



## **WFP Mali & SOCODEVI**

*Improved rice paddy quality and quality niébé  
processing for improved nutrition and increased  
farmer development*

**GAFSP Missing Middle Initiative**

*Project Document*

August 2017

|  |                                    |
|--|------------------------------------|
| <b>1. Name Originator:</b> Iyayi-Osazeme OYEGUN  | <b>2. Division(s):</b> <i>WCA</i>  |
| <b>3. Title of the proposal:</b> Improved rice paddy quality and quality niébé processing for improved nutrition and increased farmer development in Mali  |                                    |
| <b>4. Value of grant:</b> \$2,999,996  | <b>5. Co-financing:</b> \$124,620  |
| <b>6. Implementation period:</b> 3 years   | <b>7. GRIPs ID:</b>                |
| <b>8. Selected Priority Area:</b> N/A  |                                    |
| <b>9. Window:</b> GASFP Missing Middle Initiative  | <b>10. Country/Countries:</b> Mali |
| <p><b>11. Background/relevance:</b> Mali is still recovering from several years of instability and conflict, which led to economic disruption, population displacements and the destruction of infrastructure. While the large-scale displacement of the 2012-2014 period is over, Government control – and the ability to provide key social services – remains limited across much of northern Mali. Increasingly, the same is true for much of central Mali, where localized conflict has led to increasing levels of displacement, and to the closure of schools and health centres in many areas. Food security and nutrition indicators have improved in some areas while worsening in others. The ongoing insecurity and limited implementation capacity hinder progress towards realization of SDG2.</p> <p>The proposed MMI project combines the priorities of the Malian National Policy for Food and Nutrition Security and the National Policy for Agricultural which focus on food and nutrition security as well as the development of the agriculture sector through job creation and increased revenues. This project seeks to focus not only on improved quality of rice paddy but also the increased production and processing of niébé - a highly nutritious crop which is an important component of the Malian diet. This project will build on the foundations laid through SOCODEVI and WFP-Mali's interventions in the rice and niébé value chains. Through quality control and increased mechanization, training and facilitating access to financial services the targeted farmers' organization (FOs) will be better prepared to assure the quality or rice and niébé sold by their farmers. Beyond the strong capacity development and economic benefits this project will also have significant social impact through its engagement of women and youth.</p> <p>This project will address the quality and value of paddy and cleaned rice by reducing the ration of whole and broken grains after processing. Mali is one of the top four rice producing countries in Africa with an output equivalent to 1.65 million tons of milled rice (using international conversion rates). It is also the second most self-reliant rice producer in Africa with only 170,000 tons of rice imports – equivalent to 10% of national consumption. However, conversion rates in Mali are relatively low by international standard, due to high milling losses and breakage – on average 100 tons of paddy yields about 30 tons of broken grains and 30 tons of whole grains. In most developed rice economies 100 tons of paddy results in up to 60 tons of whole grains and about 10 tons of broken grains. On international markets broken grains have only about 60% of the value of long grains (\$204 per ton versus \$340 per ton per USDA). If Mali could achieve this optimal level of unbroken grains in milling the annual value of its rice crop would increase by \$72 million. Like neighboring Senegal, Malians also consume broken rice in specific dishes, so there is still a market for broken grains even with the improved quality objective.</p> <p>Furthermore, by increasing milling efficiency by about 10% to the international norm of 67 tons milled rice per 100 tons of paddy the volumes of milled rice would increase by 165,000 tons. Without any increase in planted area or yields Mali would become fully self-reliant and could begin targeting export markets.</p> <p>Malians are also great consumers of niébé and the crop is cultivated in most parts of Mali. Despite its high demand and attractive price, production and productivity remain low. The</p> |                                    |

high infestation rate (of local varieties and in storage) and the difficult storage require significant investments in; improved seeds and production practices, phytosanitary treatments and expensive storage systems such as triple bags, all of which are out of reach of the average smallholder niébé producer most of whom are women. The membership of the relatively small number of FOs concentrating on exclusive and intensive niébé production consists primarily of women. These FOs tend to have weak organizational capacity, equipment and inputs to properly invest in the niébé value chain and integrate this crop into their overall farm business which handicaps its development. To promote the cowpea value chain, it is necessary to address the capacity building needs throughout the chain and better organize the actors to provide a quality product to market.

The inadequate and inefficient milling operations typical outside of the large-scale industrial sector in Mali result in high rates of broken grains, but this is compounded by the poor quality of paddy delivered by farmers and their organizations, and traders to mills of all sizes. This project will strengthen the role of the farmer organizations as the intermediary between farmers and rice millers. Farmers will receive training in agronomic practices to ensure paddy quality, better contractual arrangements, and be introduced to new sources of harvest financing. They will benefit from better drying and storage facilities and management practices to be introduced at the FO level to reduce breakage, improve quality to result in increased end value.

