



The Norman Paterson School
of International Affairs



PARTLE:
Peace and Resolution
Through Land Education

Jessica Shumko
Aidan Russell
Paloma Boucher
Stefan Regier
Sarah Tenus

Executive Summary

Strengthening the capability, capacity and cooperation of small-holder farmers is essential in this moment of South Sudan's Nuer-Dinka coalition government. Capitalizing on this cooperation is especially needed in Greater Equatoria, where the risk of conflict between groups remains high.¹ The implementation of an agricultural assistance program which integrates multiple ethnic groups and a variety of local and international stakeholders will help achieve long-term peace, which aligns with the best case scenario of the 2020 South Sudan Conflict Risk Diagnostic.

Objectives

The Project

Though peacebuilding and food security within South Sudan is a complex and multifaceted issue, we aim to address it by developing the farming knowledge and capabilities of small-holder farmers in the Western, Central, and Eastern Equatoria regions, as well as developing co-ops which foster cooperation amongst farmers of different ethnic groups. Trust between groups is essential to the larger peace and state building processes, and thus providing the basis for food security and trust building is deeply interconnected with the larger issues of South Sudan. In South Sudan, farming is largely conducted at a subsistence level, and is not seen as a befitting profession by many young men and women, nor is it typically perceived as a worthwhile business activity.² A 2013 report found that despite 50% of its arable land mass being prime agricultural land, only 4% of this land was cultivated continuously or periodically, compared to 28% in Kenya and 8% in Uganda.³ Through the training of facilitators and the presentation of information sessions on new farming and management techniques in farmers' field schools (FFS), we aim to grow interest and knowledge of farming and assist the development of innovative and regionally proven practices in conjunction with their own traditional ones to encourage ownership of their work and to transform agriculture in South Sudan. This project also serves to address local conflict by promoting cooperation and common interests, both in terms of livelihoods and potential financial gain.

As identified by the African Development Bank in 2013, foreign direct investment (FDI) will be needed to invest in high-return crops on commercial farms in addition to small-holder farm producers of these crops which will expand FDI into South Sudan itself. Many of those high-return crops are grown in the three Equatoria regions, collectively known as the "Green Belt" for rainfall of up to 1,800 mm/year. This region, particularly Western Equatoria, possesses the possibility for two harvests per year and has a length of growing period (LGP) of 280-300 days, suitable for the growth of a wide variety of high commercial value fruits and vegetables.⁴

We aim to work with the South Sudanese government on improving existing infrastructure and attracting FDI to enable commercialization, however the main focus of this project will be the strengthening of farming.

Stakeholders and Partners

The primary stakeholders are those internal to the project. This consists of the people of South Sudan, predominantly the Dinka and Nuer ethnic groups though also the Azande, Bari and Turkana who are the primary ethnic groups in Western, Central and Eastern Equatoria, the recent coalition government formed by President Salva Kiir and opposition leader Riek Machar, who represent the Dinka and Nuer respectively, as well as the existing military and civilians living in rural communities. These internal stakeholders are also the beneficiaries. By collectively working to cultivate the land within the

communities, the people of South Sudan are mitigating food insecurity, partaking in confidence building measures, and helping to dissolve ethnic conflict by working together to achieve a common goal.

Potential stakeholders in opposition of peace could be the White Army and the Sudan People's Liberation Movement-in-Opposition.⁵ The White Army is a largely civilian force that has been fighting government troops alongside the rebel, whereas the Sudan People's Liberation Movement-in-Opposition is a political ethnic movement led by Marchar.⁶ Should negotiations between Kiir and Marchar result in unsatisfactory conclusions, the opposition movements and rebel groups alongside them may become active stakeholders opposing peace.

With funding from Global Affairs Canada (GAC), Canada is a primary external stakeholder in PARTLE, as it aims to further Canadian interests in promoting peace and security within South Sudan. GAC will provide the \$20 million dollars of funding necessary for the PARTLE project, while ensuring coordination and cooperation between stakeholders. In addition to this, GAC will provide strategic, high-level direction and insight, and will communicate regularly with partner NGOs to ensure seamless execution of the program. Any implementation challenge that cannot be solved by partners at the local level should be referred to GAC.

