RÉPUBLIQUE DU SÉNÉGAL

Un Peuple ▪ Un But ▪ Une Foi

—

SECRÉTARIAT GÉNÉRAL DU GOUVERNEMENT

Executive Secretariat of the National Food Security Council (SE-CNSA)

NTR

THE NEW RESILIENT TERROIRS

SUMMARY

ACRONYMS AND ABBREVIATIONS

AGVSAN	Global Analysis of Vulnerability, Food Security and Nutrition
ANA	National Agency for Aquaculture
ANCAR	National Agency of the Agricultural and Rural Council
ANIDA	Agence Nationale d'Insertion et de Développement Agricole
ANPEJ	National Agency for the Promotion of Youth Employment
BFPA	Agricultural Professional Training Office
BRSA	Regional Food Security Offices
CDSA	Departmental Committee for Food Security
CH	Harmonized framework
CIFA	Inter-professional Center for Training in Agricultural Trades
CIN	National ID card
CNCAAS	National Company of Agricultural Insurance of Senegal
CNDT	National Commission for Dialogue of the Territories
CRSA	Regional Food Security Committee
DEL	Regional Food Security Committee
DER	General Delegation for Fast Entrepreneurship
EF	Family Farm
EFR	Resilient Family Farm
ENSAN	National Food Security and Nutrition Survey
ENSAS	National Food Security Survey in Senegal
ERASAN	Rural Agricultural and Food and Nutritional Security Survey
PSES	Poverty Monitoring Survey in Senegal
FAO	Food and Agriculture Organization of the United Nations
FASAR	Food Security and Resilience Support Fund
FONGIP	Priority Investment Guarantee Fund
If	Financial institution
IMF	Micro-Finance Institution
NTR	New Resilient Terroirs
OCB	Basic Community Organization
ODD	Sustainable Development Goal
ONFP	National Office for Professional Training
ONG	Non Governmental Organization
OPA	Agricultural Producer Organizations
PIC	Communal Investment Plans
PNASAR	National Support Program for Food Security and Resilience
PSE	Emerging Senegal Plan
PTF	echnical and Financial Partners
RAL	Local Food Reserve

RNU	Single National Register
SAED	National Society for the Exploitation of Delta Lands and Senegal River Valleys
SAP	Early Warning System
SECNSA	Executive Secretariat of the National Food Security Council
SIRT	Information System on Terroir Resources
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SNSAR	National Food Security and Resilience Strategy
SODAGRI	Senegalese Agricultural and Industrial Development Society
SODEFITEX	Société de Développement et des Fibres Textiles
SRDR	Regional Society for Rural Development
UMSA	Mobile agricultural service delivery units

ABSTRACT

The issue of food safety is, for all the countries of the Sahel, a social, economic but also political issue that the public authorities seek to curb. It is for this reason that in 2016, Senegal adopted a National Strategy for Food Safety and Resilience (SNSAR). In view to operate the SNSAR for the 2018-2022 term, a National Food Safety and Resilience Support Program (PNASAR) was approved by the Government in November 2017.

The New Resilient Territories (NTR) claim to be real ramparts against food safety while generating virtuous dynamics of resilience of the populations most exposed to risks and shocks.

This NFSRSP sub-program is structured around three key components: the Territorial Resource Information System (SIRT), the Resilient Family Farms (EFR) and the Mobile Agricultural Services Delivery Units (UMSA). These three (03) components are harmoniously articulated in a coherent and functional whole.

The SIRT is a device using modern information and communication technologies to provide information on the specific resources - biophysical, social and economic - that each region has in terms of comparative advantages. By listing them and carrying out their detailed analysis, the SIRT, in addition to being a modern tool for cross-referenced and integrated information, thus offers to decision-makers and partners virtual support for consultation, negotiation and decision-making. With such a tool of digital mapping and cross-data analysis, it is then possible to superimpose layers of useful specific information that make it possible to identify in one go areas of existence or even concentration of different resources.

It is the sharp analysis of this cross-information that will permit identify the inputs allowing, among other things, to inform and give content to the two other components of the project: the UMSA and the EFR.

The EFR are physical and social entities consisting one or several households of 5 to 9 persons, with an area of at least one (1) hectare. The EFR project consists in helping households to have a sustainable source of water allowing agricultural activity for a whole year long. It is a farm that will combine a plant production system and an animal production system.

The EFR will have to rely on local rural support and benefit, through the UMSA, from quality services, the only guarantee of their economic profitability, thereby ensuring their sustainability. This is why, the UMSA equipped with motorized agricultural equipment, will be installed concomitantly with the settlement of EFR so as to increase significantly the production and the income by improving agricultural practices.

The UMSA are economic entities carried by young people identified in the regions and most of whom already have know-how acquired in training centers and are already showing a commitment on the ground, having initiated agricultural or not agricultural activities. Each UMSA has 2 or 3 young people at most; it will be equipped with appropriate and practical modern equipment meant to provide rapid services to producers.

The UMSA claims to offer farmers paid quality services by gradually training them for better control of their farms in order to strengthen and protect their livelihoods in a sustainable manner. At the start of the project, the UMSA to be set up will be made up of two types (UMSA plant production and UMSA animal production) and will mainly operate at the production unit level that is the EFR.

However, due to the high costs related to the acquisition and maintenance of the mechanized agricultural equipment, etc., it is planned to set up a platform meant to manage the agricultural equipment and the UMSA equipment; which implies the transition from an individual management to a shared management under management. The platform will essentially have 03 key functions: (i) management of agricultural material and equipment, (ii) training - demonstration, (iii) providing services and advice.

These three components of the NTR Project (SIRT, EFR, UMSA) are meant to be both autonomous and interdependent on each other. Information from the SIRT will allow operationally feed and animate the functioning of the 02 other components. The data on the EFR will facilitate the setting up of the UMSA while guiding the processes and technological choices of service providers.

These functional interrelationships between the different components easily show the relevance holistic approach of the project and its operational coherence, which is reflected by the establishment of a unifying framework of a multi-actor and multi-sector intervention.

CHAPTER I : GENERAL INTRODUCTION

Cadre Opérationnel de la stratégie Nationale de la Sécurité Alimentaire et de Résilience - SNSAR 2035

The New Resilient Territories **(NTR)**
CONTEXT AND JUSTIFICATION

1. CONTEXT

The 2017 FAO report on "The State of Food Safety and Nutrition in the World" reveals that almost one in ten (9.3%) people have experienced severe food insecurity in these last three years. This shows that after a long period of decline, hunger appears to be gaining ground again, particularly in the Sub-Saharan African countries, Southeast Asia and West Asia.

This is all the meaning and weight that should be given to the United Nations Sustainable Development Goal (ODD2), which aims globally to «eradicate hunger, ensure food safety, improve nutrition and promote sustainable agriculture "by 2030.

Indeed, like the Sahelian countries, Senegal has been affected by the negative effects of the major crises of these recent years due to its unfavorable biophysical and economic situation, further weakened by climatic deterioration. The main causes of food insecurity in Senegal stem from the weak resilience of households and communities. In other words, these causes are essentially household poverty, low agricultural productivity, degradation of the livelihood, weakness of the instruments of food crises management, weakness of management of food safety and resilience of populations.

In order to reverse this situation of food insecurity, Senegal has adopted since 2014 a new economic and social development model, the Emerging Senegal Plan (PSE), and in 2016 a National Strategy for Food Safety and Resilience (SNSAR), whose whole lines are linked to this framework document for all policies and strategies at national level. In view to make it operate for the 2018-2022 period, the Government of Senegal validated in November 2017 the National Support Program for Food Security and Resilience (PNASAR). The latter aims to «contribute to the sustainable improvement of food and nutrition safety of households, espcially the most vulnerable, as well as the strengthening of their resilience capacities, by 2022».

This five-year program is made up of five sub-programs, including sub-program C, which is a major innovation with the appearance of the concept of «New Resilient Territories» (NTR), new economically and socially homogeneous spaces, which should make it possible to build real ramparts against food insecurity and generate virtuous dynamics of resilience of the populations mostly exposed to risks and shocks.
The NTR sub-program is structured around three key components: the Territorial Resources Information System (SIRT), Resilient Family Farms (EFR) and the Mobile

Services Delivery Units (UMSA).

Thus, this report presents the technical document of the NTR project, stressing on the detailed study of each of these components (SIRT, EFR, UMSA) and the functional and operational interrelations between them.

2. CONCEPTUAL FRAMEWORK OF THE NTR

2-1. Strategic orientation of NTR

The New Resilient Territories (NTR) constitutes one of the major components of the PNASAR whose aim is to bring an innovation in the approach of the fight against food insecurity in Senegal. It is a matter of providing a sustainable economic response to a humanitarian and social problem.

- **Vision of the NTR**

By 2035, vulnerable households have access in their land, by themselves, to healthy and nutritious food with strong resilience capacities..

- **Purpose of the NTR**

Help building real bulwarks against food insecurity by diversifying production systems and protecting the livelihoods of vulnerable households.

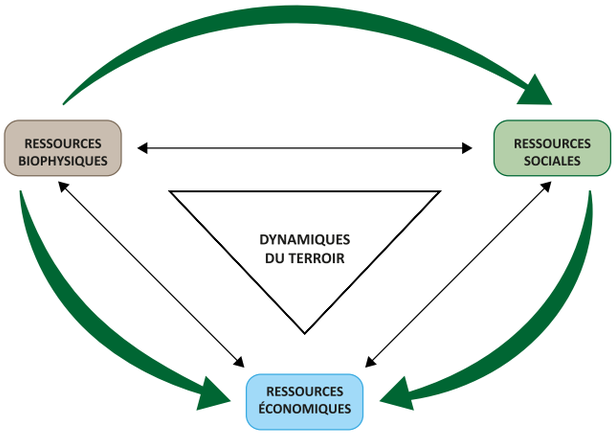
2-2. New Resilient Territories Approach

"A territory is a delimited geographical space defined from a human community which, over the course of its history, builds a set of distinctive cultural traits, knowledge and practices based on an interaction system between the natural environment and the human factors. The skills put into play reveal an originality, confer a typicality and allow recognition for the products or services originating from that space and hence for people who live there. Territories are living and innovative spaces that cannot be equated with tradition alone". (Source: INRA-INAO-UNESCO, Terroirs & Cultures charter, 2005).

In other words, in correlation with the NTR approach, the territory is conceived as a three-dimensional space where the social, the economic and the biophysics overlap, integrate and create a dynamics of which it is a question to perceive and understand the complexity in order to plan and implement more effective actions.

The three components of NTR are as follows.