In terms of niébé, the women's FO will be trained to process and fortify ground niébé into an enriched bean flour. Beignets made from bean flour are a popular daily snack across Mali, women grind/mill dried beans daily to make this food item. The production of this flour will not only respond to the rural and urban market demand for locally produced artisanal/fortified bean flour, but will also reduce the daily time burden. They will also be connected to youth groups who will also receive logistics and agribusiness training to establish local distribution networks of the more refined niébé or niébé flour product. WFP and SOCODEVI's local partner Malo will work with niébé FO's and youth groups to create these local processing and distribution systems which will result in job creation for youth and other vulnerable groups.

## 12. Direct and indirect target group:

### *Direct beneficiaries.*

| Producer organization    | Members       | Women members | Village groups / cooperatives | Women's groups |
|--------------------------|---------------|---------------|-------------------------------|----------------|
| Faso Jigi, Segou         | 2966          | 48%           | 125                           | 27             |
| Faranfasi So, N'Debougou | 2540          | 50%           | 59                            | 42             |
| Fecopon, Niono           | 1591          | 31%           | 16                            | 0              |
| Arpaso, San              | 4859          | 6%            | 1                             | 0              |
| Sabati, Sikasso          | 1860          | 100%          | 35                            | 35             |
| <b>Total</b>             | <b>13,816</b> | <b>39%</b>    | <b>214</b>                    | <b>69</b>      |

### **Indirect beneficiaries:**

*Household members* of the 13,816 farmers trained in improves techniques. With an average of 6 people per household in Mali, this number is estimated at around 82,896 individuals.

Local consumers: Paddy and niébé products will be sold at the village level and to larger centres in rural areas. An increase in production will make such products available at the local level (stability of supply and stabilization of prices), thereby promoting an improvement in the nutritional status of the populations.

DECENTRALISED government extensions services: the investments made in training the farmers with the support of WFP and SOCODEVI partners will impact the government technical services (Direction Regionale de l'Agriculture (DRA)) because of WFP's direct capacity building approach. All WFP activities with farmers in Mali are implemented with the involvement of Ministry of Agriculture agents to ensure knowledge and skills transfer.

Other FO members involved in the project, who will benefit from the capacity-strengthening of their FOs in terms of the provision of services.

### **13. Goal, objectives and expected outcomes:**

**GOAL:** Improve the quality, production, productivity, seed quality, processing, post-harvest handling, quality and marketing of niébé and paddy rice cultivated by the 5 participating FO's

| <b>OBJECTIVES</b>  | <b>OUTCOMES</b>   |
|--|---|
| <ul style="list-style-type: none"> <li>• Increase the earning potential of farmers through increased production and quality control of their paddy, milled rice and niébé.</li> <li>• Improve the ability of FOs to support their members' production of higher quality paddy, milled rice or niébé.</li> <li>• Enable FO members to benefit from improved access to financing to facilitate their access to better equipment and inputs.</li> </ul> | <ul style="list-style-type: none"> <li>• Train producer members of the 5 FOs to improve the quality of their paddy rice and niébé for commercial sale.</li> <li>• Assure FO member access to production and post-harvest handling equipment for rice.</li> <li>• Assure higher productivity and quality for at least 50% of the producers taking part in the demonstration plots enabling them to obtain a higher market price per ton.</li> <li>• Malo will support the production of fortified rice and artisanal fortified bean flour (local supplements include spirulina and moringa)</li> <li>• Through the project monitoring mechanisms create an ad hoc knowledge sharing platform among the project implementers, the agricultural extension service and the FOs</li> <li>• Increase the utilization of rural radio networks to disseminate information and increase knowledge of the best production techniques for quality paddy and niébé</li> </ul> |

**14. Key activities by component:**

**Component 1 - Rice** -strengthen the four main rice FO's capacity to produce and deliver quality paddy rice to rice processing units.

| Activity  | Components   |
|---|--|
| Rice quality promotion and food safety education – (includes radio programming for awareness building | <ul style="list-style-type: none"><li>• Audience research and partner consultations; development of programming and key messages based on production activity; identification of partners for WASH training; WFP supply chain &amp; Food tech to work with SOCODEVI to train on food safety and post-harvest handling; capacity building of local (Segou and San) partner radio stations.</li><li>• Capacity building of local radio stations; broadcasting of technical info and project progress; focus group facilitation for feedback on programming and project.</li><li>• Production and broadcast of interactive program series; support for targeted producers and extension agents</li><li>• Plan for next steps via focus groups and share feedback with local authorities and partner radio stations.</li></ul> |
| Farmer training –   | <ul style="list-style-type: none"><li>• Agreement with farmer organizations; agreements with Ministry of Agriculture; training plan; targeting of lead farmers (including women &amp; youth) and 24 plots for improved inputs; training in improved paddy cultivation techniques;</li><li>• Training of agricultural extension agents in M&amp;E system for the project</li><li>• Harvest assessment; repeat of training program as needed on 24 plots; exchange visits among producers; identification of women &amp; youth farmers; agricultural extension agents monitoring using set indicators; WFP and SOCODEVI update results framework</li></ul>   |