In order to ensure long-term sustainability, GAC will be a minor player while CECI and local stakeholders lead the project on the ground. CECI, a Quebec-based NGO focused on sustainable development, was selected for this project as they have prior experience with agricultural education programs. From 2016 to 2018, CECI ran Farmer Field Schools in Haiti. With a CDN \$2.6 million dollar budget, CECI was able to establish 50 field schools with 100 facilitators, ultimately benefiting 31,470 people, including 12,000 farmers.⁷ For the PARTLE project, CECI could use the same project framework and adapt it to fit to fit South Sudan's parameters with a more substantial budget.

CECI will also be supported by Cordaid South Sudan, a local NGO that will aid with translation, local integration, and other logistics. Partnering with Cordaid will lend the program greater local legitimacy and credibility, allowing CECI to work toward complete local ownership of the program. Effective communication between CECI and Cordaid is of utmost importance; therefore, GAC will facilitate discussion and coordination where possible.

Pre-Project Risk Assessment

Pre-Conditions

South Sudan, the world's newest state, is currently in a position where dissolving ethnic conflict and achieving food security is possible, if not vital, for the continuation of recently established peace. Following their independence from Sudan in 2011, South Sudan fell into civil war. Despite the recent coalition government formed by President Kiir and opposition leader Riek Machar in 2020, the situation in South Sudan remains highly unstable. South Sudan ranks among the world's worst in many performance metrics, notably ethnic tension, food insecurity, and economic factors. To successfully complete this project, Canada and CECI will need to establish strong relationships of trust with Cordaid and local community members. The Government of South Sudan will also be vital in ensuring the safety of Canadian CECI staff upon entering South Sudan. Furthermore, a translator will be needed to establish effective communication between the Northern Nilotic-speaking ethnic groups and English-speaking Canadians.

The hunger season is a period of scarcity between harvests that runs from May to August. Many Indigenous communities farm and keep cattle to survive. From October to April, South Sudan is in its dry season. During this time rural communities rely on their cattle herding at riverside camps to graze. From May to September, the rainy season transforms the landscape and allows them to grow crops in fixed settlements. The food they grow at this time must last them through the dry season too.⁸

Implications of COVID-19 on South Sudan

The recent COVID-19 viral pandemic will affect the timeline of the project. Given the current travel restrictions imposed by the Government of South Sudan, GAC and CECI staff would not be able to enter the country, as Canada is a high-risk country for COVID-19. Based on this information, we suggest postponing the project to 2021 barring any further restrictions from the WHO.

