

CULTIVATING SMALLHOLDER INCLUSION IN SOUTHERN AFRICA'S MACADAMIA NUT VALUE CHAINS

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ABSTRACT

This paper examines the potential for developing a macadamia nut value chain within Southern Africa, while also exploring the potential for incorporating smallholder producers into the macadamia nut industry. Using the country case studies of South Africa, Mozambique and Malawi, the paper examines the development of the macadamia nut sector in each country, highlighting the challenges faced and positive developments made in incorporating smallholders into the sector, and examining the role of African markets and producers in the international trade in macadamia nuts. The paper concludes with an understanding of the specific requirements policymakers would need to implement if a regional value chain were to be developed for the macadamia nut industry.

ABOUT THE AUTHOR

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ABBREVIATIONS AND ACRONYMS

ACE	Agricultural Commodity Exchange for Africa
AfDB	African Development Bank
AGOA	African Growth and Opportunity Act
CAADP	Comprehensive Africa Agriculture Development Programme
ASWAp	Agriculture Sector Wide Approach Programme
COMESA	Common Market for Eastern and Southern Africa
DAFF	Department of Agriculture, Forestry and Fisheries
dti	Department of Trade and Industry
EU	European Union
FDA	Agriculture Development Fund (Mozambique)
FDI	foreign direct investment
FIDP	Farm Income Diversification Project
forex	foreign exchange
FTA	free trade agreement
GDP	gross domestic product
IDC	Industrial Development Cooperation
INCAJU	National Cashew Institute (Mozambique)
LDCs	least-developed countries
MBS	Malawi Bureau of Standards
MITC	Malawi Investment and Trade Centre
MNL	Macadamia Niassa Lda
MT	metric tonnes
NIS	nut in shell
PEDSA	Country Strategic Plan for Agricultural Development (Mozambique)
PNISA	Agricultural National Investment Plan (Mozambique)
PPP	public–private partnership
R&D	research and development
SADC	Southern African Development Community
SAMAC	Southern African Macadamia Growers' Association
SPS	sanitary and phytosanitary
SUBTROP	South African Subtropical Growers Association
UK	United Kingdom
US	United States
VAT	value-added tax
VCs	value chains
WTO	World Trade Organization

INTRODUCTION

Developing regional value chains (VCs) and improving agro-processing in Southern Africa is a core focus of SADC, as reflected in the SADC Regional Industrialisation Roadmap 2015–2063. The Industrialisation Roadmap focuses on developing regional VCs where the SADC region can capitalise on opportunities and future strengths, and develop VCs that are strong enough to participate in global VCs. The Industrialisation Roadmap has three strategic pillars – industrialisation, competitiveness and regional integration – and the development of VCs across a wide range of sectors will be used to complement and fulfil these strategic goals.¹ ‘VCs’ describe the entire range of activities through different phases of production required to bring a product or service from conception to the final consumer, and disposal thereafter.²

As VCs become more sophisticated and global investment policy increasingly focuses on how global VCs can be utilised to improve socio-economic development in least-developed countries (LDCs) and developing countries, African countries need to be incorporated into global VCs, contribute to value-addition processes, and share in these profits. Within Africa, efforts often focus on how agricultural VCs can be utilised to incorporate smallholder farmers into upscaling, enabling them to access export markets and improve the quality and quantity of produce through the technological advances and industrialisation that form part of agro-processing.³ Yet VC creation should not be viewed through the lens of export strategies alone – instead, a holistic approach encompassing both upstream and downstream VC development is necessary in order for regional synergies to work, while contributing to the socio-economic development of smallholder farmers.

Regardless of whether regional VCs are a means to an end that displace foreign trade or whether they should be used as a mechanism to compete more efficiently in global VCs, the reality remains that African producers require greater levels of both intra-regional trade and access to foreign markets. In order for such efforts to be made a reality, governments must have the political will and necessary infrastructure; the broader investment climate must be conducive to developing cross-border and regional linkages; and industry leaders must be willing and active participants in driving the creation of regional VCs.

Malawi is a low-income, landlocked country where agriculture is at the heart of the economy. It is therefore the ideal country case study to examine the main agricultural challenges that LDCs face in accessing global VCs, developing their agro-processing sector, and integrating into regional VCs. The second section of this paper examines

1 SADC Secretariat, *Industrialisation Strategy and Roadmap 2015–2063*. Gaborone: SADC Secretariat, April 2015.

2 Kaplinsky R & M Morris, *A Handbook for Value Chain Research*. Brighton: International Development Research Centre, 2001.

3 The Food and Agriculture Organization (FAO) defines agro-processing as ‘a subset of manufacturing that processes raw materials and immediate products derived from the agricultural sector’. See FAO, ‘The Agroprocessing Industry and Economic Development’, <http://www.fao.org/docrep/w5800e/w5800e12.htm>, accessed 19 January 2018.

Malawi's agricultural framework and investment climate, and unpacks existing business challenges in its agricultural sector. It also discusses ongoing projects primarily in the context of donor-led initiatives (because private sector participation is limited) that aim to incorporate smallholder farmers into formal VCs and enhance the policy framework within the country.

The paper's third section provides an analysis of Malawi's macadamia nut sector in relation to that of South Africa and Mozambique, in an attempt to understand the differences and similarities in the challenges this industry faces in each country. It also looks at the practices currently being implemented in South Africa that have helped it to become the top global producer of macadamia nuts – surpassing Australia, the former top global producer. As a high-value export crop, macadamia nuts are a focal point of the South African government's VC development and industrialisation; Mozambique has prepared legislation on enhancing macadamia nut production; and the Malawian government is interested in promoting the sector among smallholder producers. Many South African farmers also grow macadamia nuts in Mozambique, and the fourth and fifth sections provide important insights into regional trade dynamics and the potential challenges in furthering a regional VC. The paper concludes with challenges impeding the creation of a regional macadamia nut VC, and policy recommendations on how regional VCs can be built and utilised among African agro-processors and producers to better position themselves in regional and global VCs.

Malawi spends an average of 10% of its annual national budget on improving its agricultural sector. Despite this investment, agricultural GDP growth has averaged at 4% per year since 1968

FARMING IN MALAWI: OPPORTUNITIES FOR GROWTH AND CHALLENGES

Agriculture is an integral part of Malawi's economy and society: almost 85% of all households are dependent on agricultural activities for survival,⁴ and 64% of Malawi's population is employed in agriculture.⁵ Malawi remains heavily reliant on agricultural production, which constitutes approximately 30% of the country's gross domestic product (GDP) and accounts for up to 75% of export earnings.⁶ As an LDC, Malawi has high poverty levels: in 2016 it had a gross national income per capita of \$250,⁷ and in 2010 33.3% of its population lived below the poverty gap (calculated at \$1.90 per day).⁸

The country has pursued an agricultural-led development strategy since 1964, when the initial focus was on exportable cash crops. The sector remains dominated by tobacco and maize production, although tobacco's share of the export market has dropped significantly,

4 European Commission, 'EU Action Document for KULIMA – Promoting Farming in Malawi'. Brussels: European Commission, 2016, Annex 2.

5 Government of Malawi, 'The Malawi Growth and Development Strategy (MGDS) III' (Draft). Lilongwe: Government of Malawi, 23 June 2017.

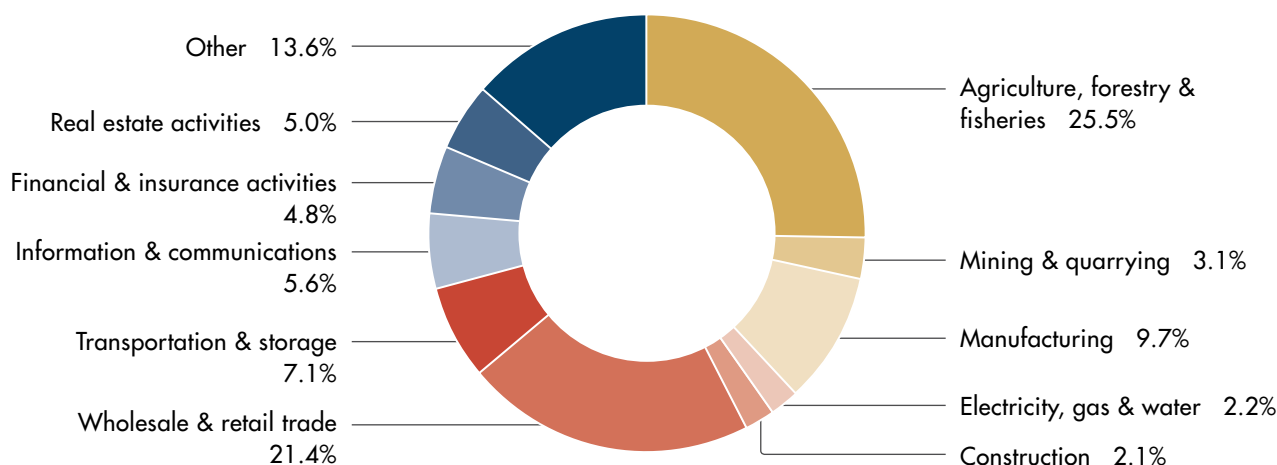
6 WTO (World Trade Organization), 'Trade Policy Review: Malawi', WT/TPR/S/335. Geneva: WTO, 23 March 2016.

7 *Ibid.*

8 World Bank, 'Poverty gap at \$1.90 a day (2011 PPP) (%)', <https://data.worldbank.org/indicator/SI.POV.GAPS?view=chart>, accessed 31 October 2017.

from 67% in 2008 to 47% in 2014.⁹ Farming in Malawi is structured around subsistence/family units on small farms whose tenure is ill defined.¹⁰ Low levels of productivity plague Malawian farmers despite efforts to increase productivity and output.

FIGURE 1 SHARE OF GDP BY SECTOR, 2014



Source: Irish Aid, 'Malawi CSP, 2010–2014: Evaluation Report', June 2015, <https://www.irishaid.ie/news-publications/publications/publicationsarchive/2016/november/malawi-csp-evaluation-report/>, accessed 12 April 2018

Malawi spends an average of 10% of its annual national budget on improving its agricultural sector. Despite this investment, agricultural GDP growth has averaged at 4% per year since 1968, owing to incoherent policies, as discussed below.¹¹ Moreover, agriculture as a value-added percentage of GDP has slowly decreased since the early 2000s, possibly as a result of consistently low yields, the absence of irrigation-based farming and generally poor farming methods.

Malawi has bilateral trade agreements with Mozambique, South Africa and Zimbabwe, and is a member of both SADC and the Common Market for Eastern and Southern Africa (COMESA). All of its main African export markets are SADC countries (Mozambique, South Africa and Zimbabwe), while its major international markets consist of the EU,

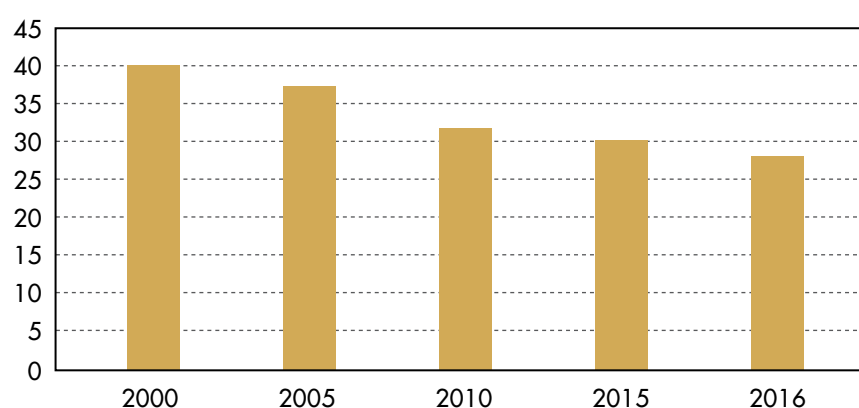
9 *Ibid.*

10 Chirwa EW, 'Access to Land, Growth and Poverty Reduction in Malawi', Working Paper, WC/03/04. Lilongwe: Wadonda Consult, August 2004.

11 Malawi, Ministry of Agriculture, Irrigation and Water Development, 'National Agricultural Policy 2016'. Lilongwe: Government of Malawi, 2016.

China and the US.¹² The EU accounted for 34.7% of Malawi's exports in 2015, and more than 9% of its exports are destined for the Asian market (predominantly China). Malawi is eligible to export certain agricultural and textile products to the US under the African Growth and Opportunity Act (AGOA) until 2025, while the country also benefits from 'Everything-But-Arms' preferential access to the EU market.¹³

FIGURE 2 AGRICULTURE AS A VALUE-ADDED PERCENTAGE OF GDP



Source: World Bank, 'Agriculture, value added (% of GDP)', <https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?view=chart>, accessed 31 October 2017

MALAWI'S AGRICULTURAL POLICY FRAMEWORK AND THE ROLE OF GOVERNMENT AND DONORS

Agricultural policies and donor engagement

Many government policies focus on improving the agricultural sector because of its economic importance. Malawi's overarching long-term development framework is Vision 2020, with which all policies must align.

Although these policies are in place, implementation is often weak or lacking.¹⁴ A number of the authorities that have been established do not function well, and interviewees also noted the lengthy timeframes between policy creation and implementation. This is the

¹² WTO, WT/TPR/S/335 *op. cit.*

¹³ *Ibid.*

¹⁴ Personal interview with MCCCCI (Malawi Confederation of Chambers of Commerce and Industry) representative, Blantyre, 16 August 2017.

case even when good relations exist, for example the Malawi Confederation of Chambers of Commerce and Industry in its relations with the Ministry of Industry and Trade.¹⁵

TABLE 1 GOVERNMENT POLICIES AND LEGISLATION FOCUSED ON THE AGRICULTURAL SECTOR	
Policy	Description of policy
National Agricultural Policy 2016	<ul style="list-style-type: none"> • Focused on commercialising agriculture, increased diversification and productivity, and increased women and youth participation in agro-processing businesses • Aligned with NEPAD's Comprehensive Africa Agriculture Development Programme (CAADP) and the donor-led Agriculture Sector Wide Approach Programme (ASWAp)
Malawi Growth and Development Strategy III (currently in draft format) 2017–2022	<ul style="list-style-type: none"> • Focused on infrastructure development and sustainable economic growth • Flagship projects based on agriculture and climate change management, agro-processing and value chains
National Irrigation Policy of 2015 (currently at draft level) and the Greenbelt initiative	<ul style="list-style-type: none"> • Intended to stimulate investment in commercial agriculture by promoting irrigation through the Greenbelt Authority
National Export Strategy 2013–2018	<ul style="list-style-type: none"> • General export incentives (regardless of sector), which are only applicable to businesses established within special economic zones, including zero corporate tax rate, no duties on capital equipment and no value-added tax • Oil seed products prioritised cluster, including macadamia nut oil

Sources: Malawi, Ministry of Agriculture, Irrigation and Water Development, 'National Agricultural Policy 2016'. Lilongwe: Government of Malawi, 2016; Government of Malawi, 'The Malawi Growth and Development Strategy (MGDS) III' (Draft). Lilongwe: Government of Malawi, 23 June 2017; Questionnaire completed by the Malawi Investment and Trade Centre (MITC) as part of stakeholder interviews, 28 August 2017; Malawi Consulate General, 'Incentives regime', <http://www.malawiconsulate.co.za/index.php/invest-in-malawi/incentives-program#Export>, accessed 1 November 2017

Donor projects focus on water and sanitation, economic governance, health and agriculture.¹⁶ Interviews confirmed good relations and donor coordination through the Donor Committee on Agriculture and Food Security, a coordinating platform headed by the

15 *Ibid.*

16 Irish Aid, 'Malawi CSP, 2010-2014: Evaluation Report', June 2015, <https://www.irishaid.ie/media/irishaid/allwebsitemedia/20newsandpublications/Malawi-CSP-2015-Final-Report.pdf>, accessed 12 April 2018.

