Established in 2011, Indaba Agricultural Policy Research Institute (IAPRI) is Zambia’s first indigenous policy research institute dedicated to policy analysis of the agricultural and environmental sectors. IAPRI is a non-profit company limited by guarantee and collaboratively works with public and private sector stakeholders. The Institute’s vision is; “A Zambia free of hunger, malnutrition and poverty through sustainable agricultural transformation”.

IAPRI exists to carry out agricultural policy research and outreach activities, serving the agricultural sector in Zambia to achieve sustainable pro-poor agricultural development. The Institute sees the improvement of rural livelihoods as the key to achieving broad-based poverty reduction in Zambia. Achieving this entails enhancing smallholder agricultural productivity, expanding agricultural markets and trade, improving natural resource management, and expanding the resilience of vulnerable households to external shocks. IAPRI’s mandate is to utilise empirical evidence to advise and guide the Government of Zambia and other stakeholders on agricultural investments and policies. The overarching goal of IAPRI’s policy analysis and outreach efforts is to identify policies and investments in the agricultural sector that can effectively stimulate inclusive economic growth and poverty reduction. This is achieved through three core operational activities:

• Producing authentic, impartial, and high-quality research on agricultural, food, and natural resource policy issues in Zambia and the wider Southern African region;
• Integrating research findings into national, regional, and international programs and policy strategies to promote sustainable agricultural growth and alleviate hunger and poverty in Zambia; and
• Supporting the development and strengthening of capacity for policy research, analysis, and outreach of public and private institutions in Zambia.
Preface

It gives me great pleasure to present to you IAPRI’s third issue of the Zambia Agriculture Status Report covering the period January to December 2018.

The report summarises the status of the agriculture sector in Zambia for the period January to December 2018. The report was conceived as a useful resource for use by different stakeholders wishing to have up to date data and information about Zambia’s agricultural sector. Policy makers, farmers, private sector, researchers, development partners and investors would find this report useful as it outlines the potential, key constraints and opportunities of the agriculture sector in the country. The first volume of this series was published in December 2016. All volumes of the report can be downloaded for free at www.iapri.org.zm.

Issues highlighted in this report include: 2017/2018 agricultural production and marketing of major crops; horticulture; fisheries and livestock; Zambia’s the food security status, 2018; the agricultural budget; and many more. A brief review of the implementation of the e-voucher during the 2017/2018 season, and the decision by the government to move 40 percent of the Farmer Input Support Programme recipients to the traditional system is also included in this year’s report.

IAPRI welcomes your feedback in order to improve the content of this series.

Chance Kabaghe
Executive Director, IAPRI
IAPRI wishes to acknowledge the generous financial support of the Government of Sweden through the Embassy of Sweden, and the United States Agency for International Development (USAID) in Lusaka, Zambia. We also wish to thank some of the IAPRI researchers and staff who made an input to make the publication of the report possible. We further wish to recognise the positive collaborative effort that has been established between the Governments of the Republic of Zambia through the Ministry of Agriculture, Ministry of Fisheries and Livestock, Central Statistical Office, and the private sector in guiding the country’s agricultural sector towards attaining more sustainable economic development.

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<td>7NDP</td>
<td>Seventh National Development Plan</td>
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<td>CAADP</td>
<td>Comprehensive Africa Agriculture Development Programme</td>
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<td>CFS</td>
<td>Crop Forecast Survey</td>
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<td>CSO</td>
<td>Central Statistical Office</td>
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<td>E-FISP</td>
<td>Electronic Farmer Input Support Programme</td>
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<td>FISP</td>
<td>Farmer Input Support Programme</td>
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<td>FRA</td>
<td>Food Reserve Agency</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>Global Hunger Index</td>
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<td>MoA</td>
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<td>Ministry of Fisheries and Livestock</td>
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<td>MT</td>
<td>Metric Tonnes</td>
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<td>MT/ha</td>
<td>Metric Tonnes per Hectare</td>
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<td>SDG</td>
<td>Sustainable Development Goal</td>
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<td>ZMW</td>
<td>Rebased Zambian Kwacha</td>
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Chapter 1

Overview
Agriculture provides the main support for Zambia’s rural economy. Because of this, growth in the agricultural sector is the clearest avenue through which poverty reduction can be achieved in Zambia. The ability of an agricultural sector to sustain broad-based, pro-poor development and food security is intricately linked to the stated priorities and actions of the public sector. Stated policy priorities do tend to exhibit a desire for sustained agricultural development through agricultural diversification, improved productivity, and rural income growth (Figure 1). Zambia continues to grapple with finding a winning formula to sustainably deal with high rural poverty and food insecurity in the country. The country’s agriculture and food systems is continuously on the move and as such transforming. However, ensuring sustainable transformation will require committed and innovative policies and programmes that take into account more up to date and accurate data; revamping public assistance programmes, harness private potential to drive key investments in the sector, and above all, constructive engagements by all key stakeholders.

1.1 Weather and production
During the 2017/18 agricultural production season, the Southern African region experienced wide spread rainfall anomalies. In Zambia, prolonged dry spells were experienced in January, particularly in the southern half of the country. The season started late in the extreme south, and parts of Western and North Western Provinces, while an early start was recorded in northern, south east, as well as western parts of North Western Province. The country was also split in terms of the amounts of rainfall received, with the southern parts of the country experiencing the dry spell, while the northern parts of the country experienced normal to high rainfall. Some districts in the North experienced excessive rainfall leading to some crop losses towards the end of the rainy season.

As a result of the above weather situation, overall crop production declined. Army worm infestations were largely anticipated and were therefore, contained due to preparedness by the farmers and the government. The Crop Forecast Survey (CFS) estimated maize production to have dropped by 33.6 percent and production of other key crops also declined: sorghum (24 percent), millet (0.9 percent), soya beans (13.9 percent), irish potatoes (57.3 percent), sunflower (5.2 percent) and wheat (40.9 percent). However, production of rice, mixed beans, groundnuts, cashew nuts and cassava were projected to increase (MoA, 2018).

1.2 Prices
Due to decline in the production for most crops, the marketing season was characterised by elevated market prices for most commodities. This is in contrast with the previous years’ experience of depressed prices. For example, maize market prices in Lusaka were 65 percent higher in October 2018 compared to the previous year over the same period. Soya beans average prices in Lusaka were 56 percent higher this year compared to the same period last year. The 2018/2019 maize marketing season was also characterised by active private sector participation. These included large corporate grain wholesalers such as NWK Agri services, AFGRI Corporation, Zdenakie, CHC Commodities; other large traders such as Aliboo, Shifa and Kavulamungu in Eastern Province; medium scale traders and a myriad informal small-scale traders/aggregators. In terms of maize, the private sector outbid the FRA buying significantly larger quantities by offering higher prices and paying on the spot.
1.3 Food Reserve Agency Purchases (FRA)
The FRA in July announced a buying price for maize of ZMW65 per 50kg bag, a price they indicated came out of wide consultation. As always, some stakeholders expressed concern that the price was well below the cost of producing a 50kg bag of maize. Through a Presidential directive, the price was increased to ZMW70 per 50kg. However, cost of production benchmarked-pricing is not the most efficient method to use as it ignores many factors that need to be taken into account (see Chapoto and Chisanga, 2018).

By the end of October 2018, the FRA had purchased 174,684 Metric Tonnes (MT) (35 percent of the target). By November 2018, the FRA was holding 473,000 MT of maize. About 60 percent of the FRA’s purchases came from Muchinga and Northern provinces. As of November 2018, the stocks held by the FRA were close to the current Strategic Grain Reserve (SGR) level. When combined with maize held by the private sector, Zambia had over 950,000 MT of maize. These stocks are more than what the country requires and can last beyond the next harvest in April/May 2019.

