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Report No: PAD5017

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROGRAM APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF US\$300 MILLION

TO THE

REPUBLIC OF ZAMBIA

FOR A

ZAMBIA GROWTH OPPORTUNITIES PROGRAM-FOR-RESULTS

June 3, 2022

Agriculture and Food Global Practice  
Eastern and Southern Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2022)

Currency Unit =   Zambian Kwacha

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US\$1 =   ZMW 17.03

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FISCAL YEAR

January 1 - December 31

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## ABBREVIATIONS AND ACRONYMS

2NAP	Second National Agriculture Policy
2PIP	Second Policy Implementation Plan
3PIP	Third Policy Implementation Plan
8NDP	Eighth National Development Plan
AfCFTA	African Continental Free Trade Agreement
AFS	Audited Financial Statement
BEB	Best Evaluated Bidder
BOZ	Bank of Zambia
CAADP	Comprehensive Africa Agriculture Development Program
COMESA	Common Market for Eastern and Southern Africa
CPF	Country Partnership Framework
CSA	Climate Smart Agriculture
DA	Designated Account
DoA	Department of Agriculture
DCASP	Digital Comprehensive Agricultural Support Program
DIS	Direct Input Support
DLI	Disbursement-linked Indicator
e-Voucher	Electronic Voucher
ECF	Extended Credit Facility
EFA	Expenditure Framework Assessment
eGP	Electronic Government Procurement
ESF	Environment and Social Framework
ESIA	Environment and Social Impact Assessment
ESMP	Environment and Social Management Plan
ESSA	Environment and Social Systems Assessment
FB	Farm Block
FBDP	Farm Block Development Program
FISP	Farmer Input Support Program
FRA	Food Reserve Agency
FSA	Fiduciary Systems Assessment
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GRZ	Government of Zambia
IDA	International Development Association
IFMIS	Integrated Financial Management Information System
IFR	Interim Financial Report
IMF	International Monetary Fund
IPC	Integrated Phase Classification (Acute food insecurity classification)
IPF	Investment Project Financing
MIC	Middle-income Country
MPI	Market Price Index
MTEF	Medium Term Expenditure Framework
MoA	Ministry of Agriculture



MoFNP	Ministry of Finance and National Planning
M&E	Monitoring and Evaluation
NDC	Nationally Determined Contribution
NDP	National Development Plan
OAG	Office of the Auditor General
OECD	Organization for Economic Co-operation and Development
OHS	Occupational Health and Safety
PforR	Program for Results
PAP	Program Action Plan
PEs	Procurement Entities
PFM	Program Financial Management
PMEC	Payroll Management and Establishment Control
PPA	Public Procurement Act
PPD	Policy and Planning Department
PRA	Price Reasonableness Analysis
RA	Results Area
RAP	Resettlement Action Plan
SADC	Southern African Development Community
SSA	Sub-Saharan Africa
SC	Steering Committee
SCCI	Seed Control and Certification Institute
SGM	Strategic Grain Management
SGR	Strategic Grain Reserve
SOE	Statement of Expenditures
STC	Sub-Technical Committee
STEP	Systematic Tracking of Exchanges in Procurement
TC	Technical Committee
FAO	Food and Agriculture Organization of the United Nations
UPND	United Party for National Development
VA	Verification Agency
WARMA	Water Resources Management Agency
WRS	Warehouse Receipt System
ZACC	Zambia Anti-Corruption Commission
ZAMACE	Zambia Agricultural Commodities Exchange
ZAMGRO	Zambia Growth Opportunities (the Program)
ZARI	Zambia Agriculture Research Institute
ZEMA	Zambia Environmental Management Agency
ZIAMIS	Zambia Integrated Agricultural Management Information System
ZPPA	Zambia Public Procurement Agency

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**DATASHEET**

**BASIC INFORMATION**

Country(ies)	Project Name		
Zambia	Zambia Growth Opportunities Program		
Project ID	Financing Instrument	Does this operation have an IPF component?	Environmental and Social Risk Classification (IPF Component)
P178372	Program-for-Results Financing	Yes	Substantial

**Financing & Implementation Modalities**

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Contingent Emergency Response Component (CERC)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Small State(s)	<input type="checkbox"/> Conflict
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)	
Expected Project Approval Date	Expected Closing Date
28-Jun-2022	31-Dec-2026

Bank/IFC Collaboration

No

**Proposed Program Development Objective(s)**

The objective of the Operation is to promote agricultural diversification, sustainability and jobs in the agri-food sector of Zambia.

**Organizations**

Borrower : Republic of Zambia

Implementing Agency : Ministry of Agriculture



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**COST & FINANCING****SUMMARY**

<b>Government program Cost</b>	1,442.00
<b>Total Operation Cost</b>	300.00
Total Program Cost	295.00
IPF Component	5.00
<b>Total Financing</b>	300.00
<b>Financing Gap</b>	0.00

**Financing (USD Millions)**

<b>International Development Association (IDA)</b>	<b>300.00</b>
IDA Credit	300.00

**IDA Resources (in US\$, Millions)**

	<b>Credit Amount</b>	<b>Grant Amount</b>	<b>Total Amount</b>
<b>Zambia</b>	300.00	0.00	300.00
National PBA	300.00	0.00	300.00
<b>Total</b>	<b>300.00</b>	<b>0.00</b>	<b>300.00</b>

**Expected Disbursements (USD Millions)**

<b>Fiscal Year</b>	2022	2023	2024	2025	2026	2027
<b>Absolute</b>	0.00	96.75	75.10	71.75	45.35	11.05



<b>Cumulative</b>	0.00	96.75	171.85	243.60	288.95	300.00
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**INSTITUTIONAL DATA**

**Practice Area (Lead)**

Agriculture and Food

**Contributing Practice Areas**

Governance, Water

**Climate Change and Disaster Screening**

This operation has been screened for short and long-term climate change and disaster risks

**SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)**

<b>Risk Category</b>	<b>Rating</b>
1. Political and Governance	● Substantial
2. Macroeconomic	● Substantial
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial
7. Environment and Social	● Substantial
8. Stakeholders	● Moderate
9. Other	
10. Overall	● Substantial

**COMPLIANCE**

**Policy**

Does the program depart from the CPF in content or in other significant respects?

Yes  No

Does the program require any waivers of Bank policies?

Yes  No





**Legal Operational Policies**

	Triggered
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

**Environmental and Social Standards Relevance Given its Context at the Time of Appraisal**

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

**NOTE:** For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

**Legal Covenants**

Sections and Description

Schedule 2, Section I.A.1(b): The Recipient shall establish, not later than two months after the Effective Date, and thereafter maintain, during the period of implementation of the Operation, a Steering Committee (SC) within the Ministry of Finance and National Planning (MoFNP) with a mandate, terms of reference, functions and resources satisfactory to the Association.



Sections and Description

Schedule 2, Section I.A.1(c): The Recipient shall establish, not later than two months after the Effective Date, and thereafter maintain, during the period of implementation of the Operation, a Technical Committee (TC) with a mandate, terms of reference, functions and resources satisfactory to the Association.

Sections and Description

Schedule 2, Section I.A.2(a): The Recipient shall, not later than one month after Effective Date, prepare and adopt a Stakeholder Engagement Plan for the Project in form and substance satisfactory to the Association.

Sections and Description

Schedule 2, Section I.A.2(b): The Recipient shall, not later than four months after the Effective Date, recruit an environmental safeguards specialist and a social safeguards specialist in ZEMA, under terms of reference and with qualifications and experience satisfactory to the Association.

Sections and Description

Schedule 2, Section I.A.2(c): The Recipient shall not later than three months after the Effective Date, recruit environmental and social safeguards staff to the PPD within MoA, under terms of reference and with qualifications and experience satisfactory to the Association.

**Conditions**

Type	Financing source	Description
Effectiveness	IBRD/IDA	The Recipient has established a Project Grievance Redress Mechanism in a manner satisfactory to the Association.



## I. STRATEGIC CONTEXT

### A. Country Context

- Zambia is a landlocked, resource-rich country with sparsely populated land in the center of Southern Africa.** Its population is estimated at about 18.3 million with 45 percent living in urban areas in 2020, compared to 41 percent of Sub-Saharan Africa (SSA). Its annual population growth rate was 2.9 percent in 2020, which was above SSA population growth rate of 2.6 percent. At this rate the country's population will reach some 27 million by 2035 (Central Statistics Office).
- While Zambia had 15 years of significant socio-economic progress and achieved middle-income status in 2011, its economic growth has stalled more recently.** Its annual real gross domestic product (GDP) growth rate which averaged 6.8 percent between 2000 and 2014, slowed to 3.1 percent per annum between 2015 and 2019, mainly attributed to falling copper prices and declines in agricultural output due to rainfall variability. The COVID-19 pandemic pushed an economy that was already weakened by recent persistent droughts, falling copper prices and unsustainable fiscal policies into contraction. The economy declined by 2.8 percent in 2020, the first recession for Zambia since 1998. Inflation remained in double digits throughout 2020, averaging 15.6 percent and reached a high of 22.1 percent in 2021, driven by COVID-related lockdown measures and depreciation of the Kwacha. Currently, the nation's unemployment rate stands at about 38.3 percent, while unemployment among the youth is about 45.5 percent, and even higher among the youth living in rural areas (52.4 percent).
- Poverty and inequality levels in Zambia remain high.** More than 58 percent of Zambia's population live below the international poverty line compared to 41 percent across Sub-Saharan Africa. Rural poverty rose from 73.6 percent in 2010 to 76.7 percent in 2015.<sup>1</sup> It is estimated that 82 percent of the country's poor live in rural areas, stemming largely from low levels of economic growth and agricultural productivity, and limited employment opportunities, especially for the youth. At the national level, the Gini index rose from 55.6 in 2010 to 57.1 in 2015. The Global Hunger Index of 2018 ranked Zambia as the fifth hungriest country in the world.<sup>2</sup>
- The job creation outlook is challenged by the demographic trends and the rapidly expanding expectations of new entrants to the labor market.** Zambia, as many countries in SSA, is experiencing a challenge of employment creation for the growing number of youths in the country. Currently, the nation's unemployment rate stands at about 38.3 percent, while unemployment among the youth is about 45.5 percent, and even higher among the youth living in rural areas (52.4 percent)<sup>3</sup>. While the Government has prioritized job creation as one of its primary tasks, it will be challenging when considering that Zambia remains one of Africa's youngest countries by median age, with 65.1 percent of the population being less than 25 years of age. The UN population projections provide annual population growth for the country of 3 percent until 2030, with the working age population growing by 3.4 percent.<sup>4</sup> As such, Zambia needs to create at least 375,000 jobs on average each year by 2030, just to keep the labor force participation rate and unemployment levels the same. This almost doubles to 747,000 per year between 2030 and 2050. In other words, employment would have to increase by 3.1 percent per year between now and 2050, for unemployment and labor force

<sup>1</sup> Poverty and Equity Brief. Sub-Saharan Africa – Zambia. World Bank. April 2020.

<sup>2</sup> OECD. Transition Finance 2019. Zambia.

<sup>3</sup> Jobs Diagnostic Zambia. World Bank, Washington DC. 2017.

<sup>4</sup> United Nations. Population 2030 Demographic Challenges and Opportunities for Sustainable Development Planning. New York, 2015.



participation to remain the same. This is a tall order considering that between 2000-2014, a period of rapid economic growth, employment rose by only 130,000 per year on average, a growth rate of 2.8 percent.<sup>5</sup>

5. **The public debt has increased markedly over the 2019 to 2021 period compounded by expansionary fiscal policy.** The stock of domestic debt increased from ZMW58.3 billion at the beginning of 2019 to ZMW193 billion by end of 2021, while its publicly guaranteed external debt was US\$1.5 billion as of September 2021. At the same time, total expenditures increased from 32.2 percent of GDP in 2019 to 37.2 percent of GDP in 2021. This increase was largely attributed to COVID-19 pandemic response related expenditures, as well as those related to fuel and agriculture subsidies and grain marketing interventions. In fact, expenditures related to the government's Farmer Input Support Program (FISP) made up 50 percent of total transfers or about three percent of the GDP in 2021<sup>6</sup>.

6. **Zambia is in debt distress and has asked for debt treatment under the G-20 Common Framework.** The government accumulated over US\$1.8 billion in external arrears between October 2019 and September 2021. Severe liquidity shortages and domestic payment arrears have persisted in the face of increasing fiscal pressures. In September 2020, the Government announced that it would not be servicing any external debt except for multilateral banks and some 10 priority projects. This was followed by a default on Eurobond interest payments in mid-November 2020. As a result, Zambia serviced only about US\$250 million of the US\$1.7 billion debt due in 2021. In mid-2020, the authorities hired legal and financial advisors to help them with a comprehensive and orderly debt restructuring. Zambia also applied for debt treatment under the G-20 Common Framework in January 2021. In addition, Zambia has also been implementing various performance and policy actions. These performance and policy actions, over the last two years, have focused on improving fiscal sustainability and strengthening debt management and transparency.

7. **Timely achievement of macroeconomic stability will largely depend on progress on debt restructuring and fiscal consolidation efforts.** High level of debt service and contracting fiscal space have reduced the capacity to make critical investments in education, health and infrastructure, as well as the ability to service its debt. The ongoing fiscal adjustment would require a combination of expenditure rationalization, reforms to strengthen overall fiscal management and tackling inefficient public investment programs and wasteful subsidies (agriculture and fuel), while generating economic growth for greater revenue mobilization.

8. **The Government of the Republic of Zambia (GRZ) has committed to restoring its debt and fiscal sustainability while transforming the economy to support growth which will facilitate job creation, especially for the youth.** In December 2021, under the three-year program supported by an arrangement under the International Monetary Fund (IMF) Extended Credit Facility (ECF) in the amount of about US\$1.4 billion, the government committed to restoring macroeconomic stability and fostering higher, more resilient, and inclusive growth. Key elements of the government's reform agenda aim to re-establish fiscal sustainability while reorienting public resources towards investment in people and in growth and jobs generating spending programs. The expected large, upfront fiscal adjustment envisages an important shift in spending, away from inefficient public investment and poorly targeted subsidies, especially those for fuel and fertilizer, towards greater investment in health and education, delivery of social safety nets, and growth and job creation expenditures, especially for the youth. In view of the economic transformation agenda, the GDP is projected to grow by 3.5 percent in 2022, 3.7 percent in 2023 and 4.4 percent in 2024.

<sup>5</sup> Jobs Diagnostic Zambia. World Bank, Washington DC, 2017.

<sup>6</sup> 2022-2024 Medium Term Budget Plan. Ministry of Finance and National Planning, January 2022.



## B. Sectoral (or Multi-Sectoral) and Institutional Context

9. **Zambia has considerable potential for economic diversification through agriculture growth and expansion.** The country is endowed with a large natural resource base for agricultural production. It is relatively land and water abundant – while its population made up 1.6 percent of SSA in 2020, its renewable freshwater and land resources were 2.1 and 3.1 percent from SSA respectively. Domestic production is comprised of crops such as maize, sorghum, millet, and cassava while exports are driven by sugar, soybeans, coffee, groundnuts, rice, and cotton as well as horticultural produce. Zambia’s strategic position bordering eight countries, especially the Democratic Republic of Congo and Angola, who have been traditionally significant importers of agricultural products, is an opportunity for markets for the country’s agricultural commodities and value-added products. Zambia has ratified the African Continental Free Trade Agreement (AfCFTA), as well as the Southern African Development Community (SADC) and the Common Market for Eastern and Southern Africa (COMESA) trade protocols, which provide opportunities for an expanded Africa to Zambian exports.

10. **The agriculture and food sector has good potential to create jobs.** Agriculture accounts for the largest share of total employment (e.g., 22.2 percent for formal and 49.6 percent for both formal and informal employment in 2019), compared to only 2.7 percent of the total labor employed in mining industry.<sup>7</sup> Due to its labor-intensive nature and potential for backward linkages, the sector could make a significant contribution to formal and informal employment. For example, there has been a rapid growth in commercial farms operating between 5 and 100 hectares in Zambia, with their area under cultivation increasing from 46 percent to 62 percent between 2008 and 2014. Such small (5-20ha) and medium-sized (20-100ha) commercial farms generate in average 4 and 7 permanent jobs per farm respectively.<sup>8</sup> This excludes jobs created in downstream sectors such as agro-dealers or processors. The Government has also targeted farm block development as an opportunity to generate agro-based jobs. If harnessed properly, farm blocks could create thousands of jobs across the country, accelerate agricultural growth, increase value addition, and generate export earnings by attracting foreign direct investment and business relations that benefit both the local investors and the surrounding communities.

11. **As most of the workforce in agriculture, women can be expected to benefit substantially from investments in the sector to close gender gaps in agricultural productivity that stem largely from unequal access to and control over land, equipment, financing, technology and markets.**<sup>9</sup> About 55 percent of Zambian women earn their livelihoods in the agricultural sector, compared to 45 percent of men,<sup>10</sup> and most of their production remains at the subsistence level. Data on agricultural productivity gender gaps are scarce in Zambia, but studies of neighboring countries produce estimates ranging from 23 percent in Tanzania to 66 percent in Niger.<sup>11</sup> Women farmers are less likely to receive training and tend to make less use of extension services than men. Access to labor-saving technologies is low: according to one study, less than one percent of Zambian women farmers had access to a cultivation instrument like a seeder or weeder, and women received less than 10 percent of credit for smallholder farmers and only about 1 percent of agricultural credit overall.<sup>12</sup> Women are less likely than men to be paid for their labor, a factor underscored by social norms that

<sup>7</sup> Zambia Agricultural Status Report 2021. IAPRI Working Paper, December 2021.

<sup>8</sup> Jayne et al. Distribution Patterns: the rise of medium-scale farms. Agricultural Economics, November 2016.

<sup>9</sup> World Bank and the ONE Campaign. 2014. Leveling the Field: Improving Opportunities for Women Farmers in Africa. Washington DC: World Bank, 2014. “Understanding the Agricultural Input Landscape in Sub-Saharan Africa: Recent Plot, Household, and Community Level Evidence.” Policy Research Working Paper 7014, World Bank, Washington, DC.

<sup>10</sup> World Bank 2019. World Development Indicators, data from 2019.

<sup>11</sup> World Bank 2020. Top Policy Lessons in Agriculture. Gender Innovation Lab. March.

<sup>12</sup> Mehra, R. and M Rojas 2008. Women, Food Security and Agriculture in a Global Marketplace. International Center for Research on Women.



uphold men as household providers, promote early marriage, one third of women are married before age 18<sup>13</sup> and prescribe disproportionate care responsibilities to women. Gender gaps in education, literacy also underlie differences in agricultural productivity; women have only 6 years of schooling compared to over 8 years for men,<sup>14</sup> and Zambia remains in the bottom 38 countries on the Gender Development Index.<sup>15</sup>

**12. Empowering women in agriculture is an effective way of enhancing food security, increasing household incomes and boosting agricultural productivity.** Because women are more than half of the agricultural workforce, and clustered in subsistence farming, addressing the barriers to women's greater productivity has the potential to move women into more lucrative production. In turn, this can generate spillover benefits in terms of increased income and food security for households.<sup>16</sup> Across the Africa region, where women farmers produce between 13 and 25 percent less than male farmers, estimates suggest growth in the agricultural sector is two to four times more effective at reducing poverty compared to economic growth in other sectors.<sup>17</sup>

**13. Despite its potential, the contribution of the agriculture sector to economic growth has remained limited.** Annual average real agricultural growth in Zambia was -1.2 percent (in inflation-adjusted USD terms) over the 2000-2019 period compared to 4.3 percent in Sub Saharan Africa (SSA).<sup>18</sup> Most farmers are small-scale and engaged in subsistence farming. Agriculture is mainly rain-fed, non-mechanized and undiversified (with maize as the leading crop) and dominated by smallholder farmers that produce 85 percent of the food crops. Productivity challenges in the sector include, *inter alia*, small land holdings (average arable land holding of less than 2 ha), limited knowledge and skills in modern, innovative technologies, lack of an adequate irrigation system, poor rural infrastructure (post-harvest, transport, electricity), weak rural advisory services, limited access to credit and investment capital, and poor market information systems and access. The sector's productivity is extremely low and has declined over the past two decades from 2000 through 2018, except for maize. Zambia's national average yield rate for maize increased from only 1.32 metric tons per hectare in 2000 to 2.10 metric tons per hectare in 2017/2018. In the 2018/2019 cropping season, it reached 2.52 tons per hectare, far below Egypt at 8 tons, South Africa at 4 tons or the Comprehensive Africa Agriculture Development Program (CAADP) target of 5 tons.<sup>19</sup> Value added per worker in agriculture has also declined from US\$860 in 2000 to US\$544 in 2018.<sup>20</sup> Low levels of agricultural diversification, agro-processing and commercialization have stymied growth in the sector and perpetuated rural poverty.

**14. Climate change poses major challenges to the development of Zambia's agricultural sector.** The country has a highly variable climate, and in the past few decades has experienced climatic extremes in the form of droughts, seasonal and flash floods, and extreme temperatures. Some of these hazards, especially droughts and floods, have increased in frequency and intensity and have adversely impacted food and water security and rural livelihoods. Annual agricultural growth rates have fluctuated widely with the variations in rainfall received during the agricultural seasons caused by climate events such as El Niño and La Nina, especially in 2018 when sector contracted by 21.2 percent. Climate change

<sup>13</sup> UNDP Human Development Indicators 2019 data.

<sup>14</sup> UNDP Human Development Indicators, 2019 data.

<sup>15</sup> United Nations Development Programme (UNDP). 2018. Human Development Indices and Indicators: 2018 Statistical Update: A Briefing Note for Countries on the 2018 Statistical Update.

<sup>16</sup> UN Women, UNDP, United Nations Environment Program (UNEP) and World Bank 2015. The Cost of the Gender Gap in Agricultural Productivity. Washington DC: World Bank.

<sup>17</sup> World Bank and the ONE Campaign. 2014. Leveling the Field: Improving Opportunities for Women Farmers in Africa. Washington DC: World Bank.

<sup>18</sup> World Bank. World Development Indicators Database

<sup>19</sup> World Bank. World Development Indicators Database.

<sup>20</sup> World Bank. World Development Indicators Database.



projections indicate that by 2050, Zambia is expected to experience increases in temperature of up to 2.2°C with the greatest increases in the southern and eastern parts of the country that are significant crop production areas; rainfall is expected to increase by up to 4 percent in the northern parts but decrease by as much as 5 percent in the southern parts.<sup>21</sup> Over the next 10 to 20 years, climate change-related losses in agriculture are expected to amount to US\$2.2–3.1 billion<sup>22</sup>. Zambia’s Nationally Determined Contribution (NDC) sets ambitious goals for climate mitigation and adaptation that include the agriculture sector; the country aims to reduce Greenhouse Gas (GHG) emissions by 25 percent and up to as much as 47 percent, depending on the level of international support and financing.

**15. Irrigation is critical in building the resilience of the rain-fed farming systems in Zambia.** With climate projections suggesting that Zambia will become hotter and drier, and water scarcity a rising threat, irrigation will be key to improving agricultural productivity, diversification, and commercialization. Climate change and drought analysis of Zambia shows that the total average annual loss for the agricultural sector (crops) could rise dramatically under projected climate conditions from US\$29 million to US\$180 million per year, indicating that a substantial part of the annual crop production could be lost due to water scarcity and intensified droughts in the projected climate.<sup>23</sup> The water and drought risks are highest in the Southern and Eastern provinces, both of which are significant crop production areas with high commercial potential. However, out of the potential 2.75 million ha of irrigable land, only about 155,000 ha (about 6 percent of the total land area or about 1/3 of irrigable area) is currently irrigated. Only 1 percent of all smallholder farmers in Zambia irrigate some of their field crops, and about 15-17 percent irrigate fruits and vegetables. The most prevalent method of irrigation is rudimentary, with more than 80 percent using wells, streams, or rivers as sources of water and buckets as the access and distribution technology.

**16. Ineffective and inefficient sector policies and spending decisions have hindered agricultural growth in Zambia.** Zambia has a history of inconsistent trade policies in the form of ad hoc import and export bans on commodities, especially on maize and soya, combined with government interventions in maize market prices, unfavorable tax policies and appreciation of the Kwacha, all of which have made Zambia’s agricultural exports in the region uncompetitive. This has disincentivized private sector investments in agricultural production and processing, as evidenced by the exit of several large multi-national grain trading and agribusiness companies in late 2010s. Public spending is heavily skewed towards inefficient fertilizer subsidies and Food Reserve Agency (FRA) maize marketing activities. In 2021, the budget for the FISP and FRA was larger than the rest of the total public expenditure on agriculture together (about 79 percent of total agriculture budget). Evidence shows that the FISP faces numerous challenges, such as high administrative costs, poor targeting, and non-delivery of inputs, in addition to low response rate due to low soil fertility which reduces yield response to increased fertilizer use.<sup>24</sup> The over-sized commitment of resources to FISP severely limits the government’s capacity to invest in growth and job creating agricultural programs, i.e., adaptive agricultural research and technology development, effective advisory services and skills development, rural institutions (i.e., producer organizations, market information systems) and productive rural infrastructure, including irrigation and farm (feeder) roads. Scaling up support in these critical areas is key to harnessing the potential of Zambia’s agriculture towards broad-based rural job creation and income growth.

**17. Despite extensive use of trade restrictions, and fiscally costly fertilizer subsidies and maize price support programs, food insecurity and malnutrition have remained daunting challenges in Zambia.** According to the United

<sup>21</sup> CIAT; World Bank. 2017. Climate Smart Agriculture in Zambia. CSA Country Profiles for Africa Series.

<sup>22</sup> Increasing Agricultural Resilience through Better Risk Management in Zambia. World Bank, Washington, DC. 2018

<sup>23</sup> SADRI. Drought Profile for Zambia, 2021: [https://knowledge4policy.ec.europa.eu/publication/drought-resilience-profiles-zambia\\_en](https://knowledge4policy.ec.europa.eu/publication/drought-resilience-profiles-zambia_en)

<sup>24</sup> Mason, N.M & S. T. Tembo (2015). Do Input Subsidy Programs Raise Incomes and Reduce Poverty among Smallholder Farm Households? Evidence from Zambia. IAPRI Working Paper 92. Accessed from: <http://www.iapri.org.zm>



Nations Food and Agriculture Organization (FAO) statistics, over 2014-2020, the prevalence of severe food insecurity in the total population has increased from 21.8 to 23.2 percent.<sup>25</sup> The projections and latest data of IPC are even more alarming, as the levels of acute food insecurity (IPC Phase 3 or above) are projected to reach 29 percent in 2021 with COVID-19 further worsening an already dire situation. Some 35 percent of children are reported to have stunted growth due to poor nutrition, above the SSA average (32 percent).<sup>26</sup> Zambia's malnutrition rates remain among the highest in the world, with 48 percent of the population unable to meet their minimum calorie requirements.<sup>27</sup>

18. **Zambian food systems could be further affected by ongoing shocks to the global energy and fertilizer markets.** The war in Ukraine is expected to significantly affect energy and fertilizer prices in Zambia. High fuel prices are expected to increase transport costs throughout food systems, while increasing fertilizer prices could have negative impact on crop yields, although in smallholder sector the yields have been historically driven largely by rainfall patterns. There is a risk of high inflation due to increased prices of import commodities and stability of the Kwacha in general. This could increase cost of food, which may increase the number of people facing hunger. Zambia currently imports between 50-90 metric tons of wheat grain per year. While these trends could present additional risks to the macroeconomic stability, they could also work to strengthen the current momentum around agriculture reform package, such as reform of fertilizer support program and re-balancing agriculture budget towards growth and job creating spending programs, which would mitigate downside risks (see Risks section).

19. **Restoring confidence in the growth potential of Zambian agro-food systems will require concerted actions both at the macroeconomic and sectoral levels.** The ratification of the AfCFTA in February 2021, that aims at the elimination of tariff and non-tariff barriers to regional trade, is an important step in this direction, which would assure that borders will remain open to encourage new private sector investments. The COVID-induced fiscal and debt crisis provides opportunities for building more fiscal responsibility through repurposing public agriculture spending programs for sectoral expenditure programs which enhance growth, job creation, and climate resilience, while improving efficiency and effectiveness of such programs. Private sector agro-processing and marketing companies remain the main drivers of growth in agriculture, but they need incentives through an improved policy environment to attract new investments. To successfully address these problems, complementary public and private investments in critical sub-sectors, coupled with policy reforms, are required.

20. **As Zambia pursues economic recovery after the COVID-19 pandemic, under even tighter budget constraints, the GRZ has a momentous opportunity to achieve its triple objectives of debt sustainability, economic growth and job creation through the reforms of its agricultural spending and support programs.** The new government is committed to refocusing the agricultural policies and programs, as articulated in its Manifesto, for the sector to become the driver for inclusive economic growth. The 2023-2025 Medium Term Expenditure Framework (MTEF) calls for implementation of a new comprehensive agriculture support program beginning in the 2022/2023 farming season. The proposed Program aims to reduce the budget allocation for the FISP and improve its efficiency and effectiveness through electronic agro-input system mechanism which would expand the choice of inputs across wide range of crop and livestock activities as well as reorient public expenditures to growth-enhancing areas such as extension service support, access to finance, support to value addition, storage and logistics. Thus the Program has been designed, not as an emergency operation, but for medium- and longer-term solutions to offset the impacts of potential future food crises in the country. In addition, the government has committed to open trade regime for agricultural exports and imports.

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<sup>25</sup> FAOSTAT database.

<sup>26</sup> FAO Stat / Global Information and Early Warning System (GIEWS) database.

<sup>27</sup> World Food Program. Zambia Country Brief. November 2021.





### C. Relationship to the CPF and Rationale for Use of Instrument

21. **The proposed Program for Results (PforR) is consistent with the Zambia Country Partnership Framework (CPF) FY19-23 (Report No. 128467-ZA) discussed by the Board on September 20, 2018. The CPF aims to assist the Government of Zambia in its efforts to chart a high growth path that is more diversified, inclusive and sustainable.** The CPF acknowledges agriculture as the “economic motor of rural growth to increase income and employment opportunities and reduce rural poverty”. The envisaged PforR actions are consistent with the CPF Focal Area 1: “*more even territorial development: opportunities and jobs for rural poor,*” which centers on accelerating inclusive and sustainable rural development, fostering fiscal decentralization, enabling the rural population to increase resilience to shocks, and connecting lagging regions of the country to the main internal and external markets through improved connectivity and closing infrastructure gaps. The focal area lays out three objectives: (i) agri-food sector becomes less maize-centric, more productive, and better connected to domestic and external markets; (ii) selected rural communities become more resilient to climate and environmental shocks; and (iii) access to and quality of resilient infrastructure services (initial emphasis on electricity and roads) increases in selected rural areas and small towns. Through support for a selected range of growth-generating activities, including *inter alia*, adoption or streamlining of relevant policies and regulations, institutional enhancements, investments in improved services (e.g., provision of improved climate-resilient, productive technologies; extension; agricultural research and development) and infrastructure development (e.g., irrigation, rural roads for connectivity), the PforR will contribute to unleashing the potential of the agriculture sector towards job creation and diversified, sustainable and inclusive economic development. Further, by using PforR as a lending instrument, the proposed operation responds to the CPF’s aspiration of diversifying the range of financing instruments to the country and serving as a vehicle for sharpening government program formulation, the accountability framework as well as fiduciary and environmental and social (E&S) standards (E&S) aspects.

