- ³²⁸⁴ IFAD, *Lesotho Adaptation to Small-Scale Agricultural Production (LASAP), Mid-Term Review/ Supervision Report*, April 2020, pp7, 8. The South African university partner is the University of Cape Town.
- ³²⁸⁵ World Bank, *op. cit.*, 2018a, p40
- ³²⁸⁶ Ibid.
- ³²⁸⁷ Ibid. p47
- ³²⁸⁸ Ibid, pp41, 44
- ³²⁸⁹ Lesotho Times, *Government Pushes Indigenisation Regulations*, 21 October 2020 (<http://lestimes.com/govt-pushes-indigenisation-regulations/>)
- ³²⁹⁰ World Bank, *Implementation Completion and Results Report ... for the Lesotho Smallholder Agriculture Development Project*, Report no. ICR00005131, 25 January 2021, p11
- ³²⁹¹ World Bank, *op. cit.*, 2018a, p38
- ³²⁹² Ibid., pp40-1
- ³²⁹³ Ibid., p41
- ³²⁹⁴ Ibid., pp41, 44
- ³²⁹⁵ Ibid., p44
- ³²⁹⁶ World Bank, *op. cit.*, 2016a, p14
- ³²⁹⁷ Grants for hail/shade netting were an important component of the World Bank's SADP I project. (World Bank, *Project Appraisal on ... Kingdom of Lesotho ... Smallholder Agriculture Development Project - II*, 8 May 2019, p13)
- ³²⁹⁸ World Bank, *op. cit.*, 2019, pp 16, 20
- ³²⁹⁹ World Bank, *op. cit.*, 2016a, p14
- ³³⁰⁰ Huber-Lee et al., *Lesotho: Tackling Water Insecurity in a Changing Climate*, Stockholm Environment Institute, 1 January 2016, p1 (<https://www.jstor.org/stable/resrepo2812>)
- ³³⁰¹ World Bank, *op. cit.*, 2018b, p4
- ³³⁰² World Bank, *op. cit.*, 2018a, p41
- ³³⁰³ Tshabalala, P, *Estimating the Economic Rate of Return to Plum Research Investments in South Africa*, Agricultural Research Council, 2015, pp7-8
- ³³⁰⁴ De la Porte, M, *A Financial Analysis of Agricultural Production Systems in the Warm Bokkeveld*, M. Agricultural Sciences thesis, University of Stellenbosch, 2019, pp39-40

- ³⁰⁵ Tshabalala, M, op. cit., p8
- ³⁰⁶ World Bank, op. cit., 2018a, p39
- ³⁰⁷ Personal communication, Mr Marc Schriver, World Bank, 8 December 2020
- ³⁰⁸ Personal communication, Ms Khauhelo Keethoa, Lesotho Post Bank, 16 December 2020
- ³⁰⁹ World Bank, op. cit., 2018a, p42
- ³¹⁰ Bertelsmann-Scott, T, The SADC EPA: How Can the Agreement Contribute to Lesotho's Agriculture and Agro-Processing Development, South African Institute of International Affairs, Policy Briefing 178, July 2018, p4; The Post (Lesotho), How M7 Million Was Lost in Cannery Project, 31 March 2017
- ³¹¹ World Bank, op. cit., 2019, p21
- ³¹² Ibid., p20
- ³¹³ World Bank, op. cit., 2018a, pp39-43
- ³¹⁴ World Bank, op. cit., 2019, pp19-20
- ³¹⁵ World Bank, op. cit., 2018a, p42
- ³¹⁶ Ibid, p43
- ³¹⁷ Ibid., p40
- ³¹⁸ Ibid., p43
- ³¹⁹ World Bank, op. cit., 2016b
- ³²⁰ Both the UN International Trade Centre, through its Horticultural Productivity and Trade Development Programme, and World Vision have also been active in promoting the production of high-quality vegetables and fruit in Lesotho in recent years.
- ³²¹ Bertelsmann-Scott, op. cit., pp3, 4
- ³²² The Post (Lesotho), op. cit.; a partnership with the South African firm, Stargrow, is now being explored, but is also understood to be finding it hard to raise funds, with Stargrow reluctant to invest equity to the value required to get plans off the ground and no willing lenders found to date (personal communication, Mr Semethe Raleche, LNDC, 3 December 2020); other independent initiatives, such as the Amakharanate Pomegranate project report similar constraints (personal communication, Mr B. Manana, 1 December 2020)
- ³²³ World Bank, op. cit., 2018a, pp45, 47
- ³²⁴ Ibid., p46
- ³²⁵ World Bank, op. cit., 2019, p21
- ³²⁶ Ibid.
- ³²⁷ World Bank, Unlocking the Potential of Lesotho's Private Sector: A Focus on Apparel, Horticulture and ICT, 2018a, pp42-3
- ³²⁸ World Bank, Climate-Smart Agriculture in Lesotho, 2018b, p4
- ³²⁹ World Bank, op. cit., 2018a, p37
- ³³⁰ Ibid., p39
- ³³¹ World Bank, 2018b, pp4, 17-18
- ³³² World Bank, op. cit., 2018a, p37
- ³³³ World Bank, Linking Smallholders to Markets: A Supplier Development Programme for Vegetable Farmers in Lesotho, 2019a, p8
- ³³⁴ World Bank, op. cit., 2018a, p38
- ³³⁵ World Bank, ibid., p40
- ³³⁶ Ibid., p38
- ³³⁷ Own estimate, based on total population, percentage residing in rural areas, average household size and percentage of rural households engaged in some category of vegetable production.
- ³³⁸ World Bank, op. cit., 2018a, p37
- ³³⁹ Ibid., p42
- ³⁴⁰ Ibid., p37
- ³⁴¹ Ibid.
- ³⁴² Ibid., p38
- ³⁴³ Ibid., pp37, 43
- ³⁴⁴ The World Bank reports the growing presence of small-scale processors, many of whom have received assistance for value-adding activities under its SADP I programme (World Bank, Implementation Completion and Results Report ... for the Kingdom of Lesotho, Smallholder Agriculture Development Project (SADP I), 25 January 2021, p15). But none of these have the scale or balance sheet to be able to offer credit to producers.
- ³⁴⁵ UNDP, Assessment of the Socio-Economic Impact of COVID-19 on the Kingdom of Lesotho, 2020, p3
- ³⁴⁶ USAID, Impact of COVID-19 on Women's Customary Land Rights in Southern Africa, December 2020, p15
- ³⁴⁷ Delegation of the EU to Lesotho, The EU and Lesotho Government Allocate European Development Fund (EDF) Funds for COVID-19 Response, Press Release, 1 October 2020
- ³⁴⁸ Vegetable production is also expected to be a focus area for EU support for the period ahead. (source: personal communication, Tomas Pallas, EU Delegation, Lesotho, 2 December 2020)