1.4 Export Restrictions
In response to the inability of the FRA to fulfil its intended purchases of maize, the Government in October 2018 announced that it had put in place administrative restrictions on maize exports in order to safeguard food security. Although there has not been any Statutory Instrument to formalise the restrictions of maize and its products, very few export permits were issued during the 2018/2019 marketing season. Experiences from previous seasons have shown that restrictive trade policies have often resulted in farmers losing the opportunity to benefit from high prices, and the country losing export revenue. It is therefore important to enhance Zambia’s capacity to supply the region with maize. Export restrictions that are ad hoc and not transparent usually result in loss of export revenue, high price volatility, increase in informal cross border trade, and reduced private sector investment, among other adverse effects. In addition, research evidence in Zambia has shown that export bans do not lower consumer prices.

1.5 Electronic Farmer Input Support Programme (E-FISP)
The full migration of the FISP through the electronic voucher system countywide in 2017/18 agricultural season was a laudable move by the government. A review of the pilot E-FISP indicated that despite some of the rollout challenges faced, the programme created an opportunity for Zambia to streamline its spending by reducing the overall cost of FISP distribution to Zambian farmers, and enhanced timely delivery of inputs. It created opportunities for agro dealers to enhance rural economies and employment creation, as well as giving the farmer an opportunity to choose what inputs they wanted to redeem. However, the announcement in 2018 that 40 percent of the e-FISP recipients will be reverted to the traditional FISP (about 55 Districts of Zambia) was a major drawback as it goes against competitive and efficient private sector-led input distribution and crop diversification. Some stakeholders became pessimistic about the prospects of resolving the E-FISP’s initial problems as more focus will be given to the traditional FISP where government tenders for a restricted set of inputs and distributed through a few selected companies.

1.6 The 2019 Agricultural Budget Highlights
The total budgetary allocation to the agricultural sector in 2019 will be ZMW 5.271 billion, an 11 percent decrease from ZMW 5.951 billion in 2018. The allocation to the sector is 6 percent of the total national budget, a reduction from 8 percent in the previous year (further reduction from the CAADP target of 10 percent). The reduction of the total agricultural budget is a reflection of the tightened fiscal space due to the high debt repayment that has affected the funds available for the key sectors of the economy. Of major concern is the continued high allocation of funding to FRA and FISP making up 51 percent of the total Ministry of Agriculture (MoA) Budget.
1.7 Livestock
Livestock conditions are relatively moderate to good as water and pasture are still available in many areas. However, in drier areas of the Southern province such as Gwembe and parts of Sinazongwe, cattle conditions have deteriorated because streams are dry, and animals need to be moved long distances in search of pasture and water. Nevertheless, the condition is expected to improve once the 2018/19 rainy season commences. Generally, livestock prices for cattle, goats, pigs, and poultry have remained stable in comparison to the same period last year. This stability is due in part to most households not indiscriminately selling their livestock as they are relying on their own produced foods and income from crop sales.

1.8 Food Security Status
Zambia is generally food secure. However, according to the Zambia Vulnerability Assessment Committee (VAC) report of 2018, the food security situation is projected to deteriorate in about 19 districts that were worst hit during the dry spell of 2017/18 agricultural season. This will likely take place during the hunger period between November 2018 and March 2019, with an estimated 954,199 people expected to be affected. As a result, a response/recovery action plan has been drawn by the Disaster Management and Mitigation Unit (DMMU) for the affected districts.

The Zero Hunger Vision
“A world free from hunger, malnutrition and rural poverty, achieved through an integrated approach and the transformation of food systems, is fully aligned with the 2030 Agenda, which sets out the goals and targets that we must achieve to make this vision a reality”.

HUNGER CAN BE ELIMINATED IN OUR LIFETIMES
Chapter 2

Agriculture, Food Security and Nutrition
2.1 Status of Food Security and Nutrition
Zambia has been consistently recording a surplus in staple food production; yet indications of reducing the high poverty and hunger levels remain low. The 2018/2019 season projections suggest that Zambia, with neighbouring countries Malawi and Zimbabwe, will have the largest increases in the number of people affected by food insecurity compared to the previous years (SADC 2018). This is in spite of the already unacceptably high numbers of people, particularly the rural poor, who depend on rain-fed agriculture, being hungry. This assertion is corroborated by the 2018/19 National food balance sheet that shows a dramatic reduction in the excess stock of maize equivalent in comparison to previous years (Figure 2).

Food insecurity and malnutrition in the country are multi-sectoral in nature. The presence of high income inequality, low productivity among smallholder farmers, food loss and waste, natural resource degradation, and low dietary diversity drive the ongoing food and nutrition challenges in the country.\(^1\)

\[\text{Source: Ministry of Agriculture (various years)}\]

2.1.1 Global Hunger Index
Zambia’s ranking in the Global Hunger Index (GHI) continues to remain very low and the country is still categorised as having alarming levels of hunger (see von Grebmer et al. 2018). It is ranked the fifth hungriest country. This is ahead of the four countries Madagascar, Yemen, Chad and the Central African Republic. Countries such as Bahrain, Bhutan, Burundi, Democratic Republic of Congo, Equatorial Guinea, Eritrea, Libya, Moldova, Qatar, Somalia, South Sudan, the Syrian Arab Republic, and Tajikistan are not included in this ranking because of the lack of access to nationally representative data. Despite the grim ranking, this is an improvement from the 2017 GHI that ranked Zambia (with a figure of 38.2) as the third hungriest nation according to available worldwide data. Figure 3 shows the progress Zambia has made from 2000 to 2018 in the four indicators (undernourishment, child wasting, child stunting and child mortality) used to calculate the GHI, it also shows the overall GHI rankings over the same period.

\[^1\text{The typical Zambian diet is still composed of mainly dark leafy green vegetables and a starchy staple; with nutrient dense foods typically not being part of the diet } (\text{Mofya-Mukuka and Kabisa 2017})\]
**Figure 3: Zambia’s progress in four indicators of the GHI**

In response to these proposals, FAO in collaboration with IAPRI conducted a training workshop with regional (Southern African) participants on measuring the prevalence and severity of food insecurity using the Prevalence of Undernourishment indicator and the Food Insecurity Experience Scale (FIES) measuring tool. This was done to enhance the technical capacity of the central statistical office and sustainable development focal point officers to compute indicators used for GHI measurement. In addition, the National Food and Nutrition Commission embarked on a National Food Consumption and Micronutrient Survey in 2018 with the support of the World Food Programme. The publishing and dissemination of the results are expected in early 2019. This is a positive step towards the general acceptance of data used to generate the GHI (For more details see Mofya-Mukuka, Banda and Kabwela, forthcoming).

### 2.2 Zambia’s Zero Hunger Challenge

The Zero Hunger Challenge stems from Agenda 2030 of the Sustainable Development Goals (SDGs); of which Zambia is a signatory to. The Agenda is centred on people with a special interest towards attaining human rights and social justice for all. These are encompassed in the call to end hunger and malnutrition in all its forms with five elements that have been identified as the catalysts to achieve this.

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2 Carry out a National Food Consumption and Micronutrient Survey; redesign the food balance sheet to include legumes and other currently excluded foodstuffs; and prioritise funding for Post-Harvest Survey data collection

3 The main objections about the data used to measure GHI were that it is outdated (no recent food consumption data), unreliable and has missing elements (legumes/pulses and other food groups not included, just starchy staples)
In recognising the need for Zambia to be part of this global initiative in ensuring there is no hunger by 2030; the Government of the Republic of Zambia, through the Office of the Vice President, with financial support from the World Food Programme, and International Fund for Agriculture Development (IFAD), and technical support from IAPRI, embarked on the framing a national level Zero Hunger Review Strategy (ZHRS) focused on five key areas or pillars as follows:

- ensuring 100% access to adequate food all year round;
- zero stunted children under the age of two;
- all food systems are sustainable;
- 100% increase in smallholder productivity and income; and
- zero loss or waste of food.

