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Independent Office of Evaluation

# Republic of Zambia
# Smallholder Productivity Promotion Programme

## PROJECT PERFORMANCE EVALUATION

# Republic of Zambia
# Smallholder Productivity Promotion Programme
# Project performance evaluation

**May 2023**
**Report No. 6490-ZM**
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Photos of activities supported by the Smallholder Productivity Promotion Programme

Front cover: Maize field planted using farming techniques learned from the Smallholder Productivity Promotion Programme in Mporokoso District, Northern Province.

Back cover: Programme-supported storage shed in Chifilwe Agricultural Camp, Luwingu District (left); Programme-supported weirs in Shiwangandu District, Muchinga Province (right).

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# *Preface*

*This report presents the findings of the project performance evaluation undertaken by the Independent Office of Evaluation of IFAD (IOE) of the Smallholder Production Promotion Programme (S3P) in the Republic of Zambia. The programme was implemented between 2011 and 2019.*

*The programme was designed to sustainably increase income levels, and the food and nutrition security of rural households. This was expected to be achieved by focusing on increasing smallholder farmers' production, productivity and sales, sustainable smallholder productivity growth, and by improving the environment for productivity growth, in line with Government and IFAD policies and priorities.*

*There were positive contributions to smallholders' production and productivity for the targeted crops (cassava, rice, beans and groundnuts), including positive spillover effects for maize. However, the absence of sustained access to inputs and interventions to complement the supply side with the demand side, in particular market orientation, prevented the programme from achieving its full potential, as smallholders faced challenges in finding markets for the S3P focus crops.*

*During implementation, the programme contributed to improved access to extension services, but this had evidently declined at the time of the evaluation, following a withdrawal of funding. The approach of working with the private service providers was a critical first step towards a pluralistic extension advisory service system. However, it lacked the key ingredients to enable the extension advisory services in Zambia to be more pluralistic in nature as envisaged at programme design. The institutional and policy framework was not harmonized to take into account the experiences of working with private service providers and supporting the establishment of a sustainable, demand- and market-driven extension advisory system.*

*Smallholders' knowledge of conservation agriculture and other sustainable agriculture practices is relatively high but adoption rates have remained low. The use of a one-size-fits-all approach, which does not consider the agro-ecological differences of the provinces, seems to have hindered wider uptake. Therefore, tailoring conservation agriculture and making it site-specific to the agro-ecological conditions is critical. In addition, support for labour-saving technologies was inadequate to address labour intensity constraints of conservation agriculture.*

*The report offers four key recommendations for ongoing and future projects in the Republic of Zambia and in the Eastern and Southern Africa region, as follows: (i) sufficiently integrate and support market orientation in production and productivity enhancement programmes; (ii) give greater attention to localized, contextually specific application of sustainable agricultural practices through the adoption of a systems agronomy approach; (iii) provide more systematic support to the harmonization of the extension advisory services to achieve pluralism goals; and (iv) ensure the careful sequencing and timeliness of interventions in integrated programmes to facilitate the delivery of results more effectively.*

*I hope that the findings of this evaluation will be instrumental to further improve the future results of the collaboration between the Government of Zambia and IFAD.*

Indran A. Naidoo

*Indran A. Naidoo, PhD*
*Director*
*Independent Office of Evaluation of IFAD*

# Acknowledgements

The project performance evaluation was led by Raymond Mubayiwa, IOE Evaluation Officer. Fabrizio Felloni, IOE Deputy Director, Johanna Pennarz, IOE Lead Evaluation Officer, Fumiko Nakai, IOE Senior Evaluation Officer, and Enala Mumba, IOE Evaluation Officer provided comments on the draft report. Antonella Sisti, IOE Evaluation Assistant, provided administrative support.

The evaluation benefited from substantial contributions from Stephen Tembo, IOE senior consultant, Mpala Nkonkomalimba, IOE national consultant, and Kelvin Munjile, IOE research assistant.

IOE is grateful to IFAD's East and Southern Africa Division and to the Government of the Republic of Zambia, in particular the Ministry of Agriculture, for their insightful inputs at various stages of the evaluation process and the support they provided to the evaluation team.

# Contents



**Annexes**

# Currency equivalent, weights and measures

### Currency equivalent

| | |
|---|---|
| Currency Unit | = Zambia Kwacha (ZMW) |
| US$1.00 | = 17.96 ZMW |

### Weights and measures

| | |
|---|---|
| 1 kilogram | = 1,000 g |
| 1,000 kg | = 2.204 lbs |
| 1 kilometre (km) | = 0.62 miles |
| 1 metre | = 1.09 yards |
| 1 square metre | = 10.76 square feet |
| 1 acre | = 0.405 hectares |
| 1 hectare | = 2.47 acres |

# Abbreviations and acronyms

| | |
|---|---|
| AR4D | Agricultural Research for Development |
| COMACO | Community Markets for Conservation |
| COSOP | country strategic opportunities programme |
| DCU | district cooperative union |
| DFA | district farmers association |
| EIRR | economic internal rate of return |
| E-SAPP | Enhanced Smallholder Agribusiness Promotion Programme |
| FBS | farmer business school |
| FFS | farmer field school |
| FGD | focus group discussion |
| FISP | Farmer Input Support Programme |
| IA | impact assessment |
| IOE | Independent Office of Evaluation of IFAD |
| JICA | Japan International Cooperation Agency |
| KII | key informant interview |
| LF/FF | lead farmer/follower farmer |
| MoA | Ministry of Agriculture |
| M&E | monitoring and evaluation |
| MTR | mid-term review |
| NAESS | National Agriculture Extension and Advisory Services Strategy |
| NAP | National Agricultural Policy |
| PCR | programme completion report |
| PDR | programme design report |
| PMU | programme management unit |
| PPE | project performance evaluation |
| PPP | Public-private partnership |
| RFP | Rural Finance Programme |
| RIA | Research and Impact Assessment Division (IFAD) |
| RUFEP | Rural Finance Expanded Programme |
| S3P | Smallholder Productivity Promotion Programme |
| SAPP | Smallholder Agribusiness Promotion Programme |
| SCCI | Seed Control and Certification Institute |
| SO | Strategic Objective |
| TLC | Total Land Care |
| WFP | World Food Programme |
| ZARI | Zambia Agricultural Research Institute |

# Map of the project area

## Republic of Zambia

Smallholder Productivity Promotion Programme (S3P)

*Project performance evaluation*


The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

*Map compiled by IFAD* | 24-02-2022

# Executive summary

## A. Background

1. **Project background.** The Smallholder Agriculture Productivity Promotion Programme (S3P) covered three provinces of Zambia: Luapula, Muchinga and Northern. The overall goal was to sustainably increase income levels, and food and nutrition security of rural households. The development objective was to increase production, productivity and sales of smallholder farmers in the target communities. This was to be achieved through: (i) strengthening farmer organizations and their federations; (ii) pluralistic participatory extension systems; (iii) agricultural research for development; (iii) local agricultural investments, to improve access to markets, increase labour productivity, reduce post-harvest losses, and improve land and water management; (iv) support to the policy and planning framework; and (v) programme management, monitoring and evaluation. The programme was implemented for 8 years and 1 month, from 01 December 2011 to 31 December 2019.

2. The revised approved budget was US$41.2 million, which included an IFAD loan of US$31.5 million and co-financing of a US$0.9 million grant from the Government of Finland. The Government of Zambia and beneficiaries were to contribute US$6.1 million and US$1.5 million, respectively. Actual programme disbursement was US$33.83 million, which includes the IFAD loan of US$29.33 million, a Government of Finland grant of US$0.9 million, a beneficiaries' contribution of US$2.02 million and a Government of Zambia contribution of US$1.58 million.

3. **Evaluation scope and approach**. The project performance evaluation (PPE) was undertaken in accordance with IFAD's Revised Evaluation Policy and the revised IFAD Evaluation Manual (2022). The scope of the S3P PPE covered the entire implementation period of S3P from 2011 to 2019. The evaluation covered all components of S3P, with a particular focus on key issues including targeting, gender and youth, pluralistic agricultural extension services, agricultural research for development, and harmonization of the IFAD portfolio in Zambia. The evaluation applied a mixed-methods approach to triangulate evidence to answer the evaluation questions, in line with the evaluation matrix. In addition, it adopted a mixed-modality approach which involved remote interviews with key programme stakeholders via zoom and field-level data collection in Zambia.

## B. Main findings

4. **Access to extension advisory services improved during programme implementation but evidently declined following the completion of the programme.** The delivery of extension advisory services through the private service providers and Ministry of Agriculture significantly enhanced access, as reflected by the high outreach numbers of the farmer field schools/farmer business school and lead farmer–follower farmer models. However, following the phasing out of S3P, the private service providers and Ministry of Agriculture have not sustained the same intensity of extension service provision as during programme implementation. This confirms that outreach was driven by programme financing. The policy framework was not harmonized to accommodate the experiences of working with private service providers in delivering extension advisory services. Notwithstanding the lack of adequate coordination between public and private extension service providers, no efforts were made to harmonize the policy or institutional frameworks to inform the pluralism as envisaged at design. The interactions of the PPE mission with both the Ministry of Agriculture and private service providers found a genuine and growing receptivity to the potential benefits of pluralistic extension advisory services. However, the absence of a structured review process on how both public and private extension services could co-exist in a non-duplicative and less costly way was a major shortcoming of S3P.

5. **Adoption rates for conservation agriculture and other sustainable agriculture practices have remained low, partly because of gaps in addressing the contextual, institutional and enabling environment issues.** The use of a "one size fits all" approach in the promotion of conservation agriculture practices became one of the major shortcomings, as the programme did not consider the different farm typologies, farmers' production orientation, and availability of farm equipment (mechanization). If conservation agriculture and other sustainable agricultural practices are tailored to the agro-ecological conditions, they can enhance the net benefits as well as the build resilience of the production systems. Furthermore, addressing the multiple barriers such as access to improved seeds and labour costs while improving the institutional and enabling environment factors that could support wider adoption required adequate consideration.

6. **Support to adapted tools/equipment, transport and on-farm post-harvest technologies was inadequate.** The promotion of conservation agriculture was to be enhanced by the incorporation of labour-saving technologies, given the labour-intensity nature of adopting sustainable farming practices. However, only 4 of the targeted 14 labour-saving technologies were supported and these were not sufficiently contextualized due to lack of end-user involvement in determining the choice of technology. In addition, the overall outreach numbers and utilization of the labour-saving technologies was low. In the end, this was a disincentive for wider adoption of conservation agriculture.

7. **The capacity development support of farmer organizations and their federations was not optimal and required further support, particularly on marketing.** Although the programme implemented capacity development interventions targeting district cooperative unions, district farmer associations, sub-district level primary cooperatives and other farmer groups for capacity development, this did not yield significant positive results. Areas of modest improvement include governance systems of farmers' organizations and cooperatives, as indicated by an increase in the number of cooperatives that were holding elections and the number of women holding executive positions in the leaderships structures, albeit not influential. Weak performance was observed in marketing capacity and enhanced group solidarity for collective action, as evidenced by weak aggregation and bulking by the cooperatives.

8. **Mixed performance was observed on the S3P-supported infrastructure investments.** The 28-kilometre Luwingu-to-Chimpili road was the most successful infrastructure activity constructed by S3P, resulting in improved access to markets for smallholder producers and traders. The permanent weirs visited by the PPE mission showed good construction quality and utilization, particularly during the off-season. On the other hand, community contributions, in the context of matching grants, were not timely and delayed construction of the storage sheds. In some cases, the materials provided by the communities were of poor quality. Ultimately, delays in completing the construction and handover of storage sheds to the cooperatives contributed to the low utilization, as observed during the field mission. S3P-supported access bridges were accessible and in good working condition; however, there were no signs of periodic maintenance.

9. **Market access has remained a significant and ongoing concern in the programme communities.** S3P focused on strengthening the supply side of agricultural production and relied heavily on: (i) coordination with Smallholder Agribusiness Promotion Programme/Enhanced Smallholder Agribusiness Promotion Programme to provide marketing and value chain development support; and (ii) Rural Finance Programme/Rural Finance Expansion Programme for the financing of enterprise development. This did not materialize, due to gaps in functional synergies at the operational level. The main direct achievement of the programme in terms of farmers' access to markets was the setting up of a marketing revolving fund mechanism through a once-off grant of US$500,000 which was provided to one of

the service providers, Community Markets for Conservation, in Luapula Province. This evaluation notes that the revolving fund has been sustained and grew by 25.5 per cent in dollar terms from 2016 to June 2022. Although the geographic reach of the marketing revolving fund now includes other provinces outside of the S3P target areas, it was positive that the crop focus still features three of the four S3P targeted crops (rice, beans and groundnuts).

## C. Conclusions

10. **The strong focus on the supply side with inadequate concentration on the demand side was a missed opportunity to achieve the full programme potential.** The design of S3P presented linkages between the different components through a farming systems approach that contributed to increased productivity and crop diversification. However, sustaining increased agricultural productivity required a mindset change towards market-oriented farming or farming-as-business approach. Furthermore, the right economic incentives for the smallholders needed to be in place to give sufficient consideration of the demand side of agricultural production.

11. **The programme approach of working with the private service providers was a critical first step towards a pluralistic extension advisory service system.** However, it lacked the key ingredients to transform the extension advisory services in Zambia to be more pluralistic in nature, as envisaged at design. The programme brought in private service providers to address slow implementation as well as pilot pluralistic extension services. This was important given the dwindling and severely underfunded public extension services in Zambia. While the Government acknowledges the need for strong extension services delivery, system gaps persist in terms of institutional capacity, planning, reporting and feedback, high extension–to–farmer ratios, coordination and communication. The private service provider has been coming in to fill in this void; however, in an unregulated environment, the potential benefits of a pluralistic extension advisory service have not been realized so far.

12. **The promotion of conservation agriculture and sustainable agricultural practices was not sufficiently contextualized.** Part of the S3P theory was based on the promotion and adoption of sustainable agricultural practices that were delivered as part of the delivery of extension advisory services. However, the promoted sustainable agricultural practices were not well adapted to the programming context, in particular paying adequate attention to the agro-ecological differences of the provinces and the local indigenous knowledge. Eventually, a standardized approach resulted in the promotion of approaches that were not context-specific, contributing to low adoption rates. In addition, conservation agriculture is labour-intensive and requires the right equipment for minimal soil disturbance, soil health improvement, and conservation of moisture. Activities to support labour-saving technologies had shortcomings in two aspects: (i) they were not adequately researched vis-à-vis the context and the needs of the beneficiaries; and (ii) they were inadequately implemented to generate meaningful results.

## D. Recommendations

13. **Recommendation 1: To ensure sustainable smallholder production and productivity growth, future IFAD-funded operations should sufficiently integrate market orientation in production and productivity enhancement programmes.** The success of production and productivity enhancement interventions is premised on adopting a market-oriented approach, which not only supports the supply side but also adequately addresses the demand side (market access) and contributes to sustaining crop diversification (as a pull to production). Analysis of market opportunities should be an ongoing feature to enable smallholder farmers to have access to, and effectively participate in, the markets for newly introduced crops.

14. In addition, deliberate efforts should be made to develop partnerships with relevant private sector actors through public–private–producer partnership mechanisms for targeted value chains covering input suppliers, logistics and agro-dealers, financial service providers, commodity brokers and buyers.

15. **Recommendation 2: IFAD and the Government should give greater attention to localized, contextually specific application of different sustainable agricultural practices through the adoption of a systems agronomy approach.** The focus on conservation agriculture seems to be too restricted to address the needs for sustainable production and productivity enhancement. There is a need to think beyond conservation agriculture. Therefore, IFAD should shift from "best bets" towards "best fits" grounded in farmers' realities, needs and indigenous knowledge to come up with context-specific and appropriate interventions. Evidence from the PPE suggests the need for more context-specific application of conservation agriculture and sustainable agricultural practices, with different approaches across the different agro-ecologic/agro-climatic conditions instead of promoting a particular choice of techniques.

16. **Recommendation 3: IFAD should provide more systematic support to the harmonization of the extension advisory services system to achieve the pluralism goals.** The general experience from S3P implementation demonstrates that pluralism in extension advisory services has strong potential to contribute to agricultural productivity, sustainability and the resilience of smallholders to shocks and stresses. The advantages and disadvantages of public and private extension advisory services need to be fully understood in the overall context of a pluralistic extension advisory services system.

17. The PPE suggests the following entry points or drivers of success in moving towards a more pluralistic system: (i) support the implementation of a stakeholder-, intervention- and information- mapping exercise to identify and map stakeholders, tools and laws, regulations and strategies relevant to extension advisory services in Zambia and in the Eastern and Southern Africa region, as well as their use and effectiveness; (ii) support the development and implementation of a national policy on pluralistic extension advisory services; and (iii) support the development, piloting and implementation of a formal framework for the strategic coordination of different pluralistic actors for integrated service delivery.

18. **Recommendation 4: IFAD and the Government should carefully consider the sequencing, timeliness and effective implementation of interventions in integrated programmes to facilitate the achievement of greater and more lasting results.** For programmes like S3P that include multiple interlinked interventions ranging from infrastructure investments and capacity development to enhancing production and production, and access to markets, sequencing is critical. For instance, infrastructure investments and capacity development should not be left late during programme implementation as they contribute to the achievement of the implementation of other components, such as market development, production and productivity, as well as testing/piloting, in real-time, mechanisms for their long-term sustainability.

19. This requires an approach/framework that describes the sequencing options, providing clear guidance on conceptual and programmatic parameters, while maintaining flexibility to adapt to the changing contextual environment. The randomized rollout of interventions limits the full potential of interventions, given their interdependence.

# IFAD Management's response[1]

1. Management welcomes the overall evaluation findings of the Smallholder Productivity Promotion Programme (S3P) project performance evaluation (PPE) conducted by the Independent Office of Evaluation.

2. Management agrees with the report's assessment of the overall performance of the programme, including ratings for overall programme achievement and performance of partners. Management also appreciates the responses to the previous round of Management comments on the draft PPE and the adjustments made for the final version, especially in recognizing the critical points for consideration for projects that support pluralistic extension services and agricultural research for development for improved productivity.

3. Management appreciates the thorough and fair assessment of the S3P interventions and their positive contribution towards smallholders' production and productivity, as well as improved access to extension services and knowledge on conservation agriculture. This notwithstanding, the PPE has also accurately identified the gaps that negatively affected the programme, preventing it from achieving its full potential, such as the absence of sustained access to inputs, the lack of market orientation and the limited focus on harmonizing the policy and institutional framework to take into account the experiences of working with private extension service providers. Additionally, the use of a "one size fits all" approach, which does not consider the agro-ecological differences of the provinces, affected the adoption of conservation agriculture practices.

4. Management appreciates the PPE recommendations, to which detailed comments are presented below:

   - **Recommendation 1: To ensure sustainable smallholder production and productivity growth, future IFAD-funded operations should sufficiently integrate market orientation in production and productivity enhancement programmes.** The success of production and productivity enhancement interventions is premised on adopting a market-oriented approach, which not only supports the supply side but also adequately addresses the demand side (market access) and contributes to sustaining crop diversification (as a pull to production).

     **Agreed.** Management recognizes the importance of integrating market-oriented interventions in production and productivity enhancement programmes. As such, deliberate design efforts will be made to link beneficiaries to sustainable input and output markets through small and medium enterprises, as well as larger- scale off-takers, to enhance technology adoption, impact and sustainability. Management is pleased to confirm that market-oriented interventions (i.e. value chain development, business planning and rural finance) have been integrated into the design of a new programme focusing on climate change adaptation and economic resilience that was recently submitted to the Adaptation Fund and the Global Agriculture and Food Security Programme (GASFP). Furthermore, **in future designs – as well as the new Country Strategic Opportunities Programme (COSOP) scheduled for 2024 – IFAD will ensure the integration of rural finance in climate-smart agriculture projects** in order to create an enabling environment for better access to markets.

   - **Recommendation 2: IFAD and the Government should give greater attention to localized, contextually specific application of different sustainable agricultural practices through the adoption of a systems**

[1] The Programme Management Department sent the final Management's response to the Independent Office of Evaluation of IFAD on 30 January 2023.

**agronomy approach.** The focus on conservation agriculture seems to be too restricted to address the needs for sustainable production and productivity enhancement. There is need to think beyond conservation agriculture. Therefore, IFAD should shift from "best bets" towards "best fits" grounded in farmers' realities, needs and indigenous knowledge to come up with context-specific and appropriate interventions. Evidence from the PPE suggests the need for more context-specific application of conservation agriculture and sustainable agricultural practices, with different approaches across the different agro-ecologic/agro-climatic conditions instead of promoting a particular choice of techniques.

**Agreed.** Management recognizes the need to give greater attention to localized, contextually specific application of different sustainable agricultural practices, understanding that climate variability (e.g. droughts, flooding) has contributed to yield differences between seasons and geographical locations. As such, **IFAD will ensure that the rollout of sustainable agricultural practices under Enhanced Smallholder Livestock Investment Programme (SAPP) and Rural Finance Expansion Programme in 2023 is tailored to the localized agro-ecological conditions, and will be a potential feature of the new COSOP**. In the new design with the Global Agriculture and Food Security Programme, the need to implement localized sustainable agriculture solutions will be integrated and shared with the lead ministry as a key technical recommendation from IFAD.

- **Recommendation 3: IFAD should provide more systematic support to the harmonization of the extension advisory system to achieve the pluralism goals.** The general experience from S3P implementation demonstrates that pluralism in extension advisory services has strong potential to contribute to agricultural productivity, sustainability and the resilience of smallholders to shocks and stresses. The advantages and disadvantages of public and private extension advisory services need to be fully understood in the overall context of a pluralistic extension advisory system.

  **Agreed.** Management recognizes that both public and private extension are required to achieve the pluralism goals. Given the limitation of the public extension system, S3P was the first programme under the Ministry of Agriculture (MoA) to pilot the private extension service providers. Although this was a critical first step towards a pluralistic extension advisory service system, it lacked the key ingredients for transforming the extension advisory services to be more pluralistic in nature, as envisaged at programme design. **IFAD has already shared with the MoA the key lessons regarding the advantages and disadvantages of extension advisory serves and the most potentially impactful solutions required to achieve the pluralism goals**. It is envisaged that these lessons will result in greater awareness of the need to harmonize the institutional and policy frameworks and for future designs to take into account the experiences of working with private service providers (lessons which will be reflected in the new COSOP).

- **Recommendation 4: IFAD and the Government should carefully consider the sequencing, timeliness and effective implementation of interventions in integrated programmes to facilitate the achievement of greater and more lasting results**. For programmes like S3P that include multiple interlinked interventions ranging from infrastructure investments and capacity development to enhancing production and production, and access to markets, sequencing is critical. For instance, infrastructure investments and capacity development should not be left late during programme implementation, as they contribute to the achievement of the implementation of other components, such as market development, production and

productivity as well as the testing/piloting in real-time of mechanisms for their long-term sustainability.

**Agreed.** Management acknowledges that S3P faced several challenges during the course of its implementation, which included lengthy start-up delays, high staff turnover rates during its initial years, withdrawal of the Finnish Grant (co-financing) and poor sequencing of key activities (such as infrastructure development) that were only implemented towards the end of the programme. **For future designs, IFAD and the Government have agreed to ensure that programmes/projects become operationally effective shortly after the signing of the Financing Agreements.** To achieve this, future designs will be undertaken in such a manner that all necessary and sufficient actions are taken to ensure adequate preparedness for implementation of programmes/projects. In terms of activity scheduling, IFAD and the Government have agreed to carefully consider the sequencing, timeliness and effective implementation of interventions, e.g. ensuring that infrastructure- and market- related activities are rolled out at project inception in order to ensure sustainability. In addition, both **IFAD and the Government have committed to ensuring that the duration of co-financing is aligned with the main loan/grant proceeds** unless otherwise rigidly precluded by the requirements of the source of the co-financing.

# Republic of Zambia
# Smallholder Productivity Promotion Programme
# Project Performance Evaluation

## I. Country and project background

### A. Introduction

1. In line with the IFAD Evaluation Policy,[1] the Independent Office of Evaluation of IFAD (IOE) undertook a project performance evaluation (PPE) of the Smallholder Agricultural Productivity Promotion Programme (S3P) in the Republic of Zambia in 2022.

2. **IFAD's portfolio and interventions in Zambia.** The total cost of IFAD's portfolio in Zambia over the past three decades (since 1981) amounts to US$352.06 million, of which US$225.81 million (64 per cent) has been IFAD contribution. This funding has gone towards a total of 15 projects. Of these, 12 are closed and three are ongoing. In Zambia, IFAD loans have supported the commercialization of smallholder agriculture through the enhancement of crop and livestock productivity and the reduction of livestock diseases. The IFAD-supported projects have also created links between smallholder farmers, suppliers and market intermediaries. In addition, they have helped to increase access to rural financial services by small-scale farmers.[2]

3. The IFAD Country Strategic Opportunities Programme (COSOP) for Zambia (2011–2015, updated and extended from 2016 to 2018)[3] was aligned to the key policies and strategies of the country, including the National Agricultural Policy (NAP) and the Sixth National Development Plan. The COSOP's goal was "to increase the incomes, improve the food security and reduce the vulnerability of rural people living in poverty" and it identified three strategic objectives: (i) increase access to and participation in expanded and more competitive markets by poor rural men and women, within more efficient value chains; (ii) increase access to and use of technologies and services for enhanced productivity, sustainability and resilience of smallholder production systems; and (iii) increase access to and use of sustainable financial services by poor rural men and women.[4]

4. The IFAD Zambia COSOP for 2019–2024 is largely aligned with the COSOP for 2011–2018. The thrust revolves around incomes, and food security and nutrition of poor and vulnerable rural people through inclusive, sustainable, diversified and climate-resilient rural livelihoods.