- ³⁴⁹ See 4.2 below
- ³⁵⁰ World Bank, op. cit., 2018a, p41
- ³⁵¹ Personal communication, Mr Mahasela Nkoko, Potatoes Lesotho Association, 16 February 2021
- ³⁵² Seed accounts for about R90 000 of the roughly R100 000 to plant 10 hectares of potatoes, labour and/or machinery making up the balance. (Personal communication, Mr Thapeli Tjabane, Seeds 365 Agric, 16 February 2021)
- ³⁵³ Uncertainties in this regard include, weather, pests, diseases and side-selling, but usually at least some delivery of product can be relied on.
- ³⁵⁴ Personal communication, Mr Thapeli Tjabane, Seeds 365 Agric, 16 February 2021
- ³⁵⁵ Personal communication, Ms Khauhelo Keetoa, LPB, 16 December 2020
- ³⁵⁶ MAFS, Department of Agricultural Research, Agricultural Productivity Programme for Southern Africa (APPSA), Project Implementation Manual, 15 April 2019, p2
- ³⁵⁷ IFAD, Lesotho Adaptation to Small-Scale Agricultural Production (LASAP), Mid-Term Review/Supervision Report, April 2020, pp7, 8
- ³⁵⁸ World Bank, op. cit., 2018b, pp17-18
- ³⁵⁹ Ibid., p9
- ³⁶⁰ World Bank's, UN International Trade Centre's and World Vision's programmes have been the main contributors.
- ³⁶¹ World Bank, op. cit., 2021, p13
- ³⁶² Ibid., p11. This assumes that the rate of commercial viability was the same for horticultural projects supported as for projects supported in field crop and livestock farming. Horticultural projects made up more than half of the overall portfolio.
- ³⁶³ World Bank, Project Appraisal ...to Kingdom of Lesotho ... for Smallholder Agriculture Development Project (SADP I), 2011, p12
- ³⁶⁴ World Bank, Project Appraisal ...to Kingdom of Lesotho ... for Smallholder Agriculture Development Project II (SADP II), 2019b, p21
- ³⁶⁵ Post-Harvest Innovation, Bushbuck Ridge Agricultural Development Plan, Annex 4 – Smallholder Agriculture Producer Budgets, 2016, p2 (www.postharvestinnovation.org.za/wp-content/uploads/2017/07/Annex-4_Smallholder-Budgets.pdf).
- ³⁶⁶ Most often 50% per month.
- ³⁶⁷ The 3-6 months needed for vegetable crops to mature is much longer than is generally offered by mashionisas.
- ³⁶⁸ See, e.g., FAO, Emergency Response to the El Nino-Induced Drought in Lesotho, 2016
- ³⁶⁹ For a detailed analysis of the operation of such groups in Lesotho, see CARE for Basotho, Caritas and 4D Climate Solutions, Explorative Study: Empowering Women through Microfinance-Based Entrepreneurial Interventions, 19 August 2020
- ³⁷⁰ Ibid., pp25-7
- ³⁷¹ See footnote 21.
- ³⁷² Those in developed countries tended to be consumer-based cooperatives.
- ³⁷³ IFAD, Rural Financial Intermediation Programme, Project Performance Evaluation, 2017, ppvi, vii
- ³⁷⁴ World Bank, op. cit., 2021, pp13, 15
- ³⁷⁵ World Bank, op. cit., 2019b, pp14, 20
- ³⁷⁶ World Bank, op. cit., 2019a, p9
- ³⁷⁷ These include, for example, World Vision, ActionAid UK, TEBA Development, which supports returning and past workers in South Africa's mining industry, and Country Crest, an Irish fresh produce producer and marketer which specializes in potatoes and onions.
- ³⁷⁸ World Bank, op. cit., 2018a, p42
- ³⁷⁹ Seeds 365 Agric reported that all of its members' potatoes were washed by hand, a very labour intensive process. A communally shared washing machine, not a very expensive capital item, could save considerably on labour costs. (Personal communication, Mr Thapeli Tjabane, Seeds 365 Agric, 16 February 2021)
- ³⁸⁰ World Bank, op. cit., 2018a, p37
- ³⁸¹ World Bank, op. cit., 2019a, p8
- ³⁸² Ibid., p7
- ³⁸³ World Bank, op. cit., 2018a, p43
- ³⁸⁴ World Bank, op. cit., 2019a, p9
- ³⁸⁵ Imani Development, Final Evaluation Report: Building Market and Climate resilience for Sugar Farmers in Swaziland (for Fairtrade Foundation and Jersey Overseas Aid Commission), 2019, pp5-14
- ³⁸⁶ See footnote 229 above.
- ³⁸⁷ Own parenthesis
- ³⁸⁸ Ibid., p46
- ³⁸⁹ World Bank, op. cit., 2019, p21
- ³⁹⁰ Ibid.