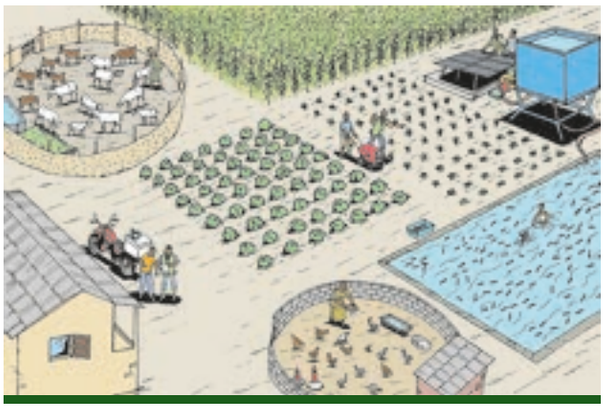
- **Territorial Resources Information System (SIRT)**



The SIRT is an elaborate device, using modern information and communication technologies so as to provide information on the specific resources - biophysical, social and economic - that each territory offers as comparative advantages.

It is also a tool which aims to integrate this knowledge allowing an adequate and rapid decision that contributes to improve the food safety and resilience situation.

- **Resilient Family Farms (EFR)**

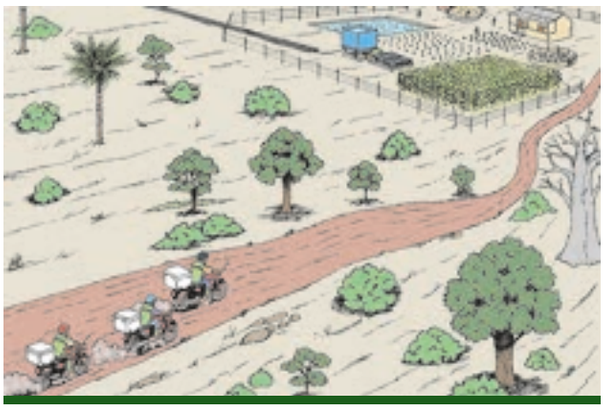


A Resilient Family Farm (EFR) is a physical and social entity made up of a household of 4 to 5 people, with an area of at least one (1) hectare.
The implementation of the EFR consists in helping the targeted households to have a production space including a perennial water source (well equipped with solar or motor-pump on a watercourse) allowing diversified agricultural activities for all the year long.

Each EFR includes a plant production system (market gardening, arboriculture, cereal production) and an animal production system (small ruminants, poultry, mainly guinea fowl and Muscovy duck, a fish pond).

The EFR constitute an important lever for the development of the local economy: they provide vegetable and animal productions, source of a healthy and nutritious food; it is also a basis of life. One of the trademarks of the EFR is that they recommend and adopt ecological production techniques (minimizing to a maximum the use of chemical products and fertilizers).

- **Mobile Unit for Agricultural Services**



The Mobile Agricultural Service Delivery Units (UMSA) are economic entities carried by young people trained beforehand in incubators of agricultural entrepreneurs (ANIDA, ANA, etc.), training schools and / or centers dedicated to the business of agriculture.

Those young people will be identified in the identified territories. Where appropriate, the selection criteria will mainly relate, for example, to their commitment materialized in the field by visible basic initiatives.

Each UMSA will have 2 or 3 young people and will be provided with appropriate logistical resources to provide rapid services adapted to the needs of the EFR. It is this latter component, the UMSA, that is the subject of this document. By promoting the emergence of small, successful service providers in the agricultural value chain, the UMSA will create a virtuous dynamics of growth, productivity and wealth creation.
However, it should be noted that these three components (SIRT, EFR, UMSA) are harmoniously articulated in a coherent and functional whole. In practical terms, this interoperability implies that the outputs of each component serve as inputs to the other components.

Thus, the SIRT offers a complete map of all the resources within the territories. The provision of these resources constitutes a critical mass of information necessary for decision-making for all development actors, but above all makes it possible to have all the essential benchmark information for the establishment of EFR and UMSA.

These territorial resources make it possible to identify the number of RF to be set up, to define the typology and categorization of EFR, the different economic models, the evaluations of yield plans as well as the conditions for the sustainability of production activities. The existence of EFR and their development are strongly correlated with the good functionality of the SIRT.

Also, the information on the EFR installed in the territories promotes the simultaneous installation of UMSA who will be responsible for supporting them, meeting their needs for agricultural and non-agricultural services in the overall perspective of improving productivity and strengthening food safety and the resilience of rural households.

COMPONENT 1

The Territory Resources Information System (SIRT)

CHAPTER II : THE TERRITORY RESSOURCES INFORMATION SYSTEM (SIRT)

INTRODUCTION

As a first component of the NTR, the Territory Resources Information System (SIRT) is a tool allowing the use of modern information and communication technologies in order to comprehensively identify all resources (biophysics , social and economic) available within a region considered here as a homogeneous geographic space.

As an IT platform, the SIRT essentially has two functions: a systematic and digital mapping function, and another for data integration and information dissemination for public decision-makers and development actors.
In addition, it is a tool that combines and analyzes factual data and endogenous knowledge that allow a rapid and adequate decision-making contributing to the improvement of the food safety and resilience situation.

1. SIRT ARCHITECTURE

The SIRT is an elaborate device, using modern information and communication technologies to provide information on the specific resources - biophysical, social and economic - that each of the territories defined as such contains in terms of comparative advantages.

By listing them and carrying out their in-depth analysis, the SIRT, in addition to being a modern tool for cross-referenced and integrated information, thus offers decision-makers and their partners, as well as the users (development actors and leaders of Farmers' organization, households, etc.), a virtual support for consultation, dialogue, negotiation and decision-making.

From this digital mapping and data analysis tool, it is possible to superimpose specific layers of information relating to resources (physical, biological, social, economic, etc.) linked to the pillars of food safety of territories.

The SIRT above all allows an interaction of social, biophysical and economic knowledge. It is the fine analysis of this cross-information that will help identify the inputs allowing, among other things, to inform and give content to the two other project components: the UMSA and the EFR.

1-1. Technical solutions

The solution will be based on a combination of web and mobile applications. At the same time, a website landing page will make it possible to publish certain data for consultation by the general public. The benefits of a web application lie in the fact that:

- it is independent of the Operating System used;
- there is no installation to be done, it can be used by anyone who can access the network;

- it can be adapted to computers, tablets and smart phones
- it is compatible with all modern and standard browsers on the market
- it can interact with other applications via web services
- it can use most standard databases on the market.

1-2. Web solution

The web part will include a back-end comprising a set of modules (as detailed below) intended, among other things, for managing EFR, UMSA, resources, access to the application, employees, etc. In those modules, it will be possible to import shape files, GPS files taken from GPS devices for more details.

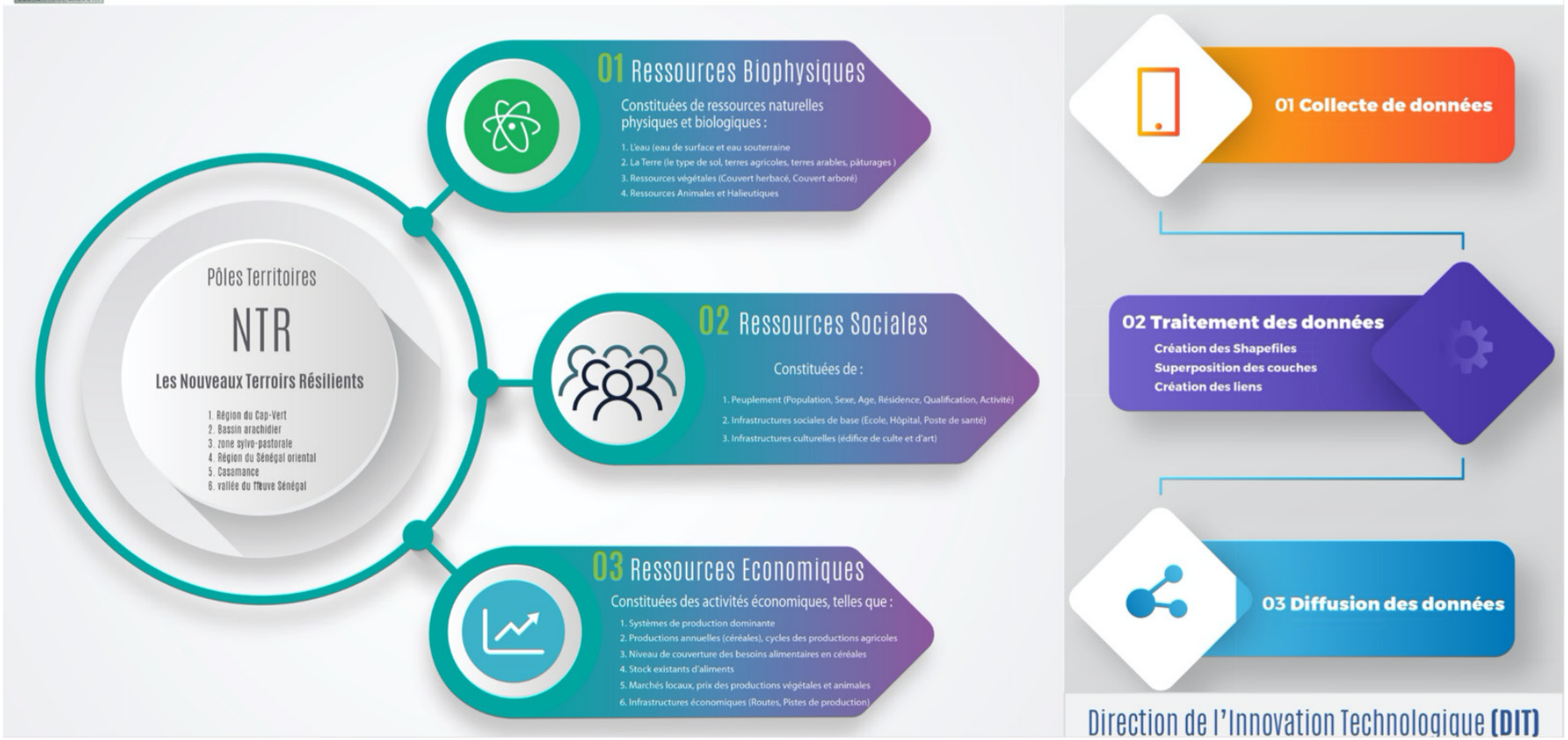
It will also include a large mapping section which will allow visualize all of the selected data on a base map with all the required geo-location. A search bar will allow to search with filters according to the type of resource, the breakdown, the EFR, the UMSA, the layers, etc.
The website or public interface will also be connected to the application via the database and will allow ESNFC to publish certain reports and figures from the SIRT or the newsletters of the EWS unit. In all cases, information to be published in this part will be discussed and adopted before implementation.

1-3. Mobile solution

The mobile part will be in the form of an Android application and will make it possible, among other things, to collect data in the field by accredited agents or targeted persons. It will send data, GPS, alerts, photos or video or audio recordings taken in the field, etc.

The mobile application will also allow authorized users to geolocate a resource (plot, borehole, water sources, point, track, etc.) by indicating its precise
geographical coordinates, a trip on the ground might be necessary in view to define the real limits.

Système d'Information sur les Ressources de Terroirs (**SIRT**)



1-4. Hardware architecture and server

- Physical architecture

The type of architecture (client-server) is centralized at the level of the main server (on which the other clients will connect - laptops, PCs and tablets), a secondary server open to the internet and a database which will save the data and to which the two servers will connect for processing the data collected or to be displayed.