### B. Country background

5. The Republic of Zambia is a landlocked country with a total land size of 753,000 km$^2$ (IFAD, 2011a). In 2010, the country had a population of 13 million and a population density of 17 persons/km$^2$. At independence in 1964, the country inherited an economy that was dependent on mining, accounting for 90 per cent of its foreign exchange earnings. Between 2004 and 2014, the growth in Zambia's GDP averaged 7.4 per cent per year (World Bank, 2018), lifting the country above the threshold of lower-middle-income countries. This was driven by an improvement in the macroeconomic indicators (relative to the 1980s and 1990s), debt relief, heavy investment in the social sectors (by the Government and cooperating partners), and a large increase in mining and agricultural production since 2004 (World Bank, 2008).

[1] https://ioe.ifad.org/en/evaluation-policy
[2] https://www.ifad.org/en/web/operations/w/country/zambia
[3] Aide Memoire, Republic of Zambia, IFAD funded portfolio alignment supervision and implementation support mission, 2016, paragraph 10.
[4] The design of S3P was aligned to the COSOP strategic objective of increasing access to and use of technologies and services for enhanced productivity, sustainability and resilience of smallholder production systems.

6. In 2011, Zambia had a GDP per capita of US$1,760 and a Human Development Index of 0.395, which made it rank 150th out of 169 nations. This slightly improved in 2019 when an Index of 0.584 was recorded, placing the country as the medium human development country – below the average of 0.631 for countries in this category but above the average of 0.523 for countries in sub-Saharan Africa (UNDP, 2020).

7. Despite improvements in economic performance, poverty remained high and widespread, with 64 per cent of the population living below the poverty line and 42 per cent living in extreme poverty in 2010 (AfDB, 2016). The national poverty line of ZMW 214 per adult equivalent per month largely remained in 2015, with more than 60 per cent still living below the poverty line despite real GDP per capita growing by 2 per cent per year in 2015 and 2020 (World Bank, 2020). However, there are marked differences between rural and urban areas. Poverty in rural areas increased from 73.6 per cent in 2010 to 76.7 per cent in 2015. In addition, 82 per cent of the poor in the country live in rural areas. On the other hand, poverty in urban areas fell from 25.7 per cent in 2010 to 23.4 per cent in 2015. Increased poverty levels in rural areas stems mainly from deteriorating levels of agricultural production constrained by factors that inhibit productive and commercialization capacity of smallholder farmers (IARPI, 2016).

8. In terms of climate change, the Republic of Zambia has been experiencing adverse impacts through an increase in the frequency and severity of seasonal droughts, occasional dry spells, increasing temperatures in valleys, and changes in the growing season. The agriculture sector, which is the main income and livelihood source for 65 per cent of the rural population, has been the worst affected. The Republic of Zambia is ranked 137th out of 181 countries, according to the University of Notre Dame Global Adaptation Index.[5]

## C. Policies on poverty reduction and agricultural growth

9. The current context of the Government's poverty reduction strategy is guided by: (i) the Vision 2030, which outlines long-term national and sector goals for attaining desirable socio-economic indicators to fulfil the Zambian people's aspirations; and (ii) the Eighth National Development Plan covering the period from 2022 to 2026, which aims to accelerate the realization of the goal and objectives of the country's Vision 2030. The plan recognizes the need to focus on economic transformation and job creation, human and social development, environmental sustainability and good governance as key strategic areas. A key component of Zambia's population requiring improved livelihoods is the smallholder farmers' population, which constitutes more than 80 per cent of the total number of farmers.

10. At design, the S3P was anchored in the NAP 2004–2015. The main thrusts of the NAP 2004–2015 were increased production, sector liberalization, commercialization, promotion of public–private partnerships (PPPs) and provision of effective services that will ensure sustainable agricultural growth. The Second NAP (2016–2020) sought to address the challenges of its predecessor and further the creation of a conducive environment to stimulate sustainable agricultural development. It provided a framework to promote sustainable agricultural diversification, agricultural commercialization, private sector participation and inclusive agricultural growth, including the promotion of competitiveness, stimulation of efficiency, and increased productivity and profitability in the agriculture sector (Ministry of Agriculture & Ministry of Fisheries and Livestock, 2016).

11. To support acceleration in the implementation of Vision 2030, and the Sixth National Development Plan, as well as the First National Agricultural Policy, the Government signed the Zambia Comprehensive African Agricultural Development Programme Compact (ZCC) in January 2011. The ZCC was anchored in four pillars with six compact

[5] The ND-GAIN Country Index summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. It aims to help governments, businesses and communities better prioritize investments for a more efficient response to the immediate global challenges ahead.

programmes: sustainable land management; agricultural productivity improvement; agricultural market development; agricultural investment promotion; food and nutrition security; research and extension enhancement. The Compact also committed the Government to promoting agricultural marketing and credit (NEPAD, 2011). The Government has realized the need to focus on marketing and productivity growth as key to the commercialization of smallholder agriculture through a "farming as a business" drive. This is critical to reducing high levels of rural poverty.

12. The poverty reduction and agricultural growth policies acknowledge or reaffirm the critical role of agricultural extension in improving the production and productivity of smallholder farmers. The National Agriculture Extension and Advisory Services Strategy (NAESS) was developed as part of the endeavours to strengthen the extension services delivery system (both public and private). It is important to emphasize that the strategy was developed at the midpoint of S3P implementation. The NAESS was formulated based on key strengths, weaknesses, opportunities and challenges in the agriculture sector in terms of extension advisory services delivery mechanisms and service providers (Ministry of Agriculture & Ministry of Fisheries and Livestock, 2016). The objective was to provide various stakeholders in extension services delivery with a framework within which to deliver effective pluralistic extension services in order to reduce poverty and accelerate agricultural transformation. The overall objective was to ensure efficient utilization of scarce resources, eliminate the dissemination of distorted and conflicting messages, and improve the adoption and adaptation of innovative technologies, essentially moving towards a harmonized approach.

13. The implementation of the NAESS was expected to build on the decentralized agricultural extension system of the Ministry of Agriculture (MoA) which is present at all levels (national, provincial, district and community/agricultural camp). At community level, the camp extension officers are the frontline extension agents who are constantly in touch with the farmers. The camp extension officer reports to the block extension officer, who in turn reports to the district agricultural officer. The Camp Agricultural Committee provides overall oversight and coordination of all agricultural development activities at the camp level.

## D. The Smallholder Productivity Promotion Programme (S3P)

14. **Programme goal and objectives**. The overall goal of S3P was to sustainably increase income levels, and food and nutrition security of rural households. The development objective was to increase smallholder farmers' production, productivity and sales in the target communities based on the adoption of good agricultural practices, improved seed multiplication and cropping practices, and access to markets.

15. **Programme components.** S3P consisted of two main components: sustainable smallholder productivity growth; and an enabling environment for productivity growth. The components and subcomponents of S3P are as follows:

    a. **Component 1:** The sustainable smallholder productivity growth component aimed to improve smallholder access to knowledge, extension, adapted technologies and improved planting material, with three subcomponents: (i) strengthening farmer organizations and their federations; (ii) pluralistic participatory extension systems; and (iii) agricultural research for development (AR4D).

    b. **Component 2:** The enabling environment for productivity growth sought to address critical constraints in the enabling environment for smallholder productivity growth. This was reflected in three subcomponents: (i) local agricultural investments, which improve access to markets, increase labour productivity, reduce post-harvest losses, and improve land and water management; (ii) support to the policy and planning framework; and (iii) programme management, monitoring and evaluation.

16. **Programme area.** Geographically, S3P was implemented in three provinces (Luapula, Muchinga and Northern) targeting 24 districts. During Year 1, it was to work in eight districts of Luapula and Northern districts, and progressively expand to 16 districts of the same provinces in Year 2, and in Year 3 expand to a third province (Muchinga) targeting another eight districts. The first two years (16 districts) were to focus on cassava-based farming systems. The total number of agricultural camps that were to be targeted by S3P across the three provinces was 150.

17. **Programme target groups.** S3P was primarily designed to target smallholder rural farmers with a cropped area up to 5 ha, organized in groups and/or cooperatives, or willing to join such groups. These groups' farming activities are mainly constrained by poor market access and weak bargaining power for produce prices. Given the role of women in Zambia's agriculture sector, female-headed households and households affected by HIV/AIDS were expected to be targeted.

18. **Programme cost and finance**. The revised financing for S3P was estimated to be US$41.3 million. This included: (i) IFAD loan of US$31.5 million (76.3 per cent of the total cost); (ii) Government of Finland contribution through a grant of US$0.9 million; (iii) beneficiary contributions of US$2.8 million; and (iv) The Republic of Zambia estimated contribution of US$6.1 million in foregone taxes (see table 1).

Table 1
**Programme financing by financier (US$'000)**

| *Financier* | *Appraisal* | *Revised* | *% of revised costs* | *Actual* | *% of actual costs* | *% disbursed* |
|---|---|---|---|---|---|---|
| IFAD loan | 24 800 | 31 500 | 76.3% | 29 329 | 86.7% | 93.1% |
| Government of Finland | 7 100 | 898 | 2.2% | 898 | 2.7% | 100.0% |
| Beneficiaries | 1 900 | 2 789 | 6.8% | 2 019 | 6.0% | 72.4% |
| Government of Zambia | 6 100 | 6 079 | 14.7% | 1 577 | 4.7% | 25.9% |
| Total | 39 900 | 41 266 | 100% | 33 823 | 100% | 82% |

Source: IFAD Operational Results Management System & Programme Completion Report (PCR).

19. Table 2 below outlines the relative weight of each component in relation to the total financing of the programme. Component 1 (sustainable smallholder productivity growth) absorbed 54.4 per cent of actual programme costs and component 2 (enabling environment for productivity growth) absorbed 25.2 per cent. Programme management, and monitoring and evaluation was 20.2 per cent of the actual costs.

Table 2
**Programme financing by component (US$'000)**

| *Component* | *Revised* | % of revised costs | *Actual** | *% of actual costs* | *% disbursed* |
|---|---|---|---|---|---|
| Sustainable smallholder productivity growth | 23 462 | 56.9% | 18 393 | 54.4% | 78.4% |
| Enabling environment for productivity growth | 13 130 | 31.8% | 8 594 | 25.2% | 86.7% |
| Project management, and monitoring and evaluation | 4 674 | 11.3 | 6 736 | 20.2% | 146.2% |
| Total | 41 266 | 100% | 33 823 | 100.0% | 82.0% |

*Source:* IFAD Operational Results Management System & PCR Report.

20. **Time frame.** The programme was approved by IFAD's Executive Board on 15 September 2011. The IFAD Loan Agreement was signed on 9 December 2011 and the loan became effective the same day. The programme was completed on 31 December

2019, after an extension of one year from its original scheduled completion date of 31 December 2018.

21. **Implementation arrangements.** The MoA was the executing agency for S3P. The programme was overseen by a programme steering committee and managed by a programme management unit (PMU) under the direction of the then MoA and Cooperatives Policy and Planning Department (IFAD, 2011b). Implementation was through service providers – Community Markets for Conservation (COMACO), the MoA, NIRAS International Consulting and Total Land Care (TLC) – and through contractors for the local agricultural investments. COMACO operates as a private social enterprise, NIRAS is a private consultancy company, and TLC is an NGO.

22. **Significant changes during programme implementation.** Several changes were made to the original design during implementation, at mid-term review (MTR). These changes were effected following the withdrawal of the Finnish government grant due to slow implementation and IFAD additional financing to compensate for the gap created by the withdrawal of the Finnish grant. The programme outreach targets were increased from 48,000 to 67,500 direct smallholder farmer households.[6] At design, nutrition was not integrated; it was retrofitted at MTR and resulted in changes in the commodity focus, leading to the addition of rice and other nutrition-dense crops, in line with the nutrition objectives. The programme had planned a seed-breeding initiative that was dropped due to the long life cycle, and instead a recommendation was made to focus on already known certified seed varieties. For the local agricultural investment projects, ceilings were raised for district, community and group investments.[7] This was to re-align the programme costs and to increase the number of projects.

23. **Linkages with other IFAD programmes**. With its focus on the supply side, S3P was expected to forge strong linkages with the Smallholder Agribusiness Promotion Programme (SAPP) and its successor project Enhanced Smallholder Agribusiness Promotion Programme (E-SAPP), which focused on the demand side. Similarly, S3P was to establish strong linkages with the Rural Finance Programme (RFP) and its successor Rural Finance Expansion Programme (RUFEP) for linking smallholder farmers with financial institutions.

24. **Summary of S3P theory**. S3P anticipated changes at both the upstream and downstream levels (see annex V, figure 2, ToC diagram). At the downstream, it worked to enhance the capacity of cooperatives and farmer organizations to improve agricultural production and productivity and, at the upstream, to create an enabling environment for productivity growth and agriculture commercialization.[8] It promoted the adoption by smallholder farmers of good agricultural practices to increase production and incomes in cassava, groundnut and beans mixed systems. Improving the accessibility and effectiveness of pluralistic agricultural extension advisory services was another key outcome of the programme. Smallholder farmers were to receive extension services through support from the service providers (i.e. COMACO, the MoA, NIRAS and TLC), which were to provide trainings. This partnership was expected to contribute to the adoption of a harmonized approach to extension services delivery between public and private providers. Furthermore, S3P provided matching grants to cooperatives for infrastructure such as roads, water management structures, drying floors and storage sheds, and labour-saving technologies.

25. If the intended pathways are achieved, long-term outcomes are: (i) increased crop productivity (quantity and yields) for targeted crops (cassava, rice, beans and groundnuts), reduced vulnerability of farmers to climatic variations affecting

[6] Similarly, the aggregate outreach target for COMACO and TLC was increased from 38,500 to 49,500 households based on their demonstrated capacity in using the lead farmer approach.
[7] The ceilings were raised as follows: a) district-level investment ceilings were raised from US$250,000 to US$500,000 per project; b) community-level investments were increased from US$25,000 to US$100,000 per project; and c) the ceiling for group-level investments was adjusted from US$2,500 to US$25,000.
[8] Farmer organizations were provided training on management and entrepreneurship skills.

production and access to markets and finance by smallholders' farmers. The vision of the programme was to have: (i) increased asset ownership; (ii) increased household savings; (iii) reduced prevalence of child malnutrition; and (iv) reduced household food insecurity.

# II. Evaluation objectives, methodology and process

26. **Objectives.** The objectives of the evaluation were to: (i) provide an independent assessment of the overall results of the programme; (ii) generate findings and recommendations for the design and implementation of ongoing and future operations in Zambia; and (iii) identify issues and inform ongoing and future evaluative work.

27. **Scope.** The PPE covered the entire implementation period of S3P from 2011 to 2019. It assessed all components of S3P, with a focus on identified key issues, including targeting, gender and youth, pluralistic agricultural extension services, AR4D, and harmonization of the IFAD portfolio in Zambia.

**Methodology and process.** The PPE was conducted in accordance with the revised IFAD Evaluation Policy (IFAD, 2021a) and the IFAD Evaluation Manual of 2022 (IFAD, 2022). It adopted a set of internationally recognized evaluation criteria and a six-point rating scale (annexes II and III, respectively) to assess the performance of the programme.

28. The evaluation applied a mixed-methods approach to triangulate evidence in order to answer the evaluation questions in line with the evaluation matrix and key issues for the evaluation based on the reconstructed theory of change (see paragraphs 24 and 25). To address the key evaluation issues, evaluation questions were asked along the evaluation criteria. An evaluation framework was prepared to present these questions and the sources of data (see annex VI). The evaluation adopted a mixed modality approach which involved remote interviews with key programme stakeholders and development partners via zoom, and field-level data collection in Zambia.

29. A review of available documents was conducted to obtain secondary data, and S3P Research and Impact Assessment Division (RIA) impact study analysis and data were used to the extent possible.[9] The PPE team carried out extensive in-country data collection, stakeholder and beneficiary interviews (online and in person), and direct field observations. The in-country field mission took place from 9 May 2022 to 20 May 2022 and included focus group discussions (FGDs) with beneficiaries across six programme districts using a stratified random sampling approach based on the productivity status of the implementation camps. In-depth FGDs largely followed the qualitative impact protocol approach, which facilitated the analysis of programme relevance, effectiveness and impact. Much of the information from these field visits was triangulated through key informant interviews (KIIs) with S3P service providers. Within the sampled sites, the PPE covered an array of programme stakeholders – including frontline extension service staff, farmer groups and cooperatives, lead farmers and local authorities. The mission itinerary and list of people met are annexed to this report (see Annexes VIII and IX, respectively).

30. An online wrap-up meeting was held on 8 July 2022 with IFAD and Government of Zambia stakeholders to validate findings, share emerging messages and inform the stakeholders of the next steps in the evaluation process. This was followed by report drafting and internal IOE peer review. Following the internal IOE peer review, the draft report was shared with IFAD's Eastern and Southern Africa Division and the Government of Zambia for comments. The comments by IFAD and the Government have been taken into account in the final report.

31. **Limitations.** The contacts of the contractors who undertook the infrastructure activities were not provided to the evaluation team for interviewing. The evaluation also faced challenges stemming from the absence of local and provincial production and productivity data to assess current trends in production and productivity since the completion of the programme. A gender analysis was not conducted to more clearly benchmark the programme goals on gender equality and women's empowerment. In addition, the absence of a systematic approach to the analysis of the various capacity

[9] The RIA study was conducted as part of IFAD's 11th Replenishment. The project had conducted a baseline survey; however, no endline survey was implemented in view of the RIA impact study.

development activities was a limitation for the evaluation, given that much of the results pathways were premised on training and capacity development. Therefore, the evaluation team relied on a more qualitative analysis to address the challenge through triangulation of documents reviewed, stakeholder and beneficiary perspectives and field observations to provide an ex-post judgement on the performance of the programme.

**Key points**

- Agriculture remains the priority sector in the growth and poverty reduction agenda of Zambia. Over 60 per cent of the population derives its livelihood from agriculture. Although Zambia has experienced strong economic growth in the recent past, agriculture has not performed well.
- The total cost for IFAD's portfolio in Zambia over the past three decades (since 1981) is US$352.06 million, of which US$225.81 million (64 per cent) has been IFAD's contribution and has gone towards 15 projects.
- The objectives of the evaluation are to: (i) provide an independent assessment of the overall results of the programme; and (ii) generate findings and recommendations for the design and implementation of ongoing and future operations in Zambia.
- S3P covered three provinces of Zambia: Luapula, Muchinga and Northern. The development objective was to increase smallholder farmers' production, productivity and sales.
- The financing for S3P was US$41.3 million, which included an IFAD loan of US$31.5 million (76.3 per cent of the total cost). Contribution from the Government of Finland was US$0.9 million, beneficiary contribution was US$2.8 million, and contribution from the Government of the Republic of Zambia was estimated at US$6.1 million in foregone taxes.

# III. Main evaluation findings

## A. Programme performance on key themes

32. This section assesses the performance of the programme along the thematic lines identified in the approach paper for the evaluation: targeting, gender and youth; pluralistic extension advisory services; and AR4D.

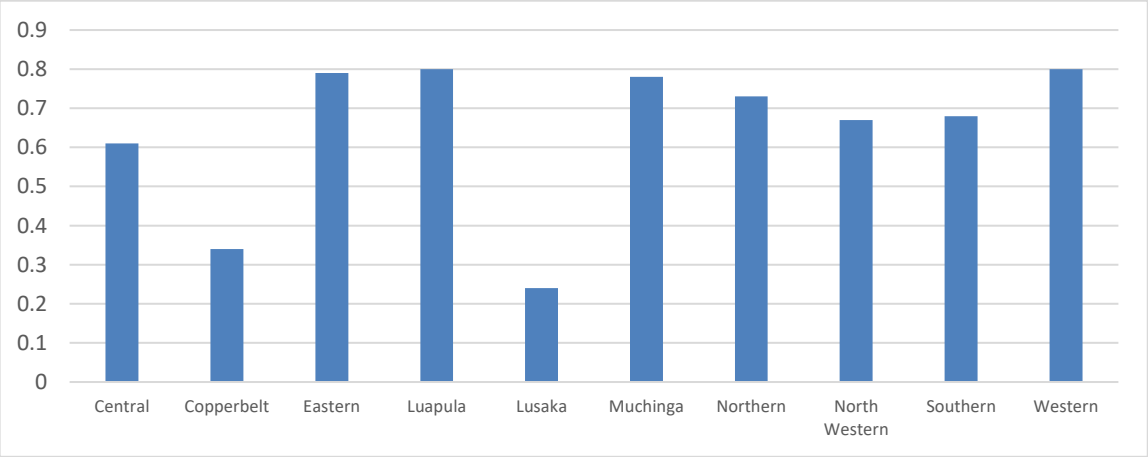
### (a) Targeting, gender and youth

33. This section of the report assesses the performance of S3P in targeting gender and youth in line with the key evaluation questions identified in the approach paper (see annex IV). The PPE sought to understand the extent to which the targeting strategy was implemented in line with the design, how it was monitored and eventually how effective it was in reaching the target groups.

#### Geographic targeting approach

34. **The choice of provinces was relevant given the prevailing poverty characteristics of the selected provinces**. S3P applied geographic targeting criteria to focus on a limited area. According to the programme design report (PDR), Northern Province ranked the second highest in poverty incidence and extreme poverty in 2006 (78 and 64 per cent, respectively), and Luapula the third highest (73 per cent and 61 per cent, respectively). The PPE analysis also confirms that the choice of provinces remained relevant during implementation in view of the latest poverty estimates of 2015 (see figure 1 below), which indicate persistent poverty in the S3P targeted provinces in comparison to the other provinces (see also annex VI, figure 3). Similarly, at design, food insecurity and the prevalence of malnutrition were high in these provinces. Stunting among preschool and school-age children was highest in Luapula (about 50 per cent and 51 per cent, respectively), followed by Northern Province (also around 50 per cent, compared to a national average of 42 per cent and 31 per cent, respectively) (IFAD, 2011b).

Figure 1
**Percentage provincial poverty estimates**




Source: Mapping of sub-national poverty in Zambia (World Bank & ZAMSAT, 2015).

35. The programme made a relevant strategic decision of adding Muchinga province in order to establish linkages another IFAD funded programme (SAPP) for the delivery of the marketing component. In the first two years, the programme was implemented in Luapula and Northern provinces while in Year 3, programme activities were extended to Muchinga province. In theory, this was meant to improve implementation performance through lesson-learning. However, the PPE found no documentary evidence of experiences and lessons from the first two years. In addition, there were no specific mechanisms to capture such experiences and feed into the programme monitoring and evaluation system.

**Targeting individual beneficiaries and groups**

36. Reaching the individual beneficiaries was to be based on the following characteristics: poor rural small-scale farmers who cropped up to 5 ha, were resource-poor/low asset-base and had precarious livelihoods, which resulted in low resilience to shocks and stresses (IFAD, 2011b). The targeted smallholder farmers were supposed to be part of a farmer group, or be willing to join a group. This was appropriate given that cooperatives and farmer organizations have long been used as the main conduit by the Zambian government to reach smallholder farmers. However, there was a lack of clarity on how smallholder farmers who were not part of any group were to be mobilized to join groups or to form new groups through the self-targeting approach.

37. While the use of groups was appropriate for the programme, to some extent it suffered from the perennial challenge of lack of clarity on the long-term objective of joining or forming groups, and the purpose and role of beneficiaries in groups within and beyond the programme life cycle. Evidence from the PPE suggests that some groups were formed to benefit from the programme service delivery with no continuity beyond the life of the programme. This is critical given that in Zambia, the motivation for joining farmer organizations or cooperatives has been driven by the need to receive support from programmes, and primarily government programme, without defining the long-term vision of the groups in terms of economic empowerment and self-reliance, or collective group enterprise development.

38. **Gender targeting was effective in reaching women.** The programme adopted a gender targeting strategy with the goal of reaching 45 per cent women's participation in various programme activities (IFAD, 2011b), and this was achieved. Women were the major target group. The use of a multi-pronged approach to reach the farmers was effective in reaching women, including cooperatives/farmer organizations, women's clubs for nutrition interventions, farmer field schools (FFS) and lead farmer/follower farmer (LF/FF) approach.

39. **There was no proactive approach to youth targeting.** Although the programme underlined the need to target youth, this was less clear and their engagement was not visible in the programme areas visited by the PPE. Although the PDR recognized the need to target youth-headed households, in practice it appears that this was not operationalized as no evidence was found of its implementation. In the absence of age-disaggregated data in the beneficiary database, it was also not possible for the PPE to verify the extent of youth targeting by the programme.