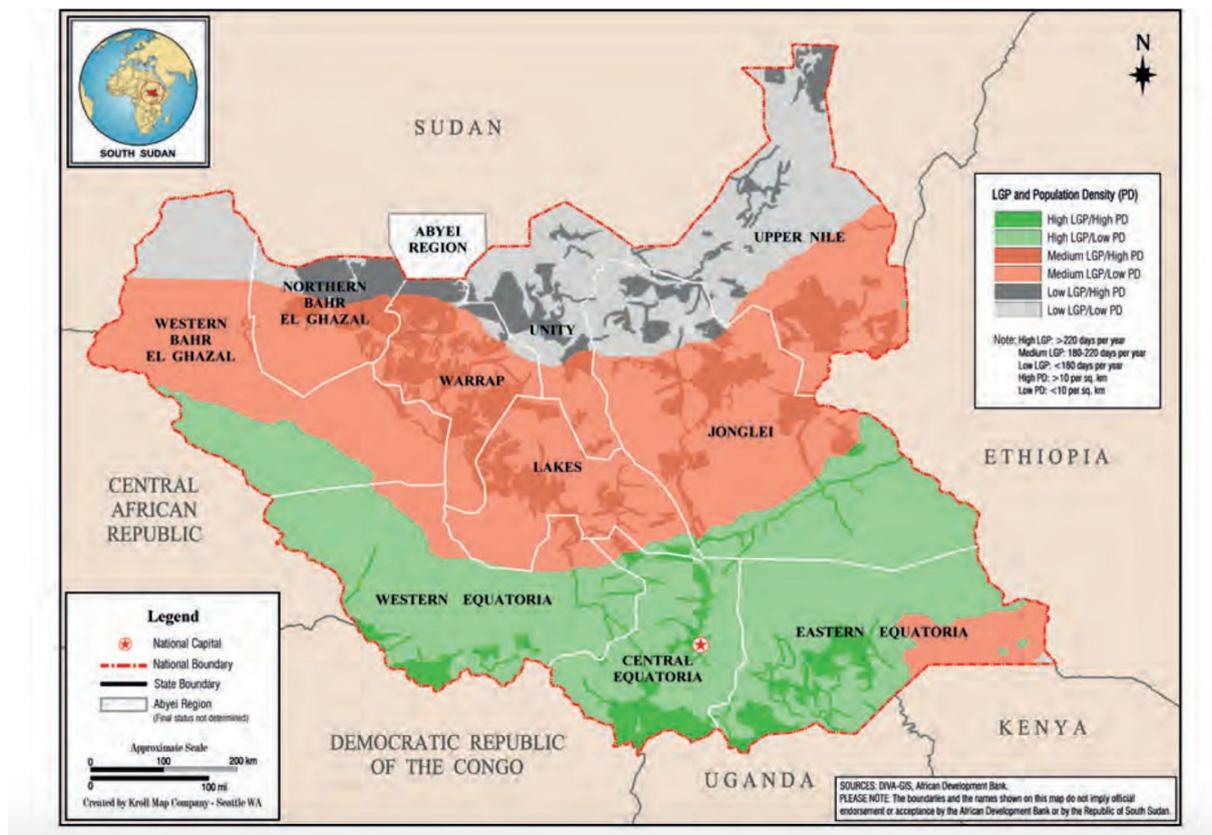
The Global Health Security Index gave South Sudan a score of 21.7 for their health security conditions in 2019 with an extremely low ranking of 180/195 countries.⁹ Notably, South Sudan scored lowest within the category of having a sufficient and robust health system compared to the other categories that were analyzed.¹⁰ Based on the most-recent information, there are no confirmed cases of COVID-19 in South Sudan.¹¹ However, if COVID-19 does reach this population, the results could be devastating as 56% of people do not have access to primary health care services and over half of the health facilities in the country are not operational.¹² This will also be exponentially more difficult on the 1.5 million internally displaced peoples within South Sudan.¹³ However, there is some hope in that they have recently dealt with the Ebola crisis which will allow for policy makers and health care professionals to transfer the knowledge learned with regards to screening in vulnerable communities as well as highlighting the importance of regular hand washing within communities when there is access to clean water and sanitation.

With regards to our project, the most significant impact for farming practices will be largely skewed towards female farmers as they are the primary workers and therefore carry the largest burden throughout the farming process. This may impact our project in that it may have to begin later than 2021 for the safety of everyone involved (physical distancing) and we may need to be even more cognisant of the societal role of women in families and communities as well as their dual role in the farming community and how both could be impacted and affect one another to an even higher degree with the fear of the virus spreading.