6. LESOTHO APPENDICES

6.1 Appendix A - Value chain selection longlist

Commodity / VC	Justification
LIVESTOCK	
1. sheep/wool	<ul style="list-style-type: none"> • most important ag. export for Lesotho • income mainstay of mountainous areas • major priority for government • WAMPP coming to an end in 2022 • herd upgrades costly for producers • producers' incomes subject to substantial fluctuations • key store of value, component of food security • access to affordable finance a challenge • significant unexploited potential for value addition
2. goats/mohair	<ul style="list-style-type: none"> • as for sheep, although numbers smaller
3. poultry, pigs	<ul style="list-style-type: none"> • important contributors to food security in many low-income households • significant potential for commercialisation, employment generation; more labour intensive than most other livestock value chains • some degree of 'local market protection' from low-priced South African imports; often sold live to local consumers • small-scale piggeries, poultry production identified by World Bank's Smallholder Agricultural Development Project Phase II (SADP2) as high potential value chains for support • substantial short, medium and long term capital needs; short term needs much higher than most other livestock value chains • access to affordable finance a major challenge
FIELD CROPS	
4. maize	<ul style="list-style-type: none"> • by far most widely grown crop, mostly for household food security • most important staple cereal for most rural households • commercial competitiveness difficult, but maximizing marketable surpluses important for producers and consumers • major priority for government, but public expenditure on maize poorly spent • yields generally low, could be much higher if better access to production capital • particularly susceptible to climate fluctuations; need to increase household resilience • significant up- (especially local seed production for poor households) and downstream value addition potential
5. sorghum	<ul style="list-style-type: none"> • as for maize, but: • second most widely grown crop • much less expenditure by government • more resilient to climate fluctuations • only cereal crop prioritized by World Bank's Agricultural Productivity Programme for Southern Africa (APPSA) in Lesotho

6. cannabis/hemp	<ul style="list-style-type: none"> • widely grown, especially in mountainous areas • important informal/illegal source of household income • although initial indications not promising, smallholder production could possibly take advantage of new medicinal market – more thorough investigation needed • if findings even partly positive, there may be: <ul style="list-style-type: none"> » substantial value addition, employment, income generation potential » increasing needs for short and medium term capital; 'climate-proofing' will increase » access to affordable finance challenges; substantial scope for financial intervention by FMT to assist smallholders
HORTICULTURE	
7. deciduous fruit	<ul style="list-style-type: none"> • Lesotho climate particularly well suited, especially mountains, foothills, Senqu Valley areas with access to water, although logistical and other challenges • high value crop with substantial commercialisation, income generation potential on smallholdings, but also contributes to household food security, nutritional needs • government priority • major focus of WB's PSCEDP2 • significant export potential, challenges • significant up- and downstream value addition potential • substantial needs for short, medium and long term capital; 'climate-proofing' will increase • access to affordable finance challenges; substantial scope for financial intervention by FMT to assist smallholders
8. vegetables	<ul style="list-style-type: none"> • ubiquitous, important contributor to household food security, nutritional needs, income generation • significant up- and downstream value addition potential • substantial needs for short and medium term capital; 'climate-proofing' will increase • access to affordable finance challenges; substantial scope for financial intervention by FMT to assist smallholders
9. potatoes	<ul style="list-style-type: none"> • as for vegetables, but also identified by WB's SADP2 as high potential value chain for support
OTHER	
10. clean energy	<ul style="list-style-type: none"> • electricity in Lesotho exceptionally 'clean' • it will be valuable to explore: <ul style="list-style-type: none"> » whether there is scope for FMT to piggyback on initiative recently launched by World Bank to extend grid into rural areas » whether the decrease in the price and increase in efficiency of solar panels over the past decade has reduced the need for subsidies, thereby making it worthwhile for FMT to examine ways of improving supplier and consumer credit to facilitate access to solar energy for rural households, for example, for solar water pumps » whether there is scope for synergy between any agricultural/rural clean energy intervention that FMT may undertake and African Clean Energy's ACE One clean energy initiative, which is particularly appropriate for rural/agricultural households.