40. It can be assumed that vulnerability based targeting was partially achieved through the self-targeting mechanisms. Although the targeting articulated the need for vulnerability-based targeting measures such as female-headed households, households affected by HIV/AIDS, and youth-headed households, these were only partially implemented. A vulnerability assessment and mapping at programme inception could have facilitated the identification and determination of the interest groups' needs as well as proactive monitoring of the targeting strategy. Gaps existed in the way the programme responded to the needs of specific target groups.

## (b) Pluralistic extension advisory services

41. Enhancing access to the pluralistic extension advisory services was one of the key themes of the S3P programme theory and was assessed during the PPE. Pluralism implies diversity, not only in the organizations that provide services to farmers, but also in the models and services offered to farmers. Key lines of inquiry included understanding the effectiveness of the extension advisory services promoted by the programme, potential scale-up beyond the programme life cycle in line with the exit strategy, and the extent to which the programme played a facilitation role in harmonizing the extension approaches.

**Enhancing access to agricultural extension advisory services**

42. **The programme approach to extension advisory services delivery was appropriate in addressing the challenges faced by farmers in accessing quality and timely advisory services**. Strengthening agricultural extension services was, and still is, relevant to the needs of smallholder farmers in Zambia. With an extension officer-to-farmer ratio of 1:1,100 in Zambia, smallholder farmers are not able to access regular public and private extension services, which is a disadvantage particularly for women, who constitute the majority of the smallholder agricultural labour force. The use of group-based FFS and household approaches (LF/FF approach) provided the opportunity for the programme to test both hybrid information-focused and integrated market models[10] and thus to assess how they can co-exist in a harmonized way and generate lessons on the scalability and effectiveness of each model. However, the programme did not adequately seize this opportunity.

43. **Access to extension advisory services improved but was evidently declining following the completion of the programme.** S3P sought to improve access to, quality and sustainability of, extension advisory services available to smallholders in the target areas. The delivery of extension advisory services through the private service providers and the MoA, with programme support, enhanced access, as reflected by the high outreach numbers of the FFS/FBS (farmer business school) and LF/FF models. Following the phasing out of S3P, the private service providers and the MoA have not continued to provide extension services to farmers at the same scale as during the programme implementation, an indication that outreach was driven by programme financing.

**Capacity development for extension advisory services**

44. S3P adopted a two-pronged capacity development approach that involved the training of extension personnel and lead farmers and providing mobility capacity for the government extension services personnel. The capacity development on extension services delivery involved assessment methodologies under various pluralistic extension advisory services, development of a harmonized curriculum, and training of personnel and farmers (IFAD, 2021b). The trainings involved training master of trainers followed by a training of trainers.[11] While this was an appropriate approach, the PPE did not find any evidence of how the training was developed and whether it was based on capacity needs assessments of the extension service providers as part of the harmonization approach. Efforts by the PPE to access the adequacy of the training curriculum/manuals were not successful. Furthermore, there was no evidence of a post-training review to assess the impact of the training.

45. Other capacity development activities built into the design and implementation of S3P were the improvement of mobility of extension staff through the procurement of vehicles and motorbikes and the rehabilitation of camp houses (see annex VII, table 8). This was found to be relevant given the mobility challenges faced by government extension officers from the provincial to the community level. The evaluation mission observed that, given the limited coverage, challenges regarding the mobility of extension staff and quality of camp housing persisted. This points to a worrying situation since the majority of extension officers are unable to reach smallholders and provide quality services in a timely way. The programme operated in 150 agricultural camps, and camp houses were rehabilitated in 23 of the targeted 42 camps (see annex

[10] Typically, information-focused models are when information is the primary element and organizations rely on other groups to provide additional services, such as credit, input and market access. Integrated market models are when markets are assured and various forms of information, credit and inputs are available or supplied to participating farmers (Burrows et al., 2017).

[11] The available data only indicate the number of meetings that were conducted as part of the training of master trainers; the data do not shed light on the number of participants in these trainings.

VII, table 8).[12] In the long term, the sustainability of these activities will depend on availability of government resources for operations and maintenance.

**Comparing the lead farmer-follower farmer and farmer field schools/farmer business school**

46. In a number of ways, the two extension approaches were effective in addressing the challenges faced by smallholder farmers, as evidenced by the adoption of the good agricultural practices that were promoted by the programme, albeit below the expected levels. There was a consensus among stakeholders, including MoA staff and smallholder farmers that the LF-FF approach appeared to be more effective in delivering extension advisory services through the personalized peer-to-peer learning approach. The LF-FF reported ratio of 1:14 (IFAD, 2021b) implied that more intensive support was received by farmers. In addition, the demonstration plot sizes were much larger for the LF-FF compared to the FFS model. For the lead farmers, the average plot sizes were 20m x 20m, while for the FFS they were 10m x 10m. No information was available on the cost per farmer of the two extension advisory approaches.[13]

Table 3
**Summary of key elements of the LF-FF and FFS/FBS approaches in S3P**

| *Lead farmer – follower farmer approach* | *Farmer field schools/farmer business schools* |
|---|---|
| • LFs are selected with the help of community members (selection criteria include good performance in agricultural production and productivity).<br>• Areas in which LFs are trained include group mobilization, farming practices and crop husbandry practices.<br>• Each LF cultivates on average a 20m X 20m plot size for demonstration purposes and is given inputs (seed and fertilizer) and occasionally a bicycle for visiting FFs. LFs are not paid.<br>• Each LF is allocated 30 FFs to train.<br>• Each LF is expected to visit each FF under their mentorship.<br>• The FFs in turn prepare their own plots, on average 10m X 10m, which they use to practice what they learn from their LF.<br>• The FFs are also given inputs (seed and fertilizer) to use on their plots.<br>• Once the LFs and FFs have successfully undertaken the demonstrations, they are expected to replicate them on their fields.<br>• The expectation is that other farmers would also have been learning from the LFs/FFs and replicating what they learn on their own fields. | • Farmers identify a constraint in their farming and report it to the extension agents.<br>• The extension agents (primarily camp extension officers) organize farmers into FFSs according to their zones – where the zones are large; such zones may have more than one FFS in order to minimize walking distance by farmers to the demonstration plot.<br>• Each FFS is organized around a communal demonstration plot where the identified constraint is addressed. It could be demonstrating a practice/ technology such as an improved farming practice and improved crop variety.<br>• The plots for the FFSs tend to vary in size; in some cases they can reach up to 0.25 ha.<br>• At critical stages of what is being demonstrated (e.g. demonstration of the production of a high-yielding crop variety), field days would be held to demonstrate practices such as planting, weeding, fertilizer application (both basal and top dressing), and harvesting.<br>• During the field days, other actors in the crop value chain (e.g. input suppliers) are brought speak about products of interest to farmers. |

Source: Evaluation team.

47. **The intensive "train, demonstrate and visit" approach adopted by the LF-FF approach was considered costly.** Beyond the life of the programme, sustaining the procurement costs of farming inputs was found to be an obstacle except in some rice-growing communities where COMACO has continued to provide services to smallholder farmers, although with less intensity in the absence of ongoing funding. The evaluation considers that the perception of the LF-FF being expensive largely emanates from the

[12] The target of rehabilitating 42 camps was less than optimal, given the housing challenges that camp extension officers face that results in many of them staying far from the camps that they support. The failure of the programme to meet its rehabilitation targets means that the issue of camp extension officers' housing remains a significant challenges in enabling smallholders to access timely services.
[13] Ideally, the cost per farmer under each extension model would have provided useful comparative information. However, the cost could not be calculated because the prerequisite data were unavailable at the time of the evaluation.

mix of activities that involved the transfer of skills and technology on one hand and the transfer of inputs on the other, with the latter being more expensive. As such, it is important to distinguish between the delivery of extension services and the provision of inputs in assessing the viability of any extension approach, and this was not defined as part of the programme exit strategy. In addition, the question of incentives for LFs still looms large, in terms of the willingness and ability to continue providing services when the programme closed. Some organizations have sought to address the issue of incentives by boosting the skills of LFs in order to transition to fee-for-service entrepreneurs who market services to farmers (Burrows et al., 2017), an option the programme could have piloted.

48. **The major challenge for the FFS/FBS is the financial commitment in the continued operation of such an effort at large scale**. The provision of extension services through the FFS/FBS was preferred by the MoA and is perhaps the more cost-effective method of achieving good coverage for smallholder farmers. However, it still faces capacity and funding limitations that include transport, daily subsistence allowances, and continued capacity-building of extension services staff. The current experience proves that this is an unsustainable approach given the fiscal constraints and mobility challenges faced by MoA frontline staff (see box 1). The overall trend in budgetary allocation to agricultural research and extension by the MoA has been consistently low, with less than 3 per cent allocated to this sector over the past decade (IAPRI, 2021).

**Harmonization and strengthening of pluralistic extension advisory services delivery**

49. **The policy framework was not harmonized to accommodate the experiences of working with private service providers in delivering extension advisory services.** Despite the lack of adequate coordination between public and private extension services provision, no efforts were made to harmonize the policy or institutional frameworks to guide the process as well as key areas for strengthening at the local level. Through interactions with the MoA and private service providers, the PPE mission found a genuine and growing receptivity on the part of the MoA to the potential benefits of advisory service pluralism, but the boundaries need to be clearly defined in terms of the focus of each partner. The absence of a structured review process on how both public and private extension services could co-exist in a non-duplicative and less costly way was another shortcoming.

50. In the end, the piloted models for the provision of agricultural extension services cannot be fully qualified as a public–private partnership[14] as envisaged by the programme, but rather a service delivery model where the Government engaged service providers. Furthermore, there were missed opportunities to test PPP approaches in extension advisory services for the seed multiplication component. The failure of the programme to work with private seed companies who work along the seed value chain (for example, input suppliers and agro-dealers such as Good Nature Agro and Afriseed) was a missed opportunity. Such linkages could have facilitated the utilization of the seed testing laboratory, which was found to be below capacity at the time of the evaluation (see paragraph 76 for more information).

51. **Potential benefits of pluralistic extension advisory services delivery were not realized due to weak partnership.** The collaboration between the MoA and the service providers (COMACO and TLC) faced coordination challenges that resulted in the creation of parallel delivery mechanisms for extension advisory services. This resulted in a lack of complementarity, particularly in the communities where implementation was led by private service providers. Instead, it appears that the

[14] PPPs are mechanism for improving the delivery of public goods and services by partnering with the private sector while retaining an active role for government to ensure that national socio-economic objectives can be achieved. PPPs are thus defined as: a framework – that while engaging the private sector – acknowledge and structure the role for government in ensuring that social obligations are met and successful sector reforms and public sector investment achieved (ADB, 2008: 7).

partners were competing to outdo each other and protect their own turf. By the time the programme ended, no efforts were made to link the community extension workers engaged through the LF model with the mainstream government extension system. This could have been one of the exit points to ensure continuity of service provision in support of the mainstream extension delivery mechanisms.

52. Although the programme managed to demonstrate the potential of pluralism, it was not clear who was to pay for the extension services beyond S3P. The PPE found that the initial thinking around the extension models was to have farmers pay for extension services; however, this was abandoned given the perceived weak financial capacity of smallholder farmers to pay for services. In addition, no efforts were made to understand or pilot the smallholder farmers' willingness to pay for fee-based extension advisory services.[15] As it turned out, there was an inherent assumption that the Government would continue funding the delivery of extension services without sufficient consideration of its fiscal capacity.

Box 1
**Experiences in delivery of extension services: account of MoA extension services staff**

> Training and capacity development were provided to the extension officers and the community-based extension workers (LFs). The training adopted a harmonized approach, meaning the same curriculum was used for the master trainers and eventually the training of trainers. Subsequently, the same curriculum was used the farmers through the FFS/FBS and LF-FF extension approaches. The need for continued capacity-building of extension staff cannot be over-emphasized as there are critical links between farmers and research institutes, government and seed companies, and are therefore vital to ensure the smooth flow of information to the smallholder farmers. Extension staff play a significant role in ensuring that farmers receive important and timely information and advice for their farming operations.
>
> For example, in working with rice farmers, they informed farmers about the weather forecast. Last year they advised the farmers in the uplands to cultivate in the wetlands because there were not enough rains and the rice that was grown in the highlands did not mature but the rice in the wetlands did.
>
> Despite the successes with the training and provision of extension services to farmers, challenges still exist. For example, the government extension delivery system lacks adequate transportation and extension materials. In addition, the extension agent-to-farmer ratio is still very high. During S3P, the MoA was provided with resources to conduct FFS but currently does not have sufficient budget to continue, hence the frequency has declined in the absence of external funding.

Source: PPE key informant interviews.

## (c) Agricultural research for development

53. S3P sought to enable farmers' access to improved technologies, good agricultural practices and improved crop varieties. Key lines of inquiry that the PPE sought to address along this impact pathway include assessing the appropriateness of the promoted agricultural practices and technologies and their effectiveness, and collecting evidence of wider adoption of the practices promoted by S3P, including scaling up.

### Crop diversification

54. **The programme successfully introduced new crop varieties and enhanced diversification across the provinces.** S3P successfully introduced new crop varieties to enhance diversification and smallholder farmers' resilience to climate change. Smallholder farmers had traditionally focused on growing maize and cassava, the staple crops. Five varieties of rice and four varieties of beans were developed and

[15] The concept of willingness to pay or reservation price is defined as the maximum price that a given consumer accepts to pay for a given quantity of goods and service while remaining on his/her indifference curve. The concept first appeared in economic literature more than a century ago by Davenport in 1902. "Willingness to pay" and its methods were designed to determine prices for pure public goods and services.

submitted to the Seed Control and Certification Institute (SCCI) for certification. Four out of eight targeted varieties were released for commercialization, representing 50 per cent achievement (IFAD, 2021b). The released crop varieties were two for rice (Misamfu 2 and Misamfu 4) and two for beans (Lusitu and Machili). The Zambia Agricultural Research Institute (ZARI) and SCCI played a vital role in facilitating adaptive and on-farm research throughout S3P implementation.

55. **The initial strategy of implementing a variety-breeding programme was not appropriate given the lengthy breeding life cycle.** At design, S3P planned to develop improved crop varieties adapted to target areas and on-station breeding and selection programmes for cassava and mixed beans (IFAD, 2021b; IFAD, 2011b). However, the programme design did not consider the ongoing breeding programmes by the government research institutions, which could have provided a number of options for new crop varieties since they already had varieties under development. As such, changes were made when it became clear that the time required, approximately seven years, to breed and release crop varieties was beyond the S3P life cycle (IFAD, 2021b).

**Seed multiplication**

56. **The seed multiplication initiative was reasonably successful but negatively affected by lack of sustained access to foundation seed and markets**. The supply of foundation seed, training of extension service officers in seed multiplication for rollout to farmers, and carrying out quality control using seed certification staff (ZARI and SCCI) appear to have been successful. In communities where seed multiplication has been sustained, this was attributed to farmers' access to markets, e.g. in Senga Hill and Luwingu District, where the farmers are supplying seed to private companies such as Good Nature Agro and Afriseed. The majority of seed multipliers who were interviewed spoke of struggles with foundation seed – forcing them to rely on recycled legume seeds – and limited access to markets, as the programme did not sufficiently work across the seed value chain. Moreover, low levels of business management and entrepreneurial skills negatively affected "market-oriented" seed multiplication.

57. **The seed-testing laboratory in Mansa was operating at below capacity at the time of the evaluation.** To support sustainability of the benefits of seed multiplication, the programme financed the construction of a seed-testing laboratory in Mansa in Luapula Province. The seed-testing laboratory was officially opened in October 2020 and therefore could not be utilized to consolidate the gains of the seed production and multiplication. At the time of the PPE, the laboratory was operating at below 30 per cent capacity and characterized by seasonal activities. The laboratory staff have embarked on sensitization campaigns targeted at farmer organizations in the province aimed at creating demand for laboratory services. This could have been more effective if other aspects of seed production and multiplication had been addressed through a seed value chain approach, in particular by working with private seed companies.

**Conservation agriculture**

58. **There was increased knowledge of conservation agriculture and other sustainable agriculture practices promoted by S3P.** Most of the farmers met during the field mission were able to correctly describe the three key techniques of conservation agriculture[16] and went on to explain other sustainable farming practices associated with conservation agriculture such as erosion control, soil cover and fallowing (see box 2).[17] This demonstrates that farmers were knowledgeable on what is involved in conservation agriculture and sustainable agriculture practices and, to

[16] Conservation agriculture encompasses different agronomic technologies to simultaneously (i) increase water and nutrient use efficiency and (ii) conserve biodiversity and the environment. The main technologies include permanent soil cover, minimum soil disturbance (zero tillage), and reduced plant (seeding) density (Thierfelder et al., 2013).
[17] Ensuring minimum, if not zero, tillage as well as constant vegetation cover (or mulching) are among the most important measures promoted by S3P.

some extent, reflects the positive contributions of the training provided during programme implementation in the absence of a post-training assessment.

59. **Despite high knowledge of conservation agriculture, adoption remains low as evidenced by low practice of all three techniques together.** The impact assessment (IA) study found no significant statistical difference between beneficiaries and non-beneficiaries in the rates of adoption of conservation agriculture practices such as the components (minimum/zero tillage, soil cover, crop rotation), fallowing, agroforestry or erosion prevention. The adoption of most of these practices is still very low.[18] This was confirmed by the PPE, which found that some of the farmers were only able to adopt selected techniques rather than the total package. Some of the reported challenges in adoption of conservation agriculture practices include the constraint of residue retention due to communal off-season grazing and the economic value of residue as animal feed. The burning of residue was reported to have the benefit of lowering weed pressure. Similarly, weed management costs were also reported as a constraining factor for the adoption of minimum tillage.

60. **The promotion of conservation agriculture practices was not sufficiently adapted to the local agro-ecological conditions**. Advocating for a blanket "one size fits all" approach across the different provinces became one of the major shortcomings, as it did not consider the farm typologies, farmers' production orientation, and availability of farm equipment (mechanization). A recent study by the World Bank also confirms the need to consider the agro-ecological conditions when promoting specific conservation agriculture practices, as some perform better under dry than wet conditions (World Bank, 2019).[19] For example, informed respondents from the field visits noted that approaches such as potholing do not thrive in areas such as Muchinga because of sandy soils. In addition, smallholder farmers met during the field mission considered conservation farming practices as labour-intensive and tedious, and noted that it is mostly women and children who work in the fields using hoes.

61. **Adoption of other sustainable agriculture practices was relatively high.** The RIA impact study found that the practice of soil cover (through the management of harvest residues), fallowing, agroforestry and erosion control measures were widely practised (64, 48, 26 and 37 per cent, respectively), but there was no statistical significance between beneficiaries and non-beneficiaries, suggesting that this was not an S3P-driven result (IFAD, 2021b). The PPE confirmed that the practice of soil cover seems to be continuing; however, the same cannot be said for agroforestry (see paragraph 141).

62. **Availability of market incentives seems to sustain continued practice of conservation agriculture techniques.** The continued practice of conservation agriculture techniques requires concrete incentives, as evidenced by farmers who reported continued commitment to these practices because of the observed productivity and economic/income benefits. In a more direct way, S3P introduced market-based incentives to encourage change by guaranteeing market access through the revolving fund mechanism in one of the three programme provinces (Muchinga). This included offering a premium price (10 per cent above the going commodity rate) for adoption of conservation agriculture and sustainable farming practices. The smallholders who were benefiting from the market access initiative through COMACO were found to be still practising (e.g. rice farmers using system of rice intensification

[18] For instance, zero tillage was practised by 2 per cent of the sample, conservation agriculture (zero tillage, planting in basins and ripping) was practised by 5 per cent of the sample, and cover crops were cultivated by less than 1 per cent of the sample.

[19] Practices amenable to dry conditions offer significant potential impact in the event of a drier future climate. A few practices – minimum soil disturbance, residue retention, small-scale horticulture – performed worse under wetter conditions (e.g. AEZ III) than under dry conditions (e.g. AEZ I, IIa, IIb), possibly due to increased weed pressure, waterlogging, and lack of drainage.

- SRI), while in the same communities where COMACO used to buy groundnuts, practice and adoption has dropped following the withdrawal of the market incentives.

**Labour-saving technologies**

63. **Support to adapted tools/equipment, transport and on-farm post-harvest technologies was inadequate.** The promotion of conservation agriculture was to be supported by the incorporation of labour-saving technologies in order to address the need to reduce labour-intensity in sustainable farming practices.[20] S3P was to promote 14 labour-saving technologies compared to the target of four,[21] but no evidence of their availability and utilization from the visited communities was reported. In addition, S3P was to finance post-harvest equipment for farmer training institutes for demonstration purposes (IFAD, 2011b). Again, no evidence of post-harvest activities being implemented was observed or mentioned during the PPE field visits and interactions with stakeholders and beneficiary groups. Ultimately, the lack of appropriate equipment to encourage adoption of conservation agriculture was considered a significant drawback since it is labour-intensive. A number of farmers reported reverting to conventional methods of weed control as they struggled to cope with increasing weeds in the absence of appropriate weeding tools.

Box 2
**Sustainable agricultural practices**

> We were encouraging farmers to adopt some good practices in order to increase productivity. Some of the practices we promoted included the use of improved seeds from a reliable source, disease-free, and tolerant to certain environmental conditions, among other things. For crops like beans, we encourage farmers to observe the correct planting window associated with their locality as well as use of fertilizer because from our agronomic experiments we have observed that when you apply fertilizer to beans, yields generally will go up.
>
> We also promoted planting of crops in rows. The adoption of these practices by farmers was in piecemeal depending on what they saw. Land preparation and weeding take a lot of time and they consider these practices labour-intensive. In some areas, farmers see the benefits in terms of yields when they do it correctly. However, others do not care and prefer to continue with their conventional approaches of time- and labour-saving farming.
>
> It has been difficult because we experienced high rainfall so the seeds got rotten. For conservation agriculture, it has not been tailor-made for the region and most of the cultivation and village practices are for low-rainfall regions. Therefore, research needs to be done to tailor the technologies to this region, which is predominantly a high rainfall region. We need conservation agriculture but the challenge is excess amount of water and not lack of water so what we need to look at is how we keep optimal amount of water in those plant stations.

Source: Interviews with government extension staff.

## B. Programme performance on evaluation criteria

64. This section of the PPE report assesses the performance of the programme using the standard evaluation criteria in line with the 2022 IFAD Evaluation Manual. In view of the thematic structure that has been adopted in this report, issues analysed in the previous foregoing section will not be repeated, but reflected in summary under the respective evaluation criteria in order to provide an overall judgement on performance.

### Relevance

65. The relevance criteria assessed the extent to which: (i) the objectives of the intervention/strategy are consistent with beneficiaries' requirements, country needs, institutional priorities and partner and donor policies; (ii) the design of the interventions/strategy, the targeting strategies adopted are consistent with the

[20] This was to be informed by research to identify appropriate tools and technologies to be promoted, taking into consideration the views of the end-users in terms of testing alternative technologies (IFAD, 2011b). While this was appropriate, it was not implemented as part of determining the choice of technologies; instead a generalized approach was adopted.

[21] Cono weeders, rice threshers, modified bicycles, row markers, sickles, chaka hoes, heap pumps, treadle pumps, sprayers, cook stoves, half-wall kitchens, dibble sticks, and two-wheel and four-wheel tractors.

objectives; and (iii) the intervention / strategy has been (re-) adapted to address changes in the context.

66. **Relevance of objectives.** This PPE found S3P to be relevant and in line with the government policies and priorities and remained appropriate during the lifecycle of the programme. It confirms that the design of S3P was consistent with, and responded to, various government policies and development plans which are instruments for the attainment of Zambia's Vision 2030, the Millennium Development Goals, and later the Sustainable Development Goals (IFAD, 2021b).[22] The S3P objectives of increasing and diversifying agricultural production and productivity and improving food security, wealth creation and nutrition security were in line with the Vision 2030 and the successive National Development Plans (5th and 6th).

67. The design objectives of S3P continued to be relevant in addressing the objectives of the Second NAP (2016), whose main thrusts were: (a) increased agricultural production and productivity; (b) commercialization; (c) agricultural diversification; (d) promotion of public and private sector partnerships; and (e) provision of effective services to ensure sustainable agricultural growth. It was also in line with the National Gender Policy of 2014.