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|--|---|
|  | <ul style="list-style-type: none"> <li>• Harvest assessment; Repeat of training program as needed on 24 plots; exchange visits among producers; agricultural extension agents monitoring using set indicators; WFP and SOCODEVI update results framework</li> <li>• Plan next steps and handover of project to farmer organizations and agricultural and local authorities; WFP and SOCODEVI update results framework</li> </ul>  |
| Equipment procurement –                                    | <ul style="list-style-type: none"> <li>• Purchase and installation of silos, tarpaulins for drying;</li> <li>• (Support of FOs stimulate) private sector investment in additional processing equipment</li> </ul>   |
| FO access to finance via SOCODEVI managed revolving fund – | <ul style="list-style-type: none"> <li>• Inclusion of WFP into the SOCODEVI internal FO credit selection and financing system; needs analysis; adapt credit facility to the beneficiaries of this project; Adjustments to existing SOCODEVI credit program to absorb the caseload of this project; targeting first main group of borrowers; testing the reimbursement mechanisms (in kind and cash)</li> <li>• Phase out of interest subsidies and default guarantees.</li> <li>• Impact assessment of guaranteed revolving fund</li> </ul> |
| FO linked to markets –                                     | <ul style="list-style-type: none"> <li>• Introduction of FOs to agribusiness (information sharing): assistance with contracts and traceability</li> <li>• Support potential buyers procure from FO's via WFP adapted procurement modalities</li> <li>• Assessment of FO / agribusiness commercial relations</li> </ul>  |
| Transversal activities project administration and M&E –    | <ul style="list-style-type: none"> <li>• Establishment of project team and steering committee; agreements with 5 FOs, government, Farm Radio; Collection of baseline data. Work plan and M&amp;E system and procedures.</li> </ul>  |

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|  | <ul style="list-style-type: none"> <li>• Reporting</li> <li>• Execution of work and monitoring plan with reports. First project review. Adjustment of collaboration models as needed. Renewal of agreements with government agricultural extension service.</li> <li>• Midterm project review</li> <li>• Execution of work and monitoring plan with reports. 2nd project review. Annual renewal of agreements with agricultural extension service.</li> <li>• Execution of work and monitoring plan with reports. Annual renewal of agricultural extension agreements. Final project evaluation/impact assessment</li> </ul> |
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**Component 2 - Niébé** -Strengthen the preservation, quality, storage and commercial capacity of a niébé producing FO and provide them with processing equipment to make fortified bean flour.

| Activity  | Components   |
|---|--|
| Nutrition education and food safety education – (includes radio programming for awareness building) | <ul style="list-style-type: none"> <li>• Identification of local partners for nutrition messaging (health centers, local animators, caretaker groups, schools); design nutrition module for niébé consumption; identification of partners for WASH training; WFP supply chain &amp; Food tech to work with SOCODEVI to train on food safety and post-harvest handling; promotion of niébé production for delivery to project FO that will be supported for processing; nutrition education via Audience research and partner consultations; development of programming and key messages based on production activity; capacity building of local (Segou and San) partner radio stations.</li> <li>• Capacity building of local radio stations; broadcasting of technical info and project progress; focus group facilitation for feedback on programming and project.</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>• Production and broadcast of interactive program series; support for targeted producers and extension agents</li> <li>• Plan for next steps via focus groups and share feedback with local authorities and partner radio stations.</li> </ul>  |
| Farmer training –  | <ul style="list-style-type: none"> <li>• Agreement with farmer organizations; agreements with Ministry of Agriculture; training plan; targeting of lead farmers (including women &amp; youth) and 6 plots for improved inputs; training in improved paddy techniques;</li> <li>• Training of agricultural extension agents in M&amp;E system for the project</li> <li>• Harvest assessment; repeat of training program as needed on 6 plots; exchange visits among producers; identification of women &amp; youth farmers; agricultural extension agents monitoring using set indicators; WFP and SOCODEVI update results framework</li> <li>• Harvest assessment; Repeat of training program as needed on 6 plots; exchange visits among producers; agricultural extension agents monitoring using set indicators; WFP and SOCODEVI update results framework</li> <li>• Private sector agribusiness to train bean producing FO on processing best practices</li> <li>• Plan next steps and handover of project to farmer organizations and agricultural and local authorities; WFP and SOCODEVI update results framework</li> </ul> |
| Equipment procurement –                                    | <ul style="list-style-type: none"> <li>• Identification of local suppliers for the bean processing equipment</li> <li>• Purchase and installation of processing equipment</li> <li>• Purchase of tarpaulins for drying;</li> <li>• Purchase of machine to packaging</li> </ul>   |
| FO access to finance via SOCODEVI managed revolving fund – | <ul style="list-style-type: none"> <li>• Inclusion of WFP into the SOCODEVI internal FO credit</li> </ul>  |