22. **The PforR is the most suitable instrument for the proposed Zambia Growth Opportunities (ZAMGRO) Program.** The fiscal and debt pressures facing the Government require reduction of wasteful spending while repurposing it towards more effective and efficient expenditure programs. Unlocking agricultural growth and job generation potential requires broader sectoral policy and institutional enhancements, which go beyond the traditional scope of the Investment Project Financing (IPF) instrument. A coherent package of policy changes and reorientation of public spending programs in agriculture is required to attain fundamental improvements in the policy regime, stronger institutions, and increased private sector investment in job creating commercial farming and agribusiness sectors. The PforR instrument could offer incentives for repurposing of public spending programs towards productivity and job creating public investments, such as technology development and dissemination, skills development, infrastructure, etc., while simultaneously addressing structural policy distortions which have been holding back growth and private sector investments. As such, the PforR instrument appears to be uniquely suited for delivering this kind of package of actions in the Zambian context.

23. **The PforR instrument is also useful to incentivize the Government to strengthen some of the technical aspects related to its own country systems.** The World Bank report concludes that the PforR instrument, complemented with the specific program assessments, could offer incentives for strengthening the government institutional capacity for planning, executing, overseeing and monitoring of its program budgets; addressing some of the non-technical challenges



by incentivizing behavioral changes, as well as coordination and collaboration within, and across, institutions and levels of government.<sup>28</sup>

24. **The proposed Program is complementary to several country and regional lending operations currently under preparation.** The PforR is aligned with the planned Zambia Macroeconomic Stability, Growth and Competitiveness Development Policy Financing (P174911), under which Pillar B: *Increasing farmer productivity and access to agricultural markets*, supports the FISP and FRA reforms through one-off time bound policy actions. The PforR will complement these actions through supplementary Disbursement-Linked Indicators (DLIs) which would allow longer-term engagement with the government on these issues through institutional enhancements. The PforR is also aligned with the proposed Food Security and Resilience Program (P178566) that would address, inter alia, agricultural policy reforms and actions for building resilience of food systems and preparedness for food insecurity. It is expected that Zambia will be one of the countries that will benefit under the second phase of the Food Security and Resilience Program.

## II. PROGRAM DESCRIPTION

### A. Government Program

25. **The key high-level development strategy in Zambia is *Vision 2030*, which sets an ambitious agenda for improvements in the living standards, targeting “a prosperous middle-income status by 2030.”** It calls for sustaining high rates of economic growth and significantly reducing poverty by 2030. The principal policy document for meeting the national aspirations articulated in the Vision 2030 are the National Development Plans (NDPs) which outline the Government’s desired developmental outcomes and related strategies and programs.

26. The new Government, led by the United Party for National Development (UPND), is in the process of finalizing the eighth NDP (2022-2026). The aim of the 8NDP is to build on the gains achieved under the previous NDPs and accelerate the attainment of a diversified and resilient economy for sustained growth, driven by the agriculture, tourism, manufacturing, and mining sectors. The UPND Manifesto 2021-2016, which calls for a people-centered, pro-poor development strategy, provides the strategic framework for the 8NDP implementation plan with the focus on restoring macroeconomic stability and promoting economic growth and job creation. It emphasizes the urgency and significance of delivering tangible development results through economic transformation, which would require improving the public investment program/project delivery functions and related policy reforms. The objectives and approach of the proposed Program for Results are fully aligned with the Government’s strategic goals as articulated in the Manifesto and the 8NDP and its implementation plan, to be released later in 2022.

### Government Agriculture Sector Program

27. **The Government’s agriculture sector program is guided by the Second National Agricultural Policy (2NAP).** The NAP is aligned with the Vision 2030 and the policy statements of the Zambia CAADP Compact (2011). It does not have a specific time limit and will be revised from time-to-time to reflect the priorities of the 8NDP. The NAP is implemented through the periodic Policy Implementation Plans (PIPs), which are aligned with the election cycles. The PIPs provide a detailed list of activities which are accompanied by specific quantitative targets. The 3PIP of the 2NAP, currently under

<sup>28</sup> World Bank. Zambia Review of Country Systems to Support the Use of PforR. 2019.



preparation, is expected to retain the programmatic framework of 2PIP, with updated performance targets. As such, the NAP, 2PIP and the UPND Manifesto will provide sufficient policy guidance until the 3PIP is completed.

28. **The 2NAP and the 2PIP provide detailed information about the specific activities, expected results and indicative targets around the ten program areas:** (a) Production and productivity of crops and livestock (produce 160,000MT of various grain seed; 3,000 ha of land brought under communal irrigation); (b) Adaptive agricultural research (9 research facilities rehabilitated and one constructed); (c) Capacity building of agricultural training institutions; (d) Agricultural markets for inputs and outputs; (e) Availability of and accessibility to agricultural finance credit facilities and insurance (250,000 farmers trained in banking services and credit repayment); (f) Private sector participation in agricultural development (review Food Reserve Act); (g) Food and nutrition security (increase Crop Diversification Index to 1.25); (h) Sustainable management and use of natural resources (78,750 farmers trained annually in conservation agriculture); (i) Mainstreaming of environment and climate change in the agriculture sector (establish a National Early Warning Call Centre); and (j) Mainstreaming of gender, HIV/AIDS prevention, and governance issues in agriculture. Plant and animal health protection is expected to be a new strategic area for the 3PIP. The proposed Program would support the Government in the delivery of results in the areas regarded as critical to the contribution of the agriculture sector towards inclusive economic growth and jobs creation.

## B. Theory of Change

29. **Increasing diversification, sustainability and jobs in the agri-food sector of Zambia requires three interrelated building blocks,** which are aligned with the Government of Zambia's goals of inclusive growth, food and nutrition security and poverty alleviation: (i) enhanced policy and institutional environment; (ii) improved service delivery; and (iii) productive and climate resilient infrastructure.

30. **Improving the efficiency and effectiveness of public spending programs and policy environment is needed to accelerate agricultural growth in Zambia,** especially in the areas of repurposing spending on inputs subsidies, management of Strategic Grain Reserves (SGR), and trade liberalization and facilitation, all of which have hindered private sector potential. The operationalization of several reform Acts, including inter alia, the Fertilizer and Feed Act and the Agricultural Credit Act, as well as alignment of the budget allocations with the country's agricultural policy objectives and improving agricultural budget management performance would improve the business environment for private sector investments and stimulate agricultural diversification. Enhanced planning of public investment programs and integration of sustainability and climate change considerations in these programs will contribute towards building resilience and protecting natural capital for longer-term sustainable growth. Sound M&E would be necessary to achieve the desired changes.

31. **Creating jobs in the agri-food system requires new and better skills as well as a supportive environment with improved services.** Growth in agriculture and increasing job opportunities depends on building human capital, in terms of increased knowledge and skill development in modern production practices and agri-entrepreneurship, as well as the capacity to innovate. Such increased capacities also lead to the development of an enabling environment that help to catalyze private sector investments for further boosting job creation and employment opportunities in farm and off-farm sectors. There is a need for improved delivery of services that can unlock this human potential and build capacities for more productive, diversified and climate resilient farming through fostering innovation through research; generating modern technologies and practices for profitable and sustainable operations; enhancing access to finance and insurance; improving plant health protection services and supporting early warning systems. This will contribute to the development and strengthening of remunerative value chains and creating jobs (both seasonal and permanent) along the links of the value chain, i.e., on-farm, agro-processing, logistics, marketing and trade.



32. **Sustainable economic growth in rural areas will depend on access to productive infrastructure.** Transport infrastructure is needed for high potential farming areas to be connected to the markets and allow people and goods to circulate cost-effectively. Building resilient and diversified farm production systems requires sustainable irrigation development, in particular for smallholders, farm mechanization, transport infrastructure, and storage and processing facilities for the development of domestic and regional markets.



Table 1: Theory of Change





### C. PforR Program Scope

33. **The proposed Program will be nested in the strategic areas of the 2NAP and the 3PIP**, which are key elements of the 8NDP and Zambia Vision 2030. The Program excludes fisheries and livestock sub-sectors, which have already established a promising growth path despite limited public investments. These sectors are also relatively free from significant policy distortions. As such, the Program would focus on crop sub-sector which received about 90 percent of the total agriculture sector funding yet is subject to major policy distortions and institutional and service delivery inefficiencies, which makes it suitable for the Program's interventions. Table 1 of Annex 3 provides the comparison of the Government agriculture sector program and the proposed PforR boundary.

34. **The NAP actions are not linked to specific government budget allocations.** Their implementation requires concerted efforts from all stakeholders including government agencies (financed from budget), financial institutions and the private sector. While NAP and its implementation plan are well aligned with international recommendations for agricultural sustainable growth, they do not encompass budget plans against which to benchmark realized budgets and expenditures. Furthermore, the outturn and related execution rate of the Government program budget is low and variable. The proposed Program will foster expenditure monitoring efforts to enable the government to report on budget allocation and execution of its major subprograms.

35. **The program budget allocations have been variable and skewed towards FISP and FRA, while underfunding genuine growth and job-creating activities.** The share of FISP and FRA expenditures averaged 6.8 percent of Zambia's GDP over 2018-2022, ranging from a low 3.9 percent in 2018 to a high 9.6 percent in 2020. Over 2018-2022, FISP represented 76 percent of the Program's budget on average (up to 84 percent in 2020) and FRA 14 percent on average. The FISP particularly has limited contribution to inclusive growth and job creation. The budget available for non-FISP and FRA activities is very low (0.4 percent of GDP on average) and has been declining (from 0.7 percent of GDP in 2018 to 0.2 percent in 2022). For instance, budget allocation on agricultural research and extension, known to have among the highest return on investments for agricultural growth, has represented less than 0.3 percent of the Program's budget over 2018-2021. This has been further affected by low budget outturn for agriculture (55 percent for 2019-2021).

36. **The decision to include the FISP and FRA expenditures in the Program boundary is deliberate.** According to the 2023-2025 MTEF, the government has committed to reduce the expenditure levels of the FISP, which would allow for repurposing some of its budget allocations towards genuine growth and jobs creating public goods and services. At the same time, the government, through the MTEF, has signaled its intent to transfer the delivery modality of the FISP from the Direct Input Support (DIS) towards Electronic Voucher (e-Voucher) scheme which would give farmers flexibility to purchase a range of inputs from the menu of options. The latter is expected to encourage diversification of crop production away from maize. Such a move towards flexible e-Voucher scheme could be considered as "smart" subsidy program, which would be eligible for the inclusion in the Program boundary. The FRA expenditures for purchasing and management of SGRs are considered legitimate part of the Program boundaries. The Program would support the efficiency and effectiveness of the management of SGRs and reduce the associated market distortions.

37. **The total amount of the agriculture sector program financing over the 2022-2026 period<sup>29</sup> is expected to be ZMW 42.89 billion (US\$1.74 billion), of which 83.1 percent will be financed by the Government of Zambia and 16.9 percent by an IDA credit.** Aggregate public spending on the Government program (including livestock and fisheries) over fiscal years 2018 to 2022 amounted to ZMW 48.49 billion (US\$2.80 billion). For the Program (livestock and fisheries

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<sup>29</sup> Calendar years, which correspond to Zambian fiscal years



excluded), it amounted to ZMW 44.14 billion (US\$2.62 billion) and averaged ZMW 8.83 billion (US\$524 million) per annum. These numbers do not reflect the normal level of agricultural expenditures because they are biased towards very high expenditure levels in 2020 and 2021 (election years) driven largely by the FISP and, to lesser extent, the FRA. The agriculture expenditure levels “normalized” again in 2022, which is considered a representative baseline for future (US\$332 million). The total Government agriculture program (livestock and fisheries included) for the period 2022-2026 is estimated at ZMW 39.31 billion (US\$1.61 billion), with expenditures for the PforR (livestock and fisheries excluded) estimated at ZMW 35.66 billion (US\$1.44 billion) if spending levels of the two previous fiscal years are continued under the 3PIP. The IDA credit will fund US\$295 million, or about US\$59 million per year assuming equal disbursements. It will bring the total financing at ZMW 42.89 billion (US\$1.74 billion), or equal disbursements of US\$347 million per year for 2022-2026.

**Table 2: Financing of the Program 2022-2026**

Source	Amount (US\$ billion)	Percent of Total
Government	1.442	83.1
IDA	0.295	16.9
<b>Total</b>	<b>1.737</b>	<b>100</b>

38. **To ensure a sharper focus on achieving the Government targets, the Result Areas (RAs) of the proposed Program cover a subset of the Government program activities**, which are aligned with the government’s own targets. The RAs were selected considering that they: (i) have the potential to make strong contribution to achieving the government’s own targets; (ii) are linked to specific measurable results; (iii) provide “value added” of the program results in terms of their technical/institutional quality, efficiency and effectiveness; and (iv) incentivize behavioral changes. Furthermore, generating inclusive economic growth and job creation in Zambia’s agriculture sector requires three interrelated building blocks, which are related to enhanced policy environment; improved service delivery; and productive infrastructure. The Program will support the following three RAs:

39. **Results Area 1: Enhanced policies and institutions for accelerating diversified, resilient, and inclusive agricultural growth.** The goal of this RA is to enhance the impact of the government agriculture expenditure programs and the related sector policies. The agriculture sector, while of great importance to Zambia’s overall economic growth, has been underperforming. Allocating more resources to growth-enhancing public expenditure programs, while highly desirable, may not achieve the desired results without simultaneously addressing the key institutional and policy constraints which have been holding back the sector growth potential. Restoring private sector confidence and enabling investment environment would require institutional enhancements which provide certainty and transparency on future sectoral policy making processes. There is also a need to enhance more predictable budget planning and release process, while improving its management and monitoring.

40. The RA would improve the efficiency and effectiveness of the agricultural inputs (fertilizer) distribution and Strategic Grain Management (SGM) arrangements and enhance the transparency of agricultural trade decisions. On the latter, the past ad hoc maize export restrictions have negatively affected private sector participation in maize markets by depressing investments and cancelling any positive effects to farmers from the FISP subsidies and FRA maize marketing activities. The RA would incentivize the reduction of the government budget allocation to FISP through improved targeting of the eligible farmers using the biometric farm registry. This would enable the government to



continue to target eligible farmers, while reducing overall FISP budget allocation, even with the increasing international fertilizer prices. The RA would also support the transition of the FISP from maize-centric delivery modality towards flexible e-Voucher modality, which is expected to increase farmer's access to broader choice of inputs while reducing the program administrative costs. The government has confirmed that the fiscal savings from repurposing of the FISP would provide additional budget resources for the implementation of activities under RAs 2 and 3. The RA would also support strengthening of the FRA operations through improving transparency of its strategic grain stock management (through parallel DPO) and incentivizing adoption of less market distortive grain trading practices. Finally, it would incentivize the improved MoA agricultural budget outturn, which has been historically low for the genuine growth and jobs creating spending programs, such as extension, research and irrigation, while the budget outturns for FISP and FRA has often exceeded the planned allocations.

41. The RA would contribute to climate co-benefits by encouraging more rational use of chemical fertilizers and crop diversification towards more drought resistance crops through: (i) reducing FISP spending on fertilizers and repurposing it towards more climate resilient enhancing public expenditure programs, such as CSA research and extension, irrigation and climate resilient feeder roads; (ii) gradual transfer of the FISP towards the flexible e-Vouchers, which would give farmers more choice over their input use/purchase decisions and would encourage diversification of agricultural production systems, enhance their climate resilience and improve soil carbon sequestration properties (i.e. legume-cereal rotations), while growing more drought resistant crops in areas of declining/variable rainfall (i.e. millet, sorghum and roots and tubers); and (iii) encouraging the FRA to utilize less market distortive maize trading operations is expected to incentivize farmers to adopt more diversified crop production systems while enhancing crop productivity and competitiveness. Improving agriculture budget outturns for programs, such as agricultural research, extension, irrigation and climate resilient feeder roads, would enhance climate resilience while protecting natural capital for long-term sustainable growth.

42. **Results Area 2: Improved services for accelerating diversified, resilient, and inclusive agricultural growth.** The goal of this RA is to increase the level of institutional capacity for improved service delivery, such as agricultural research and extension; development of modern and climate resilient agricultural technologies (seeds, fertilizers, etc.); and improved planning of public sector expenditure programs. This would contribute to productive diversification, improved quality, value addition, and market linkages through fostering the integration of a greater number of smallholder producers into remunerative value chains, incentivizing contract farming, strengthening horizontal and vertical alliances by building trusted commercial partnerships between farmers and agri-businesses. All of this is expected to result in increasing the sector's competitiveness, boosting exports and job creation, improved incomes and economic opportunities for women and youth in the rural sector.

43. The RA would support strengthening of the Farm Block Development Program (FBDP) planning process, which would draw on the international best practices, development of the related responsible commercial agriculture investment guidelines, and preparation of the block-specific investment plans, which are critical to encourage private sector investments into production and value-added processing activities. The strengthening of the legal and regulatory environment for input markets would improve farmers access to high quality seeds and fertilizer products while creating enabling conditions for private sector led seed and high value crop industries and investments into domestic fertilizer production capacities. The RA would contribute to enhancing the resilience of food production systems against climate shocks through scaling up the select Climate Smart Agricultural (CSA) techniques and practices through increased public funding for adaptive research and advisory services. Special attention will be paid to women subsistence farmers who will be targeted through interventions that address current barriers to their participation in CSA training and access to quality extension services. The design of CSA trainings will be informed by consultations with women farmers and





relevant organizations/collectives, in order to tailor the curricula to the needs of women small farmers. This RA will also aim to train and employ more female extension agents which will have the dual benefit of bringing a larger number of women into the formal workforce as well as make extension services more available to women farmers.

44. The RA would contribute to climate co-benefits through supporting: (i) adaptive and advisory services for improved climate resilience (technology and knowledge development for both adaptation and mitigation); (ii) incorporating climate resilience into agriculture training and extension programs, and improving skills for the job participation in food systems; (iii) enhancement of agricultural research facilities and restructuring of applied agricultural research and extension capacities; (iv) increasing the production and distribution of improved and more climate resilient seeds while encouraging diversification of crop production systems which would contribute both for better soil management and nutritional outcomes; and (v) enhancing the environmental and social sustainability of the planning of public and private investments in farm blocks and other high potential commercial agriculture cluster development areas.

45. **Results Area 3: Improved rural infrastructure and assets for accelerating diversified, resilient, and inclusive agricultural growth.** The goal of this RA is to support the delivery of targeted productive rural infrastructure in agriculture areas which have highest potential for contribution to local economic growth, while enhancing climate resilience of food production systems. Sustainable growth in jobs and incomes in rural areas will depend on access to infrastructure assets. Transport infrastructure, which is also climate resilient, is needed for high potential farming activities to be connected to the markets and allows people and goods to circulate cost-effectively. Building resilient and diversified farm production systems requires financially and environmentally sustainable irrigation systems and farm mechanization. The job multiplier effect of the whole food systems development is expected to be high but depends on storage and processing facilities and development of domestic urban and regional markets.

46. This RA would support the following strategic areas: (i) construction, expansion and institutional development of irrigation schemes through: (a) a progressive increase in budget allocation by the Ministry of Finance and National Planning (MoFNP) to irrigation development; (b) establishment of Water User Agreements between irrigation scheme operators and irrigation farmers within existing and new schemes ; and (c) preparation of related guidelines for irrigation development for participatory irrigation planning, operations, maintenance, management and training; and (ii) rehabilitation of feeder roads in high potential agricultural areas to enhance resilience against extreme weather conditions. The purpose of such feeder roads is to link production areas with tertiary roads.

47. The RA would contribute to climate co-benefits through encouraging more efficient use of water resources in the targeted irrigation systems through introduction of appropriate technologies and management practices, while enhancing the long-term technical, financial and environmental sustainability (improved environmental flows) of the operation of such schemes. It would improve climate resilience of food production systems (especially against increased rainfall variability and drought incidence), which could lead both to adaptation and mitigation co-benefits (i.e., irrigation induced crop diversification and improved soil management, and its carbon sequestration properties). The application of the improved technical standards for irrigation and feeder roads are expected to enhance their resilience against extreme weather conditions (torrential rains and floods). Finally, investments in irrigation systems would increase land and water productivity, which would contribute towards sustainable intensification, while reducing pressures on land use change along extensive margins (i.e., deforestation).

48. **An overarching result of the Program is a sustained move towards a more adequate agriculture sector expenditure framework.** This would require better tracking of the budget expenditures, and result in improved



planning, prioritization and timely execution of budgeted activities, particularly with the goal of achieving economic growth and job creation as stated under the UPND Manifesto. The proposed Program would therefore support: (i) strengthening of public finance and procurement management for the MoA spending programs, including improvement of annual planning process, prioritizing, monitoring and reporting the use of the budget funds by designated departments and institutes; and (ii) enhancing of M&E through better utilization of various databases and improved real-time analysis to track program efficiency and effectiveness.

**D. Program Development Objectives (PDO) and PDO Level Results Indicators**

49. The objective of the Operation is to promote agricultural diversification, sustainability and jobs in the agri-food sector of Zambia.

50. The following key indicators will measure progress towards achievement of the PDO:

- Gini-Simpson index of crop diversification (area planted to crops/area planted to maize) (ha)
- Area under climate-resilient technologies and practices for crop production (ha) (also a climate indicator)
- Jobs generated in areas benefiting from irrigation support (Number)

**E. Disbursement Linked Indicators and Verification Protocols**

51. **Program progress will be measured through nine disbursement linked indicators (DLIs)**, each involving one or more specific actions required for agricultural transformation in Zambia. DLIs were selected based on: (i) their “value added” in terms of program quality; (ii) the criticality of the activity, output, or outcome in the results chain; (iii) the need to introduce a financial incentive to deliver the activity, outcome, or output; (iv) measurability and ease of verification; and (v) the capacity of Zambia to achieve the DLIs over the period of Program implementation. Table 3 summarizes the list of DLIs, and the details are presented in the Technical Assessment Report. Some DLIs entail sub-indicators which increases scalability of disbursements.

**Table 3. Disbursement Linked Indicators (DLIs)**

Disbursement Linked Indicator	DLI Allocation (US\$)	DLI Scalability
<b>DLI 1.1:</b> Annual percentage reduction of the overall budget allocation to FISP	60,000,000	Yes
<b>DLI 1.2:</b> Number of farmers registered in a biometric-based registry on the Zambia Integrated Agriculture Management Information System Platform	18,000,000	Yes
<b>DLI 2:</b> Annual percentage change in the overall MoA budget outturn	17,500,000	Yes
<b>DLI 3:</b> Volumes ( <i>in metric tons</i> ) of maize stocks traded (sold and purchased) by the FRA on ZAMACE	10,000,000	Yes
<b>DLI 4:</b> Annual increase in export volumes ( <i>in metric tons</i> ) of maize (grain equivalent) formally exported	28,000,000	Yes
<b>DLI 5.1:</b> Development of a Farm Block Development Program Strategy	8,000,000	No
<b>DLI 5.2:</b> Development of Farm Block Specific Investment Plans	20,000,000	Yes



Disbursement Linked Indicator	DLI Allocation (US\$)	DLI Scalability
<b>DLI 6:</b> Enhancing the legal and regulatory environment for input markets	20,000,000	No
<b>DLI 7:</b> Number of farmers who have received extensions services on CSA technologies	30,000,000	Yes
<b>DLI 8.1:</b> Annual percentage increase in MoA budget allocated to irrigation development and timely disbursement	40,000,000	Yes
<b>DLI 8.2:</b> Number of Water User Agreements entered into between the operators of irrigation schemes and the irrigation farmers	17,000,000	Yes
<b>DLI 8.3:</b> Preparation and adoption of the Irrigation Development Guidelines and the National Irrigation Master Plan	5,500,000	No
<b>DLI 9:</b> Number of kilometers of farmer feeder roads found in high agricultural potential areas rehabilitated	21,000,000	Yes
<b>TOTAL</b>	295,000,000	

52. **Results Area 1: Enhanced polices and institutions for accelerating diversified, resilient, and inclusive agricultural growth** will be achieved through the following four DLIs:

53. **DLI 1 focuses on improving the efficiency and effectiveness of the FISP.** Reducing inefficient expenditures under the FISP and better targeting of subsidies for agricultural inputs would reduce the fiscal footprint of the program, which would make more resources available for growth and jobs-creating expenditures, while increasing its efficiency and effectiveness. The DLI includes two sub-DLIs: (1.1) *Annual percentage reduction of the overall budget allocation to FISP* which is tracked by *annual percentage change in budget allocation*; and (1.2) *Number of farmers registered in a biometric-based registry on the Zambia Integrated Agriculture Management Information System Platform* which seeks to improve farmer targeting by ensuring that only legitimate farmers receive agricultural support (*measured by number of farmers enrolled in the registry*).

54. The DLI would contribute to climate co-benefits by encouraging more rational use of chemical fertilizers through use of blends suited to Zambia’s agricultural system and reduction of its supply under the FISP, while encouraging crop diversification towards more drought-resistant crops through a gradual transition of the FISP from maize-centric Direct Input Support (DIS) towards flexible Digital Comprehensive Agricultural Support Program (DCASP) (as per MTEF and tracked by the RF indicator). Reducing FISP budget by 25 percent is expected to lead to nearly an equivalent reduction in fertilizer consumption, leading to mitigation benefits from less nitrogen emissions. Furthermore, the program will ensure that fertilizer expenditure is based on soil tests and crop nutrient requirements established by the Zambia Agricultural Research Institute. Crop diversification is widely acknowledged and established by the World Bank as having significant contribution to climate change adaptation and resilience and carbon sequestration.<sup>30,31</sup> Finally, the Government has expressed their intent to reallocate the savings from FISP budget reduction for farmer extension and irrigation development. Robust extension services, supporting innovation in both agriculture and food systems, are critical to climate adaptation, enabling rapid adaptive learning loops among farmers and other networks of food system participants. The Program will raise agricultural productivity and increase resilience through the development of modern

<sup>30</sup> World Bank (2019). Productive Diversification in African Agriculture and its Effects on Resilience and Nutrition. <https://documents1.worldbank.org/curated/en/942331530525570280/pdf/Productive-Diversification-in-African-Agriculture-and-its-Effects-on-Resilience-and-Nutrition.pdf>

<sup>31</sup> World Bank (2012). Carbon sequestration in agricultural soils. <https://documents1.worldbank.org/curated/en/751961468336701332/pdf/673950REVISED000CarbonSeq0Web0final.pdf>



innovation systems for technology generation and diffusion. The Program's engagement in these two areas through DLIs 7 and 8, with strong focus on climate adaptation and resilience building, is expected to generate climate co-benefits.

55. **Verification protocol.** The DLI 1.1 is defined as an annual percentage reduction of the MoA budget allocation for the FISP program. The DLI is scalable and will be measured as an annual percentage change in budget allocation against the baseline, using 0.1 percent increment. The baseline year is 2022 with a budget amount of 5.37 billion kwacha. The set targets to verify that the DLI has been achieved would be through a cumulative annual percentage reduction compared to the baseline. The verification will be done annually through the evidence provided in the MoFNP Yellow Book<sup>32</sup> on the following Fiscal Year budget allocations (to be released usually around October) which is expected to conform with the national budget speeches delivered to the national assembly in November prior to the start of the new fiscal year by the minister in charge of MoFNP.

56. The DLI 1.2 is defined as the number of farmers who will be registered in biometrics-based registry over the Program period. The e-Voucher system would be used to target the distribution of climate-smart inputs to farmers. This DLI is scalable and will be measured against the number of farmers who get registered annually into the biometric registry up to the agreed cumulative target of 1,200,000 farmers. The registration will be carried out by a team led by the Ministry of Home Affairs (as part of the broader national initiative to renew identity cards and create a national biometrics-based registry) in collaboration with Smart Zambia Institute and with the MoA's network of extension officers. The data will be collected annually through the ZIAMIS platform and managed by the Ministry of Home Affairs, also in charge of guaranteeing data privacy. The MoA will compile the report using the data from the ZIAMIS platform, which will be compared against the Smart Zambia records.

57. **DLI 2: Annual percentage change in the overall MoA budget outturn** will incentivize the effective release of funding from MoFNP to MoA, on a gradual basis, which is expected to yield overall improvement of the public financial management, in addition to fostering the monitoring and reporting on climate change-related expenditures. For the Program to reach its objectives, the availability of budget funds needs to be significantly improved to enable the mobilization of the committed resources and to generate expected development results of the sector. The DLI is expected to mitigate the negative effects of delays on program implementation and change the behavior in decision making and planning processes. Improving the agriculture budget outturns for climate-related activities such as agricultural research, extension, irrigation and climate resilient feeder roads, is expected to enhance climate resilience and adaptation of farming systems while protecting natural capital for long-term sustainable growth.

58. **Verification protocol.** The DLI is scalable and will be measured as an annual percentage change in the overall MoA budget outturn against the baseline, using 0.1 percent increment. The baseline year is the average of 2019 to 2021 MoA budget outturn, which was 55 percent. The set targets to verify that a DLI has been achieved would be through a cumulative percentage reduction based on the baseline, with end of PforR target of 90 percent. The annual budget for the MoA is presented in the Yellow Book. When funds are released from the Treasury, a funding slip is produced which indicates the date, total funds, and the budget lines that have been funded. The funding slip is given to the Ministries for their record and input into the IFMIS. The verification of the DLI achievement will be done by the Auditor General of Zambia, who will verify the funds releases from the MoFNP to the MoA as follows: (i) confirm the budget in the Yellow Book; (ii) confirm the monthly funds release slips provided by the Treasury; and (iii) issue the independent verification reports to the MoA.