68. **Alignment with IFAD COSOP objectives.** The S3P goals of sustainably improving income levels and food and nutrition security for poor agricultural households were also coherent with the IFAD Zambia 2011–2018 COSOP objectives. The goals of IFAD's country programme are to increase household incomes, improve food security, and reduce the vulnerability of rural people living in poverty. The COSOP's focus on productivity growth was in line with the expected outcomes of S3P: sustainable increase in smallholder farmers' production, productivity and sales in target areas. This programme sought to directly contribute to the achievement of Strategic Objective 2 (SO2) and indirectly to SO1 and SO3 through expected collaboration with E-SAPP and RUFEP, respectively. The programme remained relevant to the strategic objective of the IFAD Zambia 2019 –2025 COSOP objectives.[23]

69. **Coherence of design.** The programme followed a farming systems approach (supply side) and was expected to complement other IFAD programme the SAPP/E-SAPP marketing and value chain approach (demand side) (IFAD, 2011b) and RFP/RUFEP for financing of enterprise development. However, the design of S3P and the other IFAD programme did not define how the linkages between the programmes was to achieve the functional synergies at the operational level. The IFAD IOE Zambia Country Programme Evaluation (CPE) made similar observations (IFAD, Zambia CPE, 2014). The lack of comprehensive marketing and value chain support became one of the significant design weaknesses of S3P. The programme subcomponents focusing on production and productivity, crop and land management practices, capacity development of farmer organizations, access to pluralistic extension services, infrastructure, and creating an enabling environment for smallholder productivity were appropriate to support the delivery of the programme's supply-side objectives.

70. **Targeting strategy.** As highlighted under the targeting thematic criteria, the S3P targeting approach articulated and attempted to prioritize poverty reduction, and the targeting strategy clearly defined the characteristics of its target groups. Criteria such as female-headed households, youth-headed households and households affected by HIV/AIDS were all built into the targeting approach, but loosely defined in terms of how these were to be achieved. In the absence of a vulnerability assessment to map

[22] These policies and plans included the NAP 2004–2015, the Second National Agricultural Policy (SNAP) 2016, the Sixth National Development Plan (SNDP) and the Revised SNDP, the Seventh National Development Plan, the National Agricultural Investment Plan 2014–2018, and the African Union's Comprehensive African Agriculture Development Programme.

[23] The IFAD 2019–2024 COSOP strategic objectives were as follows: SO1 is "increased agricultural production, productivity and commercialization to strengthen the resilience of smallholder production systems and enhance nutrition and food security"; SO2 is "develop efficient nutrition-sensitive agricultural value chains that increase the participation of smallholder farmers in markets and create rural employment opportunities".

out the needs of the IFAD target groups and of a good monitoring and evaluation system to monitor the implementation of the targeting criteria, it was difficult to verify the extent to which this was achieved.

71. **Summary.** The S3P design was relevant to the country context and government priorities, and the design concepts have remained relevant in the current development discourse. However, some of the assumptions were not realistic, in particular the creation of linkages with other IFAD programmes to address the demand side, which appeared reasonable and realistic at the design phase, and inadequate contextualization of technologies to improve smallholder farmers' production and productivity. Similarly, the piloting of pluralistic extension advisory services was not well articulated to deliver its intended objective of a pluralistic agricultural extension advisory system characterized by the co-existence of multiple public and private sector approaches, providers, funding streams, service types and sources of information. The relevance of the programme is rated **moderately satisfactory (4).**

## Effectiveness

72. The effectiveness criteria assessed the extent to which the objectives of S3P were achieved or likely to be achieved. Other areas that are addressed under effectiveness include assessing the extent to which S3P supported innovations aligned with stakeholders' needs or challenges, and whether the programme achieved other objectives or had any unexpected consequence(s).

### Effectiveness of outreach

73. At appraisal, the programme intended to reach 60,000 smallholder rural households (with cropped area up to 5 ha), organized in groups and/or cooperatives or willing to join such groups. The targeted households were to be reached in 150 agricultural camps of 24 districts in three provinces (IFAD, 2021b). This outreach target was revised to 67,500 households with additional financing. S3P fell short of meeting its revised outreach targets in terms of households reached (i.e. 58,411 out of the targeted 67,500); this represents 86.5 per cent achievement. In terms of household members, this constituted 292,055 household members out of a target of 337,500 (IFAD, 2021b).

74. Furthermore, women were estimated to account for 45 per cent (22,206) of the total number of households reached (IFAD, 2021b). The outreach targets for the provision of extension services also included a subset of beneficiaries for the AR4D component. The programme completion report (PCR) indicates an outreach of 39,927 households versus the planned target of 49,500 representing an achievement of 80.7 per cent. Overall, the outreach by both the MoA and the partners under the subcomponent was 56,708 households, representing 97.1 per cent of the total programme outreach. This high achievement rate suggests success in the use of the service provider model.

75. Indirect beneficiaries were not tracked for all the service providers except for TLC. The PCR indicates that an estimated 138,915 indirect beneficiaries were reached, of whom 41,675 were women in both Northern and Luapula provinces through benefiting from increased access to promoted technologies.[24]

[24] No details were provided on how the numbers of indirect beneficiaries were calculated.

Table 4
**Summary of beneficiary outreach by partner/intervention/province**

| *Partner/activity* | *Luapula* | *Muchinga* | *Northern* | *Total* |
|---|---|---|---|---|
| Government | 4 443 | 4 389 | 7 949 | 16 781 |
| COMACO | - | 19 028 | - | 19 028 |
| TLC | 7 292 | - | 13 607 | 20 899 |
| Weirs/storage sheds | 155 | 167 | 277 | 599 |
| Luwingu to Chimpili road | 581 | - | 523 | 1 104 |
| Total | 12 471 | 23 584 | 22 356 | 58 411 |

Source: IFAD, 2021b.

**Objective 1: Farmer organizations, including their membership and cooperatives, are empowered to respond to market and agricultural opportunities**

76. **The programme was inadequate in developing the capacity of farmer organizations and their federations, which needed more capacity-building, particularly on market linkages.** Although the programme implemented capacity development interventions targeting district cooperative unions (DCUs), district farmer associations (DFAs), sub-district level primary cooperatives and other farmer groups for capacity development, these did not yield significant positive results in terms of capacity enhancement (NIRAS, 2016).[25,26] Training materials were not translated into the local languages and were inadequately customized to the local context. At the time of the evaluation, the training materials were also not available at the district or community level.

77. Areas of modest improvement include governance systems of farmer organizations and cooperatives, as indicated by an increase in the number of cooperatives that were holding elections and the number of women holding executive positions (albeit not influential) on the structures.[27] Significantly weak performance was in areas of market access as well as enhancing group solidarity for collective action, as evidenced by weak aggregation/bulking by farmers.

78. **Support to apex farmers' organizations came very late into programme implementation, leaving inadequate time for monitoring and mentoring.** Only two DCUs (Kawambwa and Mbala) were supported by S3P, but support came at the in its final months. Financial support of US$25,000 to each DCU reportedly contributed to increasing processing capacity, particularly of maize, and the marketing of targeted crops (cassava, beans and groundnuts), although both processing and access to marketing capacities have since been on the decline due to inadequate financial resources in the revolving fund. The financial support also helped the Kawambwa DCU to provide loans ranging from ZMW 15,000 to 30,000 to primary cooperatives under its auspices, but their gains were also diminishing because of poor monitoring by the DCUs in the usage of the loans, which has resulted in some primary cooperative societies failing to utilize the loans optimally.

**Objective 2: Improved access to more pertinent and effective agricultural extension advisory services**

79. **Access to extension advisory services improved during programme implementation.** This was driven by the service delivery through the MoA and the private sector providers. The significant achievement of the high outreach targets as

[25] A comprehensive capacity needs assessment was conducted to inform the design.
[26] The capacity-building programme included training which covered seven training modules – group formation and dynamics, business leadership, business operations and management, IT systems, business financial planning and management, product quality control and value addition, and project cycle and contract management.
[27] Approximately 75 per cent of the cooperatives visited reported holding elections on a regular basis.

discussed in the subsection on effectiveness confirms that farmers were accessing extension advisory services (see paragraphs 72-74). The decline in extension outreach services confirms that the services were driven by the programme financing. The MoA cited inadequate budgetary support from the central government to continue implementing the FFS with the same intensity as during S3P. Similarly, private extension services provision of the LF-FF approach is non-operational following the withdrawal of programme funding, except in communities where COMACO has continued with the market-based delivery model.

80. **The provision of extension advisory services to poor smallholders as a public good requires sustainable financing and fiscal resources and increased government capacity.** The public-good characteristic of extension advisory services in Zambia continues to offer the rationale for public sector participation in a pluralistic system. This is particularly important for reaching out to smallholders who are not commercially viable for the private sector service providers in market-oriented approaches as well as for information-based delivery models which largely characterize NGO delivery models. This becomes pertinent when programme funds are withdrawn.

81. **Scaling up of pluralistic extension advisory services requires development of new regulatory and service quality assurance mechanisms.** The experience of S3P confirms that there is space for pluralism of extension advisory services. However, the space needs to be regulated to ensure that smallholders who are not reached by private service providers continue to benefit from the public extension system and, in the case of project-based implementation, linkages need to be established with public and/or other private systems to ensure service continuity. With the approval of the NAESS in 2016, the programme failed to seize the opportunity to support its implementation by steering the direction toward a more pluralistic extension advisory system.

**Objective 3: Improved crop and land management practices**

82. **The adoption rates of conservation agriculture and sustainable agriculture practices have been low** partly because of gaps in addressing the contextual, institutional and enabling environment issues. As discussed in the thematic section, conservation agriculture practices, if tailored to the agro-ecological conditions, can enhance the net benefits as well as the resilience of the production systems for smallholder farmers. Addressing multiple barriers to related to continued access to improved seed, labour costs as well as institutional and enabling environment factors that could support wider adoption. In addition, factors such as capacity-building for extension advisory services, lack of access to finance and to markets were all inadequately addressed by the S3P programme.

83. **Crop diversification has continued but smallholder farmers still face a number of challenges.** The newly introduced crop varieties have continued in the programme areas but not at the same level as during programme implementation. The availability of improved certified seeds and planting materials has drastically decreased since the completion of the programme. One of the major constraints is the lack of continuity in the provision of foundation seed beyond the programme. In addition, distortionary public policies and subsidies seem to encourage the adoption of mono-cropping under conventional cropping practices. Evidence from the FGDs with beneficiaries suggests that the Food Reserve Agency's national maize purchases reduce the likelihood of continued crop diversification, particularly in the face of market access challenges for the newly introduced crops. Similarly, input programmes such as the Farmer Input Support Programme (FISP), only incentivize monoculture, rather than provide space to support crop diversification.

84. **Improved access to markets is considered a driving factor for positive changes in the adoption of conservation agriculture and sustainable farming practices**. The evidence from the PPE suggests that farmers tend to change their farming practices when they see the benefits in terms of access to markets. This was

observed in areas where COMACO has provided market-based incentives in terms of buying rice produced from farmers through the revolving fund mechanism in Chinsali. To some degree, this has contributed to sustaining and stimulating the continued adoption of conservation agriculture and other sustainable agricultural practices. A similar trend was observed across the communities that were visited by the PPE mission where adoption seemed to continue in communities where farmers have access to sustainable markets.

**Objective 4. Improved access to markets, rural infrastructure and productivity-enhancing works and equipment**

**Infrastructure**

85. **The 28 kilometre Luwingu-to-Chimpili road was the most successful infrastructure activity constructed by S3P, resulting in improved access to markets for smallholder producers and traders.** The travel time for trucks transporting farm products, particularly beans, from Kawambwa district has been reduced from approximately 3 hours to 30 minutes since the rehabilitation of the road. Indirect benefits reported by communities living in the vicinity of the road include improved access to health facilities, particularly for pregnant women, and improved access to transport services.

86. **The irrigation weirs visited by the PPE mission showed good results in terms of quality and utilization of water.** A total of eight permanent weirs were constructed in collaboration with Japan International Cooperation Agency (JICA), which facilitated the preparation of the bill of quantities. The weirs were meant to support crop and vegetable productivity through irrigation. FGDs with community members in Shiwang'andu District indicate that the irrigation weirs were an important source of water for gardening after the main crop harvests. The intervention resulted in the increase in irrigable area under the schemes from 50 ha to 151 ha, benefiting 1,944 farmers from 551 households (IFAD, 2021b).

87. **S3P-supported grain storage sheds remain underutilized.** The programme-constructed storage sheds were largely underutilized, as observed by the PPE mission. No guidance was provided to the communities on successful aggregation/group marketing and on warehouse management. The expected linkages with the E-SAPP, particularly in terms of providing training to beneficiaries on warehousing and business management, did not take place as expected.[28] Furthermore, lack of community or group cohesion resulted in farmers continuing with individuals selling to intermediaries/middlemen, reducing the need for storage and selling at reduced prices. Evidence on the ground suggests that the Food Reserve Agency has been the biggest beneficiary of the storage sheds and is now using them to store maize and, in some instances, with no direct benefits to the farmer groups/cooperatives.

88. **There was mixed performance in the construction quality of other S3P-supported infrastructure**. Much of the infrastructure activities were characterized by weak contract management, supervision, and beneficiary participation. Community contributions, in the context of matching grants, were not timely and delayed construction of the storage sheds. In some cases, the materials provided by the communities were of poor quality. At the time of the PPE field mission, one storage shed in Chifunabuli had already collapsed. Despite concerns about the construction quality, the observed access bridges were mostly accessible and in good working condition during the PPE.

**Access to markets**

89. **Market access has remained a significant and ongoing concern in the programme communities.** S3P focused on strengthening the supply side of

[28] The S3P exit and sustainability strategy anticipated that E-SAPP would provide support to the communities where 15 storage sheds were constructed. This linkage was expected to ensure utilization of the sheds as well as sufficient revenue generation to finance maintenance of the sheds through the maintenance committees.

agricultural production and relied heavily on: (i) coordination with SAPP/E-SAPP to provide marketing and value chain development support; and (ii) RFP/RUFEP for financing of enterprise development. However, these did not materialize because of gaps in functional synergies at the operational level. The impact pathway to the achievement of improved access to finance and to markets was not achieved. Although S3P supported business training through its efforts to strengthen cooperatives and farmer organizations, this had little impact on market access, as participation of farmers in markets remained considerably weak.

90. The main direct achievement in terms of farmers' access to markets has been the setting up of the **revolving fund mechanism** of US$500,000 that was established by COMACO with support from the programme as a once-off grant. The evaluation noted that the service provider has continued with crop purchases in the programme areas, although mainly for rice. Although the revolving fund is benefiting other provinces, positive tonnage and revenue trends have consistently characterized rice purchases, one of the focus crops for S3P.

Table 5
**Quantity of crops purchased using the revolving fund from 2016–2019 (tonnes)**

| *Crops* | *2016* | *2017* | *2018* | *2019* | *2020* | *2021* |
|---|---|---|---|---|---|---|
| Kabulageti Beans | 50.73 | 111.04 | 73.54 | 132.60 | 197.28 | 268.28 |
| Sugar Beans | 0.97 | - | - | - | - | - |
| Serenje Beans | 37.84 | - | - | - | 60.00 | - |
| Rice Chama | 835.90 | 808.17 | 1 740.73 | 2 362.66 | 2 487.92 | 3 072.85 |
| Rice Nakonde (Chinsali) | 176.52 | 82.12 | - | 55.00 | 97.46 | 47.55 |
| Shelled Groundnuts | 86.83 | 1.37 | 7.63 | 2.35 | 0.35 | 100.35 |
| Unshelled Groundnuts | 28.62 | 31.01 | - | 3.38 | 28.00 | 283.00 |
| Maize | - | - | - | 147.05 | 250.00 | 450.00 |
| Soya Beans | 93.56 | 222.63 | 85.85 | 96.10 | 620.00 | 730.00 |

Source: Evaluation team, analysis of revolving fund report.

91. **The revolving fund experienced modest growth due to limited competitiveness.** The US$500,000 revolving fund grew from 2016 to 2022 June by 140.9 per cent in Kwacha terms, but in dollar terms the fund grew by 25.5 per cent due to fluctuations in the exchange rate. One of the contributing factor to the fund's lack of competitiveness is the high transaction costs incurred by COMACO which results in lower margins. This make it challenging for the fund to compete with imported commodities that are comparatively cheaper in the local market.

**Objective 5. Improved agricultural policy planning to support enhanced smallholder agricultural productivity**

92. Apart from the seven policy studies that were financed by S3P and conducted by the policy analysis unit in the MoA, there is little evidence of progress on this objective. One of the key performance indicators under this objective related to the delivery of at least three policy changes through an evidence-based approach, and this was not realized. The programme did not have sufficient mechanisms for promoting policy engagement among stakeholders at various levels of programme implementation. Although S3P had a number of innovations (e.g. pluralistic extension approaches, market incentives on climate-smart crop products) which could have formed the basis for policy engagement, this did not materialize. The PPE noted inadequate two-way

information flow, from the implementation level to the national level (where policies are formulated) and vice versa. The poor generation of analytical evidence-based monitoring and evaluation products to inform decision-making exacerbated the inability of S3P to influence policy.

**Innovation**

93. IFAD defines innovation as a new process, product or approach that adds value and delivers a sustainable, equitable, inclusive and/or new contextual solution to rural development challenges. This subsection of effectiveness assesses the performance of the programme with respect to these criteria.

94. **The system of rice intensification was innovative in the context of Zambia and led to positive results in increasing rice yields.** A plot of 12.5 x 12.5 metres yielded 96 kg of dried paddy (the equivalent of 6.144 t/ha) when the average rice yield is 1-2 t/ha (IFAD, 2021). Smallholders engaged during the PPE mission confirmed that SRI had indeed assisted in increasing their yields; however, no concrete quantifiable evidence was available to demonstrate the magnitude of increase following the phasing out of S3P. In addition, SRI reportedly uses 90 per cent lower quantities of seeds at the rate of 5kg/ha in comparison to 50kg/ha in conventional rice farming and 160kg/ha under the broadcast system; this results in reduced seed input costs, which is advantageous for smallholder farmers (S3P, 2021).

95. **The success of SRI was enhanced by the use of compliance dividends that guaranteed market access** for farmers who were involved in good agricultural and sustainable agriculture practices. Farmers that fully complied received a premium price of about 10 per cent over the market price for the commodity when they sold their produce to COMACO. This approach motivated farmers to realize the benefits of using the SRI approach but not necessarily adoption as farmers reverted to traditional practices in the absence of financial incentives.

96. **The LF-FF approach was innovative but not a new approach in the context of Zambia.** The concept involved lead farmers, selected by fellow farmers, in groups of 15 to set up demonstration plots and to conduct various trainings in management practices related to specific interventions of interest. This helped address the large extension worker-to-farmer ratio. However, stakeholders perceived it to be expensive due to the intensity of training, demonstration and visit mechanisms as well as supply of inputs during implementation. The approach was only sustained in a few of the S3P communities where other projects were making use of the community extension agents and, in Muchinga where COMACO has continued to operate given the market linkages achieved through the revolving fund mechanism.

97. **Similarly, the piloting of private sector involvement in the delivery of extension advisory services was innovative but not new to Zambia.** This allowed for the implementation of a co-existence of public and private extension advisory services during programme implementation. However, no mechanisms were put in place to ensure the continuity of the approach post-S3P implementation, evidenced by the collapse of the approach after the completion of the programme.

98. **Summary.** In view of the mixed achievements of the project objectives, the main development objective of a sustainable increase in smallholders' farmers' production, productivity and sales in target areas was only partially achieved. While there is some evidence of increases in production and productivity, the evident absence of interventions to supplement the supply side with the demand side (market orientation), was a barrier to the programme contributing to the achievement of its development goal. Some results that were achieved during implementation in terms of increased access to extension advisory services have diminished following programme completion. The absence of mechanisms to adequately promote policy dialogue among key stakeholder categories across the various levels of programme implementation was a missed opportuning to improve agricultural policy planning. The

PPE rates effectiveness as **moderately satisfactory (4)** and innovation as **satisfactory (5)**

## Efficiency

99. The efficiency criterion is concerned with the extent to which the intervention or strategy delivers, or is likely to deliver, results in an economic and timely way. "Economic" is the conversion of inputs (e.g. funds, expertise, natural resources, time) into outputs, outcomes and impacts in the most cost-effective way possible, as compared to feasible alternatives in the context. "Timely" delivery is within the intended time frame, or a time frame reasonably adjusted to the demands of the evolving context. Efficiency also considers operational efficiency – i.e. how well the intervention was managed.

100. **Timeline.** S3P was approved by IFAD's Executive Board on 15 September 2011. The IFAD loan agreement was signed on 9 December 2011 and the loan became effective on the same day. This three-month lapse is far below the ESA's regional average of 11 months and the IFAD Zambia portfolio average of 12 months. The programme was completed on 31 December 2019, after an extension of one year from its original scheduled completion date of 31 December 2018. This was a result of start-up delays during the early stages of the programme as well as additional financing following the cancellation of the Finnish grant due to slow project implementation.

101. **Disbursement performance.** The overall disbursement performance was very slow up to the time of the MTR and was consistently rated unsatisfactory from the start of the programme until 2017 when it was rated moderately satisfactory. As of March 2015, disbursements stood at 29 per cent, 3.6 years since the start of the programme. Slow disbursements were largely driven by the slow start up of the local agricultural investments. Reallocation of funds from activities related to trainings and workshops to procurement sped up disbursement in the final years of the programme after the MTR. At programme closure, the overall disbursement rate on the IFAD financing was 93.1 per cent.

102. **Programme management costs.** The actual total programme management costs were at 20.2 per cent of the actual programme costs; this is 11 per cent higher than the planned and 8 per cent above IFAD-wide targets of less than 14 per cent. Despite the high programme management costs, implementation was characterized by weak monitoring and evaluation (M&E) systems.

103. **Cost per beneficiary.** The actual cost per beneficiary, estimated at about US$580, was lower than the planned cost per beneficiary of US$664 at design. At completion, the costs per beneficiary stood US$84 lower than the planned amount because the programme budget was not fully disbursed and outreach was lower than planned.

Table 6
**Cost per beneficiary at appraisal and at programme completion**

| | *Estimates at revision* | Actual at programme completion |
|---|---|---|
| Total # of beneficiary households | 67 500 | 58 411 |
| Total programme costs (in US$'000) | 41 266 | 33 823 |
| Cost per beneficiary household | US$664 | US$580 |

Source: IFAD, 2021b.

104. **Economic and financial analysis.** The economic and financial analysis as per the PCR stands at a reasonable economic internal rate of return (EIRR) of 14 per cent, which is commensurate with the 14 per cent calculated at programme design and lower than the 18.3 per cent calculated at additional financing. However, the estimated EIRR is based on the actual beneficiary outreach of 58,411, which is slightly below the 60,000 and 67,500 envisaged at programme design and additional financing, respectively (IFAD, 2021b). The economic net present value (NPV) is estimated at

about US$41.5 million over the 25-year period of the analysis; this is higher than the US$5 million estimated at programme design (IFAD, PCR, 2021b).[29]

105. A sensitivity analysis was conducted to test the robustness of the NPV and EIRR.[30] The analysis confirmed that the economic viability of the programme remained attractive, with a positive NPV and an EIRR even when costs increase up to 50 per cent or benefits decrease by up to 50 per cent (IFAD, 2021b). These calculations were based on minimum adoption rates of 50 per cent for good agricultural practices. The PPE considers this significantly ambitious given the low adoption rates of the good agricultural practices as reported by the IA study and confirmed by the PPE field mission.

106. **Summary.** The S3P programme faced many challenges that resulted from the low disbursement rates right from the start and weak project management by the PMU. In addition, slow set-up and in particular the recruitment of programme staff negatively affected the programme. This meant that programme implementation was not executed according to the original timeline. This affected the conversion of economic resources into benefits. Additionally, other implemented activities were not in accordance with the programme plan as some resources were shifted from service delivery and technical assistance to procurement related activities to expedite disbursements. The PPE rates efficiency as **moderately unsatisfactory (3).**

## Rural poverty impact

107. This evaluation criterion is concerned with the extent to which an intervention has generated significant positive or negative, intended or unintended, higher-level effects. The criteria include the following domains: changes in income, assets and productive capacity; changes in household food security and nutrition; changes in social/human capital; and, changes in institutions and policies.[31]

108. This section derives evidence from the RIA impact assessment data collected on S3P as part of the IFAD's 11 IA agenda. The design of the IA used a statistical matching technique called propensity score matching using data from the 2010 national census (IFAD, 2020). Control communities were selected through propensity score matching; each ward that contained an S3P camp and falls into the 10 km radius of the camp point was considered as a treated ward while all other wards in S3P provinces were used as potential controls (IFAD, 2020). The data from the IA was further triangulated with qualitative evidence gathered during the PPE field mission.

### Changes in income, assets and productive capacity

109. **The impact of the programme on the cropping income was positive and statistically significant, although the total income per capita was not.** The cropping income per capita of beneficiary households increased by about 34 per cent compared to that of control households. It is important to note that the total income is composed of multiple sources, of which cropping income contributes the largest share (i.e. approximately 50 to 60 per cent). Evidence from the qualitative data suggests that income increases were partly driven by crop production and productivity. In several communities that were visited, income improvements contributed to the ability of households to meet their consumption needs, including sending children to school, which is a proxy indication of improvement in the quality of life. However, it was observed that the sustainability of the positive income contributions was diminishing, given a drop in the productive capacity of smallholders.

[29] The economic discount rate adopted in the economic analysis is 5 per cent, as used by the European Union and recommended by IFAD's internal guidelines.
[30] The criteria for the sensitivity analysis were 10, 20 and 50 per cent cost overrun, 10 and 20 per cent increase in benefits, and 10 to 50 per cent decrease in benefits.
[31] The performance assessment on this criterion will seek to determine whether change has been transformational, generating changes that can shift the targeted communities into different development pathways (e.g. due to the size or distributional effects of changes to poor and marginalized groups) in line with the new IFAD Evaluation Manual of 2022.