Canada has pledged a \$50 million foreign aid package in response to the UN COVID-19 humanitarian response plan, with \$8 million being put directly towards groups such as the WHO, ICRC and UNHCR, but it is unclear how this money will be distributed and if it will be used to address the significant lack of health professionals, services and PPE in South Sudan.¹⁴

Location

Spatial Patterns of Agricultural Potential and Population Density in South Sudan:



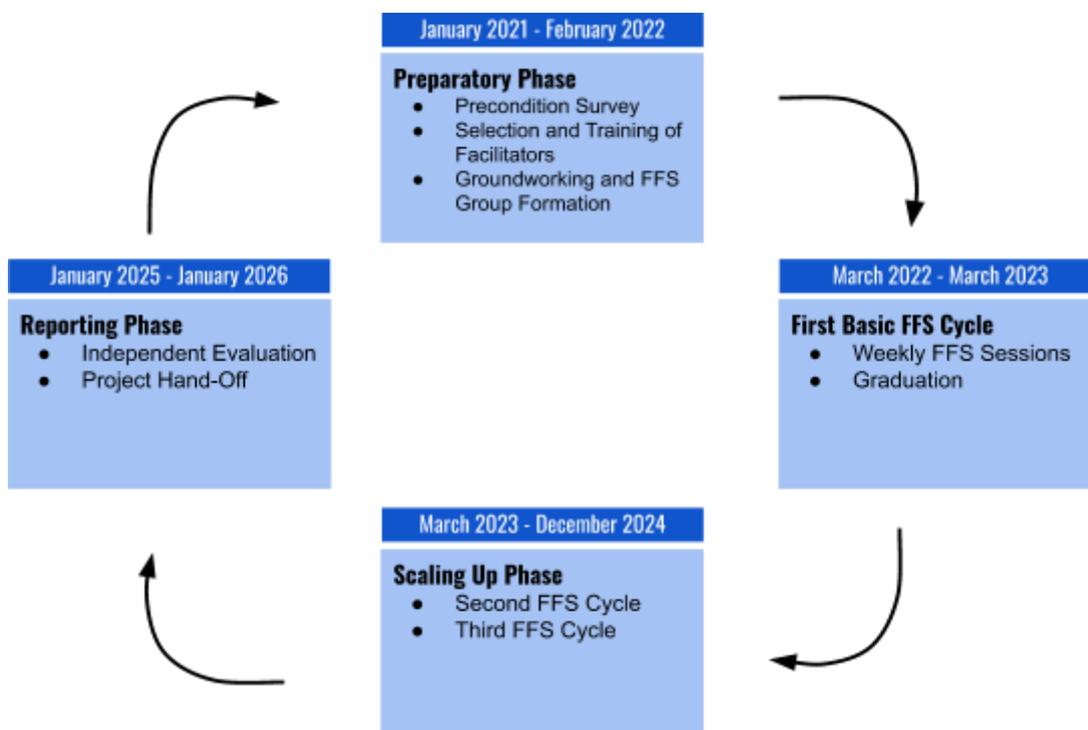
Source: African Development Bank (AfDB) Group, "Development of Agriculture in South Sudan," in *South Sudan: An Infrastructure Action Plan - A Program for Sustained Strong Economic Growth*, 137.

The chosen location for the PARTLE project is Western, Central and Eastern Equatoria in South Sudan, chosen due to a high concentration of ethnic groups, including Dinka and Nuer, and for the LGP of 280 - 300 days that allows for the growth of high value fruits and vegetables, in addition to more common cereals. The location has also previously been identified as advantageous for commercial export due to its proximity to regional and international market access points, such as Nairobi International airport and the seaports of Mombasa and Juba.¹⁵

Since 2015, the UN's Food and Agriculture Organization (FAO) has funded over 75 Farmer Field Schools (FFS) in Northern Bahr el Ghazal, Warrap, Jonglei, and Upper Nile.¹⁶ Given the fact that no Farmer Field Schools have been established in the Equatoria states, there is an opportunity to enable smallholders in this region. Furthermore, according to the FAO, food insecurity has reached the "crisis" level in Central and Eastern Equatoria.¹⁷

Timing

The project is expected to begin in January 2021 following its approval.