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<sup>32</sup> Annual budget book of MoFNP



59. **DLI 3: Volumes (in metric tons) of maize stocks traded (sold and purchased) by the FRA on ZAMACE** focuses on strengthening of FRA operations. Government intervention in maize marketing through the FRA encourages monoculture and increases the vulnerability of Zambia's food system to climate change.<sup>33</sup> This DLI would aim to encourage FRA participation in the grain market through incentivizing the Agency trading its stocks through the Zambia Commodity Exchange (ZAMACE), which would allow for price discovery and productive diversification of the farming system. This in turn would attract private sector participation and increase the volumes of commodities traded. The DLI would encourage the FRA to utilize less market distortive maize stock trading operations and increase the transparency of trade decisions which is expected to incentivize farmers to adopt more diversified crop production systems while enhancing crop productivity and competitiveness. Reducing market distortions from FRA intervention will facilitate crop diversification with beneficial effects on soil health, climate adaptation and resilience, reduced fertilizer and pesticide use, and carbon sequestration from leguminous crops.

60. **Verification protocol.** The DLI value of the volume of maize traded through the commodity exchange (ZAMACE) is scalable. The data on the FRA trading activities will be collected annually from the ZAMACE and verified against FRA records. The FRA records will provide evidence on the volume of maize traded (sold and purchased) on the ZAMACE platform, along with the relevant evidence, which will be compared with data from the ZAMACE. The MoA will compile the report using the data from the FRA and ZAMACE.

61. **DLI 4: Annual increase in export volumes (in metric tons) of maize (grain equivalent) formally exported** seeks to improve transparency of trade policy decisions in Zambia through promoting maize open border policy. Revenues from increased exports are expected to be used, in line with the objectives and priorities of the National Agricultural Policy, to establish financial incentives to promote private sector-led agricultural investment activities that strengthen climate resilience such as intercropping, conservation agriculture, agroforestry, and integrated soil fertility management, which are key to establishing viable farming systems considering the impacts of climate change in Zambia. The DLI will restore private sector confidence in markets and create an enabling investment environment for climate-smart food production. Export revenues will encourage the scaling up of public safety nets programs that would enhance the adaptive capacity of beneficiaries to impacts of climate change.

62. **Verification protocol.** This DLI is defined as the export volume of maize grain, mealie-meal and maize bran. The maize grain associated products exported will be converted into maize grain equivalency (in metric tons). To verify that the DLI targets, the MoA and MoFNP will compile the annual report using maize grain and associated products export data from Ascyuda system provided by Zambia Revenue Authority and verified by the ZAMSTAT.

63. **Results Area 2: Improved services for accelerating diversified, resilient, and inclusive agricultural growth** would improve agricultural productivity and enhance climate resilience through the following three DLIs:

64. **DLI 5 focuses on facilitation of private sector investment in the Farm Block Development Program (FBDP).** The FBDP has the potential to leverage private sector investments in agriculture and promote productive partnerships that would help to create jobs, increase agricultural value addition, enhance agricultural climate resilience, and generate export earnings. The *sub-DLI 5.1: Development of a Farm Block Development Program Strategy* will establish a roadmap and action plan for the development and improvement of FBs (*measured by the adoption of the strategy and related guidelines*) and the *sub-DLI 5.2: Development of Farm Block Specific Investment Plans* will identify specific public and

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<sup>33</sup> World Bank (2018). Increasing Agricultural Resilience through Better Risk Management in Zambia. <https://openknowledge.worldbank.org/bitstream/handle/10986/29779/125784-WP-25-4-2018-9-34-36-ZambiaAgResilienceRiskMgtweb.pdf?sequence=1&isAllowed=y>



private investments in FBs for economic growth and job creating (measured by tracking progress with completion of 5 investment plans).

65. The DLI would contribute to climate co-benefits through policy actions to scale up CSA adoption through public and private investments in the farm blocks and other high potential agriculture cluster development areas. In Zambia, the commercial farming sub-sector has been a significant driver for the adoption of CSA technologies and practices, while smallholder sector has been lagging. Development of the FBs will encourage expansion of private sector investments in CSA practices leading to enhanced resilience and increased mitigation from agriculture. Furthermore, productive partnerships between large-scale commercial farmers and emerging medium-sized farmers and smallholders will encourage adoption of CSA, technologies and practices, and promote climate-smart knowledge spillover from commercial farming segment. These partnership-based spillovers will be enforced through responsible, climate-smart commercial investment guidelines, which is a key result of this DLI.

66. **Verification protocol.** The DLI is defined in two parts: (i) Development of a comprehensive FBDP Strategy, which meets the detailed verification checklist as per Technical Assessment report, and related guidelines; and (ii) Development of five farm block specific investment plans, which meets the verification checklist as per the Technical Assessment report. The development of the Strategy and Investment Plans will be the responsibility of the MoA in consultation with key stakeholders such as other government ministries and agencies, private sector, farmer organisations as well as donor agencies. The MoA will recruit a third-party agency to verify that the development of the Strategy and the Investment Plans have followed the agreed consultative process of the key stakeholders and meets the OECD-FAO Guidance standards. The DLI disbursements will be made: (i) after the completion and verification of the comprehensive FBDP Strategy; and (ii) annually (scalable) based on the number of Farm Block Specific Investment Plans completed.

67. **DLI 6: Enhancing the legal and regulatory environment for input markets** will incentivize the development of input markets towards improved crop productivity and diversification. The DLI will focus on three Acts as follows: (i) approval of the *Plant Breeders Rights Act* and approval of the *Plant Variety and Seeds Act* which would enhance the legal and regulatory environment for seed markets and improve farmers' access to seeds, including to a wider variety of seeds, and encourage investments in more high value crop varieties; (ii) approval of the revised *Fertilizer and Feed Act* which would enhance the legal and regulatory environment for fertilizer market and incentivize the importation of new and more efficient/sustainable types of fertilizers, resulting in lowering the overall cost of fertilizers in the country; and (iii) amendment of *Agricultural Credit Act* which would allow for the use of Warehouse Receipts System (WRS) and provides legal basis for the creation of an agricultural credit facility.

68. The DLI is expected to generate significant climate co-benefits. The approval and implementation of the Plant Breeders Rights Act would encourage investments into high value crops, including tree crops, which could support intercropping, improve soil properties and contribute to climate resilience and increased carbon sequestration. The approval and implementation of the Plant Variety and Seeds Act would expand the seed sales through mobile distribution systems (bringing seed to farmers where they live rather than selling it through physical structures as done under current Act). This will significantly increase farmers access to high quality seed of their choice, including more drought-resistant crop varieties that reduces climate risks and diversification of production systems. The approval and implementation of the Fertilizer and Feed Act would enhance farmers access to new and modern fertilizer technologies, such as organic and biofertilizers, which would reduce GHG emissions from fertilizer applications.



69. **Verification protocol.** After stakeholders' consultation, the draft Plant Variety and Seeds Act, the draft Fertilizer and Feed Act and the draft Agricultural Credit Act will be shared with the World Bank for review before for approval by the MoA Cabinet. The DLI disbursements will be made against approval of the Plant Variety and Seeds Act, the Fertilizer and Feed Act, and the Agricultural Credit Act as evidenced by Parliamentary approval.

70. **DLI 7: Number of farmers who have received extensions services on CSA technologies** will focus on investing in the training of farmers in appropriate CSA technologies which will enhance farmers' capacity to adapt to climate shocks, reduce greenhouse gas emissions and contribute to building resilient agricultural production. Zambia already has been investing in conservation farming, that is embedded in CSA (with a specific focus on soil protection). This DLI would incentivize the scaling up of extension and training programs for farmers in the selected CSA technologies and practices (*measured by tracking the number of farmers participating in CSA extension activities, including women farmers*).

71. This DLI is expected to have significant climate co-benefits. CSA is a necessary condition to mitigate against climate risk and enhancing productivity. Investing and retooling extension services to better educate farmers on the risk reduction capabilities of appropriate CSA practices is required. Therefore, training of farmers in the use of CSA technologies and practices is crucial to reduce household vulnerability to climate shocks and enhancing broader national food security and rural job creation and livelihoods. Investing in the training of farmers in appropriate CSA technologies will enhance farmers' capacity to adapt against climate shocks that include drought; and monitoring and prevention of climate-induced pest and insect-related plant diseases.

72. **Verification protocol.** The DLI is defined as the number of farmers who participate in various CSA extension activities, where the CSA practices include: (i) minimum tillage; (ii) crop rotation; (iii) residue retention; (iv) animal manure; (v) green manure; (vi) agroforestry and (vi) water harvesting in accordance with the CSA training guidelines which is part of the Program Action Plan (PAP), indicated in Annex 6. Disbursements are scalable and will be made against the number of farmers which participated in the CSA training program on the agreed unit values. The verification would cover a random sample of farmers who participate in the CSA training to confirm the achievement or non-achievement of a DLI. The verification will require the review of relevant training documents from randomly selected 10 percent of the districts out of the total number of districts where training activities have been carried out. This will be repeated for each disbursement year for new set of districts. In each randomly selected district, the independent third-party VA will conduct a random verification of 10 percent farmers, through random field survey by checking training records and conducting interviews, of which at least 40 percent should be women. If 10 percent interviewed farmers fail to confirm that they have participated in the training activities, these farmers will be excluded from DLI disbursement calculations. If more than 10 percent of the interviewed farmers fail to confirm their participation in the CSA training activities, then a given year is considered as "not achieved" and the entire set of farmers from that district will be rejected from the batch in that year and will be subject to a new round of random verification in the following year, in addition to new random verification sample. The data will be annually collected by the Department of Agriculture within MoA. Based on this data the MoA compiles the annual report which will be confirmed by the third-party VA.

73. **Result Area 3. Improved rural infrastructure and assets for accelerating diversified, resilient, and inclusive agricultural growth** would support agricultural commercialization and improved resilience to climate change through development of sustainable irrigation systems and improving road connectivity for better access to markets.

74. **DLI 8 supports the provision of irrigation through the improvement of the planning process and investment decision-making for irrigation expansion, along with institutional establishment to ensure effective operations and maintenance.** The *sub-DLI 8.1: Annual percentage increase in MoA budget allocated to irrigation development and*



*timely disbursement* will incentivize the progressive increase in budget allocations from the current very low baseline (measured by annual percentage change in budget allocation). The *sub-DLI 8.2: Number of Water User Agreements entered into between the operators of irrigation schemes and the irrigation farmers* will promote the establishment of water user agreements between the entities who are operating irrigation schemes and the irrigation farmers, to be established within existing and new schemes, to facilitate a move towards systematic irrigation service provision (measured by tracking the progress in the number of water user agreements signed). The *sub-DLI 8.3: Preparation and adoption of the Irrigation Development Guidelines and Irrigation Masterplan* will support the preparation of irrigation guidelines for participatory irrigation planning, operations, maintenance and management, and training and Irrigation Masterplan which will be critical to guide future cost-effective, impactful investments in irrigation (measured by the completion of the Guidelines and Irrigation Masterplan).

75. Drought is the most significant risk facing Zambian agriculture and the rain-fed agriculture and high poverty rates characteristic of smallholders have increased their exposure to frequent weather shocks and limited their ability to cope with them. El Niño– related droughts have led to severe agricultural losses, resulting in a 10 percent contraction in agricultural GDP. Localized droughts and dry spells due to climate variability and change occur every five years. Efficient and sustainable irrigation in the context of increasing droughts is key for building climate resilience in Zambian food systems<sup>34</sup> (see also paras 14 and 15). This DLI would contribute to climate mitigation co-benefits through (i) installation of irrigation systems that conserve energy; and (ii) rehabilitation of irrigation systems to improve energy efficiency. This would encourage more efficient use of water resources in the targeted irrigation systems through introduction of appropriate technologies and management practices, while enhancing the long-term technical, financial and improved environmental flows of the operation of such schemes. Furthermore, efficient irrigation systems will help minimize shifting cultivation, which are the main driver of deforestation and land-based emissions in Zambia. Investments in irrigation systems would increase land and water productivity, which would contribute towards sustainable crop intensification, and reduce pressures on forest and natural vegetation. Finally, this DLI would make a major contribution for climate adaptation by improving the resilience of food production systems.

76. **Verification protocol.** Verification of the *Sub-DLI 8.1* will be done against the amount budgeted for irrigation as presented in the annual budget speech by the Minister of Finance. *The DLI is scalable and is measured as percentage increase in budget over the baseline.* Information is publicly disclosed, and verification will be done by the World Bank using government budget reporting systems. Achievement of *sub-DLI 8.2* will be verified based on the following criteria that must be met as defined in the Irrigation Development Guidelines to be established under DLI 8.3: (i) existence of a legally established irrigation operator; (ii) water user agreement with service delivery, operational and maintenance roles and responsibilities; and (iii) farmers trained in their roles and responsibilities as water-users. The *number of verified agreements* will be counted as the number of established water-user groups who comply with the above conditions, and in compliance with type and size of farmer groups as per Technical Assessment report. Verification of the *sub-DLI 8.3* will be done against completion of the Irrigation Development Guidelines and the Irrigation Master Plan (outlined in Technical Assessment report) and will be reviewed and accepted by the World Bank prior to submission to the MoA for formal approval. Verification for DLI 8.3 will comprise: (i) confirmation of formal adoption of the Zambian Guidelines for Irrigation Development by the Minister of Agriculture; and (ii) confirmation of formal adoption of the National Irrigation Master Plan by the MoA. The World Bank will review the draft Guidelines for Irrigation Development and the draft National Irrigation Master Plan before they are being submitted for formal adoption.

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<sup>34</sup> World Bank (2018). Increasing Agricultural Resilience Through Better Risk Management in Zambia. <https://openknowledge.worldbank.org/bitstream/handle/10986/29779/125784-WP-25-4-2018-9-34-36-ZambiaAgResilienceRiskMgtweb.pdf?sequence=1&isAllowed=y>





77. **DLI 9: Number of kilometers of farmer feeder roads found in high agricultural potential areas rehabilitated** will incentivize the rehabilitation of farm feeder roads in high agricultural potential areas (*measured by tracking progress in the number of kilometers of roads rehabilitated*) using climate resilient design standards and works practices. The climate related extreme weather events (torrential rains and floods) are the main reason for the degradation of farm roads. Weather resistant paving material to withstand extreme weather events will be used, while wider drains and culverts will be constructed to accommodate heavy precipitation. Slope stabilization to protect against climate risks will be carried out as appropriate. The DLI will aim to ensure that feeder roads are adequately prioritized, and rehabilitation works carried out in climate resilient manner. This will be supported through the related action in the PAP, which supports the development of fit-for-purpose climate-responsive feeder road design manuals. The application of such improved technical standards for feeder roads infrastructure assets construction is expected to enhance their resilience against extreme weather conditions.

78. **Verification protocol.** The verification of roads works quality and technical compliance will be made against technical standards as specified in the Agricultural Feeder Road Manual, the preparation of which is part of the PAP. A random sample of awarded road contracts will be selected for the verification. The random sample will comply with the following provisos being met as a minimum: (i) random sampling will continue until the minimum number of kilometers of roads constructed or rehabilitated reaches > 10 percent of the total kilometers completed in each year that verification takes place; *or* (ii) until the minimum number of roads construction contracts is equal to three or greater. A third-party agency will be responsible for conducting verification activities.

79. **Verifying the achievement of the DLIs annually will provide the basis for disbursements.** The Program envisages disbursements throughout the Program implementation period based on the verification of achieved disbursement linked results. For scalable DLIs, payment would be made in proportion to the achieved results for each period after verifying the DLIs. For non-scalable DLIs, only achieving the target in full would trigger the corresponding payment. Verification approach is summarized as follows:

(i) **Data source/agency:** MoA, the lead implementing agency, through the Policy and Planning Department (PPD), collects and consolidates data on the achievement of the DLIs and arrange their verification, and prepare the DLI disbursement report for the submission to the World Bank. Data providers would be the various Departments involved in Program implementation, i.e., Department of Policy and Planning, Department of Agriculture, Department of Agribusiness and Marketing, Zambia Agricultural Research Institute (ZARI), Seed Control and Certification Institute (SCCI), and FRA, as well as other national institutions such as Ministry of Finance and National Planning (budget data), Smart Zambia Institute, ZAMACE, Zambia Revenue Authority and ZamStat.

(ii) **Verification entity:** To the extent feasible, the existing country and information systems will be used to verify the achievement of the DLIs as per verification protocols described in the Technical Assessment report. For example, existing budget data reporting systems (i.e., Yellow Book and other budget data sources) will be used to verify the achievement of DLIs 1.1, 2 and 8.1. The data from Smart Zambia Institute will be used to verify achievement of DLI 1.2 and Zambia Revenue Authority and ZamStat for DLI 4. Achievement of DLI 3 will be verified through cross checking of the records from the ZAMACE and FRA. A third-party Verification Agency (VA), under the TOR acceptable to the World Bank (see Technical Assessment report), will be tasked with fully verifying the achievement of the DLIs 5, 7, 8.2, and 9 as per the defined verification protocols for each DLI.

(iii) **Verification procedures:** The third-party VA will verify the relevant DLI reports prepared by the PPD of MoA as per verification protocols described in the Technical Assessment report and submit these to the MoFNP, for onward



submission to the World Bank, along with the accompanying evidence. In addition, where relevant the third-party VA will carry out site inspections (DLIs 7 of CSA training and 9 rehabilitation of feeder roads on random sample basis) and in-depth reviews of specific items, such as DLIs 5 and 8.2.

#### F. IPF component

80. **The IPF Component, in an amount of US\$5.0 million, will finance activities that would strengthen the E&S standards and fiduciary due diligence capacity of the MoA and Zambia Environmental Management Agency (ZEMA) for effective implementation of the proposed ZAMGRO Program.** The Environment and Social Systems Assessment (ESSA) and Fiduciary Systems Assessment (FSA) conducted during Program preparation identified capacity gaps related to the implementation of safeguard and fiduciary policies that need to be addressed to facilitate the successful implementation of the Program, and the NAP more broadly. The Program's IPF component will contribute to filling these gaps by financing capacity building activities of relevant entities at the national, provincial and district/local levels, to carry out necessary E&S and fiduciary due diligence of the activities under the NAP and proposed Program. Specifically, it will strengthen: (i) the social capacity of ZEMA to undertake its duties as stipulated in the Environmental Management Act of 2011; (ii) the MoA's capacity to undertake the Environment and Social (E&S) screening, including climate risks screening and gender inclusiveness/GBV/SEA risk screening, management and monitoring of the Program activities; and (iii) the MoA's capacity to enhance its procurement, financial management, financial monitoring, budgeting and quality assurance functions.

81. The Component would support institutional capacity building activities as follows: (i) provide resources for the recruitment of long-term specialists in environment and social management to oversee screening of the Program activities to be undertaken by the MoA. These specialists would support the relevant MoA departments on the preparation of required assessments and mitigation measures; (ii) provide short-term technical assistance support to ZEMA to enhance its screening capabilities, and to the MoA to update/revise its Environmental Management tools (e.g., Environment and Social Management Plans (ESMPs), Resettlement Action Plans (RAPs) for irrigation schemes and farm blocks); (iii) support training programs for the relevant ZEMA and MoA staff, and contractors at all levels on: (a) national legislation requirements and good environmental and social management practices and procedures; and (b) procurement, financial management, budgeting and quality assurance functions; and (iv) provide financing for equipment and software to the MoA to enable the ministry to carry out the safeguards and fiduciary oversight functions effectively. See Annex 8 for additional details on the IPF component.

### III. PROGRAM IMPLEMENTATION

#### A. Institutional and Implementation Arrangements

82. The implementation of the Program would rely on existing structures and mechanisms in place for the implementation and monitoring of the 2NAP. In general, there is adequate capacity and commitment in place to implement the Program. The GRZ has acceptable institutional structures in place for the implementation of its agricultural sector programs at various levels. The highest-level leadership of the government provides overall guidance for the implementation of the agriculture development agenda as articulated in the UNPD Manifesto and 8NDP, while its execution through the 2NAP and related implementation plans is led by the MoFNP and the MoA.

83. The implementation arrangements for the Program are indicated in Figure 1. A Steering Committee (SC) chaired



by the Secretary to the Treasury (ST) under the MoFNP, will be established for the Program. The Permanent Secretary of the MoA will serve as the Vice-Chair and the Policy and Planning Department (PPD) of the MoA as the Secretariat of the SC. The SC will coordinate the Program's implementation and data collection activities, and will provide overall strategic direction, guidance, and oversight for the Program. It will meet on a quarterly basis to review implementation progress and achievement of agreed actions under DLIs and the PAP. The SC may call additional meetings on need basis and may also invite non-PSC members to participate in meetings if the situation so warrants. The MoFNP will retain the overall higher level responsibility for oversight and coordination to ensure successful Program implementation.

84. The MoA will be the line ministry responsible for implementation of the Operation. The PPD, the leadership of its Director, will be responsible for overall coordination and day-to-day administration of the operation. The Director of the PPD will be supported by a team of MoA professionals, as well as externally recruited experts to fill capacity gaps. The PPD will ensure the establishment of well-functioning fiduciary, environment and social, and M&E systems for the implementation of the operation. In addition, it will coordinate the planning, budgeting and preparation of the consolidated reports on the implementation progress of the operation. The PPD will be responsible for submitting quarterly progress reports to the SC prior to the progress review meetings in a timely manner.

85. At the technical level, the MoA Departments will be entrusted with the responsibility of detailed implementation of the DLIs. Assigned responsibilities for the achievement of each DLI and related PAP actions is as follows; DLIs 1, 3, and 4: Department of Agribusiness and Marketing; DLI 2: PPD and Department of Finance, DLI 5: Department of Agriculture (DoA); DLI 6: DoA, ZARI and SCCI; DLI 7: DoA and ZARI, DLI 8: DoA; and DLI 9: DoA, and Department of Agribusiness and Marketing.

86. A Technical Committee (TC), chaired by the Director of the PPD will be established within the MoA. The TC will include Directors of the relevant MoA departments implementing the DLIs, Directors of the MoFNP's Debt Management, Budget, and Economic Management, representatives of other ministries and agencies/institutes as deemed necessary, as well as focal points of the seven Sub-Technical Committees. The TC will be responsible for ensuring the overall quality of implementation of the DLIs, timely delivery of the tasks in accordance with the agreed plans and preparation of detailed progress reports.

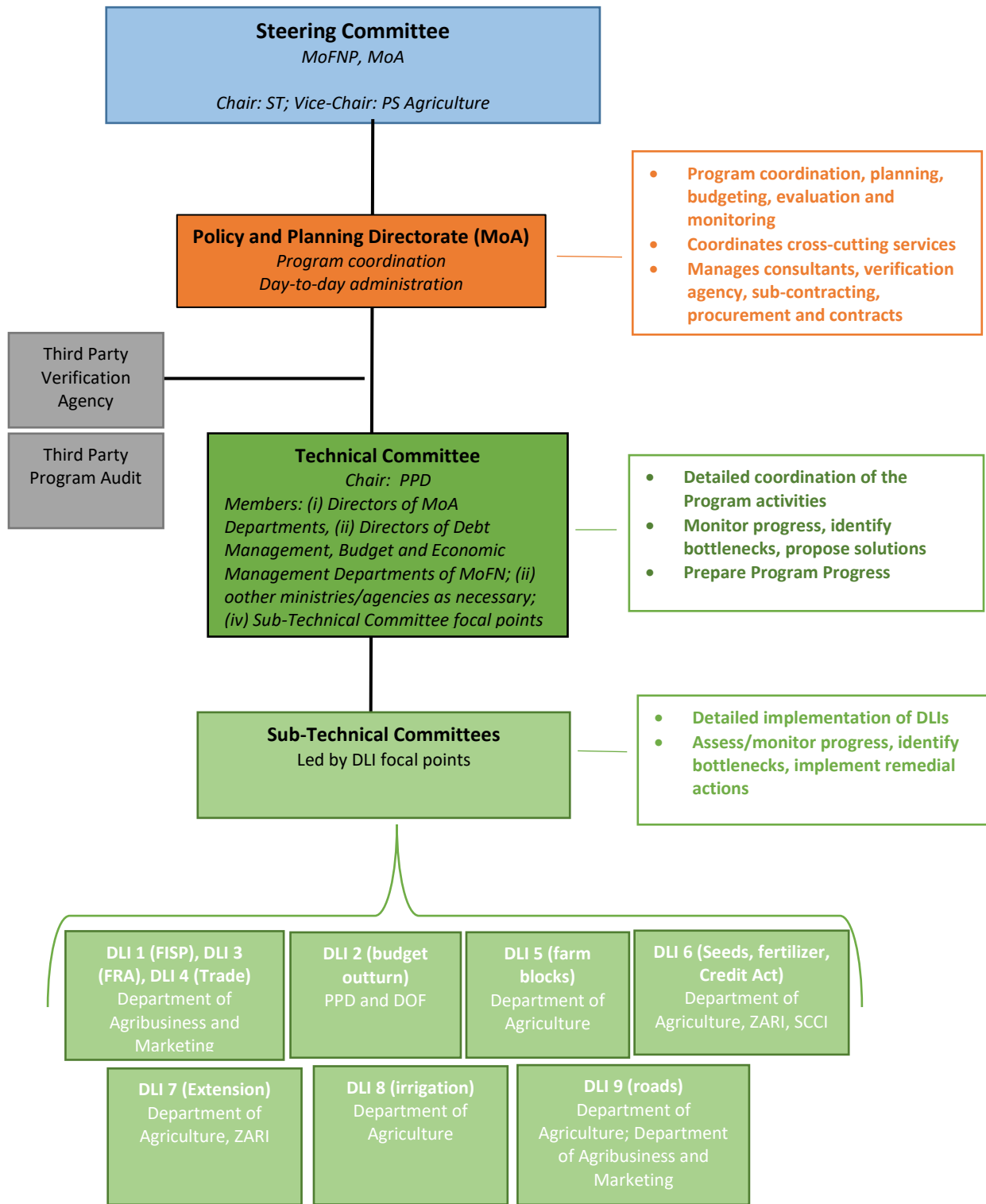
87. Seven Sub-Technical Committees (STCs) will be set up, each of which will be responsible for the detailed implementation of activities under select DLIs. Each STC will be represented in the TC by one focal person who will be a member of the TC. The STCs will meet every two weeks and will report to the TC on a monthly basis. The TC will be responsible for the consolidation of data from all STCs and the issuance of monthly implementation and progress reports. As the PforR works through the program's systems, the assignment of data collection is aligned with the mandates of responsible departments and institute/agencies under the MoA.

88. Most Program implementation will take place at the national level. Implementation of DLIs 1.1, 7, 8 and 9 would require coordination between national level and district/local level ministerial structures. Institutional arrangements involve both horizontal coordination and vertical structures where MoA and its departments are mirrored at the district level and would require engagement of local technical specialists.

89. As the Program will be implemented through the government's structures, it would require the MoFNP to allocate resources as needed to MoA to enable effective coordination, implementation and M&E of the Program, including for the implementation of the PAP that are critical for achieving the DLIs. It is expected that these resources will be made available to PPD through the national budget allocation or a portion of the PforR receipts.



**Figure 1. Institutional arrangements**





## **B. Results Monitoring and Evaluation**

90. **The MoA Policy and Planning Department (PPD) would coordinate the monitoring and evaluation (M&E) of the Program.** The PPD will be responsible for the day-to-day monitoring as needed. It would compile and consolidate data and supporting documents, ensure data quality, and prepare and submit the reports to the World Bank on a timely basis and collect data about physical progress, achievement of results in each program area, and the flow of financial funds. The PPD would report to the World Bank on a semiannual basis, covering the following items: (i) physical progress; (ii) results framework indicators; (iii) disbursement linked indicators (DLIs); (iv) progress with PAP implementation; (v) compliance with social and environmental requirements; and (vi) grievances and any allegations of fraud and corruption. Reports would be endorsed by the SC before submitting to the World Bank. The Government will recruit an independent third-party Verification Agency (VA) to verify achievement of selected DLIs, in accordance with agreed protocols.

91. **The Program's M&E system would draw on the existing Government's systems.** The Government has developed a Management Monitoring System, a web-based reporting framework, that tracks progress on implementation of all developmental programs in Zambia. To effectively undertake M&E activities, the Ministry has established M&E Committee comprising focal point persons from the various departments of the ministry who undertake M&E activities on programs/projects being implemented by their departments and submit their reports to the PPD that serves as the Secretariat to the Committee. However, currently, there is no dedicated M&E Unit within MoA to conduct M&E activities and the M&E activities are assigned as add-on duties to existing staff. The MoA has initiated the internal process of establishing a dedicated M&E unit within the structures of the PPD and will seek funding from the MoFNP to hire M&E experts. To ensure satisfactory capacity of the M&E functions, the PAP includes the establishment of a dedicated M&E Unit within PPD structures.

## **C. Disbursement Arrangements**

92. **Disbursement arrangements.** Disbursement of the credit proceeds would be made at the request of the Borrower upon achievement of Disbursement-Linked Indicators (DLIs). Disbursements for scalable DLIs will be proportional to the progress towards achieving the DLI target values. Disbursements under non-scalable DLIs will relate to whether the actions are either achieved or not. For results not achieved, or partially achieved, each year, the allocated amount outstanding would be carried over to subsequent years. The specific amounts to be disbursed against achieved and verified results are determined in accordance with the formulas provided in Annex 3.

93. **Under the IPF component,** the MoA will open a designated Account (DA) denominated in US dollars and the Project Account denominated in ZMW. Both accounts will be opened at the Bank of Zambia with a mirror account at a commercial bank acceptable to the World Bank. The Project will use the SOE-based method of disbursement to disburse the IPF loan. The Project will submit a withdrawal application for the initial disbursement based on the DA ceiling prescribed by the Disbursement and Financial Information Letter. Subsequent disbursement to the DA will be based on actual expenditures to be documented by the project. Other methods of disbursement available to the Project include Reimbursement, Direct Payment, and Special Commitment.

94. **Advances and prior results financing.** The World Bank will advance to the Borrower US\$73.75 million (representing up to 24.5 percent of the credit amount) once the Program becomes effective to facilitate the achievement of DLI results. The advance would be necessary to enable the achievement of the DLI results; achieve the agreed PAP and legal covenants; recruit the third-party VA, and other technical staff, etc. When the DLI against which an advance has been disbursed, is achieved, the amount of the advance will be deducted from the total amount due to



be disbursed under such DLI. The World Bank will record an amount of the advance as disbursed for an achieved Disbursement Linked Result (“recovered”) after it has notified the Borrower of its acceptance of the evidence of achievement of the result for which the advance was provided. The amount so reclassified will become available for further advances in accordance with the preceding paragraph. In addition, an amount up to US\$14.75 million is provided for results achieved prior to the signature date of the Financing Agreement, but on or after January 31, 2022, under DLIs 2, 3 and 8, until GRZ has furnished evidence in accordance with the provisions of the verification protocols and acceptable to the World Bank showing that such prior results have been achieved. The Borrower has indicated its intention to avail itself of the full advance upon effectiveness.