World Bank.¹⁷ Participating donors meet once a month and the platform is headed by a troika.¹⁸

Another key programme is ASWAp, a multi-donor trust fund and Malawi's umbrella programme for prioritised investments in agriculture. ASWAp aims to increase productivity, institutional development and capacity building, and diversify the products that are cultivated and exported.¹⁹ Specific programmes include the Green Belt initiative, the Irrigation, Rural Livelihoods and Agricultural Development Project and the Farm Income Diversification Project (FIDP).²⁰ The second phase of ASWAp was scheduled for implementation by December 2017;²¹ however, there are no reported developments on this as yet.

Independent actors are also trying to improve productivity, knowledge building and market access among Malawian farmers. The Agricultural Commodity Exchange for Africa (ACE) is a trading platform providing an aggregated, graded approach to storage and quality guarantee through its warehouse receipt system, which allows farmers to deposit and store their commodities at 54 ACE warehouses countrywide. Warehouse receipts are used by farmers as guarantees against loans in order to access financing from banks.²² ACE also provides farmers with business-related assistance through its Marketing School and Chithumba Model – a services package focusing on high-quality agricultural inputs and farming equipment on loan, training and field visits, and formal access to market information – in order to strengthen farmers' participation in VCs within Malawi.²³

Policy uncertainty and stalling attempts at building investment

Malawi faces serious challenges in improving its business and investment climate. Although an improvement on its 2015 ranking (164 out of 189 countries), the World Bank's Ease of Doing Business 2016 report still ranks Malawi as only 133 out of 190 countries.²⁴ This low rating is compounded by a lack of technical capacity in government

17 Personal interview with EU Delegation representative, Blantyre, 16 October 2017.

18 Personal interview with World Bank representative, Lilongwe, 15 August 2017.

19 Irish Aid, *op. cit.*

20 WTO, *op. cit.*

21 Personal interview with World Bank representative, *op. cit.*

22 Personal interview with ACE (Agricultural Commodity Exchange for Africa) representative, Lilongwe, 15 August 2017.

23 Delwaide A, *Chithumba Model: Alternative Financing Mechanism*, Presentation by ACE. Producers are responsible for loan repayments, and are tied to Chithumba through an incentives-based contract. If producers repay the loan fully, they qualify for an increased quantity/choice of assets available on loan the following season. See ACE, <http://www.aceafrica.org/>, accessed 15 August 2017.

24 World Bank, 'Doing Business Report: Equal Opportunity For All'. Washington DC: World Bank, 2017.

departments and constricting bureaucracy.²⁵ Consequently, the general business climate remains poor. Donor and private sector interviewees alike suggested that it would be easier to implement trade and investment changes if there were greater deregulation and the government were more willing to implement rather than facilitate projects.²⁶ As noted in the World Trade Organization's (WTO) 'Trade Policy Review: Malawi' of 2016,²⁷

[S]tate involvement remains prevalent in many sectors of the Malawian economy and, in some cases, continues to crowd out private entrepreneurs. Besides soft budget constraints, some SOEs [state-owned enterprises] have benefitted from tax concessions on the acquisition of motor vehicles, equipment and machinery, as well as from preferential access to land.

The government has been criticised for imposing arbitrary export bans (affecting predominantly maize and soya exports), which makes investors uncomfortable.²⁸ Similarly, the awarding of export licences is opaque and many commercial farmers are unable to export their commercial maize.²⁹ Consequently, agriculture in Malawi is also associated with uncertain policy regulations.³⁰

Attempts to develop the agricultural private sector have been difficult, given its informality. Public-private partnerships (PPPs) have not yet taken off in the agricultural sector.³¹ There are few large-scale commercial actors and the sector is characterised by monopolies with strong government links.³² For example, Auction Holdings (a warehouse storage facility for agricultural produce) is supposed to be privately managed but is owned by Press Corporation Ltd, which has close links to the government. Such relations can fuel higher levels of corruption and opaque engagement between business and the government, where big companies have the same vested interests as the government in specific sectors. This behaviour has also contributed to making policy reforms difficult to implement. Instead of direct involvement in agricultural VCs, the government should focus on creating an enabling environment that also provides basic infrastructure and improves transparency and deregulation within the government, which would encourage PPP formation.

Nevertheless, the government has made several efforts to develop the private sector and facilitate foreign direct investment (FDI), which has increased in recent years – although it remains limited. For example, foreign and domestic companies can establish and own

The World Bank's Ease of Doing Business 2016 report still ranks Malawi as only 133 out of 190 countries. This low rating is compounded by a lack of technical capacity in government departments and constricting bureaucracy

25 Personal interview with AfDB (African Development Bank) representative, Lilongwe, 15 August 2017; personal interview with USAID (US Agency for International Development)/IFPRI (International Food Policy Research Institute) representative, Lilongwe, 17 August 2017; telephonic interview with independent consultant, 25 August 2017.

26 Personal interview with EU Delegation representative, Blantyre, 16 October 2017.

27 WTO, *op. cit.*

28 Personal interview with World Bank representative, *op. cit.*

29 Chokotho K, 'Speech by the President of the MCCC at the Official Opening of the 14th National Agricultural Fair', Blantyre, 16 August 2017.

30 Personal interview with MCCC representative, *op. cit.*

31 Personal interview with AfDB representative, Lilongwe, *op. cit.*

32 Telephonic interview with DfID (Department for International Development) representative in Malawi, 19 September 2017; personal interview with EU Delegation representative, *op. cit.*

The facilities of the Malawi Bureau of Standards, which is responsible for testing and certifying goods and services, lack international accreditation, making it difficult for farmers to access foreign markets

businesses irrespective of the size of the investment, source of funds, or destination of the final product, and there is no government policy to screen FDI.³³ Malawi's leading investors include Switzerland, South Africa, Kuwait, Mauritius, the UK and France, and FDI inflows are mainly targeted at mining, agro-processing and railway construction.³⁴ Other measures include the creation of the Malawi Investment and Trade Centre (MITC) in 2012 as a one-stop promotion office for foreign and local investors; the MITC-World Bank Trade Portal Platform, to reduce paperwork for exporting applications and streamlining the process through online applications; and the National Investment Policy of 2011, which aims to increase export competitiveness.³⁵

CHALLENGES FACING GROWTH AND INVESTMENT IN THE AGRICULTURAL SECTOR

Production difficulties

Improved agricultural productivity and access to export markets are pervasive challenges for farmers. The government has traditionally provided extension services (ie, technical knowledge and capacity building through trained personnel) to farmers. However, this support is insufficient: as much as 80% of all farmers are visited by an extension worker less than once a month.³⁶ The facilities of the Malawi Bureau of Standards (MBS), which is responsible for testing and certifying goods and services, lack international accreditation, making it difficult for farmers to access foreign markets. There is also no independent accreditation body in Malawi, and certificates and test reports issued by the MBS under its export quality certification scheme are generally not accepted in foreign markets.³⁷ Farmers require access to better quality seed, but the government restricts their access as any seed sold must be certified by the Ministry of Agriculture, Irrigation and Water Development and the existing system excludes farmer-run seed cooperatives.³⁸ Lastly, low literacy levels among farmers also hinder their ability to understand sanitary and phytosanitary (SPS) requirements and markets.

33 US Department of State, 'Investment climate statements for 2017', <https://www.state.gov/eb/rls/othr/ics/investmentclimatestatements/index.htm?year=2017&dclid=269753#wrapper>, accessed 30 October 2017. The only exception is that any investment capital over \$50,000 must be registered with the Reserve Bank.

34 WTO, *op. cit.*

35 Personal interview with AfDB representative, *op. cit.*

36 European Commission, 2016, *op. cit.*, Annex 2.

37 WTO, *op. cit.*

38 Mkoka C, 'Local – not just commercial – crop seeds key to food security, Malawi admits', Relief Web, 29 September 2017, <https://reliefweb.int/report/malawi/local-not-just-commercial-crop-seeds-key-food-security-malawi-admits>, accessed 19 January 2018; personal interview with Farmers Union Malawi representative, Blantyre, 16 August 2017.

Agricultural inputs

In order to encourage FDI into the agricultural sector, Malawi offers liberal investment conditionalities and an attractive import regime for agricultural inputs. Fertilisers and agri-chemicals can be imported duty-free and are zero rated for value-added tax (VAT), while most seed types are VAT exempt and have a 5% import duty. However, the transport and administrative costs associated with importing these inputs remain prohibitively high, increasing the price of crucial inputs.³⁹

Business Confidence Index⁴⁰

Results from the Business Confidence Index show, overall, low confidence in Malawi's business climate among existing businesses. The Business Climate Survey (with a 42% response rate among 250 companies selected randomly for the survey) also highlights the perceived top challenges to doing business in Malawi, as depicted in Table 2.

Policy	2014	2015	2016
Current business performance	25.00	32.86	17.16
Expected business performance	34.00	5.00	15.69
Investment outlook	31.50	22.46	17.16
Employment outlook	22.50	12.86	17.16

Source: MCCCCI (Malawi Confederation of Chambers of Commerce and Industry), 'Malawi Business Climate Survey Report 2016'

Infrastructural challenges

Roads remain the dominant mode of transportation for goods (70% for internal freight and 90% for international freight). Although inefficiencies in transit corridors have improved in recent years, it still takes several days for Malawian produce to reach the nearest maritime port,⁴¹ making it extremely difficult to export most types of perishables for long-distance journeys. Malawi currently ranks 132 out of 137 economies on the World Economic Forum's Global Competitiveness Index; testimony to the deep-seated

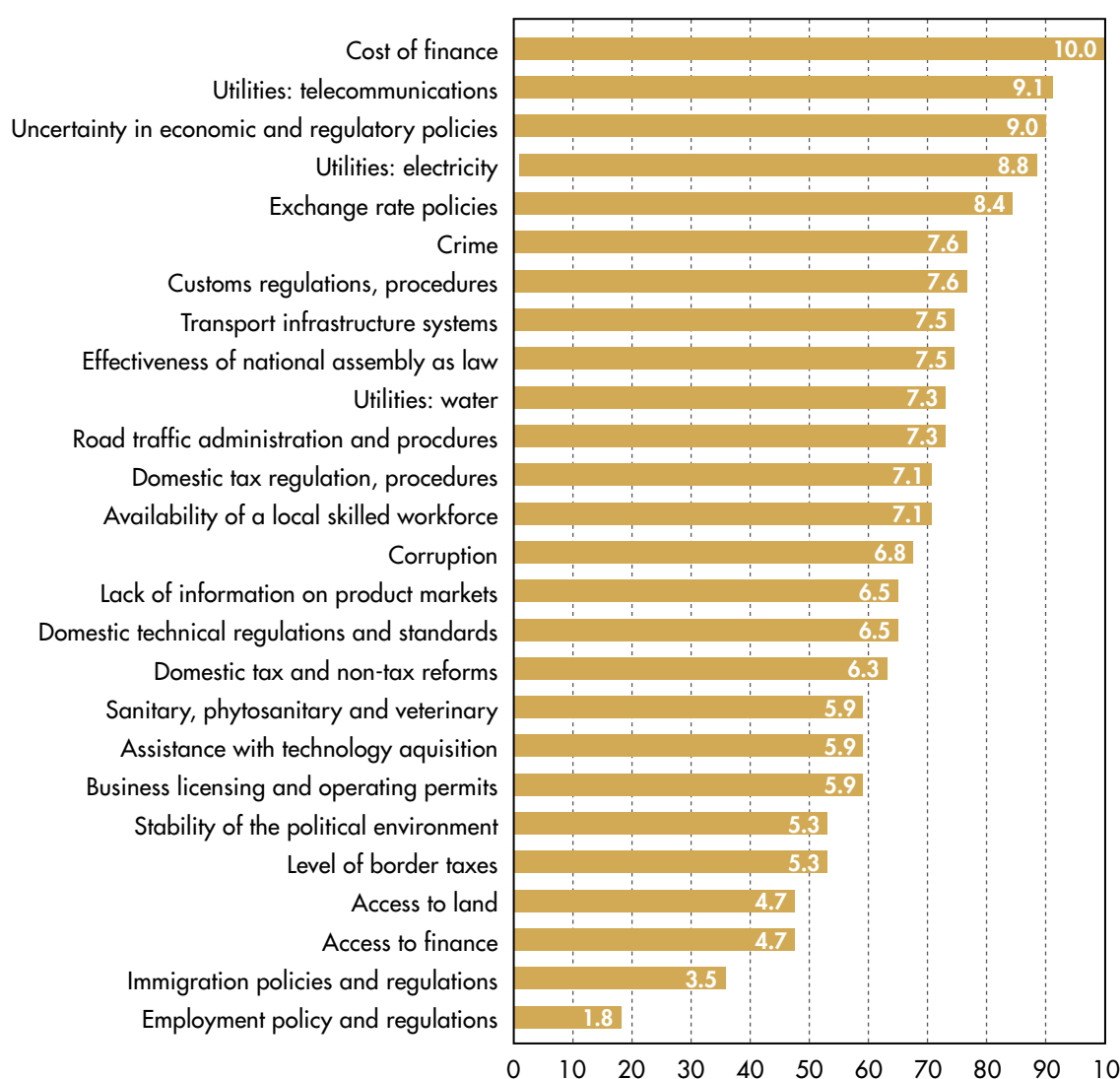
39 WTO, *op. cit.*

40 This is a quantitative domestic index assessment by the MCCCCI of existing challenges to Malawi's business regulatory framework.

41 WTO, *op. cit.* See also Government of Malawi, *op. cit.*

infrastructural challenges facing the country.⁴² The Durban Corridor, which handles time-sensitive Malawian exports, is reliable but further away from Malawi and more expensive than the Beira Corridor through Mozambique. In comparison, the Beira Corridor is closer to Malawi and handles most of Malawi's trade (47%), but is less predictable and reliable than the Durban Corridor.⁴³ Roads to both of these maritime ports are also under-maintained.

FIGURE 3 OBSTACLES TO DOING BUSINESS



Source: MCCI, 'Malawi Business Climate Survey Report 2016'

42 World Economic Forum, 'Global Competitiveness Index 2017–2018', <https://widgets.weforum.org/global-competitiveness-report-2017/>, accessed 1 November 2017.