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|  | <p>selection and financing system; needs analysis; adapt credit facility to the beneficiaries of this project;<br/>Adjustments to existing SOCODEVI credit program to absorb the caseload of this project; targeting first main group of borrowers; testing the reimbursement mechanisms (in kind and cash)</p> <ul style="list-style-type: none"> <li>● Phase out of interest subsidies and default guarantees.</li> <li>● Impact assessment of guaranteed revolving fund</li> </ul>   |
| FO linked to markets –   | <ul style="list-style-type: none"> <li>● Introduction of FOs to agribusiness (information sharing): assistance with contracts and traceability</li> <li>● Support potential buyers procure from FO's via WFP adapted procurement modalities</li> <li>● Assessment of FO / agribusiness commercial relations</li> </ul>  |
| Transversal activities project administration and M&E –                            | <ul style="list-style-type: none"> <li>● Establishment of project team and steering committee; agreements with 5 FOs, government, Farm Radio; Collection of baseline data. Work plan and M&amp;E system and procedures. Reporting</li> <li>● Execution of work and monitoring plan with reports. First project review. Adjustment of collaboration models as needed. Renewal of agreements with government agricultural extension service.</li> <li>● Midterm project review</li> <li>● Execution of work and monitoring plan with reports. 2nd project review. Annual renewal of agreements with agricultural extension service.</li> <li>● Execution of work and monitoring plan with reports. Annual renewal of agricultural extension agreements. Final project evaluation/impact assessment</li> </ul> |
| <p><b>15. Recipient:</b> <i>Rice and Niébé producing Farmers Organisations</i></p> |   |

**16. Rationale for recipient selection and recipient capacity:** *The project concept note was submitted to the Global Agriculture and Food Security Program (GAFSP) and they have a history of working with WFP and SOCODEVI*

**17. Project cost: \$3,124,616**

| Item                | Expenditure                             | GAFSP            | Co-financing   | Total            |
|---------------------|---|------------------|----------------|------------------|
| 1                   | Project Administration & Logistics      | 135 116          | 13 620         | 148 736          |
| 2                   | Guarantee Investment/revolving fund FOs | 1 200 000        | 15 000         | 1 215 000        |
| 3                   | Capacity building FOs                   | 450 000          | 15 000         | 465 000          |
| 4                   | Human resources                         | 164 880          | 81 000         | 245 880          |
| 5                   | Equipment & Material for FOs            | 650 000          |                | 650 000          |
| 6                   | Project overhead (WFP & SOCODEVI)       | 300 000          |                | 300 000          |
| 7                   | M&E                                     | 100 000          |                | 100 000          |
| <b>Budget total</b> |   | <b>2 999 996</b> | <b>124 620</b> | <b>3 124 616</b> |

**2: Investment Item:** WFP and SOCODEVI will adapt the SOCODEVI rural financing mechanism operating under the SOCODEVI Feere Diyara project. This financing will be used either to facilitate a revolving FO fund or to serve as guarantee funding for primary cooperatives/associations to be able to access credit. The purpose of this financing mechanism is to establish a connection between lenders (microfinance partners, the FO's) and borrowers (the FO, cooperative or individual farmer).

Under this approach, each FO is accompanied by supply side partners (NGOs) that assure their capacity building and business readiness needs. These partners assist the FO's not only to prepare funding requests, but also help them identify opportunities for funding and train them in the business practices required to adequately manage the financing once secured. At present, there are few financial and credit institutions willing to take the risk to finance FO's given their limited collateral and guarantee capacity. This financing mechanism mitigates this risk by providing a guarantee fund to share some of the risk with the financial institutions so they can extend credit services to FO's at a lower interest rate.

In this project lending, will happen at two possible levels:

- 1. Farmers from their FO's** – farmers will be able to acquire inputs, equipment or storage services on credit from their FO's which they can either repay at harvest time with their surplus commodity, which the FO will store and later at profit during the lean season. Or they can reimburse their credit in cash from the profit of their sales, individual farmers stand a better chance in terms of profit from group sales instead of selling at their farmgate. This credit mechanism will operate in parallel to the pre-existing system of annual dues that FO's have with their members.
- 2. FO's from financial institutions** – FO's will request financing from banks or micro-finance institutions to purchase the resources that their members need for the agricultural campaign. Their partners will support them to ensure their internal accounting systems efficiently manage their finances (dues, credit reimbursement from members, profit from sales) so they repay their loans on time.

At both levels granted the reimbursement mechanisms are well monitored, the funds should revolve and accrue interest, which will be held in the FO's bank or micro finance accounts (possession of an account is a prerequisite for selection the project). The FO's internal financial management will be backstopped by their NGO partners to ensure that the project operates from the start with financial sustainability in mind. The NGO's will also reinforce the message that the financing/investments received are not hand-outs but business engagements to instil a sense of accountability and responsibility in the FO's and cooperatives that will utilise these facilities. SOCODEVI's solidarity lending approach will apply to this MMI project also.

