

RÉPUBLIQUE DU SÉNÉGAL



FCI4Africa



McGill | MCCHE



MISSION REPORT

McGill IN SENEGAL

From March 1 to 15, 2026

Photo: Ousmane MBAYE SG MASAE (middle) receiving the McGill mission

Dakar, March 13, 2026

INTRODUCTION

Arriving in Senegal on March 1, 2026, the research mission from McGill University in Canada, composed of Marilyne CHICOINE and Joël MONGEON, was welcomed by Dr. Jean Pierre SENHOR, former Executive Secretary of the National Food Security Council (SE-CNSA) of Senegal.

The mission aimed to gain firsthand knowledge of the Resilient Family Farms (EFR) initiative, a model designed and implemented by Senegal in the regions of Sédhiou and Ziguinchor, as part of the structural response provided by the country to the persistent issue of food insecurity in the Sahel and West Africa.

CONDUCT OF THE MISSION

Dakar

From the arrival of the mission, a sharing session on the EFR initiative, a sub-component of the New Resilient Territories (NTR), itself a sub-program of the PNSAR (National Program for Support to Food Security and Resilience), allowed members of the McGill University delegation to gain a clearer idea of the genesis of the concept and the motivation of the promoters of this major innovation in food security governance. Mr. Ibrahima Ndiaye, one of the main actors of the project, had an extensive discussion with the McGill team about the ins and outs of the model, whose start-up phase benefited from funding from the European Union as well as from that of UEMOA (West African Economic and Monetary Union).

Mr. Ousmane Mbaye, Secretary General of the Ministry of Agriculture, Food Sovereignty and Livestock (MASAE), the second-ranking official of the ministerial department, also received the mission in his office.

After a long period of discussions allowing the SG to inquire about the purpose of the mission and to address the EFR model as a major input of the food sovereignty strategy, the members of the mission did not hide their ambition to see a scaling up of this very interesting initiative.

The expectations of the General Secretariat are centered around three main areas:

Scaling up: obtaining support from the Senegalese government to generalize the EFR model.

Political alignment: Establish a permanent dialogue to support public policies on food sovereignty.

International outreach: Promoting the EFR model to other African and international countries.

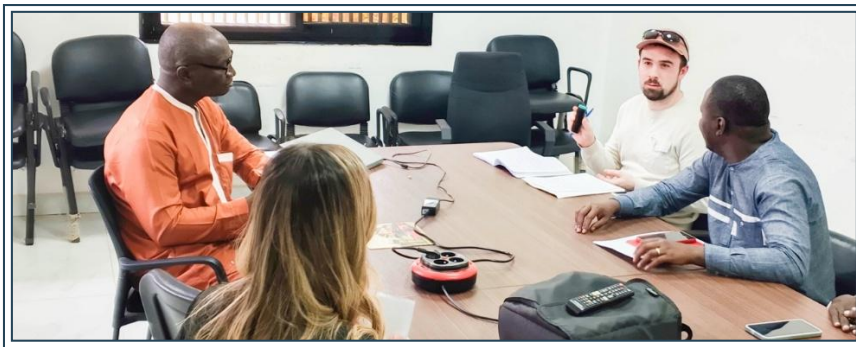
Sédhiou 04/03/26

The itinerary of the stay in Sédhiou began with a working session with the local team supervised by the regional food security officer, Mr. Marcel Ndione. This meeting made it possible to adjust the sequence of visits and meetings and to readjust the program.

A historical reminder of the genesis of Séfa, an area with a rich agricultural past and a former true hub of economic development, allowed the evolution of this land to be contextualized.

Day 1 : Wednesday, March 4: meeting with the administrative authorities and technical services

The first day was devoted to meetings with the administrative authorities and the technical services overseeing the beneficiaries. On this occasion, the Sub-Prefect of the DIÉNDÉ district, representing the State, welcomed this courtesy visit. He particularly appreciated this approach of transparency, emphasizing that it allows the authority to become familiar with the activities of the mission.



The sub-prefect expressed his intention to visit the nine (9) sites established in his district. The State technical services, partners of the project, received the study mission.

The head of the departmental livestock service, Mr. Tamsir Dramé, expressed his complete satisfaction with his involvement in supporting the beneficiaries. In an interview lasting more than an hour, he praised the initiative of the EFR while expressing some of the constraints related to poultry farming. It concerns:

Heat that does not allow production all year round, with heat peaks approaching 45°C at certain times of the year.

Difficulties in accessing poultry and chick feed.