6.2 Appendix B – Lesotho value chain scoring matrix

6.2.1 Sheep and wool

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Sheep / Wool		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%	5	0,5	"There is current demand and growth potential Foundation of Lesotho's ag economy - exports"
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	5	0,25	Yes - almost all wool producers are small scale producers - part of a competitive VC
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	"Textile production is cotton-based or wool blend but imported Very limited in terms of current VA Potential e.g. in expanding grading "
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	Dominant output by volume & value
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	Contribution to HH income significant but very limited scope in terms of prospective opportunities
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	4	0,2	Many smallholders are women - scope for inclusion, but generally lower stock
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)	4%	1	0,04	"Generally negative impacts Scope for improving range management"
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall)	4%	1	0,04	"Lack of rangeland management - susceptible to climate change Scope for improvement e.g. zero grazing & fodder management"

c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	5	0,1	Foot & Mouth affects market but no impact on consumer health
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%		0	??? Included as a food VC or not?
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%		0	
6	CATEGORY	NATIONAL PRIORITY & SUSTAINABILITY	20%	Score	Weighted score	Justification
a	Institutional	Donor activity is currently supporting / has recently supported this VC	10%	4	0,4	Support from WAMPP & SADP but gov refocus towards horticulture
b	Institutional	Coherence with National Policies	10%	3	0,3	"Important export earner therefore high national priority but... Prevalent policies in recent years have been counterproductive"
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	Access to finance is very limited for SHF - mostly remittances
b	Institutional	Opportunities to increase access to finance exist and can be capitalized on	5%	4	0,2	Good opportunities - scope to revisit and consider different modes of financing
TOTAL (max score = 5 points)			100%		3,38	
					75%	

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 Goat and mohair

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Goat / Mohair		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%	5	0,5	"Good market outlook - increasing demand Under the same regulation as wool"
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	5	0,25	
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	
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%	3	0,3	
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	4	0,2	
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)	4%	1	0,04	
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall)	4%	1	0,04	
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	5	0,1	
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%		0	
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%		0	
6	CATEGORY	NATIONAL PRIORITY & SUSTAINABILITY	20%	Score	Weighted score	Justification
a	Institutional	Donor activity is currently supporting / has recently supported this VC	10%	4	0,4	
b	Institutional	Coherence with National Policies	10%	3	0,3	
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	
b	Institutional	Opportunities to increase access to finance exist and can be capitalized on	5%	4	0,2	
TOTAL (max score = 5 points)			100%		3,38	
					75%	
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 Pigs and poultry

SELECTED KEY & ADDITIONAL CRITERIA		Weight of criteria of total %	Poultry / Pig		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	"Both are small HH activities but restricted to local/ informal markets Egg production informal but borderline self sufficient Scope for growing informal market "

b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	2	0,1	
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	Very little potential for value added beyond slaughter
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output "	5%	1	0,05	Very low
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	SADP optimistic but hard to gauge genuine potential
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	3	0,15	Even small scale production for local/informal markets has positive impacts for women
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)	4%	4	0,16	"Currently small scale so minimal impact Chicken manure goes to compost"
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall)	4%	4	0,16	Not particularly vulnerable
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	3	0,06	"Salmonella risk Slaughter conditions - currently informal so higher risk"
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	Chickens widely kept & eggs widely consumed
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%	4	0,4	Included in SADP target activities and some other donor programmes
b	Institutional	Coherence with National Policies	10%	4	0,4	"Part of strategic growth plan - pig meat, poultry meat & eggs One of 77 investment priorities"
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%	3	0,3	Some small scale producers involved in savings groups
b	Institutional	Opportunities to increase access to finance exist and can be capitalized on	5%	2	0,1	"Additional donor & national attention may open up new routes to finance "
TOTAL (max score = 5 points)			100%		2,98	
					75%	

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 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%	1	0,1	Market swamped by SA - very little market potential
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	1	0,05	No room for small scale producers to compete
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%	1	0,1	"Very limited Really only for own consumption & stock feed, dehussing activities etc"
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output"	5%	3	0,15	Widely grown but small contribution to agricultural output
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	Very limited opportunities for VC integration
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	1	0,05	Land ownership issue
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)	4%	1	0,04	Monocropping, impact on topsoil, fertilizer is subsidised and may not be appropriately administered.
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall)	4%	1	0,04	Attempts to improve / bring in drought resistant varieties but to very limited effect
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	5	0,1	"Aflatoxin not such an issue due to dry climate Inputs not widely used re residues"
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	Large component of HH diet
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	2	0,1	Some trials to introduce fortified varieties but very limited uptake and most HH grow their own
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	No known donor programmes
b	Institutional	Coherence with National Policies	10%	4	0,4	Government input subsidy programme

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	"Larger scale producers may benefit from input subsidy programme No other activities"
b	Institutional	Opportunities to increase access to finance exist and can be capitalized on	5%	4	0,2	Opportunities exist
TOTAL (max score = 5 points)			100%		2,18	
					44%	

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 Sorghum

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Sorghum		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%	1	0,1	same as maize
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	1	0,05	
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%	1	0,1	same as maize
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	Smaller contribution than maize to gross ag output

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	
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)	4%	1	0,04	
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall)	4%	4	0,16	More resilient than maize - drought tolerant
c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	5	0,1	Same as maize
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	Not grown as widely as maize but still key component of diets and drought resilience increases resilience
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%	3	0,3	Support from APPSA - not top priority but only cereal crop included
b	Institutional	Coherence with National Policies	10%	1	0,1	No national support for the crop identified to date
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	Same as maize
b	Institutional	Opportunities to increase access to finance exist and can be capitalized on	5%	4	0,2	
TOTAL (max score = 5 points)			100%		2,15	
					43%	