Political Context

In 2019, South Sudan was ranked as “gravely lacking democracy.” In the UN Civility report, it scored 2/100 in freedom rating, 10/90 in human rights and 0.2/90 in democracy score in 2019, ranking it as one of the worst human rights violating countries.¹⁸ In 2020 President Salva Kiir and opposition leader Riek Machar formed a coalition government to signify an official end to the violent conflict.¹⁹ As President Kiir declared the coalition to be the official end of the war, he stated that peace is “never to be shaken ever again.”²⁰ Kiir emphasized his forgiveness and asked for Machar to do the same while calling on their respective Dinka and Nuer ethnic groups to follow their example. This public advocacy for peace creates an atmosphere in which PARTLE will be welcomed by the government to aid in community trust building, rather than met with hostility.

Opportunities

South Sudan’s primary exports are crude, petroleum, scrap iron, aircraft parts, sawn wood and gas turbines, which it primarily exports to China, India, Uganda, Ukraine, and Jordan.²¹ However, South Sudan has the potential to be a net exporter of agricultural goods to regional markets as well as a major exporter of cereals at the domestic level.²² Unfortunately, it remains a net importer of food for the time being due to factors such as ongoing conflict, poor infrastructure - particularly underdeveloped roads for transportation of goods and services out of rural areas, as well as a farming industry that is centered around subsistence agriculture that constantly deals with uncertainties related to property rights.²³

In order to become self-sufficient, a number of constraints must be removed. These include, but are not limited to the transformation of subsistence farming methods to increase productivity, transformation of infrastructure with creation of additional rural and feeder roads, increasing the

availability of arable land to plant additional staple crop seeds such as sorghum, maize, millet and rice, which could see increased efficiency through the use of animal traction to cultivate larger plots.²⁴

Our central focus here is to better inform the local farming populations in Central, Western and Eastern Equatoria, whose states are part of the Green Belt Zone, where there is the greatest economic opportunity due to their potential for crop production. The Green Belt Zone accounts for 18% of national cropland and has the longest LGP in South Sudan.²⁵ With agriculture being dependent on the level of annual rainfall, the bimodal nature of rainfall in the Green Belt Zone allows for the possibility of two harvests per year with approximately 1800mm of rain per year.²⁶ Furthermore, there are high population densities here, which could lead to rapid returns from investments to increase agricultural production (with estimates for expansion reaching nearly 60% in the Green Belt Zone).²⁷ We propose teaching smallholder farmers in the Green Belt Zone how to increase agricultural production through the introduction of modern mechanized farming technology and thereby increase the cultivation of arable land to increase economic output.

Unfortunately, another constraint is that market information systems are nearly non-existent and formal banking services are limited, which underscores the weak business management skills of the private sector.²⁸ As a result, business management training could be a skillset that would be beneficial for farmers in the Greater Equatoria region. Finally, when considering the gendered nature of farming and the predominant role of women in owning and controlling agricultural assets (with nearly 80% of farming labour done by women),²⁹ the educational training sessions need to be geared towards women farmers and take into consideration that farm labor is often combined with their domestic chores. Finally, there is notably a very low literacy and numeracy rate among women,³⁰ which if improved, could allow smallholders to become more commercialized.

In the process of educating the labour force, particular care must be taken to include children as nearly 50% of children in the 10-14 year age group are employed in the labour force and often engaged in horrific forms of child labour.³¹ As a result, children should be allowed to join the educational training for farmers. This would not be to promote child labour, but rather to accept that it is a practice in South Sudan and to use this opportunity to better educate children and improve their literacy rate, but also to teach the farmers more broadly how child labour can be detrimental both to the child and to the total output of goods as an unwell child will not be able to work at the same level as a healthy adult.

Expected Impacts

Increasing Food Security: In 2019 South Sudan ranked among the eight worst countries in the world suffering from food crises with approximately 57% of the population facing severe food insecurity and acute hunger.³² With minimal access to irrigation, food production is largely determined by rainfall. April is the beginning of what is called "The Hunger Gap," as the previous year's food stores run thin and the next harvest is not until September.³³ Through PARTLE, communities and NGOs will work together to minimize the Hunger Gap by increasing the return in crops for the harvesting season in addition to improving food storage infrastructure.