The fish farming sector of farms is currently facing the same challenges as other industries, notably the well-known shortage of basic food supply. In the face of growing demand and very limited local supply, establishing an animal feed manufacturing unit becomes a strategic priority.

In this dynamic, the National Agency for Agricultural and Rural Advisory (ANCAR) plays a pivotal role. Acting in close collaboration with the technicians of the Mobile Agricultural Service Units (UMSA), an essential component of the NTR, ANCAR ensures the guidance and technical supervision of producers.

As such, the agency has already trained the beneficiaries in soil fertilization techniques through composting. It is now working on formalizing the processing procedures in order to drastically reduce post-harvest losses.

The day ended with a visit to the KOUNAYAN farm. The beneficiary met on-site expressed immense satisfaction, demonstrating a real escape from poverty thanks to this project, whose benefits she enjoys and clearly describes the significant impact on her family and the village.

Finally, the end-of-day debrief allowed us to adjust the next day's agenda, thus ensuring optimal operational efficiency for the continuation of the mission..

DAY 2 : Thursday, March 5, 2026: meeting with 6 EFR in Koussy

The second day was dedicated to meeting the six (6) women farmers from the Koussy site. This session was held directly in the field, in this, rural



commune located about fifteen kilometers from the regional capital. A series of individual interviews was then conducted on each farm, allowing for a deeper understanding of the operational functioning of each farm.

Photos : Some activities of the EFR

The son of one of the beneficiaries, substituting for his ailing mother, detailed his daily schedule as well as the technical protocols followed. He particularly emphasized the rigorous management of phytosanitary products, specifying the

safety measures adopted to prevent any risk of toxicity or contamination during the sale of the products.

For his part, Dieudonné BATHE, another beneficiary, describes his schedule, marked by the regular maintenance of his one-hectare plot. His daily activities focus mainly on irrigation and the harvest of products that have reached maturity, intended for immediate sale.

Unanimously, the operators agree on the substantial benefits generated by the RFE. These farms not only ensure household food security, but also generate considerable income through the marketing of a wide range of products.

The main crops developed within these operations include:

Diversified vegetable farming: Tomato, chili pepper, eggplant, lettuce, bell pepper, and cucumber.

This diversification of crops helps to stabilize incomes and to respond effectively to the demand of local markets.

Despite the successes achieved, major constraints hinder the full potential of the farms. These mainly concern: the degradation of infrastructure: early wear of irrigation systems (drip) and solar installations is observed.

Mechanization: The acquisition of motorized tillers becomes imperative to adhere to the crop schedule, which closely depends on the speed of plowing.

Logistics and the market: Transport remains a major challenge, both for the delivery of inputs (fertilizers, organic manure for compost) and for the marketing of crops in the face of increased competition.

All the beneficiaries agree on the promising nature of these farms, which are based on an integrated model including:

Water self-sufficiency thanks to small boreholes equipped with solar pumps.

Efficient production equipment: horticultural greenhouses, fish ponds, and sheepfolds.

A functional living environment including housing and storage spaces (shops).

Digitalization represents a major area of progress, particularly for access to weather data. Currently, the establishment of a discussion group (WhatsApp) promotes synergy among the operators. This tool allows for the coordination of product marketing in order to avoid an oversupply that would lead to a decrease in prices and revenue.

Day 3 : Friday, March 6, 2026: Focus group meeting with 3 producers outside EFR

The focus group made it possible to identify these challenges and to lay the groundwork for sustainable solutions carried by the project stakeholders.



Photos : Focus group with some beneficiaries Photos: Birds (Pelican)

Analysis of organizational issues and perspectives

The discussions highlighted a keen awareness among producers of external threats (notably avian) that damage facilities. Emphasis was placed on the imperative of modernizing equipment. In this regard, the creation of an agricultural cooperative appears as a strategic solution to pool contributions and facilitate access to the financing needed to purchase tractors or motorized cultivators.

At the end of consultations with the management staff, authorities, and beneficiaries, 24 challenges were identified. The priorities are summarized as follows:

Supply: Secure access to inputs and rigorous planning of crop cycles.

Market balance: Management of surpluses (supply exceeding demand).

Maintenance: Repair of drip systems and maintenance of energy infrastructure (solar batteries, piping).

Mechanization and Logistics: Shortage of equipment for plowing and transporting crops.

Innovation: Acceleration of digitization.