On this main (physical) server, an Apache server and the MYSQL Maria DB database will be installed. It will host the application and will be accessible from the internal network via http or https. However, a separation can be made by installing Apache and MYSQL on a separate server each.
The smart phones, tablets and PCs connected to the system via the internet (3g / 4g) are intended for the exploitation of the data that will be displayed on the site. But they also serve to supply the database by sending the data collected in the field to the main server, via the Internet.

2. THE SIRT INTERFACE

This chapter describes a small presentation of the main windows of the software and some functionalities. The SIRT presents a graphical interface composed of three (3) parts:

- The resources mapping: this part is reserved for displaying the geographic information system of the regional hubs. It offers a user-friendly environment that allows you to display or research the resources of the regional hubs. The information is represented in form of super imposable and dynamic spatial layers with a well detailed legend.
- The SIRT dashboard gives a statistical feature of the data from the territorial clusters.
- The configuration of the SIRT offers a possibility to the system administrator to configure all the software options.

2-1. The SIRT environment

The SIRT is multi-environment and is composed of web and mobile applications, the UMSA and EFR data are collected from the mobile version and are then sent to the server for processing and analysis. While the web application allows to insert data but is mainly used to display resources in form of a digital map.

2-1-1. The WEB application

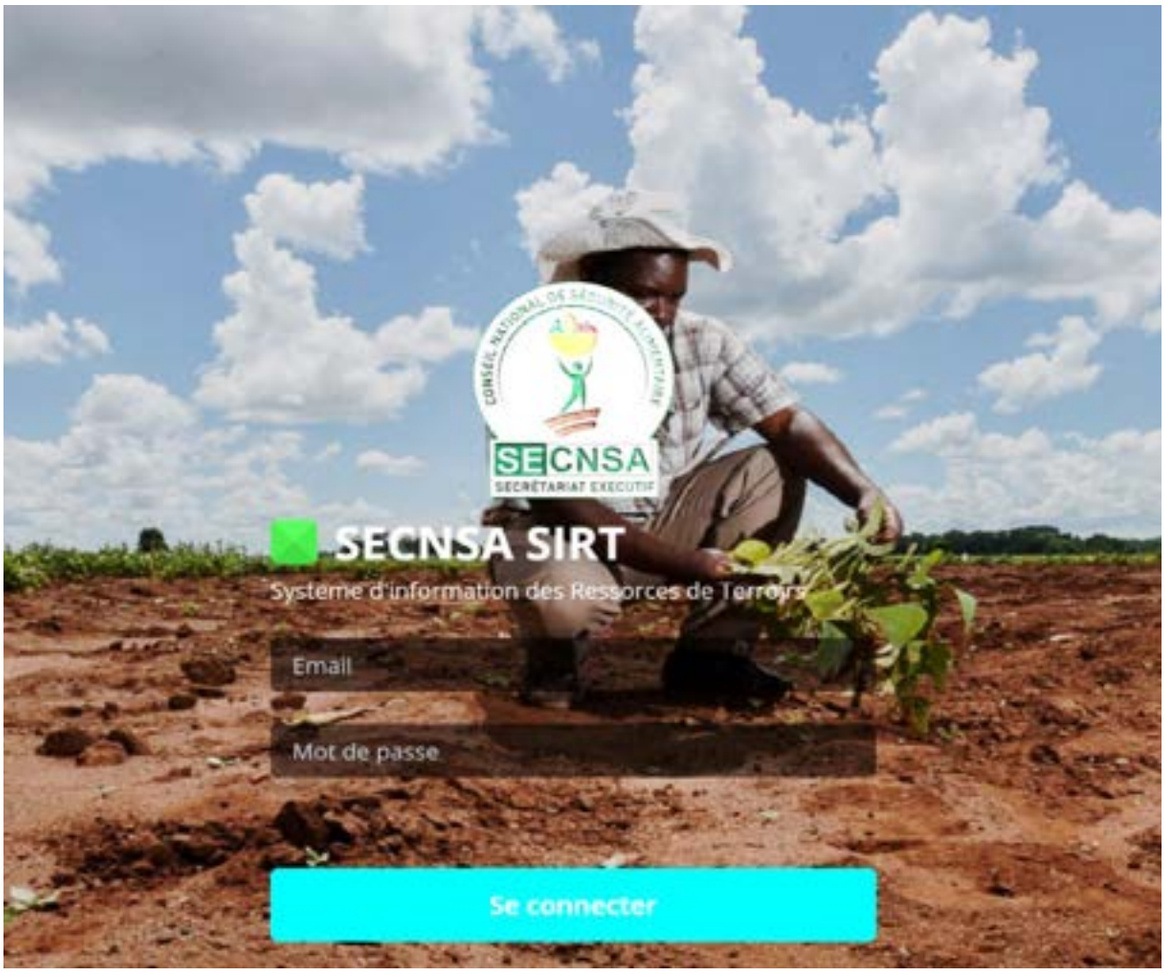
The SIRT is a WEB application compatible with all types of internet browser that exist. Its use requires an internet connection, the software link, a user name (email address) and a password.
When launching the software, an authentication window opens and allows entering the user's connection parameters. This information is managed in the SIRT configuration section. The system administrator adds the users who are authorized to use the

software.

2-1-2. Connection to the application

To connect to the information system, start your internet browser (the SIRT is compatible with all browsers), then enter the address of the software in the address area. The authentication window is the gateway to SIRT.

You must have access parameters to the software for its use. Once these parameters have been entered, the user clicks on the «Connect» button to display the SIRT interface.

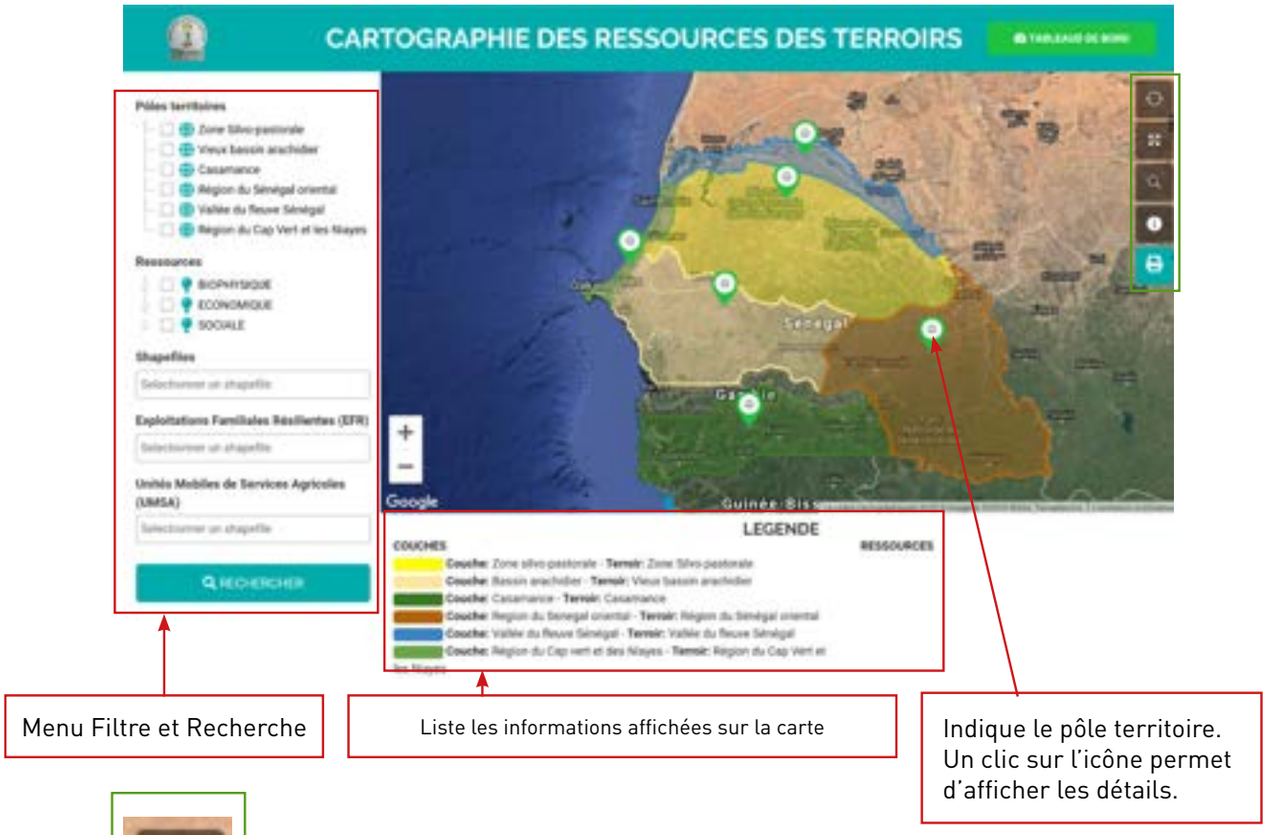


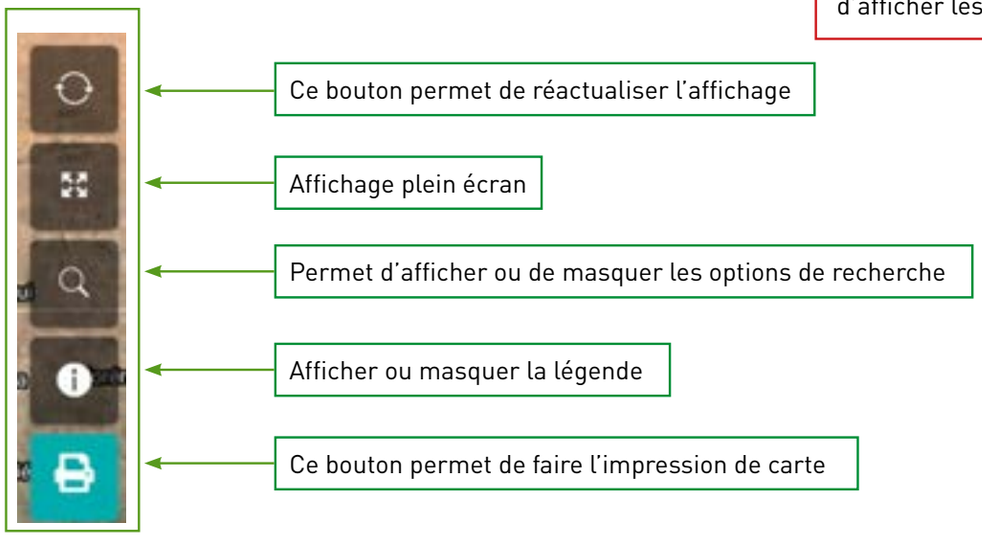
Fenêtre d'authentification

2-2. Presentation of the mapping interface

When the connection is established, you get directly access to the interface which displays the cartography of local resources (Interface below).