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 Cannabis and hemp

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Cannabis / Hemp		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%	1	0,1	A possibility in the long term but currently very poor i.e. not accessible to Lesotho producers, though illegal trade occurs
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	1	0,05	
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%	1	0,1	"Not at SHF level Bigger operators - insufficient capacity to meet strict regulatory requirements Scope in theory but not in practice"
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output"	5%	1	0,05	No contribution to legal/ legitimate ag output
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	
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)	4%	3	0,12	

b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall)	4%	3	0,12	
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%		Weighted score	Justification
a	social	Contribution of VC to HH food security i.e. availability of sufficient calories, mainly referring to staple crops	5%		0	
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%		0	
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	
b	Institutional	Coherence with National Policies	10%	1	0,1	
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%	1	0,1	
b	Institutional	Opportunities to increase access to finance exist and can be capitalized on	5%	1	0,05	
TOTAL (max score = 5 points)			100%		1,25	

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 Deciduous fruits

SELECTED KEY & ADDITIONAL CRITERIA		Weight of criteria of total %	Deciduous Fruit e.g. peaches & apples		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	"Low available supply chain capacity in SA Starfruit want to take over 1,000 Ha Some market potential - millennium challenge irrigation project boost Local demand"
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	3	0,15	Not at present but potential with improved infrastructure
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	"Significant potential - both upstream & downstream Would require significant investment. Difficult to be competitive with local VA"
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output"	5%	1	0,05	Currently no discernible contribution
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	"Starfruit - possible integration of SHF through outgrower schemes Potential but as yet unproven. If commercial production is established horticulture is labour intensive "
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	4	0,2	"High potential if opportunities materialise. Picking, grading & packing opportunities good for women"
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)	4%	4	0,16	"Positive impacts from tree crops - potential synergies e.g. intercropping Potentially water intensive "
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall)	4%	4	0,16	Irrigation protects from rainfall variability & high altitude suggests increasing temps will be less severely felt.

c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	5	0,1	Possible pesticide residues but very limited risk
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	Limited potential to increase food availability at household level
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	5	0,25	Very strong potential to increase dietary diversity and improve micronutrient consumption
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	Main donor priority
b	Institutional	Coherence with National Policies	10%	5	0,5	High national priority e.g. targeting irrigation development towards fruit
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%	5	0,5	"Currently no financial inclusion - industry not yet developed Long lead times for tree crops"
b	Institutional	Opportunities to increase access to finance exist and can be capitalized on	5%	3	0,15	"Donor & national focus suggests that needs will be catered for There may still be opportunities to help develop that or target emerging unmet needs"
TOTAL (max score = 5 points)			100%		3,82	
					76%	

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

6.2.8 Vegetables

ELECTED 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%	4	0,4	"Strong local demand but extent unknown. Limited export potential"
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	3	0,15	"Not substantial but yes for the local market Key restraint is seasonality"
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	"Some upstream e.g. seedling industry (though there is interference from donor programmes) Downstream potential is limited"
3	CATEGORY	INCOME, EMPLOYMENT & INCLUSION	20%	Score	Weighted score	Justification
a	economic	"Size of contribution to gross value of agricultural output"	5%	1	0,05	Difficult to gauge due to informal production but likely limited
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	"There is potential but not great Commercial production would create employment opportunities, but as yet unproven"
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	4	0,2	"High potential if opportunities materialise. Picking, grading & packing opportunities good for women"
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)	4%	4	0,16	Generally good but accounting for water needs and possible pesticide use, noting that organic matter will likely be used.
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall)	4%	3	0,12	"Plan is for enclosed production. Looking at CA where possible. There is some risk/vulnerability nonetheless "

c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	5	0,1	Possible pesticide residues but very limited risk
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	More widely grown than fruit and contribute considerably to HH diets
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	5	0,25	Very strong potential to increase dietary diversity and improve micronutrient consumption
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	Main donor priority
b	Institutional	Coherence with National Policies	10%	5	0,5	High national priority e.g. targeting irrigation development towards fruit
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%	5	0,5	Currently no financial inclusion - industry not yet developed
b	Institutional	Opportunities to increase access to finance exist and can be capitalized on	5%	3	0,15	"Donor & national focus suggests that needs will be catered for There may still be opportunities to help develop that or target emerging unmet needs Is there support to savings & credit groups?"
TOTAL (max score = 5 points)			100%		3,63	
					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

6.2.9 Potatoes

SELECTED KEY & ADDITIONAL CRITERIA			Weight of criteria of total %	Potatoes		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	Largely same as veg but good potential for seed potato production
b	economic	Substantial percentage of local producers have the capacity or potential to produce the commodity competitively.	5%	3	0,15	
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	"Potentiall better downstream VA opportunities than for other veg Certainly better prospects for upstream - seed potato"
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	No data available but an important veg crop so likely higher than other veg
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	Slightly better opportunities than other veg - more aligned with fruit
c	social	Inclusion of disadvantaged groups esp. women, youth	5%	4	0,2	Same as other veg
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)	4%	4	0,16	Potential benefits of rotation but generally aligned with other veg
b	environment	Resilience of the value chain functions to climate change / environmental factors (e.g. drought, erratic rainfall)	4%	3	0,12	Vulnerable to drought

c	environment	Health/food safety risks to consumers (e.g. tobacco, groundnuts due to aflatoxin) (score low for high risk)	2%	5	0,1	Very limited risk
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	Important for HH food security
b	social	Contribution to improved nutritional status at HH level e.g. improved dietary diversity	5%	2	0,1	Much lower than other veg in terms of micronutrient content
6	CATEGORY	NATIONAL PRIORITY & SUSTAINABILITY	20%	Score	Weighted score	Justification
a	Institutional	Donor activity is currently supporting / has recently supported this VC	10%	4	0,4	"Some donor activity in recent years. APPSA"
b	Institutional	Coherence with National Policies	10%	4	0,4	Potato & seed within national priorities
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%	5	0,5	No known sources of access to finance
b	Institutional	Opportunities to increase access to finance exist and can be capitalized on	5%	3	0,15	
TOTAL (max score = 5 points)			100%		3,63	
					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