43 WTO, *op. cit.*

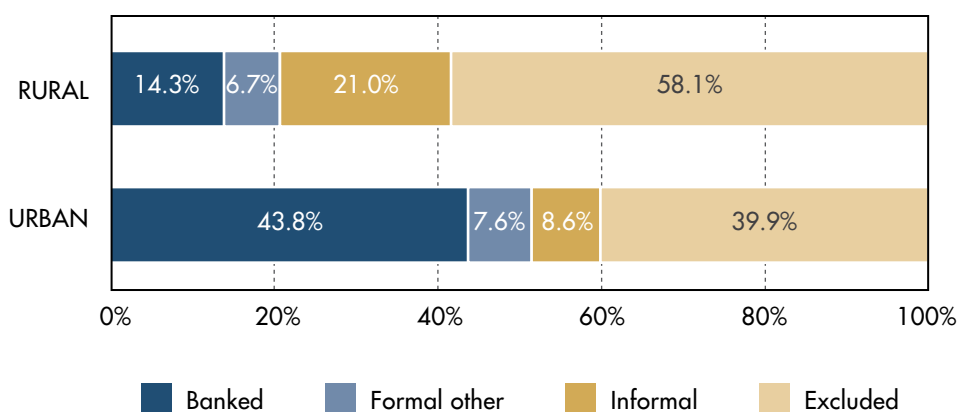
Access to finance

Owing to low levels of productivity and limited irrigation (over 90% of cultivated land is rain-fed),⁴⁴ farmers struggle to obtain loans, as commercial banks consider agricultural-related risks to be too high. Although the Reserve Bank has reduced lending rates from 27% to 24%, interest rates on commercial loans remain prohibitively high – up to 40%⁴⁵ – and are unlikely to encourage investment in the near future.⁴⁶

In 2008 agriculture accounted for 32% of the country's GDP; however, the sector received only 11% of loans made by the banking industry.⁴⁷ Loans are usually provided following a period of drought or a collapse in commodity prices, and focus on sectors with large commercial farmers (tea, sugar and tobacco).⁴⁸ Smallholder farmers are thus unable to access financing during periods of economic hardship. The Development Bank and Agricultural Bank are yet to be fully established, and the Export Development Fund, although operational, remains hobbled by an inadequate financial base.⁴⁹

Although the Reserve Bank has reduced lending rates from 27% to 24%, interest rates on commercial loans remain prohibitively high – up to 40% – and are unlikely to encourage investment in the near future

FIGURE 4 FINANCIAL ACCESS STRAND, RURAL/URBAN COMPARISON, 2008



Source: Agar J *et al.*, 'Status of Agriculture and Rural Finance in Malawi'. Midrand: FinMarkTrust, 2012

44 Malawi, Ministry of Agriculture, Irrigation and Water Development, 'National Agricultural Policy 2016'. Lilongwe: Government of Malawi, 2016.

45 Schoeman M & M Carr, 'Case study 1: Access to finance in Malawi', in *Regional Business Barriers Collection: Unlocking Economic Potential in Southern Africa*. Johannesburg: SAIIA (South African Institute of International Affairs), 2014.

46 MCCCCI, '2016 Business Survey' (document provided by interviewee).

47 Agar J *et al.*, *Status of Agriculture and Rural Finance in Malawi*. Midrand: FinMark Trust, July 2012.

48 *Ibid.*

49 MCCCCI, *op. cit.*

Land tenure and security

Current efforts at land reform are slow. Most land under smallholder cultivation is subject to customary law, suggesting that farmers have limited legal rights to secure their land tenure.⁵⁰ The recent Land Act of 2016 is supposed to convert customary land tenure to leasehold title in order to secure current users' legal rights to the land. However, under the Land Act all newly acquired land will be granted on a leasehold basis only: foreign investors are allowed to lease land for a period of 50 years and, until new legislation comes into effect, neither Malawians nor foreigners can acquire freehold land.⁵¹ Consequently, agricultural investment could become problematic because of a lack of readily available compensation for reallocation to investors.⁵²

CASE STUDY: MACADAMIA NUT PRODUCTION IN MALAWI, SOUTH AFRICA AND MOZAMBIQUE

AN OVERVIEW OF MACADAMIA NUT CULTIVATION AND CHARACTERISTICS

Macadamia nut production accounts for 1% of global tree nut production. A high-value crop with good export potential, the industry has experienced rapid growth in South Africa and is also seeing growing interest in Malawi and Mozambique. South Africa is currently planting at a rate of over 600 000 trees per year, while China is expected to add 2 million trees per year.⁵³

Country	Metric tonnes (MT) in kernel basis
Australia	14 100MT
South Africa	13 146MT
Kenya	5 448MT
US	3 600MT
Malawi	1 813MT
TOTAL	38 107MT

Source: INC (International Nut & Dried Fruit), www.nutfruit.org, accessed 13 October 2017

50 Chirwa EW, *op. cit.*

51 US Department of State, *op. cit.*

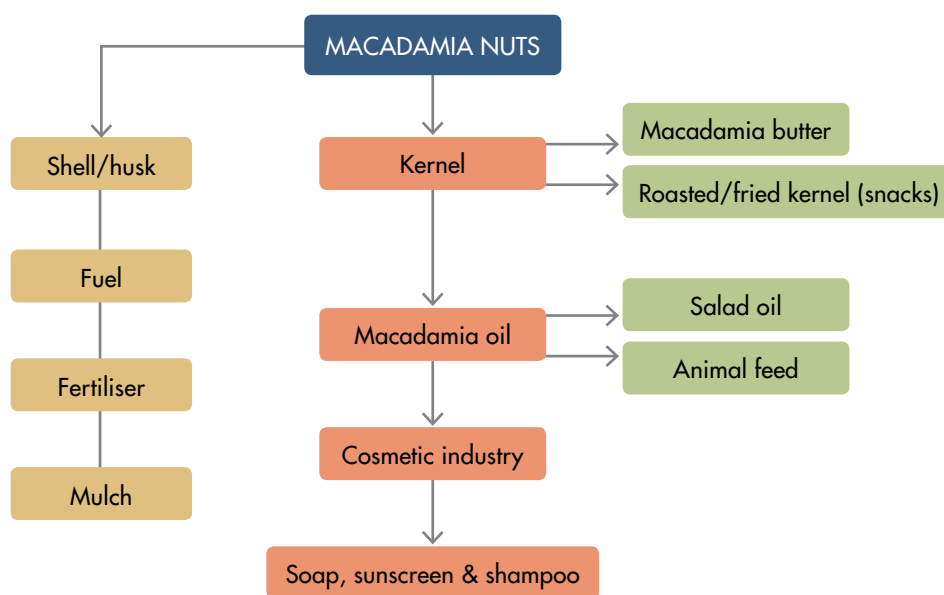
52 Questionnaire completed by the MITC as part of stakeholder interviews, 28 August 2017.

53 Valley Macadamias Group, 'Record high macadamia prices cause for concern for industry', *Engineering News*, 9 June 2016, http://www.engineeringnews.co.za/article/record-high-macadamia-prices-cause-for-concern-for-industry-2016-06-09/rep_id:4136, accessed 20 November 2017.

Despite their high value, several key characteristics have prohibited smallholder farmers from growing macadamia nuts. Firstly, establishing macadamia orchards is expensive and it can take between five and seven years before an orchard bears nuts. In the absence of any financial and technical support, this prolonged wait period has deterred smallholder farmers from entering the industry, especially without an alternative income-generating crop being grown during the waiting period. Secondly, without access to high-quality seedlings and nurseries locally, starting a macadamia orchard requires farmers to purchase imported seeds – an unaffordable expense for many. As such, macadamias have traditionally been grown by commercial farmers, a trend witnessed in both Malawi and South Africa,⁵⁴ although efforts are now being made to bring in smallholder producers.

Macadamia nuts can be exported either as nut in shell (NIS) or as kernel (ie, nut alone). The husks covering the nuts are removed post-harvesting, and the nuts can then be processed for confectionary or snacking purposes. Macadamia nuts of poor quality that cannot be consumed in their kernel state are often pressed and turned into macadamia nut oil, which can be used for cooking or in the cosmetic industry.

FIGURE 5 MACADAMIA TREE VC, EXPLAINING ITS USES



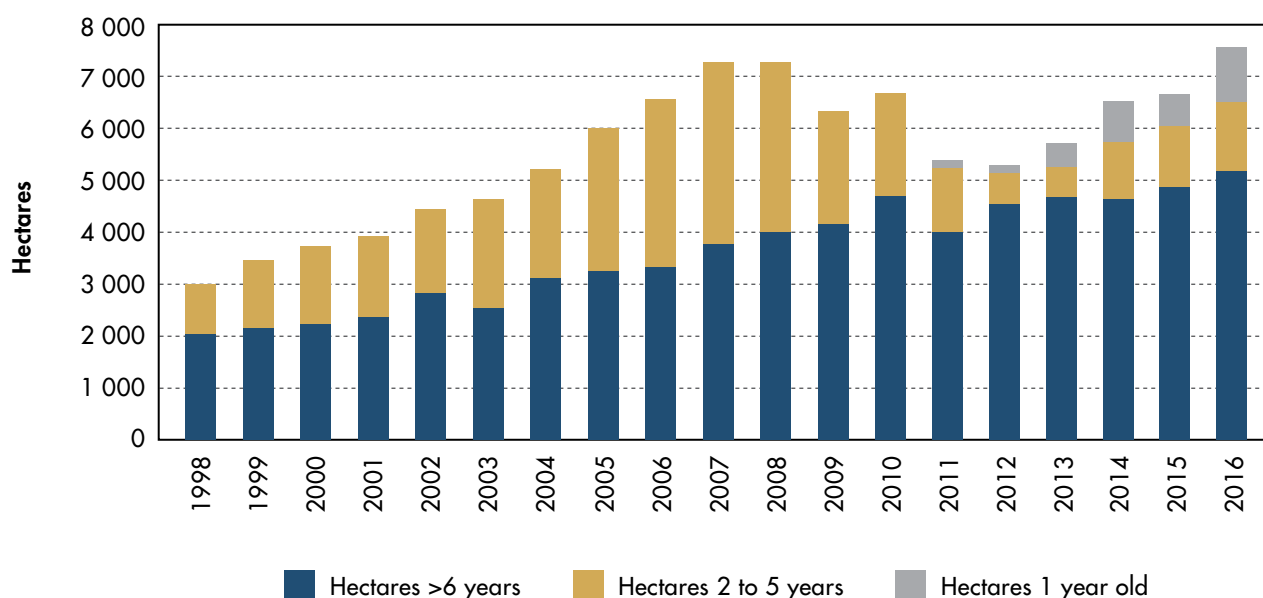
Source: Mogala M, ‘A Profile of the South African Macadamia Nut Market Value Chain 2015’. Pretoria: Department of Agriculture, Forestry and Fisheries, 2015

54 Personal interview with AgBiz representative, Pretoria, 8 August 2017.

MACADAMIA NUT PRODUCTION IN MALAWI

Macadamia nuts were historically inter-cropped in tea, tung oil and coffee plantations in southern Malawi. Declining tung oil prices led to full-scale macadamia production instead,⁵⁵ and the first commercial practice was established in the 1950s on the Kumadzi estate in Thyolo.⁵⁶ Improved market conditions for macadamia nuts have seen growing interest among farmers in cultivating macadamia plantations. Malawi is currently ranked among the top five producers in the world and a growing number of trees are planted annually. The country has five commercial processing facilities, although Thyolo remains the centre of the industry with the majority of the estate plantings and three factories in operation.⁵⁷ Figures from 2010 show that Malawi's five processing factories handled 8 000MT of NIS per year, and in 2011 1 498MT of kernels were exported.⁵⁸

FIGURE 6 AREA (HECTARE) ALLOCATED TO MACADAMIA NUT CULTIVATION IN MALAWI



Source: Mabiso A *et al.*, 'NAPAS: Malawi Value Chain Studies: Informing the National Agricultural Investment Plan'. Presentation details not available.

55 Khan R, 'Presentation to the Oil Seed Products Technical Working Group – Malawi Sector Overview'. Lilongwe: AgDevCo Malawi, 15 December 2016.

56 Business Innovation Facility & Irish Aid, 'Malawian Macadamias 2012–2020: Strategic Plan for the Malawian Macadamia Industry', <http://www.inclusivebusinesshub.org/wp-content/uploads/2016/05/MalawiMacadamiaStrategicPlan20122020.pdf>, accessed 12 April 2018.

57 *Ibid.*

58 *Ibid.*

Many of Malawi's macadamia nut farms are owned by foreign conglomerates: Thyolo Nut is British-owned; Eastern Produce is a South African company with farms in South Africa, Malawi and Kenya; and Tropha Estate (part of Jacoma Estate) is a British investment company. Until recently, macadamia nuts did not receive the same political support or interest as maize, pigeon peas or soy beans, as five-year electoral terms often dictate which sectors get government support, and macadamia cultivation falls outside of this period.⁵⁹

While there is interest in macadamia nut cultivation owing to its high export quality, the sector remains a niche market, dominated by a select number of larger players and commercial enterprises. National budget support for the macadamia nut industry is limited, although the Malawian government does want greater farmer uptake and interest in cultivating the crop.⁶⁰ There is growing interest among donors in entering the macadamia nut sector, although many do not yet have formal plans or implemented projects.

While there is interest in macadamia nut cultivation the sector remains a niche market, dominated by a select number of larger players and commercial enterprises

Smallholder-focused initiatives

FIDP Phase I introduced smallholder farmers in central and northern Malawi to macadamia nut farming. However, government interventions to stimulate Malawi's macadamia nut sector have not been successful: the Import Diversification Programme of 2004 was not strategic, as farmers in northern Malawi were given the wrong seedlings, and there was no market outlet in the area to process and export the macadamia nuts.⁶¹

The African Development Bank (AfDB) macadamia nut project was a 10-year initiative (completed in 2009) to support the cultivation of macadamia nuts among smallholder farmers with the aim of reducing rural poverty and contributing to diversified exports. Valued at \$5.58 million,⁶² the project cultivated 1 320ha of land, established six mother nurseries and 100 community nurseries, and provided 3 650 farmers with capacity development.⁶³ The initial project duration was February 1999 to December 2004; however, delays meant implementation only began in March 2001.⁶⁴

Despite its potential and the strong interest from smallholder farmers, the AfDB project is regarded by many interviewees as unsuccessful, owing to a number of critical oversights, including:

- a lack of successful follow-through by the government when the AfDB phased out of the project;⁶⁵

59 Personal interview with AgDevCo representative, Lilongwe, 15 August 2017.

60 Personal interview with USAID/IFPRI representative, *op. cit.*

61 Personal interview with AgDevCo representative, *op. cit.*

62 This refers to Unit of Account, and the project was valued at UA 8.21 million. Conversion rate is 1 US\$ = UA 0.68 at the time of project completion report.