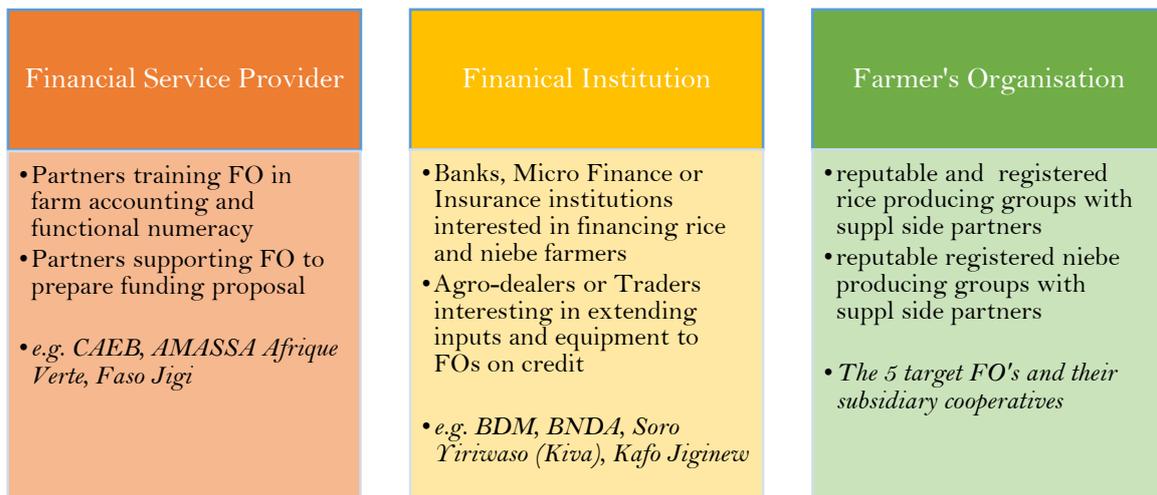


Image 1: actors involved in the financing mechanism and their roles

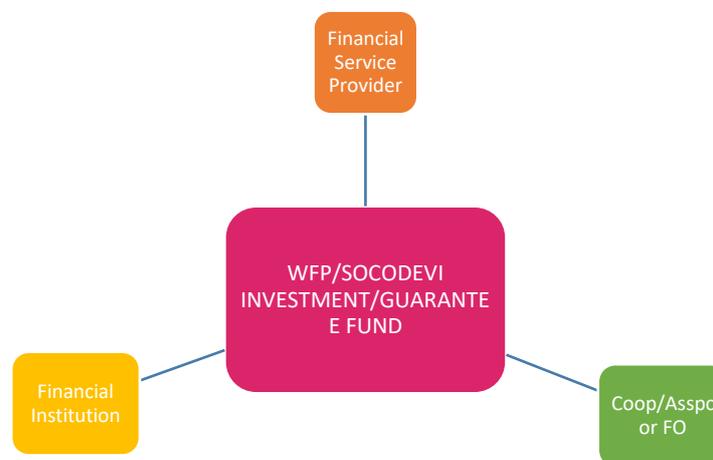


Image 2: The MMI financing mechanism serves as a buffer/mitigation tool to facilitate the agricultural resource mobilisation.

**5: Purchase Item:** Currently WFP uses a risk/sharing hybrid system. When equipment is purchased for FO's, for instance with the construction of warehouses FO's/communities contribute by allocating day labourers to deliver water, sand, bricks and other necessary materials during the process. Involving the FO/community from the beginning has led to increased sense of ownership and ultimately maintenance of equipment and infrastructure. For FO's/communities with more financial capacity they make a symbolic financial contribution (around 7%) to the process. Once the warehouse is built or the equipment is installed a portion of the FO members' dues is used to pay for maintenance. SOCODEVI requires between 5%-10% cost sharing from beneficiary FO's to their projects, for this MMI project the partners will use a combination of the methods, both symbolic financial cost-sharing and in kind contribution.

**18. Risks:**

| Component                       | Risk   | Mitigation   |
|---------------------------------|--|--|
| <b>Training &amp; Promotion</b> | Low acceptance by farmers                      | Community based participatory planning (involving partners, community and govt.) to conduct needs assessment before training modules are designed                |
| <b>Equipment pilots</b>         | Farmers potential slow behavior change         | Education, value chain approach to planning their agricultural campaign so they are aware of the end user at every step of their activity                        |
|                                 | Technical difficulties                         | Identify and train capable youth as equipment operators and engineers  |
| <b>Revolving fund</b>           | High default rates                             | Flexible repayment options and sliding credit rates, mitigated interest rate because of guarantee funds, monitoring by NGO partners                              |
| <b>M&amp;E</b>                  | Security                                       | During field missions' attention to UNDSS and MINUSMA security directives, where possible hold meetings in central neutral, keep meeting participant numbers low |
|                                 | Govt. agent inability to respect M&E protocols | Training and oversight   |