Interviewed with 3 producers outside EFR

Case Study: The Exploitation of Lamine Diallo

The visit to Mr. Lamine Diallo's modern farm, backed by six years of experience, offers a model of profitability. Although he controls his production on one hectare through a strategic partnership, his new priorities are oriented towards:

- The acquisition of advanced equipment.

- The establishment of a processing unit.
- The listing of its products in large-scale retail. Only a strengthening of current partnerships will allow it to boost its ambitions and optimize its profits.

Diagnosis of traditional vegetable farming in BAKOUM

The area exploited by the women of the village of BAKOUM contrasts sharply with the previous model. Here, production relies exclusively on the intense physical effort of women, using rudimentary tools (traditional wells, makeshift wooden or bamboo fences, and the "Daba").

Production: The crops (tomato, sorrel, eggplant, cucumber, lettuce) are intended for sale and for self-consumption.

Profitability: Profits remain unpredictable given the arduousness of the work and production costs.

Competition: The risk of poor sales is increased by the competition from producers coming from the other bank of the Casamance River.

Perspectives: If the transformation is desired, it is hindered by the lack of training and the scarcity of unsold goods.

Social observation: A disengagement of young people (girls and boys) is observed, the latter moving away from agricultural activities for several reasons, including the lack of attractiveness of traditional, rudimentary agriculture. The reduction of tasks and the securing of plots (fences) are essential conditions for the sustainability of this activity.



Photos : two private farms (modern and village-style)

It is worth highlighting the existence of private initiatives prior to the establishment of EFR in the southern area. A striking contrast is observed between modern farms, equipped with wells with motor pumps, and traditional family farms, which rely on open-air wells (see photos above).

The challenges faced by these private operators are similar to those of the FIRs. Although each manages to maintain the usefulness and social relevance of their activity, the lack of modern agricultural equipment remains a major obstacle. The acquisition of motorized cultivators is therefore strongly desired to replace the daba and other traditional land-working tools.

Photos : le "kadiandou"



Photos : Soap factory



Day 4 : Saturday, March 7, 2026: meeting with the 3 members of the UMSA and 2 shopkeepers

Meeting with the UMSA: a pillar of the NTR

On the fourth day of the mission, the delegation was received by the UMSA (Mobile Agricultural Service Units) team, key players in the NTR system. This meeting made it possible to assess the role of this economic entity supported by young agricultural technicians. It also made it possible to take stock of the progress of the farms and to transparently analyze their successes as well as the obstacles encountered.

Highlight the expertise of young agricultural technicians

After a reminder of the strategic role of UMSA, Jean Pierre Senghor reiterated his belief in the importance of these young graduates who have chosen to establish themselves as private service providers. Under the guidance of Dr. Fadel DIAMÉ, the technicians were invited to share their journeys and the motivations that led them to engage in this model.

Local technical and social support

Aminata SANE, one of the managers, detailed the extent of their involvement, which covers the entire value chain:

- Sélection of seeds and other inputs, cultivation methods, monitoring of technical itineraries, and advisory support.
- Local support including marketing assistance.

Beyond the technical aspect, a true bond developed between the technicians and the beneficiaries, creating a winning synergy and dynamic. This immersion

allowed UMSA members to adapt to the sociological realities of the environment for more humane and effective support.

Challenges and recognition of the mission

However, a major constraint remains: the lack of understanding of the crucial role of UMSA. The need for rigorous technical support in order

Photos : Interview with a UMSA

optimizing production appears as a requirement. Nevertheless, the quality of the responses provided during the exchanges clearly demonstrated that the



presence of the UMSA is a guarantee of the sustainability and performance of the operations.

Correlation between advisory support and market access

The success of EFR largely depends on the quality of advisory support, an indispensable lever for conquering new markets. The major challenge remains mastering marketing mechanisms: the issue is to move from subsistence agriculture to demand-driven production, cultivating only what meets the actual needs of the market.

Commitment of UMSA and strategic vision

For now, members of the UMSA are willing to make concessions on their immediate economic model, betting on future growth in demand for their services. Furthermore, a strong strategic recommendation has emerged: the allocation of tractors to the UMSA. This option seems more rational than direct provision to the EFR, as it ensures better maintenance management and optimal planning of plowing work for all farms.

Digitalization and management tools

The digitization of services is progressing, notably through the implementation of group purchases for farms. While the WhatsApp group already allows real-time information sharing, the acquisition of more specialized computer tools

would make it possible to further structure data collection and production monitoring.

