

Concept Note 3

Project Title: Strengthening Extension Services for Increased Rice Production in Zambia

Total Budget: 3,000,000 USD

Duration: 3 Years

Implementing Partners: Ministry of Agriculture, Zambia Agricultural Research Institute (ZARI), International Rice Research Institute (IRRI), Farmer Cooperatives, Private Sector, Non-Governmental Organizations

Location: Major rice-producing regions in Zambia (Western, Northern, Luapula, Eastern Provinces)

1. Background

Rice is an important crop in Zambia, particularly in rural regions where it provides food security and income for smallholder farmers. The growing demand for rice, both locally and regionally, presents significant opportunities for increasing rice production in Zambia. However, rice yields in Zambia remain below potential due to a range of factors, including limited access to extension services, poor knowledge of improved rice agronomy, and inadequate dissemination of modern farming techniques. Agricultural extension services play a vital role in transferring knowledge, technologies, and innovations from research institutions to farmers. In Zambia, however, extension services are often under-resourced, lacking the capacity to provide timely and relevant advice to rice farmers. This gap limits farmers' ability to adopt improved practices, including the use of improved rice varieties, proper land preparation, water management, and post-harvest handling techniques.

The proposed project aims to strengthen Zambia's agricultural extension services to boost rice production, improve farmer knowledge, and support the adoption of best agronomic practices. By enhancing the capacity of extension officers and improving the dissemination of information, the project will contribute to increased rice productivity and incomes for smallholder farmers.

2. Project Objectives

The overarching objective of the project is to enhance the capacity of extension services to support smallholder rice farmers in Zambia and increase rice production. The specific objectives are:

1. **Strengthen Extension Services:** Improve the capacity and outreach of agricultural extension services to deliver timely and relevant advice on rice farming practices.
 2. **Promote the Adoption of Best Agronomic Practices:** Encourage farmers to adopt improved rice varieties, modern agronomic techniques, and sustainable water management practices.
 3. **Improve Farmer Access to Information:** Utilize modern communication tools to deliver agricultural knowledge to farmers more effectively, particularly in remote areas.
 4. **Build Capacity of Extension Officers and Farmer Leaders:** Enhance the technical skills of extension officers and farmer leaders in rice production and technology dissemination.
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3. Key Project Components

Component 1: Capacity Building for Extension Officers (USD 1,000,000)

- **Objective:** Strengthen the knowledge and skills of agricultural extension officers in rice production, enabling them to provide effective guidance to smallholder farmers.
- **Activities:**
 - Develop and deliver training programs for extension officers on modern rice production techniques, including improved rice varieties, soil management, water management, pest and disease control, and post-harvest handling.
 - Train extension officers on the use of digital tools and platforms for monitoring rice crop performance and providing advisory services.
 - Organize exchange visits and field tours to successful rice farming operations within Zambia and in neighboring countries to provide practical learning experiences for extension officers.
 - Collaborate with research institutions such as ZARI and IRRI to provide technical support and resources for extension officers.

Component 2: Farmer Field Schools and Demonstration Plots (USD 800,000)

- **Objective:** Promote the adoption of best agronomic practices among rice farmers through hands-on learning and demonstration.
- **Activities:**
 - Establish farmer field schools in key rice-producing regions to facilitate peer-to-peer learning and demonstration of best rice farming practices.
 - Set up demonstration plots in strategic locations to showcase improved rice varieties and modern agronomic practices, such as proper land preparation, water management, and the use of organic and inorganic fertilizers.
 - Conduct regular farmer field days to provide practical demonstrations and facilitate knowledge exchange between extension officers, researchers, and farmers.
 - Develop a mentorship program where experienced rice farmers can serve as lead farmers, guiding other smallholder farmers in their communities.

Component 3: Development and Dissemination of Information Materials (USD 600,000)

- **Objective:** Improve access to information on rice farming practices by developing educational materials and using modern communication channels.
- **Activities:**
 - Develop extension materials, including brochures, posters, and video tutorials, focusing on key rice farming practices, such as seed selection, irrigation management, pest control, and post-harvest handling.
 - Create radio programs and short mobile phone messages (SMS) to provide timely agronomic advice to farmers in remote areas, especially during the planting and harvesting seasons.

- Utilize digital platforms and mobile applications to disseminate information on improved rice practices and monitor farm activities.
- Partner with local radio stations, farmer organizations, and NGOs to ensure the widespread dissemination of these materials to farmers across rice-producing regions.

Component 4: Strengthening Farmer-Extension Linkages (USD 400,000)

- **Objective:** Enhance collaboration between farmers and extension officers to improve the delivery of extension services and establish feedback loops.
- **Activities:**
 - Establish farmer-extension committees at the community level to provide a platform for continuous engagement and dialogue between extension officers and farmers.
 - Develop a digital feedback system through which farmers can ask questions and provide feedback to extension officers via SMS or a mobile app.
 - Conduct regular farmer-extension workshops to review progress, share challenges, and adjust advisory services based on farmer needs and feedback.
 - Facilitate collaboration between extension services, farmer cooperatives, and private sector actors to provide complementary services, such as input provision, market linkages, and access to finance.

Component 5: Monitoring and Evaluation (USD 200,000)

- **Objective:** Monitor and evaluate the impact of extension services on rice production and farmer livelihoods.
- **Activities:**
 - Develop a robust monitoring and evaluation framework to track the effectiveness of extension services in increasing rice productivity and farmer adoption of best practices.
 - Baseline surveys will be conducted at the start of the project to assess current levels of rice productivity, extension service coverage, and farmer knowledge.
 - Perform mid-term and end-of-project evaluations to measure changes in rice yields, farmer income, and the quality of extension services.
 - Share lessons learned and best practices with stakeholders to inform future interventions in the rice sector.

4. Expected Outcomes

- **Increased Extension Capacity:** At least 200 extension officers will receive specialized training in rice production, enabling them to provide more effective support to smallholder farmers.
- **Adoption of Improved Practices:** At least 70% of rice farmers in target regions will adopt improved agronomic practices, resulting in higher yields and improved incomes.
- **Improved Rice Yields:** Rice productivity will increase by at least 30% in project areas due to the adoption of improved farming techniques and the use of high-quality seeds.

- **Enhanced Access to Information:** Over 50,000 rice farmers will receive timely agronomic advice through radio programs, mobile applications, and demonstration plots.
- **Stronger Farmer-Extension Linkages:** Improved collaboration between farmers and extension officers will lead to more responsive and tailored advisory services.

5. Budget Summary

Component	Estimated Budget (USD)
Component 1: Capacity Building for Extension	1,000,000
Component 2: Farmer Field Schools and Demos	800,000
Component 3: Information Dissemination	600,000
Component 4: Strengthening Farmer-Extension	400,000
Component 5: Monitoring and Evaluation	200,000
Total	3,000,000

6. Conclusion

The strengthening of extension services is critical to boosting rice production and improving livelihoods for smallholder farmers in Zambia. By enhancing the technical capacity of extension officers, promoting the adoption of best agronomic practices, and improving access to information, this project will contribute to a significant increase in rice productivity. The collaboration between extension services, research institutions, and farmers will ensure that the benefits of modern rice technologies are widely disseminated and adopted, ultimately leading to higher yields, improved food security, and increased farmer incomes. The project will have a lasting impact on Zambia's rice sector, contributing to the country's broader agricultural development goals.