110. **The programme impacts were more on non-productive asset ownership.** Ownership of durable goods has increased by 17 per cent and quality of housing by 6 per cent. However, the ownership of agricultural assets remains notably low, including improved cook stoves, water pumps, ox carts and harrows, which are almost non-existent with a reported ownership of 1 per cent (IFAD, 2021b). The same applies to other productive assets.[32] Similar observations were made by the PPE field mission, which confirmed more investments in non-productive assets in comparison to productive assets though not widespread, suggesting uneven/differential programme impacts across the intervention communities. Both female and male FGD participants reported having improved their houses (replacing grass thatched roofs with iron sheets as well as building houses with walls made of burned bricks with cement), purchased vehicles (especially in Luwingu) and purchased household furniture (e.g. chairs, beds and mattresses).

111. **Impacts on household savings were positive.** Compared to households in the control area, the beneficiary households recorded a 33 per cent increase in household savings (IFAD, 2021b). Households under TLC had the highest increase in savings (38 percentage points); while those under the MoA and COMACO had 33 and 27 percentage points, respectively (IFAD, 2021b). Narratives from the FGD participants (both male and female) suggest that smallholders were members of the savings and internal lending communities[33] and other informal savings schemes. Since the programme did not have specific interventions to encourage savings, it can only be assumed that the impacts were indirect or a result of previous interventions or from other development partners. There was a missed opportunity to integrate specific actions to strengthen a savings culture that could have contributed to wider impacts.

112. **Smallholder farmers' productivity capacity was marginally increased and was not statistically significant except for groundnuts and beans.** In the context of S3P, indicators of productive capacity include yields, value of crops produced, adoption of sustainable agricultural practices and access to improved planting materials. To some extent, S3P contributed to a 13 per cent increase in yields/productivity by the beneficiary households compared to their counterparts (IFAD, PCR, annex 11 2021b). This increase was driven by higher cassava yields of 23 per cent among target beneficiaries compared to a 10 per cent increase for non-beneficiary farmers (IFAD, PCR, annex 11 2021b). Other crops (notably maize) were also positively affected due to spill-over effects, particularly those arising from the practice of conservation agriculture techniques. As shown in table 8 below, the average yields per ha are mixed across the different crops, and with variations across provinces. Overall, farmers in treatments communities were likely to have better yields per ha for maize (2,871.2 kg/ha) compared to control communities (2,447.8 kg/ha). Farmers in the control groups performed better yields for both mixed beans and groundnuts compared to intervention communities.

[32] Assets like trained oxen/cows, ox-drawn ploughs, wheelbarrows, hammer mills and knapsack sprayers are instead concentrated in a few households.

[33] Savings and internal lending communities are community-based, user-owned, self-managed savings and lending vehicles, built on concepts of transparency and flexibility. They helps members to build large lump sums that become available at the end of a pre-determined cycle, typically 8 to12 months.

Table 7
**Comparison of average crop yields per hectare between treatment and control households**

| *Type of crop* | *Luapula* | | *Northern* | | *Muchinga* | | *Overall* | |
|---|---|---|---|---|---|---|---|---|
| | Treatment | Control | Treatment | Control | Treatment | Control | Treatment | Control |
| Maize | 2 836.0 | 2 464.6 | 2 801.4 | 2 524.6 | 2 976.3 | 2 354.1 | 2 871.2 | 2 447.8 |
| Cassava | 5 946.6 | 5 247.1 | 5 257.8 | 4 607.9 | 5 500.7 | 5 844.0 | 5 568.4 | 5 233.0 |
| Groundnuts | 484.6 | 633.4 | 549.3 | 651.9 | 532.4 | 559.7 | 522.1 | 615.0 |
| Mixed beans | 438.8 | 393.9 | 358.8 | 465.6 | 417.0 | 473.7 | 404.9 | 444.4 |

Source: Evaluation team, re-analysis of IA dataset.

113. In the absence of systematic post-programme data on production and productivity, it was not possible for the PPE to validate current production trends. The annual national crop forecast survey and post-harvest survey, which could have provided data on yields, were not consistently conducted from 2019 to 2021 to provide evidence on the sustainability of productivity capacity in the S3P communities. The available qualitative evidence suggests weakening productive capacity in some communities due to challenges in accessing foundation seed, particularly for the S3P targeted crops. Consequently, access to improved planting materials and the practice of sustainable agricultural techniques are on the decline. On the other hand, improved seed availability for maize is not a very big challenge when farmers receive inputs through FISP.

**Changes in household food security and nutrition**

114. **Evidence suggests attributable contributions to household food security.** According to the S3P IA, months of adequate household food provisions have increased by 0.44 months, which means an increase of 5 per cent compared to non-beneficiary households (IFAD, PCR, 2021b, annex 10). In addition, dietary diversity has also improved for beneficiary households compared to non-beneficiary households. The household dietary diversity score of S3P households increased by 0.27, which corresponds to an increase of 3 per cent.[34,35] The availability of more diverse crop produce (e.g. cassava, rice, groundnuts, beans, sweet potatoes, orange maize) has undoubtedly contributed to this improvement. The PPE FGD participants confirmed having enough food to meet household consumption needs throughout the year as well as having surplus for the market. However, some communities' still face food security challenges, in particular where shocks such as floods and rainfall variability are experienced, which often result in poor yields among smallholders.

115. **Beyond the improved dietary diversity, programme impacts on nutrition are uncertain and anecdotal.** In the absence of nutrition-specific indicators, the impact of the nutrition interventions retrofitted at MTR was not verifiable apart from the introduction of the nutrition-dense crop varieties and nutrition groups, which have unevenly continued beyond the S3P.[36] Potential impact pathways were, therefore, linked to reduced hunger period and increased dietary diversity. The PPE qualitative evidence suggests mixed improvements along the key impact pathway indicators, with variations across communities on productive capacity. Despite these anecdotal improvements, it must be noted that the latest available data on key nutrition indicators illustrates that malnutrition has remained high in Northern and Luapula provinces, where stunting for under-five children stands at 46 per cent and 45 per

[34] Food Insecurity Experience Scale is a measure of more severe forms of food insecurity compared to the other indicators.
[35] No statistically significant impact is estimated for the Food Insecurity Experience Scale, suggesting a low incidence of severe forms of food insecurity in the sample.
[36] Nutrition interventions for S3P were retrofitted at MTR to include nutrition trainings and the production of nutrition-dense crop varieties such as orange-fleshed sweet potatoes and cassava, orange maize, bean varieties rich in zinc and iron, and soybeans. Other interventions which were introduced at MTR to boost nutrition benefits were off-season activities such as the promotion of vegetable production, processing and the cooking and consumption of nutritious foods.

cent, respectively. Wasting among children under age 5 was highest in Muchinga at 8 per cent (ZDHS, 2019).

**Changes in social/human capital**

116. **The programme contributed to improved knowledge and skills through various capacity development initiatives.** At the subnational level, camp extension officers, blocks supervisors and district extension staff were supported to deliver trainings to farmers. In addition, members of cooperatives were trained on management and governance of farmer organizations. Trainings were also provided on conservation agriculture and use of improved crop varieties as well as ongoing agronomic support from the Government and community-based extension services staff. Non-programme participants indirectly benefited by participating in field days as well as technology transfer and farming practices from project beneficiaries, particularly in areas where the adoption of promoted practices was well received in the communities (IFAD, 2021b).

**Changes in institutions and policies**

117. **The programme made limited contributions to institutional strengthening.** At the grassroots level, farmer organizations made little progress in terms of strengthened capacity for effective provision of services to their respective members, as discussed under the effectiveness section. Similarly, the capacity-building of farmer apex bodies representing farmer organizations (DCUs/DFAs) came late into the programme to make significant impact in the absence of coaching and mentoring support (IFAD, 2021b).

118. At the policy level, support was provided to the MoA's Department of Policy and Planning to undertake seven policy reviews and studies.[37] The objectives of the policy reviews and studies was to improve the enabling environment relevant to sustainable productivity growth. However, there was no evidence of utilization of various policy studies to influence policy change, and this was a missed opportunity. The failure by S3P to use the experiences learned and evidence generated from downstream to influence upstream policy change was also a missed opportunity, especially to influence further refinement of the extension strategy or approach in Zambia, as elaborated in the themes section of the report.

119. **S3P contributed to the Zero Hunger strategic review in 2018**. The review was conducted by the Indaba Agricultural Policy Research Institute and culminated in a comprehensive review report with recommendations to achieve Zero Hunger by 2030 in line with Strategic Development Goal 2. The review, which was spearheaded by the World Food Programme (WFP) in Zambia, sought to devise and recommend specific strategic interventions aimed at ending hunger in Zambia by 2030 (IFAD, PCR, 2021b).

120. **Summary.** The programme made modest contributions to household incomes, assets and savings through improvements in production and productivity as a result of crop diversification and human capital gains. However, the extent to which the observed changes can be sufficiently attributed to the S3P is difficult to establish, given the small observed differences with the non-intervention communities and the limited coverage of the field mission. Besides, in the ex-post programme scenario, some of the gains driven by the S3P interventions were observed to be dwindling. Available evidence points to weak achievements on institutions and policies. Therefore, rural poverty impact is rated **moderately satisfactory (4)**.

[37] S3P financed seven policy studies that were conducted by the Policy Analysis Unit of the Ministry: (a) The Effect of Rice Imports on Local Rice Production; (b) Review of Cassava Legislation and Strategies; (c) The Economic Analysis of Rice Production; (d) Study of Public–Private Partnership (PPP) Models; (e) Policy Study on Increasing Agricultural Production, Resilience and Agribusiness Value Chains; (f) Review of the Second National Agricultural Policy; and (g) Statutory Instrument 52 Policy Study on Cassava.

### Gender equality and women's empowerment

121. This evaluation criterion assesses the extent to which IFAD supported interventions have promoted gender equality and women's empowerment.[38] This section of the report assesses the extent to which interventions and strategies were gender-transformational relative to the context, by: (i) addressing root causes of gender inequality and discrimination; (ii) acting upon gender roles, norms and power relations; and, (iii) promoting broader processes of social change.

122. **The programme outreach approach of targeting female beneficiaries with extension advisory services was highly effective.** The programme achieved its objective of reaching 45 per cent women with various services such as advisory services, including trainings, demonstrations, seed multiplication and market services (IFAD, PCR, 2021b). Of the 2,485 members belonging to 497 sub-district or camp-level farmer organizations and associations, 800 (32.2 per cent) females were in leadership positions. This was consistent with the PPE field mission findings, which observed an overall increase in the number of women participating in the governance structures of cooperatives. However, positions of influence and decision-making were still largely dominated by men, with women being given less influential positions as ordinary committee members.

123. Adequate attention was given to reporting on gender-disaggregated data, but **monitoring and tracking of gender equality and women's empowerment was weak.** There was an over-emphasis on ensuring gender parity at the expense of monitoring changes on gender equality and women's empowerment. This can be attributed to the absence of a gender analysis that could have defined the gender equality and women's empowerment agenda of the programme. There was a missed opportunity to identify the context-specific challenges faced by women in different implementation provinces and districts.

124. **There were marginal increases in income among female beneficiaries.** Due to the gender targeting approach adopted by the programme, more women participated in the programme and this increased incomes under their control. Indirect income impacts were reported given the increased participation of female beneficiaries as members of savings and internal lending communities and other informal savings groups, which was positive and empowering.

125. **There is little evidence to demonstrate the contribution of labour-saving technologies in addressing women's workload challenges.** In Zambia, women contribute most of the labour in the agriculture sector; as such, investments in equipment to ease their workload is imperative. The programme promoted 15 labour-saving technologies out of which five were targeted to address women's workload challenges with minimal success (i.e. dibber sticks, cono weeders, rice threshers, sickles and improved cook stoves). For example, female FGD respondents in Luwingu confirmed receiving the chakar hoes but were not using them as they preferred hand-held tractors. Similarly, in Chifilwe camp in Luwingu District, several improved cook stoves were constructed and demonstrated, but adoption was low. There was a general lack of involvement of end-users in determining the choice of technology they wanted to adopt to replace conventional practices. The quantities of labour-saving technologies distributed by the programme were inadequate to deliver the expected reduction in women's workloads and demonstrate their utility (see annex VII, table 8).

126. **Summary.** S3P can be characterized as gender-aware since it noted gender inequalities but the programme did not take action to address them. Very limited progress was made in terms of contributing to gender equality and women's empowerment apart from gender-targeting and involving women in leadership

[38] It provides an assessment of the following parameters: women's access to and ownership of assets, resources and services; participation in decision-making; workload balance and impact on women's income, nutrition and livelihoods; and promotion of sustainable, inclusive and far-reaching changes in the social norms, attitudes, behaviours and beliefs underpinning gender inequality.

positions in farmer organizations and cooperatives. This criterion is therefore rated **moderately unsatisfactory (3).**

### Sustainability of benefits

127. The sustainability criterion assesses the extent to which the net benefits of the intervention continue and are scaled up (or are likely to continue and be scaled up) by government authorities, donor organizations, the private sector and other development agencies. It entails an examination of the financial, economic, social, environmental and institutional capacities of the systems needed to sustain net benefits over time. It involves analyses of resilience, risks and potential trade-offs.

128. **The implementation of the programme exit strategy was too weak to consolidate programme achievements.** An exit and sustainability strategy was developed in 2015 and updated in 2019. The main focus of the exit strategy was to strengthen the identified weaknesses and gaps of the institutions involved in the implementation of S3P interventions as well as to address sustainability gaps. The IFAD Supervision and Implementation Support Mission of August 2019 noted that although the exit strategy had highlighted interventions which were needed for the completion of pending activities, there were some gaps (IFAD, 2019).[39] The evaluation did not find any evidence showing that identified gaps were addressed or the different aspects of the exit strategy implemented. This partly explains some of the identified sustainability challenges further elaborated in this section. While the exit and sustainability strategy was designed early, its implementation was weak and appeared to have never been a living document.

129. **The Luwingu–Chimpili gravel road was found to be self-sustaining, with evidence of regular maintenance.** There were clear signs of continued maintenance for the Luwingu–Chimpili road, for which the Road Development Agency has assumed responsibility. Longer-term sustainability will depend on the continued resource allocation, in particular for periodic major maintenance activities. Interviews with community members residing within the vicinity of the road confirmed ongoing periodic maintenance that included clearing of grass on the roadsides and filling up sections of the road damaged by erosion due to heavy rain.

130. **There was limited focus on operations and maintenance for the other S3P supported infrastructure.** Operations and maintenance challenges were observed for the other S3P-supported infrastructure such as access roads, embankments and bridges. This is despite the fact that operations and maintenance structures were put in place at the time of programme completion. Failure by the communities to contribute resources and lack of ownership were cited as the biggest challenges. Standard designs also meant that in some cases the storage sheds were not appropriately constructed to address the challenges of each site well, including the needs of beneficiaries particularly taking into account the type and the quality of locally available construction materials.

131. **The evaluation did not find significant government capacity to ensure long-term technical and financial sustainability.** No specific mechanisms were put in place to ensure the continuity of community-based capacity development activities, which were largely driven by programme financing. The lack of a clear strategy to ensure the continuity of community-driven extension delivery contributed to the reversal of achievements during implementation. In particular, the decline in adoption of good sustainable agricultural practices has been widespread in view of reduced extension worker–farmer contact for ongoing skills and technology transfer. The

[39] The main gap was that sustainability aspects had not been fully addressed in the exist strategy. More specifically: (a) Under Component 1, there was a need for the programme to undertake a needs assessment of the farmer organizations and design training interventions that would address the identified needs; (b) Under Policy and Planning framework, the results of the studies were to be disseminated and management was to report on how the results of the studies were being used to improve policy; (c) the exit strategy plans for nutrition and gender were to be informed by the annual report consolidation workshop outcomes prepared by the PMU; and (d) the knowledge management action plan was to be incorporated into the exit strategy.

community extension workers who were trained by the programme (LFs) were not linked to/integrated within the MoA extension system or other private service providers when the programme ended.

132. Similarly, the support to farmer organizations and cooperatives was not properly handed over to the Department of Cooperatives, resulting in lack of continuity in the provision of technical support. There was no evidence of implementation of the various action items as per the exit and sustainability strategy, in particular the identification of value chains for development by linking S3P beneficiaries with E-SAPP. Similarly, given the late start of the support to the DFAs and DCUs, their capacity to continue providing support to the primary cooperatives has seriously diminished due to weak capacities, particularly in terms of marketing services.

133. The implementation of the S3P interventions through existing structures in a bid to promote sustainability did not yield its intended results due to government budgetary constraints. It is important to highlight that most of the S3P-supported interventions that are typically part of the MoA annual work plans are in fact not budgeted for in the annual MoA budgets.

134. **The use of improved seed varieties has been partially sustained**. Farmers' knowledge and use of improved seed varieties and technologies was enhanced through their participation in the programme. This was supported by the community seed multiplication initiative, which facilitated smallholder farmers' participation in the seed sector. In addition, the general availability and utilization of improved seed is partly attributed to increased private sector participation in the seed value chain and the provision of subsidized seeds through FISP (particularly for maize). However, it must be highlighted that there were variations in terms of sustained improved seed availability across the communities, particularly for newly introduced crops/varieties. Farmers complained of walking/travelling long distances to buy seed due to the absence of agro-dealers in close proximity to their communities. Therefore, long-term sustainability depends on the continued availability of foundation seeds, access to markets, and access to timely and quality extension services.

135. **Summary.** Programme benefits are being sustained for the Luwingu–Chimpili market access road and the irrigation weirs. The same cannot be said for other infrastructure such as access bridges and storage sheds due to the absence of operations and maintenance mechanisms. Overall, S3P was not able to implement its exit strategy according to plan. Sustainability with respect to strengthening institutional capacities at various levels did not achieve the intended results. While the farmer organizations were found to still be active, their technical and financial capacities were often limited. The PPE rates sustainability as **moderately unsatisfactory (3).**

### Scaling up

136. **There have been no significant attempts to scale up the results of S3P.** The scaling-up scheme was at phase two of the programme; however, this did not materialize when the Government of Zambia was suspended from borrowing due to debt distress and linking of S3P beneficiaries to the other ongoing IFAD programmes which did not materialize. At the end of implementation, there was no platform for scaling up the achievements put in place.

137. The continuity of the LF-FF approach appears to have been sustained in areas where the service providers have continued with operations (e.g. COMACO in Chinsali) and in cases where other programmes made use of the structures created by S3P (e.g. in Shiwang'andu with World Vision and Caritas). There were stories of schemes such as Scaling Up Nutrition, which was making use of nutrition groups and the LF-FF structures that were created by the programme.

138. There were clearly opportunities for some of the results of the programme to be scaled up, particularly the community seed multiplication through linkages with private seed buyers. In some communities, such linkages have been facilitated by ZARI and SCCI,

by linking seed multipliers to seed buyers such as Good Nature Agro and Afriseed. In addition, there was scope for sustaining the production and productivity gains by linking farmers to markets, potentially through the ongoing E-SAPP programme. Most importantly, perhaps, was the need to apply an evidence-based approach to use the lessons learned through PPP and work on a regulatory/policy framework for extension services pluralism.

139. The scaling up of S3P interventions has largely been driven by the presence of other development actors who have made use of the S3P structures, particularly the LFs, in some of the communities. Efforts by government institutions to link some of the remaining seed multipliers with seed companies are commendable; however, these are not widespread. On this basis, the PPE rates scaling up as **moderately satisfactory (4).**

### Environment and natural resources management

140. **Localized initiatives such as the promotion of bee-keeping as a community-based natural resource management approach were not successful.** Bee-keeping was promoted as a community-based natural resource management initiative with a focus on creating an economic alternative to destructive environmental practices (e.g. slash and burn agriculture, charcoal production). However, the initiative had limited success, partly because most of the outputs, particularly in relation to the distribution of beehives, were not achieved, as the initiative came late during programme implementation. Farmers had been sensitized by COMACO to start bee-keeping in a bid to stop them from cutting down trees (the first training on bee-keeping by some farmers in Muchinga province was conducted by JICA in 2008).

141. **There was mixed performance of the agroforestry initiatives.** Trainings on agroforestry of communities were provided with seedlings distributed on an annual basis (i.e. 30 kg) during the life cycle of the programme. One of the communities visited in Muchinga province had an estimated 15,000 surviving agroforest tree seedlings, which was quite an achievement. In other communities, gaps in agroforestry extension services were observed, as evidenced by low survival rates of tree seedlings, as well as a far smaller number of agroforestry trees on farmers' plots. Other communities confirmed that they had been trained but were never provided with seedlings.

142. **The use of improved cook stoves was inadequately promoted, resulting in low uptake and adoption.** The PPE did not find evidence of interventions beyond the training on the construction of the stoves and a few demonstrations through the LFs. FGD participants demonstrated limited knowledge on the potential benefits of using the stoves beyond fuel efficiency. Despite 6,652 households receiving training on the construction and utilization of stoves as a clean and energy-saving technology, the evaluation did not find any evidence of their utilization, while construction was only witnessed in one of the six communities that were visited during the field mission. This could be explained by the late start of this activity and little being done to facilitate uptake and utilization.

### Climate change adaptation

143. **The programme was successful in enhancing crop diversity among smallholder farmers, contributing to the resilience of food production systems**. The RIA impact study notes that the total estimated impacts on crop diversification were positive for the promoted crops, increasing farmers' resilience to climate shocks. Beneficiary households increased their diversification by 11 per cent compared to non-beneficiaries. They cultivated a higher number of crops (on average 3.5 crops for beneficiary households, compared to 2.9 crops for non-beneficiaries) and had equal distribution of land allocated across the cultivated crops (IFAD, 2021b). This was confirmed by the PPE, which found that farmers have mostly continued to grow the crops that were introduced, such as beans, groundnuts, cassava varieties, soya beans, and rice.

144. **The promotion of animal manure in vegetable gardens as an alternative to commercial fertilizer was not effective.** This was mainly because of limited consideration of the local context – for example, livestock production is generally not widely practised in the programme areas. Furthermore, efforts to promote small-livestock production came late into the programme, and the livestock pass-on scheme promoted by one of the service providers, TLC, was not adequately implemented. The beneficiaries who were interviewed during the field mission confirmed that they received training on rearing small livestock, but these were never delivered/distributed as planned.

145. The ratings on environment and natural resources management and climate change adaptation are **moderately unsatisfactory (3)**

## C. Performance of partners

146. This criterion assesses the extent to which the Government (including the central and local authorities) and IFAD supported the design, implementation and achievement of results as well as the creation of an enabling policy environment for the delivery of programme development objective. The adequacy of government ownership and responsibility during the implementation of all programme interventions, as well as in ensuring quality preparation and implementation, complying with covenants and agreements, supporting a conducive policy environment, establishing the basis for sustainability, and harnessing the participation by the programme's stakeholders, will be considered.

**IFAD performance**

147. According to the PCR, the design of S3P was a participatory and inclusive process that included stakeholders from the public and private sectors during the several design missions that were fielded between September 2009 and September 2011 (IFAD, 2021b). However, evidence about the extent of community engagement and participation during the design process was limited. This affected the contextualization of the interventions to the local community needs.

148. **IFAD consistently conducted supervision and implementation support missions to provide the required backstopping to the programme.** During the life cycle of the programme, a total of 14 field supervision missions were conducted by IFAD in addition to the implementation support mission carried out in response to slow project start-up, which at some point had resulted in the programme being categorized as a programme at risk due to low implementation and disbursement. This resulted in the programme being put under a Fast Tracking Action Plan to address the slow pace of programme implementation and implied disbursement lag. Despite regular support from IFAD, several challenges related to procurement, monitoring and evaluation and financial management persisted throughout the implementation of the programme.

149. **IFAD was able to identify threats to the achievement of programme development objectives but some of them were left unresolved during the life cycle of the programme.** Consistent implementation of the supervision and implementation support missions contributed to the identification of key programme threats. These were fielded during the middle of the year to review annual work programme and budget (AWPB) implementation and make recommendations for improving implementation. The supervision and implementation support missions also took place towards the end of the year. Their purpose was to inform the preparation of the subsequent AWPB. While there were efforts to address threats to the programme development objective, it appears that more emphasis was placed on disbursement rates without sufficient consideration of the programme quality. This resulted in resources being moved from service provision activities to procurement activities in order to increase the disbursement rates.

150. **The handling of loan administration, procurement and AWPB reviews was largely efficient**. IFAD no-objections with respect to procurements, AWPBs, change requests and other requests had a standard turn-around time of two weeks (IFAD, 2021b). However, the PPE field mission found that initially there were delays in issuing IFAD no-objections, which subsequently improved after 2016 with the introduction of the no-objection tracking utility system. However, structural issues related to procurement and contracting processes which affected the implementation of the programme were not addressed.

151. **IFAD failed to influence challenges related to the harmonization goals of the IFAD portfolio in order to achieve wider results**. This was particularly important given that part of the S3P development objectives were to be achieved through a harmonized approach with other IFAD-funded programmes, in particular E-SAPP and RUFEP, as discussed in the relevance section of this report.