Recognition of quality in the market

Despite the crowd at the local market, a field visit confirmed the good reputation of products from the EFR. Reseller merchants highlight two major comparative advantages :

- A higher quality perceived by consumers.
- Better preservation of products (post-harvest shelf life), which reduces losses for resellers.



Photos : Stables at the central market

Market positioning and comparative advantages

Products from EFR enjoy an excellent reputation in local markets. Due to their superior quality and long shelf life, they sell better and at more profitable prices than average. This success encourages merchants to request the local production of crops that are usually imported from the northern part of the country (Niayes areas: Thiès, Louga, and Saint-Louis).

The mission was able to observe firsthand the strong penetration of these products in the market and their high level of adoption by consumers. To

consolidate this momentum, two development directions have been identified for the UMSA:

Diversification of outlets: Consider opening a store dedicated to EFR products, in addition to sales at the central market.

Empowerment of UMSA: Expand their scope of action by offering services to external clients (outside of direct beneficiaries) in order to increase their profitability.

Day 5 : Monday, March 9, 2026: Interviews with 9 EFR

The fifth day marked the launch of in-depth interviews with all stakeholders. The beneficiaries were the first to undergo this exercise, through a rigorous individual questionnaire. 9 EFR beneficiaries (6 from KOUSSY, 1 from DIENDÉ, 1 from MANCONOMBA, and 1 from KOUNAYA) participated in this exercise.

Each interview, with an average duration of two hours, allowed for covering a wide range of information:

- identification: Profile of the operator and family context.
- arming techniques: Details of the crops produced and cultivation methods adopted.
- Means of production: Inventory of tools and available infrastructure.
- Marketing: Analysis of sales channels and revenues generated.



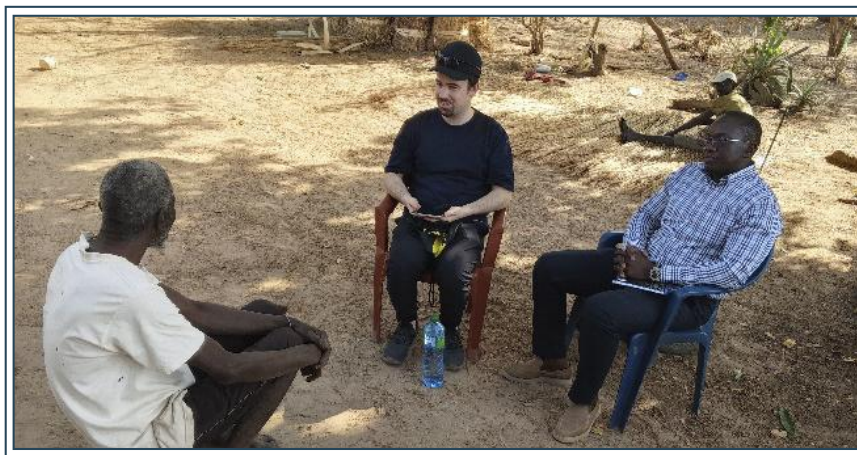
Photos : Interview with beneficiaries

Although the application of the interview guide required a significant time investment (about two hours per interview), the richness of the data collected is noteworthy. This content will serve as a basis for improving operators' productivity, notably through the strengthening of training, the acceleration of digitalization, and a better mastery of marketing channels.

Day 6 : Tuesday, March 10, 2025: Interview with 3 non-beneficiary farmers, 3 UMSA, and merchants

This sixth day was devoted to the actors revolving around the EFR ecosystem: producers outside the project, UMSA technicians, and merchants.

The interview with a farmer from the village was particularly instructive. He manages a diversified farm combining vegetable growing, fruit tree cultivation, and poultry farming. His testimony confirms the economic viability of the sector: he pointed out with satisfaction that his activity is fully profitable and manages to "put food on the table," thus illustrating the agricultural potential of the area for those who invest in it.



Photos : Issa Diallo, a farmer in the village of Sefa

In BAKOUM, a locality located on the immediate outskirts of the town of Sédhiou (less than two kilometers away), women's groups are particularly dynamic in vegetable production. Their farming is characterized by a diversity of crops, notably:

Fruit-vegetables: Tomato, bell pepper, chili pepper, okra, sweet and bitter eggplant. Diversification crops: Cucumber and sorrel. This proximity to the

urban center of Sédhiou constitutes a major strategic asset, facilitating the rapid flow of fresh products to consumer markets.



All of these crops come from plots whose security remains precarious, regularly exposing the crops to damage caused by roaming animals. Despite the insufficiency of production means and the pressure from pests, the farm achieves a dual objective: ensuring household consumption and generating a significant surplus for marketing.