Reducing Ethnic Tensions: The Dinka and the Nuer, South Sudan's two largest ethnic groups, have a long history of conflict over pastures and field crops. Competition for livelihoods and agricultural resources has only exacerbated existing ethnic tensions in the region.³⁴ In improving knowledge of field production and productivity, PARTLE will enhance the sustainability and productivity of smallholder farms. By decreasing the competition for livelihoods amongst ethnic groups, this program

will, in turn, diminish ethnic tensions. Furthermore, Field Schools bring together farmers from various ethnic groups. FFS activities require that farmers work together and share knowledge; this interaction will, over time, increase cohesion within the community and help break down ethnic divisions. In addition to this, PARTLE will provide farmers with a local arena within which they may address any grievances or problems, thereby mitigating potential conflicts between ethnic groups in the community.

Building Intra-Community Trust: Through engaging with Cordaid South Sudan, as well as Indigenous communities in the region prior to the start of planting season, those involved will cultivate relationships through shared knowledge of land use and cultural practices. Trust building will begin by establishing the shared use of land for cultivating and grazing purposes among the various ethnic communities, as land disputes are a significant source of conflict and distrust between the Dinka and Nuer in addition to the other largely dominant ethnic groups in Greater Equatoria.

Increasing Economic Opportunity: While South Sudan's GDP growth rate is steadily rising, their GDP per capita remains exceptionally low (237.44 USD in 2016).³⁵ This, coupled with recent extremely high inflation rates (170.5% in Oct. 2019) and a high level of income inequality highlights the importance of this proposal to expand the agricultural sector through the education of the South Sudan labour force. Macroeconomic policies that target inflation rates have begun to greatly reduce the inflation rate (36.4% as of Jan. 2020) and may have an effect on the unemployment rate, which was at 12.7% in 2018.³⁶ This newfound stability could increase the likelihood of success of this project.

South Sudan's smallholder farms must be included in the supply chain for the commercial investor, which can be done by having investors train local farms while maintaining a large-scale farm with crops purchased from local cooperatives, leading to greater employment opportunities.³⁷ Furthermore, there must be support for the social and economic reintegration of soldiers and returnees to the agricultural sector. There must be consistency between the output of educational qualifications and labour market requirements, which as stated before, should particularly emphasize the role of women in farming as well as the significant number of child labourers.

Empowering Female Farmers: Women represent 57% of those employed in the subsistence farming sector in South Sudan.³⁸ During the civil war, while many men were fighting, women learned new agricultural skills and became their families' sole breadwinners.³⁹ Despite carrying out a major proportion of agricultural activities, women in the traditional sector continue to have access only to low-paying, low-status, seasonal work.⁴⁰ PARTLE will endow women with the necessary knowledge and skills to take ownership of agricultural activities and bring home higher yields. The program will also offer an opportunity to invest in women's education and economic participation – female participants may take on leadership roles as Farmer Facilitators, or they may simply use their newfound skills to bring food security and income to their households. Overall, PARTLE will ensure that rural women benefit from the equal opportunities and access to agricultural markets and knowledge.

Potential Negative Externalities

External risks to the success of PARTLE include the continuation of violence among ethnic communities, foreign interference, and the extreme climate conditions within South Sudan. The temperature variations between dry and wet seasons, as well as between day and night, are minimal.⁴¹ Rainfall is the most vital climatic factor because of its direct effect on plant growth. The rainy season

may start as early as March, but typically begins in May, with maximum rainfall in July and August.⁴² Rainfall will gradually decrease with the last showers at the beginning of November. The seasonality of climate with a distinct wet and dry season is a crucial factor governing all human activities. Wet and dry seasons dictate people's ability to herd, farm, fish, and general mobility in the area. Rainy season limits mobility as many roads become impassable. Up to 60% of the country is cut off during the rainy season, meaning that road access in key locations of humanitarian response is minimal or impossible from July until December.⁴³ Although the dry season allows for mobility it creates higher potential for violence. Between October to March there is an increased risk of local road blocks and extortion, armed robbery and poor quality roads damaged by the previous rainy season.⁴⁴