63 AfDB, *Macadamia Smallholder Development Project: Project Completion Report*. Abidjan: AfDB, April 2009.

64 *Ibid.*

65 Personal interview with IDH representative, Blantyre, 16 August 2017.

- no viable output to market;
- joint financing instead of parallel financing, which meant the implementation of activities could not proceed according to work plans;
- absence of credit facilities and credit mechanisms for smallholder farmers: the Malawi Rural Finance Company charged exorbitant interest rates of 45–52%, severely limiting smallholders' access to finance – despite the fact that non-governmental organisations were offering credit at comparatively affordable rates; and
- sub-optimal infrastructure development (roads, boreholes and storage sheds), and not all infrastructure works had been completed by project closure.

Moreover, smallholder farmers did not have access to processing facilities in their vicinity, which meant many had to travel either 150km to Thyolo or 600km to southern Malawi to have their nuts processed. Extension staff and macadamia experts also became less available as the project progressed. Activities were not self-sustainable and many farmers were unable to reap long-term benefits from the programme.⁶⁶ Consequently, trees were neglected and farmers received little technical and financial support from the Malawian government after the AfDB exited the project.

Despite these challenges there is renewed interest in incorporating smallholder farmers into the macadamia nut sector. Irish Aid and the Business Innovation Facility have worked on developing a Strategic Plan 2012–2020 for the sector.⁶⁷ Valued at \$5,750,000 over five years, the Strategic Plan identifies business models that enable smallholder farmer inclusion, improve processing capacity and facilitate access to high-quality export markets. The Strategic Plan is based on three work themes: developing industry-wide capacity and technical support; developing smallholder industry and growing nut volumes; and applying research in order to maintain industry competitiveness. Statistics from 2012 show that smallholder participation increased to 72 000 new trees a year. Projections by Irish Aid show potentially massive increases in macadamia nut plantations through smallholder participation, as depicted in Figure 7.

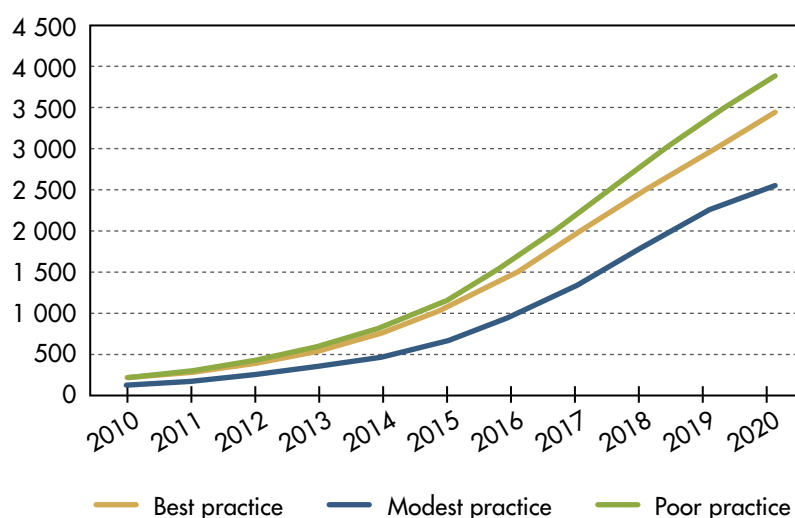
A promising smallholder project underway in northern Malawi is supported by AgDevCo, a British social impact investor and fund manager, which has invested \$3.5 million in Jacoma Estate to improve business, farming and upscaling. In 2014 AgDevCo also invested \$2 million in Tropha Estate to develop macadamia nut farming. AgDevCo's Smallholder Development Unit focuses on four key areas to boost productivity and increase income among smallholder farmers:

- conducting feasibility studies for outgrower schemes;
- implementing and up-scaling outgrower schemes;
- establishing demonstration plots to promote good agricultural practices; and
- developing IT systems to help farmers track and manage their impacts.⁶⁸

66 Personal interview with AfDB representative, *op. cit.*

67 Irish Aid, *op. cit.*

68 AgDevCo, 'Smallholder Development Unit', promotional leaflet, 2017.

FIGURE 7 PROJECTED TOTAL NIS (MT) FROM SMALLHOLDER SECTOR 2010–2020

Source Business Innovation Facility & Irish Aid, 'Malawian Macadamias 2012–2020: Strategic Plan for the Malawian Macadamia Industry', <http://www.inclusivebusinesshub.org/wp-content/uploads/2016/05/MalawiMacadamiaStrategicPlan20122020.pdf>, accessed 12 April 2018

The project is structured as a social development investment because AgDevCo focuses on incorporating smallholder producers into the formal VC, and Tropha aims to source macadamia nuts from over 1 000 smallholder farmers by 2026.⁶⁹ As a social outreach initiative it is mandatory that 30–40% of all Tropha Estate's processed nuts are supplied by smallholder farmers. Farmers are also granted access to technical facilities and seedlings/trees as part of Tropha's outgrowing programmes.⁷⁰ In addition, Tropha houses an on-site processing facility, which means farmers no longer only have access to one processing facility in northern Malawi. Funding for the processing plant is provided by Pearl Capital Partners, a co-investor and partner of AgDevCo in Tropha Estate.⁷¹

A significant challenge for the fledging Malawian macadamia nut sector has been irrigation and access to new technology and systems.⁷² Seasonal foreign exchange (forex) shortages, fixed exchange rates and limited investment have deterred investment, and road infrastructure remains inadequate. Macadamia nut research is undertaken predominantly

AgDevCo focuses on incorporating smallholder producers into the formal VC, and Tropha aims to source macadamia nuts from over 1 000 smallholder farmers by 2026

69 Khan R, *op. cit.*

70 Personal interview with AgDevCo representative, *op. cit.*

71 Pearl Capital Partners, 'Pearl Capital partners invests US\$ 2m in Malawian macadamia nut company', Press Release, 28 November 2014.

72 Personal interview with AgDevCo representative, *op. cit.*

in Australia, and many Malawian processors and growers cannot afford to access its cutting-edge research and development (R&D), which is essential for competitiveness in global markets.⁷³ Instead, many Malawian growers use old systems and outdated technologies. Interviewees also raised concerns about cultivation methods in Malawi, suggesting that farming methods in some commercial plantations involve little fertiliser input, minimal training, little/no irrigation and trees that are planted widely apart – practices that are deemed highly business averse and expensive in South Africa.⁷⁴

In order for macadamia nuts to remain viable in Malawi as a long-term initiative, providing smallholder farmers with the necessary extension services and technical support is essential. This involves smallholders' scaling up into commercial production or engaging in cooperative farming, and reducing their dependency on donor-driven projects, which have been the key development factor in the industry thus far. Malawi needs to develop industries that can lobby investors, conduct R&D and address climate change-related challenges.⁷⁵

MACADAMIA NUT PRODUCTION IN SOUTH AFRICA

South Africa's main macadamia nut-producing provinces are KwaZulu-Natal, Mpumalanga and Limpopo. Agriculture plays an important role in development and employment opportunities in these regions. The cultivation of macadamia nuts began in the 1960s, and the industry has grown rapidly since then – increasing from only 211 tonnes NIS in 1991 to a whopping 46 000 tonnes in 2015, and generating sales of ZAR⁷⁶ 4 billion in 2015 (an average of \$315 million).⁷⁷ There are approximately 700 farmers growing macadamia nuts supplying 10 cracking factories in South Africa. Many growers are GLOBAL G.A.P. accredited and most of the cracking facilities are Hazard Analysis and Critical Control Points accredited.⁷⁸ High international prices have seen an increase in the number of smallholder and black farmers participating in the macadamia sector.

73 Telephonic interview with Institute for Tropical and Sub-Tropical Crops researcher, 28 August 2017.

74 Telephonic interview with independent consultant, 25 August 2017.

75 Irish Aid, *op. cit.*

76 Currency code for the South African rand. Dollar rate based on Nedbank's historical yearly rate: Nedbank, 'Annual exchange rates', https://www.nedbank.co.za/content/dam/nedbank/site-assets/AboutUs/Economics_Unit/Forecast_and_data/Daily_Rates/Annual_Average_Exchange_Rates.pdf, accessed 12 April 2018.

77 SAMAC (Southern African Macadamia Growers' Association), 'Industry overview', <https://www.samac.org.za/overview-south-african-macadamia-industry/>, accessed 8 November 2017.

78 Mogala M, 'A Profile of the South African Macadamia Nut Market Value Chain 2015'. Pretoria: DAFF (Department of Agriculture, Forestry and Fisheries), 2015.

TABLE 4 TOP THREE MACADAMIA NUT PRODUCTION AREAS BY PROVINCE

	Hectares cultivated for macadamia	Trees planted	Production areas	Production percentage
Mpumalanga	8 820	2 025 794	Barberton, Nelspruit, Hazyview	51%
Limpopo	5 105	1 550 000	Tzaneen, Levubu	30%
KwaZulu-Natal	2 859	694 675	North & South coast	16%

Source: Urban-Econ Development Economists, Limpopo Provincial Government, 'Limpopo Agro-Processing Strategy 2012'

South Africa was the top global macadamia nut producer for 2011 and 2013–2015, surpassing Australia (where they originate)

South Africa was the top global macadamia nut producer for 2011 and 2013–2015, surpassing Australia (where they originate) and Hawaii. In terms of African producers, Kenya ranks second after South Africa (and third globally, after Australia), producing 12.1% of global macadamia nut exports.⁷⁹ New plantings ensure industry growth by an estimated 2 000ha annually, and in 2016 more than 7.5 million trees were planted, covering 25 000ha.⁸⁰ In the Levubu district in Limpopo, macadamia nut production has replaced pecan nut production because the income per hectare is much higher, and turnover and marketing is more stable; 90% of nuts grown here are exported.⁸¹ Similarly, the industry is the second-largest forex earner (after coal) in Mpumalanga, and has a national export value of ZAR 3 billion (an average of \$225 million).⁸²

As in Malawi, policy changes, commodity crises and currency fluctuations have negatively impacted South Africa's agricultural growth. Despite these challenges the Bureau for Food and Agricultural Policy's 2017–2026 Baseline Report predicts that horticultural crops such as blueberries, pecan nuts and macadamia nuts will continue expanding. Again, as in Malawi, some rural areas in South Africa have low levels of productivity and are unable to access finance. In addition, discussions on land reform and potential land redistribution have caused investment uncertainty regarding farmers' land rights in South Africa.

Growth in South Africa's macadamia nut sector also arose largely because of private investment and efforts by commercial farmers, although the South African government has implemented policies to stimulate agro-processing initiatives. As the responsible government actor for industrial development and trade relations, the Department of Trade and Industry's (dti) projects in the agro-processing sector focus on smallholder farmer development, creating linkages with multinational companies and securing investment

New plantings ensure industry growth by an estimated 2 000ha annually, and in 2016 more than 7.5 million trees were planted

79 *Ibid.*

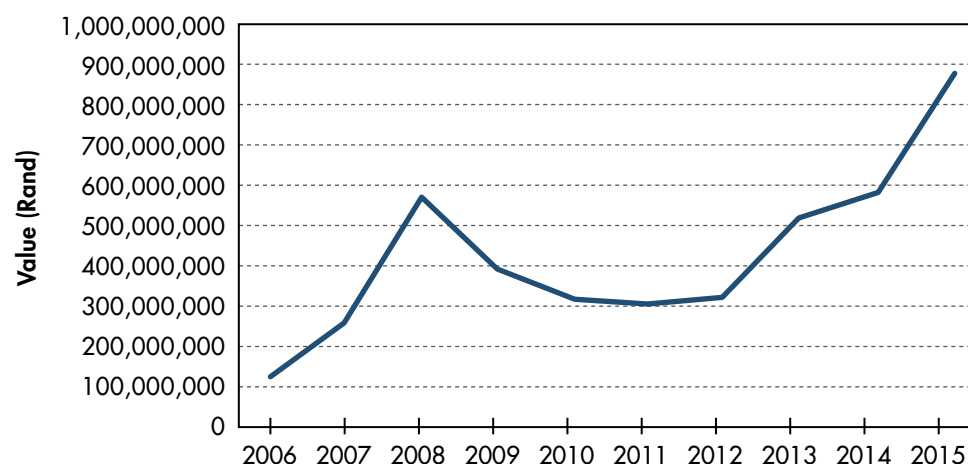
80 SAMAC, *op. cit.*

81 Giacomello A *et al.*, *DfID Economic Analysis of Forestry and Commercial Agriculture in the Luvuvhu Catchment*. London: UK Government, 2004.

82 Van Zyl A, 'Crop theft has major impact on macadamia industry', *Zoutnet*, 4 November 2017, <https://www.zoutnet.co.za/articles/news/44770/2017-11-04/crop-theft-has-major-impact-on-macadamia-industry>, accessed 8 November 2017.

in infrastructure.⁸³ It also concentrates on a wide range of products, of which edible oils (including macadamia nut) are a core focus, together with relevant activities such as skills development, commercialisation of organic products and the establishment of new industries.⁸⁴

FIGURE 8 GROSS VALUE OF MACADAMIA NUTS 2005–2014



Source: Mogala M, 'A Profile of the South African Macadamia Nut Market Value Chain 2016'. Pretoria: Department of Agriculture, Forestry and Fisheries, 2016

However, interviews with growers and processors suggest that, to date, the government has offered little support in facilitating the growth of the macadamia nut industry. Nevertheless, the dti is currently finalising its agro-processing framework, which will include a strategy for macadamia nut and oil seeds. It was meant to be approved by cabinet in early 2018.⁸⁵ Specific efforts include 'expansion of domestic and export markets for South Africa's macadamia nuts by developing action plans with industry associations and individual companies through dti incentives'.⁸⁶

83 'Industrial Policy Action Plan 2017/18–2019/20: Economic sectors, infrastructure and employment cluster 1', Presentation to the Portfolio Committee on Trade and Industry, 13 June 2017.

84 dti (Department of Trade and Industry), 'Industrial development: Agro processing sector', http://www.dti.gov.za/industrial_development/agro_processing.jsp, accessed 26 October 2017.

85 Personal interview with dti representative, Pretoria, 29 August 2017.

86 *Ibid.*

A key organisational difference between South Africa and Malawi's industries is the way in which processors engage with their growers. In South Africa, processors own both commercial plantations and the processing plants, while other structures permit grower shareholding in the processing companies/facilities. Some South African processors and commercial growers actively incorporate smallholder farmers, viewing them as assets to the industry rather than a liability. This reflects a key difference with Malawi's commercial producers, which tend to view smallholder farmers as liabilities rather than collaborative partners in the industry.