95. The MoFNP and MoA will be responsible for verifying the achievements of the selected DLIs under its purview, through independent third-party VAs, based on the agreed verification protocols. There is a reasonable pool of potential qualified third-party VAs among academic institutions and consultancy firms in Zambia. It is not likely that a single entity would possess all the necessary technical expertise required for the verification of the DLIs. It is thus expected that the selected VA will have to recruit additional technical expertise to complement its core team. The technical expertise needed for the verification of the DLI results are straightforward and readily available in Zambia. It is expected that one VA would cover the verification of all those DLIs which are subject to the third-party verification. The World Bank will review and provide feedback on the VA TORs and the selected VA must be acceptable to the World Bank.

96. **Verification protocols.** The verification of progress towards the achievement of the Program's objectives will be carried out as per verification protocols and associated detailed guidance notes and criteria (see Technical Assessment report and its annexes). The verification of the DLI results will be carried out to the extent possible through country systems (Government Office of Auditor General, existing budget reporting systems, ZamStat, etc.) and by the third-party VA where applicable. The verification will be carried out at least annually, in accordance with the protocols agreed with the World Bank. The verification of achievement of DLIs will be supported by the MoA PPD who will compile and make available the documentation required for verification. Based on its validation, the MoA, through the MoFNP, will notify the World Bank of DLI achievement, supported by the relevant evidence and documentation.

97. **Disbursement requests.** The PPD of the MoA will be responsible for collecting the reports from each implementing department/agency and will periodically submit a consolidated report to MoFNP. The MoFNP will submit to the World Bank the relevant evidence of the total or partial achievement of DLIs. After analysis of that evidence, the World Bank will communicate to the MoFNP and the MoA the results of its analysis with regards to the fulfillment of DLIs and the corresponding level of disbursement for each DLI. On that basis, the MoFNP will prepare disbursement applications and submit them to the World Bank. A copy of the World Bank's official communications confirming DLI achievements will be attached to the disbursement requests.

98. Disbursements will be made upon verification of the results of the DLIs. The actual disbursed amount will depend on the verified results as all DLIs are scalable except for DLIs 5.1, 6 and 8.3. The annual targets for scalable DLIs are indicative. The MoFNP can apply for disbursements as soon as it meets targets, provides the necessary documentation and the World Bank accepts evidence of achievements in a formal notice to the Borrower with the disbursement amounts. The MoFNP can also ask to be reimbursed for any results achieved beyond the indicative annual target up to the total PforR target and amount allocated for the respective DLI. World Bank disbursements in US dollars will be deposited in a bank account designed by the borrower and acceptable to the World Bank. Following the World Bank's review of the relevant documentation, including any additional information as considered necessary, the World Bank will confirm the achievement of the DLI(s) and the level of Program financing proceeds available for disbursement against each DLI, including any incremental disbursement.



## D. Capacity Building

99. **Institutional strengthening complements the new policy directions and reallocation of public investments under the Program.** The IPF Component will strengthen the institutional capacity of the relevant public institutions and towards this will provide technical support to build capacity and strengthen institutional processes and government systems, as specified in the PAP and dated legal covenants.

100. **Under the IPF component,** the Program is expected to generate the following capacity results: (i) enhanced capacity for the management, M&E of the implementation of the Program activities; (ii) enhanced procurement and FM capacities for improved Program implementation; and (iii) ensure adherence to and implementation of environmental and social standards under the NAP and the proposed Program.

## IV. ASSESSMENT SUMMARY

### A. Technical

101. The technical assessment has established a sound basis for the Program boundary and expenditure framework. The technical assessment draws on the recent analytical work carried out by the World Bank, government and its development partners. In-depth technical discussions have been carried out with relevant departments and agencies to verify the validity of the analytical framework, quantitative tools and results used, design of the DLIs and their targets and formulas. The MTEF suggest that targeted activities will be adequately resourced in line with the NAP targets. The RF indicators which are being measured at different levels, are broadly anchored in the NAP and provide a reasonably clear and ambitious orientation for the government's program. The Program focus, with an emphasis on agricultural growth and job creating and access to key productive infrastructure services in irrigation and roads, provides for a robust rationale for indicator selection in the results chain. The contribution of the World Bank PforR financing has been to accentuate the removal of policy constraints and strengthening regulatory and institutional capacities.

102. The NAP and its implementation plans adopt a credible strategic approach toward agricultural transformation. It supports the transition of Zambia from the traditional input subsidies and price support paradigm toward a more market-oriented development paradigm which relies on private sector driven output and input markets, government withdrawal from the maize market, and better targeting of subsidies. It redirects government spending to genuine growth enhancing investments such as research and extension, CSA, sustainable irrigation management and improved feeder road connectivity. These changes place no further fiscal burden on Zambia as funding for these expenditures would come from repurposing of the fertilizer subsidy program and increased effectiveness of public expenditures.

103. The Program recognizes that sustained benefits of infrastructure expansion are not just about scale but ensuring that supported irrigation and feeder road assets' quality are financially and technically adequate, under credible operational and management arrangements, contribute to environmental sustainability, and are climate resilient. The measures supported under the proposed Program make tangible contributions to productive income gains through removal of policy distortions, creating enabling environment for private sector investments and supporting skills training, as well as timely monitoring through M&E.

104. The governance structure, institutional arrangements, and operational arrangements of the Program's implementing entities are adequate. All implementing departments have experience with the World Bank-supported projects. The PPD has appropriate capacity to coordinate the implementation of policy reforms and related institutional



changes. It is well positioned to lead the coordination and oversight of the implementation of the proposed Program.

105. In order to enhance technical implementation support to the government, the World Bank is partnering with the Global Center on Adaptation (GCA), an international organization dedicated to supporting climate adaptation, to enhance the use of digital technology solutions for climate adaptation in the Zambian agriculture sector. The GCA will finance analytical and technical advisory services, which will support the implementation of the Program in the following areas: (i) assessment of climate risks of the key agricultural value chains and identify appropriate digital adaptation solutions to help smallholder farmers adapt to the challenges to minimize their impacts; (ii) conduct training and capacity building for farmer leaders, extension agents and youths on digital adaptation tools; (iii) facilitate multi-stakeholder policy engagements and events to identify opportunities and challenges to private sector investments in the scaling up of digital adaptation solutions; and (iv) identify potential opportunities and entry points for adaptation jobs, especially for youth through the Program.

### Expenditure Framework Assessment

106. The expenditure framework presents an adequate basis for the proposed Program, provided that agriculture expenditures are rebalanced towards growth and jobs-creating programs, such as extension, research and productive infrastructure. The Government's commitment to do so is strong, as witnessed by several strategic documents. The Program's expenditures are expected to amount to ZMW 42.89 billion (US\$1.737 billion) for the 2022-2026 period, of which 83.1 percent will be financed by the Government and 16.9 percent by the IDA credit. The Program supports investments in the improvement of country systems and capacity building. Together with subsidy reallocation, it is expected to lead to a higher share of recurrent expenditures (78 percent). The expenditure framework assessment (EFA) also shows that the past budget predictability has been weak. It is therefore an area that will be strengthened during the Program's implementation through DLI#2 which seeks to increase the MoA budget outturn. Regarding expenditure performance, the NAP and its implementation plan are well aligned with international recommendations for sustainable growth, but largely unrealized over 2018-2021 due to lack of funding.

## B. Fiduciary

107. **Program Institutional and Implementation Arrangements:** The DoA is one of the Departments in the MoA mandated with the provision of extension services to farmers, irrigation services and disease control. The ZARI is the largest research entity in Zambia with 10 research stations, with Mount Makulu being the largest and serving as the head office. The research is focused on soils, crops, and water with the aim of providing technologies and knowledge that enhance household food security while ensuring the maintenance of the natural resource base. The SCCI is Zambia's seed authority, and its standards are considered equivalent to all other Organization for Economic Co-operation and Development (OECD) member countries within the same seed schemes. The FRA is a parastatal organization established in 1996 under the Food Reserve Act 1995, whose functions are administering the national strategic reserves, marketing and market facilitation, and management of storage facilities. All these institutions will constitute implementing entities under the Program, with the MoA in charge of overall coordination of the Program.

108. **Planning and Budgeting:** The GRZ has an established budget preparation process that is guided by the National Planning and Budget Act 2020. The MoFNP will provide budget ceiling to each ministry and budget guidelines. In turn the MoA through its Budget committee will send notices to departments and provinces giving ceilings, for them to budget in line with their priorities and within given ceilings. Consolidation of the budget is done using Budget software called Access. Budget instructions are issued by the Finance Department (generally in the month of July) each year to all





departments, institutions, and provinces.

109. The overall budget to the MoA has shown a decrease from ZMW 5.774 billion for FY 2018 to ZMW 5.314 billion for FY 2020. However, for the year 2021, the budget increased to ZMW 7.210 billion primarily as it was an election year, and the additional resources were channeled to the FISP and FRA, which received over 86.26 percent of the total budget allocation. For the MoA, the budget outturns have ranged from 35.79 percent to 79.98 percent, averaging 55 percent, over the period 2018-2021. The attributing reasons for the variation between the budget versus actuals include cash flow deficits, slow procurements, and optimistic planning and budgeting. Effective 2022, the MoFNP has requested ministries to provide annual funding requirements which are being updated quarterly, and the fund releases are done monthly.

110. **Internal Controls and Audit:** The arrangements for internal controls will include processing of all payments through the Integrated Financial Management Information System (IFMIS) at the MoA headquarters, use of bank transfer or cheque for payments through commercial banks at institutions, periodic financial reporting and reconciliations. In addition, the internal audit departments at MoA and the FRA will undertake regular internal audits using the risk-based approach and will include review of accounting records and financial transactions, and internal control processes. The internal audit reports from such audits will be shared with the World Bank. The MoA internal audit department will be responsible for the Ministry itself whereas FRA internal audit department will undertake internal audits of the FRA.

111. **Procurement** activities will be based on the approved budgets and will be undertaken as per the Public Procurement Act (PPA) No. 8 of 2020. The user department will initiate the envisaged procurement activity after obtaining formal approvals and the procurement will proceed in line with the procurement regulations. The Program includes procurement activities, such as civil works (infrastructure), non-consulting services and consultancy services to support the implementation of the Program DLIs.

112. **Electronic Government Procurement (eGP) Platform:** The Public Procurement Act No. 8 of 2020 also stipulates the mandatory use of the eGP Platform for all public procurements. The PPA provides for the use of the electronic government procurement (e-GP) system and has made it mandatory for procuring entities to use the e-GP system for their procurements. The PPA provides for the use of the electronic government procurement (e-GP) system and has made it mandatory for procuring entities to use the e-GP system for their procurements.

113. The Fiduciary Systems Assessment (FSA) reveals that: (a) despite the availability of eGP there has been a slow uptake of the system due to lack of adequate IT equipment, but it has been noted that procurement staff are enthusiastic to embrace the use of eGP which will be supported under the TA component; (b) there are some internal weaknesses that needs strengthening. Based on the FSA, the fiduciary risk of the Program is assessed as *Substantial*. To strengthen the existing systems of the implementing agencies and to mitigate fiduciary risks, various action items are recommended as part of the Program PAP and DLIs such as: (i) publication APP and Contract on eGP platform and Program website; and (ii) improvement of budget outturns from 55 to 90 percent.



### C. Environmental and Social

114. The Program's outcomes are intended to increase agricultural productivity through improved farming techniques and more efficient use of natural resources (especially land and water) which protect the environment and restore degraded landscapes and ecosystems. The potential environmental and social risks and impacts associated with the Program activities include: (i) construction-related and site-specific risks and impacts, including occupational health and safety (OHS) issues; (ii) environmental pollution, impact on natural resources and ecosystems (iii) risk of exclusion from participating in the Program, (iv) risk of labor influx with potential increase in gender-based violence and sexual exploitation, including transmission of communicable diseases such as HIV/AIDS and COVID-19, (v) cumulative impacts and associated facilities impacts; (vi) physical and cultural resources disruption; (vii) water quality and quantity issues; and (viii) land acquisition and resettlement. Against this background, the environment and social risk is rated *Substantial*. The identified risks and impacts are expected to be site-specific and can be readily avoided, minimized, and mitigated through known and demonstrated technologies and good management practices stipulated in the PAP section of the Environment and Social Systems Assessment (ESSA) report.

115. An environmental and social systems assessment has been conducted, providing a comprehensive review of the environmental and social legal framework, procedures and capacity of implementing institutions and relevant stakeholders to the Program. The ESSA used the following methodology: (a) thorough screening of the potential risks and impacts from the activities to be supported by the Program; (b) desktop review on existing legal and institutional frameworks relevant to the program; (c) field visits to sites of typical program activities and (d) conducting interviews with key stakeholders at national, provincial, local levels including community representatives. These consultations and field observations provided a good understanding of government's capacity to address risks and impacts likely to arise from implementation of the program. The ESSA recommends that the Program be used as an opportunity to enhance the capacity for managing environmental and social risks related to agricultural sector expenditure programs as per the 2NAP. The draft ESSA report was consulted upon with relevant stakeholders and the final report was disclosed in-country and on the World Bank website on May 29, 2022.

116. The World Bank Environmental and Social Framework will be applied to the IPF component, which will strengthen the GRZ's framework to manage fiduciary and E&S related risks. Physical works will be financed under the Program, and will, therefore, be guided by the ESSA. The MoA has experience coordinating World Bank-financed projects, but it lacks environmental and social staff to manage environmental and social risks and impacts. The IPF Component of the ZAMGRO Program will strengthen its capacity by recruiting environmental and social and gender inclusion experts with the necessary skills to advise on the Program's environmental and social capacity building dimensions as well as conducting trainings in environmental and social risk management aspects. The IPF component's Environmental and Social Risk Classification is *Moderate* as no adverse impacts are expected due to its implementation. The Environmental and Social Review Summary (ESRS), Environment and Social Commitment Plan (ESCP) and the Stakeholder Engagement Plan (SEP) were disclosed in-country and on the World Bank website on May 9, 2022.

117. OP 7.50 – *Projects on International Waterways* is triggered due to activities envisaged under DLI 8 on irrigation. According to Paragraph 1 of OP/BP 7.50, the World Bank's operational policy covers the following types of international waterways: "(a) Any river, canal, lake, or similar body of water that forms a boundary between, or any river or body of surface water that flows through, two or more states, whether Bank members or not; (b) any tributary or other body of surface water that is a component of any waterway described in (a) above; and (c) any bay, gulf, strait, or channel bounded by two or more states or, if within one state, recognized as a necessary channel of communication between the open sea and other states – and any river flowing into such waters." As per Bank practice, the policy is also applied



to transboundary aquifers and aquifers connected to international waterways. As the proposed irrigation investments will be conducted in the basins of the Zambezi River, Congo River, and Lake Tanganyika which are international waterways, these could potentially increase water abstraction from the tributaries of the Zambezi, Congo rivers and Lake Tanganyika and could result in increased risk of pollutants entering these international waterways. According to the World Bank's preliminary assessment, Program activities: (i) will not affect the water quality or flow in the upstream riparian countries; and (ii) will not be adversely affected by the other riparians' possible water use. The World Bank notified the riparian countries of the proposed Program, including the Republic of Angola, United Republic of Tanzania, Zimbabwe, Mozambique, Republic of South Sudan, Republic of Namibia, Malawi, Democratic Republic of Congo, Botswana, and Burundi. Notifications were sent on April 8, 2022, and April 14, 2022, and as no objections were received from any of the riparian countries, the World Bank Regional Vice President for the Eastern and Southern Africa Region, through the Memorandum dated May 19, 2022, authorized the preparation of the Program to move forward.

118. *Gender.* The Program will roll-out a tailored communications strategy to inform rural women farmers and entrepreneurs of the Program and incentivize their participation in relevant Program-supported activities for their overall social and economic benefit. Enhancing climate resilience for increased crop production, food and nutrition security and household incomes is one of the key objectives of the Program. To achieve this, the Program will, inter alia, support the provision of training in CSA technologies and strengthen extension services to women farmers as closing the gap in women's access to a broad range of technologies will enhance their agricultural productivity, help free their time for more productive activities, improve their market returns and empower them to make choices that are better for themselves and their families. The CSA training curricula will be developed in close consultation with women and their inputs will inform the design of the training program so that high-quality and timely information as well as skill development in new technologies and techniques are achieved. The types of trainings to be offered will be tailored to their needs and skill level; the timings of the training sessions will be determined by their availability; and logistical arrangements will be made to ensure their participation (e.g., provision of child-care, easily accessible training location or transport arrangements to training site, etc.). In addition to the development and implementation of women farmer-driven training modules, where women prefer to work only with female extension agents, every effort will be made to facilitate this. Male extension agents will also be sensitized to the realities of rural women so that the quality of information provided to women is improved. Where needed, separate trainings for male and female farmers will be organized. This will help to encourage women to avail of extension services – currently, women tend to make less use of extension services than men. All trainings provided will be evaluated by the women to assess their level of satisfaction and will be modified/improved as necessary to ensure their maximum future participation. The Program's M&E system will sex-disaggregate key indicators to monitor the Program's outreach to women. These include the share of women reached with extension services, increase in the number of female extension workers, female farmers benefiting from new irrigation services and female farmers that have signed water user agreements with irrigation operators.

119. *Citizen Engagement and Grievance Redress Mechanism.* The social specialist within the MoA will develop a comprehensive communications strategy to be implemented throughout the operation to ensure dissemination of Program activities and coordination of stakeholder feedback. Consultations with stakeholders will measure: (i) the level of satisfaction of the population affected by the project, (ii) feedback from beneficiaries in the selection of specific interventions, and (iii) empowerment of citizens who report satisfaction with the Program. In addition to the World Bank's Grievance Redress Service (GRS), the project will establish a grievance redress mechanism (GRM) to address all project-related complaints at local, regional and national level, including, but not limited to: (i) corruption, (ii) the non-respect of the rights of direct project beneficiaries; (iii) resettlement issues; and (iv) gender-based violence and labor issues. The GRM will ensure that appropriate and mutually acceptable redress mechanisms are identified and implemented to the satisfaction of complainants and reduce the need for beneficiaries to use judicial proceedings.



## V. WORLD BANK GRIEVANCE REDRESS SERVICE

120. Communities and individuals who believe that they are adversely affected as a result of a Bank supported Program, as defined by the applicable policy and procedures, may submit complaints to the existing program grievance redress mechanism or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit <http://www.inspectionpanel.org>.

## VI. RISK

121. The overall risk of the Program is *Substantial*. Implementation will rely on using the Program's own systems, which is reflected in the overall risk rating.

122. The political and governance risk is rated *Substantial*. The Program aims to effect policy reforms in the FISP and FRA which have encountered considerable resistance in the past. There may be vested interests that may attempt to slow down or prevent these proposed policy reforms. However, the current government recognizes the importance of these policy reforms for unlocking the potential of the sector as the key driver for growth, jobs (especially for women and the youth), food and nutrition security and increased exports for foreign exchange earnings. There is a significant commitment on the part of the new government to stay on the reform course, which is also manifested through its IMF Program commitments.

123. The macroeconomic risk is rated *Substantial*. Zambia is in debt distress and has requested debt treatment under the G-20 Common Framework. The achievement of macroeconomic stability will largely depend on progress with debt restructuring and fiscal consolidation efforts. The ongoing fiscal adjustment would require a combination of expenditure rationalization, reforms to strengthen overall fiscal management, and tackling inefficient public investment programs and poorly targeted subsidies, especially those for fertilizer, which is one of the primary objectives of the proposed Program.

124. The technical design of the Program is rated *Substantial*. The technical assessment identified several political economy risks associated with the proposed Program activities, such as willingness to reduce the FISP subsidies, commitment to reduce FRA maize market activities and to create more transparent trade policy environment. There is also a risk that the war in Ukraine and its impact on the global energy and fertilizer prices may dampen the political will to stay on the stated reform pathway. However, these global developments could, on the other hand, strengthen the current momentum around the agriculture reform package, which would mitigate the downside risks. Specifically, there is an opportunity to accelerate the reform of the FISP to reduce its fiscal footprint and allocate more resources to extension, irrigation and other productive investments (DLIs 1, 7, and 8). Commitment to free trade would encourage food exports to the region and private sector investments in food production in response to higher food prices (DLI 4). High global wheat prices would incentivize expansion of wheat production in Zambia by commercial farming sector for



export and local consumption, while high fertilizer prices would encourage diversification of maize-centric smallholder cropping systems towards soya, which has higher gross margins while improving soil fertility properties (DLI7). Furthermore, high fertilizer import prices are already encouraging domestic fertilizer production and use of more diverse and modern fertilizer products, such as biofertilizers, organic fertilizers, etc. (DLI 6). In the long run, the current energy and fertilizer crises could incentivize the country to invest more in energy efficient fuels and move away from fossil fuels.

125. The institutional capacity for implementation of the Program and Sustainability is rated *Substantial*. Institutional strengthening complements the new policy directions and reallocation of public investments under the Program. The IPF Component will strengthen the institutional capacity of the relevant public institutions and towards this will provide technical support to build capacity and strengthen institutional processes and government systems, as specified in the PAP and dated legal covenants. Under the IPF component, the Program is expected to generate the following capacity results: (i) enhanced capacity for the management, M&E of the implementation of the Program activities; (ii) enhanced procurement and FM capacities for improved Program implementation; and (iii) ensure adherence to and implementation of environmental and social standards under the NAP and the proposed Program. The project will build institutional sustainability through the provision of local experts in the MoA that will be trained as necessary. Training will also be provided to existing staff of the MoA and its departments. In addition, some office equipment and other relevant operating costs will be covered by the project to ensure that adequate resources are available to undertake effective implementation of the Program. By building such technical and operational capacity within the MoA and increasing the Ministry's budget outturn (under DLI 2), the operation will contribute to institutional sustainability of the MoA systems.

126. The fiduciary risk is rated *Substantial*. The Fiduciary Systems Assessment (FSA) reveals that: (i) despite the availability of eGP there has been a slow uptake of the system due to lack of adequate IT equipment, but it has been noted that procurement staff are enthusiastic to embrace the use of eGP which will be supported under the IPF component; and (ii) there are some internal system weaknesses that needs strengthening. To strengthen the existing systems of the implementing agencies and to mitigate fiduciary risks, various action items are recommended as part of the PAP and DLIs such as: (i) publication APP and Contract on eGP platform and Program website; and (ii) improvement of budget outturns from 55 to 90 percent. The IPF component will also address capacity gaps through inter alia, training and provision of relevant software and office equipment.

127. The environmental and social risks are rated *Substantial* due to identified weaknesses in the capacity to manage environmental and social risks, lack of adequate numbers of staff as well as limited knowledge of the environment and social policies and procedures. The ESSA provides detailed recommendations for the enhancement of environmental and social systems, some of which will be addressed through the PAP. The IPF component of the Program has been specifically designed to mitigate such capacity risks. It will support the recruiting of environmental and social experts with the necessary skills to advise on the Program's environmental and social capacity building, as well as conducting trainings in environmental and social risk management.



**ANNEX 1. RESULTS FRAMEWORK MATRIX**

**Results Framework**

**COUNTRY: Zambia**

**Zambia Growth Opportunities Program**

**Program Development Objective(s)**

The objective of the Operation is to promote agricultural diversification, sustainability and jobs in the agri-food sector of Zambia.

**Program Development Objective Indicators by Objectives/Outcomes**

<b>Indicator Name</b>	<b>DLI</b>	<b>Baseline</b>	<b>End Target</b>
<b>To promote agricultural diversification, sustainability and jobs in the agri-food sector of Zambia.</b>			
Gini-Simpson index of crop diversification (area planted to crops/area planted to maize) (Percentage)		47.00	50.00
Area under climate-resilient technologies and practices for crop production (Hectare(Ha))		405,013.00	605,000.00
Jobs generated in areas benefiting from irrigation support (Number)		0.00	5,000.00



**Intermediate Results Indicator by Results Areas**

Indicator Name	DLI	Baseline	End Target
<b>Enhanced policies &amp; institutions for accelerating diversified, resilient and inclusive agri growth</b>			
Reduction in FISP Budget allocation (percentage change) (Percentage)		0.00	25.00
Share of FISP budget under e-vouchers (Percentage)		0.00	100.00
Number of farmers in biometric-based registry (Number)		0.00	1,200,000.00
MoA total budget outturn (Percentage)		55.00	90.00
FRA maize trading through ZAMACE (Metric ton)		0.00	333,000.00
Share of maize purchases (Metric ton)		0.00	86,400.00
Volume of maize exports (grain equivalent) (Metric ton)		35,000.00	1,400,000.00
<b>Improved services for accelerating diversified, resilient and inclusive agri growth</b>			
Comprehensive Farm Block strategy developed (Yes/No)		No	Yes
Farm block specific investment plans prepared (Number)		0.00	5.00
Amendment of Plant Breeders' Act (Yes/No)		No	Yes
Amendment of Plant Variety and Seeds Act (Yes/No)		No	Yes
Amendment of Fertilizers and Feed Act (Yes/No)		No	Yes
Amendment of Agricultural Credit Act (Yes/No)		No	Yes
Volume of certified seeds produced (Metric ton)		126,285.00	151,285.00
Volume of certified seed exports (Metric ton)		7,926.00	20,000.00
The number of farmers who have received extension services and have completed the training on CSA technologies (Number)		100,000.00	600,000.00



Indicator Name	DLI	Baseline	End Target
Share of female (Number)		27,000.00	160,000.00
Trained farmers who have adopted CSA technologies (Percentage)		0.00	50.00
Farmers satisfied with CSA training (Percentage)		0.00	80.00
Share of agricultural extension and training expenditures out of total agriculture expenditures (Percentage)		0.60	2.00
Share of female extension officers (Percentage)		30.00	40.00
Reduction in gender gap in gross farm household income (Percentage)		50.00	40.00
Share of agricultural research expenditures out of total agriculture expenditures (Percentage)		0.30	1.00
<b>Improved infrastructure and assets for accelerating diversified, resilient and inclusive agri growth</b>			
Budget allocation for irrigation development (percentage change) (Percentage)		0.00	2,500.00
Share of irrigation expenditures from total agricultural expenditures (Percentage)		1.80	10.00
Water User Agreements (Number)		0.00	350.00
Area under Water User Agreements (Hectare(Ha))		0.00	6,000.00
Farmers benefitting from new irrigation services (Number)		0.00	5,000.00
Share of female (Number)		0.00	2,000.00
Farmers under signed water user agreements as per irrigation guidelines (new and existing schemes) (Number)		0.00	7,500.00
Share of female (Number)		0.00	3,000.00
Preparation of Zambian Irrigation Development Guidelines (Yes/No)		No	Yes





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Indicator Name	DLI	Baseline	End Target
Preparation of Irrigation Masterplan (Yes/No)		No	Yes
Farm feeder roads rehabilitated (Kilometers)		0.00	1,400.00



**Monitoring & Evaluation Plan: PDO Indicators**

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Gini-Simpson index of crop diversification (area planted to crops/area planted to maize)	The index measures the degree of crop diversification. It is calculated as area planted to crops/area planted to maize. The value of the index varies from zero to one.	Annual	Annual agriculture yearbooks	The data will be collected as part of annual crop surveys.	MoA
Area under climate-resilient technologies and practices for crop production	This indicator will be measured as aggregate number of hectares under CSA practices, here meaning areas under at least two of the following: (i) minimum tillage; (ii) crop rotation; (iii) residue retention; (iv) animal manure; (v) agroforestry; (vi) water harvesting; and (vii) green manure technologies and practices for crop production.	Annual	Conservation Farming Unit	Data to be collected by the Conservation Farming unit and transmitted to MoA.	MoA
Jobs generated in areas benefiting from irrigation support	The indicator measures the additional agricultural jobs, generated from the supported irrigation farming activities.	Annual	New land area and crops brought under irrigation (Sugar - 1 job/Ha; (Hort	Program data monthly updates on new irrigation areas developed under crop type	MoA



			- 3 jobs/ha)		
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**Monitoring & Evaluation Plan: Intermediate Results Indicators**

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Reduction in FISP Budget allocation (percentage change)	This indicator measures a percentage reduction of the total budget allocation for the FISP program (both MoA and MoFNP).	Annual	Data from MoFNP Yellow Book	Data will be collected from the MoFNP yellow books on following Fiscal Year budget allocations which is expected to confirm with the national budget speeches delivered to the national assembly prior to the start of the new FY. MoFNP will transmit annual budget data to MoA.	MoFNP
Share of FISP budget under e-vouchers	This indicator measures the share of FISP budget that is allocated to e-vouchers (in contrast to bags of fertilizers)	Annual	MoFNP Yellow Book	MoFNP will transmit annual budget data to MoA.	MoA
Number of farmers in biometric-based registry	This indicator measures incremental number of farmers who will be registered in biometrics-based registry over the PforR period.	Annual	Ministry of Home Affairs, data from ZIAMIS platform of the Smart Zambia Institute (SZI)	Ministry of Home Affairs will provide dataset to MoA, who will check that registered individuals are existing farmers by cross-checking information with Provincial Agricultural Coordination Centers.	Ministry of Home Affairs



MoA total budget outturn	This indicator monitors that funds are released from the Treasury to the MoA timely on a monthly basis, up to the targeted budget outturn percentage for each year.	Annual	Data from MoFNP Yellow Book	MoA will verify the funds releases from the MoFNP as follows: (i) confirm the budget in the Yellow Book; (ii) confirm the monthly funds release slips provided by the Treasury; and (iii) issue the independent verification reports to the Auditor General of Zambia.	MoA
FRA maize trading through ZAMACE	The indicator will monitor FRA trading its stocks through the Zambia Commodity Exchange (ZAMACE).	Annual	Data from FRA and ZAMACE	The data on FRA trading activities will be collected annually from ZAMACE and verified against FRA records.	MoA
Share of maize purchases	Share of maize purchases traded by FRA through the Zambia Commodity Exchange (ZAMACE).	Annual	Data from FRA and ZAMACE	The data on FRA trading activities will be collected annually from ZAMACE and verified against FRA records.	MoA
Volume of maize exports (grain equivalent)	This indicator will measure the export volume of maize grain, mealie-meal and maize grain.	Annual	Export data from the Ascyuda system provided by Zambia Revenue Authority and compiled by	Maize grain and associated products export data from Ascyuda system provided by Zambia Revenue Authority and compiled by ZAMSTAT will be used to check the volumes traded.	MoA