7. REFERENCES

- ACE One, www.africancleanenergy>ace-one
- Action Aid, Lesotho, What We Do, actionaid.org.uk/about-us/where-we-work/lesotho
- African Development Bank, Red Meat Production Feasibility Study in Lesotho – Detailed Feasibility Study Report and project Implementation Plan, February 2019
- American Wind Energy Association, Agriculture, awea.org/wind-101/benefits-of-wind/wind-in-my-community/agriculture
- Bajpaye, A., The Application of Solar Energy in Powering Agriculture, 28 February 2019, cleanleap.com>application-solar-energy-powering-agriculture
- Bertelsmann-Scott, T, The SADC EPA: How Can the Agreement Contribute to Lesotho’s Agriculture and Agro-Processing Development, South African Institute of International Affairs, Policy Briefing 178, July 2018
- Bertelsmann-Scott, T., et al., The SADC EPA Opportunities in the Agro-processing Sectors of South Africa and Lesotho, SA Institute of International Affairs, Occasional Paper 282, June 2018
- CARE for Basotho, Caritas and 4D Climate Solutions, Explorative Study: Empowering Women through Microfinance-Based Entrepreneurial Interventions, 19 August 2020
- CARE for Basotho, Caritas, et al., Report 1: Empowering Women through Microfinance-Based Entrepreneurial Interventions, 2020
- CARE, South Africa and Lesotho, September 2014, pp1-2, care.org/wp-content/uploads/2020/06/South-Africa-Lesotho-Factsheet-September-2014.pdf
- Catholic Relief Services, CRS in Lesotho, crs.org/our-work-overseas/where-we-work/lesotho
- Catholic Relief Services, Experience: Restoring Ecosystems and Livelihoods in Lesotho (REAL), 2014-2019, PowerPoint
- Catholic Relief Services, Innovations for Integrated Watershed Management: Approaches, Outcomes and Lessons Learnt from Interventions on Restoring Ecosystems and Livelihoods in Lesotho, 2018
- De la Porte, M, A Financial Analysis of Agricultural Production Systems in the Warm Bokkeveld, M. Agricultural Sciences thesis, University of Stellenbosch, 2019
- Delegation of the EU to Lesotho, The EU and Lesotho Government Allocate European Development Fund (EDF) Funds for COVID-19 Response, Press Release, 1 October 2020
- Dresden, D., What is the Difference between Hemp CBD and Cannabis CBD?, Medical News Today, 23 July 2020, medicalnewstoday.com/articles/hemp-cbd-vs-cannabis-cbd
- Energypedia, Lesotho Energy Situation, (undated)
- Energypedia, Solar Energy in Powering Agriculture, (undated), energypedia.info/wiki/Solar_Energy_in_Powering_Agriculture
- Energypedia, Wind Energy in Powering Agriculture, 14 July 2020, energypedia.info/wiki/Wind_Energy_in_Powering_Agriculture
- ESI Africa, AfDB Approves Funding for Lesotho Solar PV Project, 14 August 2017, www.esi-africa.com>renewable-energy>afdb-approves
- FANRPAN, Our Approach, fanrpan.org/home
- FAO, Building Resilience to Drought in Lesotho, fao.org/3/ca0143en/CA0143EN.pdf
- FAO, COVID-19: Channels of Transmission to Food and Agriculture, 2020
- FAO, Emergency Response to El Nino-Induced Drought in Lesotho, fao.org/emergencies/fao-in-

[action/projects/detail/en/c/454211/](#)

FAO, Emergency Response to the El Nino-Induced Drought in Lesotho, 2016

FAO, Lesotho Country Programming Framework, 2013-2017

FAO, Seed Security Assessment, Lesotho 2016 – Response to Drought Effects Related to El Nino, 2016

Financial Sector Deepening, Zambia (FSDZ), Initial Results from Our Working Capital Access Pilot Are Promising, unpublished e-mail

FinMark Trust, 16&30 November Bi-monthly Report, 2020

FinMark Trust, FinScope Micro, Small and Medium Enterprises Survey Lesotho, 2016, Pocket Guide

FinMark Trust, Terms of Reference, To Conduct and Agriculture Finance Scoping Exercise in Botswana, Lesotho and Malawi, July 2020

FSD Zambia, Unlocking Financial Opportunities for Micro and Small Enterprises, Focus Note, January 2021, p8

Global Forum for Rural Advisory Services (GFRAS), Lesotho, March 2014

Government of Lesotho, Food and Nutrition Coordinating Office, Lesotho Food and Nutrition Strategy and Costed Action Plan (2019-2023), March 2019

Government of Lesotho, Lesotho Review – Agriculture, 2019

Government of Lesotho/African Development Bank, Red Meat Production Feasibility Study in Lesotho, Detailed Feasibility Report and Project Implementation Plan, 2019