This part marks the great innovation of this system, it centralizes all the information sent from the field, as well as data coming from sectional ministries and other actors. It dynamically allows you to search, to filter and to display the resources and information of the territories on the map, in form of super imposable layers, in order to help decision-making.





2-3. The SIRT modules

The software is made up of three modules :

2-3-1. Module 1: The territories

This module makes it possible to display on the map the geographical division of the territories with the possibility of making filters on the display in order to optimize the search.

For convenience, we have modeled our territories on the territorial poles. The concept of territory, which has become the basis of development in the new policy called «Act 3 of decentralization», is understood as being the support for collective action and the best suited space to implement socio-economic development policies.
This choice is due to the major challenges of the reform, which remain the territorialization of public policies, the development of contractualization between the State and the Territories and the promotion of cooperation between territorial actors, following a systemic and concerted approach.

The territory is defined as «a homogeneous eco-geographic, historical, socio-cultural and economic space, meant to serve as a level of coordination and implementation of socio-productive activities ensuring its sustainable development».

Let us recall that the local territory is the first expression framework for democracy and convergence of the populations' concerns. As such, the concept of territorial development goes far beyond the localized development model. It is thus apprehended globally. This is undoubtedly the meaning of the innovative approach consisting in «thinking globally and acting locally while integrating the specificities of each territory», hence the importance of the link between local governance, local development, regional planning and sustainable development.

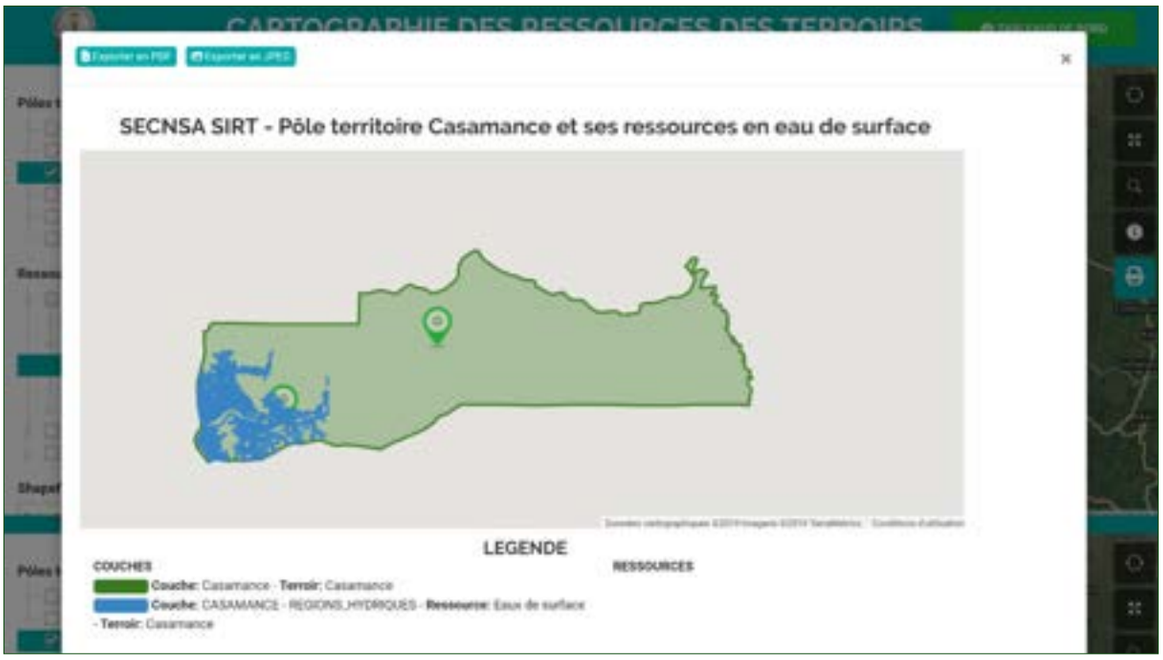
The territories that will constitute the New Resilient Territories (NTR) will come from the territorial poles in order to be in line with the Government's development policy. This division based on the territorial poles will permit to identify the members of the UMSA, to train and specialize them, adding thus a value-added to their future tasks of advisers, etc. It also permits to select vulnerable households that will benefit from the project's facilities (EF).
The result of this work will allow a synergy of actors at the local level, to increase the production, to diversify production systems, etc.

As a matter of fact, the territory constitutes a relevant framework for defining a shared vision of the development, the construction and implementation of a territorial and co-production project of families of territorial actors (local communities, private sector, civil society, decentralized territorial administration). It is possible to select with the Filter and Search menu, the territory pole (s) to be displayed on the map.

2-3-2. Module 2: Resources

To do a search, tick on the territories, then on the resources of interest to you and finally click on the button « RECHERCHER »

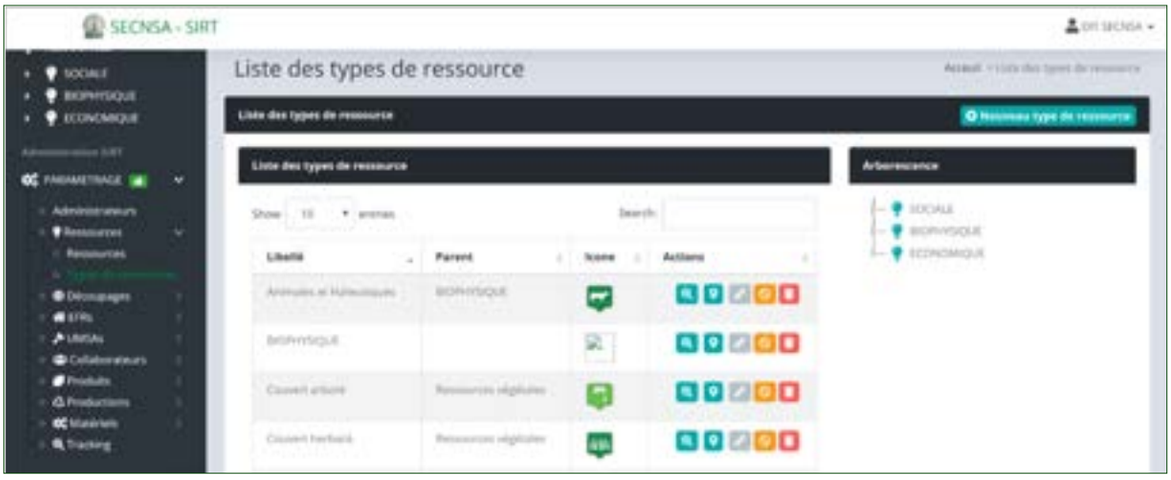
The picture below shows us on the map the information sought in the menu.



We can print the displayed map in JPG or PDF format.

2-3-3. Module 3: Configuration

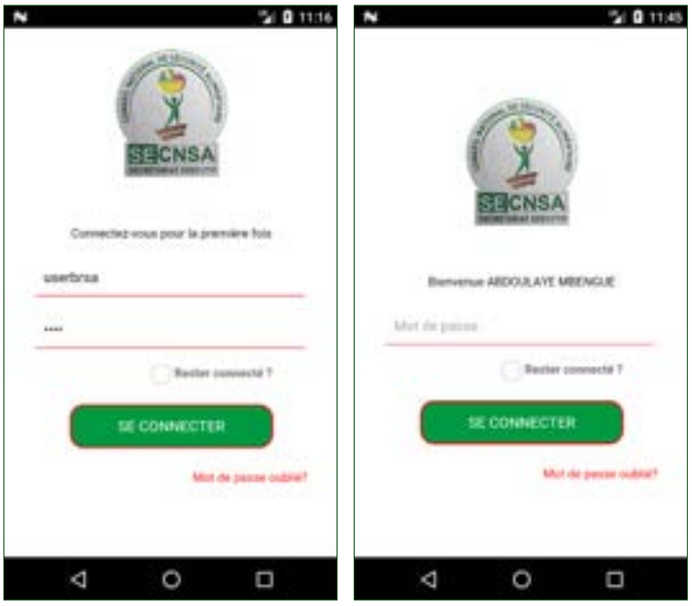
It is a module intended for the administration of the information system. The authorized user only (SIRT Administrator), in this case Admin DIT, is entitled to access this module. The administrator can access this module by clicking on «Parameter», and then choose the section to configure.



- Mobile application

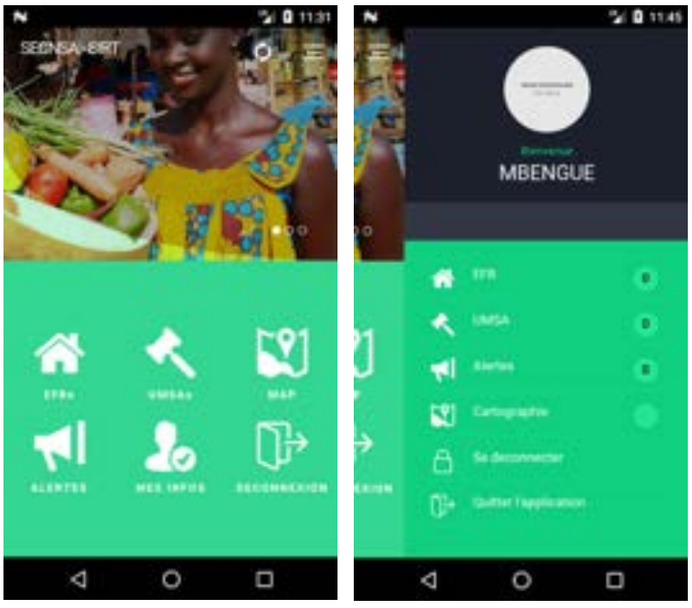
The mobile application is developed in Android and mainly allows BRSA agents to collect and report information concerning EFR and UMSA which depend on their entity. It allows the latter to connect with their login and password defined from the administration part.

- Connection



The connection is made by filling out the form presented on the screenshot below and corresponding to the home screen of the mobile application. A radio button located at the bottom of the form will allow keep connected and no longer need to enter one's password when opening the application.

2-4. Home page or main menu



Afterasuccessfulauthentication, the logged-in user is redirected to the main home page shown below. This page displays the icons of the links to the modules of the application and their geolocalization, the Alerts, the personal information of the user.

- **The EFR**

The EFR list is represented as in the screenshot below, with the wording and the territory to which it belongs.
When you click on an item in this list, the corresponding EFR page is displayed with the tabs:
• **Info:** to display detailed information from the EFR;
• **Members:** the EFR members' list;
• **Equipment:** the EFR equipments' list;

• **Map:** the EFR geolocalization of its exploited surface which can be modified by moving the points on the map or by moving on the ground so as to place the points on the map from its geographical position.

- **UMSA**

The UMSA list is represented as in the screenshot below, with the wording and the territory to which it belongs.
When you click on an item in this list, the corresponding UMSA page is displayed with the tabs:

• **Info:** to display detailed information from the UMSA;
• **Members:** the UMSA members' list;
• **Equipment:** the UMSA equipments' list;
• **Map:** the UMSA geolocalization.