**19. Monitoring & Evaluation, Knowledge Management and Learning:** *A simple system for collecting and managing information will be put in place. The monitoring and evaluation system provides for: continuous monitoring of activities and results; an interim review involving all project stakeholders; and a final impact assessment carried out by an external entity.*

| Goal and objectives: MMI Mali   | Indicators and results  |
|---|---|
| <p><b>Project goal</b></p> <p>Improve the quality, production, productivity, seed quality, processing, post-harvest handling, quality and marketing of niébé and paddy rice cultivated by the 5 participating FOs</p> | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- Increase in the production of quality paddy rice by the end of the project</li> <li>- Increased intensification of niébé production</li> <li>- Introduction of artisanal/SME enriched bean flour made with local niébé and micronutrients like spirulina</li> <li>- The 5 FOs provide better quality paddy, milled rice or niébé and have increased earnings due to the improved quality</li> <li>- Increase in profit as a percentage of sales for improved quality paddy rice and niébé, compared to sales pre-project</li> </ul> |

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| <p><b>Objective 1:</b></p> <p>Increase the earning potential of farmers through increased production and quality control of their paddy, milled rice and niébé.</p>   | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- 10% reduction in the rate of broken grains per ton of rice due to improvements in agronomic practices and post-harvest handling.</li> <li>- Increase the extraction rate of milled rice for those FO's selling milled rice</li> <li>- Increase in the price of paddy, milled rice or niébé due to improved quality</li> <li>- Increased profit attributable to impact aggregation on market access and improved quality commodity</li> </ul>  |
| <p><b>Objective 2:</b></p> <p>Improve the ability of FOs to support their members' production of higher quality paddy, milled rice or niébé.</p> <p><i>FO's are supposed to be the clearing house of services for their member farmers, however oftentimes their capacity to meet the equipment, input and training needs of their farmers is low. So, the project intends to strengthen the identified FO capacity gaps through targeted, customised support and capacity development interventions ranging from; facilitating FO access to financial and credit services beyond the financial capacity of the project, training the lead farmers in the improved techniques, working with the decentralised government technical services to accompany and monitor FO progress. Facilitate bulk procurement from agro-dealers for improved inputs and post-harvest equipment.</i></p> | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- The 5 FOs able to supply quality inputs to members needed for better agricultural practices.</li> <li>- The FO members recruited for the field schools are trained in improved agricultural techniques</li> <li>- FOs ensure that their member farmers respect the agricultural calendar (sowing and harvesting) and use necessary inputs for optimal productivity.</li> <li>- The commercial services of the 5 FOs provide quality control and assure traceability of their products.</li> </ul> |
| <p><b>Objective 3:</b></p> <p>Enable FO members to benefit from improved access to financing to facilitate their access to better equipment and inputs.</p>   | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- Establish a US\$1,200,000 guarantee fund to encourage financial service providers to extend packages to FOs.</li> <li>- Establish a US\$650,000 fund to support purchase of essential production, post-harvest, and processing equipment.</li> <li>- Establish US\$450,000 capacity building fund to support the farm-field schools and</li> </ul>  |

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|  | <p>other urgent training needs (processing and fortification)</p> <ul style="list-style-type: none"> <li>- Use WFP adapted procurement modalities as inspiration for the contract system between FOs and SMEs for processing and fortification</li> <li>- FO internal accounting systems efficiently managed (dues, credit reimbursement, income &amp; profit from sales) so they repay their loans on time monitored by NGO partners</li> <li>- Number of loans repaid (on time or late)</li> <li>- Number of defaulted loans</li> <li>- Tracking income earned from sales during project cycle and monitor profit margin</li> </ul> |
| <p><b>Result 1:</b></p> <p>Train producer members of the 5 FOs to improve the quality of their rice paddy and niébé for commercial sale.</p>   | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- 30 demonstration plots/farm-field schools (6 per FO)</li> <li>- 300 producers are directly involved in demonstration plots production including 40% women and youth.</li> <li>- 600 producers benefit annually from training in agricultural practices including 45% women and youth.</li> </ul>  |
| <p><b>Result 2</b></p> <p>Assure FO member access to production and post-harvest handling equipment for rice.</p>  | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- Establish a US\$650,000 fund to support purchase of essential production, post-harvest, and processing equipment.</li> </ul>  |
| <p><b>Result 3</b></p> <p>Assure higher productivity and quality for at least 50% of the producers taking part in the demonstration plots enabling them to obtain a higher market price per ton.</p> | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- A 50% increase in quality paddy in the 30 demonstration plots compared to average production in the zone.</li> <li>- The sales price of quality paddy delivered by the FOs to rice enterprises is increased by 20 FCFA (US\$30 per ton).</li> </ul>   |