TABLE 5 SOUTH AFRICAN MACADAMIA PRODUCERS' CORPORATE STRUCTURES

Company	Structure	Services/additional benefits offered
Mayo Macs	<ul style="list-style-type: none"> • Joint venture between processors, harvesters and farmers • Supply agreement whereby farmers have to sell their nuts to Mayo Macs • 210 farmers are shareholders in Mayo Macs (250 farmers in total supply nuts) 	<ul style="list-style-type: none"> • Technical support offered to shareholders as an unlimited service and at no extra cost to farmers • Mapping service to track yields and outputs generated by each farmer
Golden Macadamia	<ul style="list-style-type: none"> • Processing company structured like a cooperative • 95 farmers own shares in the company and farmers deliver their nuts for processing to Golden Macadamia • Generated profits are reinvested in the cooperative 	<ul style="list-style-type: none"> • No extension services offered to farmers
Ivory Macadamias^a	<ul style="list-style-type: none"> • Increased processing capacity and modernisation through recent upgrades 	<ul style="list-style-type: none"> • Strong workplace diversity and equity policy: 95% of factory positions are held by women from previously disadvantaged backgrounds (this includes senior positions, with a 75% female representation)
Green and Gold Macadamia	<ul style="list-style-type: none"> • Marketing company owned by several farms, including Green Farms in South Africa and Suncoast Farms in Australia • Green and Gold markets on behalf of Malawian, Brazilian and Australian processing companies 	<ul style="list-style-type: none"> • Green Farm has a UK-based distributor selling kernels to the EU market • Provides technical support to its farmers, as well as equipment and knowledge support • Green Farms recently implemented drone technology to deliver information and bespoke fertiliser programmes to its farmers^b

^a Ivory Macadamias, 'Processing', <http://ivorymacs.co.za/processing/>, accessed 24 October 2017.

^b Fresh Plaza, 'Drones deliver improved outcomes for South African macadamia', 19 September 2017, <http://www.freshplaza.com/article/181668/Drones-deliver-improved-outcomes-for-South-African-macadamia>, accessed 8 November 2017.

Source: Author's interviews with stakeholders

INDUSTRY REPRESENTATIVES AND SMALLHOLDER FARMER INITIATIVES

South African farmers are recognised for their competitiveness in global markets, resilience in the face of climate change, and excellent farming practices. These factors illustrate the key differences between Malawi and South Africa's macadamia nut sectors. Despite financial constraints, the Department of Agriculture, Forestry and Fisheries (DAFF) focuses on growing smallholder participation in South Africa's formal agricultural VCs through its Comprehensive Consultative Support Programme. It also offers support to producers through training, skills development and extension services: local government is responsible for providing farmers with extension services. However, as in Malawi, ensuring that sufficient extension officers' services are available to rural farmers is an ongoing challenge. Agro-processing initiatives are complementary in order to streamline efforts, but with different goals: the dti is focused on upstream VC development, including larger multinational corporations, while the DAFF focuses on downstream VC development, including smallholder farmers, start-up enterprises and small and medium enterprises.⁸⁷ These synergies are important for addressing crosscutting issues in VC development and implementing both upstream and downstream VC development. This approach is one of the crucial differences between agro-processing developments efforts in the region and those in South Africa.

South Africa's agricultural sector is well structured and different sectors have specific industry representatives, which allows farmers' concerns to be raised and heard in official channels and for growth strategies to be implemented by industry/sector. The Southern African Macadamia Growers' Association (SAMAC) represents macadamia nut producers in South Africa, Mozambique and southern Malawi. Until March 2018 SAMAC was part of the South African Subtropical Growers Association (SUBTROP). Formed in the early 1980s as a growers' association, SAMAC now has 550 grower members and over 700 members in total, including handlers (ie, processors), nurseries, banks and consultants.

SAMAC's functions include providing members with production and pest-related research and funding projects that tackle the challenges facing macadamia nut growers.⁸⁸ In recent years SAMAC's membership has expanded to include emerging and/or previously disadvantaged farmers. It hosts 73 black farmers as registered members, while another 70 are not registered. SAMAC also runs a number of transformation projects to assist its members with training, financial support, technical assistance and extension services.⁸⁹

SAMAC representatives highlighted their positive engagement with and support for emerging smallholder farmers. Interviewees pointed to the goodwill between commercial producers and smallholder farmers and the offers of bilateral support (without any intervention from SAMAC) in the form of machinery and information on better farming methods from commercial farmers to black farmers. These good relations also extend to

87 Personal interview with DAFF agro-processing representatives, Pretoria, 29 August 2017; personal interview with dti representative, *op. cit.*

88 Telephonic interview with SAMAC representative, 10 August 2017.

89 *Ibid.*

farmers and processors: existing pricing structures favour farmers (which help to protect them against being marginalised or disadvantaged in the larger VC structure) while creating competition between the various processors.⁹⁰

An important way in which SAMAC finances its community and transformation projects is through the ZAR 2 million statutory levy (approximately \$156 617) it receives from the DAFF.⁹¹ Implemented in 2015, all SAMAC members pay this levy: contributions are levied at 23c/kg on processed macadamia nuts. In terms of statutory provisions, 25% of the levy must be used for transformation activities in the industry, which forms a core part of SAMAC's community-based projects.⁹²

SAMAC supports transformation projects on a 50% matching grant basis and offers bursaries to students pursuing tertiary education in agricultural studies. The association runs a mentorship programme (initially established voluntarily by the growers themselves), which was subsequently formalised in 2014 as a SAMAC study group. The study group disseminates information on growing techniques, irrigation, spraying and other relevant issues among members, and includes information sharing by the farmers themselves and technical experts. On average, approximately 10 study groups are held each year throughout the country and, to date, the project has reached 900 black farmers.⁹³

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TABLE 6 SUBTROP STUDY GROUP STATISTICS

	Number of study groups	Average attendance per study group	Total
Vhembe district	16	35	560
Mopani district	4	15	60
Bushbuckridge district	4	30	120
Mbombela district	4	15	60
North coast	4	15	60
South coast	4	10	40
Total	36	120	900

Source: SUBTROP own records, October 2017

90 Telephonic interview with independent consultant, 25 August 2017.

91 Personal interview with SUBTROP representative, Johannesburg, 23 October 2017. Exchange rate based on average yearly exchange rate from US\$ to ZAR for 2015 at 12.77:1 (See https://www.nedbank.co.za/content/dam/nedbank/site-assets/AboutUs/Economics_Unit/Forecast_and_data/Daily_Rates/Annual_Average_Exchange_Rates.pdf)

92 Telephonic interview with Ivory Macadamias/former chairperson of SAMAC, 28 August 2017.

93 Personal interview with SUBTROP representative, *op. cit.*

Together with its annual technical research symposium, SAMAC's Transformation Summit is held each year in Tzaneen and brings together government officials, private sector actors, industry players and farmers to discuss transformation initiatives, finances and challenges. Some individual companies/processors are involved in smallholder projects, where there has been donor assistance and/or private sector-led initiatives. Green and Gold Macadamia is involved in two such initiatives.⁹⁴

- Co-funded project with the EU (in the form of grant funding) in Limpopo's Vhembe region: The project was only partially successful, as not all smallholder farmers continued to participate in the project. However, some growers still deliver nuts to Green and Gold Macadamia for processing and the project is considered successful at this level.
- Ncera community project (communal land that is tended collectively) in the Eastern Cape: The company owns 51% of the project and private companies have 49% shareholding in the company. The Ncera community project provides a wide range of services to farmers, including marketing, selling of produce and horticultural services. To date, 1 000ha have been planted and the project is regarded as a successful initiative for macadamia growers in this region.

However, as in Malawi, not all government interventions have been successful, and the Industrial Development Cooperation (IDC), a national development institution, has been criticised for its highly risk-averse approach to agricultural projects.⁹⁵ For example, attempts to launch a hub for fertiliser and tractors, which was supposed to be financed by the IDC and SAMAC, did not get off the ground because the agricultural project did not have any irrigation in place, which made it too risky for the IDC to support.⁹⁶ While there is goodwill among South African growers, there are limits to what private farmers can achieve in their personal capacity without assistance from government stakeholders such as the dti and IDC.⁹⁷

Another potential cause for concern is SAMAC's departure from SUBTROP, the parent association for litchis, mango, macadamia nuts and avocado producers. This has raised doubts around institutional memory, once SAMAC becomes an independent organisation,⁹⁸ and the future viability of its transformation projects under new management. If discontinued, the DAFF is unlikely to continue paying a statutory levy to SAMAC, as its financial support is linked to SAMAC's commitment to and implementation of transformation projects in the macadamia nut sector.⁹⁹ SAMAC's departure from SUBTROP identifies a longer, deeper-seated problem within the association, which has been riven

94 Telephonic interview with Green and Gold Macadamia representative, 31 August 2017.

95 Personal interview with DAFF research representatives, Pretoria, 8 August 2017.

96 Telephonic interview with SAMAC representative, *op. cit.*

97 Telephonic interview with Golden Macadamia representative, 30 August 2017.

98 Personal interview with PMA (Produce Marketing Association) representative, Pretoria, 29 August 2017.

99 Personal interview with SUBTROP representative, *op. cit.*

with divisive internal politics.¹⁰⁰ Concerns about a poorly performing board and growers' discontent with management issues have been ongoing for several years, resulting in the vote for SAMAC to remove itself from SUBTROP.¹⁰¹ Nevertheless, industry players hope that SAMAC's future role will see continued transformation work, more macadamia nut-specific research, and the outsourcing of research to specialised enterprises to help develop the industry and examine issues of direct concern for growers.¹⁰²

MACADAMIA NUT PRODUCTION IN MOZAMBIQUE

First introduced in the Niassa province in 2000, Mozambique now has 20 macadamia farms employing approximately 1 000 people. Mozambique's macadamia nut producers are based in four provinces: Maputo in the south, Manica in the centre, and Niassa and Zambezia in the north. Like Malawi, the sector is dominated by large-scale commercial farms owned by private investors, and has minimal smallholder involvement.

The National Cashew Institute (INCAJU) estimates that 10 000–12 000ha are allocated specifically to macadamia nut production in Mozambique. Thus far, 20–25% is under production, although this number is expected to increase as more trees are planted.¹⁰³ Almost all companies rely on South African expertise in the production process. Many growers have only begun reaping their first harvests and, given its relatively new nature in Mozambique, some companies in Manica province (Mac Manica and Donson, Lda) are only expecting their first harvests in 2020.

The Ministry of Agriculture and Food Safety supports macadamia nut production, although there is no strategic plan to develop the sector, with neither an allocated budget nor donor support. However, the government has prioritised development of the macadamia nut sector domestically: in May 2017 the government mandated INCAJU (through Comunicado 17) to manage Mozambique's macadamia nut sector.¹⁰⁴ Comunicado 17 permits INCAJU to promote macadamia nut cultivation at technical and investment levels, including by enhancing production through partnerships with the private sector, marketing produce, mapping potential producing areas, facilitating land access for smallholder producers and providing macadamia seedlings to farmers. INCAJU is also tasked with policy development, and the first draft of macadamia-specific legislation was expected by March 2018.

The government believes that the newly approved decree and INCAJU's current institutional reforms will further the growth potential of the sector domestically. Mozambique appears to be on the right path in developing its macadamia nut sector: identifying potential partners

100 Telephonic interview with independent consultant, 25 August 2017.

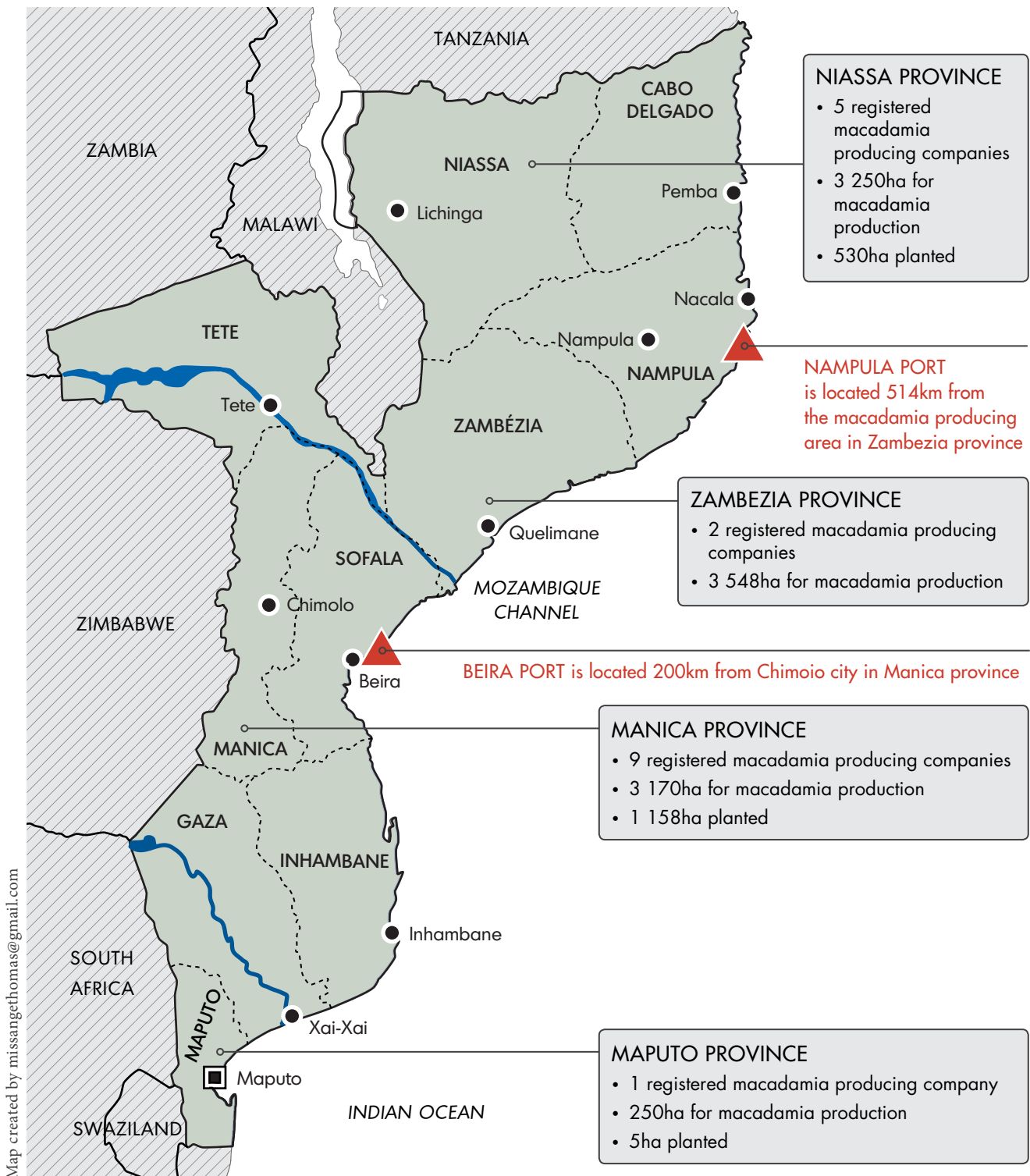
101 Telephonic interview with Green and Gold Macadamia, *op. cit.*

102 Telephonic interview with Mayo Mac representative, 7 September 2017.

103 Personal interview with INCAJU (National Cashew Institute) representative, Maputo, 16 October 2017.

104 Comunicado 17, 2017 revokes the December 2016 Decree 43/97 (*Fomento do Caju e revoga o Decreto*).

FIGURE 9 MOZAMBIQUE'S MACADAMIA-PRODUCING AREAS



Source: Author

(donors) interested in investing in the sector; mapping the national macadamia nut VC; and developing the National Strategic Plan for Macadamia Nuts, all of which are key to strengthening the macadamia sector in the country. With considerable tracts of arable land available and a climate conducive to growing macadamia nuts, as well as attractive investment incentives, Mozambique has the potential to attract more investors to the sector and play a major regional role in maximising production of this nut in future.