This review is in line with Zambia’s commitments to the African Union’s call to eliminate hunger and food insecurity by 2063, and its priorities in the Seventh National Development Plan (7NDP).

### 2.2.1 The review process and key recommendations

The Strategic Review was implemented via a consultative process involving identified stakeholders across the five Zero Hunger pillars. The review conducted identified the challenges and gaps slowing down sustainable achievement of food and nutrition security. The strategy will be finalised and launched early 2019 with the leadership of the Vice President’s Office. Among many other recommendations by pillar, two important key recommendations emerged from the strategic review as follows:

- As a multi-sectoral problem, for Zambia to achieve Zero hunger by the year 2030, it needs an integrated and collaborative effort across the sectors and among stakeholders from the public, private, development partners, and civil society. This should be coupled with the need to speedily develop and implement a holistic and coherent Food and Nutrition Security Policy aligned to the 7NDP.
- Coordination of food and nutrition interventions must be done at a higher level to allow an integrated implementation plan that operationalises the recommendations from the strategic review. In particular, the Office of the Vice President or Cabinet Office should use its statute and convening power to coordinate all stakeholders’ party to the implementation of the Zero Hunger roadmap.

**Figure 4: Zero Hunger Strategic Review Objectives**

- Provide analysis of the drivers of food and nutrition insecurity in Zambia. The review looked at whether existing strategies, policies, programmes, institutional capacities and resources are adequate.
- Highlight the main challenges that might prevent the country from achieving the zero hunger targets as articulated under the Sustainable Development Goals (SDG 2).
- Recommend actions required to accelerate progress towards achieving zero hunger and development of the implementation road map.

Source: Chapoto and Mofya-Mukuka, 2018
Chapter 3

Performance of the Zambian Agricultural Sector in 2018
3.1 2017/2018 Agricultural Season

The 2017/18 agricultural season was characterised by prolonged dry spells and extremely high temperatures at the beginning of the season (WFP 2018). This led to crop failure for farmers who had planted early; with those who planted late had the opportunity for their crops to recover (particularly maize). Countrywide projections have confirmed the increased likelihood of such events in the future (Figure 5).

The 2016/2017 agricultural season had a La Niña weather event that saw normal and above normal rainfall; and ultimately led to recorded bumper harvests in maize production. This is in contrast to the situation with the 2017/18 season were the CFS showed that overall crop production in 2018 reduced in comparison to the previous season. Maize production was projected to decline by 33.6 percent, sorghum (24 percent), millet (0.9 percent), soya beans (13.9 percent), Irish potatoes (57.3 percent), sunflower (5.2 percent) and wheat (40.9 percent). However, production of crops such as rice, mixed beans, groundnuts, cashew nuts, and cassava was expected to increase (MoA, 2018).

The weather patterns being experienced in Zambia seem to be in line with projections by Verhage et al. (2018) showing that by the 2050s, the country will experience more failed seasons once in every two or three years. Regional projections indicate that for Zambia: rainfall is expected to become less frequent; intense rainfall events are expected to have a larger number of dry days separating them and with increased frequency of such occurrences; higher inter-annual variability of rainfall will be more likely; and there will be an increased number of days with temperatures greater than 30°C (Verhage et al. 2018). Because agricultural production in the country still remains mainly rain-fed, these climate induced changes in production call for the need to have adaptation options that are specific to the country context, in order to realise the benefits of the SDGs and poverty reduction (IPCC 2018). More so, the prediction of a 70 percent chance of having an El Niño event in the 2018/19 agricultural season further speaks to the inherent risk that climate variability and change poses to the country's economic activities, and the need to invest in adaptation options that enhance crop and livestock resilience to climate-induced stress.

Figure 5: Probability of main season crop failure in Zambia

Source: Verhage et al. (2018)
3.2 Progress towards CAADP Targets

Achieving the Comprehensive Africa Agricultural Development Programme (CAADP) targets continues to be an annual aspiration for Zambia in the quest to transform the agricultural sector to one that responds to the country’s economic and developmental needs. This progress has been monitored by looking at the contribution of agriculture to the Gross Domestic Product (GDP), its growth rate, and the annual national budgetary allocation to the agricultural sector. Progress towards the CAADP commitment has been generally slow despite policy proclamations and willingness to fulfil these commitments. Like many other African countries, this has been due to capacity constraints that have slowed down the ability of the country to not only design/draft, but implement a transformative agricultural agenda (AGRA 2018).

In monitoring the commitments to allocating at least 10 percent allocation to agriculture, sustaining a 6 percent annual agricultural GDP growth, and responding to the country’s multi-faceted needs, this section looks at the progress that has been made thus far.

3.2.1 Agricultural Gross Domestic Product

The contribution of Zambia’s agricultural sector to GDP has been maintained at a level above 6 percent for more than a decade. The trend for value added per worker has unfortunately not been reflective of this sustained GDP contribution. Figure 6 below shows the trend from 2004 to 2017 which saw the lowest values of value added per worker and GDP contribution, but 2017 values show signs of recovery.

![Figure 6: Contribution of agriculture to GDP and value added per worker 2004-2017](image)

Source: World Bank (2018a)
3.2.2 Declining agriculture contribution to GDP

Agriculture's contribution to GDP in Zambia has been steadily declining. This trend has been closely related to the climatic events that the country has been experiencing because of its high dependence on rain-fed production (see Figure 7). For instance, the decline in agriculture's contribution to GDP in 2014/15 and 2015/16 could be attributed to the El Niño weather event that was characterised by prolonged dry spells that led to crop failure. A recovery was witnessed in the 2016/17 season due to the La Niña event. The normal to above-normal rainfall in the 2017/18 season led to even higher production and in both instances, reflected an increase in the contribution to GDP. Making agriculture more responsive to the country's needs will require investment that goes beyond dealing with adaptation and mitigation to climate risk. It requires greater political will that can be translated into public sector investments, institutions, and policy actions that recognise the crucial role government plays in agricultural transformation (AGRA 2018).

The distribution of the agricultural budget shows that there has been an increase in allocation to the Ministry of Fisheries and Livestock, a positive step towards diversification of the agricultural sector. The increase was from 15.2 percent in 2018, to 21.8 percent in the 2019 budget (see Figure 9). The challenge continues to be the disbursement of these funds and more allocation for the activities as opposed to e.g. personal emoluments. An increase in these emoluments could be an indication of more staff being hired within the ministries but it still remains essential that more resources go towards activities. It remains critical that more funds are released for broad-based public investments that are critical in growing and transforming the agricultural sector.

3.2.3 Quality of the Agricultural Sector Budget

The trends of the annual budgetary allocation towards agriculture is shown in Figure 8. The allocation for the sector slated for 2019 is 6.1 percent, a decrease from 8.3 percent in the 2018 budget. The trend from 2013 to date shows that the CAADP commitment of 10 percent of the national budget going towards agriculture is yet to be realised. The 2019 allocation is the lowest proportion since 2013, speaking to the current fiscal challenges the government is facing, particularly with regards to the debt servicing that has left little room for public spending.

![Figure 7: Agriculture growth rate 2004-2017](source: World Bank (2018))

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![Figure 8: Share of Agriculture budget/spending to total government budget](source: MoFNP various years; MoA various years. *Notes: Excludes allocations via other ministries)
A recurrent trend that has been a source of discussion within the sector is the continued heavy public spending towards the FRA and FISP; and the high proportion of the agricultural sector budget that is allocated to them. There is a marginal decrease in the budgetary allocation towards these programs from 56.2 percent of the agricultural sector budget in 2018 to 51.1 percent in the 2019 budget. This step is encouraging but the proportion of funds dedicated to these programs still remains too high. Regional and national evidence continues to show that heavy investment into subsidy programs will not yield the desired economic and poverty reduction goals of the country. Investments with the highest gains in achieving these lies in the recognised drivers of agricultural growth such as research and development, extension, and feeder roads.
Chapter 4

Improved Technology Use
Adoption of improved agricultural technology by farmers can contribute to an economically efficient farm sector, and to the financial viability for farmers through improved production and productivity. In this section, we look at the performance of the agricultural sector in terms of the two key productivity enhancing technologies: use of fertilizer and improved seed. Future reports will track utilisation of other climate smart technologies such as conservation agriculture.