Green Climate Fund, Concept Note, Lesotho Energy Programme, 29 November 2018

GTZ, Financing of Solar Home Systems in Developing Countries, Volume 1, Main Report, 2001

Gwimbi, P., et al., A Comprehensive Scoping and Assessment Study of Climate-Smart Agriculture (CSA) in Lesotho, Food, Agriculture, Natural Resources Policy Analysis Network (FANRPAN), 30 April 2014

Hart, C., Time to Let Go of That Prejudice against Pot so SA Can Reap the Astonishing Potential, Business Day, 21 September 2020

How Wool is Made, www.madehow.com>Volume1>Wool

Huber-Lee et al., Lesotho: Tackling Water Insecurity in a Changing Climate, Stockholm Environment Institute, 1 January 2016

Hunter, J, The Economics of Wool and Mohair Production and Marketing in Lesotho, Farming Systems Research Division, Ministry of Agriculture, Lesotho, Research Division Report RD-R-80, 1987

IFAD (WAMPP), Analysis of the Agriculture Marketing (Wool and Mohair Licensing) Regulations 2018 and Subsequent Amendments 2019 (draft), 2020

IFAD, Kingdom of Lesotho, 2018 Country Strategy and Opportunity Paper (COSOP) Results Review, Main Report and Appendices

IFAD, Kingdom of Lesotho, Country Strategic Opportunities Programme, 2020-2025

IFAD, Kingdom of Lesotho, Rural Finance Intermediation, Project Performance Evaluation, November 2017

IFAD, Kingdom of Lesotho, Wool and Mohair Promotion Project (WAMPP), Final Project Design Report, September 2014

IFAD, Lesotho Adaptation to Small-Scale Agricultural Production (LASAP), Mid-Term Review/

Supervision Report, April 2020

IFAD, Lesotho, Smallholder Agriculture Development Project, Supervision Report, 23 August 2019

IFAD, Lesotho, WAMPP Supervision Report, 25 August 2020

IFAD, Rural Financial Intermediation Programme, Project Performance Evaluation, 2017

Imani Development (South Africa), Technical Proposal, Agricultural Scoping Study, July 2020

Imani Development, Final Evaluation of the Lesotho Horticulture Productivity and Trade Development Programme, March 2017

Imani Development, Final Evaluation Report: Building Market and Climate resilience for Sugar Farmers in Swaziland (for Fairtrade Foundation and Jersey Overseas Aid Commission), 2019

International Fund for Agricultural Development (IFAD), Wool and Mohair Promotion Project (WAMPP), Final Project Design Report, 2014

Jefferis, K., et al., Making Access Possible (MAP) Lesotho: Demand, Supply, Policy and Regulation, Diagnostic Report, FinMark Trust/CENFRI/UNDP, 2014, p13; data for farmers derived from Lesotho FinScope Consumer Survey, 2011

Kingdom of Lesotho, Bureau of Statistics, Lesotho Livestock Report, 2013/2014

Kingdom of Lesotho, Bureau of Statistics, Lesotho Livestock Report, 2020

Lesotho Times, Government Pushes Indigenisation Regulations, 21 October 2020 (<http://lestimes.com/govt-pushes-indigenisation-regulations/>)

Louw, M, Mohair Production and Marketing in South Africa, www.southafrica.co.za/mohair-production-and-marketing-in-south-africa.html

MAFS, Department of Agricultural Research, Agricultural Productivity Programme for Southern Africa (APPSA), Project Implementation Manual, 15 April 2019

Making Access Possible (MAP), Lesotho Financial Inclusion Country Report, 2014

Matebesi-Ranthimo, P., et al., WAMPP, Merino Sheep and Angora Goats Culling and Exchange Manual in Lesotho, undated (2019?)

Mineworkers Development Agency, micjhb.co.za/mineworkers-development-agency/

Ministry of Agriculture and Food Security, Department of Agricultural Research, Agricultural Productivity Programme for Southern Africa (APPSA), Project Implementation Manual, 15 April 2019

Mkhabela, T., How COVID-19 is Impacting on South Africa's Agriculture, IOL, 19 March 2020, iol.co.za/business-report/opinion/how-covid-19-is-impacting-on-sas-agriculture-45196311

Mohair South Africa, The Fibre, www.mohair.co.za/mohair-fibre/

National Agricultural Council/ComMark Trust, Sub-Sector Study, Deciduous Fruit, 2007

Office of the Prime Minister, Kingdom of Lesotho, Zero Hunger Strategy Review, 2018

Optimizing the Pre-Harvest Management of Orchards to Maximize the Storage and Eating Quality of Fruits (www.ahbdapples.azurewebsites.net/post-harvest-section1a.asp)

Phiri, E. et al., Initial Results from Working Capital Access Promising, FSD Zambia blog report, 4 July 2019 (info@fsdzambia.org)

Post-Harvest Innovation, Bushbuck Ridge Agricultural Development Plan, Annex 4 – Smallholder Agriculture Producer Budgets, 2016, p2 (www.postharvestinnovation.org.za/wp-content/uploads/2017/07/Annex-4_Smallholder-Budgets.pdf)

Powell, A., Lesotho's Budding Cannabis Industry Sparks High Hopes, 12 February 2020,

voanews.com/science-health/lesothos-budding-cannabis-industry-sparks-high-hopes

Prinsloo, L., et al., One of the Poorest Countries in Africa Wants to Send Its Legal Marijuana All over the World, Bloomberg, 19 December 2019