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| <p><b>Result 4</b></p> <p>Malo will produce fortified rice using local rice paddy and imported fortified kernels and support local production of artisanal fortified bean flour</p>                  | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- With the capacity building fund, Malo will train the niébé producers and a group of youth interested in agribusiness in niébé processing and fortification</li> <li>- Malo will purchase paddy or milled rice from FO's for fortification and will themselves fortify rice and train those FO's (women and youth) interested in fortification to create local processing and distribution networks</li> </ul>   |
| <p><b>Result 5:</b></p> <p>Through the project monitoring mechanisms create an ad hoc knowledge sharing platform among the project implementers, the agricultural extension service and the FOs.</p> | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- A knowledge sharing platform for dialogue and collaboration exists among the project team, the 5 FOs and the government extension service including the seed service.</li> <li>- Establish a steering committee to assemble the project beneficiaries and the implementing partners.</li> </ul>   |
| <p><b>Result 6:</b></p> <p>Increase the utilization of rural radio networks to disseminate information and increase knowledge of the best production techniques for quality paddy and niébé</p>      | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- RRI works with local radio stations in Segou and San to broadcast programming on the best agronomic practices to produce quality paddy and niébé. Three programme series will be developed and diffused concerning: 1) coverage of the rice and niébé crop cycles, various topics of interest to farm communities; 2) provision of weather and rain information via collaboration with Mali-Meteo 3) a platform for exchange of information among technical services and FO members.</li> </ul> |

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| <p><b>Result 7:</b> Increased availability and consumption of nutritious foods at village level (beans, and bean by-products, flour)<br/><i>nutrition sensitive result</i></p> | <p><b>Indicators</b></p> <ul style="list-style-type: none"> <li>- Percentage of women who include more niébé in their household meals due to improved ease of use (pre-packaged beans/bean flour) <i>outcome</i></li> <li>- Percentage women/households who have knowledge of the nutritional benefits of niébé (by-products) <i>outcome</i></li> <li>- Percentage of farmers who intensify niébé production/processing due to its nutritional benefits <i>outcome</i></li> <li>- Prevalence of underweight children under 5 and school aged (<i>at start of project vs at end of project, impact</i>)</li> <li>- Prevalence of underweight pregnant &amp; lactating women (<i>at start of project vs at end of project, impact</i>)</li> <li>-</li> </ul> |
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**20. Supervision modalities:** World Food Programme (WFP) will be the Supervising Entity. In addition to its role in designing and supervising the project WFP will have the opportunity to support the production of quality paddy rice for the Malian market and will support diversified niébé value chain activities for the Sabati women's FO a significant niébé supplier for WFP. Through its smallholder agricultural market and value chain support activities in Mali WFP focusses on FO capacity building, quality control and increased market access.

Channelling Entity:

SOCODEVI, Bamako has been active in Mali for over 10 years. SOCODEVI has fully participated in the design of this project and has experience working with the lead rice and niébé producing FOs, Faso Jigi and Sabati. SOCODEVI will be the main entity responsible for interacting with the 5 farmer's organizations, the miller/re-processor, the micro-finance institutions and the banks engaged in the project. SOCODEVI will play a supervisory role regarding capacity building and training. Through participatory planning and project design they will delegate or sub-contracting the specific training and awareness-building activities to project partners, and the FOs themselves. Those SOCODEVI engages for capacity building will apply for funding through a system SOCODEVI already uses to manage contracts and distribute project funds.

**21. Linkages:** Sustainable Development Goal 2 is to End hunger, achieve food security and improve nutrition and promote sustainable agriculture. The WFP global strategy falls under this SDG, in Mali WFP focuses on smallholder farmer resilience building via WFP Strategic Result 3 – Smallholder productivity and incomes (SDG Target 2.3) and Strategic Result 4 – Sustainable Food Systems (SDG Target 2.4) these strategic results breakdown into two outcome areas for smallholder farmer development:

**OUTCOME 3: Food insecure and vulnerable smallholder farmers have improved access to markets and sustainably increase their productivity and income.**

**OUTCOME 4: Vulnerable and persistently food-insecure households and communities are more resilient to recurrent seasonal shocks and other stressors.**

This project is a continuation of WFP’s smallholder farmer development activities, which began with the P4P initiative. It complements the evolved WFP smallholder and value chain portfolio, to which SOCODEVI has been a long-time partner via their local initiative Feere Diyara.

The MMI Mali project will complement SOCODEVI’s current \$14.5 million 5-year (2014–2019) project, called Feere Diyara (“Sales were good!”) that supports 16 FOs in four regions including the three main irrigated rice zones amongst others and engages in rice and niébé commercialization which will be complemented by MMI Mali’s focus on quality enhancements.

**22. Scaling up:** The composition of the Steering Committee and the community ownership of the project results will provide a favourable basis for encouraging other farmers in the community to adopt similar practices. Hopefully given the nutrition and economic benefits of processing/value addition will attract others to the subsector and catalyse further private sector investment.

**23. Sustainability:** The approach chosen of community based participatory planning from the conception of the project will increase the project acceptability with the target populations and their sense of ownership. Additionally, the value chain approach that plans towards the end user will not only encourage the farmer to consider questions of quality, food safety and end line consumer, but will also allow for the crowding in of other value chain actors. The promotion of endogenous solutions for economies of scale will also allow for multiple context specific implementation models in the different regions of the country. This approach should facilitate duplication and scale up as needed.