4.1 Fertilizer use
Figure 10 shows the percentage of households that used fertilizer over the period 2003 to 2018. Nationally, about 51.3 percent of the rural households reported using fertilizer in the 2017/2018 agricultural season. As in other years, most of the fertilizer that was used in 2017/2018 season was on maize fields. The proportion of households using fertilizer in 2018 decreased by 8.6 percentage points from 59.9 percent in 2017. Fertilizer use varied by province, with Muchinga province having the highest percentage (64.9 percent) of farmers that used fertilizer, followed by Lusaka with 63.2 percent (Figure 11). Similar to other years, Western province on the other hand had the least percentage of farmers that used fertilizer, with only 7.8 percent reporting fertilizer use in the 2017/2018 agricultural season. The total fertilizer used among the smallholder farmers in Zambia decreased significantly by 42 percent, from 361,091 MT to 209,233MT (MoA and CSO, 2018). The yield reduction experienced in the 2017/2018 agricultural reason from maize and other crops can also be attributed to the reduction in fertiliser use among other factors such as the prolonged dry spell.

In the past 10 years, there has been a general upward trend in the percentage of farmers reporting using fertilizer as well as the rate of fertilizer application as shown in Figure 10. However, the average fertilizer use per hectare (Ha) in 2018 declined from 82.1 Kilograms per Ha among fertilizer users compared to 105.9 Kilograms per Ha in 2016/2017, a 22.5 percent decrease.
4.1.1 Electronic Voucher -FISP Implementation

The electronic voucher system has been in place since the 2015/2016 agricultural season. It has been implemented in a bid to transform the agricultural sector by having an input subsidy programme that addresses the diverse needs of different kinds of farmers country-wide. The E-FISP started as a pilot in 2015/2016 and 2016/2017 agricultural seasons. This was followed by a rolling out of the program to the whole country in the 2017/2018 farming season. The 2017/2018 season had about 1,500,000 registered farmers and of these, 1,024,435 were targeted for the electronic voucher farmer input support programme (e-FISP) nation-wide rollout. This accounted for 68 percent of FISP distribution through e-FISP.

The full migration of the FISP through the electronic voucher system countywide in 2017/2018 agricultural season was a laudable move by the government. A review of the pilot E-FISP indicated that despite some of the rollout challenges faced, the programme created an opportunity for Zambia to streamline its spending by reducing the overall cost of FISP distribution to Zambian farmers, and enhanced timely delivery of inputs. It created opportunities for agro dealers to enhance rural economies and employment creation, as well as giving the farmer an opportunity to choose what inputs they wanted to redeem (see Kuteya and Chapoto 2018). The number of trained agro-dealers engaged in input distribution was reported to have increased from 422 in the 2015/16 farming season, to about 1,364 in the 2017/18 season.

The main challenges that were experienced during the implementation of the e-FISP rollout were around limited access to information technology, telecommunications connectivity, and challenges in the provision of financial services. With these challenges identified, the 2017/18 agricultural season came with some unexpected news over the much-championed e-voucher. A pronouncement was made that the government would revert to having 40 percent of the recipients reverting to the traditional FISP. It is however surprising that
the government decided to revert to traditional FISP in districts where the private sector was very active. These included Chipata, Chongwe, Katete, Petauke, Lundazi and Rufunsa (Figure 12). These districts alone have more than 120,000 FISP recipients, thus (12 percent of the total recipients). Therefore, reverting to traditional FISP is viewed by many stakeholders as a major drawback that will work against competitive and efficient private sector-led input distribution and crop diversification in Zambia. There is now pessimism about the prospects of resolving E-FISP initial implementation problems as more focus will likely be given to the traditional FISP where government tenders for a restricted set of inputs and distributed through the few selected companies.

Figure 12: E-FISP districts: GRZ and IAPRI proposed districts

Box 1: Lessons learnt in e-voucher implementation

1. E-voucher requires all systems to be put in place on time.
   • Effective delivery depends on effective coordination among the multiple actors including Ministry of Agriculture, Ministry of Fisheries and Livestock, Ministry of Finance, other government agencies, and private players
   • There is need for a single and authorised agency to oversee implementation
2. Late release of program funds by Government delayed e-card activations
   • Ministries of Finance and Agriculture should work hand in hand to ensure that e-voucher funds are released on time so payments to farmers can be made on time, ahead of the planting season
3. Continuous changing of operations of ZIAMIS shows that there is need:
   • For early publication and distribution of Implementation Manuals
   • To revamp and test the system before redeeming starts
4.2 Use of Improved Seed

Figure 13 provides a comparison of the percentages of households using improved seed varieties over the period 2003 to 2018. Nationally, about 62 percent of the rural households used improved seed in 2018 (irrespective of crops produced), compared to 72 percent in the 2016/2017 agricultural season, representing a reduction of 10 percentage points. For maize, the number of farm households using improved seed was 53.7 percent, decreasing by 9.9 percentage points from 63.6 percent in 2017.

Generally, there has been an upward increase in improved seed use in Zambia. Between 2003 and 2018, the number of farm households using improved seed increased by 17 percentage points. The highest was 2017, while the lowest was in 2004. Increased private sector participation in the seed sector has contributed to the adoption of improved seed use. Also, the traditional FISP might have contributed to this increase, especially that hybrid maize seed was part of the subsidised package. Further, the governments’ Food Security Pack (FSP) which distributes free hybrid maize seed to vulnerable households may have partly accounted for this increase in use of improved seed.
Chapter 5

Agricultural Trade Performance
5.1 Agricultural Imports and Exports

Figure 14 shows the value of agricultural imports and exports as well as the ratio of imports to exports in Zambia for the period 2012 to 2018. Between 2012 and 2016, the value of agricultural imports stayed almost consistent at around US$ 420-440 million but dropped to US$320 and US$336 million in 2017 and 2018 respectively. The value of agricultural exports has been trending downwards since 2012. As of September 2018, the value of exports in 2018 had already surpassed that of 2017. Until 2016, the ratio of agricultural imports to exports was increasing, meaning the value of exports had been trending downwards relative to the value of imports (an indication of a declining agricultural trade surplus position for the country). However, since 2017, there has been a slight improvement with the country having an agricultural trade surplus, though this surplus is still far less than the one recorded back in 2012. The increase in trade restrictions on maize is one of the factors accounting for the reduction in the quantity and value of exports.

Figure 15 shows the proportion of different commodities and associated products in the value of agricultural exports between 2012 and 2018. It is quite obvious from the figure that Zambia has five (5) main agricultural exports: a) maize and maize products; b) sugar; c) tobacco; d) cotton; and e) stock feed, ranked in order of importance. The exports of maize and maize products fluctuate depending on season and government policy, while the share of sugar, tobacco, and cotton have largely remained stable. In 2018, the value of maize exports have been far less than the 2012 and 2016 values. Even though Zambia has put in place administrative export restrictions on maize and its products, the value of exports was not expected to increase rapidly because the regional demand for maize in the 2018/2019 marketing season has been low. More about the maize trade is discussed in section 5.2.

Import and export ratios for the other agricultural commodities and products (fisheries, horticulture, and livestock) are presented in Figures 16a to 16d. Apart from tobacco (and groundnuts in 2018 only), the import/export value ratio is greater than one and highest for fisheries, followed by horticulture and then groundnut commodities and products. However, in 2018, there has been a slight increase in the import/export ratio from 2017. In the last two years, the import/export ratio has been significantly lower that what it was before, an indication that the fish imports are reducing.
The ratio of the value of imports/exports of horticulture commodities and products have been downwards since 2016, and this trend has continued even in 2018.