However, a finding was made: the operators are not aware of the health and environmental risks associated with the use of phytosanitary products. This lack of training on persistence and dosages exposes both producers and consumers to potential dangers.



Photos : UMSA Team



Photos : Interview with a shopkeeper

The interview with the UMSA team took place in their shop (Southern Agricultural Service) located in the Mansacounda district, in Sédhiou. On this occasion, the technicians completed a detailed questionnaire allowing for a precise assessment of their activities, as well as the major challenges encountered in providing advisory support to EFRs and marketing their products.

The responses provided in the questionnaire also highlighted feasible and effective solutions according to their field expertise. These proposals are mainly aimed at optimizing the connection between service providers, producers, and markets, in order to improve the fluidity of the value chain and the overall impact of the project.

Day 7 : Wednesday, March 11, 2026: Interview with 10 consumers of EFR products

The visit to households consuming products derived from EFR made it possible to assess the local perception of local vegetables. The survey involved ten (10) households, evenly distributed between the localities of Koussy and Bloc Village.

Several factors explain the enthusiasm of populations for these products:

- **Accessibility:** Constant availability and easier geographical proximity.
- **Competitiveness:** Prices more affordable than those on conventional markets.

- Superior quality: Some women interviewed emphasize that the vegetables from EFR have high nutritional value and are noticeably more flavorful (delicious).

From a health perspective, none of the interviewees reported any cases of food poisoning related to the consumption of EFR products. On the contrary, families show a strong preference for these vegetables, which they regularly consume raw, thus demonstrating their confidence in the sanitary safety of this production.



Photos : Consumers from Bloc-village and Koussy

Day 8 : Thursday, March 12, 2026: Interview with 10 non-EFR product consumers

The morning was devoted to a series of interviews with ten (10) households residing in the village of Séfa, sourcing exclusively non-EFR products..

The survey revealed that all the women interviewed are fully aware of the existence of these EFRs producing fresh vegetables. The main obstacle to purchasing, therefore, does not lie in a lack of communication, but rather in the geographical accessibility of the production sites. Furthermore, the limited availability of these specific products in the village markets of DIÉNDÉ and SEFA restricts purchasing opportunities for these consumers who favor local supply

chains. The ten (10) household heads interviewed confirmed that vegetable consumption contributes to the health of the population, and that preparing meals with lots of vegetables or based on vegetables is a tradition in Casamance.



Photos : Household heads of Séfa and Diéndé who do not consume EFR products

At 1:00 PM, the mission met a new trader at the central market of Sédhiou to complete the data on the distribution of EFR products through the UMSA channel. The findings reinforce the previous observations.

- **Comparative freshness:** Products from the EFR are widely preferred to those from the Niayes area. The latter, after several days of transport to Sédhiou, lose their freshness and often arrive degraded.
- **Optimal preservation:** Merchants emphasize that EFR vegetables retain their properties for 4 to 5 days, compared to only 2 to 3 days for external products.
- **Adoption of digital technology:** Sellers are in favor of using a mobile application to check prices and stock availability in the EFRs in real time. Already connected via their smartphones, they consider this digital solution both feasible and essential to optimize their purchases.



Photos : meeting with a merchant from the central market of Sendhiou

Survey analysis (summary)

The objective of this mission was achieved 100%, in accordance with the initial schedule. The organization of the work and field visits was facilitated by excellent coordination with the SE-CNSA Regional Office. Unlike the previous experience in Ghana according to the investigators, this mission was distinguished by direct and continuous contact with the populations, without any language barrier and with easy translation, ensuring the authenticity of the data collected. The team was thus able to visit seven of the twelve pilot EFRs established..

The dynamism and commitment observed on the ground demonstrate that the EFR operating model, linked to the UMSA and relying on a platform fed by a dynamic database, remains an inspiring innovation regarding the sustainable management of the issue of food insecurity. Beneficiaries have become aware of the reliability and durability of the initiative, which acts as a true major lever for food security and nutritional improvement. Moreover, the EFR appears as a living base and a place for family fulfillment.

The social and economic relevance of EFR is a tangible reality. A striking indicator has been observed: families who once struggled to buy basic school supplies are now able to afford transport motorcycles. This spectacular improvement in the standard of living generates strong expectations among non-beneficiaries, who are already wondering when the project will be scaled up throughout the south of the country.