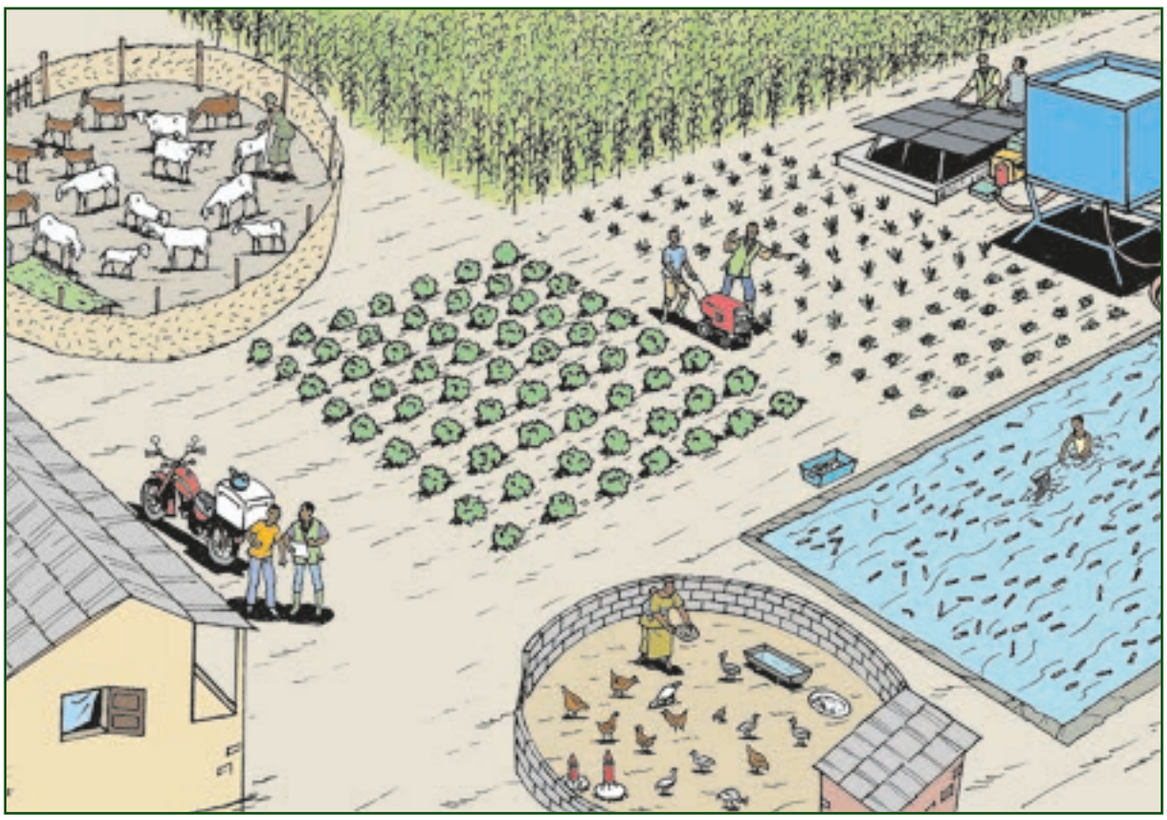
- **Alertes**

The alerts' list is represented like that of the other modules. But if the list is empty, the screen below is displayed (left).
The addition of a new alert is made by replacing the form on the screenshot below. The information to be completed are :

- **Geolocalization:** current position of the tablet;
- **The wording;**
- **The EFR (if necessary);**
- **UMSA (if necessary);**
- **The category;**
- **The description;**
- **A file:** it can be loaded from the mobile phone gallery by pressing the left button (file). So also, the user can directly open the smartphone camera to capture a picture or a video and charge it by pressing the right button (on the right).

COMPONENT 2

The Resilient Family Farms (EFR)



CHAPTER III : RESILIENT FAMILY FARMS (EFR)

1. THE PROBLEM OF FOOD INSECURITY

In Senegal, the successive food crises recorded in the last decade, namely those of 2005, 2008, 2010 and 2012, have highlighted the limits of policies aimed at achieving food and nutritional safety.

The different food safety surveys show a high prevalence of food insecurity in several regions of the country. At the national level, the rate of food insecurity has not improved compared to the rates recorded with AGVSAN, 2010, ENSAN 2013 and ENSAS 2016.

All the surveys and vulnerability assessments related to poverty and food and nutritional insecurity: workshops of the harmonized framework 2013-2015, National Survey of Food Safety and Nutrition of 2013 (ENSAN, 2013), of the SMART Survey of 2012 and 2014, the 2011 Poverty Monitoring Survey in Senegal (ESPSII), the Agricultural Rural Survey and Food and Nutritional Safety (ERASAN2014); reveal a generally worrying situation in the seven (07) regions of the North, the East and the South: Kédougou, Kolda, Matam, Saint-Louis, Sédhiou, Tambacounda and Ziguinchor. All in all, twenty (20) administrative departments are affected by this situation of almost permanent vulnerability: Kédougou, Salémata, Saraya, Kolda, Médina Yoro Foulah, Vélingara, Matam, Kanel, Ranérou, Podor, Sédhiou, Bounkiling, Goudomp, Tambacounda, Koumpentoum, Goudiry, Bakel, Ziguinchor, Bignona and Oussouye.

2. DEFINITION OF THE EFR

A Resilient Family Farm (EFR) is a physical and social entity made up of a household of 4 to 5 people, with an area of at least one (1) hectare.

The implementation of the EFR consists in helping the targeted households to have a production space including a perennial water source (well equipped with solar or motor-pump on a watercourse) allowing diversified agricultural activities all the yearlong.

Thus, the EFRs appear as an important support of the rural economy: they contribute to the safety and the food sovereignty of the households by providing them with healthy and nutritious products; they also promote the provision of additional income by marketing the surplus products from farms, so as to meet other basic social needs.

3. REALIZATION OF THE EFR

As indicated in the PNASAR, it is planned to carry out 60 to 90,000 EFR through the entire national territory over the next 20 years. The installation of these EFRs will have a positive impact on the living conditions of the beneficiary populations, by strengthening substantially their food safety and their resilience on a territorial scale.

3-1. Distribution of the EFR

A planning of the EFRs to be carried out will be annually made according to the percentage of the total population in the pressurized phase (Ph 2) with the results of the Harmonized Framework.
As an illustration based on the results of the November 2018 Harmonized Framework data analysis, the table below shows the EFRs distribution to be carried out per department every year.

2nd administrative level	3rd administrative level	Total Population	Total population in the pressurized phase (Ph 2)		
			Number of people	Numbre of households	Number of people
KEDOUGOU	SALEMATA	26 920	16%	4 307	538
	KEDOUGOU	95 599	12%	11 472	1 434
	SARAYA	61 756	17%	10 499	1 312
ZIGUINCHOR	ZIGUINCHOR	299 364	15%	44 905	5 613
	BIGNONA	304 535	10%	30 454	3 807
	OUSSOUYE	58 280	9%	5 245	656
KOLDA	KOLDA	295 795	21%	62 117	7 765
	MYF	166 042	19%	31 548	3 944
	VELINGARA	334 746	11%	36 822	4 603
SEDHIOU	SEDHIOU	184 742	15%	27 711	3 464
	BOUNKILING	177 706	10%	17 771	2 221
	GOUDOMP	190 557	12%	22 867	2 858
FATICK	FATICK	413 302	9%	37 197	4 650
	FOUNDIOUGNE	340 444	10%	34 044	4 256
	GOSSAS	116 612	12%	13 993	1 749
KAFFRINE	KAFFRINE	257 696	8%	20 616	2 577
	MBIRKILANE	125 596	11%	13 816	1 727
	KOUNGHEUL	202 803	7%	14 196	1 775
	MALEM HODDAR	117 462	9%	10 572	1 322
TAMBACOUNDA	BAKEL	171 521	7%	12 006	1 501
	TAMBACOUNDA	369 510	11%	40 646	5 081
	GOUDIRY	141 853	10%	14 185	1 773
	KOUMPEMTOUM	158 634	13%	20 622	2 578
DAKAR	RUFISQUE	583 774	14%	81 728	10 216
LOUGA	KEBEMER	306 043	17%	52 027	6 503
	LINGUERE	285 743	28%	80 008	10 001
	LOUGA	440 859	15%	66 129	8 266
MATAM	MATAM	342 164	20%	68 433	8 554
	KANEL	299 471	20%	59 894	7 487
	RANEROU	64 402	22%	14 168	1 771
SAINT-LOUIS	DAGANA	282 804	14%	39 593	4 949
	PODOR	433 811	15%	65 072	8 134
	SAINT-LOUIS	346 926	12%	41 631	5 204
DIOURBEL	DIOURBEL	322 762	23%	74 235	9 279
	BAMBEY	360 380	15%	54 057	6 757
	MBACKE	1 118 849	10%	111 885	13 986
THIES	MBOUR	787 349	18%	141 723	17 715
	THIES	786 097	15%	117 915	14 739
	TIVAOUNE	532 261	16%	85 162	10 645
KAOLACK	KAOLACK	587 730	15%	88 160	11 020
	NIORO	429 198	16%	68 672	8 584
	GUINGUINEO	138 506	18%	24 931	3 116
TOTAL		**13 060 604**		**1 873 034**	**234 129**

Number of EFR to be realized per year	Total population in the pressurized phase (Ph 2)			
	20% and more	20% and more	15 to 19%	10 to 14%
10		10		
28			28	
25		25		
108		108		
73			73	
13				13
149	149			
76		76		
88			88	
67		67		
43			43	
55			55	
89				89
82			82	
34			34	
50				50
33			33	
34				34
25				25
29				29
98			98	
34			34	
50			50	
196			196	
125		125		
192	192			
159		159		
164	164			
144	144			
34	34			
95		95		
156		156		
100			100	
178	178			
130		130		
269			269	
340		340		
283		283		
205		205		
212		212		
165		165		
60		60		
4 500	**862**	**2 216**	**1 182**	**240**

3-2. Starting phase

It is planned to carry out at least 100 EFR over the whole national territory by the end of the 1st quarter of 2020, taking into account the departments identified as being the mostly affected by food insecurity according to the latest results from the Harmonized Frame. The table which follows makes the presentation.

Table 2: Distribution of the 100 EFR for the starting phase according to the percentage of the total population in phase 2 of the Harmonized Frame.

Regions	Departements	EFR distribution according to the total population en phase 2 from Harmonized Frame			
		20% and more	15 à 19%	10 à 14%	Less than 10%
KEDOUGOU	SARAYA			5	
ZIGUINCHOR	OUSSOUYE				5
KOLDA	KOLDA	8			
	MYF		5		
SEDHIOU	SEDHIOU		5		
FATICK	FATICK				5
KAFFRINE	MALEM HODDAR				5
TAMBACOUNDA	BAKEL				5
	KOUMPEMTOUM			5	
DAKAR	RUFISQUE			5	
LOUGA	KEBEMER		5		
	LINGUERE	9			
MATAM	KANEL	5			
	RANEROU	5			
SAINT-LOUIS	DAGANA			5	
DIOURBEL	DIOURBEL	8			
THIES	MBOUR		5		
KAOLACK	GUINGUINEO		5		
TOTAL		**35**	**25**	**20**	**20**

On reading this table, the four regions mostly affected by food insecurity (Kolda, Matam, Louga and Diourbel) have a percentage of more than 20% in the pressurized phase (Ph 2). That is the reason why 35 EFR are assigned to them; the same process prevailed in the distribution of the other 65 EFR for the other departments which have, respectively, percentages between 15 and 19%, 10 to 14% and less than 10%.