In the case of groundnuts, there has been a general reduction in the ratio of the value of imports to exports between 2015 and 2018. This has continued on its declining pattern such that it is less than 1 in 2018.

### 5.2 Maize Trade in 2018

Figure 17 shows the national maize stock levels held by various players in the country as at 31st October 2018. At the beginning of the 2018/2019 marketing season in May 2018, Zambia had total carryover maize stocks amounting to 846,710 MT, which was sufficient to offset the projected reduction in maize supply from the 2017/18 harvest. The FRA entered this season with 600,000 MT of maize -more than the required 500,000 MT SGR. As of end of October 2018, the country’s maize stocks were reported to be approximately 957,090 MT. This was the known total stock held by registered members of Grain Traders Association of Zambia (GTAZ), Millers Association of Zambia (MAZ) and Zambia National Farmers Union (ZNFU), as well as FRA. Excluding stocks held by non GTAZ and MAZ members and maize stored by farmers, this stock is enough to last the country until at least the beginning of the new harvest in May 2019.

Generally, there have been very limited formal exports to date with most of the exports in the form of maize bran destined for South Africa, Botswana and Namibia. By end of September 2018, Zambia had only managed to export a total of 44,586 MT of maize and related products. There have been significantly lower exports to Tanzania, Kenya and Zimbabwe compared to past years.
The lower regional exports during the 2018/2019 marketing season are largely due to the lower export parity prices, as well as the export restrictions currently in place. Likewise, Tanzania has put in place import restrictions reducing the ability for traders to explore markets in East Africa. Nevertheless, the demand from East Africa is low due to a good harvest there as well.

On 17th October 2018, the Honourable Minister of Agriculture announced to Parliament that Government had put an administrative measure on the export of maize. He indicated that while the restrictive measure did not constitute an export ban, it was a temporal measure to ensure food security in the nation. This measure is attributed to the fact that the FRA has not reached the intended SGR of 500,000 MT of maize (Lusaka Times, 2018a).

The current restrictions are reminiscent of the temporal export restrictions applied under similar circumstances during the 2016/2017 season, which later contributed to a market crash during the bumper harvest the following year. Experiences from previous seasons have shown that restrictive trade policies have often resulted in farmers losing the opportunity to benefit from high prices and the country losing export revenue (see Chisanga et al, 2017). It is therefore important to enhance Zambia’s capacity to supply the region with maize. Efforts to safeguard national food security should not undermine Zambia’s ability to export its surplus maize to neighbouring countries. Instead of restricting maize exports, the government should ensure exporters are issued permits and allowed to export, especially when the regional demand is low. A consistent trade policy will encourage the private sector to invest in the production and marketing of the staple crop. Also, the solution lies in increasing farmers’ productivity—a sure way of sustainably securing Zambia’s food security and impetus to embrace consistent open maize trade policy.

**Figure 17: Maize stocks held by various players January to November 2018**

![Maize stocks held by various players January to November 2018](source: Stocks Monitoring Committee (2018))
Chapter 6

Sector Performance


6.1 Maize
Maize production in 2017/2018 agricultural season was forecast to drop by 33.6 percent to 2,394,907 MT from the record harvest of 3,606,549 MT in the previous year. This was in part due to a reduction in area cultivated under maize, which was a 15 percent drop from the previous season. In addition, maize yields were projected to decline from 2.19 MT/Ha to 1.72 MT/Ha, as well as area planted (see Figure 18). In general, the reduction in maize yields and overall production was largely due to the prolonged dry spells experienced between November 2017 and January 2018; while the reduction attributable to the fall army worm was minimal because of early warning and preparedness by the government and farmers.

Districts located in the southern parts of the country experienced the largest decline in maize production. These include districts in the Southern, Eastern, Lusaka, Western, and parts of Central Provinces, where maize wilting was highest, as a result of the prolonged dry spell. The reduction was subdued in the northern parts of the country as the region received normal to above normal rainfall. Some districts in the northern parts of Zambia 4 experienced excessive rainfall leading to some crop losses towards the end of the rainy season.

Zambia’s 2017/2018 food balance sheet indicated a total maize supply of 3,239,151 MT, which included a carryover stock of 844,244 MT from the previous season. Given the total national maize requirement of 2,897,838 MT, which includes human, industrial, strategic reserves and structural cross-border trade, Zambia produced an exportable maize surplus of about 341,313 MT, compared to 1,178,516 MT from 2016/2017 agricultural season.

In contrast to the previous marketing year, maize market prices have been high in the 2018/2019 marketing season, owing to the much-reduced maize surplus on the market. In comparison to last year, October 2018 maize grain prices were 65 percent higher during the same period. One peculiarity of the current marketing season is that maize market prices began rising much earlier in the season around June, instead of the hunger season beginning December through end of March. While this is a reflection of limited grain supply on the market, it may also be driven by speculative behaviour by some traders and farmers with access to storage facilities waiting for the prices to rise before they can offload the grain on the market.

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4 This includes districts in Northern Province, Muchinga, Copperbelt, North-western, Luapula, and parts of Central Province falling in agro-ecological zone III
Surprisingly, mealie meal prices have remained stable after they declined temporarily in May 2018. As expected, mealie meal prices may start to rise as the hungry season approaches due to a tightening of maize supply.

6.1.1 Extent of participation of private sector in maize marketing

The 2018/2019 maize marketing season has been characterised by active private sector participation. These included large corporate grain wholesalers such as NWK Agri services, AFGRI Corporation, Zdenakie, CHC Commodities; other large traders such as Aliboo, Shifa and Kavulamungu in Eastern Province; medium-scale traders, and a myriad of informal small-scale traders (also referred to as aggregators).

As the season opened, private grain traders went into the market early, buying maize at relatively low prices. At the time, a good number of the farmers were holding on to the maize in anticipation of the announcement of the FRA price normally used as a yardstick during price bargaining. Hence, maize supply to the market was initially muted until after the announcement of the ZMW65 per 50kg bag FRA price, and the subsequent upward adjustment to ZMW70. Upon realising that there was generally low maize supply in the market, private traders aggressively started outbidding each other resulting in market prices rising above announced FRA price. Moreover, the spot cash attracted farmers to sell to the private traders rather than the FRA, demonstrating the value placed by farmers on on-time cash payment. By the end of September 2018, the private sector had purchased more than 390,000 MT of maize, a figure which does not include informal grain traders and non-members of the GTAZ and MAZ. In reality the figure is likely to be much higher. At the end of October, grain traders were holding 335,000 MT of maize, while millers had 149,000 MT.

A good number of large commercial millers with financial capacity were able to mobilise maize purchasing through agents distributed across the maize surplus regions of the country to secure grains for their operations. However, a few millers spoken to during the study in the Copperbelt Province indicated that they had no capacity to purchase from very distant places such as Northern and Muchinga Provinces. A number of such millers indicated that they were operating below their usual capacity and would require government assistance.

6.2 Wheat

In the 2017/18 production season, wheat preliminary estimates indicated that Zambia would produce 114,462 MT of wheat, a decline of 40.9 percent from the previous year (MoA/CSO 2018). However, more recent provisional post-harvest estimates from ZNFU indicate that wheat production in 2017 was about 171,424 MT (Stocks Monitoring Committee, 2018). The large variance from what was projected by the Ministry of Agriculture is an indication of the data challenges and the need for the country to invest in statistics to enable effective government planning. At the end of September, the total available wheat stocks amounted to 206,663 MT. Given the estimated national wheat annual requirement of 414,750 MT for the country, Zambia will need to import some wheat to fill the deficit. Figure 19 shows the wheat production, area planted, and yield in the last six (6) years.