Operational Decisions and Monitoring

Training

All training will be implemented according to the framework established by FAO for effective FFS programming.⁴⁵ Master Trainers (MT) will be sourced from CECI, as the organization retains agricultural trainers for its own projects. These MTs will already have experience with FFS implementation and will be well-versed on FFS methodology. Before the start of a new cycle, MTs from CECI will be tasked with selecting and training FFS facilitators from local communities. Each facilitator training will be headed by two MTs and will have 15-30 participants. The duration of this training depends on the crop chosen, as CECI MTs will guide facilitators through a complete growing season. FFS coordinators must also be trained prior to the commencement of the program. Coordinators will be tasked with providing support to facilitators in their completion of day-to-day tasks. They will undergo the same training as facilitators, but are expected to be better qualified and more experienced than facilitators. Any program partners who are lacking situational knowledge about South Sudan will undergo a sensitization training prior to the commencement of the program.

Operational Limits

There are more than 60 ethnic groups in Sudan, although more than half of the South Sudanese population is either Dinka or Nuer.⁴⁶ The Dinka and Nuer both speak Northern Nilotic languages.⁴⁷ In order to communicate effectively, CECI will need several translators. Furthermore, both the Dinka and Nuer are cattle herders and semi-nomadic, following their herds seasonally to the best pasturelands. During the dry season, both the Dinka and Nuer have to migrate in search of wetter places, often infringing on land claimed by other communities.⁴⁸ This often results in resource conflicts and cattle raiding. This dynamic has been amplified by progressive warming and more frequent droughts in South Sudan. Therefore, warming climates and migration limit PARTLE's capacity to mitigate conflicts over land and cattle. Furthermore, working around the dry and rainy seasons may be a limitation to mobility, as well as agricultural cultivation potential.

Operational Timeline

Preparatory Phase

***Duration:* January 2021 - February 2022**

***Funding:* 15% of budget allocated to precondition survey and training of facilitators.**

Precondition Survey

Before beginning the program, MTs from CECI will assess local conditions in order to determine whether FFS is suitable within the particular local context. In addition to this, MTs will hold

discussions with local communities and institutions in order to confirm the community's willingness to participate in the program. MTs will also conduct baseline studies in these communities in order to establish priorities and identify potential entry points for the FFS curriculum. These studies will also provide programmers with information about the social context, challenges, opportunities, and potential social vulnerabilities in the targeted area.

Selection and Training of Facilitators

With the help of Cordaid South Sudan, MTs will source local community members with advanced skills, knowledge, and experience in agriculture. These individuals will then undergo a facilitator training taught by the Master Trainers in March. Two facilitators will be assigned to each FFS group for the duration of the learning cycle.

Groundworking and FFS Group Formation

This step will begin at least two months ahead of the planned start of the FFS. Once FFS groups are established, facilitators will engage with participants in order to identify their needs and interests. The curriculum should reflect existing gaps in the community's knowledge and skills, and should build on local knowledge systems. Facilitators will also design and set up the FFS experimental field.

First Basic FFS Cycle

Duration: March 2022 - March 2023 (1 year)

Funding: 20% of budget allocated to establishment of the first FFS cycle; 20% allocated to provision of free inputs.

Weekly FFS Sessions

FFS groups will meet on a weekly basis, thereby allowing the group to follow the crop through its critical development stages. The length of the FFS learning cycle depends on the type of crop being observed--groups will follow the process from seed selection to harvesting. Some crop cycles may be as short as three months (corn, for example), whereas others may be as long as six months (like rice). Each weekly session will include at least three activities: 1) analysis of the experimental field; 2) group activity; and, 3) training related to field experiment observations or micro-finance.