			ZAMSTAT		
Comprehensive Farm Block strategy developed	This indicator will monitor the development of a comprehensive FBDP Strategy, which meets the detailed verification checklist as per Annex 1 of Technical Assessment.	Annual	Third party verification agency	The third-party agency will verify that the Strategy has been developed following the agreed consultative process and meets the OECD-FAO Guidance standards.	Third party verification agency / MoA
Farm block specific investment plans prepared	This indicator will monitor the development of five farm block specific investment plans, which meets the detailed verification checklist as per Annex 2 of the Technical Assessment.	Annual	Third party verification agency	The third-party agency will verify that the investment plans have been prepared following the agreed consultative process and meets the OECD-FAO Guidance standards.	Third party verification agency / MoA
Amendment of Plant Breeders' Act	Approval of Plant Breeders Rights Act by Parliament	Monthly	Parliament's website and Zambia Gazette	Before Cabinet approval, WB will verify the revised Act to confirm their content. The MoA will verify the publication of the approved Act on the Parliament's website and in the Zambian Gazette.	MoA
Amendment of Plant Variety and Seeds Act	Approval of harmonized Plant variety and Seeds Act by Parliament	Monthly	Parliament's website and Zambia Gazette	Before MoA cabinet approval, WB will verify the revised Act against the pre-agreed checklist	MoA



				of criteria (see TA). MoA will verify the publication of the approved Act on the Parliament's website and in the Zambia Gazette.	
Amendment of Fertilizers and Feed Act	Approval of the revised Fertilizer and Feed Act by Parliament	Monthly	Parliament's website and Zambia Gazette	Before MoA cabinet approval, WB will verify the revised Act against the pre-agreed checklist of criteria (see TA). MoA will verify the publication of the approved Act on the Parliament's website and in the Zambia Gazette.	MoA
Amendment of Agricultural Credit Act	This indicator will monitor the approval of the revised Agricultural Credit Act by Parliament.	Monthly	Parliament's website and Zambia Gazette	Before MoA cabinet approval, WB will verify the revised Act against the pre-agreed checklist of criteria (see TA). MoA will verify the publication of the approved Act on the Parliament's website and in the Zambia Gazette.	MoA
Volume of certified seeds produced	This indicator measures the value of certified seeds (for sowing purposes) produced	Annual	SCCI	SCCI	MoA



	by Zambia. Baseline and End Target TBD.				
Volume of certified seed exports	This indicator measures the value of certified seeds (for sowing purposes) exported by Zambia.	Annual	SCCI	SCCI	MoA
The number of farmers who have received extension services and have completed the training on CSA technologies	This indicator measures the number of farmers who have received extension services and have completed the training on CSA technologies	Annual	Data from beneficiary surveys	The survey will collect household information on the following variables: share of female farmers, training content, method and organization of training, process, result (practice adoption) and usefulness of training, and satisfaction with the services provided.	MoA
Share of female	This indicator measures the number of female farmers trained in CSA technologies.	Annual	Data from beneficiary surveys training, process, result (practice adoption) and usefulness of training, and satisfaction with the services provided.	The survey will collect household information on the following variables: share of female farmers, training content, method and organization of training, process, result (practice adoption) and usefulness of training, and satisfaction with the services provided.	MoA





<p>Trained farmers who have adopted CSA technologies</p>	<p>This indicator measured as the number of trained farmers who have adopted at minimum two out of the following CSA technologies listed in CSA training manual: minimum tillage; crop rotation; residue management. Adoption is defined as the majority of area cropped by the farmer is stated to be under two out of these practices. Baseline data is not available.</p>	<p>Annual</p>	<p>Data from beneficiary surveys</p>	<p>The beneficiary survey will include data on adoption of the following practices: (i) minimum tillage; (ii) crop rotation; (iii) residue retention; (iv) animal manure; (v) agroforestry; (vi) water harvesting; and (vii) green manure.</p>	<p>MoA</p>
<p>Farmers satisfied with CSA training</p>	<p>This is a citizen engagement indicator which measures satisfaction rate of participating farmers with the training provided in CSA technologies.</p>	<p>Annual</p>	<p>Beneficiary surveys</p>	<p>The survey will collect household information on the following variables: share of female farmers, training content, method and organization of training, process, result (adoption) and usefulness of training, and satisfaction with the services provided.</p>	<p>MoA</p>
<p>Share of agricultural extension and training expenditures out of total agriculture expenditures</p>	<p>This indicator measures the percentage of agricultural expenditures that is targeted to agricultural extension and training</p>	<p>Annual</p>	<p>Approved budgets as per Yellow Books</p>	<p>MoA will report the budget allocated to agricultural training and extension services ; the total agricultural budget;</p>	<p>MoA</p>



	services.			and calculate the ratio. Total agricultural budget includes MoA budget plus FISP and FRA budget under MoF.	
Share of female extension officers	This indicator measures the share of extension officers who are female among all extension officers	Annual	Provincial and District agricultural coordination units	Agricultural coordination units will report the total number of extension officers to MoA as well as the number of female extension officers.	MoA
Reduction in gender gap in gross farm household income	This indicator measures in percentage the difference in gross farm household income between farm households headed by women and farm households headed by men.	Every other year	IAPRI	IAPRI conducts every one or two years a rural livelihoods ag. survey. The survey includes farm household gross income per gender.	MoA
Share of agricultural research expenditures out of total agriculture expenditures	This indicator measures the percentage of agricultural expenditures that is targeted to agricultural research.	Annual	Approved budgets as per Yellow Books	MoA will report the budget allocated to agricultural research; total agricultural budget; and calculate the ratio. Total agricultural budget includes MoA budget plus FISP and FRA budget under MoF.	MoA
Budget allocation for irrigation development (percentage change)	This indicator measures the percentage change in MoF budget allocated to the MoA for irrigation	Annual	Approved budgets as per Yellow Book	MoA will report the budget (in ZK) allocated to irrigation development and the	MoA



	development			evolution (percentage) compared to 2022 budget.	
Share of irrigation expenditures from total agricultural expenditures	This indicator measures the share of irrigation (development only) budget out of total agricultural budget.	Annual	Approved budgets as per Yellow Book	MoA will report the budget allocated to irrigation (development only); the total agricultural budget; and calculate the ration. Total agricultural budget includes MoA budget plus FISP and FRA budget under MoF.	MoA
Water User Agreements	This indicator measures the number of Water User Agreements that have been signed.	Annual	MoA	The signed agreements must: (i) comply with the structure of Pro-forma Water User Agreements included in the Guidelines for Irrigation Development; (ii) process and training of water users (irrigation farmers) as to their roles and responsibilities in the agreements, and the consequences of all binding elements of the agreement will be detailed in the Guidelines for Irrigation development, and documented evidence of	MoA



				training of all farmers who are party to the agreement will be provided for each signed agreement in the form of evidence for training sessions; and (iii) compliance with type and size of farmer groups as per Technical Assessment report,	
Area under Water User Agreements	Total irrigation area under formalized operational institutional arrangements with water user agreements.	Annual	MoA	Database with scheme areas in the program with completed institutional establishment.	MoA
Farmers benefitting from new irrigation services	The number of farmers directly benefitting from new irrigation expansion area.	Annual	MoA	Database with scheme areas in the program with new irrigation developed	MoA
Share of female	The number of female farmers directly benefitting from new irrigation expansion area	Annual	MoA	Database with scheme areas in the program with new irrigation developed	MoA
Farmers under signed water user agreements as per irrigation guidelines (new and existing schemes)	The number of farmers who are signatories to water user agreements that are established under the program.	Annual	MoA	Database including number of participating farmers in irrigation organizations	MoA
Share of female	The number of female farmers who are signatories to water user	Annual	MoA	Database including number of participating farmers in irrigation	MoA



	agreements that are established under the program			organizations	
Preparation of Zambian Irrigation Development Guidelines	The guidelines will describe participatory planning, prioritization criteria, institutional establishment modalities, water user agreement templates and training information for Irrigation Organizations.	Once (2023)	MoA	The Irrigation Development Guidelines will (i) be reviewed and accepted by the World Bank, (ii) formally approved by MoA Cabinet.	MoA
Preparation of Irrigation Masterplan	The masterplan will consolidate resource and market potential, cost-benefit rationale and a 10 year vision of irrigation development n in Zambia	Once (2024)	MoA	The Irrigation Masterplan will (i) be reviewed and accepted by the World Bank, (ii) formally approved by MoA Cabinet.	MoA
Farm feeder roads rehabilitated	Rehabilitation of farm feeder roads to high value agricultural areas (rehabilitated as per technical standards specified in the Agricultural Feeder Road Manual in PAP).	Annual	Road inspection led by Verification Agency	The verification of roads works will be made against technical standards as specified in the Agricultural Feeder Road Manual (PAP). A random sample of awarded roads contracts will be selected for verification. The random sample will comply with the following as a minimum: (i) Random sampling will continue until the minimum	MoA



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				number of km's of roads constructed or rehabilitated reaches > 10% of the total km's completed in each year that verification takes place; or (ii) Until the minimum number of roads construction contracts is equal to 3 or greater.	
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ANNEX 2. DISBURSEMENT LINKED INDICATORS, DISBURSEMENT ARRANGEMENTS AND VERIFICATION PROTOCOLS

Disbursement Linked Indicators Matrix

DLI 1	DLI 1.1: Annual percentage reduction of the overall budget allocation to FISP (cumulative)			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Process	Yes	Percentage	60,000,000.00	20.34
Period	Value		Allocated Amount (USD)	Formula
Baseline	0.00			
Prior Results	0.00		0.00	
FY 2022	0.00		16,800,000.00	\$240,000 per 0.1% budget reduction from year-to-year basis.
FY 2023	7.00		14,400,000.00	\$240,000 per 0.1% budget reduction from year-to-year basis.
FY 2024	13.00		14,400,000.00	\$240,000 per 0.1% budget reduction from year-to-year basis.
FY 2025	19.00		14,400,000.00	\$240,000 per 0.1% budget reduction from year-to-year basis.v
FY 2026	25.00		0.00	\$240,000 per 0.1% budget reduction from year-to-year basis.



<b>DLI 1.1</b>	DLI 1.2: Number of farmers registered in a biometric-based registry on the Zambia integrated agriculture management information system platform			
<b>Type of DLI</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Output	Yes	Number	18,000,000.00	6.10
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	0.00			
Prior Results			0.00	
FY 2022	800,000.00		12,000,000.00	\$15 per each targeted farmers included in the biometrics-based farmer registry
FY 2023	1,200,000.00		6,000,000.00	\$15 per each targeted farmers included in the biometrics-based farmer registry
FY 2024	1,200,000.00		0.00	\$15 per each targeted farmers included in the biometrics-based farmer registry
FY 2025	1,200,000.00		0.00	\$15 per each targeted farmers included in the biometrics-based farmer registry
FY 2026	1,200,000.00		0.00	\$15 per each targeted farmers included in the biometrics-based farmer registry





DLI 2		DLI 2: Annual percentage change in the overall MOA budget outturn (cumulative)		
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Process	Yes	Percentage	17,500,000.00	5.93
Period	Value		Allocated Amount (USD)	Formula
Baseline	55.00			
Prior Results			0.00	
FY 2022	80.00		12,500,000.00	\$50,000 per 0.1% budget outturn increase
FY 2023	85.00		2,500,000.00	\$50,000 per 0.1% budget outturn increase
FY 2024	90.00		2,500,000.00	\$50,000 per 0.1% budget outturn increase
FY 2025	90.00		0.00	\$50,000 per 0.1% budget outturn increase
FY 2026	90.00		0.00	\$50,000 per 0.1% budget outturn increase
DLI 3		DLI 3: Volumes of maize stocks traded (sold and purchased) by the FRA on ZAMACE		
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Metric ton	10,000,000.00	3.39
Period	Value		Allocated Amount (USD)	Formula



Baseline	0.00		
Prior Results			0.00
FY 2022	50,000.00		1,500,000.00 \$30 per ton of maize traded (sold and purchased) through ZAMACE (cumulative).
FY 2023	120,000.00		2,100,000.00 \$30 per ton of maize traded (sold and purchased) through ZAMACE (cumulative).
FY 2024	210,000.00		2,700,000.00 \$30 per ton of maize traded (sold and purchased) through ZAMACE (cumulative).
FY 2025	333,000.00		3,700,000.00 \$30 per ton of maize traded (sold and purchased) through ZAMACE (cumulative).
FY 2026	333,000.00		0.00 \$30 per ton of maize traded (sold and purchased) through ZAMACE (cumulative).

<b>DLI 4</b>	DLI 4: Annual increase in export volumes of maize (grain equivalent) formally exported			
<b>Type of DLI</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Output	Yes	Metric ton	28,000,000.00	9.49
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	35,000.00			



Prior Results			0.00	
FY 2022	100,000.00		2,000,000.00	\$20 per ton of maize (grain equivalent) exported
FY 2023	350,000.00		5,000,000.00	\$20 per ton of maize (grain equivalent) exported
FY 2024	650,000.00		6,000,000.00	\$20 per ton of maize (grain equivalent) exported
FY 2025	1,000,000.00		7,000,000.00	\$20 per ton of maize (grain equivalent) exported
FY 2026	1,400,000.00		8,000,000.00	\$20 per ton of maize (grain equivalent) exported
<b>DLI 5</b>	<b>DLI 5.1: Development of a Farm Block Development Program Strategy</b>			
<b>Type of DLI</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Output	No	Yes/No	8,000,000.00	2.71
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	No			
Prior Results			0.00	
FY 2022	No		0.00	Resources allocated in given year. FBDP strategy document as per agreed criteria approved by the FNDP Steering Committee



FY 2023	Yes		8,000,000.00	Resources allocated in given year. FBDP strategy document as per agreed criteria approved by the FNDP Steering Committee
FY 2024	Yes		0.00	Resources allocated in given year. FBDP strategy document as per agreed criteria approved by the FNDP Steering Committee
FY 2025	Yes		0.00	Resources allocated in given year. FBDP strategy document as per agreed criteria approved by the FNDP Steering Committee
FY 2026	Yes		0.00	Resources allocated in given year. FBDP strategy document as per agreed criteria approved by the FNDP Steering Committee

<b>DLI 5.1</b>	<b>DLI 5.2: Development of Farm Block specific investment plans</b>			
<b>Type of DLI</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Output	Yes	Number	20,000,000.00	6.78
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	0.00			
Prior Results			0.00	
FY 2022	0.00		0.00	\$4 mill per Farm Block investment



			plan as per agreed criteria approved by the FNDP Steering Committee
FY 2023	2.00	8,000,000.00	\$4 mill per Farm Block investment plan as per agreed criteria approved by the FNDP Steering Committee
FY 2024	4.00	8,000,000.00	\$4 mill per Farm Block investment plan as per agreed criteria approved by the FNDP Steering Committee
FY 2025	5.00	4,000,000.00	\$4 mill per Farm Block investment plan as per agreed criteria approved by the FNDP Steering Committee
FY 2026	5.00	0.00	\$4 mill per Farm Block investment plan as per agreed criteria approved by the FNDP Steering Committee
<b>DLI 6</b>	<b>DLI 6: Enhancing the legal and regulatory environment for input markets</b>		
<b>Type of DLI</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>
Output	No	Yes/No	20,000,000.00
<b>Period</b>	<b>Value</b>	<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	No		
Prior Results		0.00	
FY 2022	Yes	10,000,000.00	Approval of (i) Plant Breeders Rights Act and (ii) Plant variety and Seeds Act - \$3m per Act



FY 2023	Yes		5,000,000.00	Approval of the revised Fertilizer and Feed Act - \$3m per Act
FY 2024	Yes		5,000,000.00	Amendment of Agricultural Credit Act - \$3m per Act
FY 2025	Yes		0.00	N/A
FY 2026	Yes		0.00	N/A
<b>DLI 7</b>	<b>DLI 7: Number of farmers who have received extension services on CSA technologies</b>			
<b>Type of DLI</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Output	Yes	Number	30,000,000.00	10.17
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	0.00			
Prior Results			0.00	
FY 2022	10,000.00		500,000.00	\$50 per each farmer participating in the CSA training activity
FY 2023	110,000.00		5,000,000.00	\$50 per each farmer participating in the CSA training activity
FY 2024	260,000.00		7,500,000.00	\$50 per each farmer participating in the CSA training activity
FY 2025	410,000.00		7,500,000.00	\$50 per each farmer participating in the CSA training activity



FY 2026	600,000.00		9,500,000.00	\$50 per each farmer participating in the CSA training activity
<b>DLI 8</b>	DLI 8.1: Annual percentage increase in MoA budget allocated to irrigation development and timely disbursement			
<b>Type of DLI</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Output	Yes	Percentage	40,000,000.00	13.56
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	0.00			
Prior Results			0.00	
FY 2022	500.00		8,000,000.00	\$16,000 per one percent increase in irrigation budget
FY 2023	1,050.00		8,800,000.00	\$16,000 per one percent increase in irrigation budget
FY 2024	1,650.00		9,600,000.00	\$16,000 per one percent increase in irrigation budget
FY 2025	2,500.00		13,600,000.00	\$16,000 per one percent increase in irrigation budget
FY 2026	2,500.00		0.00	N/A



DLI 8.1		DLI 8.2: Number of water user agreements entered into between operators of irrigation schemes and the irrigation farmers		
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Number	17,000,000.00	5.76
Period	Value		Allocated Amount (USD)	Formula
Baseline	0.00			
Prior Results			0.00	
FY 2022	0.00		0.00	N/A
FY 2023	10.00		500,000.00	\$50,000 per water user agreement
FY 2024	100.00		4,500,000.00	\$50,000 per water user agreement
FY 2025	250.00		7,500,000.00	\$50,000 per water user agreement
FY 2026	340.00		4,500,000.00	\$50,000 per water user agreement
DLI 8.2		DLI 8.3: Preparation and adoption of the Irrigation Development Guidelines and the National Irrigation Masterplan		
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	No	Yes/No	5,500,000.00	1.86
Period	Value		Allocated Amount (USD)	Formula
Baseline	No			
Prior Results			0.00	
FY 2022	No		0.00	N/A





FY 2023	Yes		1,500,000.00	Irrigation Development Guidelines - \$1 mill for the approval of the Guidelines by MoA
FY 2024	Yes		4,000,000.00	Masterplan - \$2 mill for the approval of a Masterplan by MoA
FY 2025	Yes		0.00	N/A
FY 2026	Yes		0.00	N/A
<b>DLI 9</b>	<b>DLI 9: Number of kilometers of farmer feeder roads found in high agricultural potential areas rehabilitated</b>			
<b>Type of DLI</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Output	Yes	Kilometers	21,000,000.00	7.12
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	0.00			
Prior Results			0.00	
FY 2022	0.00		0.00	\$15,000 per km of feeder roads rehabilitated
FY 2023	100.00		1,500,000.00	\$15,000 per km of feeder roads rehabilitated
FY 2024	400.00		4,500,000.00	\$15,000 per km of feeder roads rehabilitated
FY 2025	900.00		7,500,000.00	\$15,000 per km of feeder roads



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			rehabilitated
FY 2026	1,400.00	7,500,000.00	\$15,000 per km of feeder roads rehabilitated

**Verification Protocol Table: Disbursement Linked Indicators**

<b>DLI 1</b>	DLI 1.1: Annual percentage reduction of the overall budget allocation to FISP (cumulative)
<b>Description</b>	The DLI is scalable and is defined as a percentage reduction of total the MoA budget allocation for the FISP program (under both MoA and MoFNP budgets, cumulative over 2023-2026).
<b>Data source/ Agency</b>	Evidence provided in the MoFNP Yellow Book / MoFNP
<b>Verification Entity</b>	WB
<b>Procedure</b>	The DLI will be measured as an annual percentage change in budget allocation against the baseline, using 0.1 percent increment. The baseline year is 2022 with a budget amount of 5.37 billion kwacha. The set targets to verify that the DLI has been achieved would be through a cumulative annual percentage reduction compared to the baseline. The verification will be done annually through the evidence provided in the MoFNP Yellow Books on the following Fiscal Year budget allocations (released in October) which is expected to confirm with the national budget speeches delivered to the national assembly in November prior to the start of the new fiscal year by the minister in charge of MoFNP.
<b>DLI 1.1</b>	DLI 1.2: Number of farmers registered in a biometric-based registry on the Zambia integrated agriculture management information system platform
<b>Description</b>	This DLI is scalable and is defined as the number of farmers who will be registered in biometrics-based registry over the PforR period.
<b>Data source/ Agency</b>	Data from ZIAMIS platform / Smart Zambia Institute & MoA
<b>Verification Entity</b>	ZIAMIS and Smart ZAMIS/SZI and Third-party Verification Agency.
<b>Procedure</b>	The DLI is measured against the number of farmers who get registered annually into the biometric registry up to the agreed cumulative target of 1,000,000 farmers. The registration will be carried out against the guidelines developed by the Smart Zambia Institute in collaboration with MoA. The data will be collected annually from Smart Zambia Institute through the ZIAMIS platform. MoA will compile the annual report based on the data from the SZI. To verify that the DLI target has been met, the VA will review the report from the MoA, by verifying the data through random checks of the ZIAMIS platform.
<b>DLI 2</b>	DLI 2: Annual percentage change in the overall MOA budget outturn (cumulative)
<b>Description</b>	The DLI is scalable and is intended to incentivize both the MoFNP and MoA to ensure that funds are released from the



	treasury to the MoA timely on monthly basis, up to the targeted budget outturn percentage for each year.
<b>Data source/ Agency</b>	Data from MoFNP Yellow Book / MoA
<b>Verification Entity</b>	Auditor General of Zambia or an independent auditor (the 'Verifier')
<b>Procedure</b>	The DLI will be measured as an annual percentage change in the overall MoA budget outturn against the baseline, using 0.1 percent increment. The baseline year is 2022 with an overall MoA budget outturn of 55 percent. The set targets to verify that a DLI has been achieved would be through a cumulative percentage reduction based on the baseline, with end of PforR target of 90 percent. The annual budget for the MoA is presented in the Yellow Book. When funds are released from the Treasury, a funding slip is produced which indicates the date, total funds, and the budget lines that have been funded. The funding slip is given to the Ministries for their record and input into the IFMIS. The verification of the DLI achievement will be done by the Auditor General of Zambia or an independent auditor (the 'Verifier'). The Verifier will verify the funds releases from the MoFNP to the MoA as follows: (i) confirm the budget in the Yellow Book; (ii) confirm the monthly funds release slips provided by the Treasury; and (iii) issue the independent verification reports to the MoA.
<b>DLI 3</b>	DLI 3: Volumes of maize stocks traded (sold and purchased) by the FRA on ZAMACE
<b>Description</b>	This DLI aims to encourage FRA participation in the grain market through incentivizing the Agency trading its stocks through the Zambia Commodity Exchange (ZAMACE), which would allow for price discovery. The DLI would encourage the FRA to utilize less market distortive maize stock trading operations.
<b>Data source/ Agency</b>	Data from FRA and ZAMACE / MoA
<b>Verification Entity</b>	Third-party Verification Agency
<b>Procedure</b>	The DLI is scalable. The data on the FRA trading activities will be collected annually from the ZAMACE and verified against FRA records. The FRA records will provide evidence on the volume of maize traded (sold and purchased) on the ZAMACE platform, along with the relevant evidence, which will be compared with data from the ZAMACE. The MoA will compile the report using the data from the FRA and ZAMACE, which will be verified by the independent VA.
<b>DLI 4</b>	DLI 4: Annual increase in export volumes of maize (grain equivalent) formally exported
<b>Description</b>	The DLI is defined as the export volume of maize grain, mealie-meal and maize grain. It aims to restore private sector confidence and create an enabling investment environment.



<b>Data source/ Agency</b>	Export data from the Ascyuda system provided by Zambia Revenue Authority ZAMSTAT / MoA
<b>Verification Entity</b>	ZAMSTAT
<b>Procedure</b>	The maize grain associated products exported will be converted into maize grain equivalency (in metric tons). To verify that the DLI targets, the MoA and MoFNP will compile the annual report using maize grain and associated products export data from Ascyuda system provided by Zambia Revenue Authority and verified by the ZAMSTAT.
<b>DLI 5</b>	DLI 5.1: Development of a Farm Block Development Program Strategy
<b>Description</b>	The DLI is defined in two parts: (i) Development of a comprehensive FBDP Strategy, which meets the detailed verification checklist as per Technical Assessment report; and (ii) Development of five farm block specific investment plans, which meets the detailed verification checklist
<b>Data source/ Agency</b>	MoA
<b>Verification Entity</b>	Third party verification agency
<b>Procedure</b>	The development of the Strategy and Investment Plans will be the responsibility of the MoA in consultation with key stakeholders such as other government ministries and agencies, private sector, farmer organizations as well as donor agencies. The MoA will recruit a third-party agency to verify that the development of the Strategy and the Investment Plans have followed the agreed consultative process of the key stakeholders and meets the OECD-FAO Guidance standards. The DLI disbursements will be made: (i) after the completion and verification of the comprehensive FBDP Strategy; and (ii) annually (scalable) based on the number of Farm Block Specific Investment Plans completed. It is estimated that the Comprehensive FBDP Strategy will be completed in 2023.
<b>DLI 5.1</b>	DLI 5.2: Development of Farm Block specific investment plans
<b>Description</b>	Number of farm blocks investment plans developed.
<b>Data source/ Agency</b>	Refer to DLI 5.1
<b>Verification Entity</b>	Refer to DLI 5.1
<b>Procedure</b>	Refer to DLI 5.1



<b>DLI 6</b>	DLI 6: Enhancing the legal and regulatory environment for input markets
<b>Description</b>	Resources allocated in given FY for approval of Acts by Parliament. This DLI will incentivize the development of input markets towards improved crop productivity and diversification. It will include amendment/approval of the following four Acts: (i) Plant Breeders Rights Act; (ii) Plant Variety and Seeds Act; (iii) Fertilizer and Feed Act; and (iv) Agricultural Credit Act.
<b>Data source/ Agency</b>	MoA
<b>Verification Entity</b>	WB
<b>Procedure</b>	Verification of the completion of the Plant Breeders Rights Act will be done against Zambia joining the Union for the Protection of New Varieties of Plants (UPOV) which review confirms that the Act meets expected standards. Verification of the completion of the Plant Variety and Seeds Act; Fertilizer and Feed Act and Agricultural Credit Act, will be done against the detailed verification checklist as per Technical Assessment report. The DLI disbursements will be made against the evidence of approval of these Acts by the Parliament.
<b>DLI 7</b>	DLI 7: Number of farmers who have received extension services on CSA technologies
<b>Description</b>	The DLI is defined as the number of farmers who complete the training on CSA/CA, where the CSA/CA practices include: (i) minimum tillage; (ii) crop rotation; (iii) residue retention; (iv) animal manure and (v) green manure in accordance to the CSA training guidelines which will be prepared as part of PAP action.
<b>Data source/ Agency</b>	Data from beneficiary surveys / MoA
<b>Verification Entity</b>	Third party verification agency
<b>Procedure</b>	The verification would cover a random sample of farmers who participate in the CSA training to confirm the achievement or non-achievement of a DLI. The verification will require the review of relevant training documents from randomly selected 10 percent districts out of all districts where training activities have been carried out. This will be repeated for each disbursement year for new set of districts. In each randomly selected district, the independent third-party VA will conduct a random verification of 10 percent farmers, through random field survey by checking training records and conducting interviews, of which at least 4 percent should be women. If 10 percent interviewed farmers fails to confirm that they have participated in the training activities, these farmers will be excluded from DLI disbursement calculations. If more than 10 percent of the interviewed farmers fail to confirm their participation in the CSA training activities, the a given year is



	considered as “not achieved” and the entire set of farmers from that district will be rejected from the bach this year and will be subject to a new round of random verification in a following year, in addition to new random verification sample. The data will be annually collected by the Department of Agriculture within MoA. Based on this data the MoA compiles the annual report which will be confirmed by the third-party VA.
<b>DLI 8</b>	DLI 8.1: Annual percentage increase in MoA budget allocated to irrigation development and timely disbursement
<b>Description</b>	This DLI supports the improvement of systematic planning process and investment decision-making for irrigation expansion, along with institutional establishment to ensure effective operations and maintenance. The sub-DLI 8.1: Budget Allocation to Irrigation Development will incentivize the progressive increase in budget allocations from the current very low baseline (measured by annual percentage change in budget allocation). The sub-DLI 8.2: Water User Agreements will promote the establishment of legally binding water user agreements between the operators of the irrigation schemes and the irrigation farmers which define the obligations of both parties for improved operational practices (measured by tracking the progress in the number of water user agreements signed). The sub-DLI 8.3: Preparation of Irrigation Development Guidelines and Irrigation Masterplan will support the preparation of irrigation guidelines for participatory irrigation planning, operations, maintenance and management, and training and Irrigation Masterplan which will be critical to guide future cost-effective, impactful investments in irrigation (measured by the completion of the Guidelines and Irrigation Masterplan).
<b>Data source/ Agency</b>	MoA
<b>Verification Entity</b>	GRZ / Third party verification agency / WB
<b>Procedure</b>	Verification of the Sub-DLI 8.1 Budget Allocation to Irrigation will be done against the amount budgeted for irrigation as presented in the annual budget speech by the Minister of Finance. The DLI is scalable and is measured as percent increase in budget over the baseline. Information is publicly disclosed, and verification will be done by the Bank using government budget reporting systems. Verification of the sub-DLI 8.2 – Water User Agreements will be verified on the basis of: (i) document structure will comply with the Pro-forma Water User Agreements included in the Guidelines for Irrigation Development; (ii) process and training of water users (irrigation farmers) as to their roles and responsibilities in the agreements, and the consequences of all binding elements of the agreement will be detailed in the Guidelines for Irrigation development, and documented evidence of training of all farmers who are party to the agreement will be provided for each signed agreement in the form of evidence for training sessions; and (iii) compliance with type and size of farmer groups as per Technical Assessment report. Verification of the sub-DLI 8.3 Strategic planning will be done against completion of the Irrigation Development Guidelines and the Irrigation Master Plan and will be reviewed and accepted by the World Bank



	prior to submission to the MoA for formal approval. Verification for DLI 8.3 will comprise: (i) Confirmation of formal adoption of the Zambian Guidelines for Irrigation Development by the Minister of Agriculture; and (ii) Confirmation of formal adoption of the National Irrigation Master Plan by the MoA.
<b>DLI 8.1</b>	DLI 8.2: Number of water user agreements entered into between operators of irrigation schemes and the irrigation farmers
<b>Description</b>	Number of schemes with signed agreements.
<b>Data source/ Agency</b>	Refer to DLI 8.1
<b>Verification Entity</b>	Refer to DLI 8.1
<b>Procedure</b>	Refer to DLI 8.1
<b>DLI 8.2</b>	DLI 8.3: Preparation and adoption of the Irrigation Development Guidelines and the National Irrigation Masterplan
<b>Description</b>	Resources allocated in given FY for approval of Guidelines and Masterplan by MoA.
<b>Data source/ Agency</b>	Refer to DLI 8.1
<b>Verification Entity</b>	Refer to DLI 8.1
<b>Procedure</b>	Refer to DLI 8.1
<b>DLI 9</b>	DLI 9: Number of kilometers of farmer feeder roads found in high agricultural potential areas rehabilitated
<b>Description</b>	This DLI will incentivize the rehabilitation of farm feeder roads in high agricultural potential areas (measured by tracking progress in the number of kilometers of roads rehabilitated). The DLI will aim to ensure that feeder roads are adequately prioritized and rehabilitation works carried out. The related PAP would support the development of fit-for-purpose climate-responsive feeder road design manuals. The application of the improved technical standards for irrigation and feeder roads infrastructure assets construction are expected to enhance their resilience against extreme weather conditions.
<b>Data source/ Agency</b>	MoA
<b>Verification Entity</b>	Third party verification agency





**Procedure**

The verification of roads works quality and technical compliance will be made against technical standards as specified in the Agricultural Feeder Road Manual (PAP). A random sample of awarded roads contracts will be selected for the verification. The random sample will comply with the following provisos being met as a minimum: (i) Random sampling will continue until the minimum number of km's of roads constructed or rehabilitated reaches > 10% of the total km's completed in each year that verification takes place; or (ii) Until the minimum number of roads construction contracts is equal to 3 or greater. A third-party agency will be responsible for conducting verification activities.