The Mkushi farm block, which is the largest wheat producing area, experienced a significant reduction in water availability in 2017/2018 agricultural season, as the main rivers had 30 percent less water during the production period and this ultimately affected irrigation. Therefore, yields in Mkushi have been reported to have dropped by about 25 percent. However, the Nansanga farm block in Serenje, which is a new farming block, is likely going to add more to national wheat production as more land is being put under irrigated wheat.
6.3 Soya beans

Soya beans production reduced from 351,416 MT to 302,720 MT, a reduction of 13.9 percent. Soya beans area reduced from 231,630 Ha to 205,508 Ha, while yield reduced from 1.52 MT/Ha to 1.47 MT/Ha (Ministry of Agriculture, 2018) (see Figure 20). The reduction was both as a result of reduced area planted as farmers responded to the low prices received in the previous season, as well as low yields resulting from poor weather conditions. As a highly sensitive crop to changes in weather conditions, the reduction in soya beans yields due to the dry spell was more severe than maize. In addition to the prolonged dry spell, the Copperbelt Province, which is another important soya beans producing region, experienced an outbreak of bacterial leaf streak disease which affected production.

The soya beans supply shock led to major shortages of the commodity negatively affecting the animal feed and edible oils industries. Prices of soya beans were significantly higher than the previous season. In September 2018, average soya beans prices in Lusaka were 56 percent higher compared to the same period last year in 2017. Prices paid to farmers in the Copperbelt ranged from ZMW4.3/Kg to ZMW 4.6/Kg, while in Central Province, they ranged from ZMW4.0 to ZMW4.4/kg. In Eastern Province, soya beans prices ranged from ZMW3.5 to ZMW 4.2/kg. Most grain traders and off-takers competed vigorously in buying the commodity directly from farmers and through agents.

Expansion of the crushing capacity by some processors such as Global Industries on the Copperbelt with current installed capacity to crush 360,000 MT of soya beans per year has significantly contributed to the increase in national demand for the commodity. There are reports that the shortfall in soya beans supply and increased competition have culminated in most processing plants operating at below capacity, with some having to face the threat of plant closure before the end of year. The soya market is also reported to be facing competition from illegal imports of processed edible oils (Lusaka Times, 2018b).
6.4 Cotton

According to the 2017/18 production season CFS results, seed cotton production was 88,219 MT, a 1.2 percent decrease from the previous year when it was 89,293 MT (Figure 21). The Cotton Board of Zambia (CBZ) conducted a post-harvest survey which indicated that cotton production was 116,423 MT in the 2017/2018 season, which was 32 percent above the CFS estimates. The huge discrepancies will need to be interrogated.

The area planted was estimated at 118,763 Ha, representing an increase of 4.6 percent from the previous season. Although farmers increased their area allocation to cotton, there was no corresponding increase in cotton production as a result of low productivity. Cotton yields declined from 0.79 to 0.74 percent, a decline of 6.3 percent. The number of households growing cotton also declined from 11.5 percent in the 2016/2017 season, to 8.9 percent during the 2017/18 season. The prolonged dry spell did not affect cotton farmers to the extent that it affected other crops, therefore the decline in production and yield were modest.

The average price of seed cotton was at ZMW3.7/ kg in the 2017/18 marketing season, while it was bought at an average of ZMW 3.5/ Kg with the highest price paid being ZMW4/ kg this marketing season. The 2017/18 cotton plantings were mainly influenced by the previous years’ average price, which in this instance was attractive for farmers, hence the increase in area planted for the crop. The current average international lint price stands at 204 cents per Kg, compared to 184 cents per Kg in the previous year. Projections are that international prices of lint cotton are going to increase further in 2019/20 marketing season.

Fortunately, the pulling out of some key investors in the cotton subsector such as Cargill has not had a major impact on the cotton industry. This is because companies such as continental ginneries have expanded the number of farmers supported, whereas Parrogate, which purchased the cotton infrastructure from Cargill, has continued supporting farmers although the numbers of farmers has reduced.
Currently, almost 100 percent of cotton production is produced by smallholders as a rain-fed crop. However, the Cotton Board has indicated that there are trials currently going on in Zambia to engage commercial farmers to produce the crop under irrigation, with an initial total area of 500Ha. If successful, this may bring in commercial cotton production thus increasing total production.

To attract further investments in the cotton industry, there is need for companies to hedge against international price movements such as trading in futures markets, which will guarantee prices. This way, the companies can also transmit favourable prices to farmers without the uncertainty of a drop in future prices.

Figure 21: Cotton production, area Planted and yield, 2013-2018

Source: CFS Data, 2013-2018
6.5 Mixed Beans
Mixed beans is one of the six most widely grown crops in Zambia, apart from maize, groundnuts, sweet potatoes, cassava and rice. As a legume, mixed beans provides the needed diversity diets and also supports incomes for smallholders. About 13.2 percent of the smallholder farmers in Zambia grew mixed beans in 2018, compared to 15.9 percent in 2017, representing a decline of 2.7 percentage points. Production of mixed beans increased by 14 percent to 52,351 MT from 45,938 MT the previous season. The area planted increased slightly from 83,635 Ha to 84,566 Ha (about 1.1 percent increase). The yield with a marginal yield increased from 0.55 MT/Ha to 0.62 MT/Ha representing an increase of 12.7 per cent. Of great concern is the declining area under mixed beans since 2014, and yields that have remained below one (1) MT (Figure 22).

Figure 22: Mixed beans, area planted, and yield, 2013-2018

Source: CFS Data, 2013-2018
6.6 Groundnuts

Groundnuts are the second most widely grown smallholder crop in Zambia, with 49.8 percent of households producing groundnuts in 2018, which has decreased from 52.9 percent in the previous year (a decrease of 3.1 percentage points). Groundnuts production has been on an upward trend since 2015, has and this continued in 2018. According to the CFS, groundnuts production increased by 7.7 percent from 168,699 MT the previous year, to reach 181,771 MT in 2018 (Figure 23). Area planted increased from 269,611 Ha in 2017 to 284,708 Ha in 2018; an increase of 5.6 per cent, while yield only increased marginally from 0.63 MT/Ha to 0.64 MT/Ha, an increase of 2 percent. This means that much of the production increase came from area expansion compared to yield increase.

The groundnuts value chain offers great potential for increasing incomes of smallholders more so because the groundnuts production is dominated by smallholder women farmers. Groundnuts are also key in addressing the malnutrition challenges that Zambia faces at the moment by offering diversified diets especially among children, whose average stunting and wasting rates are high in the country. There are immense economic benefits for the whole country if Zambia can become a major exporter of groundnuts. Strong linkages to agro-processing of groundnuts into peanut butter promises to increase/create jobs along the value chain. However, these opportunities have remained under-exploited. Among the major constraints facing groundnuts are low yields, limited access to improved seed, and high aflatoxin levels.

There are a number of key interventions supporting the groundnuts value chain, mostly led by donors. Over 200,000 smallholders in Eastern Province had been targeted through two major projects; the Production, Finance & Improving Technology Plus (PROFIT+) project and the Better Life Alliance (BLA) project (Curtis et al., 2015). Groundnuts were a major crop in these interventions. One intervention was focused on enhancing women’s livelihood from engaging in groundnuts production. Groundnuts are considered a female-controlled crop, therefore, commercialization of groundnuts can result in women being displaced from the value chain due to a male takeover as crops become more profitable. An evaluation of the end of the interventions Gender and Groundnut Value Chains (GNVC) impact evaluation tested the hypothesis that the gender interventions implemented by PROFIT+ and BLA assisted in maintaining or increasing women’s control over production, marketing, and proceeds from groundnuts as groundnut commercialization increased (Curtis et al., 2015).