152. **IFAD facilitated effective collaboration and engagement with other development partners, particularly WFP and JICA.** The rehabilitation of the Luwingu-to-Chimpili road, aimed at enhancing market access by smallholder farmers, was a result of collaboration between IFAD and WFP. The road provides a critical link between Chimpili with high bean production (where WFP and other partners established an agri-business centre) and the main road network to major markets of Copperbelt and Lusaka. Further collaboration was established with JICA for the construction and upgrading of irrigation weirs which were jointly identified. The weirs were rehabilitated to increase crop area under irrigation and would enable farmers to produce year round, thereby increasing their productivity and production (IFAD, 2021b).

153. **Summary**. IFAD performed well in terms of providing support to implementation through consistent supervision missions. However, there was inadequate follow-up on the supervision mission recommendations, which resulted in some identified issues persistently arising throughout programme implementation. Limited engagement of IFAD in policy dialogue was a missed opportunity to ensure that the programme strategies and approaches fed into policy development. IFAD's performance is rated **moderately satisfactory (4).**

**Government performance**

154. **The Government demonstrated commitment to achieving the development objective and strategy, although with limited ownership of the programme.** The PPE field mission found stronger government commitments to the development objectives. However, weak ownership of the programme has ultimately affected sustainability of some programme activities at the local level. The various government departments working with the programme e.g. SCCI, ZARI and the Department of Cooperatives, were committed to the programme; however, their roles were not sufficiently clarified. Ultimately, when implementation changed to working through service providers, on account of delays that had been experienced due to slow programme-start up, the role of the Government was even less defined, particularly at the decentralized level, resulting in limited participation and ownership. The on-boarding of the service providers was therefore perceived as a way of grabbing the programme away from the Government, understandably so given the creation of parallel structures that came with service providers.

155. **There was limited evidence of Government-led stakeholder and beneficiary consultations during design and implementation.** As highlighted in the relevance section, the design of the new variety-breeding programme did not take into consideration the variety breeding cycle. Key institutions such as SCCI, ZARI and the Department of Cooperatives were not adequately involved during the design phase. Furthermore, evidence on the ground also seems to suggest limited community consultation in determining programme activities, resulting in inadequate contextualization of interventions.

156. **There was generally slow set-up of the implementation arrangements, including the establishment of the PMU.** The MoA established a dedicated PMU to manage the implementation of the programme comprising management team members and technical team members based in the field. The PMU was not fully established until the end of 2013 and it faced high staff turnover (31 per cent) within two years of its establishment. The key positions where there was high staff turnover were Procurement and Contracts Specialist, Monitoring and Evaluation Specialist and Local Agricultural Investments Manager. Various reasons resulted in these positions falling vacant, including resignations and termination due to poor performance. Later, all key positions were filled, contributing to stability of the PMU up to programme completion.

157. **The S3P monitoring and evaluation system was weak and less effective in feeding into ongoing programme quality improvement.** The system was not responsive to changes in the context or operational environment. The programme management information system designed to track programme outputs and outreach came in late (2017) and was not upgraded thereafter, resulting in initial design weaknesses not being addressed (IFAD, 2021b). As confirmed by the PPE field mission, this resulted in challenges related to beneficiaries – for example, a mix of beneficiary names and national identity numbers – making it difficult to quantify the exact number of beneficiaries reached by the programme. Identification of new programme beneficiaries and those who were part of ongoing programming, particularly in the COMACO communities, was especially difficult. There was no clear recruitment and graduation strategy of beneficiaries due to inadequate generation and analysis of monitoring and evaluation data, raising concerns of beneficiary double-counting.

158. **The S3P procurement function experienced challenges, which contributed to slowing down the programme's implementation pace**. Consistently, Aide Memoires for Supervision and Implementation Support Missions fielded from 2015 to 2017 reported that procurement delays were an issue. Several reasons were cited by the PCR and confirmed by the PPE mission: (a) instability of the position of procurement and contracts specialist; (b) delayed receipt of specifications and terms of reference from end-users/user units; (c) delays in evaluation of bids; and (d) protracted approvals at Ministry Procurement Committee, Ministry of Justice and IFAD levels. These challenges were particularly felt in contract execution, especially for construction-related activities. Literally no construction and/or rehabilitation contracts were completed according to contractual schedules.

159. Despite the procurement delays, it was encouraging to note that the procurement of goods, works and services was carried out in line with IFAD procurement guidelines, and public procurement legislation and regulations of the Republic of Zambia (Public Procurement Act No 12 of 2008, and Public Procurement Regulations, 2011).

160. **Summary**. Government performance was marked by weak ownership, particularly at the decentralized level of implementation where roles and responsibilities were less clear. While the programme procurement system was weak, there was adherence to the fiduciary requirements in terms of following the IFAD and Government procurement systems. On the balance, the PPE rates government performance as **moderately unsatisfactory (3).**

## D. Assessment of the quality of the project completion report

161. **Scope.** The scope of the PCR is comprehensive and in line with the PCR guidelines of IFAD. All key criteria, which include relevance, effectiveness, efficiency, sustainability and rural poverty impact were adequately covered as well as other criteria: gender, scaling up, environment and natural resources management, climate change adaptation, and access to markets. The performance of partners was also covered in the report. The scope of the PCR is rated **satisfactory (5).**

162. **Quality.** The PCR generally presents good analytical rigour while making good use of both qualitative and quantitative information. However, the report lacked in-depth

critical reflection of the shortcomings of the programme. The performance of the harmonization goals of S3P with other IFAD-supported programmes (SAPP and RUFEP) were not adequately addressed. Furthermore, there was inadequate analytical assessment of criteria such as gender equality and women's empowerment, as well as environment and natural resources management and climate change adaptation. The PPE rates this criterion as **moderately satisfactory (4).**

163. **Lessons.** The PCR presents some useful and informative lessons for implementation of similar programmes in the future. This includes lessons that cut across the various programme components, since the critical role of the PPPs in facilitating effective programme outreach. In addition, it addressed key lessons in relation to the role of farmer organizations' governance systems in ensuring sustainability; key constraints experienced with the matching grants, and the need to adequately define the nature and type of community contributions upfront, were considered.

164. The critical lessons learned from not having a strong monitoring and evaluation system in the programme were also sufficiently discussed in the PCR. The lessons learned from both the technical in the PCR are relevant and provide important inputs for future programme design and implementation; however, there is inadequate consideration of the operational lessons. The PPE rates this criterion as **satisfactory (5).**

165. **Candour.** Some of the PCR narrative and ratings were more positive compared to what actually happened, especially given the delays in programme start-up, which resulted in it being classified as a programme at risk at some point. Overall, the evaluation rates candour as **moderately satisfactory (4).**

# IV. Conclusions and recommendations

## A. Conclusions

166. **The focus on the supply side with inadequate concentration on the demand side was a missed opportunity to achieve full programme potential.** The design of S3P presented linkages between the different components through a farming systems approach that contributed to increased productivity and crop diversification. However, continuous increases in agricultural productivity required a mindset change towards market-oriented farming or farming-as-business approach. Furthermore, the right economic incentives for the smallholders need to be in place to give sufficient consideration of the demand side of agricultural production.

167. Apart from the supported market access opportunities through the revolving fund mechanism established through COMACO, the anticipated linkages with the other IFAD-supported programmes (i.e. SAPP/E-SAPP and RFP/RUFEP) did not materialize. This gap was also identified by the IFAD Zambia CPE of 2014, which highlighted the apparent lack of demand focus of S3P, but no specific actions were taken by the portfolio to address this limitation. Smallholder farmers had difficulty in finding buyers, particularly for the newly introduced legumes that were the focus of the programme, resulting in reduced incentives to intensify production at programme completion.

168. **The programme approach of working with the private service providers was a critical first step towards a pluralistic extension advisory service system.** However, it lacked the key ingredients to transform the extension advisory services in Zambia to be more pluralistic in nature, as envisaged at design. At MTR, the programme brought in private service providers to address the slow implementation and to pilot pluralistic extension services by engaging with private service providers (in line with the programme design assumptions). This was important in view of the dwindling and severely underfunded public extension services in Zambia. While the Government acknowledges the need for strong extension, system gaps persist in terms of institutional capacity, planning, reporting and feedback, high extension–to–farmer ratios, coordination and communication. The private sector has been coming in to fill in this void; however, in an unregulated environment the potential benefits of pluralistic extension advisory services have not been realized so far.

169. The extra resources provided by the programme through community extension agents was good, but suffered the familiar challenge of "projectization" of services, resulting in fragmentation and limited sustainability. The immediate collapse of the LF-FF in the areas where service delivery was led by TLC following the withdrawal of funding is of concern. Similarly, in the COMACO operational camps, there was a noticeable withdrawal of extension advisory services where the quantities of produce for their market-driven model did not justify their presence. This confirms that commercial interests and viability are key drivers of provision of services of a "public good'' nature rather than the needs of the end-users. There are clearly continuing roles for the public sector in terms of ensuring extension advisory services to meet national development goals and objectives and to serve farmers who are not served by the private sector. The need for effective policies, that give clear guidance on the roles and responsibilities of the pluralistic agricultural extension service providers and provide a framework for coordination them among cannot be overemphasized.

170. **The promotion of conservation agriculture and sustainable agricultural practices was not sufficiently contextualized.** Part of the S3P theory was based on the promotion and adoption of sustainable agricultural practices to be delivered through extension advisory services. However, the promoted sustainable agricultural practices were not well adapted to the programming context, in particular due consideration to the agro ecological differences of the provinces and the local indigenous knowledge. Eventually, a standardized approach resulted in the promotion of approaches that were not context-specific, contributing to low adoption rates. In addition, conservation agriculture is labour-intensive and requires the right equipment

for minimal soil disturbance, soil health improvement, and conservation of moisture. Activities to support labour-saving technologies had shortcomings in two aspects: (i) they were not adequately researched vis-à-vis the context and the needs of the beneficiaries; and (ii) they were inadequately implemented to generate meaningful results.

171. **The capacity development support to farmer organizations and their federations was not optimal and required further support, particularly on marketing.** The capacity development support to cooperatives and their membership suffered from being too focused on the quantitative measures (e.g. number of farmers trained, increase in membership) and less on the qualitative aspects of the interventions, in particular addressing the enabling environment issues, management and governance, marketing aspects, and access to finance for smallholder farmers. There was an observed weakness related to economic viability of their production activities, and poor skills in cooperative leadership, governance and management. Furthermore, the apparent institutional fragility of the apex organizations (DFAs and DFUs) to support their membership was also significant.

## B. Recommendations

172. **Recommendation 1: To ensure sustainable smallholder production and productivity growth, future IFAD-funded operations should sufficiently integrate market orientation in production and productivity enhancement programmes.** The success of production and productivity enhancement interventions is premised on adopting a market-oriented approach, which not only supports the supply side but also adequately addresses the demand side (market access) and contributes to sustaining crop diversification (as a pull to production). Analysis of market opportunities should be an ongoing feature to enable smallholder farmers to have access to, and effectively participate in, the markets for newly introduced crops.

173. In addition, deliberate efforts should be made to develop partnerships with relevant private sector actors through PPP mechanisms for targeted value chains covering input suppliers, logistics and agro-dealers, financial service providers, commodity brokers and buyers.

174. **Recommendation 2: IFAD and the Government should give greater attention to localized, contextually specific application of different sustainable agricultural practices through the adoption of a systems agronomy approach.** The focus on conservation agriculture seems to be too restricted to address the needs for sustainable production and productivity enhancement. There is a need to think beyond conservation agriculture. Therefore, IFAD should shift from "best bets" towards "best fits" grounded in farmers' realities, needs and indigenous knowledge to come up with context-specific and appropriate interventions. Evidence from the PPE suggests the need for more context-specific application of conservation agriculture and sustainable agricultural practices, with different approaches across the different agro-ecologic/agro-climatic conditions instead of promoting a particular choice of techniques.

175. **Recommendation 3: IFAD should provide more systematic support to the harmonization of the extension advisory services system to achieve the pluralism goals.** The general experience from S3P implementation demonstrates that pluralism in extension advisory services has strong potential to contribute to agricultural productivity, sustainability and the resilience of smallholders to shocks and stresses. The advantages and disadvantages of public and private extension advisory services need to be fully understood in the overall context of a pluralistic extension advisory services system.

176. The PPE suggests the following entry points or drivers of success in moving towards a more pluralistic extension advisory services system: (i) support the implementation of a stakeholder-, intervention- and information- mapping exercise as a first step towards the development of national policy on pluralistic extension advisory services. There is

need to identify and map stakeholders, tools, and laws, regulations and strategies relevant to extension advisory services in Zambia and in the ESA region, as well as their use and effectiveness; (ii) support the development and implementation of a national policy on pluralistic extension advisory services. This could assist in reviewing, coordinating and rolling out effective an extension advisory services system based on multiple providers; and (iii) support the development, piloting and implementation of a formal framework for the strategic coordination of different pluralistic extension advisory service actors for integrated service delivery that is not only production-oriented but also more sustainable and demand- and market-driven. This should reduce inefficiencies arising from overlapping service delivery and facilitate the co-existence of service providers in a non-duplicative manner.

177. **Recommendation 4: IFAD and the Government should carefully consider the sequencing, timeliness and effective implementation of interventions in integrated programmes to facilitate the achievement of greater and more lasting results.** For programmes like S3P that include multiple interlinked interventions ranging from infrastructure investments and capacity development to enhancing production and production, and access to markets, sequencing is critical. For instance, infrastructure investments and capacity development should not be left late during programme implementation as they contribute to the achievement of the implementation of other components, such as market development, production and productivity as well as testing/piloting in real-time, mechanisms for their long-term sustainability.

178. This requires an approach/framework that describes the sequencing options, providing clear guidance and conceptual and programmatic parameters, while maintaining flexibility to adapt to the changing contextual environment. The randomized rollout of interventions limits the full potential of interventions, given their interdependence.

# Basic project data

| | | | | *Appraisal/revised (US$ m)*[1] | | *Actual (US$ m)* | |
|---|---|---|---|---|---|---|---|
| Region | Eastern and Southern Africa | | Total project costs | | 41.2 | | 33.8 |
| Country | Zambia | | IFAD loan and percentage of total | 31.5 | 76.3% | 29.3 | 93.1% |
| Loan number | 1100001567 | | Finnish Grant | 0.9 | 2.2% | 0.9 | 100.0% |
| Type of project (subsector) | Research, extension and training | | Government | 6.1 | 14.7% | 1.6 | 4.7% |
| Financing type | F | | Beneficiaries | 2.8 | 6.8% | 2.0 | 72.4% |
| Lending terms | Highly concessional[2] | | | | | | |
| Date of approval | 15/09/2011 | | | | | | |
| Date of loan signature | 09/12/2011 | | | | | | |
| Date of effectiveness | 09/12/2011 | | | | | | |
| Loan amendments | 1 | | Number of beneficiaries (direct) | | 337,500 | | 292,055 |
| Loan closure extensions | 12 months | | | | | | |
| Country programme managers | Fumiko Nakai<br>Abla Benhammouche<br>Ambrosio Barros | | Loan closing date | | | | 31/12/2019 |
| Regional director(s) | Perin Saint Ange<br>Ides de Willebois<br>Sara Mbago-Bhunu | | Mid-term review | | | | 30/06/2015 |
| Lead evaluator for project performance evaluation | Raymond Mubayiwa | | IFAD loan disbursement at project completion (%) | | | | Loan: 93.1% |
| Project performance evaluation quality control panel | Fabrizio Felloni<br>Johanna Pennarz<br>Fumiko Nakai<br>Enala Mumba | | Date of project completion report | | | | 12/07/2021 |

Source: S3P project completion report; IFAD Operations Results Management System.

[1] The amount presented are revised amounts following the cancellation of the Finnish Government Grant of US$7.1m.
[2] Special loan on highly concessional terms, free of interest but bearing a service charge of three fourths of one per cent (0.75 per cent) per annum and having a maturity period of 40 years, including a grace period of 10 years.

# Definition and rating of the evaluation criteria used by IOE

| *Criteria* | *Definition* * | *Mandatory* | *To be rated* |
|---|---|---|---|
| **Impact** | The extent to which an intervention/country strategy has generated or is expected to generate significant positive or negative, intended or unintended, higher-level effects.<br>The criterion includes the following domains:<br>- changes in incomes, assets and productive capacities<br>- changes in social / human capital<br>- changes in household food security and nutrition<br>- changes in institution and policies<br>The analysis of impact will seek to determine whether changes have been transformational, generating changes that can lead societies onto fundamentally different development pathways (e.g., due to the size or distributional effects of changes to poor and marginalized groups) | X | Yes |
| **Project performance** | Project performance is an average of the ratings for relevance, effectiveness, efficiency and sustainability of benefits. | X | Yes |
| Relevance | The extent to which: (i) the objectives of the intervention/ strategy are consistent with beneficiaries' requirements, country needs, institutional priorities and partner and donor policies; (ii) the design of the interventions / strategy*, the targeting strategies adopted are consistent with the objectives; and (iii) the intervention / strategy has been (re-) adapted to address changes in the context. | X | Yes |
| Effectiveness | The extent to which the intervention/country strategy achieved, or is expected to achieve, its objectives and its results at the time of the evaluation, including any differential results across groups<br>A specific sub-domain of effectiveness relates to *Innovation*, the extent to which interventions brought a solution (practice, approach/method, process, product, or rule) that is novel, with respect to the specific context, time frame and stakeholders (intended users of the solution), with the purpose of improving performance and/or addressing challenge(s) in relation to rural poverty reduction.[1] | X | Yes |
| Efficiency | The extent to which the intervention or strategy delivers, or is likely to deliver, results in an economic and timely way.<br>"Economic" is the conversion of inputs (e.g., funds, expertise, natural resources, time) into outputs, outcomes and impacts, in the most cost-effective way possible, as compared to feasible alternatives in the context. "Timely" delivery is within the intended timeframe, or a timeframe reasonably adjusted to the demands of the evolving context. This may include assessing operational efficiency (how well the intervention was managed). | X | Yes |
| Sustainability of benefits | The extent to which the net benefits of the intervention or strategy continue and are scaled-up (or are likely to continue and be scaled-up) by government authorities, donor organizations, the private sector and others agencies.<br>Note: This entails an examination of the financial, economic, social, environmental, and institutional capacities of the systems needed to sustain net benefits over time. It involves analyses of resilience, risks and potential trade-offs.<br>*Scaling-up** takes place when: (i) bi- and multi laterals partners, private sector, communities) adopt and diffuse the solution tested by IFAD; (ii) other stakeholders invested resources to bring the solution at scale; and (iii) | X<br>X | Yes<br>Yes |

[1] Conditions that qualify an innovation: newness to the context, to the intended users and the intended purpose of improving performance. Furthermore, the 2020 Corporate-level Evaluation on IFAD's support to Innovation defined transformational innovations as "those that are able to lift poor farmers above a threshold, where they cannot easily fall back after a shock". Those innovations tackle simultaneously multiple challenges faced by smallholder farmers. In IFAD operation contexts, this happens by packaging / bundling together several small innovations. They are most of the time holistic solutions or approaches applied of implemented by IFAD supported operations.

| *Criteria* | *Definition* * | *Mandatory* | *To be rated* |
|---|---|---|---|
| | the government applies a policy framework to generalize the solution tested by IFAD (from practice to policy).<br>*Note that scaling up does not only relate to innovations. | | |
| **Other performance criteria** | | | |
| Gender equality and women's empowerment | The extent to which IFAD interventions have contributed to better gender equality and women's empowerment. For example, in terms of women's access to and ownership of assets, resources and services; participation in decision making; workload balance and impact on women's incomes, nutrition and livelihoods; and in promoting sustainable, inclusive and far-reaching changes in social norms, attitudes, behaviours and beliefs underpinning gender inequality.<br>Evaluations will assess to what extent interventions and strategies have been gender transformational, relative to the context, by: (i) addressing root causes of gender inequality and discrimination; (ii) acting upon gender roles, norms and power relations; (iii) promoting broader processes of social change (beyond the immediate intervention).<br>Evaluators will consider differential impacts by gender and the way they interact with other forms of discrimination (such as age, race, ethnicity, social status and disability), also known as gender intersectionality.[2] | X | Yes |
| Specific domain of sustainability:<br>Environment and natural resources management and climate change adaptation. | The extent to which the development interventions/strategy contribute to enhancing the environmental sustainability and resilience to climate change in small-scale agriculture. | X | Yes |
| Performance of partners (assessed separately for IFAD and the Government) | The extent to which IFAD and the Government (including central and local authorities and executing agencies) supported design, implementation and the achievement of results, conducive policy environment, and impact and the sustainability of the intervention/country programme | X | Yes |
| | The adequacy of the Borrower's assumption of ownership and responsibility during all project phases, including government and implementing agency, in ensuring quality preparation and implementation, compliance with covenants and agreements, supporting a conducive policy environment and establishing the basis for sustainability, and fostering participation by the project's stakeholders | X | Yes |

[2] Evaluation Cooperation Group, "Gender. Main messages and findings from the ECG Gender practitioners' workshops) (Washington, D.C., 2017), https://www.ecgnet.org/document/main-messages-and-findings-ieg-gender-practitioners-workshop

# Rating comparison[a]

| *Criteria* | *Programme Management Department rating* | *Project Performance Evaluation rating* | *Rating disconnect* |
|---|---|---|---|
| **Rural poverty impact** | 5 | 4 | -1.00 |
| **Project performance** | | | |
| Relevance | 5 | 4 | -1.00 |
| Effectiveness | 4 | 4 | 0.00 |
| *Innovation* | 5 | 5 | 0.00 |
| Efficiency | 4 | 3 | -1.00 |
| Sustainability of benefits | 4 | 3 | -1.00 |
| **IFAD specific performance criteria** | | | |
| Gender equality and women's empowerment | 4 | 3 | -1.00 |
| Scaling up | 5 | 4 | -1.00 |
| ENRM/CCA | 5 | 3 | -2.00 |
| **Overall project achievement** | **4.50** | **3.67** | **-0.83** |
| **Performance of partners** | | | |
| IFAD | 4 | 4 | 0.00 |
| Government | 4 | 3 | -1.00 |
| **Average net disconnect[b]** | | | **-0.67** |

[a] Rating scale: 1 = highly unsatisfactory; 2 = unsatisfactory; 3 = moderately unsatisfactory; 4 = moderately satisfactory; 5 = satisfactory; 6 = highly satisfactory; n.p. = not provided; n.a. = not applicable.

[b] The algebraic sum of disconnect, divided by the number of criteria and sub-criteria, excluding 'overall project achievement; The disconnect is rounded at the first two decimals

**Ratings of the Project Completion Report quality**

| | *IOE rating* |
|---|---|
| Scope | 5 |
| Quality (methods, data, participatory process) | 4 |
| Lessons | 5 |
| Candour | 4 |
| Overall rating of the Project Completion Report | 4.50 |

Rating scale: 1 = highly unsatisfactory; 2 = unsatisfactory; 3 = moderately unsatisfactory; 4 = moderately satisfactory; 5 = satisfactory; 6 = highly satisfactory; n.a. = not applicable.

# Key issues for the evaluation

Key issues for this PPE have been identified through a review of different studies and reports concerning the programme and a focus group discussion with the IFAD Zambia team. The key issues and questions to be addressed by this PPE are outlined below. Some of these key issues may either change, be refined or updated.

**Targeting, gender and youth**

The programme adopted a phased geographic targeting approach, and this involved initial implementation in two regions and expansion into the third region.[1] The programme was to target smallholder farmers that cropped up to 5 ha and were characterized by low asset-based, precarious livelihoods with comparatively low resilience to shocks.[2] In addition, a pro-active gender targeting was incorporated through a crosscutting gender mainstreaming strategy throughout the programme and in line with IFAD and government policies.

Available documentation does not provide sufficient details on the extent to which the implementation of the targeting approach was actually implemented, monitored and effective in reaching the most vulnerable groups in the programme areas.

**Questions for this PPE**

a. To what extent was the targeting strategy clear and implemented as conceptualized at design? Was the implementation of the targeting strategy monitored?

b. To what extent was the targeting approach pro-poor and effective in reaching poor households in particular including women and youth?

c. To what extent did the targeting strategy contribute to changes in gender equality and women's empowerment (access to resources and services, decision-making and distribution of workload change in power relations between the men and the women)?

d. To what extent did the programme meet women's strategic needs (encouraging women's participation in leadership, increase agency and voice for the women)?

e. To what extent was the gender mainstreaming strategy disseminated and understood at all levels?

**Pluralistic agricultural extension services**

S3P supported the ongoing shift by the government in the extension services by supporting a liberalized approach characterized by multiple providers, both public and private, and promoted initiatives such as FFS/FBS and the lead farmer approach. According to the appraisal document, the objective was to improve access, quality and sustainability of advisory services to small-scale farmers in targeted areas.