However, it will be possible to focus efforts on the 05 departments (Kolda, Linguère, Kanel, Ranérou and Diourbel) mostly affected by food insecurity, with a rate of over 20%, at the rate of 20 EFR in each of them. This planning will allow better control of the implementation process of the EFR by identifying the limits and difficulties, the dysfunctions and appropriate solutions to bring for a good execution of the activities during the years to follow the scaling up at national level.

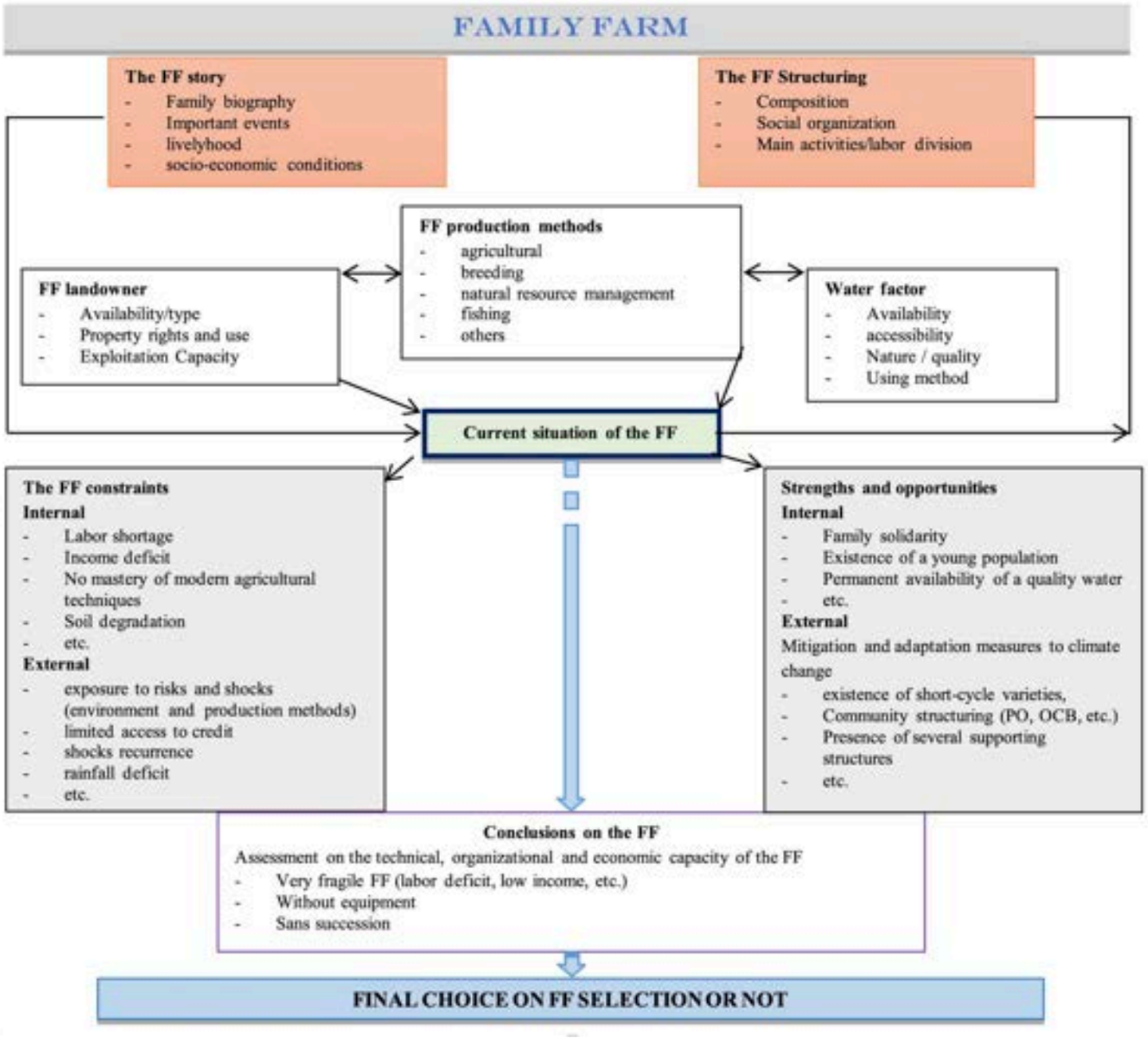
4. TARGETING PROCESS FOR HOUSEHOLDS IN THE REGIONS

At the regional level, the targeting of thee vulnerable households will be based on the combination of cross-data from the RNU and the SE-CNSA database.

The identification of vulnerable households in the districts or villages will be carried out by a local assembly, the results of which should be validated by the municipal councils, in the presence of the prefects or sub-prefects. The lists resulting from the targeting will include all the elements necessary for the identification of the household: the first name (s) and surname of the head of the household, his status, ID card number, the size of the household and a second telephone number, etc.

Following this process, the stage of identification and analysis of RUs will be carried out in accordance with the diagram presented in the following point.

4-1. Identification and analysis sheet of the RU



This phase of information collecting on households is a key step in the process of implementation of the EFR, for it allows among other things to make a diagnosis and an in-depth analysis of the characteristics of RUs, but also a justification of the choices to be made during the final selection of RU beneficiaries to enroll in the implementation of EFR.

5. PRESENTATION OF AN INTEGRATED EFR MODEL (COSTS AND BENEFITS)

To strengthen the resilience of vulnerable populations in a sustainable way, a Resilient Family Farming model is proposed for the selected households, combining several types of production with high added value. The EFR has a double objective: on the one hand, it provides a diversified range of food products essential for household consumption; and on the other hand, through the marketing of the production, it brings substantial income that allows meet the other social needs. These comparative advantages of the EFR clearly contribute to secure the livelihoods and a sustainable strengthening household food safety. For this purpose, a description of the constituent elements of the basic investment of an EFR (1 ha: 100 x 100 m) is established below, in addition to the business model of the integrated farm :

- Description of the components of the EFR :
    - a well or a water catchment point
    - a complete pumping device powered by solar energy
    - a concrete support supporting a 2 m3 tank
    - a drip, sprinkler or line irrigation system
    - a market garden, tree-dwelling perimeter,
    - a henhouse
    - a 100 m3 fish pond
    - a wire fence on one (1) hectare

- Definition of the EFR business model :

KIT COMPOSITION FOR 1HA					
N°	**Description**	**Unit**	**Quantity**	**UR**	**Amount**
Infrastructures					
1	Ponds	One	1	1 500 000	1 500 000
2	Concrete tank support	One	1	300 000	300 000
3	Henhouse construction	One	1	300 000	300 000
4	Fishing basin	One	1	1 000 000	1 000 000
5	Bovins fence	One	1	200 000	200 000
6	Ovins fence	One	1	150 000	150 000
7	Wire fence (100x100)	Ml	250	4 500	1 125 000
8	Soil preparation	Ha	1	50 000	50 000
Sub total					**4 625 000**
Equipments					
9	Water tank 2 m3	One	1	300 000	300 000
10	Pump & Complete solar panels	Kit	1	3 500 000	3 500 000
10	Polyethylene tarpaulin 8m & 120	Ml	8	2 500	20 000
11	Piping & ducts + accessories	Mt	1	500 000	500 000
12	Agricultural material & tools	One	1	100 000	100 000

13	Material transport	One	1	100 000	100 000
Sub total					**4 520 000**
Operational charges					
Breeding					
13	Tilapia fry	One	3500	100	350 000
14	75-90 days farm laying hens	One	20	5 000	100 000
15	Laying line roosters	One	2	6 000	12 000
16	Reproductive heifer	One	2	150 000	300 000
17	Sheep	One	3	75 000	225 000
18	Aries	One	1	100 000	100 000
Sub total					**1 087 000**
Feed					
19	Bag of corn (50kg) or poultry ration	One	5	16 000	80 000
20	Ration for fry 42% protein	Kg	3150	650	2 047 500
22	Supplementary ruminant feed + forage seed	Kit	1	70 000	70 000
23	Veterinary products (breeding and fish farming)	Kit	1	100 000	100 000
Sub total					**2 297 500**
Production inputs					
24	Ripe compost	T	3,5	50 000	175 000
25	Fruits and natural plants	One	2,8	4 000	11 200
27	Vegetable seeds	One	1	151 300	151 300
28	Phyto sanitary products	Lot	1	75 000	75 000
29	Natural fertilizers	T	0,75	400 000	300 000
30	Transport	Lot	1	62 500	62 500
31	Other expenses	Lot	1	75 000	75 000
Sub total					**850 000**
TOTAL Kit					**13 379 500**

A – Estimated production costs

1 – Estimated production costs of the farm					
Rubriques	**Potato**	**Onion**	**Chili**	**Others (vegetable and arboreal)**	**Total**
	Costs (thousands) CFA F				
Soil préparation	25,00	12,50	12,50	12,50	62,50
Seeds	25,00	50,00	50,00	50,00	175,00
Fertilisants + Compost	100,00	100,00	100,00	100,00	400,00

Phytosanitary products	12,50	12,50	25,00	25,00	75,00
Transport	25,00	12,50	12,50	12,50	62,50
Overhead costs	12,50	12,50	25,00	25,00	75,00
Total	**200,00**	**200,00**	**225,00**	**225,00**	**850,00**
Yield	15,00	15,00	10,00	10,00	**50,00**
Production	3,75	7,50	2,50	2,50	**16,25**
P.V.T	75,00	100,00	300,00	300,00	**775,00**
C.A	562,50	750,00	1 500,00	1 500,00	**4 312,50**
Margin	362,50	550,00	1 275,00	1 275,00	**3 462,50**

No	Headings	Amounts in FCFA
2 – Estimated production costs of the fish farm		
1	Purchase of fingerlings	350 000
2	feed	2047 500
3	Veterinary products	50 000
Total Cost		**2 447 500**
3 – Estimated production costs of the hens farm		
1	Purchase of subjects	112 000
2	food	80 000
3	Veterinary products	20 000
Total Cost		**212 000**
4 – Estimated production costs of bovine et ovine farm		
1	Purshase of subjects	625 000
2	Food (feed semen concentrate)	70 000
3	Veterinary products	30 000
Total Cost		**725 000**
Grand total (summary statement of general expenses)		**3 384 500**