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**Figure 23: Groundnuts production, area planted and yield, 2013-2018**

Source: CFS Data, 2013-2018
The evaluation found that: 1) The percentage of women who participated in groundnut production decisions increased significantly in the project domain; 2) Promotion of gender messages had a positive effect on maintaining women's control over groundnut production; and 3) There was a significant increase in the percentage of households that sold/bartered groundnuts in both study domains (Curtis et al., 2015).

6.7 Horticulture
The horticultural sector in the 2017/18 season was characterised by excessive price volatility in the market, particularly for tomatoes where prices spiked from around January to April. This was partly caused by the outbreak of diseases and the dry spell (see Figure 24). The high tomato prices triggered more farmers to enter the tomato business and existing farmers to increase production. As a result, tomato production increased and caused prices to collapse from May to August due to oversupply of the commodity. Key lessons learned from the market experience were that there is need to:

1. invest in cold chains to improve the shelf life of horticultural products;
2. invest is processing facilities to process tomatoes into tomato sauce and other products and;
3. invest in commission-based wholesale markets similar to the ones in South Africa for enhancing price discovery and market predictability.

A study commissioned by IAPRI and Musika in 2018 with the aim of assessing the viability of horticulture wholesale markets investments in Zambia had a number of key findings for the horticultural sector where data has been a major challenge. Figure 25 shows aggregated estimates of production, sales and consumption of horticultural products (fruits and vegetables) for selected years since 2015 and 2020 projections. There has been steady growth in the production, sales and consumption of horticultural products in Zambia over the years and this trend is projected to continue in the medium term. Annual consumption is estimated at 1 million MT, worth over US$330 million, and this is estimated to increase to 1.4 million MT worth US$500 million by 2020. Production is estimated at 1.4 million MT, worth US$235 million, and is projected to increase to 2.2 million MT by 2020 (IAPRI and Musika, 2018).

Figure 24: Average wholesale and retail prices of selected horticultural products in Lusaka in 2018

Source: CFS Data, 2013-2018
The main challenges identified by the study were the unregulated, non-transparent and uncompetitive informal open air markets; High horticulture supply inconsistencies, which result in high price volatility and huge post-harvest losses; and limited cold chain facilities and chaotic marketing systems. The study proposed, among other things, changes to the horticulture marketing structures and environment by introducing a sales commission-based model for marketing fruits and vegetables in Zambia, similar to how it is conducted in South Africa. This model: 1) protects all players, stimulates competition, transparency, efficiency and security of all transactions; 2) allows predefined commissions for regulated brokers and market authority; and 3) provides a competitive marketing system and trading infrastructure, including a computerized sales system, cash collections, cleaning and security (IAPRI and Musika, 2018).

6.8 Fisheries and Livestock

The Ministry of Agriculture and the Ministry of Fisheries and Livestock have been functioning separately since 2015. The split of the Ministry of Agriculture and Livestock (MAL) into the two ministries was done to bring better focus to the fisheries and livestock sector which had been previously overlooked while existing as departments within MAL. Although still small, the proportion of the agricultural budget towards fisheries and livestock has averaged around 15 percent, and was increased from 15.2 percent in 2018 to 21.2 percent in 2019 budget as shown in Figure 26.

The much awaited Livestock and Aquaculture Census took place in 2017, the third ever in the history of the country. Preliminary data from the Central Statistical Office (final report is yet to be published) shows the following on the status of Livestock and Aquaculture in the country (Tables 1 and Figure 27). Southern, Eastern, Central and Lusaka provinces generally had the highest numbers of livestock.

The distribution of livestock in terms of source shows that the majority of livestock comes from households as opposed to establishments. This speaks to the state of livestock commercialisation in the country and the need to further invest in livestock marketing.
Table 1: Preliminary livestock population 2017

<table>
<thead>
<tr>
<th>Province</th>
<th>Cattle</th>
<th>Goats</th>
<th>Sheep</th>
<th>Pigs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Central</td>
<td>826,322</td>
<td>22.6</td>
<td>595,277</td>
<td>16.8</td>
</tr>
<tr>
<td>Copperbelt</td>
<td>96,644</td>
<td>2.7</td>
<td>164,251</td>
<td>4.7</td>
</tr>
<tr>
<td>Eastern</td>
<td>598,455</td>
<td>16.4</td>
<td>355,956</td>
<td>10.2</td>
</tr>
<tr>
<td>Luapula</td>
<td>12,359</td>
<td>0.3</td>
<td>161,891</td>
<td>4.7</td>
</tr>
<tr>
<td>Lusaka</td>
<td>167,822</td>
<td>4.6</td>
<td>323,765</td>
<td>9.3</td>
</tr>
<tr>
<td>Muchinga</td>
<td>83,286</td>
<td>2.3</td>
<td>153,688</td>
<td>4.4</td>
</tr>
<tr>
<td>Northern</td>
<td>48,261</td>
<td>1.3</td>
<td>210,389</td>
<td>6.1</td>
</tr>
<tr>
<td>North Western</td>
<td>96,681</td>
<td>2.6</td>
<td>221,804</td>
<td>6.4</td>
</tr>
<tr>
<td>Southern</td>
<td>1,293,715</td>
<td>35.4</td>
<td>1,233,435</td>
<td>35.5</td>
</tr>
<tr>
<td>Western</td>
<td>429,142</td>
<td>11.7</td>
<td>66,322</td>
<td>1.9</td>
</tr>
<tr>
<td>National Total</td>
<td>3,454,668</td>
<td>100</td>
<td>3,476,790</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: CSO (2018)

Figure 27: Contribution of households and establishments to livestock numbers

Source: CSO (2018)
6.8.2 Fisheries
The total amount of fish produced in the country in 2017 is estimated to be about 120,963 MT from both capture fisheries and aquaculture (DoF 2018). The trends in capture fisheries and aquaculture, as illustrated in Figure 28, show that the quantities produced have been increasing. However, aquaculture in particular is still in its infancy, and will require additional support to help it grow to meet the country’s needs (Namonje-Kapembwa and Mofya-Mukuka 2018). In further demonstrating the infancy of the sector that is yet to be fully realised, Figures 29 and 30 summarise the number of households that are engaged in fish farming and the amount of fish produced in 2017 by province respectively.

Figure 28: Fish production 2005 - 2017

Source: Department of Fisheries (2018)

Figure 29: Households engaged in fish farming by province

Source: CSO (2018)
The growth of the aquaculture sector is a positive development and the last three years has seen significant investment into the sector through programs such as the Zambia Aquaculture Development Project and the now Zambia Aquaculture Entrepreneurship Project valued at US$50m and US$100m respectively. However, challenges still exist in realising the full potential of the sector and these are summarised in Box 2.

Box 2: Challenges facing aquaculture development

- **Production:** • Low productivity • High cost of feed and fingerlings • Non-availability of quality fingerlings • Shortage of experts in areas of production and fish diseases
- **Marketing:** • Limited availability of transport and cold storage facilities • Supply Inconsistency
- **Institution Constraints:** • Inadequate Extension Services • Poor access to finance • No regulation on the importation of fish in the country • Limited visibility of aquaculture within the ministry • Insufficient financial resources allocated to the department by government.

Source: Namonje-Kapembwa and Mofya-Mukuka 2018
Chapter 7

2019 Agricultural Sector Budget Highlights
7.1 2019 Agricultural Budget
The total budgetary allocation to the agricultural sector is ZMW 5.271 billion, an 11 percent decrease from ZMW 5.951 billion in 2019. The percent share reduction is from 8 to 6 percent, a further drop from the CAADP target of 10 percent. Besides allocations to Climate Resilient Livestock Management and Small Ruminants Value Chain Support Projects, allocations in the agricultural sector remains similar to the other years. There is still heavy continued spending on FISP and FRA, programmes that have been found to be ineffective in growing the agricultural sector and reducing rural poverty.