There is insufficient analytic evidence on the performance of the different extension services delivery models that were promoted in particular the relative complementarity of the public and private sector-based approaches requires further attention (harmonization). The PPE will seek to fill in this gap by understanding the critical factors for the different models of agricultural extension services delivery at different levels in particular any signs of continuity, scale up beyond the S3P programme life cycle will be explored. The extent to which the design and implementation of extension services recognized the heterogeneity of the smallholder farmers is an important aspect that requires consideration.

[1] This would involve programme activities starting in the first two provinces (Luapula and Northern) in the first two years, with activities in 8 districts in year 1 and more activities in another 8 districts in year 2.
[2] S3P PDR, paragraph 32.

**Questions for the PPE**

a. How effective were the different models of pluralistic agricultural extension services promoted by the S3P in providing holistic and timely services to farmers? Which models or approaches have been scaled up beyond the S3P of the S3P in line with the exit and sustainability strategy?

b. How, why, for whom and in what circumstances did the different models of agricultural extension services contributed to the expected changes or results? What were the mechanisms at play?

c. What circumstances (conditions, enabling/constraining factors) were conducive (or not) to generating benefits to farmers?

d. Did the government play a critical role in the provision of pluralistic extension services through harmonization and providing a regulatory framework to ensure maintenance of quality standards?

e. How effective has the programme been in ensuring better extension services for women and youth farmers? Has it taken into account their needs accordingly?

**Improving crop and land management practices**

The intersection of crop and land management practices are of critical importance given the increasing risks the agriculture sector is facing in Zambia and climate change is compounding the challenges. The S3P sought to enable farmers access improved technologies, good agricultural practices and improved crop varieties. The original design as conceptualized was changed during midterm after it became apparent that the time required for breeding of crop varieties was beyond the S3P implementation period.[3] Instead, the programme opted for the procurement and distribution of known improved seed varieties. Alongside promoting improved seed varieties, the programme promoted conservation agriculture methods to ensure optimum utilization of natural resources and the acquisition of nutrient dense seeds.

The evidence on this critical component is mixed. No statistically significant difference between the rates of adoption of sustainable agricultural practices such as the components of CA (minimum/zero tillage, soil cover, crop rotation), fallowing, agroforestry or erosion between beneficiaries and non-beneficiaries. Adoption of agricultural practices as zero or minimum tillage and growing cover crops is very low in the IAHS.[4] Sustainable agricultural practices such as soil cover (through the management of harvest residues), fallowing, agroforestry and erosion control measures, are used much more extensively (64, 48, 26 and 37 per cent, respectively) by the sampled households with no statistical significance between beneficiaries and non-beneficiaries.[5] Evidence seems to suggest S3P impacts on residue management and erosion control practices for beneficiaries when compared to non-beneficiaries.[6]

The PPE will seek to understand and explain the mixed results on this critical component in particular the benefits and constraints in adopting the improved crop and land management practices. Understanding the benefits (on productivity in particular) and difficulties farmers faced in applying the CA as promoted by the S3P will be of critical importance. Evidence will broaden the understanding of the technical and policy conditions required for the adoption of CA in the context of IFAD in Zambia and the region at large

[3] At design, the programme planned to develop improved crop varieties adapted to target areas and on-station breeding and selection programmes for cassava and mixed beans.
[4] For instance, zero tillage has been practised by two per cent of the sample, minimum tillage (zero, planting basins and ripping) has been practiced by five per cent of the sample, while cover crops were cultivated by less than one per cent of the sample.
[5] Annex 10: RIA assessment of the S3P attributable impacts, PCR.
[6] For residue management beneficiary households are 13 percentage points more likely than non-beneficiary households to use this practice are. Similarly, regarding the different erosion control practices, beneficiary households are more likely to use draining ditches and bushes to control soil erosion than non-beneficiary households by 3 and 1 percentage points, respectively.

for ongoing and future programming. There will be need to look at how the programme had defined adoption and how this was captured. In addition, the difference between the men and the women in adoption and re-adoption.

**Questions for the PPE**

a. How appropriate were the good agricultural practices and technologies promoted by the programme to the agro-ecological conditions (soil properties, cropping patterns, labour supply, socio-economic and cultural factors)?

b. To what extent did the beneficiary farmers adopt the new cultivation techniques including the use of improved seed varieties, CA and other inputs?

c. How, why, for whom and in what circumstances did the promoted crop and land management practices contribute to the expected changes: How and why have these changes materialized?

d. What factors have been critical in facilitating the uptake of CA? If not, what are the barriers? Was there a difference in uptake between the female and male farmers?

e. Is there any evidence of contribution to policy, strategic changes including wider adoption (scale up) of the crop and land management practices promoted by the S3P? What was the strategy used by the project for knowledge sharing? With who and at what levels?

**Agricultural production and productivity**

The programme sought to contribute to sustained increase in smallholder productivity that would result in significant marketable crop output as stated in the development objective. That way, S3P would address the supply side while SAPP would deal with the demand side. The PCR reported positive crop production increases in the total value of crop production by 13 per cent for beneficiaries compared to non-beneficiaries.[7] The impact was reportedly driven by higher yields in cassava and maize although the latter was not a focus crop. No statistically significant impacts were observed on other crops promoted by the S3P, which include groundnuts and mixed beans and analysis could not be done for rice because of a small sample of beneficiaries cultivating it.[8]

The PPE proposes to understand the extent to which reported production and productivity increases have been sustained beyond the S3P. In other words, the PPE will endeavour to establish whether the programme was able to build resilient production and productivity systems. In addition, it will be critical to understand the reasons for the lack of production increases for the other focus crops as highlighted above. The PPE field mission will therefore endeavour to visit the some of the communities that were part of the RIA impact study while ensuring coverage of the different service providers programme areas. Evidence from the PPE data collection will be embedded on the IA study and analyse the post project scenario in terms of production and productivity.

**Questions for the PPE**

a. To what extent have the target beneficiaries maintained or increased their production and productivity of the target crops during and after programme completion?

b. Has there been an increase in the diversity of crops and intensity of land areas under production?

c. What explains the lack of, or limited productivity enhancement for the other target crops such as beans, rice and groundnuts?

**Harmonization of S3P with other IFAD programmes**

The S3P was designed as an agricultural productivity programme with expectations that part of objective one and three, other components with potential linkages to the

[7] RIA report.
[8] S3P Programme Completion Report.

programme, will be addressed under IFAD supported programmes in Zambia. The PDR notes that while S3P would focus on the productivity, with the ongoing programme complementing the achievement of strategic objective 1 and 3 of the programme i.e. **access to market and access to finance**, this would supplement the value chain linkages in particular through the SAPP programme for market linkages, and, Rural Finance Programme for access to finance. However, it is unclear from the design report on how this was supposed to be operationalized.

The extent of geographic targeting overlap between S3P and other IFAD programmes is another issue of concern when it comes to harmonization of the interventions. The PPE will seek to understand the extent to which harmonization and complementarity with other IFAD financed programmes was achieved. The IFAD Zambia team at one point had an ambitious idea of bringing the programmes under one roof in order to strengthen programme harmonization.

**Questions for the PPE**

a. To what extent were the expected complementarities between the different IFAD programmes achieved in particular E-SAPP and RUFEP?

b. To what extent did S3P achieve its **access to market** and **financial services** through linkages with other ongoing IFAD supported programmes as envisaged during the design of the programme?

c. Was the design of the S3P sufficiently clear on the harmonization objectives?

d. Was the S3P sufficiently geographically targeted to benefit from the envisaged complementarities in particular the value chain/market linkages with the E-SAPP?

e. What were the challenges to programme harmonization and what lessons can be learned for future and ongoing programme?

# S3P theory of change

The programme anticipated changes at both the upstream and downstream levels. At the downstream, it worked with cooperatives (farmer organizations) to improve agricultural production and productivity and, at the upstream create an enabling environment for productivity growth and agriculture commercialization.

A. At the community level, the entry point to reaching households was established **cooperatives or households that were willing to join groups/cooperatives**. Interventions were aimed at strengthening the business and entrepreneurship skills to empower farmers to better respond to markets and agricultural opportunities. Trainings were provided to farmers on governance, management and organizational structure, labour legislation, strategic planning, entrepreneurship skills, and leadership skills. The knowledge was expected cascade to other members of the FOs using their resources. In the short term, this was to contribute to the **empowerment of farmer organizations to respond to market and agricultural opportunities.**

B. To enhance production and productivity trainings were provided to smallholder farmers on conservation framing techniques, improved seed varieties and use of inputs and the use of labour-saving technologies. Support provided to farmers also responded to the need to ensure the availability of crop varieties with high nutritional density. Key to this programme component was the training of farmers on management of cassava, beans, rice and groundnuts. In the short term, this was to contribute to **improved land and crop management practices**.

C. The S3P sought to **improve the accessibility and effectiveness of pluralistic agricultural extension services.** Smallholder farmers were to receive extension services through support from MAL, COMACO and TLC who were to provide trainings in their operational areas. The MAL took over implementation from NIRAS who were part of the initial implementation. The delivery of training followed the FFS, this entailed training of lead farmers who are in turn expected to train other farmers in the community, commonly referred to as follower farmers. For the nutrition education, trained farmers were called 'lead mother' or 'lead fathers' with the same expectation that they would pass on their acquired skills to other smallholder farmers in the community.[1]

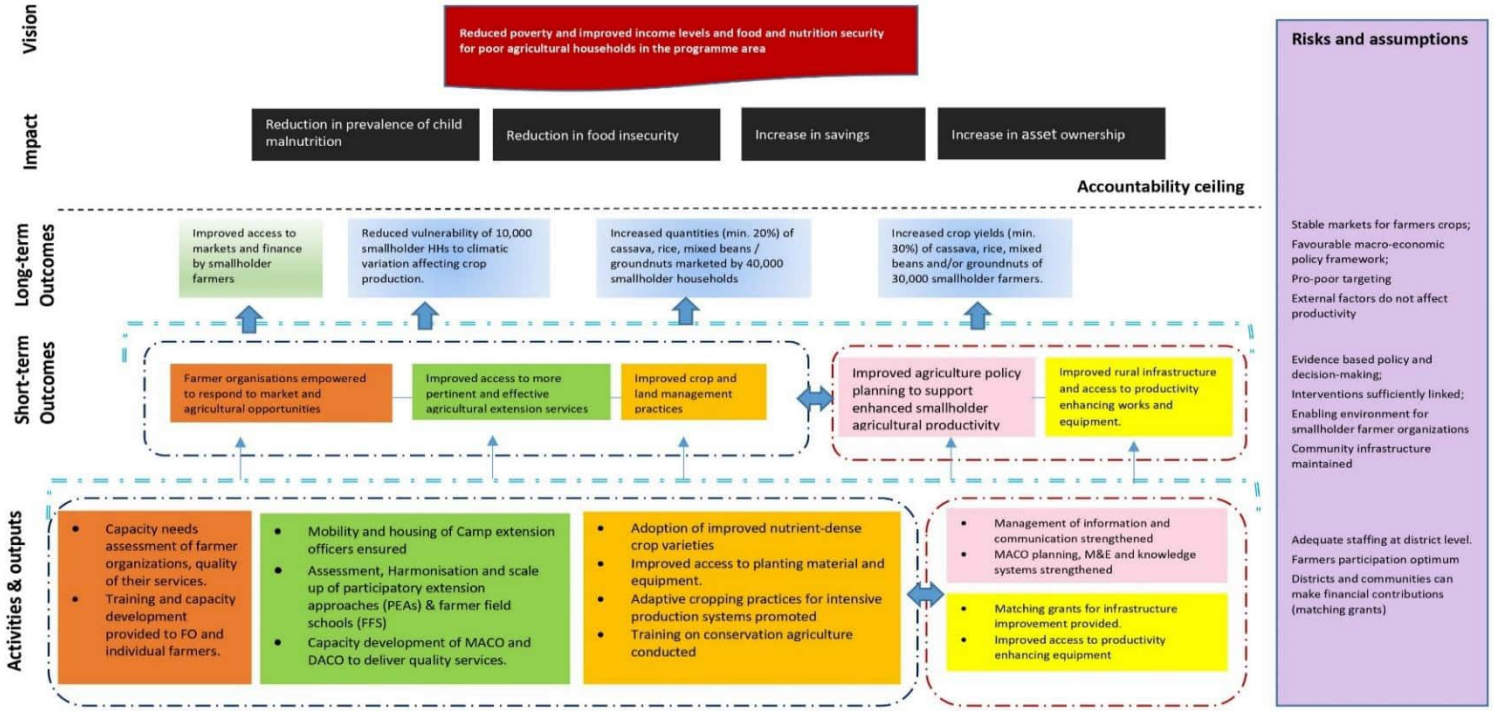
D. The S3P programme provided matching grants at the cooperative for infrastructure such as roads, water management structures, drying floors and storage sheds and other equipment based on the group's joint decision[2]. The District Agricultural Coordinator (DACO) and the Project Management Unit (PMU) of S3P supported the cooperatives to prepare proposals. In addition to programme financing and group financing (25 per cent[3]), the Local Authorities were also expected to make financial contributions. This was to result in **improved rural infrastructure and access to productivity enhancing equipment.**

E. If the intended pathways are achieved, long-term outcomes are: (i) increased crop productivity (quantity and yields) for targeted crops (cassava, rice, beans and groundnuts (ii) reduced vulnerability of farmers to climatic variations affecting production, (iii) access to markets and finance by smallholders' farmers.

F. The vision of the programme was: (i) increase in asset ownership (ii) increased household savings (iii) reduced prevalence of child malnutrition and, (iv) reduced household food insecurity.

[1] S3P impact assessment implementation plan.
[2] The equipment and infrastructure were expected to contribute to reduce post-harvest losses and increase market opportunities for the smallholder farmers.
[3] Cooperative contribution was either in cash or in kind.

Figure 2: **S3P programme theory of change diagram**



# Evaluation framework

| *Criteria & overarching evaluation questions* | *Specific sub-questions for this PPE* | *Judgement criteria/indicators of success* | *Data sources and methods* |
|---|---|---|---|
| **Relevance** | | | |
| Was the intervention/ programme relevant and aligned to:<br><br>(a) the country's development needs and challenges as well as national policies and strategies; (b) IFAD's relevant strategies and priorities; (c) the needs of the beneficiaries and tailored to very poor or marginalized people or special categories.<br><br>Was the design realistic in terms of meeting the context and implementation capacity?<br><br>Was the design re-adapted to changes in the context (if applicable)? | Was the programme relevant and coherent in contributing towards increased smallholder farmer productivity?<br><br>Was the programme supportive towards the realization of the country's key policies and rural/agricultural development frameworks?<br><br>Did the programme employ clear strategies and criteria in targeting the poorest areas and groups? How relevant was the targeting criteria to the needs of the target group?<br><br>Did the programme design build in synergies with the on-going IFAD supported programmes?<br><br>Were IFAD's priority themes (reflected in Zambia's COSOP, 2011 to 2015) namely: gender, youth, climate change and youth – adequately addressed by the programme?<br><br>How was infrastructure expected to contribute to IFAD's strategic objectives at the country level?<br><br>To what extent did the design of the S3P take into consideration the staffing and capacity levels of the Ministry of Agriculture and the private sector service providers?<br><br>Did the design of S3P take into account lessons learnt from previous IFAD supported programmes in the country?<br><br>Were S3P institutional arrangements for management, coordination and oversight appropriate for the interventions?<br><br>What were the common programme management issues related to the PMU, Policy and Planning Department and Management Teams in Lusaka? How did these interface?<br><br>Were the interventions for creating an enabling environment for smallholder productivity growth adequate and appropriate?<br><br>Were these interventions for creating and enabling environment backed by appropriately qualified agencies and their respective staff? | Evidence of vulnerability based on targeting based on the country context<br><br>Evidence of programme complementing/linkages with other IFAD supported programmes in particular SAPP and RUFEP.<br><br>Evidence of COSOP priorities and themes in the S3P design reports and documents.<br><br>Evidence of programme contribution to key agricultural policies and the evolving context.<br><br>Evidence of improvements in the environment for smallholder farmers to thrive.<br><br>Evidence of the programme design being relevant to the context in which it was implemented.<br><br>Evidence of the capacity of the different institutions to delivery on their mandate to enable smallholder productivity.<br><br>Evidence of design changes which were driven by the changing context.<br><br>Evidence of alignment with other donor programmes or activities. | **Data sources**<br><br>S3P Design Report<br><br>Supervision mission reports<br><br>Project completion report<br><br>Mid-term review report<br><br>Zambia CPE evaluation report<br><br>Policy documents<br><br>**Data collection methods**<br><br>Desk review checklists<br><br>Key information interviews<br><br>Focus group discussions |

| | | | |
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| | To what extent was the programme design flexible in accommodating important changes during implementation? How relevant were the design changes? | | |
| **Effectiveness** | | | |
| Were the objectives of the intervention/programme achieved or likely to be achieved at the time of the evaluation?<br><br>Did the intervention / strategy achieve other objectives or did it have any unexpected consequence?<br><br>To what extent did the programme or project support / promote innovations, aligned with stakeholders' needs or challenges they faced?<br><br>Were the innovations inclusive and accessible to a diversity of farmers (in terms of gender, youths, and diversity of socio-economic groups)? | How and to what extent did S3P interventions contribute towards the programme's intended outcomes? What worked well and why? What did not work well and why?<br><br>Did the improvements in rural infrastructure (rehabilitation of roads and farmer training centres) lead to improved access to markets (both inputs and produce) as well as improved farmer knowledge leading to higher adoption rates of improved technologies and GAPs?<br><br>Did improvement in rural infrastructure contribute to utilization of storage sheds and small water canals?<br><br>Were there any improvements farmers' access to labour saving technologies that were promoted during the implementation of the programme? In what ways did these contribute to productivity enhancement?<br><br>Were implementation timelines of the two major components and their key activities sufficiently synchronized to deliver on the expected outcomes and complementarities of the programme?<br><br>Were there changes in the S3P environment which affected effectiveness? If yes, which ones were these? In what ways did these affect effectiveness?<br><br>To what extent did S3P reduce the vulnerabilities of the poor (including environmental, social and economic) by social group category, i.e. women? Youth? Poor rural smallholder farmers in general?<br><br>What factors contributed to such programme achievements? What were the key challenges?<br><br>What innovations were introduced by S3P, implemented and scaled-up? Which of the innovations were the most successful and why? Which of the innovations were the least successful and why?<br><br>To what extent were the good agricultural practices that were promoted by the S3P still being practiced? What are the variations in the adoption of improved agriculture practices? | Evidence of increased smallholder agricultural productivity in the targeted crops which include cassava, groundnuts, beans.<br><br>Smallholder farmers are linked to markets and financial services.<br><br>Evidence of utilization of AR4D outputs in policy & strategy.<br><br>Evidence of use of improved seed varieties that were promoted by the programme.<br><br>Evidence of continued utilization of infrastructure promoted under the local agricultural investments (labour savings technologies/access roads and community infrastructure)<br><br>Farmer households adopted and continue using good agricultural practices.<br><br>Evidence of enhanced productivity spill over effects on the non-targeted crops (both positive and negative).<br><br>Evidence of new approaches being introduced in Zambia as part of the S3P.<br><br>Evidence of equity and inclusion of the S3P programme i.e. targeting of the most vulnerable. | **Data sources**<br><br>S3P Design Report<br><br>Supervision mission reports<br><br>Project completion report<br><br>Mid-term review report<br><br>Policy documents<br><br>**Data collection methods**<br><br>Desk review checklists<br><br>Key information interviews<br><br>Focus group discussions<br><br>Semi-structured interviews |

| | | | |
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| | What are the perceived barriers to adopting improved agriculture practices? | | |
| **Efficiency** | | | |
| What is the relation between benefits and costs (e.g., net present value, internal rate of return)? How does it compare with similar interventions (if the comparison is plausible)?<br><br>Are unit costs of specific interventions in line with recognized practices and congruent with the results achieved?<br><br>Are programme management cost ratios justifiable in terms of intervention objectives, results achieved, considering contextual aspects and unforeseeable events?<br><br>Is the timeframe of the intervention development and implementation justifiable, taking into account the results achieved, the specific context and unforeseeable events? | What were the reasons for the delays S3P suffered during start-up and programme implementation?<br><br>What lessons can IFAD and the Government learn to avoid such delays in future?<br><br>Were the financial, human and technical resources adequate and were they mobilized timely?<br><br>Was the PMU sufficiently staffed and did it have people with the appropriate qualifications? Was the PME effective in executing its tasks?<br><br>Did the various branches/departments of the Ministry of Agriculture provide adequate staff to implement programme activities for which they were responsible? Did these staff execute the activities for which they were mandated, timely?<br><br>How was IFAD human resource organized and deployed to supervise and support programme implementation?<br><br>To what extent was value for money achieved during the implementation of S3P? | Evidence of timely start-up time and disbursement profiles for the intervention<br><br>Level of discrepancy between planned and utilized financial expenditures<br><br>Cost in view of results achieved compared to costs of similar projects from other organizations<br><br>Adequacy of project choices in view of existing context, infrastructure and cost<br><br>Quality of results-based management reporting (progress reporting, monitoring and evaluation)<br><br>Occurrence of change in project design/ implementation approach when needed to improve project efficiency<br><br>Cost associated with delivery mechanism and management alternatives<br><br>Management costs as a proportion of the overall project budget. | **Data sources**<br><br>Supervision mission reports<br><br>Project completion report<br><br>Mid-term review report<br><br>**Data collection methods**<br><br>Desk review checklists<br><br>Key information interviews |
| **Impact** | | | |
| Has the intervention/country strategy and programme had the anticipated impact on the target group and institutions and policies? Why?<br><br>What are the observed changes in incomes, assets of the target group, household food security and nutrition, social/human capital and institutions and policies over the project/COSOP period? What explains those changes? What are the challenges?<br><br>From an equity perspective, have very poor / marginalized groups, special | To what extent and in what ways did S3P contribute to the strengthening or the establishment of pro-poor institutions?<br><br>To what extent and in what ways did S3P contribute to the strengthening, or establishment or implementation of pro-poor policies?<br><br>What contribution did S3P made to the reduction of poverty in target areas? Please provide specific examples/evidence.<br><br>Did S3P interventions have the anticipated effects on the target groups (i.e. the poorest smallholders, women and youth in particular?) – if in the affirmative, please provide specific examples/evidence<br><br>What changes have taken place in household food security and nutrition? What explains such changes? | Evidence of institutional capacity of DACO/MACO in the provision of agricultural extension services to smallholder farmers.<br><br>Evidence of improved capacity of farmer organizations in the management of their affairs. | **Data sources**<br><br>S3P Design Report<br><br>Supervision mission reports<br><br>Project completion report<br><br>Mid-term review report<br><br>Policy documents<br><br>RIA impact study<br><br>**Data collection methods**<br><br>Desk review checklists |

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| categories, benefited in a sizable manner? | What changes have taken place in household income and asset ownership? What explains such changes? | | Key information interviews<br>Focus group discussions<br>Semi-structured interviews |

**Sustainability**

| | | | |
|---|---|---|---|
| To what extent did the intervention/programme contribute to long-term institutional, environmental and social sustainability?<br><br>What is the level of engagement, participation and ownership of the government, local communities, grass-roots organizations and the rural poor? In particular, did the government ensure budget allocations to cover operation and maintenance?<br><br>Did the programme include an exit strategy? [1]<br><br>▪ **For scaling up:**<br><br>To what extent were results scaled up or likely to be scaled up in the future? Is there an indication of commitment of the government and key stakeholders in scaling-up interventions and approaches, for example, in terms of provision of funds for selected activities, human resources availability, continuity of pro-poor policies and participatory development approaches, and institutional support? | What has been the level of engagement, participation and ownership by Farmer Organizations of S3P supported activities?<br><br>To what extent is there government commitment to continuing supporting S3P activities in terms of for example: including S3P activities in MAL Annual Work plan and budgets? Is there evidence to suggest synergies between the MoA and the relevant authorities at various levels responsible for roads maintenance?<br><br>Are there any financial sustainability models that were promoted during the implementation of the programme at the national and community levels?<br><br>How was the infrastructure constructed or rehabilitated as part of the local agricultural investments handed over and to whom? Were provisions made for post-programme handover and post completion operations and maintenance?<br><br>What are the current maintenance practices of the rural infrastructure created by the S3P<br><br>To what extent was the implementation of the S3P embedded in the broader structures of the Ministry of Agriculture and the relevant institutions responsible for construction, operations and maintenance e.g. Roads Development Agency and District Councils, in the case of roads rehabilitation.<br><br>Which of the capacity development approaches of the S3P have been adopted beyond the programme (to probe for pluralistic extension advisory services, training of cooperatives, FFS, lead farmer approach)?<br><br>What have been the main challenges regarding sustainability of the benefits accrued from S3P? What lessons can be learned by Government and IFAD for future programming?<br><br>To what extent do the beneficiaries, local committees and Ministry of Agriculture have the capacities, resources and | Existence of environmental risks to programme benefits<br><br>Existence of institutional and governance risks to programme benefits<br><br>Level of technical capacity and willingness of relevant stakeholders (government, beneficiaries) relative to level required to sustain programme benefits<br><br>Existence of socio-political risks to programme benefits | **Data sources**<br><br>S3P Design Report<br><br>Supervision mission reports<br><br>Project completion report<br><br>Mid-term review report<br><br>Policy documents<br><br>RIA impact study<br><br>**Data collection methods**<br><br>Desk review checklists<br><br>Key information interviews<br><br>Focus group discussions<br><br>Semi-structured interviews |