## ANNEX 3. TECHNICAL ASSESSMENT SUMMARY

### Program Objective

1. **The Objective of the operation is to promote diversification, sustainability and jobs in the agri-food sector of Zambia.** The following indicators will measure progress towards achievement of the PDO:

- Gini-Simpson index of crop diversification (area planted to crops/area planted to maize) (ha)
- Area under climate-resilient technologies and practices for crop production (ha) (also a climate indicator)
- Jobs generated in areas benefiting from irrigation support (Number)

### Program Scope

2. **The Government agriculture sector program is guided by the Second National Agricultural Policy (2NAP).** The NAP is aligned with the Vision 2030 and the policy statements of the Zambia CAADP Compact (2011). It does not have a specific time limit and will be revised from time-to-time to reflect the priorities of the 8NDP. The NAP is implemented through the periodic Policy Implementation Plans (PIPs), which are aligned with the election cycles. The PIPs provide a detailed list of activities which are accompanied by specific quantitative targets (but not budgets). The Second Policy Implementation Plan (2PIP) of the Second NAP (2NAP) for 2016-2021 has expired and the Third Policy Implementation Plan (3PIP) of the NAP for 2022-2026, is to be aligned with the 8NDP and with the UNDP 2021-2026 Manifesto, is under preparation.

3. **The 3PIP of the 2NAP is expected to update its targets, although its programmatic framework is expected to largely follow that of the 2PIP.** It is expected that it draws closely on the activities identified under the 2PIP, but with updated performance targets. As such, the NAP, its current implementation plan, and the Manifesto will provide sufficient policy guidance until the 3PIP is completed.

4. **The proposed Program will be nested in the strategic areas of the 2NAP and the third Policy Implementation Plan (3PIP),** which are key elements of the 8NDP and Zambia Vision 2030. The Program excludes fisheries and livestock sub-sectors, which have already established a promising growth path despite limited public investments. These sectors are also relatively free from significant policy distortions. As such, the Program would focus on crop sub-sector which received about 90 percent of the total agriculture sector funding yet is subject to major policy distortions and institutional and service delivery inefficiencies, which makes it suitable for the Program's interventions. Table 3.1 provides the comparison of the Government agriculture sector program and the PforR boundary.



**Table 3.1. The Government program and the PforR Boundary Comparison**

	Government programs		Program supported by the PforR	
<b>Objectives</b>	NAP: An efficient, competitive, sustainable agricultural sector which assures food and nutrition security, increased employment and income.		To promote agricultural diversification, sustainability and jobs in the agri-food sector of Zambia	
<b>Duration</b>	NAP 3PIP: 2022-2026		World Bank FY 2022/23-2025/26	
<b>Geographic coverage</b>	Nationwide		Nationwide	
<b>Result areas</b>	NAP: Actions 1 to 10		NAP: Actions 1 to 10 (except livestock and aquaculture sub-sectors)	
<b>Overall Financing</b>	US\$1.74 billion		US\$295 million	
	<b>Priorities / sub-priorities for NAP</b>		<b>Included in PforR</b>	<b>Result Areas</b>
Program areas	<b>1</b>	<b>Increase Agricultural production and productivity</b>		
	1.1	Crops. Promote improved and certified seeds	Yes	2
	1.2	Crops. Irrigation technologies & infrastructure for smallholders	Yes	3
	1.3	Crops. Promote efficient water use & high value irrigable crops	Yes	2
	1.4-5	Livestock. Promote re/stocking, production & disease control	No	
	1.6-7	Fisheries. Promote fish re/stocking and access to fish seed	No	
	1.8	Promote farm power and mechanization	Yes	2
	1.9	Promote development of farm blocks	Yes	2
		Plant and disease clinics and surveillance (SPS)		2
	<b>2</b>	<b>Improve Agricultural Research and Development</b>		
	2.1	Promote alternative financing for agricultural research	Yes	2
	2.2-3	Strengthen institutional capacity for climate change research and adaptive research		
	<b>3</b>	<b>Strengthen Capacities of Agricultural Training Institutions</b>		
	3.1-2	Increase staff levels, efficiency, effectiveness in ATIs	Yes	2
	<b>4</b>	<b>Improve efficiency of agricultural input and output markets</b>		



Government programs		Program supported by the PforR	
4.1	Promote private sector participation in input/output markets (FISP)	Yes	1
4.2	Strengthen farmer groups and co-operatives capacity	Yes	2
<b>5</b>	<b>Promote agricultural finance credit facilities and insurance.</b>		
5.1	Promote broad based smallholder credit and financial delivery	Yes	2
5.2	Promote warehouse receipt system	Yes	1
5.3.	Promote payback culture in ag. credit management	Yes	2
<b>6</b>	<b>Increase Private Sector in Agricultural Development</b>		
6.1	Strengthen agriculture legal and regulatory framework	Yes	1
6.2	Strengthen ag. info. management systems and dissemination	Yes	2
6.3	Strengthen coordination among all stakeholders in the sector	Yes	1
	Feeder roads	Yes	3
<b>7</b>	<b>Improve Food and Nutrition Security</b>		
7.1	Promote diversification of ag. production and utilization	Yes	2
7.2-3	Promote on-farm agri-processing, value addition and storage.	Yes	3
	Food reserves (FRA)	Yes	1
<b>8</b>	<b>Promote Natural Resources Sustainable Management &amp; Use</b>		
8.1	Promote sustainable land management & conservation ag.	Yes	1
8.2	Promote sustainable and climate resilient animal resources	No	
8.3	Promote sustainable fishing methods	No	
<b>9</b>	<b>Mainstream environment and climate change in ag. sector</b>		
9.1	Promote awareness to climate change mitigation and adaptation	Yes	2
9.2	Strengthen existing early warning systems	Yes	2
9.3	Build individual capacity for climate change risk assessment	Yes	2
<b>10</b>	<b>Mainstream Gender, HIV/AIDS, Governance issues in Ag.</b>		
10.1	Promote women and youth participation in agriculture	Yes	1,2,3
10.2	Promote ag. technologies that mitigate HIV/AIDS impact	Yes	1



Government programs		Program supported by the PforR	
	<b>Enhance Internal Controls, Risk Management and Governance Processes.</b>	Yes	1

### Results Areas

5. The Program will focus on three Results Areas (RAs): (i) Enhanced policies and institutions for accelerating diversified, resilient, and inclusive agricultural growth; (ii) Improved Services for accelerating diversified, resilient, and inclusive agricultural growth; and (iii) Improved rural infrastructure and assets for accelerating diversified, resilient, and inclusive agricultural growth. All three RAs are expected to contribute to climate benefits and promote climate resilience in Zambia’s agricultural sector. The following are the Disbursement Linked Indicators designed under the three RAs:

**Table 3.2. Disbursement Linked Indicators**

Disbursement Linked Indicator	DLI Allocation (US\$)	DLI Scalability
<b>DLI 1.1:</b> Annual percentage reduction of the overall budget allocation to FISP	60,000,000	Yes
<b>DLI 1.2:</b> Number of farmers registered in a biometric-based registry on the Zambia Integrated Agriculture Management Information System Platform	18,000,000	Yes
<b>DLI 2:</b> Annual percentage change in the overall MoA budget outturn	17,500,000	Yes
<b>DLI 3:</b> Volumes ( <i>in metric tons</i> ) of maize stocks traded (sold and purchased) by the FRA on ZAMACE	10,000,000	Yes
<b>DLI 4:</b> Annual increase in export volumes ( <i>in metric tons</i> ) of maize (grain equivalent) formally exported	28,000,000	Yes
<b>DLI 5.1:</b> Development of a Farm Block Development Program Strategy	8,000,000	No
<b>DLI 5.2:</b> Development of Farm Block Specific Investment Plans	20,000,000	Yes
<b>DLI 6:</b> Enhancing the legal and regulatory environment for input markets	20,000,000	No
<b>DLI 7:</b> Number of farmers who have received extensions services on CSA technologies	30,000,000	Yes
<b>DLI 8.1:</b> Annual percentage increase in MoA budget allocated to irrigation development and timely disbursement	40,000,000	Yes
<b>DLI 8.2:</b> Number of Water User Agreements entered into between the operators of irrigation schemes and the irrigation farmers	17,000,000	Yes
<b>DLI 8.3:</b> Preparation and adoption of the Irrigation Development Guidelines and the National Irrigation Master Plan	5,500,000	No
<b>DLI 9:</b> Number of kilometers of farmer feeder roads found in high agricultural potential areas rehabilitated	21,000,000	Yes
<b>TOTAL</b>	295,000,000	



### Expenditure Framework

6. The EFA was conducted based on information provided by the MoA, the MoF (Medium Term Budget 2022-2024), IMF and a review of literature in comparable countries. The EFA included the following dimensions: (i) fiscal sustainability and resource predictability; (ii) budget allocation and execution; and (iii) incentives for efficient service delivery and value for money.

7. The duration of the Program is from World Bank FY 2022/23 to FY 2025/26. Zambian fiscal year is based on calendar years. The expenditure framework below is presented as per Zambian fiscal years. The total Program financing is ZMW 42.89 billion (US\$1.737 billion), or equal disbursements of US\$347 million per year for 2022-2026. The IDA credit will fund US\$295 million, or about US\$59 million per year assuming equal disbursements.

8. A key characteristic of the Program financing is the repurposing of agricultural budget from distortive input subsidies (FISP and FRA) towards growth and job creating activities. In terms of expenditures outlays, about 74 percent, or ZMW 31.70 billion (US\$1.29 billion) will support enhancement of policies and institutions for accelerated agricultural growth and job creation (including subsidy repurposing); 14 percent will improve the services for inclusive growth and job creation in rural areas; and 12 percent will improve infrastructure and rural assets. Table 3.3 below provides an overview of the main elements in the expenditure framework of the Program.

**Table 3.3: Program Expenditure Framework by Results Areas**

	2018-2022			2022-2026		
	Amount (ZMW millions)	Amount (US\$ millions)	Share	Amount (ZMW millions)	Amount (US\$ millions)	Share
<b>Program Total</b>	<b>44,138</b>	<b>2,289</b>	<b>100%</b>	<b>35,449</b>	<b>1,737</b>	<b>100%</b>
Results Area 1: Enhanced policies and institutions for accelerating diversified, resilient and inclusive agricultural growth	40,161	2,336	88%	31,699	1,294	70%
Results Area 2: Improved services for accelerating diversified, resilient, and inclusive agricultural growth	1,554	109	4%	5,933	236	16%
Results Area 3: Improved rural infrastructure and assets for accelerating diversified, resilient and inclusive agricultural growth	2,423	165	7%	5,254	207	14%

9. The expenditure framework presents an adequate basis for the proposed Program, provided policy realignment occurs as planned. The government is committed to realigning FISP subsidies and supporting the development of agricultural productivity. Budget appears generally adequate. Fiscal sustainability issues were not identified as a core concern associated with the expenditures. However, the program implementation’s efficiency is low and will require strengthening.

### Budget Structure and Classification

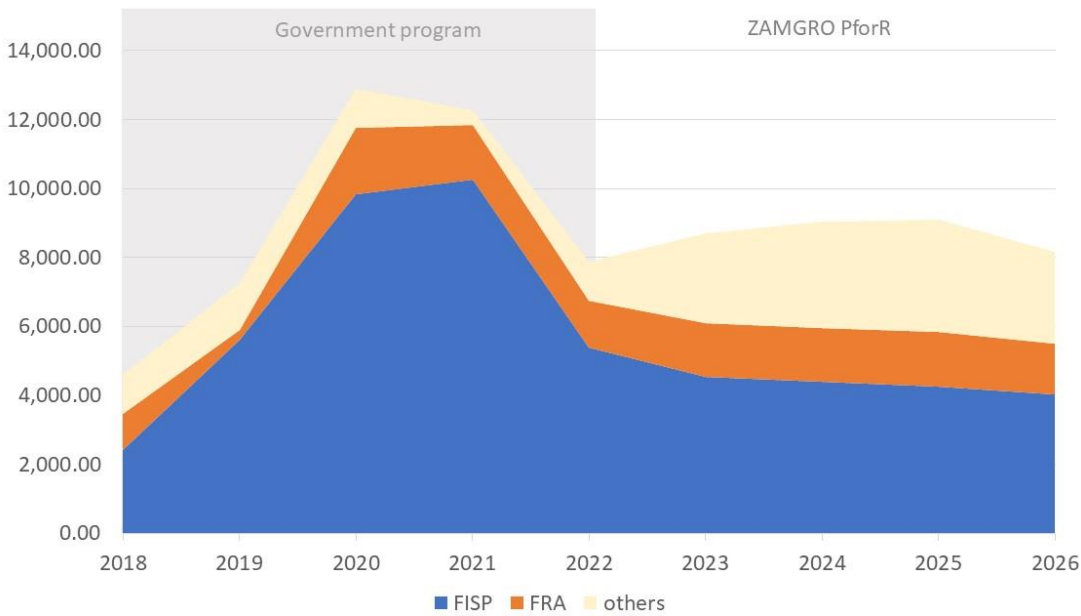
10. The Government program expenditure framework is based on the Program boundaries. It covers MoA’s budget targeted on the Program’s activities (livestock and fisheries are excluded) as well as MoFNP’s earmarked



transfers for FRA and FISP. As shown in Figure 3.1 below, the 2018-2022 Government program expenditure framework was essentially (at 76 percent) targeted on FISP, leaving scarce resources for other activities. The FRA was the second largest expenditure (14 percent over 2018-2022). Irrigation (infrastructure development) was consistently the largest recipient of the remaining budget, with about 3.5 percent. The variability of agricultural budget over 2018-2022 (Figure 1) is driven by large fluctuations in FISP and FRA allocations during election years.

11. The Program incentivizes the government to reduce the FISP budget and repurpose it towards agricultural activities that have the potential to create jobs, improve agricultural productivity, add value to the agricultural production and strengthen climate change resilience, in particular irrigation, feeder roads, research and training, especially on climate change adaptation, seed improvement and certification, feeder roads, among others. Figure 3.1 illustrates the shift.

**Figure 3.1: Evolution of the Government program expenditure framework and its distribution over 2018-2022 (past budgets) and 2022-2026 (projected)**



12. Figure 3.2 and Table 3.4 detail the projected outlays of the program expenditure framework in 2022-2026 and compares it with that of the Government over 2018-2022. The reallocation of the FISP budget and of DLI’s disbursements is based on a set of assumptions that builds on: (i) GRZ’s key priorities as detailed in the draft 8NDP; (ii) MoA’s priorities as per technical discussions and as will be reflected in the forthcoming revised Implementation Plan of the NAP; (iii) international guidelines and best practices.<sup>35</sup> The Program is expected to rebalance the expenditure towards activities such as irrigation, feeder roads, farmers’ training and extension, research and development, etc.

<sup>35</sup> CAADP framework; Khartoum target for Research and Development; Pernechele et al. 2021; World Bank Agricultural Public Expenditures Reviews of neighboring countries.



Figure 3.2: Expected evolution of distribution of budget over 2018-2022 and 2022-2026

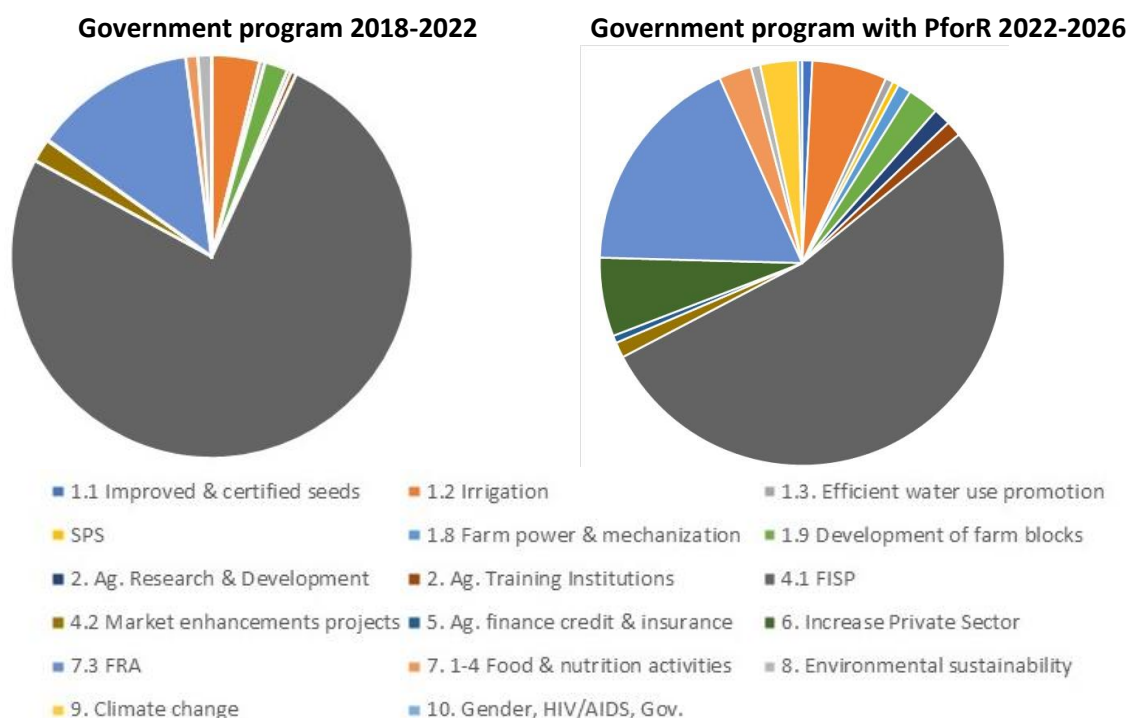


Table 3.4: Expected evolution of distribution of budget over 2018-2021 and 2022-2026 and budget lines

PforR Result Areas	Government Program 2018-2022		ZAMGRO PforR 2022-2026		Budget lines
	ZMW million	Share	ZMW million	Share	
<b>Result Area 1: Enhanced policies and institutions for accelerating diversified, resilient, and inclusive agricultural growth</b>	<b>40,161</b>	<b>91.0%</b>	<b>31,699</b>	<b>73.9%</b>	
FISP	33,498	75.9%	22,593	52.7%	2141/7001
Increase sector participation (trade, regulatory, coordination)	29	0.0%	716	1.7%	2142
FRA	6,196	14.0%	7,558	17.6%	2143/9001
Promote Natural Resources Sustainable Management & Use	438	1.0%	287	0.7%	2141
Mainstream Gender, HIV/AIDS, Governance issues in Ag.	0	0%	133	0.3%	2141
Enhance Internal Controls, Risk Management and Governance Processes	0	0%	412	1.0%	2199
<b>Result Area 2: Improved services for accelerating diversified, resilient, and inclusive agricultural growth</b>	<b>1,554</b>	<b>3.5%</b>	<b>5,933</b>	<b>13.8%</b>	
Promote improved and certified seeds	15	0.0%	573	1.3%	2144/1000
Efficient water use promotion	175	0.4%	231	0.5%	2141
Promote development of farm blocks	711	1.6%	1,168	2.7%	2141





PforR Result Areas	Government Program 2018-2022		ZAMGRO PforR 2022-2026		Budget lines
	ZMW million	Share	ZMW million	Share	
SPS	0	0.0%	214	0.5%	2144/2000
Agricultural Research and development	124	0.3%	560	1.3%	2141/7004
Agricultural Training Institutions	189	0.4%	463	1.1%	2141/7002 and 7003 and 7005
Promote agricultural finance credit facilities and insurance.	0	0.0%	213	0.5%	2141
Strengthen ag. info. management systems and dissemination	0	0.0%	171	0.4%	2141/7006
Services for food and nutrition security (including training for diversification)	272	0.2%	619	1.4%	7005
Mainstream environment and climate change in ag. sector (training)	68	0.2%	1,351	3.2%	2141
Promote farm power and mechanization	0	0.0%	369	0.9%	2141
<b>RA 3: Improved infrastructure and assets for accelerating diversified, resilient, and inclusive agricultural growth</b>	<b>2,423</b>	<b>5.5%</b>	<b>5,254</b>	<b>12.3%</b>	
Irrigation	1,546	3.5%	2,752	6.4%	2141
on-farm agri-processing, value addition and storage	102	0.2%	278	0.6%	2142
Feeder roads	0	0.0%	1,612	3.8%	2142
Market enhancements projects	775	1.8%	612	1.4%	2141/8001
<b>Total</b>	<b>44,139</b>		<b>42,886</b>		

13. The agencies in charge of the Program are technical departments under the MoA, as well as its institutes: ZARI and SCCI, and the MoFNP (in charge of parts of FISP transfers). Table 3.5 details the Program budget allocation per implementing agency. The Department of Agri-business and Marketing will be the main implementing agency budget-wise as it is responsible for FISP and FRA, which represents the largest share of the budget over 2022-2026. Most of the budget will be recurrent expenditures (78 percent), encompassing input subsidies (FISP), operational costs (SGRs) and wages and salaries. Wages and salaries make up a significant share of the Program budget due to the large capacity and system building components of the Program.

**Table 3.5: Budget allocation and economic classification of the Program budget over 2022-2026**

Agency	Main economic classification	Activity	Amount (ZMW Million)
Ministry of Finance	Recurrent (subsidies)	FISP	1237
FRA	Recurrent (operational costs)	FRA	7,558
MoA/Department of Agri-business and Marketing	Recurrent (subsidies)	FISP (e-Vouchers)	21,356
	Recurrent (operational costs)	Trade	716
	Recurrent (operational costs)	Ag. info. management systems	171
	Recurrent (wages and salaries)	Promote ag. finance credit facilities and insurance	213
	Capital	Market enhancements projects	611
	Capital	On-farm value addition and storage	278



Agency	Main economic classification	Activity	Amount (ZMW Million)
MoA / Department of Policy and Planning	Recurrent (wages and salaries)	Coordination, mainstream env. and gender	422
MoA/ Department of agriculture	Recurrent (wages and salaries) and Capital	Farming training extension	694
	Capital	Irrigation	2,752
	Recurrent (wages and salaries)	CSA	1,351
	Recurrent (wages and salaries) and Capital	Farm power and mechanization	369
	Capital	Farm blocks	1,168
	Capital	Feeder roads	1,612
	Recurrent (operational costs)	Nutrition	619
MoA / Departments in charge of Finance, Audit, Procurement	Recurrent (wages and salaries, operational costs) and Capital	Enhance Internal Controls, Risk Management and Governance Processes.	412
ZARI	Recurrent (wages and salaries) and Capital	R&D (including SPS)	774
Seed Control and Certification Institute	Recurrent (wages and salaries) and Capital	Seed system	573
<i>total Recurrent</i>			<i>36,465</i>
<i>total Capital</i>			<i>6,421</i>
<b>Total</b>			<b>42,886</b>

**Program’s Financial Sustainability and Funding Predictability**

**1) Source of financing**

14. The total amount of the Program financing over 2022-2026 period is expected to be ZMW 42,886 billion (US\$1.737 billion), of which 83.1 percent will be financed by the Government of Zambia and 16.9 percent by an IDA credit. Aggregate public spending on the Government program over fiscal years 2018 to 2022 averaged ZMW 8.18 billion per annum. These numbers do not reflect the normal level of agricultural expenditures because it is biased by very high expenditure levels in 2020 and 2021 (election year) driven largely by FISP and FRA. The agriculture expenditure levels “normalized” again in 2022, which is considered as a representative baseline for future projections (Table 3.6). While the budget in Kwacha terms is expected to increase nominally over 2022 - 2026, it is declining in US dollar terms because of projected depreciation of the exchange rate (as per IMF projections). The IDA credit will fund US\$295 million, or about US\$59 million per year assuming equal disbursements.

**Table 3.6: Program Financing, 2022-2026**

	2022	2023	2024	2025	2026	Total
Government (million USD)	304.02	299.79	290.02	280.20	268.03	1,442.06
Government (million ZMW)	6,532.53	7,075.49	7,298.74	7,391.38	7,357.29	35,655.43
IDA (million USD)	63	68	69	65	30	295
IDA (million ZMW)	1,360	1,612	1,729	1,720	810	7,230



## 2) Adequacy and Sustainability

15. Budget appears generally adequate to support the desired activities and support job creation and growth in a sustainable way, provided that the FISP budget is repurposed. In its draft 8NDP 2022-2026, the Government outlines its planned reform to “to make the FISP more cost effective, better targeted and equitable across beneficiaries”. This reform is backed by the new comprehensive agriculture support program, to which the proposed PforR contributes. The 2022-2024 MTEF highlights the Government’s plan of “reducing the monetary outlay associated with the FISP by migrating fully to a comprehensive agriculture support system”.

## 3) Budget Predictability

16. Budget predictability is expected to be weak. The Ministry of Finance and National Planning publishes yearly the MTEFs, which set out three-year spending plans. Its main objective is to ensure that budgets reflect the Government's priorities and development commitments. However, the level of aggregation is high and equivalent documents do not exist at line agency level, providing little clarity on detailed planned expenditures. Presidential speeches also provide guidance to the ministries.

### Expenditure Performance

17. **The Second National Agricultural Policy and its implementation plan are well aligned with international recommendations for agricultural sustainable growth, but largely unrealized over 2018-2021 due to lack of funding.** The vision of the NAP is to achieve an efficient, competitive, and sustainable agriculture sector that assures food and nutrition security, increased employment opportunities, and incomes (Ministry of Agriculture and Ministry of Fisheries and Livestock 2016). The 8NDP emphasizes adopting environment-friendly agricultural practices to address the adverse effects of climate change. The NAP emphasizes an enabling environment for all key stakeholders in the sector to contribute effectively toward national economic growth and development. The policy and its implementation plan provide accurate and relevant analysis of the challenges faced by Zambia’s agricultural sector and of the way forward. However, they do not encompass budget plans against which to benchmark realized budgets and expenditures. Table 3.7 provides an estimate of the share of the budget of the program of the Government for the 10 objectives of the NAP. The objectives 8 and 10 appear insufficiently funded to yield significant results.



**Table 3.7: Estimated shares of Government program budget allocated to the 10 Objectives of the Second National Agricultural Policy over 2018-2021**

<b>Objective 1:</b> To increase agricultural production and productivity	6.2%
<b>Objective 2:</b> To increase effectiveness and efficiency of agricultural Research and Development	0.3%
<b>Objective 3:</b> To strengthen the capacities of Agricultural Training Institutions	0.4%
<b>Objective 4:</b> To improve the efficiency of agricultural markets for inputs and outputs	77.8% with FISP (1.9% without)
<b>Objective 5:</b> To promote availability of and accessibility to agricultural finance credit facilities and insurance	0.0%
<b>Objective 6:</b> To increase private sector participation in agricultural development	0.1%
<b>Objective 7:</b> To improve food and nutrition security	14.1% with FRA (1.0% without)
<b>Objective 8:</b> To promote the sustainable management and use of natural resources	1.1%
<b>Objective 9:</b> To mainstream environment and Climate Change in the agriculture sector	0.0%
<b>Objective 10:</b> To promote the mainstreaming of Gender, HIV and AIDS, and governance issues in agriculture	0.0%

18. **Over 2018-2021, public agricultural expenditures have not been aligned with the country’s Vision 2030 or CAADP targets.** Zambia’s overall poverty rate hovers around 64 percent, with rural poverty rates remaining high at above 75 percent while urban poverty rates have been cut by half over the last decade.<sup>36</sup> The sector’s productivity is low and agriculture value addition per worker has been declining over the past 20 years.<sup>37</sup> The third CAADP Biennial Review Report (2021) shows that Zambia is overall not on track to achieve the CAADP Malabo goals and targets by 2025. However, good progress since 2019 is highlighted. Zambia’s scores are particularly low for objectives of Ending Hunger (score of 2.88/10) and Eradicating Poverty through Agriculture (1.51/10). It is particularly striking that despite high budget committed to input subsidies (FISP) and grain reserves (FRA), Zambia is not on track on its commitments related to “Access to Agriculture inputs and technologies” (score of 2.51/10) and “Food security and nutrition” (464/10). Furthermore, the country is rated 0/10 on “post-harvest loss” and “agricultural productivity”. Productivity rates need to increase threefold to fivefold to meet the CAADP target.

19. **Recent evidence highlights that Zambian producers have been penalized by market distortive subsidies.** The recent evidence shows that price incentives for all analyzed crops, including maize, rice, groundnuts, cotton, cassava, tomatoes, and soybeans, were largely negative during the 2010–20 period.<sup>38</sup> Maize prices were penalized by unpredictable export bans and price distortions generated by Food Reserve Agency (FRA) operations. The analysis indicates market inefficiencies and excessive market access costs, including high transport costs due to poor road conditions, excessive profit margins captured by traders and other intermediaries along the value chain, and illegal fees. As a benchmark, transport costs in South Africa were 40 percent lower than in Zambia over 2010-2020.

<sup>36</sup> FAO -Monitoring and Analysing Food and Agricultural Policies (MAFAP) and World Bank. 2021.

<sup>37</sup> Ibid.

<sup>38</sup> FAO-MAFAP and World Bank 2021.



20. **While the level of agricultural spending is important, the quality of that spending is also important.** In agriculture, targeting the provision of public goods and services such as innovation, irrigation or rural access have the most substantial impacts on productivity and rural welfare. Among these, investments in research and development in developing countries yielded particularly high social rates of return, as they averaged over 40 percent per year in other regions.<sup>39</sup> In addition, in the context of Zambia, the evidence shows the need to develop market infrastructure, such as feeder roads, to reduce transportation costs and provide more integrated and sustainable development for value chains.