Rantso, T., et al., Agriculture and Food Security in Lesotho: Government-Sponsored Block Farming Programme in the Berea, Maseru and Leribe Districts, Cogent Food and Agriculture, 5(1), 1657300, 2019

Rantso, T., et al., The Contribution of Lesotho Dairy Products to the Livelihoods of Dairy Farm Households in Maseru and Berea Districts in Lesotho, International Journal of Rural Management, v16, Issue 2, June 2020, journals.sagepub.com/doi/abs/10.1177/09730930383

SADC, Regional Agricultural Policy, Country Summary Agricultural Policy Review Reports, 2011

Sensi Seeds, Cannabis in Lesotho – Laws and Attitudes, 4 June 2020

South Africa, Department of Agriculture, Forestry and Fisheries (DAFF), A Profile of the South African Wool Market Value Chain, 2016

South African Mohair Cluster, Lesotho Mohair Primary Production Research Report, 2019, PowerPoint

Statista, Lesotho: Distribution of Gross Domestic Product (GDP) Across Economic Sectors from 2009 to 2019, 2020

The Post (Lesotho), How M7 Million Was Lost in Cannery Project, 31 March 2017

Trading Economics, Lesotho Unemployment Rate, 1991-2019 Data, tradingeconomics.com/lesotho/unemployment-rate

Tshabalala, P, Estimating the Economic Rate of Return to Plum Research Investments in South Africa, Agricultural Research Council, 2015

UNDP, Assessment of the Socio-Economic Impact of COVID-19 on the Kingdom of Lesotho, UNDP, 2020

UNDP, Lesotho Renewable Energy-Based Rural Electrification Project (LREBRE), Draft Terminal Evaluation Report, 2013

UNDP, Solar Panels Light Rural Districts of Lesotho, (undated), www.undp.org>undp>home>ourwork>ourstories

USAID Trade Hub Southern Africa, Lesotho Textile and Apparel Brief, (undated), satradehub.org>stories>downloads>pdf>brochures

USAID, Impact of COVID-19 on Women's Customary Land Rights in Southern Africa, December 2020

Vickers, E., The Small African Kingdom That's Perfect for Growing Cannabis, but Maybe Not for Regulating It, Quartz Africa, 9 November 2019

Wikipedia, Cannabis in Lesotho, (undated)

Wikipedia, www.en.wikipedia.org/wiki/Wool_top#mw-head

World Bank et al., Climate-Smart Agriculture in Lesotho

World Bank, Climate-Smart Agriculture in Lesotho, 2018

World Bank, Climate-Smart Agriculture in Lesotho, 2019

World Bank, Environment and Social Management Framework: Lesotho Second Private Sector Competitiveness and Economic Diversification Project (PSCEDP II) – Horticulture

World Bank, Implementation Completion and Results Report ... for the Kingdom of Lesotho, Smallholder Agriculture Development Project (SADP I), 25 January 2021

World Bank, Kingdom of Lesotho, Agriculture Public Expenditure Review, 2019

World Bank, Kingdom of Lesotho, Public Expenditure Review: Improving Expenditure Efficiency for Inclusive Development and Growth, Report no. 127317, June 2018

World Bank, Lesotho Poverty Assessment: Poverty and Inequality Remain Widespread Despite Decline, 18 December 2019

World Bank, Lesotho Renewable Energy and Energy Access Project, projects.worldbank.org/en/projects-operations/project-detail/P166936

World Bank, Lesotho Second Private Sector Competitiveness and Economic Diversification Project (PSCEDPII), Appendix 7 – Horticulture, 2016

World Bank, Lesotho Water Security and Climate Change Assessment, 2016

World Bank, Linking Smallholders to Markets: A Supplier Development Programme for Vegetable Farmers in Lesotho, 2019

World Bank, Loans and Credits, 30 January 2020: Lesotho – Renewable Energy and Energy Access Project

World Bank, Project Appraisal ...to Kingdom of Lesotho ... for Smallholder Agriculture Development Project (SADP I), 2011

World Bank, Project Appraisal ...to Kingdom of Lesotho ... for Smallholder Agriculture Development Project II (SADP II), 2019

World Bank, Project Appraisal Document ... Smallholder Agriculture Development Project II, 8 May 2019

World Bank, Project Appraisal Document, Private Sector Competitiveness and Economic Diversification Project, Lesotho (2007)

World Bank, Project Appraisal on ... Kingdom of Lesotho ... Smallholder Agriculture Development Project - II, 8 May 2019

World Bank, Project Helps Lesotho's Rural Farmers Become Certified Exporters, feature article, 9 November 2016

World Bank, Unlocking the Potential of Lesotho's Private Sector: A Focus on Apparel, Horticulture and ICT, 2018

World Integrated Trade Solution (WITS), Lesotho Trade Statistics, 2017, wits.worldbank.org/CountryProfile/en/LSO

World Vision, Lesotho, Our Work, wvi.org/Lesotho/our-work

World Wildlife Fund, Understanding Climate Risk to South Africa's Agri-Food System: A Commodity Value Chain Analysis of Apples, 2016

www.worldatlas.com>articles>the-world-s-top-wool-producers



An Agriculture Finance Scoping Exercise in Lesotho | Agricultural Finance Scoping

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