[1] Useful references to Management's documents related to this criterion include the IFAD action plan on sustainability and the IFAD Project Design Guidelines, 2020 (notably annex V).

| | | | |
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| | commitment to sustain the project and enable it to meet its longer term objectives?<br><br>Did the design of the exit strategy clarify how support for sustainable agricultural production and productivity was to be continued? To what extent was the S3P exit strategy implemented? | | |
| **Gender equality and women's empowerment** | | | |
| What were the project's achievements in terms of promoting gender equality and women's empowerment, including intersectionality issues?<br><br>In particular, were there changes in: (i) women's access to resources, income sources, assets (including land) and services; (ii) women's influence in decision-making within the household and community; (iii) workload distribution (including domestic chores); (iv) women's health, skills, nutrition?<br><br>Were there notable changes in social norms, attitudes, behaviours and beliefs and policies / laws relating to gender equality?<br><br>Was attention given to programme implementation resources and disaggregated monitoring with respect to gender equality and women's empowerment goals? | What evidence is available to indicate that the programme promoted gender equality and women empowerment at different levels (community, household, individual)?<br><br>Was the programme's gender strategy/approach implemented and with what results?<br><br>What evidence is available to suggest changes (positive/negative) in gender and intra-household dynamics as a results of the implemented of the S3P?<br><br>Did the introduction of labour saving technologies contribute to the reduction of women's drudgery?<br><br>What are the differential effects (if any) of changing agriculture practices on men and women?<br><br>What are the current social norms, attitudes, behaviours and beliefs in the community in relation to gender equality? Is there any evidence of positive improvements in the S3P programme communities?<br><br>Did the S3P gender strategy have any policy objectives towards improving gender equality? If so, what was the impact on the policy and institutional framework?<br><br>Was the monitoring system responsive to provide gender disaggregated data?<br><br>To what extent were the labour-saving technologies promoted during the implementation of the programme benefiting the community and in particular reducing the drudgery on women? | Evidence of changes in the gender dynamics at the community levels.<br><br>Evidence that women continue using labour saving technologies that were promoted during the programme.<br><br>Evidence of enhanced women participation in leadership and decision making structures at the community level and in particular the FOs and their federations.<br><br>Equitable household decision making<br><br>Evidence of equitable access to community assets created by the programme including services<br><br>Increased control of economic resources (income, assets)<br><br>Evidence of S3P gender policy influence.<br><br>Evidence the S3P monitoring system collected gender disaggregated data. | **Data sources**<br><br>S3P Design Report<br><br>Supervision mission reports<br><br>Project completion report<br><br>Mid-term review report<br><br>Policy documents<br><br>RIA impact study<br><br>**Data collection methods**<br><br>Desk review checklists<br><br>Key informant interviews<br><br>Focus group discussions<br><br>Semi-structured interviews |
| **Performance of IFAD** | | | |
| How effectively did IFAD support the overall quality of design, including aspects related to project approach, | How well did IFAD support the design of S3P, its implementation and supervision? To what extent was this support consistent? | Evidence of adequate technical support being provided to the programme. | **Data sources**<br><br>S3P Design Report |

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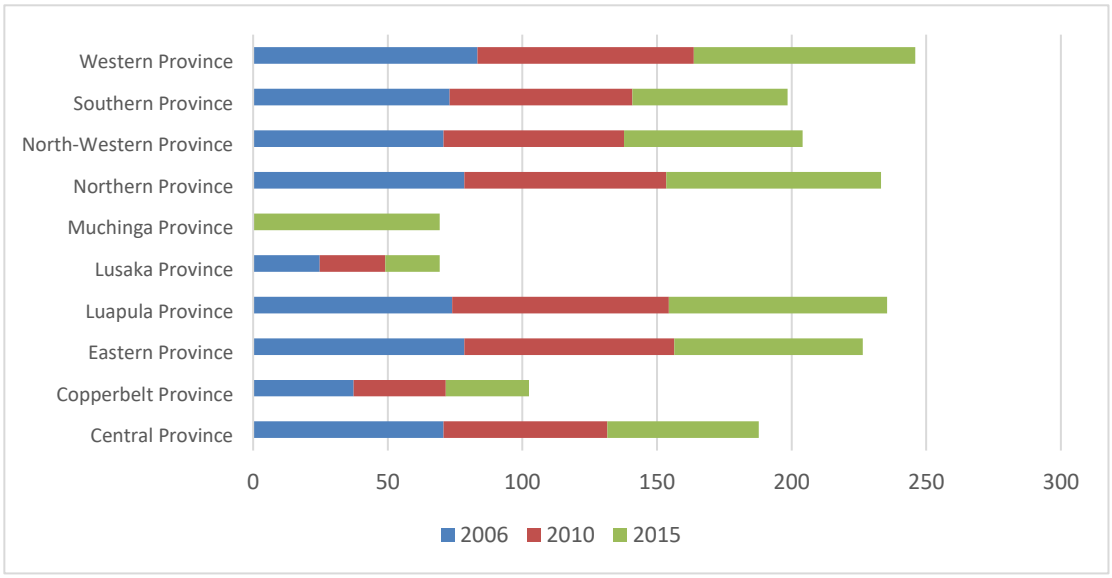
|---|---|---|---|
| compliance, and operational aspects?[2]<br><br>How proactively did IFAD identify and address threats to the achievement of project development objectives?[3]<br><br>How effectively did IFAD support the executing agency on the aspects of project management, financial management, and setting-up project level M&E systems?<br><br>How did IFAD position itself and its work in partnership with other development partners? | Did IFAD provide the required financial and human resources in an adequate matter? Did IFAD do so timely?<br><br>How effective was IFAD in identifying, addressing bottlenecks and supporting S3P performance?<br><br>How effective did the IFAD Country Office and the Regional Office provide support to S3P interventions? | Evidence of adequacy of supervision missions.<br><br>Evidence of adaptive management and support being provided to the S3P programme. | Supervision mission reports<br><br>Project completion report<br><br>Mid-term review report<br><br>Policy documents<br><br>RIA impact study<br><br>**Data collection methods**<br><br>Desk review checklists<br><br>Key information interviews<br><br>Focus group discussions<br><br>Semi-structured interviews |
| **Performance of the Government** | | | |
| Did the government pay adequate attention to design quality (adhering to quality standards when available) and realistic expectations on targets and implementation capacity?<br><br>Did they provide oversight and strategic guidance at design and during implementation?<br><br>Did Government comply with the loan covenant and fulfil its fiduciary responsibilities according to the loan agreement?<br><br>To what extent did the Government demonstrate its ownership of the programme?<br><br>Were management decisions supported by a functioning M&E system? | Did government demonstrate sufficient ownership in the design and implementation of S3P? If so, in what ways did government do so?<br><br>How well did government perform in fulfilling covenants?<br><br>To what extent did government performed its required programme oversight and management?<br><br>To what extent and how well did government mobilize the required resources (counterpart resources)? How timely was this resource mobilization?<br><br>How well and to what extent did government address implementation bottlenecks? How timely did government do this?<br><br>To what extent and how quickly did government address fiduciary and procurement concerns? | Evidence of Government ownership of the S3P programme<br><br>Evidence of sufficient government oversight.<br><br>Evidence of quality procurement processes by the Government.<br><br>Evidence of follow up on supervision missions recommendations. | **Data sources**<br><br>S3P Design Report<br><br>Supervision mission reports<br><br>Project completion report<br><br>Mid-term review report<br><br>Policy documents<br><br>RIA impact study<br><br>**Data collection methods**<br><br>Desk review checklists<br><br>Key information interviews<br><br>Focus group discussions<br><br>Semi-structured interviews |

Source: PPE team, based on preliminary desk review and scoping meeting with IFAD Zambia team.

[2] Useful reference to Management's comments that relate to the criterion are the IFAD project design guidelines (2020).
[3] Sources for self-evaluations include Project Supervisions and Project Status Reports.

# Supplementary data for the PPE assessment

Figure 3
**Poverty data by province from 2006, 2010 and 2015**




Source**:** Central statistical office of Zambia

Table 8
**Summary of S3P achievement of outputs**

| *Activity* | *Target at MTR* | *Achievement* | *% achievement* |
|---|---|---|---|
| Provincial programme planning and monitoring meetings | 39 | 80 | 205.1 |
| District programme planning and monitoring meetings | 488 | 452 | 92.6 |
| Rehabilitation of camp houses | 42 | 23 | 54.8 |
| Procurement of motor bikes | 72 | 88 | 122.2 |
| Purchase of motor vehicles | - | 33 | |
| Purchase of boats | - | 3 | |
| Training of provincial and district staff on procurement and financial management | 42 | 47 | 111.9 |
| District level meeting (ToTs on extension service provision) | 24 | 24 | 100.0 |
| Provincial training meetings of master trainers | 3 | 3 | 100.0 |
| # of farmer field schools conducted | 1 882 | 2 351 | 124.9 |
| # of farmer households reached through FFSs | 30 000 | 57 708 | 192.4 |
| Demonstration plots established | 3 000 | 4 350 | 145.0 |
| Community level projects funded | 45 | 29 | 64.4 |
| Group level projects funded | 33 | 5 | 15.2 |
| Outreach, Households | 67 500 | 58 411 | 86.5 |
| Outreach, Household members | 337 500 | 292 055 | 86.5 |

Source: S3P Project Completion Report.

Box 3
**Crop diversification**

If you look at the crops, we focused on i.e. cassava, beans, rice and groundnuts. I think your findings will in the field will explains the efforts by the various teams that were responsible for the different crops, maybe let me start with groundnuts. Groundnuts research headquarters is based in Chipata and most of the groundnuts production in Zambia is Chipata compared to the other regions in the country than any other part of the country. This is why adoption and the dissemination of the production of groundnuts is far much better in the Eastern province than to the North. It has to do with the access and availability of seeds.

We had challenges in trying to bring in the varieties of groundnuts to the north, so that farmers could be engaged in the multiplication, actually at some stage I think there were even considerations of trying to drop groundnuts, because there was no much effort from this end to have the varieties disseminated in this region. Most of the varieties that were brought here had a poor germination rate given the sensitivity in transporting groundnuts seed.

There was therefore a need to think about all this during the design of the programme. So that the promotion of new varieties takes into account the seed value chain and the agro-ecology of the programme provinces.

Source: PPE key informant interviews.

Box 4
**Seed multiplication**

We have seen an increase in number of seed companies that are looking for legume seeds especially along the beans value chain. Because of that, people got an incentive to produce seed because they know that there is a seed company will come and buy. In addition, NGOs also come and buy seed. A few smallholder farmers have established themselves in the seed production sector; this was not the case 8 to 10 years ago.

For good quality seed, we have a company called Afriseed. Afriseed is one of the company that has encouraged smallholder farmers trained by ZARI/S3P to go into seed production. Good Nature Agro is another seed company that is also buying seed and are accessing seed from the multipliers trained under S3P.

Therefore, S3P's main contributions was in training smallholder farmers and they have taken it up by themselves to continue to producing seed, particularly beans. In addition to the private companies, we also have some NGOs here in the North like Self Help Africa. They encourage the smallholder farmers to produce grain as well as seed. So, some of these farmers are producing seed for Self Help Africa. Self Help Africa will pick it redistribute to other areas.

Unfortunately, despite these positives, S3P did not link farmers to markets they left them alone. It is now our responsibility, those in the group to ensure farmers are linked to markets and the challenge we do not know where these farmers/associations are to be able make follow up on them as these were not handed over systematically to relevant government departments. S3P never deliberately or intentionally leave the farmers organized together. This was a weakness I found in the S3P. Since the programme finished, we have tried to locate some of the farmers and make sure farmers are linked to the seed markets to enable seed multiplication. We have companies coming in looking for seed and we link them to the farmers because we want them to continue with the seed multiplication.

Source: PPE key informant interviews.

# Fieldwork itinerary

| *Day* | *Time* | *Activity* | *District, province* |
|---|---|---|---|
| Monday 09/05 | 9h30 - 10h00 | Travel to MoA Office | |
| | 10h00 - 10h30 | Courtesy call to the PS of MoA (30min) | Lusaka, Lusaka |
| | 10h30 - 15h30 | Planning meeting for S3P evaluation team mission<br>Meeting with Total Land Care (S3P service provider) | Lusaka, Lusaka |
| | 15h30 - 15h45 | Travel to IFAD Country Office | |
| | 16h00 - 16h30 | Courtesy call to the IFAD Country Office (meeting with CPO & E-SAPP mission team members) | Lusaka, Lusaka |
| Tuesday 10/05 | 7h30 - 1800 | Departure from Lusaka<br>Travel to Mansa (Luapula Province – approx. 700kms - 10 hours | Mansa, Luapula |
| Wednesday 11/05 | 8h00 - 8h30 | Travel to PACO Offices | |
| | 9h00 - 11h30 | Courtesy call to the MoA/PACO in Luapula Province<br>Meetings with Provincial Stakeholders in Luapula Province | Mansa, Luapula |
| | 11h30 - 12h30 | Travel to Samfya District | |
| | 12h30 - 13h00 | Courtesy call to the MoA/DACO in Samfya District, Luapula Province | Samfya, Luapula |
| | 13h00 - 14h00 | 3 team members travel to Katanshya Agricultural Camp, Samfya District, Luapula Province. 1-team members remains at District capital in Samfya District. | Katanshya, Samfya |
| | 14h00 - 16h30 | Stakeholders meetings at district level in Samfya District | Samfya, Luapula |
| | 16h30 - 19h00 | Travel from Mansa District in Luapula Province | |
| Thursday 12/05 | 8h00 - 8h30 | Travel to DACO Office in Mansa District, Luapula Province | Mansa, Luapula |
| | 9h00 - 11h00 | Courtesy call to the MoA/DACO Office in Mansa District Luapula Province<br>Meetings with District Stakeholders in Mansa District, Luapula Province | Mansa, Luapula |
| | 11h00 - 12h00 | Travel to Resettlement Agricultural Camp, Mansa District, Luapula Province | Mansa, Luapula |
| | 12h00 - 15h00 | Community meetings with S3P beneficiaries<br>1 male FGD, 1 Female FGD, KII with Lead Farmers, KII with Camp Extension Officers | Mansa, Luapula |
| | 15h00 - 16h00 | Travel to xxx<br>Observation of access bridge constructed in xx camp | Mansa, Luapula |
| | 16h00 - 18h30 | Travel to Luwingu District, Northern Province | Luwingu, Northern |
| Friday 13/05 | 8h00 - 8h30 | Travel to DACO Offices | Luwingu, Northern |
| | 9h00 - 11h30 | Courtesy call to the MoA/DACO in Luwingu District, Northern Province<br>Meetings with District Stakeholders in Luapula Province | Luwingu, Northern |
| | 11h30 - 12h30 | Travel to Chifilwe and Mucheleka Agricultural Camps | Luwingu, Northern |
| | 12h30 - 15h00 | Meetings with S3P Beneficiaries (FGDs, KIIs, Observation of Storage Sheds in Chifilwe Agricultural Camps | Chifilwe, Luwingu |
| | 15h00 - 16h00 | Travel to Luwingu District, Northern Province | Luwingu, Northern |
| | 16h00 - 17h00 | Observation of the 26 km Luwingu to Chimpili Road supported by the S3P | Luwingu, Northern |
| | 16h00 - 19h00 | Travel to Kasama, provincial capital of Northern Province | Kasama, Northern |

Annex VIII

| *Day* | *Time* | *Activity* | *District, province* |
|---|---|---|---|
| | 8h00 - 8h30 | Travel to DACO Office in Mporokoso District, Northern Province | Kasama, Northern |
| | 9h00 - 14h00 | Courtesy call to the MoA/DACO Office in Mporokoso District, Northern Province Meetings with District Stakeholders in Mporokoso District, Northern Province Meetings with S3P beneficiaries in Mporokoso Central Agricultural Camp (KIIs, FGDs) | Mporokoso, Northern |
| Saturday 14/05 | 14h00 - 16h00 | Travel to Kasama, provincial capital of Northern Province | Kasama, Northern |
| Sunday 15/05 | 10h00 - 12h00 | Evaluation team meeting, review and reflection on data collection progress, gaps and key areas to focus on for the final phase of the evaluation mission | Kasama, Northern |
| Monday 16/05 | 8h00 - 8h30 | Travel to PACO Offices, in Kasama, Northern Provincial Capital | Kasama, Northern |
| | 9h00 - 9h30 | Courtesy call to the MoA/PACO in Northern Province (All) | Kasama, Northern |
| | 09h30 - 12h00 | Meetings with Provincial Stakeholders in Northern Province (2 team members)<br><br>Visit Misamfu Research Station in Kasama and conduct meetings with stakeholders stationed at the research centre (2 team members) | Kasama, Northern |
| | 12h00 - 19h00 | Travel to Chinsali, Muchinga Province | |
| Tuesday 17/05 | 8h00 - 8h30 | Travel to DACO Office in Chinsali, Muchinga Province | Chinsali, Muchinga |
| | 9h00 - 11h00 | Courtesy call to the MoA/DACO Office in Chinsali, Muchinga Province<br>Meetings with District Stakeholders in Chinsali, Muchinga Province | Chinsali, Muchinga |
| | 11h00 - 15h00 | Travel to Kampemba Agricultural Camp, Chinsali District, Muchinga Province (Team 1)<br><br>Community meetings with S3P beneficiaries<br>1 male FGD, 1 Female FGD, KII with Lead Farmers, KII with Camp Extension Officers | Chinsali, Muchinga |
| | 11h00 - 15h00 | Travel to Lubu Agricultural Camp, Chinsali District, Muchinga Province (Team 2)<br><br>Community meetings with S3P beneficiaries. Conduct 1 mixed group focus group discussion, KII with camp extension officer | Chinsali, Muchinga |
| Wednesday 18/05 | 7h00 - 8h30 | Travel to Shiwangandu District in Muchinga Province | Shiwangandu, Muchinga |
| | 8h30 - 9h00 | Courtesy call to the MoA/DACO Office in Shiwangandu District in Muchinga Province<br><br>Meetings with District Stakeholders in Mporokoso District, Northern Province (Team 1) | Shiwangandu, Muchinga |
| | 9h00 - 14h00 | Travel to Kabangama Agricultural Camp, Shiwangandu District, Muchinga Province (Team 2)<br><br>Community meetings with S3P beneficiaries<br>1 male FGD, 1 Female FGD, KII with Lead Farmers, KII with Block Extension Officer, Observation of Weir Rehabilitated/Constructed by S3P support | Shiwangandu, Muchinga |
| | 14h00 - 19h00 | Travel to Kapiri Mposhi | Kapiri Mposhi, Central |
| Thursday 19/05 | 8h00 - 12h30 | Travel back to Lusaka | Lusaka, Lusaka |
| | 14h00 - 14h30 | Remote debriefing meeting with MoA focal person for the PPE | Lusaka, Lusaka |

| *Day* | *Time* | *Activity* | *District, province* |
|---|---|---|---|
| | 12h30 - 13h30 | Remote debriefing meeting with IFAD CPO | Lusaka, Lusaka |

# List of key persons met

## National level stakeholders/government officials

### Ministry of Agriculture

Green Mbozi, Permanent Secretary
Christopher Mbewe, Chief Agricultural Economist
Yotam Nyirenda, Economist
Chongo Banda, Senior Planner
Peggy Mlewa, Director, Policy and Planning Department

### Ministry of Small and Medium Enterprise Development

Shadreck Mungalaba, Director of Cooperatives

## Zambia Agricultural Research Institute

Ivor Mukuka, Director

Kennedy Muimui, Chief Agricultural Research Officer, Mismafu

Arnold Banda, Senior Agricultural Research Officer (Farming Systems), Mismafu

Richard Kaunda, Programme Officer, Soil Fertility, Mismafu

Evans Mutero, Rice Research Technician, Mismafu

## Seed Control and Certification Institute

Francesco Mitti, Chief Seeds Officer

Nathan Phiri, Principal Seeds Officer

Dennis Tonga, Seed Officer, Mismafu

## Provincial and district level staff – Luapula province

Kalaba Chama, Provincial Agricultural Planner, Mansa

Fidelis Mazuba, Snr Marketing Development Officer, Mansa

Savior Kasonde, Provincial Accountant, Mansa

Charles Lungu, Senior Cooperatives Officer, Mansa

Remmy Chibebeya, Provincial Engineer, Mansa

Hobab Mumba, Senior Extension Methodology Officer, Mansa

Holy Mwanza, Provincial Agricultural Information Officer, Mansa

Muimui Arnold, District Agricultural Coordinator, Mansa

Jonathan Sinkolongo, Senior Agricultural Officer, Mansa

Kandala, District Agricultural Coordinator, Samfya

Chiona, Acting Senior Agricultural Officer

Joseph Saidi, Ministry of Infrastructure

Godfrey Chisanga, Cooperative Officer

Simon Sarawe, District Marketing Development Officer

## Provincial and district level staff – Northern Province

Sylvester Nyendwa, Provincial Agricultural Coordinator, Kasama

Wachata Mtoshi, Purchasing and Supply Officer, Kasama

Henry Daka, Provincial Agricultural Planner, Kasama

Sifaya Mufalali, Engineer, Kasama

Victor Ndlovu, District Agricultural Coordinator, Luwingu District

Aaron Mutale, Senior Agricultural Officer, Luwingu District

Simasiku, Ass District Marketing Development Officer, Luwingu District

Agnes Mbewe, District Marketing Development officer, Luwingu District

Beatrice Chanda, Assistant District Cooperatives an Entrepreneurship Officer, Luwingu District

Michelo Mweemba, Acting Crop Husbandry Officer, Luwingu District

Stanly Chaabu, TSB, Luwingu District

Boyd Sakala, District Agricultural Coordinator, Mporokoso District

Ian Chilimboyi, Senior Agricultural Officer, Mporokoso District

Harison Kapila, Ass. Entrepreneurship Development Officer, Mporokoso District

Evaristo Kapasa, Former Kawambwa District Cooperative Union Chairperson

Siget Lingunja, Current District Cooperative Union Chairperson

## Provincial and district level staff – Muchinga province

Victor Mulopa, Provincial Agricultural Coordinator, Chinsali

Mwaba Mwansa, Provincial Agricultural Planner

Francis K Mbati, District Agricultural Coordinator, Chinsali

Nelson Phiri, Senior Agricultural Engineer, Chinsali

Mulenga, District Agricultural Coordinator, Shiwang'andu

Emmanuel Phiri, National Agricultural Information System, Shiwang'andu

Ms. Patricia Mulemba, Nutrition, Shiwang'andu

Mukuka Mwansa, Senior Agricultural Officer, Shiwang'andu

Chrispin Mvula, Block Extension Officer, Shiwang'andu

Ms Mariet Moonga, Agricultural Assistant, Shiwang'andu

Lameck Chola, District Agricultural Coordinator, Isoka

## IFAD

Ambrosio Barros, Country Director, IFAD Zambia.

Robert Delve, Lead Global Technical Advisor, Agronomy, PMI, IFAD HQ

Brian Kapotwe, Country Programme Officer, IFAD Zambia

Fabrizio Vivarini, IFAD

Lucia B. Rakotovololona, Consultant, Eastern and Southern Africa Division, IFAD

Dick Siame, former IFAD Country Programme Officer, IFAD Zambia

## Former S3P staff

Martin Liywalii, Programme Manager, S3P

Patrick Chishika, Procurement and Contracts Specialist, S3P

Fackson Chanda, Quality Assurance Engineer, S3P

Doreen Simoonga Katuya, Provincial Facilitator, Northern Province, S3P

Andy Sitali, Provincial Facilitator, Luapula Province, S3P

Joshua Kapya, Provincial Facilitator, Muchinga Province, S3P

Chola Kulya, Monitoring and Evaluation Specialist, S3P

## Other IFAD Funded Programmes

Michael Mbulo, Programme Coordinator, RUFEP

Emmanuel Mulenga, Programme Coordinator, E-SAPP

## Service Providers

Richard Mumba, Chief Operations Officer – Extension, COMACO

Ms. Prudence Muchinouta, Chief Financial Officer, COMACO

Harrison Katebe, Business Development Officer, COMACO

Paul Malambo, Monitoring and Evaluation Specialist, Total Land Care

Jimmy Daka, Project Manager, NIRAS

## Beneficiaries

Beneficiaries in Katansha Camp, Samya District

Beneficiaries in Resettlement Camp, Mansa District

Beneficiaries, Mporokoso Central Camp, Mporokoso Central Multi-purpose cooperative, Mporokoso District

Beneficiaries, Mucheleka Camp, Kazembe Multi-Purpose Cooperative, Luwingu District

Beneficiaries, Kabangama Camp, Kabangama Multi-Purpose Cooperative, Shiwangandu District

Beneficiaries, Lubu Camp, Chinsali District.

Beneficiaries, Chambeshi Camp**,** Chambeshi Multi-Purpose Cooperative, Chinsali District

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