TABLE 7 INVESTORS IN MOZAMBIQUE'S MACADAMIA NUT SECTOR

Companies	Investor origin	Amount invested (\$)	Available land (ha)	Number of employees	Main export markets
Agro Pema	Mozambique	3 million	100	–	China
Mac Manica	South Africa	8 million	100	8	China
Mac in Moz	South Africa & EU	20 million	1500	400	China & South Africa
Macavado Lda	South Africa	4 million	100	5	China
Sun Socera Lda	South Africa	7 million	200	43	–
Valley of Macs	South Africa, Netherlands, UK, Mozambique, US	8 million	220	140	China
Total		50 million	2 220	596	

Source: Author

Private sector investment and smallholder inclusion

Mozambique's Country Strategic Plan for Agricultural Development (PEDSA) presents a medium- to long-term vision based on national directives for agriculture and the priorities set out in the CAADP, the overarching continental framework for boosting investment and growth in the agricultural sector.¹⁰⁵ To operationalise the PEDSA framework, the government created the Agricultural National Investment Plan for Agriculture (PNISA) in 2014 and the Agriculture Development Fund (FDA) in 2006. The PNISA is undertaken through the CAADP and prioritises investment and policy interventions critical to agricultural productivity. The FDA promotes access to services provided by financial institutions, companies and associations. This is one of the government's sources of

105 Mozambique, 'Plano Estrategico Para o Desenvolvimento do Sector Agrario (PEDSA) 2011–2020'. Maputo: Ministry of Agriculture, May 2011. PEDSA's implementation is based upon a comprehensive VC approach, and takes into consideration all the activities linked to technology transfer and provision of agricultural inputs, agricultural productivity, processing and marketing activities.

funds for agricultural development. Unfortunately, the FDA has been plagued with fund mismanagement in recent years, raising questions as to its ability to fulfil its mandate.

PEDSA supports agro-processing activities that promote agricultural investment, active private sector participation and state support for local initiatives to enable alternative sources of income.¹⁰⁶ However, policy has been unable to keep up with growth in the sector, and government policies to strengthen the agro-processing sector's development are weak. Agribusiness has generally been constrained by under-investment, resulting in low productivity and a lack of infrastructure, hindering access to markets.

After visiting several macadamia farms, the head of INCAJU's macadamia sector found that while the government is aware of the industry's rapid growth, certain infrastructural challenges (reliable electricity sources, access to land for expansion purposes, and access to affordable finance for smallholder producers) continue to impede development. According to the G&F group (a group of South African and Dutch investors, such as King Nuts & Raaphorst), major challenges in growing the macadamia nut sector include logistical issues, bureaucracy and red tape, together with a dearth of certified laboratories for testing finished products. Only 10% of Mozambique's arable land is currently under production, while it has four times more potential agricultural territory than South Africa. Mozambique still levies excise taxes on a range of products, and the International Monetary Fund notes that VAT efficiency in Mozambique is well below the SADC average. It is not clear how this affects the shrinking tax base and the poor, but it poses an additional financial challenge for smallholder farmers.¹⁰⁷ This ties in with Mozambique's overall challenges in upscaling, providing value-addition and developing its agro-processing sector.

Only 10% of Mozambique's arable land is currently under production, while it has four times more potential agricultural territory than South Africa

Although these challenges have a negative impact on Mozambique's business conditions, the macadamia nut sector is still seen as an attractive industry for investment. The sector attracts FDI in areas where a lot of land is available for agricultural production (Niassa province).

Mozambique's macadamia nut industry is intrinsically tied to that of South Africa: foreign investors' interest stems predominantly from the country's proximity to South African-based growers and processors. Many South African investors view Mozambique as an opportunity to lower cultivation costs (labour, land and water), which allows them to expand their production and increase their profit margins. This, coupled with Mozambique's infrastructural challenges, means that Mozambican growers/processors export most of their macadamia nuts as NIS to China, the EU, the US and South Africa. Consequently, very little processing is done in Mozambique.

106 *Ibid.*

107 WTO, 'Trade Policy Review: Mozambique', T/TPR/S/354. Geneva: WTO, March 2017.

TABLE 8 INVESTORS IN MOZAMBIQUE'S MACADAMIA NUT SECTOR

	Description	Amount invested (\$)	Hectares invested	Company invested	Nationality of investors
Niassa Lda	Goal is to export 1 000 containers of macadamia nuts within the next 15 years	20 million	5 000	Owners/investors	South African and Dutch
White Bird International and Crooke Brothers	South Africa	24 million	3 000	Murrimo Macadamia farm	Dutch and South African
G&F Group	In 2017 the company harvested 42 tonnes of macadamia nuts. From 2018–2020 the company expects to harvest over 200 tonnes	6 million	250		
Valley of Mac Mozambique	For the 2017 harvesting season, the company forecasted a harvest of 500 tonnes ^a	8 million	224		South African, Dutch, British, Mozambican, American

^a Valley of Macs, <http://www.valleyofmacs.com>, accessed 20 November 2017.

Source: Author

Nevertheless, private sector investments in processing facilities are underway. There are four macadamia processing/cracking factories in Mozambique: two in Manica province, one in Zambezia and one in Niassa. Murrimo Macadamia opened its first processing plant in August 2017, with direct investment from its shareholders (Crookes Brothers Limited and White Bird International BV). The plant has the capacity to process 2 000MT of macadamia nuts each year. Similarly, Macs-In-Moz's immediate expansion plans include developing an area of up to 1 500ha of trees through irrigation. Whether other investors will build similar processing plants remains to be seen, as infrastructural challenges could hinder the development of agribusinesses that bring value-add to Mozambique's industry.

The Mozambican macadamia nut sector remains a fledging industry, and many smallholder farmers are unaware of its high export value, as there is little knowledge dissemination on macadamia nut cultivation. Initiatives that do incorporate smallholder producers through outgrower schemes are mostly private-led and some (such as Murrimo Macadamia) use macadamia nuts as an inter-crop. Murrimo Macadamia is also involved in knowledge transfer and skills development to local communities.

Macadamia Niassa Lda (MNL) has the largest community-managed outgrower programme in Mozambique, with 9ha dedicated to smallholder farmer cultivation of macadamia

The Mozambican macadamia nut sector remains a fledging industry, and many smallholder farmers are unaware of its high export value, as there is little knowledge dissemination on macadamia nut cultivation

nuts.¹⁰⁸ According to the company, this model forms part of its social intervention in local communities. It provides all inputs – from trees to fertilisers and technical assistance – and farmers can also sell their produce to external processors. MNL's approach has received government praise, particularly because it provides smallholder farmers with the technical assistance needed to produce a high-quality product.

Fear of the spread of diseases, pests and ongoing theft underlies producers' reluctance to increase engagement with smallholder farmers. According to the director of G&F Macadamia Lda,¹⁰⁹

[m]acadamias are a high value crop and can easily be stolen. Here in Mozambique, 100 nuts is approximately the same value as a minimum daily wage. It would be very difficult to monitor whether we would be purchasing our own nuts back from the smallholder grower if the projects were in close proximity. That said, it [incorporating smallholders] could be done in a separate area away from commercial growers, so that it does not result in conflict. One of the issues with smallholder programs is the initial wait, so there needs to be a good system in place that will sustain the smallholder farmers until the trees start producing a crop.

CHALLENGES IN CREATING A REGIONAL VALUE CHAIN AND THE ROLE OF INTERNATIONAL MARKETS

REGIONAL CHALLENGES FACING MACADAMIA NUT PRODUCTION

As the macadamia nut sector experiences global growth it is vital that African producers establish themselves as major international players. Based on SAMAC's own projections from 2015, the sector will expand rapidly to include larger volumes of global cultivation by an increased range of actors by 2020. Based on the projected production figures in Figure 10, African producers' ability to establish themselves as long-term players in global production chains is dependent on their ability to securely position themselves as leading regional players.

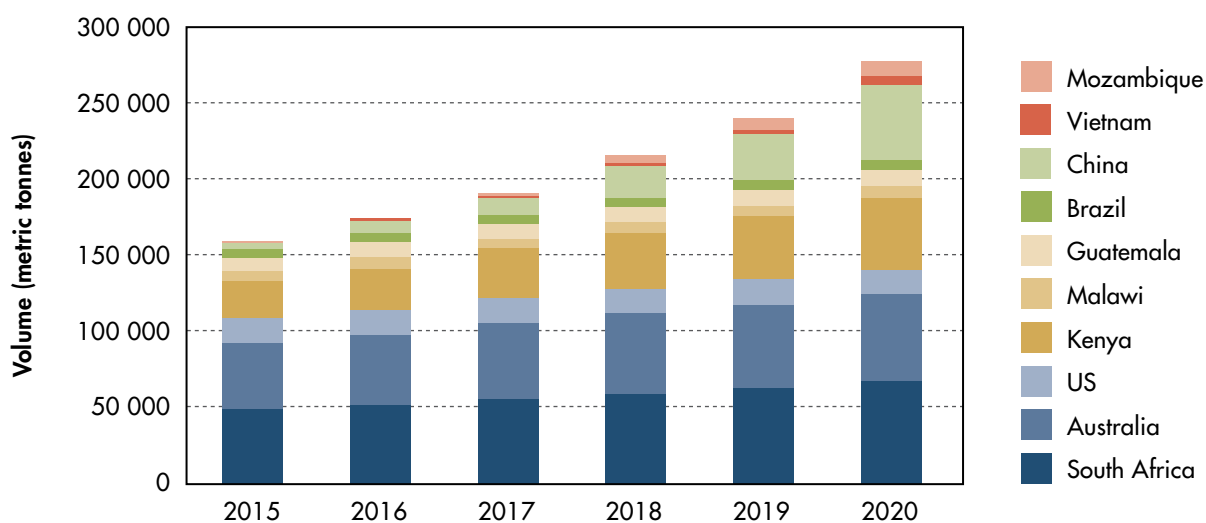
Despite quality concerns, South Africa imports macadamia nuts predominantly from other African countries, including Mozambique and Malawi, and it remains the cheapest importing option.¹¹⁰ In 2014 South Africa imported 1 285 633kg macadamia nuts from the rest of Africa, showing that there is potential to establish a regional VC. Intra-regional macadamia nut flows and pooled efforts could go towards establishing a working model that will allow African producers to dominate global supply chains. Existing links between international players, South African processors and their external farms (Green and Gold Macadamias, for example, together with Camellia LLC, which owns farms Zetmac in South Africa and Eastern Produce in Malawi) need to be expanded and new relationships forged if Southern Africa is to develop a successful regional macadamia nut sector.

Intra-regional macadamia nut flows and pooled efforts could go towards establishing a working model that will allow African producers to dominate global supply chains

108 Personal interview with INCAJU representative, Maputo, 16 October 2017.

109 Personal interview with G&F Macadamia representatives, Maputo, 20 September 2017.

110 Mogala M, *op. cit.*

FIGURE 10 WORLD MACADAMIA NUT PRODUCTION PROJECTIONS, 2020

Source: SAMAC, 'Industry statistics on the Southern African macadamia industry', 2015, <https://www.samac.org.za/industry-statistics-southern-african-macadamia-industry/>, accessed 9 November 2017

In order for this to become a reality, however, structural difficulties must be addressed. High processing costs and poor quality nuts – the result of a lack of technical equipment and expertise – are particularly problematic in Malawi.¹¹¹ Lack of access to technical assistance, training and capacity building, coupled with delays and/or costs incurred owing to poor infrastructure, is another massive challenge for smallholder producers. Added to this are food safety issues and the risk of stink bug, fungal infections and diseases that threaten produce. Regional cooperation and cross-border assistance also are problematic.

SAMAC's membership extends to Malawian and Mozambican growers and offers them technical assistance when requested (at the expense of the requesting party), although opinions differ on how to welcome other African producers. For example, the SAMAC board's decision not to audit regional nurseries and to allow voluntary implementation of its nursery protocols and standards may have contributed to African producers' inability to access locally sourced high-quality seed. This in turn increased their dependency on South African or other imported seeds at additional costs for local farmers, and further entrenched their inability to access the regular technical assistance necessary for improved productivity.

111 Urban-Econ Development Economists & Limpopo Provincial Government, 'Limpopo Agro-Processing Strategy 2012'; telephonic interview with independent consultant, 28 August 2017.

Border management and slow customs processes within SADC further deter the creation of regional markets and VCs, while corruption is endemic in many African countries

The cost of intra-regional transportation is another limiting factor, together with a lack of access to information systems that would facilitate transparency and allow readily available trading prices.¹¹² Border management and slow customs processes within SADC further deter the creation of regional markets and VCs, while corruption is endemic in many African countries. Fluctuating exchange rates make it difficult to plan export programmes, especially in terms of trying to establish a regional VC and export markets in other African countries. Economic crises in countries such as Angola and Nigeria, which could have been important continental recipient markets for macadamia nut sales from Southern Africa, have instead made these countries high-risk markets.¹¹³

In all three countries, theft of macadamia nuts is a pervasive problem and farmers have little recourse to legal mechanisms to prevent this from happening.¹¹⁴ Malawian macadamia representatives complained of insufficient assistance from the police and authorities.¹¹⁵ In southern Malawi theft and inadequate pest control by smallholder farmers have heightened tensions with commercial growers, who are reluctant to engage with or support the incorporation of smallholder farmers into their commercial VCs.¹¹⁶ Interviewees said the government overlooked this tension, particularly as land shortages in southern Malawi have exacerbated calls for commercial estates to be ‘freed up’ for use by smallholder producers.¹¹⁷

According to South African interviewees, theft is linked to an aggressive sourcing strategy by Chinese buyers, whose increasing demand and willingness to pay cash for nuts have contributed to a thriving black market.¹¹⁸ On average, SAMAC records 2 120 tonnes of macadamia nuts stolen annually, valued at ZAR 146 million (approximately \$10 960 960).¹¹⁹ Many of these stolen nuts are exported to Mpumalanga via Zimbabwe by syndicates that retail the nuts through different avenues and at far cheaper commercial prices, despite their high international prices.¹²⁰ Not only is the loss of profit a huge concern for farmers, but stolen products often do not comply with the necessary quality checks either, which could result in reputational damage for African producers.