21. **The outturn and related execution rate of the Government program budget is low and variable.** The outturn rate of the Government program over 2018-2021 was 55 percent, with concerns regarding the reliability of the actual expenditures data. These estimates are in line with FAO-MAFAP and World Bank,<sup>40</sup> which finds outturn rates of public agricultural expenditures ranging between 51 and 78 percent over 2010-2020, much lower than the overall budget outturn rates (between 75 percent and 80 percent). Over 2018-2021, outturn rates appear higher for some strategic areas such as improving food and nutrition security (about 67 percent) but are extremely low for activities such as training (about 5 percent), sustainable management of natural resources (about 5 percent) or research (about 11 percent). The GRZ acknowledges the need to improve execution rates, as stated in its 2020-2023 Economic Recovery Program. Significant variations between the approved annual budgets and the actual outturns are exemplified by persistently high fiscal deficits, averaging 7.5 percent of GDP during 2017-2019, compared to planned deficits of less than 5 percent of GDP, driven by the high depreciation of the Zambian Kwacha, which resulted in higher than planned debt service payments.

### **Implications of the Program**

22. The analysis of the expenditure framework highlights the centrality of DLI 1 (improving efficiency and effectiveness of the FISP) for the success of the Program. The repurposing of FISP budget towards agricultural growth enhancing activities underpins the achievement of the outcomes of the Government program. The expenditure framework also highlights several weaknesses to be addressed during project implementation in particular: (i) budget predictability; and (ii) budget outturn rates.

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<sup>39</sup> Fuglie et al 2020.

<sup>40</sup> FAO-MAFAP and World Bank 2021.



## ANNEX 4. FIDUCIARY SYSTEMS ASSESSMENT SUMMARY

1. **Based on the Fiduciary Systems Assessment (FSA), fiduciary risk of the Program is assessed as Substantial. To strengthen the existing systems of the Implementing Agencies (IAs) and to mitigate fiduciary risks, various action items are recommended that are included in the Program Action Plan (PAP).** As part of the Program preparation, the World Bank carried out an Integrated Fiduciary System Assessment (FSA) of the program, to determine whether the fiduciary systems provide reasonable assurance that funds will be used for the intended purposes. The conclusion of the FSA is that the capacity and performance of the fiduciary systems of all IAs are adequate to provide reasonable assurance that the program funds will be used for the intended purposes with due attention to the principles of economy, efficiency, effectiveness, transparency, and accountability<sup>41</sup>.

2. **Procurement Exclusions:** The Program is not expected to procure any high value contracts<sup>42</sup> valued at or above Operational Procurement Review Committee (OPRC) thresholds (US\$75 million for works, US\$50 million for goods and non-consulting services, and US\$20 million for consultant services). Contracts under the Program shall be monitored during the supervision missions to ensure that the Program is in conformity with the World Bank's policy on high value contracts in Program for Results (PforR) Financing.

3. **Scope of the FSA:** The objective of fiduciary systems assessment of the arrangements under the Program is to conclude that the systems for financial management, procurement, and mitigating risk of fraud and corruption meet the requirements of the World Bank's Program for Results (PforR) Policy and Directive and are adequate for achievement of the Program objectives. The FSA has been conducted in accordance with the principles governing PforR programs as set out in the PforR Policy and other World Bank's internal guidelines<sup>43</sup>. The FSA focused on determining whether the Program systems provide reasonable assurance that financing proceeds will be used for the intended purpose with due attention to the principles of economy, efficiency, effectiveness, transparency, and accountability. The salient features of the Program are:

(i) **Use of Program systems:** The Program will be implemented using GRZ's own procurement and financial management systems and will seek to strengthen some of these systems. The number of contracts and the value of expenditures under the Program is relatively small when compared to the scale of operations of the MoA departments/agencies involved.

(ii) **Program financial management (PFM) systems** have been assessed for the effectiveness of planning, budgeting, accounting, internal controls, funds flow, financial reporting, and auditing procedures.

(iii) **The Procurement systems** have been assessed for effectiveness of the procurement planning, bidding, evaluation, contract award, and contract administration procedures, in line with Public Procurement Act No. 8 of 2020, Public Procurement Regulations of 2022, and Statutory no. 30 of 2022.

<sup>41</sup> Bank Policy – Program for Results Financing November 20, 2017

<sup>42</sup> High Value means contracts with estimated values exceeding the monetary amounts that require mandatory review by the World Bank's Operations Procurement Review Committee (OPRC)

<sup>43</sup> Bank Policy -Program-for-Results Financing November 10, 2017; Bank Guidance – Program for Results Fiduciary Systems Assessment Guidance Note June 30, 2017



(iv) The FSA has also assessed how Program systems address the risks of fraud and corruption and have mechanisms to redress complaints. The FSA reviewed the existence and adequacy of existing rules, policies, and procedures and the extent of their implementation in gaining assurance that the Program objectives shall be met. The FSA has identified certain risks and mitigation actions have been included in the PAP as appropriate.

4. **Program Institutional and Implementation Arrangements:** The DoA is one of the Departments in the MoA and is mandated with the provision of extension services to farmers, irrigation services and disease control. The Zambia Agriculture Research institute (ZARI) is the largest research entity in Zambia with 10 research stations with Mount Makulu being the largest and serving as head office. The research is focused on soils, crops, and water with the aim of providing appropriate technologies and knowledge that enhance household food security and equitable income-generating opportunities for the farming community and agricultural enterprises while ensuring the maintenance of the natural resource base. The Seed Control and Certification Institute (SCCI) is Zambia’s seed authority, and its standards are considered equivalent to all other Organization for Economic Co-operation and Development (OECD) member countries within the same seed schemes. The Food Reserve Agency (FRA) is a parastatal organization established in 1996 under the Food Reserve Act 1995, whose functions are administering the national strategic reserves, grain marketing, and management of storage facilities. The MoA will coordinate the Program, with the DoA responsible for detailed implementation of most of the Program activities. The total financing of the Program is indicated below:

**Table 4.1: Program Financing**

Source of funding	Amount
Government of the Republic of Zambia	US\$1,442 million
IDA*	US\$295 million
Total	US\$1,737 million

\*US\$5.0 million has been allocated for technical assistance activities under the IPF component, which brings the total IDA financing to US\$300 million.

5. The roles and legal structure of the various agencies under the ZAMGRO Program are provided in Table 4.2 below.

**Table 4.2: Institutional Responsibilities**

Institution	Legal Status	Responsibility
MoA (Department of Policy and Planning)	Created by an Act of Parliament	Policy decisions and supervision of the Program
MoA (Department of Agriculture)	Created by an Act of Parliament	Procurements for HQ and Directorates (ZARI and SCCI) and making payments under the Program within thresholds
Zambia Agriculture Research Institute (ZARI)	Created by an Act of Parliament	Making payments under the Program within thresholds.
Seed Control and Certification Institute (SCCI)	Created by an Act of Parliament	Making payments under the Program within thresholds
Food Reserve Agency (FRA)	Created by an Act of Parliament	Procurements and making payments under the Program



6. As observed from the table above, not all implementing entities have the responsibility for procurement functions although all can receive and make payments. Procurements for ZARI and SCCI are handled through the Ministry’s procurement unit using the public procurement procedures.

**Table 4.3: Governance Framework**

Step in Public Financial Management Cycle	MoA	ZARI/SCCI	FRA	Remarks
Planning	√	√	√	Prioritization done by budget committee at each institution
Budgeting	√	√	√	Budgets prepared by the institutions based of allocation provided by MoF via MoA and submitted to HQ for consolidation
Budget Execution – Procurement cycle including contract management	√	√	√	Procurement mainly at HQ, Province/Districts, ZARI/SCCI small procurements FRA full procurement
Budget Execution	√	√	√	Monthly returns provided to HQ which are validated by the budget team to ensure accuracy and alignment to budget lines. Once validation is done, IFMIS is updated,
Internal Controls	√	√	√	Segregation of duties, operating procedures & policies, authorizations, Internal Audit function at MoA and FRA
Accounting and Reporting	√	√	√	Double entry, cash-based accounting system using IFMIS at HQ, manual processing using excel at other institutions
External Scrutiny and Audit	√	√	√	Annual Audit will be conducted by Office of the Auditor General as per TORs cleared by IDA

7. **Use of Program systems:** Program financial management arrangements will use GRZ’s systems for planning and budgeting, funds flow, accounting, payments, and auditing. The GRZ systems include the Public Finance Management Act 2018, the Appropriation Act, 2021, Regulations for 2022 S.I. to the Public Finance Management Act, National Planning and Budgeting Act, 2020, Budget Manuals and PFM Circulars. Similarly, GRZ’s Procurement Framework will be followed for Procurement and Contract Management as outlined in the Public Procurement Act no. 08 of 2020 and Zambia Public Procurement Agency (ZPPA) Circulars. The ZARI and SCCI are institutions, which though created by Acts of parliament and enjoy a measure of autonomy, are considered as departments under the MoA. Hence all procurements for these institutions are handled through the Ministry’s Procurement Unit, using public procurement procedures.

**I. Review of Public Financial Management (PFM) Cycle**

8. **PFM and accountability systems, processes, and practices, including for the MoA, have improved over the last few years.** The improvements were brought about by the enactment and application of the PFM Act of 2018. The consistent application of the PFM Act 2018 and other PFM reforms have improved the public financial management practices in Zambia. These include the implementing of Integrated Financial Management Information System (IFMIS) at the central government. The IFMIS covers budget formulation, budget execution, payments and accounts preparation, and expenditure monitoring.

9. **Planning and Budgeting – Adequacy of Budgets:** The GRZ has an established budget preparation process, that is guided by the National Planning and Budget Act 2020. The Ministry of Finance will provide budget ceiling





to each ministry and budget guidelines. In turn the MoA, through its Budget committee, will send notices to departments and provinces giving ceilings, for them to budget in line with their priorities and within given ceilings. Consolidation of the budget is done using Budget software called access. Budget instructions are issued by the Finance Department (generally in the month of July) each year to all departments and provinces.

10. Overall, budget to the MoA has shown a decrease from ZMW 5.774 billion for FY 2018 to ZMW5.314 billion for FY 2020. However, for the year 2021, the budget increased to ZMW13.5 billion which was an election year, with increased expenditure for the FISP and FRA. Budget outturns have ranged from 34.32 percent to 55.51 percent in the past four years as presented Table 4.4 below. The attributing reasons for the variation between the budget versus actual include cash flow deficits, slow procurements, and optimistic planning and budgeting. Effective 2022, the MoFNP has requested ministries to provide annual funding requirements which are being updated quarterly, and the fund releases are done monthly.

**Table 4.4: Budget Outturns during last four years: 2018-2021 (In ZMW)**

Year	Budget	Actuals	Budget Outturn
2018	5,774,251,430.00	2,711,142,040.85	46.95%
2019	5,213,434,633.00	1,865,970,074.00	35.79%
2020	5,314,630,517.00	2,951,304,707.00	55.53%
2021	13,472,802,795.00	5,766,543,959.00	79.98%

11. **Annual Planning and Budgeting for MoA.** The Ministry’s expenditure performance compared to the approved targets as per the Annual Plan and Budget range between 43.18 percent to 84.66 percent. The last two years show remarkable performance of 80 percent indicating a good absorption rate. ZARI, SCCI and FRA are included in the budgets shown in Table 4.5 below.

**Table 4.5: Performance against AWPB for MOA (in ZMW)**

Financial Year	AWPB (MoA)	Funds received from MoFNP	Expenditure (MoA)	Expenditure/AWPB
2018	4,701,301,088.00	2,711,142,040.85	2,697,486,022.72	57.38%
2019	4,213,714,550.92	1,865,970,074.00	1,819,621,429.00	43.18%
2020	3,484,785,858.46	2,951,304,707.00	2,950,375,973.00	84.66%
2021	7,209,802,794.96	5,766,543,959.00	5,765,103,090.00	79.96%

12. **Procurement Planning:** The Departments initiate procurement activities after obtaining formal approvals of their procurement plans, that should be in line with the approved budgets. The departments will request the procurement unit to facilitate the procurements using purchase requisition forms, as per the ministry’s operational manual, and as stipulated in the procurement Act no.8 of 2020.

13. **Program Procurement Profile:** The generic list of procurement activities under the Program will be as per Table 4.6 below.

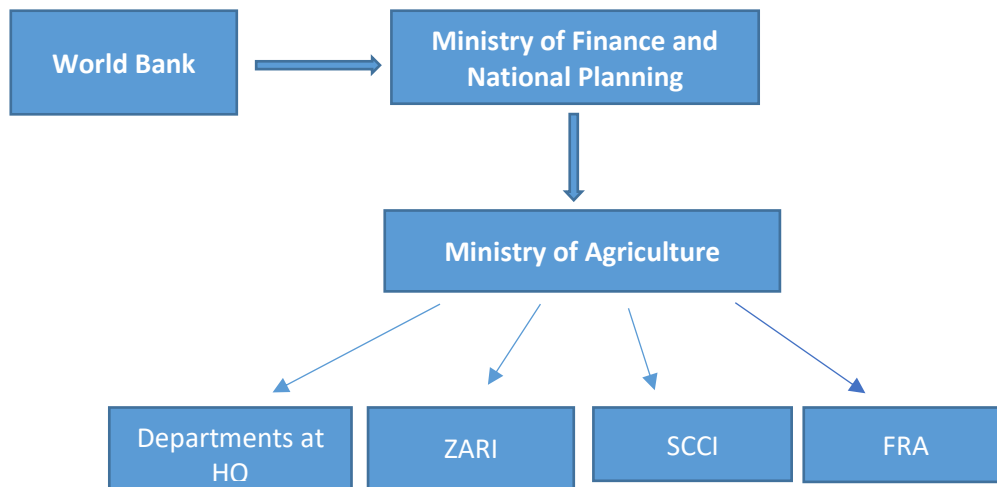


Table 4.6: Broad list of procurable activities under each Result Area

Result Area	Broad list of Procurable Activities	Allocation
Result Area 1: Enhanced policies and institutions for accelerating diversified, resilient and inclusive agricultural growth	Consulting and non-consulting services, training	US\$174 million
Result Area 2: Improved services for accelerating diversified, resilient and inclusive agricultural growth	Consulting services, capacity building and training	US\$78 million
Result Area 3: Improved rural infrastructure and assets for accelerating diversified, resilient and inclusive agricultural growth	Goods, civil works, consulting and non-consulting services	US\$83 million

14. **Budget Execution – Treasury Management and Fund Flows:** The GRZ revenue accounts are held at the Bank of Zambia (BOZ) in the consolidated account (Control 99). All revenues including funds from the Donors and World Bank for the program will be deposited at BOZ in the consolidated account. In the BOZ all expenditures are routed through a treasury single account (TSA). The budget releases to the MoA’s departments and institutions will follow the budget profiles prepared by the Ministry in line with program plans and budgeting. The Ministry will use IFMIS to fund the approved budgets in line with budget lines as per Yellow Book. The funds flow from the World Bank to the Government revenue accounts will be linked exclusively to the achievement of the agreed DLI results. The World Bank policy allows for advance disbursement against achievement of future results or for agreed results achieved between project concept and signing of the legal agreement<sup>44</sup>. Funds disbursed from the World Bank loan account will be deposited into the government general revenue account and the money will form part of the overall government consolidated fund.

Figure 4.1: Flow of Funds



Note: Funds released from the World Bank will be based on achievement of results.

<sup>44</sup> Bank Policy - Program-for-Results Financing



15. **Funds Flow Analysis.** In general, the budget fund releases are timely but with some delays. A review of the past two years’ budget releases indicated that that the treasury delayed releasing funds by number of days ranging from 12 days (efficiency) to 31 days (inefficiency) in 2020, and from 2 to 17 days in fund releases in year 2021 as shown in Table 4.7 (a and b) below. However, for the year 2022, the government has requested ministries to provide quarterly budget profile so delays in budget releases is expected to reduce.

**Table 4.7a: Summary of Delay (days) in MoA budget Releases**

	Financial Year	2019	2020
<b>1</b>	<b>Average delay in the release of funds to MoA</b>	<b>5.17 days</b>	<b>9.42 days</b>

**Table 4.7b: Delays – data for FY 2020 and FY 2021**

Month	Financial Year	Amount released	Due Date of release from MoF	Date of Release	Delay in day	Range/days
Jan-20	FY 2020	58,024,368.49	10-Jan-20	27-Jan-20	17	+12 to 31 days
Feb-20		10,450,000.00	15-Feb-20	28-Feb-20	13	
Mar-20		77,416,558.34	16-Mar-20	18-Mar-20	2	
Apr-20		69,699,965.70	10-Apr-20	8-Apr-20	-2	
May-20		51,801,581.34	9-May-20	15-May-20	6	
Jun-20		1,145,077,415.25	10-Jun-20	12-Jun-20	2	
Jul-20		79,821,811.50	15-Jul-20	14-Jul-20	-1	
Aug-20		156,866,846.91	16-Aug-20	7-Aug-20	-9	
Sep-20		551,810,827.00	15-Sep-20	3-Sep-20	-12	
Oct-20		194,059,945.00	15-Oct-20	15-Nov-20	31	
Nov-20		168,308,089.10	10-Nov-20	18-Nov-20	8	
Dec-20		66,681,971.37	15-Dec-20	22-Dec-20	7	
<b>Total</b>		<b>2,630,019,380.00</b>				

Month	Financial Year	Amount released	Due Date of release from MoF	Date of Release	Delay in day	Range/days
Jan-21	FY 2021	66,570,833.34	10-Jan-21	25-Jan-21	15	12 to 17 days
Feb-21		57,359,361.08	15-Feb-21	4-Mar-21	17	
Mar-21		132,050,183.55	16-Mar-21	18-Mar-21	2	
Apr-21		1,690,351,606.55	17-Apr-21	29-Apr-21	12	
May-21		41,527,804.51	9-May-21	15-May-21	6	
Jun-21		597,689,160.84	10-Jun-21	22-Jun-21	12	
Jul-21		1,450,985,966.63	15-Jul-21	22-Jul-21	7	
Aug-21		293,927,061.50	16-Aug-21	26-Aug-21	10	
Sep-21		303,042,849.00	15-Sep-21	22-Sep-21	7	
Oct-21		16,521,942.97	15-Oct-21	21-Oct-21	6	
Nov-21		268,473,136.65	10-Nov-21	15-Nov-21	5	
Dec-21		512,655,618.96	15-Dec-21	29-Dec-21	14	
<b>Total</b>		<b>5,431,155,525.58</b>				

The tables above exclude salaries

16. **Accounting and Reporting:** Accounting will be on a cash basis using government systems. The expenditures will be recorded and reported at the time of final payment for works, goods, services, and other expenditures. Accounting will be guided by the country systems as outlined in the various legislations including the PFM Act and other regulations. The rules, governing policies and procedures for the entire FM cycle, from planning budgeting to budget execution and reporting and, also prescribe formats for reporting and record keeping. The MoA and the implementing entities are expected to maintain adequate records at accounting locations and will include vouchers, invoices, cashbooks, ledgers, and asset registers. With respect to salary bill,



MoA prepares monthly salary input schedule which normally includes recoveries, adjustments, retirement, dismissal, and new staff, which is audited, and a copy sent to MoF Payroll Management and Establishment Control (PMEC) e-payroll system. Treasury then makes the electronic payment directly into the bank account of staff.

17. **Internal Controls:** Program arrangements will include the following arrangements for internal controls:

- (i) Processing of all payments through the IFMIS at the Ministry headquarters.
- (ii) Use bank transfer or cheque for payments through commercial banks at institutions.
- (iii) Periodic financial reporting and reconciliations.

18. The MoA's finance department has sufficient staff to ensure segregation of duties and compliance with the PFM Act, various regulations, and circulars ensures effective internal controls. This coupled with the external audit by OAG, provide reasonable assurance that adequate controls are in place for all transactions/payments

19. **Internal Audit:** The MoA has a well-established internal audit department that is fully staffed with a Director of Audit heading the department. It has a full complement of staff at head office and has auditors in five out of the ten provinces. The internal audit unit prepares its annual internal audit plans and audit strategies for carrying out the internal audit. In carrying out the scope of which may include review of accounting records and financial transactions, and internal control processes, a risk-based approach is adopted. The audit reports are shared with Audit Committee, the Permanent Secretary, MoFNP, and others as stipulated in the PFM Act of 2020. The most common weaknesses identified include: (i) weak stores management; (ii) weak asset management due to failure to update; and (iii) payroll weaknesses. Internal audits have been completed for the years 2018 to 2021.

## II. Applicable Procurement Framework

20. **Available procurement methods:** Open Tendering, Limited Tendering and Direct Contracting procurement methods are the available procurement method for goods, works and services. Open Tendering is the preferred method of procurement. Single stage two envelope method is widely used for the open tendering method for contracts above ZMW 500,000 threshold. These invitations to tender are published on the website for soliciting feedback from interested public.

21. **Standard procurement documents:** The GRZ does not have a universal suit of procurement documents/templates, and these are not disclosed on the website. The tender documents are customized by the IA. Tender documents have various sections to enable the potential bidders to submit responsive Tenders. However, there is no contract form along with General Conditions of Contract and Particular / Specific Conditions of contract in the Tender Document. Besides, the Fraud and Corruption<sup>45</sup> clause needs to be part of the contract.

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<sup>45</sup> (a) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bidding Process or in contract execution,  
(b) "fraudulent practice" means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts;  
(c) "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person's participation or action in the Bidding Process;  
(d) "undesirable practice" means establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest;



The IAs are presently using World Bank approved standard bidding documents designed using the World Bank format.

22. **eGovernment Procurement (eGP) Platform:** The Public Procurement Act No. 8 of 2020 stipulates the mandatory use of the eGP Platform for all public procurements. The PPA provides for the use of the electronic government procurement (e-GP) system and has made it mandatory for procuring entities to use the e-GP system for their procurements. The PPA provides for the use of the electronic government procurement (e-GP) system and has made it mandatory for procuring entities to use the e-GP system for their procurements.

23. The e-GP system comprises the following modules:

- (i) Registration system; procuring entities and suppliers are required to register on the system.
- (ii) Dashboards; these are user-specific dashboards for administrative purposes.
- (iii) E-Bidding; this module covers the entire procurement process from procurement planning to contract signing.
- (iv) Simplified Bidding (e-Quoting); used for low value procurements.
- (v) Complaint handling mechanisms and procedures.
- (vi) Framework Agreements.
- (vii) Contract Management.
- (viii) E-Procurement Monitoring System.
- (ix) Open Contracting Data Standard (OCDS); interface and visualisation portal.
- (x) Audit Trail Capability
- (xi) Online Help

24. The starting point for Procuring Entities and Suppliers to be registered on the e-GP system is that ZPPA undertakes e-readiness assessment to ascertain the level of preparedness in the use of the e-GP System. The e-readiness assessment looks at the following areas:

- (i) The number of procurement professionals available in the procurement unit.
- (ii) The number of computers in the procurement unit
- (iii) The availability of reliable internet connectivity.

25. Although the eGP is not yet fully rolled out, the procuring entity at MoA has a team of trained eGP users who have begun to use the system, as it is now a requirement by law.

26. **Publication of tender notice:** The publication period is 28 days for open tenders. For procurements below the ZMW 500,000.00 threshold, the tender notice will be published in national dailies with the largest circulation. For works costing more than ZMW 500,000.00, the tender notices will be published in more than one national daily having largest circulation. To reduce the cost of each publication, an abridged version of tender notice published in the newspaper and detailed tender notice in the eGP website. This is yet to be done as the IAs are restricted from using eGP due to non-availability of dedicated computer systems for this function.

27. **Evaluation process:** Evaluation is undertaken both manually and on the eGP Portal to determine the best evaluated bidder (BEB). The BEB is then compared with the Market Price Index (MPI) issued on a quarterly basis



by ZPPA. The BEB should be within  $\pm 10\%$  of the MPI. The Procurement Entities (PEs) are required to undertake a Price Reasonableness Analysis (PRA) for items not covered by the MPI. The PRA may be undertaken using historical prices or budget provision. ZPPA has provided guidelines on how to undertake the PRA.

28. **Disclosure of Contract Award:** The contract award details are disclosed in the eGP Platform. This is a requirement for all implementing agencies using public funds to provide procurement services

29. **Performance of Procurement System:** The MoA have adequate capacity to centrally procure goods and works with reasonable procurement lead time (tender notice publication to award). eGP usage by the ministry has been initiated because of the current Procurement Act no. 8 of 2020. Procurement performance indicators calculated based on sample procurement cases is presented below:

**Table 4.8: Procurement Data extracted based on Sample Procurement Activities: MoA**

Description	Estimated Cost in ZMW	Number of Tenders Participated	Number of Bidders qualified (Technical)	Procurement Lead time (invitation to award) (days)	Contract Amount in ZMW	Savings with respect to the estimated cost
Construction of Mwomboshi Irrigation Scheme	288,000,000	1	1	40 days	288,000,000	NIL
Musakashi Irrigation Scheme (Limited bidding)	63,000,000	4	4	60 days	50,400,000	K12,600,000
Consultancy Services for Website development, hosting and establishment monitoring and Evaluation (QCBS)	900,000	2	2		900,000	NIL
Procurement of Vehicles (Limited Bidding)		3	3		K3,200,000	
Consultancy services for dam safety for monitoring of filing plan up to full supply level	K1,620,000	1	1		K1,620,000	Nil
Tender for the supply and delivery of Agriculture implements for SCRALA project (Open Bidding)	K1,600,000	14		5 Months	K1,494,237	K106,000
<b>Purchase of seed for districts and E voucher (Direct bidding)</b>	K35,000,000.	1	1	30 days	K32,559,585	K2,440,415

30. For MoA, no procurement files from eGP Portal were analysed as the eGP is not currently fully utilized to get this data.

31. **Contract Management:** For the centralized procurements, the contracts were managed and monitored by the MoA. The PEs validates and accepts the distributed goods and takes to the asset register. The payment will be processed centrally. These PEs will take decisions related to contractual amendments inter alia scope, extension of time, and levying of liquidated damages. The PEs will setup a simple contract management database (even if in MS Excel) to be able to list all active contracts, relevant dates, and values to manage the contracts better on a day-to-day basis, as well as for more effective Management reporting.

32. **Procurement Procedure for the MoA & FRA:** The MoA and FRA follow the Public Procurement Act No. 8 of 2020 for their procurement procedures. The procurements for ZARI and SCCI are done on their behalf centrally by the Ministry’s procurement unit.



III. Fiduciary Staffing

33. There are enough staff in the fiduciary section of the DoA, ZARI, SCCI and FRA as most of the positions are filled. Most members of staff are qualified with appropriate professional qualifications and experience. However, the team has inadequate number of computers and office equipment. This issue will be addressed through the IPF component.

34. In terms of procurement management staffing, there is need to have the office of the Controller of Procurement, for strengthening of procurement management, professionalization, discipline, talent management and promotion. The office should be anchored in the finance department since it forms part of the PFM as in the case of the accounting profession.

35. Policy formulation will be done by the government, within the MoFNP and separate from the ZPPA, the regulatory and oversight body for compliance and practice. This will enhance implementation of reforms as oversight of implementation of reform will no longer rest with ZPPA therefore resulting in increased professionalization and competencies.

36. Procurement services are anchored within a unit as is the case for internal audit and the accounting profession. They are supervised by the Controller of Internal Audit and the Accountant General respectively, all of them are at the level of PS. Going forward, the promotions, transfers, discipline, and retention of staff will be done by an entity in the ministry of finance in charge of their daily supervision as well as policy formulation. In terms of financial management and procurement staffing, details at the MoA, ZARI, SCCI and FRA are given below.

Table 4.9: Department-wise details of Staffing

	Sanctioned	Filled	Vacant	Percentage Vacant
MoA	47	45	2	4.3%
ZARI	2	2		0
SCCI	2	2		0
FRA	71	70	1	1.4%
<b>Total</b>	<b>122</b>	<b>119</b>	<b>3</b>	

IV. Program Governance and Anti-Corruption Arrangements

37. **Fraud and Corruption.** The Program will be subject to the World Bank ‘Guidelines on Preventing and Combating Fraud and Corruption in Program-for-Results Financing’ dated February 1, 2012, and revised on July 10, 2015. These guidelines shall apply to all activities within the Program scope. As there is no distinction between World Bank-financed activities and government-financed activities within the Program, these guidelines shall be applied in an unrestricted manner on all activities within the Program boundary. The tender documents’ Fraud and Corruption Clauses will be aligned to the World Bank’s Anti-corruption Guidelines. They include: the “Borrower” shall: (i) report promptly and regularly to the Bank any material allegations of fraud and corruption including actions to be taken to investigate and the outcome of such investigations; and (ii) report the remedies in cases where one is determined to have been engaged in fraud and corruption including how recurrence will be prevented.

38. **Complaints Handling Mechanism will be put in place.** Currently there is no dedicated mechanism in place to treat the procurement related complaints in a timely manner. A complaints-handling mechanism on procurement related complaints exists, and complaints are processed using administrative procedures. For the



program, an online procurement related complaint handling mechanism (including appeal mechanism), with pre-defined roles, responsibilities, processes, and timelines, will be put in place to deal with any complaints arising from procurement activities. As last resort after exhausting the complaints handling mechanism, an unsatisfied bidder may go for arbitration.

39. **Debarment Process and Allegations:** The World Bank and ZPPA's debarment and suspension lists will apply to the Program. The Zambia Anti-Corruption Commission (ZACC) will share information on credible and material allegations with the World Bank and will sign a memorandum of understanding (MoU) with the World Bank to this effect. The World Bank's Integrity Unit (INT) will advise on the protocols for the sharing of such information and the World Bank's legal department will review the MoU before it goes into effect. This will allow regular reporting to the World Bank on allegations and actual fraud and corruption issues arising during implementation of the Program.

## V. External Audit

40. The Office of the Auditor General (OAG) is mandated by article 250 of the constitution of Zambia, Public Audit Act No. 13 of 1994 and Public Finance Management Act No. 1 of 2018 to perform audits of all public institutions, grant aided institution and parastatals. The OAG may at times appoint private auditors to carry out audits of any of these institutions where capacity constraints are observed. The OAG will nevertheless retain oversight on the project as the private firm will be undertaking the audit on behalf of the supreme audit institution.

41. In addition to the audit of financial statements, the OAG carries out compliance audit, performance audit, forensic audit, and special audit. The Auditor General submits his report to the President of the Republic of Zambia and simultaneously to the Parliament.

42. The audit of MoA's accounts is conducted annually by the Office of the Auditor General (OAG), and reports are generally issued on September 30 and are made publicly available on the website of the OAG. The reports are thereafter tabled before Parliament for consideration by the public account committee. The MoA shared the audit reports for years 2018, 2019 and 2020. All were received within the nine months. A review of audit reports for FY 2020 has reported serious accountability issues on budget execution, farmer input support program, payroll management, and procurement of insurance.