This project has been designed partially in response to priorities from the Minister of Agriculture, in that it targets underserved populations; women and youth. The project is also targeting a highly profitable and nutritious value chain, niébé which despite its popularity in the Malian diet is under produced. In terms of the use of local inputs (material and industry), the promotion of resilient production practices, and the connection of smallholder farmers to domestic markets. The project is based on professional agricultural organizations, institutions whose lifetime is not tied to that of the project.

The project is also in line with several other agriculture and rural development initiatives underway in the country at present. It is perfectly in line with all national agriculture and rural development policies and schemes.

If the farmers through the support of their FOs adopt the practices and technologies introduced to improve the quality of their paddy; household level health and nutrition will improve in the project zones. Additionally, the farmers will have more market opportunities which will increase their incomes. The entire rice value and supply chain will shift to a greater emphasis on quality with Producer Organizations playing a key role and farmers benefiting the most.

**24. Crowding in the Private Sector:**

**Malo: in Ségou for an existing project with WFP** Malo has made an investment to date to fulfil the objective of producing 1,500 tons of fortified rice. The investment covers the cost of procuring and operation of the in Ségou. The conversion rate used is \$1 = 572 FCFA.

| Designation   | FCFA       | USD       |
|---|------------|-----------|
| Rice processing and fortification equipment including acquisition, transportation, and installation costs | 58,199,014 | \$101,747 |

|   |                   |                  |
|---|-------------------|------------------|
| Leasehold Improvements (diesel generator, electrical wiring, soil levelling, cleaning, water and plumbing, pest control, and minor repairs and renovations) | 5,800,000         | \$10,140         |
| <b>Total</b>  | <b>63,999 014</b> | <b>\$111,886</b> |

In terms of human resources, to date, Malo has hired four management/technical level employees and six operators/labourers to date. We will gradually add operators and managers to enable us to run the line as close to 24 hours a day as possible in the coming weeks. We estimate about 5 production workers per shift to run the operations so before the end of the project, we could be up to 15 operators for a total of 19-20 direct hires. For days that we need to load WFP's trucks, we will hire contractors based on 1000 FCFA a ton as needed.

Malo is open to making further investments in equipment and manpower as required for this project.

Though the Malian private sector players in the agribusiness/agro-industry space are young and risk averse, they are not naïve or oblivious to the market opportunities associated with unfilled niches. Malo SARL agribusiness and social enterprise is a perfect example of a Malian firm forging ahead in a traditionally under serviced sector in the country precisely because they see the potential not only for profit but also incredible social impact which is at the core of their business model. Malo has invested boldly in the requisite infrastructure and manpower to position themselves to become a premium producer of fortified foods (starting with rice) in Mali. The proprietors of Malo are aware of the numerous obstacles and realities of doing agribusiness in Mali. They are particularly apprised to those related to availability and quality of raw materials (paddy rice) required for their business to succeed. It is the awareness of these issues and their preparedness that facilitated the partnership with WFP on a rice fortification for the School Meals Programme which led to their deliberate increased investment to their Facilities and Human Resources.

Malo are leveraging the increased investment they made in equipment, infrastructure and quality control to engage with WFP and SOCODEVI on this MMI project. The investments that will be made through this project to increase farmer capacity to produce quality paddy rice will significantly reduce the risks Malo's overall business model related to inputs and a more robust supply chain. The symbiotic partnership between Malo and the WFP MMI team is a risk sharing relationship; where the MMI provides a guarantee in terms of quality inputs for Malo who are prepared to pay a quality premium, and Malo provides a market for the projects beneficiary FO's. The leverage ratio of GAFSP to Malo (private sector) finance will be in the range of \$1: 4 c -10 c. this range can be explained by the current investment made by Malo into this project, that investments that will be made by the participant FO's and the other private sector actors that will ultimately complement these activities.

Malo's engagement in the MMI process to date is already drumming up interest from other private sector players interested in contributing to other areas of the rice and niébé value chain development. Firms have manifested interest in supplying quality inputs, increased processing capacity, technical training. While some local private investment firms have manifested interested to parallel financial investments to support the FO's for the duration of the pilot to test the feasibility of the investment model.

#### Farmer Organisations Contribution

In terms of the contribution of the farmer organisations the basic physical assets (100 ton warehouses, farm animal, small farm machinery and other agricultural equipment) of each FO can be estimated at between \$55 000-\$60 000, with the women's cooperatives under the FO typically possessing less physical assets. The total value of the 6 FO contribution can be estimated at \$350 000.

**25. Impact on food security and improvement of nutritional status.** The project will promote food security and improve nutritional status by: (i) promoting the diversification of production and consumption with an affordable product (niébé) that is rich in protein and micronutrients; (ii) training and awareness-raising on good nutrition practices.