THE CHALLENGE OF CHINA AND EXISTING GLOBAL TRADE STRUCTURES

China’s role in fuelling global demand for macadamia nuts remains contentious. The country is globally number one in terms of import volume and third in terms of

112 Personal interview with AgBiz representative, *op. cit.*

113 Personal interview with PMA representative, *op. cit.*

114 Telephonic interview with Golden Macadamia representative, *op. cit.*

115 Questionnaire completed by the Tree Nut Growers Association of Malawi, 3 August 2017.

116 Personal interview with AgDevCo representative, *op. cit.*; personal interview with IDH representative, *op. cit.*

117 Telephonic interview with Mayo Mac representative, *op. cit.*

118 Telephonic interview with Ivory Macadamias/former chairperson of SAMAC, *op. cit.*

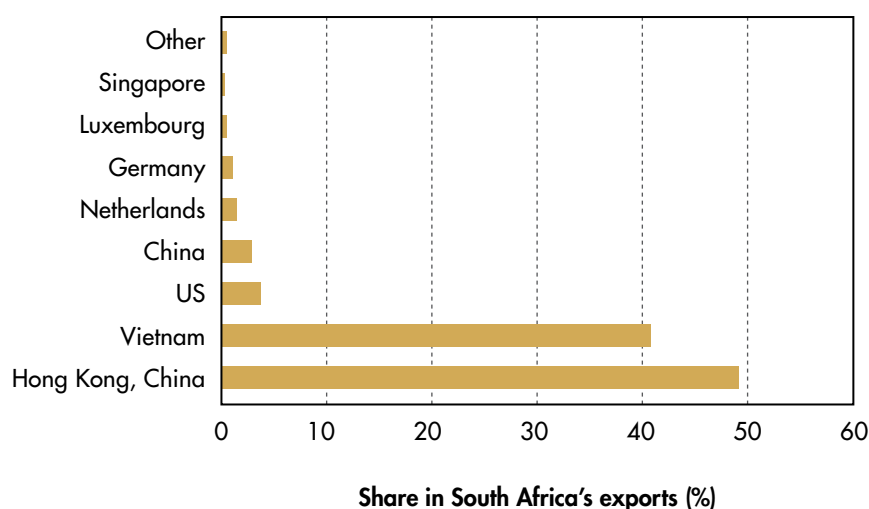
119 Van Zyl A, *op. cit.* Exchange rate based on average yearly exchange rate from US\$ to ZAR for 2017 at 13.32:1 (See https://www.nedbank.co.za/content/dam/nedbank/site-assets/AboutUs/Economics_Unit/Forecast_and_data/Daily_Rates/Annual_Average_Exchange_Rates.pdf).

120 *Ibid.*

consumption.¹²¹ The Chinese market's domestic consumption has specifically driven prices for NIS as opposed to kernel.¹²² This is important for two reasons: NIS requires lower levels of agro-processing, which has contributed to the increased number of smallholder farmers entering the macadamia nut sector in Southern Africa; secondly, it is a more volatile market and less reliable, in the long run, for African producers.¹²³

The risks and opportunities posed by the Chinese market remain a contentious discussion among South African producers. While some South African growers believe that Chinese domestic production will be unable to satisfy local demand, others express concern at South African and African growers' selling 50% or more of their produce to a single market.¹²⁴

FIGURE 11 SOUTH AFRICA'S MACADAMIA NIS EXPORT DESTINATIONS, 2015



Source: Mogala M, 'A Profile of the South African Macadamia Nut Market Value Chain 2015'. Pretoria: Department of Agriculture, Forestry and Fisheries, 2015

121 Produce Report, 'Rapid growth of China's macadamia market shows great potential', 24 August 2017, <http://www.producereport.com/article/rapid-growth-china%E2%80%99s-macadamia-market-shows-great-potential>, accessed 26 October 2017.

122 Telephonic interview with SAMAC representative, *op. cit.*

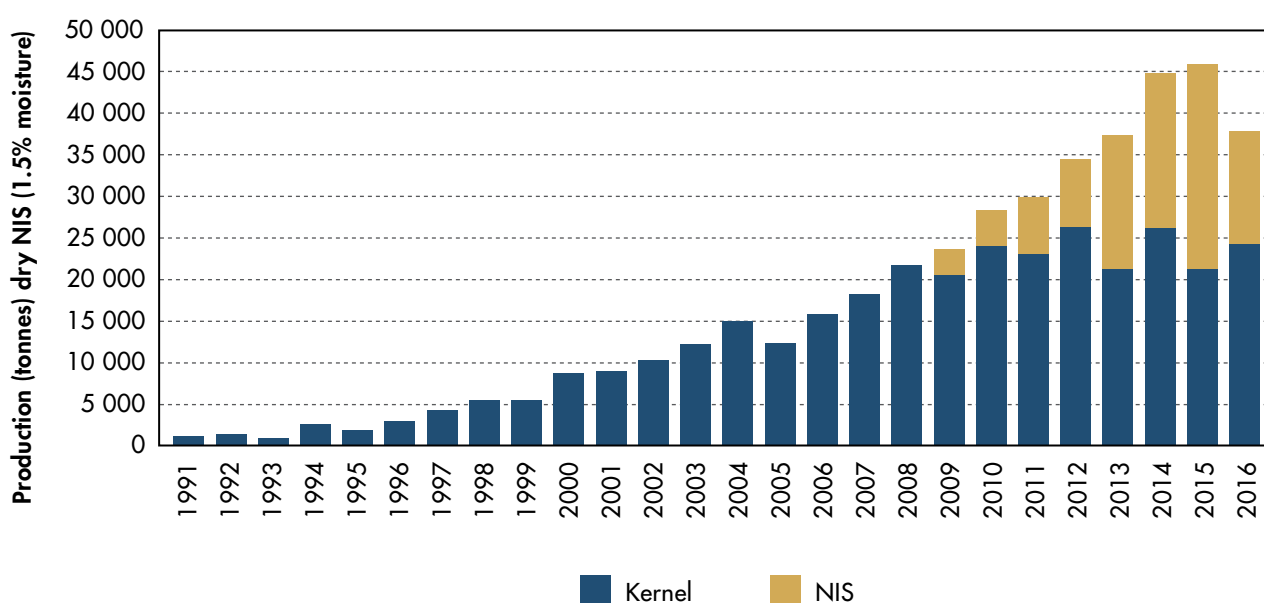
123 Telephonic interview with Golden Macadamia representative, *op. cit.*

124 Telephonic interview with Ivory Macadamias/former chairperson of SAMAC, *op. cit.* 'A Profile of the South African Macadamia Nut Market Value Chain 2015' reports that exports to the Asian region accounts for more than 50% of total macadamia nut exports. See Mogala M, *op. cit.*

Many growers interviewed also noted it would be poor business acumen not to supply the Chinese market, because it would render a processor uncompetitive in an increasingly competitive industry where farmers are able to demand higher prices for their produce.¹²⁵ Consequently, the Chinese market has been able to influence the high global prices for macadamia nuts, and some industry players speculate China may even have manipulated the market to a certain degree.

Within South Africa, year-on-year production has increased for dry NIS: during 2014, production output increased a whopping 19.7% compared to the 2013 production season. Yet the final estimate for NIS for 2017 has been 42 000 tonnes among South African producers, which is far below the long-term forecast of 50 000 tons for 2017.¹²⁶ Despite this, fears of a macadamia bubble continue to plague the industry, and industry players are concerned about how excess produce would be absorbed should China be unable to do so.

FIGURE 12 HISTORICAL SOUTH AFRICAN MACADAMIA PRODUCTION: NIS VERSUS KERNEL PRODUCTION



Source: SAMAC, 'Industry statistics on the Southern African macadamia industry', 2 June 2017, <https://www.samac.org.za/industry-statistics-southern-african-macadamia-industry/>, accessed 9 November 2017

¹²⁵ Telephonic interview with Golden Macadamia representative, *op. cit.*

¹²⁶ Jansen C, 'Macadamias in 2018: Bonanza or bubble?', *Fresh Plaza*, September 2017, <http://www.freshplaza.com/article/181943/Macadamias-in-2018-Bonanza-or-bubble>, accessed 14 November 2017.

China is also growing larger volumes of macadamia nuts domestically, having planted 127 970ha in 2015 alone.¹²⁷ However, it is a fledging industry; knowledge and technical expertise is sparse, and reports suggest that Chinese growers are mostly smallholder farmers cultivating crops on mountainous terrain, which is not ideal for macadamia nut cultivation. This could result in smaller yields and poorer quality orchards.¹²⁸ Current Chinese government initiatives have been to treat macadamia nut plantation as part of a broader agro-forestry programme to rehabilitate deforested areas,¹²⁹ which may result in shifting goals for the plantations in the long term, particularly if these trees yield low volumes. However, Chinese growers are reportedly receiving technical and horticultural assistance from Australian experts, which could result in improved yields in the coming years.¹³⁰ This will determine whether China's domestic production will be sufficient to feed its domestic appetite for macadamias, and the ensuing impact that potentially high levels of domestic production could have for international producers, especially African growers.

Despite African producers' reliance on the Chinese market, there is no free trade agreement (FTA) between China and its African trading partners. Australia's FTA with China gives its macadamia nut farmers favourable market access at a 0% tariff rate. In comparison, and despite the high levels of macadamia nut exports to China, South African producers pay a tariff rate of 19% to access the Chinese market. Although the Produce Market Association has linked Chinese buyers with South African producers through its global network,¹³¹ and SAMAC has engaged China Roasters in the hopes of its lobbying the Chinese government to reduce the tariff rates,¹³² not much has been done at an inter-government level to address this problem. Discussions with Chinese counterparts have been stop-start,¹³³ and the industry would like to see the dti assist by engaging its Chinese counterparts in bilateral discussions on this topic.¹³⁴

An analysis of existing trade arrangements between African countries and their respective export markets reveals structural processes that make it more profitable for growers to export semi-processed/NIS products, while production difficulties necessitate their reliance on exporting NIS instead of kernel. For example, while African growers can export macadamia nuts to the US through AGOA at a 0% tariff, the US' high food safety requirements deter such exports.¹³⁵ Up to 75% of investments in US factories are geared towards tackling food safety issues¹³⁶ and African producers that are unable to invest in equipment to ensure that their macadamia nuts meet

The Chinese market has been able to influence the high global prices for macadamia nuts, and some industry players speculate China may even have manipulated the market to a certain degree

127 Produce Report, *op. cit.*

128 *Ibid.*

129 Telephonic interview with independent consultant, 25 August 2017.

130 Botha A, 'International Nut Council issues increased global macadamia nut forecast', *Fresh Plaza*, 23 May 2017, <http://www.freshplaza.com/article/175873/International-Nut-Council-issues-increased-global-macadamia-nut-forecast>, accessed 14 November 2017.

131 Personal interview with PMA representative, *op. cit.*

132 Telephonic interview with Green and Gold Macadamia, *op. cit.*

133 Telephonic interview with Ivory Macadamias/former chairperson of SAMAC, *op. cit.*

134 Telephonic interview with Mayo Mac representative, *op. cit.*

135 Telephonic interview with Golden Macadamia representative, *op. cit.*

136 Botha A, *op. cit.*

these SPS standards risk exclusion from the US market. It is also cheaper for the US, owing to its purchase power and higher levels of industrialisation, to engage in value-addition confectionary production (chocolates and biscuits, for example) using imported macadamia nuts.¹³⁷ Therefore, US importers may have little desire to import value-added macadamia products directly from African processors and producers, although South Africa does provide a large share of its shelled nut exports to the US.

An inability to invest in the infrastructure required to shell macadamia nut into kernel form means that African smallholder growers cannot sufficiently capitalise on the fact that the EU levies 2% tariff rates on Australian macadamia nut imports, compared to their own preferential access to EU markets.¹³⁸ Instead, current statistics suggest that South Africa's exports to kernel markets continue to decrease: SAMAC estimated that only 49% nut kernels would be exported in 2017, compared to 64% in 2016.¹³⁹ Diminishing supplies to kernel markets, over-production of NIS for China alone, and generally lower levels of value-addition in the sector are all cause for concern as far as agro-processing and value-addition agribusinesses are concerned.

Exporting kernels requires a grower/processor to fill large containers for export. However, when exporting packaged products processors get less than 6 tonnes in freight cost, compared to 18 tonnes when macadamia nuts are shipped as kernels instead.¹⁴⁰ Consequently, economies of scale deter farmers from exporting larger quantities of value-added products. For emerging smallholder producers this is almost certainly impossible to achieve, which is why exporting NIS to China is an easier option than exporting kernel. This is despite the fact that the EU levies a zero tariff rate on kernel or NIS imports from South Africa, Malawi and Mozambique;¹⁴¹ exports to the EU and US markets in kernel form generate larger profit revenues even with lower export volumes,¹⁴² and investment in kernel-processing facilities promotes job creation.

Lastly, even where processors are interested in value addition, structural difficulties contribute to their inability to scale up. In theory, there is a desire to expand in the coming years, but it has been challenging for African producers to make capital investments in processing units because of their prohibitively high costs, which deter diversification into greater value-added products.¹⁴³ In South Africa, many factories and processing plants built in the late 1990s have not been maintained and stiff competition has reduced processors' ability to invest in upgrading their equipment, particularly as international demands have moved towards exports of NIS rather than kernel.¹⁴⁴ It would be easier

In South Africa, many factories and processing plants built in the late 1990s have not been maintained and stiff competition has reduced processors' ability to invest in upgrading their equipment

137 Telephonic interview with Mayo Mac representative, *op. cit.*

138 European Commission, 'EU tariffs: Australia', <http://madb.europa.eu/madb/euTariffs.htm?productCode=0802620000&country=AU>, accessed 14 November 2017.

139 Jansen C, *op. cit.*

140 Telephonic interview with Green and Gold Macadamia, *op. cit.*

141 European Commission, 'EU tariffs: South Africa', <http://madb.europa.eu/madb/euTariffs.htm?productCode=0802620000&country=ZA>, accessed 14 November 2017.

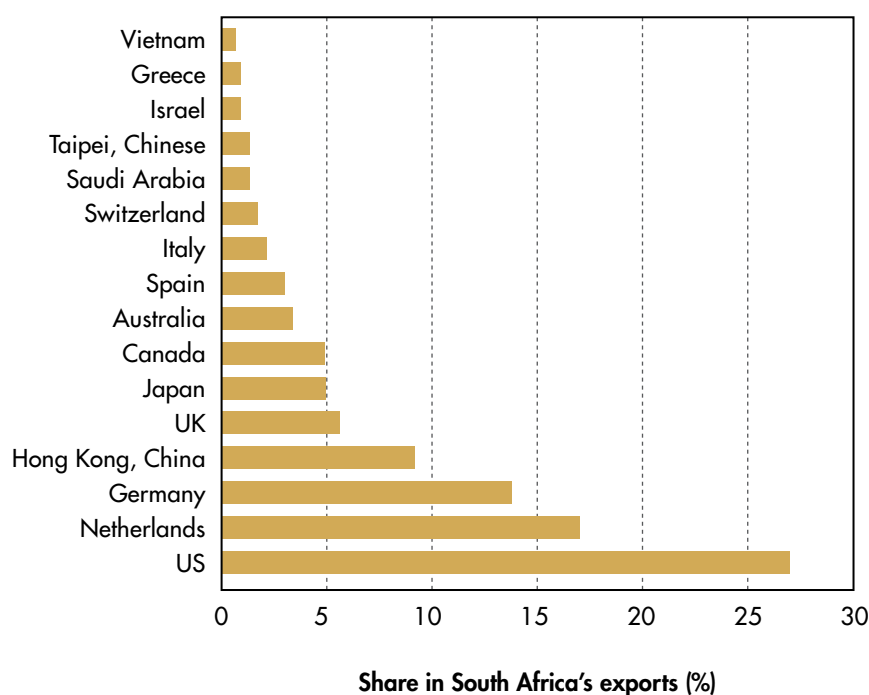
142 Mogala M, *op. cit.*

143 Telephonic interview with Mayo Mac representative, *op. cit.*

144 Telephonic interview with Ivory Macadamias/former chairperson of SAMAC, *op. cit.*

if domestic markets were interested in purchasing value-added products (as is the case in Australia); however, this will require the very capital investments that farmers are struggling to make.