The main ambition, shared by all the operators, is now the strengthening of productivity. To achieve this, the acquisition of modern agricultural equipment has become the top priority in order to consolidate the gains of this phase, whose initial results are rather encouraging.

Recommendations

In the face of the enthusiasm generated by family farms and in order to ensure the sustainability of the model, it is imperative to anticipate the next stages of development. The priority work areas are structured around five pillars

1. Expansion and Mechanization

- Scaling of FEs: Expand the model to cover new geographic areas.
- Acquisition of agricultural equipment: equip farms with modern equipment to increase productivity and reduce the hardship of work (motorized tillers).

2. Maintenance and Technical Support

- Logistic reinforcement: increase the mobility and intervention means of the UMSA (tractor) for faster and earlier technical monitoring.

3. Autonomy in Inputs and Feeding

- Animal feed manufacturing units: Install local units for the production of feed for livestock, poultry, and fish, in order to reduce dependence on external markets and lower production costs.
- Cooperative purchasing center: Organize producers into cooperatives to pool the purchase of agricultural inputs (seeds, fertilizers) and obtain better rates.

4. Capacity Building and Training

- Processing techniques: Organize practical training sessions on artisanal and semi-industrial preservation and processing techniques (making tomato puree, drying and grinding chili peppers, canning).
- Hygiene and Quality: Train operators on food safety standards to ensure processed products that are competitive and healthy for the market.

5. Specialized equipment for processing

- Local processing units: Equip women's groups with processing kits (presses, grinders, solar dryers, vacuum sealing devices) suitable for the main crops such as tomato, chili, and okra.

6. Promotion and Marketing

- Labeling of EFR products: develop simple and attractive packaging for processed products (canned tomato concentrate, chili powder) to facilitate their insertion into local shops and supermarkets.
- Income diversification: Transform production surpluses into high value-added products to ensure income for families, even outside the harvest periods.

7. Ensuring the Sustainability of the Model:

The goal, at the end of this mission, is to work towards giving the model a scientific character that will be based on the rigorous processing of the collected data and an in-depth analysis of the results from two years of implementation, corroborated by a cross and differentiated evaluation (flexibility, adaptation, and adjustments) carried out by academics and which will have fulfilled all its promises.

Acronyms

ANA	Agence nationale de l'aquaculture / National Aquaculture Agency
ANCAR	Agence Nationale de Conseil Agricole et Rural/ National Agency for Agricultural and Rural Consulting
ANSD	Agence Nationale de la Statistique et de la Démographie/ National Agency of Statistics and Demography
BRSA	Bureau Régional de Sécurité Alimentaire / Regional Food Security Office
DE	Direction de l'Élevage / Livestock Department
DPV	Direction de la Protection des Végétaux / Directorate of Plant Protection
DRDR	Direction Régionale pour le Développement Rural / Regional Directorate for Rural Development
EFR	Exploitations Familiales Résilientes / Resilient Family Farms
FCI4AFRICA	Food Convergence Innovation for Africa
MASAE	Ministère de l'Agriculture et de l'Élevage du Sénégal / Ministry of Agriculture and Livestock of Senegal
NTR	Nouveaux Terroirs Résilients / New Resilient Terroirs
ONG	Organisation Non Gouvernementale / Non-Governmental Organization
PAM	Programme Alimentaire Mondial / World Food Programme
PA-PNASAR	Projet d'Appui au Programme National d'Appui à la Sécurité Alimentaire et à la Résilience / Support Project for the National Program for Food Security and Resilience
PNASAR	Programme National d'Appui à la Sécurité Alimentaire et à la Résilience / National Program for Support of Food Security and Resilience
SDDR	Service Départemental pour le Développement Rural/ Departmental Service for Rural Development
SE-CNSA	Secrétariat Exécutif du Conseil National de Sécurité Alimentaire/ Executive Secretariat of the National Food Security Council
UBT	Unité Bétail Tropical/ Tropical Livestock Unit
UEMOA	Union Économique et Monétaire Ouest Africaine/ West African Economic and Monetary Union
UMSA	Unité Mobile de Prestation des Services Agricoles/ Mobile Unit for the Provision of Agricultural Services
UNACOIS	Union Nationale des Commerçants et Industriels du Sénégal/ National Union of Merchants and Industrialists of Senegal

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Formatted: Font: 11 pt

Written by :

Elhadji GUISE

Review :

Marcel NDIONE

Validation :

Jean Pierre SENHOR

Infographics :

Mansour DJIBA

English Translation :

Hilda Barry



FCI4Africa

Food Convergence Innovation for Africa