Tables 2 and 3 summarise the 2018 and 2019 budgetary allocations within MoA and MFL respectively. Again, because of the growing debt burden, there is a decline in allocations to all the key spending areas except for the salaries and personnel emoluments and the donor funded programs.

### Table 2: 2018 and 2019 allocations within MoA

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Personnel Emoluments (PEs)</td>
<td>385.4</td>
<td>7.6</td>
<td>457.9</td>
<td>11.1</td>
<td>18.8</td>
</tr>
<tr>
<td>PRPs o/w FISP</td>
<td>2,852.6</td>
<td>56.5</td>
<td>2,108.2</td>
<td>51.3</td>
<td>-26.1</td>
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<tr>
<td>FRA</td>
<td>1,735</td>
<td>35.4</td>
<td>1,428</td>
<td>34.7</td>
<td>-17.7</td>
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<tr>
<td></td>
<td>1,051</td>
<td>20.8</td>
<td>672</td>
<td>16.3</td>
<td>-36.1</td>
</tr>
<tr>
<td>Recurrent Departmental Charges</td>
<td>114.6</td>
<td>2.3</td>
<td>108.8</td>
<td>2.6</td>
<td>-5.1</td>
</tr>
<tr>
<td>Agricultural Development Programs (ADPs)</td>
<td>1,037.5</td>
<td>20.6</td>
<td>1,254.4</td>
<td>30.5</td>
<td>20.9</td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>104.0</td>
<td>2.1</td>
<td>7.5</td>
<td>0.2</td>
<td>-92.8</td>
</tr>
<tr>
<td>Agricultural Show</td>
<td>10.1</td>
<td>0.2</td>
<td>9.4</td>
<td>0.2</td>
<td>-6.9</td>
</tr>
<tr>
<td>Grants &amp; other payments</td>
<td>923</td>
<td>1.8</td>
<td>90.8</td>
<td>2.2</td>
<td>-1.6</td>
</tr>
<tr>
<td>Arrears</td>
<td>451.1</td>
<td>8.9</td>
<td>73.2</td>
<td>1.8</td>
<td>-83.8</td>
</tr>
<tr>
<td>Grand total</td>
<td>5,047.7</td>
<td>100</td>
<td>4,110.2</td>
<td>100</td>
<td>-18.6</td>
</tr>
</tbody>
</table>

Source: MoF 2017, 2018
Table 3: 2018 and 2019 allocations within MFL

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Emoluments (PEs)</td>
<td>184.8</td>
<td>20.5</td>
<td>194.4</td>
<td>16.75</td>
<td>5.2</td>
</tr>
<tr>
<td>Recurrent Departmental Charges</td>
<td>136.3</td>
<td>15.1</td>
<td>100.9</td>
<td>8.70</td>
<td>-26.0</td>
</tr>
<tr>
<td>Grants and Other Payments</td>
<td>1.7</td>
<td>0.2</td>
<td>4.1</td>
<td>0.35</td>
<td>147.0</td>
</tr>
<tr>
<td>Poverty Reduction Programmes</td>
<td>45.3</td>
<td>5.0</td>
<td>16.0</td>
<td>1.38</td>
<td>-64.7</td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>7.3</td>
<td>0.8</td>
<td>3.9</td>
<td>0.34</td>
<td>-46.3</td>
</tr>
<tr>
<td>Agricultural show</td>
<td>11.9</td>
<td>1.3</td>
<td>6.8</td>
<td>0.58</td>
<td>-42.8</td>
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<tr>
<td>Agricultural development Programs</td>
<td>513.1</td>
<td>56.8</td>
<td>832.7</td>
<td>71.76</td>
<td>62.3</td>
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<tr>
<td>Arrears</td>
<td>2.6</td>
<td>0.3</td>
<td>1.6</td>
<td>0.14</td>
<td>-38.8</td>
</tr>
<tr>
<td>Grant Total</td>
<td>903.0</td>
<td>100.0</td>
<td>1,160.3</td>
<td>100</td>
<td>28.5</td>
</tr>
</tbody>
</table>

Source: MoF 2017, 2018
7.2 Budget Speech Highlights
Box 3 presents some budget speech highlights for the agricultural sector planned for 2019.

Box 3: Agricultural sector budget speech highlights

- Establishment of the US$100 million tractor assembly plant in the Lusaka South Multi Facility Economic Zone to improve mechanisation;
- Continued access to agricultural equipment to those in the public service through the Public Service Micro Finance Company;
- Allocation of ZMW 483.2 million for Small Ruminants Value Chain Support Project;
- Allocation of ZMW 169.2 million for Aquaculture Entrepreneurship Project;
- Allocation of ZMW 182.5 million towards rural electrification;
- Revised guidelines for land acquisition in farm blocks to foster Public Private Partnerships in the development of infrastructure e.g. Nansanga, Luswishi and Luena;
- Upscaling of Social Cash Transfer from ZMW 550 million to ZMW 699.5 million in 2019;
- Proposed revision of the Food Reserve Act in 2019 to enhance sustainability and efficient management of national strategic food reserve;
- Introduction of an export duty of 10 percent on raw hides and skin;
- The movement towards production that can be year round; with specific focus on mechanisation, climate smart practices and development of irrigation infrastructure
Chapter 8

Conclusion
The agricultural sector remains the key to unlocking economic growth, employment creation, and poverty reduction in Zambia. There is great potential for the sector to flourish, but it requires very tough policy decisions in order to fully harness this potential. Investments in the fisheries and livestock sectors should be sustained as they provide Zambia with the opportunity to earn foreign currency as well as deal with poverty and food and nutrition security issues. Private sector-led agricultural development should be at the centre of any investment plan and policy changes.

Allocations to Agriculture in the 2019 budget has declined mainly due to the growing debt burden which is squeezing public spending. The challenge of the debt burden is huge such that the cost of servicing debt in 2019 will be 34 percent more than the budget for agriculture, health, and social protection combined. Therefore, it is important to prioritise cost-effective policies, especially reduction of less effective public programmes such as FISP and the level of the SGR. With less government investment, then it becomes more important than ever to achieve private sector led-growth. This means government policies in the sector must enable trade and business growth.

The Zambian government’s commitment in 2017 to a country-wide rolling out of the e-FISP needs to be revisited. Reverting to the traditional FISP is likely going to derail the progress of fully adopting the E-FISP. It is important for stakeholders not to lose sight of the benefits of the E-FISP versus traditional FISP. The benefits of E-FISP are restated in Figure 31 below.

As articulated by Kuteya and Samboko (2018), reducing the size of the SGR offers the government the opportunity to meet strategic objectives to reduce spending by up to ZMW 500 million. It can also promote agricultural productivity, and facilitate private sector-led growth. Increasing productivity will lower prices for consumers and has the potential to create an export market which would generate foreign exchange reserves. Reducing the size of the SGR can crowd-in the investment necessary for increasing productivity. GRZ can achieve a win-win by promoting private sector-led growth and reducing fiscal spending without compromising the core objective of the SGR; ensuring food security for Zambia’s poorest.

**Figure 31: Restating E-FISP benefits**

<table>
<thead>
<tr>
<th>A better policy solution</th>
<th>Better for the economy</th>
<th>Better for public finances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers are able to choose inputs appropriate to their agricultural enterprise they engage in (e.g. crops, livestock, fisheries, horticulture etc.)</td>
<td>E-voucher delivers economic growth e.g. direct and indirect job creation. Scaling back the e-voucher puts these jobs at risk.</td>
<td>E-voucher less costly than traditional FISP (1,748 ZMW GRZ spending per farmer for e-voucher compared to 2,057 ZMW per farmer on Traditional FISP). If Government continues to support 1 million farmers through e-voucher, it would save in excess of ZMW309 (US$30m) annually over traditional FISP</td>
</tr>
</tbody>
</table>

Source Kuteya and Chapoto (2018)
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