FIGURE 13 SOUTH AFRICA MACADAMIA NUT (SHELLED) EXPORT DESTINATIONS



Source: Mogala M, 'A Profile of the South African Macadamia Nut Market Value Chain 2015'. Pretoria: Department of Agriculture, Forestry and Fisheries, 2015

REGIONAL POLITICAL DYNAMICS AND THE CHALLENGE OF ESTABLISHING A REGIONAL VC FOR SOUTH AFRICA, MALAWI AND MOZAMBIQUE

SADC's Industrialisation Roadmap provides a useful framework to assess the viability of regional agricultural VCs. Part of the Industrialisation Roadmap's strategy is to '[d]evelop viable regional value chains capable of interacting with global value chains and identify areas where the SADC region can have the greatest success in capturing high opportunities based on present and future strengths and capabilities'.¹⁴⁵ This includes upskilling, value-addition, downstream processing and manufacturing by way of participating in regional and global VCs.

145 SADC Secretariat, *op. cit.*

The Industrialisation Roadmap recognises that cross-border utilisation of natural and human resources is crucial for enabling regional VCs. For this to become a reality, an overarching enabling environment must be created through efficient transportation, streamlined border logistics, and long-term, real value-addition processing and upscaling. Specialised production, capital investments and greater competitiveness are necessary for establishing and participating in VCs. VC development should focus on economic realities, examining the various roles that actors can play across formal and informal VCs while ensuring that low-technology, high-employment stages do not detract from long-term goals of upgrading into high-skill, greater value-addition activities. Using technology and finance to transform agricultural industries is also necessary. An important part of this process is creating cheaper ways to import and export raw and semi-finished products throughout the region.¹⁴⁶

The overriding question is whether macadamia nuts are a suitable sector for regional VC development, and if SADC countries are capable of integrating into a regional VC based on their domestic capabilities. The Industrialisation Roadmap recognises that low productivity, poor farm support systems, inefficient land-use management, limited access to quality inputs, climate change and poor linkages with industry continue to negatively impact SADC VC development. In order to implement a regional VC there must be political willingness from governments and collaboration with industry experts and leaders. It also requires national capacities to be developed in order to ensure that regional efforts are efficient and effective. However, because manufacturing and value-adding capacities are not spread equally throughout the region there is a general concern that South Africa will dominate value-added processing and continue to rely on its neighbours for raw materials exports. At a political level, investment is also driven by those countries with well-performing private sectors that can expand into the region.

An analysis of the findings for each country, based on the Industrialisation Roadmap, is given below.

Malawi's potential for participation in a regional VC

Malawi has good potential for future VC participation, but is unable to capitalise on this in the immediate future because of existing constraints to its domestic capabilities. Within Malawi, projects do not focus on creating regional synergies.¹⁴⁷ Although the country might enjoy a comparative advantage in labour-intensive activities (which gives it a chance to be competitive in global VCs), there is still a need to move towards industrialisation in order to avoid being trapped in a labour-intensive export system, which will keep Malawian players at the lower end of the VC.

The Malawian government does have a strong interest in growing processing capacities within the country.¹⁴⁸ Owing to Malawi's history of exporting raw materials, there is greater

146 Telephonic interview with Mayo Mac representative, *op. cit.*

147 Personal interview with AfDB representative, *op. cit.*

148 Personal interview with USAID/IFPRI representative, *op. cit.*

focus on cultivating processing initiatives domestically, which explains the government's reluctance to engage in regional VC creation where the country is predominantly a raw materials supplier. However, Malawi's ability to engage in a regional VC is also severely hampered by its lack of infrastructure and a viable transportation system – both essential for incorporating the country's produce into a regional VC. There are also ongoing questions about farmers' ability to access quality seed and R&D to improve their production. For example, AgDevCo has a well-stocked nursery that could supply Tanzania and the southern COMESA region with seedlings. Yet, despite its efforts to engage SAMAC on this front, SAMAC has not shown much interest in collaborating,¹⁴⁹ possibly because it is mostly focused on the South African market and producers, despite its regional mandate.

Therefore, the challenge facing Malawi is to reposition its economy by addressing infrastructural and doing-business constraints, building capacity and enhancing its competitiveness based on its natural strengths, while also finding ways to ensure greater value-add to products and diversifying away from tobacco.¹⁵⁰ In order for Malawi's macadamia nut sector to develop sustainably in the coming decades, incorporation of smallholder farmers is essential, especially since this is the dominant mode of production. However, incorporating smallholder farmers into the macadamia nut sector for industrial and socio-economic development will require dedicated efforts, continuous training and access to financial support to achieve the required economies of scale and improve Malawi's future stake in a regional VC. More than South Africa and Mozambique, Malawi is also directly reliant on regional linkages to further its access to global VCs. Consequently, in order for the country to remain competitive, economies of scale and modes of production will have to be increased; garnering private sector investment must be taken seriously, with regulatory efforts made to encourage its involvement; and transportation costs reduced. It thus remains highly unlikely that Malawi will be ready for incorporation into a regional VC within the next few years. However, focusing on developing national capacities will, in the long run, facilitate its gradual inclusion and involvement.

South Africa's potential for participation in a regional VC

Given South Africa's level of industrialisation, it is obviously the best-placed country to be a value-adding partner in the potential creation of a regional VC. Notwithstanding concerns regarding a lack of innovation and skills shortages, the country is well placed to further implementation of the Industrialisation Roadmap through its technical expertise, established companies with products and competencies, access to R&D and 'well-developed and dense networks of local supply industries and services and geographical clustering'.¹⁵¹ Together with its existing advantage in the macadamia nut sector, these

149 Personal interview with AgDevCo representative, *op. cit.*

150 AfDB, OECD & UNDP (UN Development Programme), *African Economic Outlook 2014: Global Value Chains and Africa's Industrialisation*. Abidjan / Geneva: AfDB, OECD & UNDP, 2014.

151 *Ibid.*

attributes position South Africa as a potential leader in spearheading the creation of a regional macadamia nut VC.

The quality and quantity of nut production in South Africa are among the best in the world, and its smallholder farmers and producers have access to financial and technical assistance (furthering downstream processing), as well as industry representation. However, it is important to highlight that ongoing politics could deter regional cooperation. A huge part of establishing a regional VC for the macadamia nut sector involves a paradigm shift among industry players, processors and growers. Interviewees suggested that many South African growers view farmers in other African countries as competitors, and there is little desire to collaborate and work together in building regional VCs.¹⁵² For South African growers, the problem is both reputational and political: South African macadamia nuts are regarded as being of a high quality and they are reluctant to collaborate with regional producers who might not be able to meet the same standards of production. Their reluctance have not gone unnoticed, particularly as some African growers have highlighted the lack of assistance from SAMAC.

Therefore, South Africa could only participate in a regional VC if it demonstrated a change in attitude and a willingness not to attempt to dominate the entire value-added processing aspect. It would also require South Africa to utilise existing strengths that could further the successful creation of a regional VC – for example, exporting macadamia nuts through its ports – and to share R&D with neighbouring growers. The country could play an important role in helping to shape a regional strategy where its value addition is shared among countries and the region's competitiveness is improved. Ultimately, if South Africa were to play the leader in developing this VC, it would face a difficult task in winning over its neighbours, ensuring its private sector is involved in corporate social responsibility activities, and fostering trust and cooperation among all parties concerned.

Mozambique's potential for participation in a regional VC

Mozambique plays a major role in regional trade, accounting for 70% of SADC's transit traffic, with logistics corridors linking its deep-water coastal ports with neighbouring countries.¹⁵³ Its ports can play an important contributory role in creating a regional VC through existing infrastructure, and help improve Malawi's export market access. However, the country's productivity levels are lower today than in 1975 and its agricultural production levels have decreased over time.¹⁵⁴ Mozambique's ability to meet the Industrialisation Roadmap's goals is limited by a lack of human resources, poor infrastructure and a lack of technical knowledge regarding potential markets and non-tariff barriers. These are challenges shared with Malawi. Without improved productivity,

152 Personal interview with PMA representative, *op. cit.*; telephonic interview with Golden Macadamia representative, *op. cit.*; telephonic interview with Ivory Macadamias/former chairperson of SAMAC, *op. cit.*; telephonic interview with independent consultant, 20 September 2017.

153 WTO, 'Trade Policy Review: Mozambique', T/TPR/G/354. Geneva: WTO, March 2017.

154 AfDB, OECD & UNDP, *op. cit.*

the country will struggle to integrate into and remain competitive within regional and global agro-processing VCs, especially since South Africa is its main destination for food and beverages exports.¹⁵⁵

Before Mozambique can play a regional role it should have a strategic plan for growing its domestic macadamia nut sector. This will require donor and private sector involvement and support, together with assistance from the AfDB. Policy shifts that promote financing for economic development, particularly in rural areas, and the inclusion of smallholder farmers into the industry are also necessities. Until these teething issues are addressed, the macadamia nut sector will likely continue to be dominated by private investors and/or commercial farmers, and not local producers. This need not be disadvantageous if the sector is developed by commercial farmers with the necessary agricultural assets, technical know-how and financial capacity. However, industry development has to account for the needs and involvement of smallholder producers, who could be accommodated through off-take agreements between processors and smallholder farmers, especially once the processing plants become active in Mozambique. This will work towards facilitating smallholder inclusion in formal VCs, cultivating business practices and ensuring improved productivity over the long term, which the government can facilitate through formal knowledge-sharing channels between commercial producers and smallholder producers (for example, through the creation of a Mozambican macadamia nut association) as well as asset sharing/loan schemes similar to ACE's efforts in Malawi.

According to INCAJU's head of the macadamia nut sector, there are good relations within the sector, and the main macadamia producers know each other and communicate on a regular basis. The government believes that this close relationship will help build a stronger macadamia sector, and it is expecting five new macadamia-producing companies in 2018 in Manica province alone. These developments indicate the potential to improve domestic capacity and technical knowledge in the years to come. Creating a Mozambican macadamia association would feed into the Industrialisation Roadmap's strategy of upskilling local producers, creating economies of scale and improving the sector's relations with government through bilateral engagement. A Mozambican macadamia association could also help by incorporating smallholder farmers through outgrower schemes, thereby enabling their involvement in the broader VC and facilitating the creation of agribusinesses and crop diversification for maximum profit yields.

In its current format, however, Mozambique's ability to participate in a regional macadamia nut VC is highly dependent on its South African connections, particularly for technical assistance and investment. Agro-processing initiatives and value-addition within the sector depend on how viable and financially profitable current processing projects will remain. Lastly, as long as Mozambique continues to export the bulk of its nuts as NIS there will be little incentive for producers to upscale and engage in value-addition activities.

155 *Ibid.*

ESTABLISHING A SOUTHERN AFRICAN VC: OVERCOMING HURDLES AND SUGGESTIONS FOR THE FUTURE

The macadamia nut sector's potential to be a regional VC remains contestable. While the crop itself is highly valued, development and capacities across the region remain highly unequal. While a macadamia nut regional VC might be possible in the future, there appears to be limited scope for its immediate viability. However, that does not mean that cooperation towards establishing a regional VC is impossible. This paper identifies four broad policy recommendations to take into consideration.

Improve Malawi's agricultural sector and further VC development

Efforts here include the involvement of both the private sector and donor communities, reflecting a cross-cutting range of options to improve yield, quality and productivity, including:

- ensuring donor-funded expansion of extension services, training government extension officers and offering assistance in implementing control systems with long-term visions of SPS compliance;
- creating off-take agreements between commercial farmers and neighbouring small-holders to discourage crime;
- leveraging and encouraging the creation of farmer cooperatives for farmers' improved integration into VCs, access to quality seeds and inputs;
- improving certification processes and national labs, which currently cannot meet international standards/demands; and
- encouraging better utilisation of donor support: policymakers could re-direct donor support towards funding-intensive initiatives that require technical capacity building and improve the R&D environment in African countries through training and constructing R&D facilities. Funding could also be directed at the training of extension officers.

Establish African producers as global leaders in production through collaboration, research-sharing and regular engagement

- One of the ways in which growers and processors from different countries can work together is through an information-sharing platform and study groups where national bodies and industry representatives can offer business skills and export market information, share useful research, and help growers to understand international standards and SPS issues. This needs to be a government-driven initiative among Malawi, Mozambique and South Africa.
- For the purposes of establishing a regional VC, it is important to understand lessons and potential best practices emerging from other African countries, particularly where these can be replicated in other parts of the continent.

Induce industry representatives to find coherent regional approaches to regional VC development and engagement

- If African producers are to establish themselves as important global players it is essential that group industry representatives work together under a regional umbrella body to implement specific regional policies.¹⁵⁶ A regional industry body is essential for shaping a common agenda among SADC macadamia nut producers and ensuring a common strategy towards regional growth and expansion. This will facilitate information sharing and working towards common goals, and assist in addressing discrepancies between producers across Southern Africa. Developing regional strategies could also supplement and support cross-regional coordination among farmer cooperatives.
- National governments need to establish member associations in Malawi and Mozambique that are well supported by domestic producers, and able to advocate for domestic policy reforms and lobby for domestic macadamia nut issues.¹⁵⁷ SAMAC could play a technical role by providing guidance and training to domestic/national macadamia member associations in other SADC countries in order to facilitate their technical knowledge building, build stakeholder relations with foreign players in the macadamia nut sector and generally coordinate on regional issues.

Identify innovative ways in which African producers can improve their economies of scale and upscale in VCs

- Governments, together with industry representatives, could investigate the viability of creating local markets for industrialised/value-added products incorporating macadamia nuts, such as biscuits, chocolates and oil-based soaps. Creating a domestic and regional market for value-added products could help offset the reliance on NIS markets, and foster local demand for niche macadamia products.

156 Personal interview with NEPAD Business Forum representative, Midrand, 24 August 2017.

157 Telephonic interview with Golden Macadamia representative, 30 August 2017.

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