B – Estimated revenue forecast

1 – Estimated farm receipts					
Speculations	**0,5 ha**	**income**	**Production/ cycle**	**Sale price/ kg**	**Incomings**
Yam	1 250 m²	1,875	3,75	200	750 000
Onion	1 250 m²	1,875	3,75	300	1 125 000
Piment	1 250 m²	1,25	2,5	600	1 500 000
Other vegetable gardens	1 250 m²	31,25	0,0625	600	37 500
Grand total			**10,0625**		**3 412 500**

2 – Estimated revenue from fish farming				
Fish	**Production**	**UP / kg**		**Incomings**
Fish	3500	1800		6 300 000
Grand total	**3500**			**6 300 000**
3 – Estimated poultry farming revenue				
Animals	**Nombre**	**Prod eggs**	**P U**	**Incomings**
Farming hens	10	5 760	75	432 000
Farm roosters	2	-	-	
Poultry recycling	12	-	6 000	72 000
Grand total				**504 000**

C – Summary statement of general revenue

Farms		**Incomings (FCFA)**	
Agricuture			**3 412 500**
Fishing			**6 300 000**
Poultry			**504 000**
Grand total			**10 216 500**
Summary table			
No	**Headings**	**Expenses**	**Incomings**
A	Realization and installation of the kit		
1	Infrastructures	4 625 000	
2	Equipments	4 520 000	
Sub total		**9 145 000**	
B	Production costs		
1	Farming production costs	850 000	
2	Fishing production costs	2 447 500	
3	Poultry farming production costs	192 000	
4	Bovin and ovin farming production costs	745 000	
Sub total		**4 234 500**	
Total expenses		**13 379 500**	
C	Production recipe		
1	Gross income from agricultural production		3 412 500
2	Gross income from fishing production		6 300 000
3	Gross income from poultry production		504 000
Total revenue			**10 216 500**
Gross operating margin			**5 982 000**
Cost support - advice		**430 000**	
Net operating margin		**5 552 000**	

However, it should be specified that the model presented here constitutes a prototype which aims to be modular according to the characteristics of each territory. In each region, the focus will be specifically on the main products of the area and on the market access conditions so as to ensure the marketing of products from the EFR.

6. IMPACTS ON FOOD SAFETY AND NUTRITION

The implementation of such an operating system based on the integration of several types of production should significantly contribute to improve the food and nutritional safety of the beneficiary populations. So, it should be remembered that there is a reciprocal cause and effect link between nutrition and resilience.

Impact on food safety

- The improvement of agricultural production that promotes good food availability.
- The diversification of crops with respect for the production standards which allow a healthy, varied and of a high-grade nutrition.
- The improvement of the purchasing power of the households allowing access to other basic products necessary for their daily consumption.
- The improvement of food availability allowing a contribution to the constitution of the Local Food Reserve (RAL)
- The regular and diversified supply of school canteens with food products

Impact on Nutrition

- Nutritious market gardening will significantly reduce the noted deficiencies in micro-nutrients thanks to the contributions of fruits and vegetables in Vitamin A, in iron and even more: Vitamin C, Zinc, and improve the dietary diversity of children and households.
- The fish farming and poultry farming for the provision of such micro-nutrients as iron, vitamin A, amino acids essential for children's growth
- Beef or sheep fattening and heifers for milk production are essential in the diet of households due to their intake of micro-nutrients

In short, such a system makes it possible to considerably reduce the prevalence of malnutrition in the concerned territories and to improve the dietary diversity of children, pregnant and lactating women in particular and of the household in general.

7. FINANCING OF EFR

One of the main challenges related to the financing of rural development concerns the insufficiency or even the unavailability of financial services for the actors of agriculture, stockbreeding and fishing, in particular those considered to be the most vulnerable. A large part of the rural population, made up of the poorest households, continues to see their financial needs unmet because the formal financial sector is not able to offer, in rural areas, suitable products that meet the real needs of the producers.

For this reason, it follows that family farms are facing investment and operating difficulties mainly related to the realization of sustainable hydro agricultural arrangements, the availability of working equipment of the soil, irrigation, establishment of stalls conform with the standards, modern or improved henhouses, fish ponds etc.

Thus, with a view to implementing EFR, the focus will be on a financing model, through a business plan specific to the operation, which makes it possible to realize all the investments needed for the proper functioning of an integrated farm, and to have a continuous production in quantity and good quality as well.

Funding strategy of EFR

Schematically, the EFR funding strategy will be carried out in the form of a grant and will put in touch the State and its TFPs, the NTR coordination unit, the implementing agencies, the FIs and the beneficiaries, by clearly defining the roles, missions and responsibilities of each actor.
Regarding the financing of the production infrastructures and equipments, the Coordination Unit for New Resilient Territories (UC / NTR) will rely on technical implementing agencies (ANCAR, NAIAD, ANA, Private operators, etc.), with whom protocols will be signed for the realization of hydro agricultural installations, fish ponds, stables and sheepfold, etc.

With regard to working capital endowments (assumption of operational costs), FIs will be recruited through precise and exhaustive specifications and will be responsible for the management of resources dedicated to the acquisition of inputs (agricultural, breeding, fish farming, etc.). Agreements will be signed with the latter to enable them to have refinancing lines for the benefit of the EFRs, and thus to clear the input credits granted by the EFRs to suppliers approved by the UC / NTR.

Also, households benefiting from EFR will be supported by specific financial education actions to ensure the security of investments and the sustainability of production activities. This training will allow them, among other things, to clearly distinguish family goods from those of the production company, to keep simplified accounts, to be attentive to cost elements and to be able to plan their business.

With the support of technicians providing agricultural services, streamlined management supports will be defined and implemented in order to facilitate the production and processing of financial information on family farms.

Financing mechanism

Given the state of vulnerability of the beneficiaries, the funding of the EFRs will be based on a full grant for the financing of the first year of the working capital which will allow the EFRs to acquire the requested inputs.

Investments related to the realization of hydro-agricultural, livestock and fish farming facilities will also be made in a subsidy form. The beneficiaries will make, in this 2nd case, a contribution in kind (traditional materials, etc.) and / or labor to be determined.

In all cases, appropriate tools will have to be installed for the operational financing and management of the risks related to their nature as small vulnerable producers. These management mechanisms could be based, among other things, on the following elements: (i) proximity to the EFR; (ii) subsidized financing and insurance services adapted to EFR; (iii) creation of a guarantee fund; and (iv) establishment of a risk assessment and management system and of the specific context of EFR.

In short, it will be a question of highlighting virtuous management principles that can be applied by financial institutions, executing agencies and promotion organizations to facilitate guaranteed access to subsidized financial services for FRTs.

Sources of funding

The funding of the EFRs can come from a subsidy from the State and / or technical and financial partners, financial aid from bilateral or multilateral conventions, donations and legacies and from any other subsidy resources authorized by the regulations in force. Particular emphasis will be placed on mobilizing the significant resources annually allocated by financial partners to assist the poor people and to combat food insecurity in vulnerable households, especially during the lean season.

8. Framework for implementation

8-1. Organizational scheme

For the implementing procedures and methods of the interventions, the participatory and inclusive approach will be applied and privileged. The strategy for setting up EFRs requires emphasizing the following basic principles:

- the village as a reference unit for planning; it will be considered both as a specific geographic space and as a local decision-making entity;
- the «spatial-advance» strategy will focus primarily on covering the structurally vulnerable areas;
- the systematic search for complementary partnership and synergy with local development operators, with other projects and NGOs working in the same village;
- The general organization and the responsibilities of the operators, from the community level to the central level, are presented as follows:
- at the municipal level, information on RUs are collected and analyzed by the

Regional Food Safety Offices with the support of technical services which advise on their eligibility for the EFR project;

- during a Departmental Food Safety Committee session (CDSA), these information are shared and validated in relation to local specificities, the arbitration on the distribution of quotas carried out at the municipal level.

At the central level, the whole information validated by the departmental level are consolidated by a national technical committee in charge of coordinating the NTR program. Arbitration is made on the allocation of the resources intended for the financing of the EFR according to the allocations emanating from the State and / or its partners.

8-2. Partnership development

As part of the implementation of EFRs, it would be appropriate to initiate strategic partnerships with a plurality of actors whose missions can contribute to the achievement of these EFRs with the aim of making them more sustainable. Those institutional actors can be national and regional administrations (Ministries and technical services), PTFs, ONGs, etc.
Among these, specific actions will be implemented with specialized structures, in particular ANA, ANIDA, ANCAR, BFPA, CNDT, etc .; and whose interventions will focus on three major areas: infrastructure development, training and support, social mobilization, etc.

In the concrete realization phase of the EFRs, the National Agency for Integration and Agricultural Development (ANIDA) will be considered as delegated contracting authority, given its main mission which is to promote the development of a modern and diversified agriculture based on water control and providing sustainable jobs for young people.

As regards the trainings and the technical support, the National Agency for Agricultural and Rural Advice (ANCAR) will provide advisory support services to EFRs; the BFPA will contribute to the reinforcement of the technical capacities of the EFR and the UMSA, while the ANA will intervene in the organizational management and technical monitoring of the fishponds installed within the EFRs.

In addition, in the strategy of social mobilization and appropriation of the EFR development project by local actors, a specific collaboration will be carried out with the National Commission for the Dialogue of Territories (CNDT) whose main objectives consist, among others, in promoting the Community interest groups, facilitating the creation of territorial groupings or territorial poles, facilitating relations between local authorities in order to improve consultation between territorial players, etc. The implementation of this partnership will take into account the collaborative programs within the framework of Communal Investment Plans (PIC).
In addition to these strategic partnerships with state structures, specific protocols will be established with national and international NGOs, universities and / or training schools, OPFs, etc...; with the aim of covering all needs, providing local advice and quality service to the EFRs.

8-3. Operational planning

In planning the activities planned in the process of implementing the EFRs, a working document will be drawn up annually in a participatory and inclusive manner, taking into account all of the concerns of each actor concerned and the specific needs expressed by the beneficiaries. The resulting action plan will also be based on the use of the various data collected from the RUs and from the various stakeholders.

To achieve this, a methodological guide will be developed and shared with all the stakeholders to serve as a working base for the field teams and the coordination team. This guide will also adopt an educational approach to ensure:

- an efficient and appropriate sensitization of the why and the objectives of the EFRs, the constraints to be overcome, the solutions to be provided, the conditions for sustainability, etc .;
- a judicious use of thematic visual supports to facilitate their implementation by operators and social animation by technical teams;
- a good communication between territorial stakeholders and local operators, allowing a better appropriation of good resilience practices;
- a good training of the various actors by exchanging successful experiences for a better transfer of skills in their respective regions and for ensuring the sustainability conditions of their operating system.

In addition, it is be noted that at the level of each department, an yearly action plan will be developed, periodically monitored and evaluated through a local system composed of the various stakeholders.

These monitoring activities will help identify the dysfunctions, the limits and constraints, the appropriate solutions and innovations to provide; It will also make it possible to capitalize on the development process of the EFRs so as to ensure a better success of the EFR Project.