Graduation

Upon completing all sessions, farmers will graduate from the first basic FFS cycle. Facilitators should maintain periodic communication with participants--a gradual phase-out of program support is preferred over a sudden cessation of assistance. Upon graduation, participants will be provided with some agricultural inputs (seeds and tools)--these will be distributed evenly and in small quantities so as to preclude dependency. At this stage, facilitators will also develop a new curriculum for the next FFS cycle using feedback from participants.

Scaling Up Phase

Duration: March 2023 - December 2024

Funding: 30% of budget allocated to establishment of second and third FFS cycles.

Second and Third FFS Cycles

Farmers who excelled in the first basic FFS cycle will be invited to become farmer-facilitators in their community. These farmers will guide new FFS groups through the curriculum they learned, thereby enhancing local ownership of the project. By placing farmers in charge of teaching efforts, the program becomes self-sufficient. Facilitators from the first cycle, meanwhile, will move on to a different area in order to launch the preparatory stage and expand the program across Equatoria.

Reporting Phase

Duration: January 2025 - January 2026

Funding: 10% of budget allocated to impact assessment; 5% allocated to contingency plan for emergency evacuation of all personnel should there be an outbreak of armed conflict.

Independent Evaluation

An impact assessment will be conducted following the conclusion of PARTLE in order to determine whether the program brought about the desired outcome. This assessment will analyze various impact levels: the socio-political impact, the financial impact, and the agro-ecosystem impact.

Project Hand-Off

Following the conclusion of the program, GAC will facilitate discussions between Cordaid South Sudan and CECI in order to ensure proper hand-off of the program. If PARTLE is successful, Cordaid South Sudan will take ownership of the project after the four-year term, providing support to farmer-facilitators. PARTLE will have already set up the necessary FFS infrastructure; therefore, the program's continuity will largely be up to farmer-facilitators' continued transmission of knowledge and skills.

Monitoring and Evaluation

During the Program

To ensure that PARTLE is on track, and that changes are made when necessary, the program will be monitored throughout each stage. Both Canadian and local South Sudanese stakeholders will review the progress of the project every four months and meet, either in-person or virtually, to discuss their findings.

Project management and evaluation will be especially focused on determining whether the new strategies for each harvest season prove to be effective in terms of greater yields and/or more efficient use of resources. This would entail regular meetings with farming communities around April (a difficult month for farming known as the "Hunger Gap").

After the Program

Following the conclusion of the four-year PARTLE program, an independent evaluation team will review the program to highlight successes and challenges. Most importantly, they will gather statistics which will measure: how many farmers were assisted, the amount of training provided, and how much money was ultimately spent on the project. Once they gather and evaluate data, the team will produce a report for CECI, GAC and local stakeholders. The team will also discuss the project with local farmers, Cordaid South Sudan, CECI, and GAC to get varying perspectives on the program.

While quarterly reports will focus on the efficacy of the tools for farming and agriculture, the independent review will examine whether the PARTLE program had an impact on conflict resolution in the Equatoria region. This includes, but is not limited to, ethnic tension, herder-farmer tension, food insecurity and land disputes.

Sustainability

The ultimate aim of PARTLE is to train local farmer facilitators to run the program independently, with continued support from Cordaid South Sudan. PARTLE will allow for FFS graduates to become teachers themselves, thereby expanding the program and ensuring that it is sustained locally. Ultimately, following the conclusion of PARTLE, farmer-facilitators will be able to run the program

with little support, training new farmers for years to come. While funding will no longer be provided after the four-year program, the resources will be left behind for them to continue the program. The introduction of FFS to the Equatoria region will augment local farming capacity, thereby improving food security in the region over time. Food security is a pre-condition for political stability; therefore, the extension of this project over various cycles will contribute directly to greater stability in the region. Furthermore, the program's group-based learning process will induce greater cooperation within communities, thereby eroding perceived barriers between ethnic groups over time. Altogether, the community-level changes brought about by FFS will prevent the resurgence of conflict in the Equatoria region for years to come.

Endnotes

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