43. The audit of the FRA for the year ended December 31, 2018, was undertaken by a private audit firm. The audited financial statements for the year ended 2018 were unqualified. A review of management letter indicated internal control weakness related to: (i) lack of policy for provision of doubtful debts, (ii) bank reconciliation not undertaken regularly, (iii) asset register not updated, (iv) non-retirement of imprest, and (v) carrying of long outstanding vendor balances which are unlikely to be recovered. The audited financial statements (AFS) and management letters for the years 2019 and 2020 are yet to be concluded. OAG is undertaking the audit and has delayed in completing the audits. As at the time of this report, they AFS were not ready.

44. **Program Audit:** The audit for the Program will be undertaken by the OAG in line with terms of reference to be agreed with the World Bank. The audit will ascertain and confirm that (i) no contract awards have been made to debarred firms, (ii) there are no high value contract procured. (iii) all procurement is in accordance with the ZPPA rules and applicable circulars/regulations. The World Bank team will carry out regular implementation mission to support the implementing agencies to achieve results. The progress on agreed DLIs and PAP will be





reviewed and any additions/changes to the action plan will be made during the implementation phase. The Treasury reports on budget allocation and execution by implementing agencies, procurement progress, contract management and financial reports, internal and external audit reports and annual financial statements will be reviewed from an FM and procurement perspective. Further, some of key performance metrics including: (i) audit with no material deviations; (ii) timeliness of audit; (iii) timeliness of fund release; (iv) procurement cycle time; (v) publication of contract award; and (vi) complaints received and resolved will also be monitored. The FM and procurement issues / risks identified during the implementation phase will be addressed appropriately.

45. The Program implementing entities (such as MoA departments, ZARI, SCCI, FRA) will implement specific components of the Program and the basis upon which the program funds will be transferred to each entity. Each implementing entity will prepare a separate Program financial statements and submit it to the OAG four months after the end of each fiscal year. The OAG will audit each financial statement and issue the audited financial statements (AFS) in which he/she will express his/her opinion. The OAG will highlight the control issues in separate management letters (MLs) for each implementing entity. The implementing entities will each submit the AFSs together and the accompanying ML to the World Bank six months after the end of each FY.

**VI. Risk/Weaknesses and Resolution**

46. The Program will address the following weaknesses through the related PAP actions and DLIs.

**Table 4.10: Weaknesses Addressed through Related PAP actions and DLIs**

Action Description	Source	Responsibility	Timing		Completion Measurement
a) Measure Fiduciary Key Performance Indicators (KPIs)	Fiduciary Systems	MoA	Recurrent	Semi-Annually	Share monitoring report with the Bank semi-annually
b) Establishment of a procurement related complaint handling mechanism	Fiduciary Systems	MoA	Due Date	31-Dec-2022	Government Notification/Order specifying an interface to accept complaints and detailed provisions on complaint resolution including appeal.
c) Semi-annual reports collating allegation of fraud and corruption, complaints received, and investigations on the program activities.	Fiduciary Systems	MoA	Recurrent	Semi-Annually	Semi-annual report shared with the World Bank
d) Adequate disclosure of procurement information and financial information	Fiduciary Systems	MoA	Recurrent	Continuous	Publish APP at the beginning of each FY on the program’s website and update it periodically; and (b) publish contract award information within 2 weeks from signing of contract through the e-procurement platform and Program website  Program AWPB, and annual audited financial statement published on the program website



Action Description	Source	Responsibility	Timing		Completion Measurement
e) Share Internal Audit Reports with the World Bank	Fiduciary systems	MOF/MoA	Recurrent	Continuous	Share internal audit reports on a semi-annual basis
f) Improve budget outturns (budget release as % of budget) for the MoA	Fiduciary systems	MoF/MoA	Annual	continuous	Increase the budget outturns over the program period from current 56 percent to 95 percent by end of program

**VII. Implementation support**

47. The World Bank would support MoA in implementing the mitigating actions to address the risks identified in the FSA. The World Bank would undertake a review of key activities and documents under the Program, such as procurement progress, funds availability, contract management, procurement complaints, adherence to Anti-Corruption Guidelines, policy notes, manuals and provide suggestions for improvement as necessary. Progress against PAP actions would be assessed. The World Bank would also assess at each mission, whether there are any significant changes to the assessed fiduciary risks and/or new risks have emerged and work with the MoA towards addressing such risks.



## ANNEX 5. ENVIRONMENTAL AND SOCIAL SYSTEMS ASSESSMENT SUMMARY

1. The implementation of activities under the Program will rely on the existing national and provincial legal framework and institutional systems for managing Environment and Social (E&S) issues. The Environment and Social Assessment (ESSA) report provides a comprehensive review of relevant E&S risk management systems, procedures, capacity, and performance at national and provincial levels, and hence recommends necessary actions to address the identified gaps to enhance the E&S performance during the implementation of the Program. This Annex provides a summary of the main conclusions of the ESSA.

2. **Potential Environmental and Social Risk Effects.** The proposed Program activities will generate positive environmental impacts, such as: (i) sustainable land and water management, improved soil structure and decreased erosion; (ii) increased resilience to climate change impacts through livelihood/crop diversification; (iii) improved agricultural practices and increased food security in the country; (iv) climate change adaptation and mitigation; (v) promotion of integrated pest management practices; and (vi) increased carbon sinks through promotion of tree and plantation crops. Positive social effects, include, creation of employment opportunities for rural communities, in particular among youths and women who comprise 70 percent of the labor force in agriculture; empowering marginalized groups, including women and persons living with disability with productive resources; increased household income from quality produce sold to markets; crop production enhanced due to improved farming practices; knowledge enhancement for farmers and youths through provision of extension services support to enhance productivity; nutritional improvement at households due to crop diversification and enhanced food security; improved access roads and irrigation infrastructure to facilitate farming throughout the year; research on seed production strengthened resulting in improved quality of seeds and ultimately crop yield for farmers; promoting participation of women and youths for example; application of farm block development guidelines provides for 40 percent of land allocation for women; and reform of agricultural promotion policy, making the sector more viable and attracting private sector involvement.

3. Potential environmental effects associated with the Program activities include impacts on: (i) natural habitats such as, introduction of invasive flora species; loss of high value trees especially those with medicinal value; influence on animal habitats, as well as site-specific soil erosion; and potential damage to aquatic habitats; as well as (ii) environmental pollution such as dust, noise, wastewater, chemical wastes, oil spillages, solid waste and odor that will be generated from construction related activities and all occupational safety and health risks associated with construction as well as agricultural activities; improper application of chemical fertilizers and pesticide might cause NPS pollution; crop straws burning would cause air pollution; improper disposal of mulching residues and pesticide/fertilizer packages may cause white pollution to the soil and water resources; and application of poor quality organic fertilizers or overuse of organic fertilizers might result in soil pollution and degradation, excess use of irrigation water that may cause salinity in farms etc.; and soil erosion, change in soil salinity and deforestation due to agricultural production practices. There are potential cumulative and induced impacts, such as increased use of chemical fertilizers which will have downstream impacts, including water contamination and eutrophication of water sources; reduced water to downstream users due to irrigation structures, which might not have been designed considering other irrigation structures in the same watershed; increased sedimentation of the natural water bodies and valley; possible contribution of rural roads rehabilitation to soil erosion; and flooding due to poor upstream catchment management and drainage systems.

4. Potential adverse social effects associated with the Program activities include, land acquisition, physical and economic displacement/loss of livelihoods; social conflict related to land ownership and competing for local



resources; and exclusion of marginalized groups women, youth and persons living with disability from participating and benefiting from the program due to elite capture. The agricultural sector in Zambia is synonymous with women as the main labor force. Despite active participation in the sector, they lag behind in terms of access to and control of productive assets. Owing to the nature of proposed activities and the application process for acquiring land in the farm block, participation of women and rural households maybe low due to cultural influences and challenges in access to information; increased labor Influx which may increase the rate of crimes and/or perception of insecurity by the local community and demand for transactional sex and transmission of non-communicable diseases such as HIV/AIDS and increased incidence of GBV/SEA; community exposure to health and safety risks such as exposure to noise, vibration, dust pollution increasing risk of respiratory illnesses emanating and generally disturbance of day-to-day work from construction related activities; potential increase in spread and transmission of COVID-19 among construction workers and communities; poor labor management practices among contractors and potential instances for practicing child labor particularly in rural areas; poor acceptance of project due to lack of transparency during community consultations and selective engagement with project beneficiaries; persistent project complaints and project stoppages by local communities leading to project implementation delays as a result of inadequate consultations with local communities and an ineffective project grievance redress mechanism.

5. In light of the envisaged positive outcomes and potential adverse impacts, the ESSA concluded that the overall E&S risk rating of the Program is *Substantial*. The potential adverse E&S impacts, while significant, are reversible, and can be identified and readily avoided, minimized, and mitigated through known and demonstrated technologies and good management practices.

6. The World Bank Operational Policy (OP) 7.50 - International Waterways is triggered as the proposed Program investments will be conducted in the Zambezi River, Congo River, or Lake Tanganyika basins, which are international waterways. Irrigation activities have the potential for increasing water abstraction from the tributaries of the Zambezi, Congo rivers and Lake Tanganyika basins as well as increasing the risk of pollutants entering these international waterways. It is envisaged that by supporting the rehabilitation of the existing irrigation and drainage system, the Program will help to increase water use efficiency. Accordingly, the World Bank team's assessment is that the rehabilitation of the existing irrigation and drainage systems will not: (i) affect the water quality or flow in the upstream riparian countries; and (ii) be adversely affected by the other riparians' possible water use. The riparian countries were notified of the Program and did not express objections to the Program's design and scope in terms of the impacts of the irrigation activities on shared international waterways.

7. **Assessment of Environmental and Social Management System.** A comprehensive review of the legal and regulatory framework for E&S management relevant to the Program activities was conducted, including a review of the legal framework, management procedures, and institutional arrangements, performance, and capacity. Overall, Zambia has established a legal framework for management of E&S issues at both national and provincial levels, which consists of laws, regulations, guidelines, and standards principally consistent with the Bank's PforR Policy and Directive. The legal framework provides a reasonable basis for addressing the E&S issues related to the Program activities; however, there is need for strengthening other aspects to consistently address E&S risks in line with the core principles of the Program.

8. **Environmental Management Systems.** Zambia is governed by its constitution which was promulgated in 1991 and amended in 2016. The constitution includes Section 255 which sets out the principles that underpin the management and development of Zambia's environment and natural resources. In addition, Section 257(g)



commits the Zambian government to establishing and implementing mechanisms that address climate change. It is from this law of the land that other legislation is derived. The GRZ has since developed an environmental management legal framework as follows: (i) Environmental Management Act 12 of Zambia (2011); (ii) Employment Act 2021; (iii) Zambia Occupation Health and Safety (OHS) Act 2010; (iv) Zambia Water resources Management Act 2011; (v) National Gender policy 2014; (vi) National Council for Construction Act 2020; (vii) Zambia National Climate Change Policy 2017; (viii) Land Act 1995; (ix) Zambia Wildlife Act 2015; (x) Forest Act 2015; and (xi) Plant Pests and Diseases Act 1958. The various laws, acts and regulations govern environmental management in terms of, inter alia, environment impact assessment (EIA), pollution control, natural habitats conservation, and OHS management.

9. The key government stakeholders involved in environmental management under the Program include MoA and its directorates, especially DoA for farm block, irrigation, crops development; ZARI; ZEMA; Water Resources Management Authority; Occupational Health and Safety Institute; and the National Council for Construction, Forestry Department. ZEMA is responsible for implementation and ensuring compliance of the Environmental Management Act by stakeholders, including approving EIA and guidance on EIA instruments that need to be prepared. Occupational Health and Safety Institute is responsible for OHS Capacity building, surveillances, audits medical assessments in case of accidents, though evident in mining and not in the agriculture sector. The MoA is responsible for all agricultural activities, as well as ensuring that all activities are implemented in a sustainable manner.

10. **Social Management System.** The assessment concludes that Zambia has formulated a series of laws and policies at the national and local levels and has established management agencies and mechanisms to govern social risks in relation to the Program activities. The management of social risks is governed by the Constitution of Zambia 1995, Urban and Regional Planning Act 2015, The National Resettlement Policy, Disaster Management Act 2013, Land Act 1995, Gender Equity and Equality Act, 2015, Employment Act 2019, Protection of Traditional Knowledge, Genetic Resources and Expressions of Folklore Act 2016, Sexual Offences Act 2009. The institutions that are responsible for implementation of these varied acts are MoA, ZEMA, Ministry of Lands and Natural Resources, Ministry of Infrastructure and Housing and Urban Development-Valuation department, Ministry of Works and Supply, Municipality and district councils and traditional systems of governance. Through the set institutions, gender-based violence and sexual exploitation and abuse risks, social exclusions, risks of land take and economic loss are managed. Subject to the potential social impacts and risks identified, the social system assessment focused on the dimensions concerning social impacts and risks assessment and management system, cultural heritage protection, occupational health and community safety, land acquisition and resettlement, public participation, ethnic minorities, and vulnerable groups. It was concluded that existing social management systems were weak, and implementation was fragmented. Notable gaps were identified in the handling of land acquisition and compensation processes, inclusion of vulnerable groups, particularly persons living with disability and including process for benefits sharing. Mechanisms for addressing grievances were equally lacking.

11. With reference to World Bank PforR policy and Directive, gaps exist in the environmental and social screening, assessments and management of risks in biodiversity, natural habitats, social inclusion, land acquisition, resettlements, ESHS, OHS, community health and safety, climate risk screening revealed inadequate capacity at national and provincial level for both ZEMA and MoA to implement and monitor environmental and social compliance in projects. Though legislation is reasonable, enforcement is limited. Roles and responsibilities of different Government departments charged with ensuring compliance are not clearly stipulated and coordination is challenging. Resource allocation to the regulatory authority ZEMA and other Government



departments is usually delayed. The EIA guidelines are skewed towards mining activities and not agriculture, and once Environmental Project Briefs or Environmental Impacts Statements are approved by ZEMA, monitoring implementation of the plans is not regularly conducted and project developers have no obligation to adhere to the requirements of ZEMA. Similarly, resettlement and compensations are implemented by private investors with minimal or no involvement by MoA in the farm blocks. OHS regulations are also not yet prepared for agriculture hence the mandate of the OHS institute does not fully extend to agriculture. Other inadequacies identified include lack of environmental and social experts within implementing institutions and absence of comprehensive EIA guidelines to address cumulative impacts and associated facilities.

12. Against this background, the existing environmental and social systems will require strengthening to effectively address impacts associated with the Program. There will be need to adhere to the exclusion list developed for the program and ensure full compliance in implementing recommendations identified as part of the ESSA to strengthen risk management.

13. **Key Conclusions and Recommendations.** The ESSA concluded that although the national and provincial systems for addressing E&S impacts are generally consistent with the Bank's PforR Policy and Directive, there remains a need to strengthen efficiency and effectiveness of E&S management under the Program. The key recommendations include:

- (i) Prepare ESIA guidelines for irrigation, farm block and feeder roads that will bridge differences between national legislation and World Bank's PforR Policy and Directive in management of environmental and social risks such as resettlement and compensation issues.
- (ii) Improve institutional capacity in the Program implementing agencies, regarding implementation of the requirements of environmental and social legal framework and monitoring compliance of the same by ensuring that the MoA has environmental and social specialists and ZEMA's capacity is strengthened to screen social aspects. Capacity strengthening includes a continuous capacity building and training program of relevant personnel on E&S risk management to improve the understanding and application of the GRZ E&S policies, and adoption of good sector practices on environmental and social risk management and social accountability, at the national and provincial level.
- (iii) Prepare/update existing environmental and social management instruments so that environmental and social assessments are strengthened for full alignment with Bank's PforR Policy and Directive requirements.
- (iv) WARMA to only deliver water withdrawal authorization (section 23 of the Water Resources Management Act) to private investors in irrigation schemes supported by the Program once the investor has prepared ESIA's that meet the guidelines prepared by the MoA with Program support.
- (v) Prepare a communications strategy and stakeholder engagement plan that includes a grievance redress mechanism (GRM).

14. A Technical Assistance component using the IPF approach will address E&S capacity strengthening activities which will include the hiring of specialists in the areas of environment, social, and gender inclusion within the MoA as well as a social specialist within ZEMA. Other capacity strengthening activities include training of ministry staff and contractors on environmental and social risk management aspects.

**ANNEX 6. PROGRAM ACTION PLAN**

Action Description	Source	DLI#	Responsibility	Timing		Completion Measurement
DLI# 3: FRA maize trading through ZAMACE (Commodity Exchange). Establishment of the electronic stock monitoring system.	Technical	DLI 2	FRA	Due Date	31-Dec-2023	Establishment of the electronic stock monitoring system.
DLI# 7: Scaling up CSA Technologies. Development of CSA training manual which incorporates clear performance standards for adoption.	Technical	DLI 7	DoA and ZARI	Due Date	31-Dec-2022	Completion of CSA training manual acceptable to the Bank.
DLI# 8: Training on irrigation organizational development and irrigation planning. Training targets: (i) Government technical staff from central and provincial offices; (ii) farmers; and (iii) private sector service providers.	Technical	DLI 8	DoA	Recurrent	Yearly	Training attendance lists.
DLI# 9: Preparation of the guidelines for climate resilient feeder road rehabilitation design	Technical	DLI 9	DoA	Recurrent	Continuous	Completion of guidelines for climate resilient feeder road rehabilitation design acceptable to the Bank.
Establishment of a procurement related complaint handling mechanism with an interface to accept complaint and detailed provisions	Fiduciary Systems		MoA	Due Date	31-Dec-2022	Establishment of a procurement related complaint handling mechanism.



on complaint resolution including appeal.						
For compliance with Anti-corruption Guidelines: Anti-corruption Commission to share Report with World Bank on any allegations of fraud and corruption related allegation and investigations on a six-monthly basis.	Fiduciary Systems		MoA	Recurrent	Semi-Annually	Report submitted to World Bank on a six-month basis.
Preparation of the updated Environment and Social Management Plans.	Environmental and Social Systems		MoA	Due Date	31-Dec-2022	Completion of the updated Environment and Social Management Plans, acceptable to the Bank.
Training on E&S risk management to improve the understanding and application of GRZ E&S policies, and adoption of good sector practices on environmental and social risk management and social accountability, at the National and District level.	Environmental and Social Systems		MoA	Recurrent	Yearly	Training attendance lists.
Establishment of a dedicated M&E Unit within MoA.	Technical		PPD	Due Date	31-Oct-2022	Establishment of a dedicated M&E Unit within MoA.
Recruit necessary staff to strengthen ZEMA's capacity to screen Program activities particularly regarding social issues	Environmental and Social Systems		MoA	Due Date	31-Jan-2023	Social Specialist hired
Hire environment and social specialists within MoA that will	Environmental and Social Systems		MoA	Due Date	31-Jan-2023	Environment and Social specialist hired in MoA





supervise the preparation of ESIA's, ESMPs and RAPs for Program activities under DLI 8 and to monitor their implementation						
Prepare environmental and social guidelines for the farm blocks, irrigation sector and for feeder roads (see guidance notes annexed as annex 1,2 and 3 of the ESSA and refer to technical assessment report).	Environmental and Social Systems		MoA	Due Date	30-Jun-2023	ESIA Guidelines for Irrigation sector and rural feeder roads
Resources available for implementation of ESIA/ESMPs and RAPs.	Environmental and Social Systems		MoA	Recurrent	Yearly	Annual workplans and budgets
Only deliver water withdrawal authorization (section 23 of the Water Resources Management Act) to private investors in MoA irrigation schemes supported by the Program, once the investor has prepared ESIA's and RAPs that meet the E&S requirements.	Environmental and Social Systems		WARMA	Other	Before water extraction permit is granted	Approved ESIA and implemented RAP
Develop and implement a Stakeholder Engagement Plan that includes a communication strategy and a GRM with a GBV sensitive channels.	Environmental and Social Systems		MoA	Due Date	31-Dec-2022	Communication Strategy, SEP final version.



**ANNEX 7. IMPLEMENTATION SUPPORT PLAN**

**Main focus of Implementation Support**

Time	Focus	Skills Needed	Resources Estimate	Partner Role
First twelve months	Ensure the establishment of the PSC, PTC, TCs. The development of the PAP. Development of the M&E manual. Engagement with other GRZ units. Recruitment of the TP verification agency.	Task Team Leader, and Technical (agriculture production, agribusiness and value chain, irrigation, water management, civil engineering) Agriculture Economist, Legal, Transport, Procurement, safeguards, Financial Management, and M&E, and team assistance.	Two Implementation Support Missions, each consisting of 12 participants each. Each mission will be for two weeks.  Total 16 participants x two weeks x two missions = 62 staff weeks including international and domestic travel.	Coordination with other stakeholders including other WB funded projects, GRZ agencies, development partners in Zambia including UN agencies, and domestic consulting firms.
12-48 months	Review implementation progress, data collections and verification by the TP, and coordination with stakeholders.	Task Team Leader, and Technical (agriculture production, agribusiness and value chain, irrigation, water management, civil engineering) Agriculture Economist, Transport Procurement, Safeguards, Financial Management, and M&E, and team assistance.	Two implementation mission every year each consisting of 12 participants, each mission will be for two weeks.  15 participants x two weeks x two missions / yr x 3 years = 180 staff weeks including international and domestic travel during the three years.	Coordination with other stakeholders including other WB funded projects, GRZ agencies, development partners in Zambia including UN agencies, and domestic consulting firms.

**Task Team Skills Mix Requirements for Implementation Support**

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Agriculture Specialist	16	8	For the whole lifetime of the Program
Irrigation	16	8	For the whole lifetime of the Program
Agribusiness	16	8	For the whole lifetime of the Program
Agriculture Economist	16	8	For the whole lifetime of the Program
Civil Engineer	16	8	For the whole lifetime of the Program
Transport	16	8	For the whole lifetime of the Program
Procurement	16	8	For the whole lifetime of the Program
Financial Management	16	8	For the whole lifetime of the Program
Safeguards (Env)	16	8	For the whole lifetime of the Program
Safeguards (Social)	16	8	For the whole lifetime of the Program
M&E	16	8	For the whole lifetime of the Program
Legal	4	2	During the first 12 months.

**Role of Partners in Program Implementation**

Name	Institution/Country	Role
GRZ – MoF	Zambia	Coordination and Support
International Development Partners	Other UN agencies, and other development partners operating in Zambia.	Coordination and Knowledge sharing
African Development Bank	Zambia	Coordination and Knowledge sharing



## ANNEX 8. INVESTMENT PROJECT FINANCING COMPONENT

### I. Component Description

1. The Environment and Social Systems Assessment (ESSA) and Fiduciary Systems Assessment (FSA) conducted during Program preparation revealed capacity gaps related to the implementation of safeguard and fiduciary policies that need to be addressed to facilitate the effective implementation of the Program and the NAP more broadly. The IPF Component of the Program will help to fill these gaps by financing national-level activities in support of the NAP activities.

2. The IPF Component, in an amount of US\$5.0 million, would finance capacity building of relevant entities at national, provincial and district/local levels, to carry out necessary E&S and fiduciary due diligence of the activities under the NAP and the proposed Program. Specifically, it will strengthen: (i) the ZEMA's social E&S capacity to undertake its duties as stipulated in the Environmental Management Act of 2011 (ii) the MoA's capacity to undertake Environment and Social (E&S) screening, including climate risk screening and gender inclusiveness/GBV/SEA risk screening; management, and monitoring of the Program activities; and (iii) the MoA's capacity to enhance its procurement, financial management, financial monitoring, budgeting, quality assurance, and M&E functions.

3. The Component would support the institutional capacity building activities through the following categories. First, it will provide resources for the recruitment of specialists in environment and social management to oversee screening of the Program activities who will be seconded under the PPD of the MoA. These specialists would support the relevant MoA departments at various levels on the preparation of required assessments and mitigation measures. Secondly, it would provide technical assistance to support ZEMA to enhance its screening capabilities, and to the MoA to update/revise its Environmental Management tools (e.g., Environment and Social Management Plans (ESMPs) and Resettlement Action Plans (RAPs) for irrigation schemes and farm blocks). Thirdly, it would support training programs for the relevant ZEMA and MoA staff and contractors at all levels on: (i) national legislation requirements and good environmental and social management practices and procedures; and (ii) procurement, financial management, budgeting and quality assurance functions. Fourthly, the component will provide financing for equipment and software for the MoA to enable it to carry out its fiduciary oversight and M&E functions effectively.

4. The proposed IPF Component is expected to generate the following results: (i) enhanced capacity for the management, monitoring and evaluation of the Program activities; (ii) enhanced procurement, FM and M&E capacities for improved Program implementation; and (iii) enhance adherence to, and implementation of, environmental and social standards under the NAP and ZAMGRO Program.

### II. Procurement Arrangements

5. Procurement under the Program will be carried out in accordance with 'World Bank Procurement Regulations for IPF Borrowers for Goods, Works, Non-Consulting and Consulting Services', dated July 2016 and revised in November 2017, August 2018, and November 2020, hereafter referred to as 'Procurement Regulations'. The Procurement Plan will be updated at least annually or as required to reflect the actual Program implementation needs and improvements in institutional capacity. The IPF component of the Program will use the



Systematic Tracking of Exchanges in Procurement (STEP), a planning and tracking system, to plan, record, and track procurement transactions and performance.

6. **Procurement Activities.** These include procurement of goods, non-consulting services, and consulting services.

7. **Use of National Procurement Procedures.** Under the IPF Component, all contracts following the national market approach shall follow the procedures set out in the Procurement Regulations Section V Para 5.3 and 5.4 of National Procurement Procedures. The provisions of the Public Procurement Act No. 8 of 2020 and Public Procurement Regulations of 2022 have been assessed and found to be consistent with the World Bank Procurement Regulations, Section V, Paragraph 5.4, National Procurement Procedures.

8. **Market Approach.** When approaching the international market, procurement will be done using the World Bank's Standard Procurement Documents. Procurements while approaching the national market will be done using the National Standard Bidding Documents with appropriate modifications and additional annexes to address the World Bank's Anti-Corruption Guidelines, universal eligibility, and the World Bank's right to inspection and audit.

9. **Procurement Risk.** The procurement assessments indicate that the risk under the IPF Component is *Moderate*. However, the overall procurement risk of the Program is still assessed as *Substantial*.

### III. Financial Management Arrangements

10. **Budgeting.** The Program budgeting will be done in line with the GRZ budget cycle and budgetary procedures. The MOA will prepare an annual work plan and budget which will be cleared by the World Bank and be the basis of implementation of the Project.

11. **Accounting System and Capacity.** The MoA has a financial management unit that is adequately staffed with a director of finance, assisted by the chief accountant (sector), who is assisted by senior accountants and accountants, some of whom have experience with World Bank project accounting. The MOA is connected to the country's Integrated Financial Management Information System (IFMIS). Therefore, the country IFMIS will be used to record Project accounting transactions following the built-in chart of accounts, as well as for reporting budget execution. The accounting policies and procedures to be used by the Project will be updated in the relevant sections of the existing the Financial Management Manual, as needed.

12. **Internal Controls and Internal Audit.** The MoA will be responsible for ensuring that the internal controls system as established in the Public Finance Management (PFM) regulations is working as intended. This will include management of imprest, cash, and bank reconciliations, fixed assets management, and payment approval processes. The Ministry's Internal Audit department will include the internal audit of the Project in its Annual Audit Work Plan and share its reports with the auditee and the World Bank semi-annually.

13. **Funds Flow and Disbursement Arrangements.** The Project will use country system in the funds flow and disbursements of funds. The MoA will open a designated Account (DA) denominated in US dollar and a Project Account (PA) denominated in ZMW. Both accounts will be opened at the Bank of Zambia (BOZ) with a mirror account at a commercial acceptable to the World Bank. The Project will use the SOE method-based disbursement



to disburse the IPF loan. The Project will submit a withdrawal application for the initial disbursement based on the DA ceiling prescribed by the DFIL. Subsequent disbursement to the DA will be based on actual expenses to be documented by the project. Other method disbursements available to project include Reimbursement, Direct Payment, and Special Commitment. Payments will be made centrally by the MoA, including payments for activities carried out by related institutions such as ZARI and SCCI.

14. **Financial Reporting.** The MoA will prepare and submit semi-annual IFRs and annual financial statements to the World Bank. The semi-annual IFRs will be submitted to the World Bank within 45 days after the end of the period to which it relates. The submission will be done online through client connection. The annual financial statements will be prepared based on IPSAS cash basis of accounting. Audited financial statements, together with management letters with management responses, will be submitted to the World Bank no later than nine months following the end of the fiscal year.

15. **External Audit Arrangements.** The Office of the Auditor General in Zambia has the constitutional responsibility for carrying out all audits of public funds and will be responsible for the Program audit. The Standard Audit TOR for World Bank-funded projects that the Auditor General has been using can be customized as appropriate. The audit will be conducted in accordance with ISA or ISSAIs. The MoA Program-specific audit report and management letter will be submitted to the World Bank within nine months after the end of the financial year audited as noted under financial reporting above.

16. **Financial Management (FM) Risk Rating.** The overall FM residual risk rating of the IPF Component is *Moderate*. The FM arrangements in place at the MoA meet the World Bank's minimum requirements under World Bank Directive: Financial Management Manual for World Bank Investment Project Financing Operations issued on February 10, 2017. The FM arrangements will therefore provide, with reasonable assurance, adequate information to provide accurate and timely information on the status of the program, as required by the World Bank.

#### **IV. Environmental and Social Standards**

17. The World Bank Environmental and Social Framework (ESF) will be applied to the IPF Component, which will strengthen the GRZ's environment and social framework. The physical works to be financed under the Program will be guided by the Program's ESSA. The MoA has experience coordinating and implementing World Bank-financed projects and programs. However, it lacks environmental and social staff as well as adequate knowledge to manage environmental and social risks and impacts. The IPF Component will strengthen MoA's capacity in this regard by recruiting environmental and social staff with the necessary skills to advise on the Program's environmental and social capacity building dimensions as well as provide training as needed to relevant personnel. Towards this, the IPF component will support: (i) the hiring of Environment, Social and Gender inclusion specialists in the MoA to facilitate preparation and implementation of guidelines and monitoring compliance of the same; (ii) the hiring of periodic technical assistance expertise to update and prepare environmental and social management instruments for the farm blocks, irrigation schemes and feeder roads; (iii) strengthening of ZEMA capacity through training and hiring necessary technical expertise to enable it carry out its specified duties under Article 29 of the Environmental Management Act (2011); and (iv) training activities for MoA, contractors, and relevant stakeholders in environmental and social risk management.



18. The IPF Component's Environmental and Social Risk Classification is *Substantial* owing to the potential of downstream environmental and social risks due to the technical assistance activities designed for the implementation of the PAP.



ANNEX 9. MAP OF ZAMBIA