9. MONITORING AND EVALUATION

The monitoring and the evaluation will be carried out in a participatory manner with all of the actors involved in the process of setting up EFRs. The follow-up will mainly focus on the execution level of the activities and the necessary adjustments to be made facing the difficulties encountered; while the evaluation will focus on the results obtained in the different phases of the implementation of the EFRs and in relation to the achievement of the overall objective and specific objectives.

Data will be collected within determined frequencies according to the evolution of the activities included in the planning and the indicators retained in the logical framework. In conjunction with all of the players concerned, the SE-CNSA will have to carry out a risk analysis and hypothesis to set up attenuation or mitigation plans. The implementation of these plans will have to be subject to rigorous monitoring, and the evaluation stages will make it possible to assess the relevance, the coherence, the efficiency, the effectiveness, the impact and the sustainability of the EFRs.

9-1. Types of monitoring and procedures

(i). Technical monitoring : It concerns the execution of the activities and monitoring of performance indicators. It covers :

- the level of progress of the activities and the results obtained as regards the planned timetable and the planned indicators.
- the identification and appreciation of the factors affecting the progress of the activities.
- the identification of the measures to be taken to eliminate or minimize the problems which hamper the execution of the activities, the persons who must take them into account and the timetable for their implementation.

(ii). Financial monitoring allows :

- ensure the conformity of the projects according to the costs and budgets allocated to the activities of the EFRs.
- establish efficiency criteria of the EFRs by using recurring expense ratios or financial performance ratios.

(iii). Administrative monitoring allows :

- monitoring the management of funding agreements between the SE-CNSA and local implementing agencies, both with regard to the compliance with procedures and the use of funds.
- manage the contracts with subcontractors, from the award of contracts (consultation or invitation to tender) to the end of the contract.

(iv). Socio-organizational monitoring concerns

- the structures involved and the representativeness of the beneficiaries associated with the programming, the execution, the monitoring and the evaluation of the EFRs.

9-2. Periodic implementation checks

The periodic checks are concerned with the different stages of advancement of the implementation of the EFRs. They provide a real-time data to prepare the future assessments and respond to unexpected constraints during the implementation of the EFRs. The periodic checks cover the following aspects:

- evaluation of the start-up plan;
- verification of the progress of the work carried out by the service providers;
- verification of the compliance with the calendar / chronogram of activities;
- verification of the accuracy of the achievements reported in previous periodic reports;
- identification of the difficulties encountered in the execution of the EFR;
- proposals in the form of recommendations to bring improvements or solutions so as to guarantee the proper execution of the EFR component.

9-3. Organization of the periodic control missions

In the implementation phase of the EFRs, control missions will be organized, their frequency and duration known through annual planning involving all the players concerned: the SE-CNSA, the representatives of the partners concerned (sectoral ministries, State agency, TFP, international institutions, NGOs).

The organization of these missions is the responsibility of the ES-NCFS, which is responsible for:

- drawing up the reference terms;
- get in touch with the sectional ministries and designate their representative (s);
- prepare the monitoring mission;
- supervise the drafting of the mission report;
- organize the return to the SE-CNSA with the stakeholders.

The TORs will constitute the reference document for the various periodic control missions. They must be drawn up taking into account the following elements: context of the mission, objective and expected results, operations or actions to be carried out, timetable, actors involved, budget, etc...

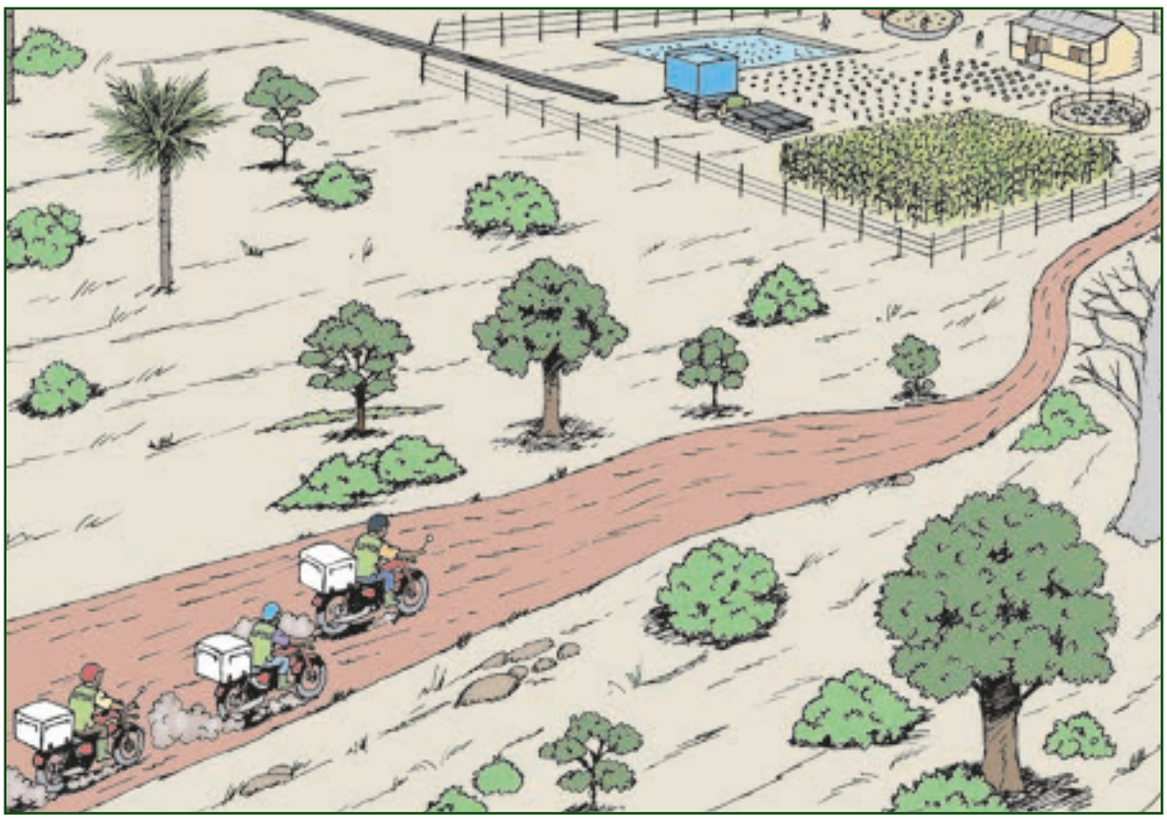
9-4. Monitoring and evaluation criteria

A set of monitoring and evaluation criteria will be designed in a participatory and inclusive manner, to monitor and evaluate the overall performance of the interventions of the EFR component. The following table provides guidance on monitoring and evaluation activities :

Logical framework level	Type of informations	Frequency of collection	Criteria
Goal	• Substantial development change, specific to the food safety sector • Measures based on the trends, perhaps on those of the key sector indicators	• End of the implementation of 90 000 EFR • Ex-post	**SUSTAINABILITY** (maintenance of the generated benefits) **IMPACT** (influence on the context, the environment) **RELEVANCE** (match the objectives to the needs of beneficiaries)
Specific objectives	• realistic and sustainable change in the beneficiaries' situation, specific to interventions	• Mid-term • End of implementation of the 90 000 EFR	
Activities	• Measures based on the timetable of the activities • Comparison of the start-up and end dates (planned and current) • Variations with regard to the timetable	• Weekly • Monthly	**ECONOMIC (ensure a better relationship between the costs, the quality and the time)**
Costs	• Measures based on the implementation budget of the EFRs • Comparison of the current situation to the planned one • Analysis of the contributions from the government, the donors and the beneficiaries • Cost-variance analysis	• Weekly • Monthly	
Results	• quantitative and qualitative measures of physical progress in the provided services • Cost ratios, input/output performance ratios • Comparison of the current achievements to those planned	• Quaterly • Annual	**EFFICIENCY** (achievement of the objectives) **EFFICIENCY** (conversion of the resources economically

COMPONENT 3

Mobile Delivery Units of Agricultural Services (UMSA)



CHAPTER IV : MOBILE DELIVERY UNITS OF AGRICULTURAL SERVICES (UMSA)

INTRODUCTION

Senegal records a population growth rate of 2.8% per year with a proportion of 55% of young people under 20 years age. This age bracket experiences an annual variation of 3.8% (ANSD annual report 2017). As a matter of fact, the statistics reveal an unemployment rate of 10.2% at the national level with almost 12.8% of young working people aged 15-35 against 7.2% for the group of 35 years and over.
In addition, the number of new job seekers is estimated at more than 270,000 people per year. This number will reach 376,000 in 2025 and 411,000 in 2030, according to the Prospective Agricultural and Rural Initiative (IPAR: employment of young rural people in Senegal, June 2018); while stressing that the private sector offers few opportunities for paid employment, and that SMEs / SMIs have difficulty accessing finance due to the high levels of bank guarantees required.

However, the agricultural sector is, in our country as elsewhere in Africa, one of the largest job niches. Each segment of value chains is, indeed, an opportunity and a breeding ground for jobs. However, it must be recognized that this sector suffers mainly from the weakness of direct investments, and above all, from the failure of the agricultural service allowing a significant and sustainable improvement of the productive base and consequently, of rural household food safety especially.
This sustainable improvement of the productive base is dependent on an efficient agricultural service and the necessary diversification of production systems. This is what warrants the promotion of the Mobile Delivery Units of Agricultural Services (UMSA), which is a guarantee of the viability of agricultural holdings and true instruments for enhancing of the know-how.

1. THE SUPPLY OF AGRICULTURAL SERVICES

Providing paid agricultural services to agricultural producers is the essential mission of the UMSA. It is these quality services that will allow the EFRs to improve their productivity but also to diversify their production systems, to generate income allowing them, beyond their basic food needs, to pay for UMSA services.

1-1. Developments of the rural agricultural council and diversity of actors

The first experiments carried out in Senegal in supporting rural people were oriented towards an agricultural economy strongly administered by a technical and economic framework which was very often based on cooperative structures. The promotion development was therefore based on the rural community whose animation was entrusted to agricultural technicians, generally civil servants.

In order to achieve the option of productivity diversification, a specialization of production by agro-ecological zone was adopted, resulting most often in a profound

transformation of the technology transfer mode and the farmers supervising method. We have therefore witnessed the emergence of Regional Rural Development Societies (RRDS) which have appropriated the training, extension and supervision function of rural people. Among those companies, we have SAED, SODAGRI, SODEFITEX, SOMIVAC, etc.

Thus, the State reorganizes globally the rural development sector by allowing the transition from a mainly rainy and recession agriculture to an irrigation agriculture in the Senegal River valley, the Anambée basin and in Casamance.

The decentralized technical services of the State (animal husbandry, agriculture, water and forests, fishing, etc.) will assume a wide range of activities in supporting rural people: collecting and processing information, zoo-sanitary and phyto-sanitary supervision, forest control, literacy, support for the transformation and the preserving of local products, training of women and young people, etc.

With ANCAR, the State wanted to share or transfer some functions with the private sector or civil society so as to make agricultural services more efficient, and above all, to make service providers more accountable to producers, and basing their actions on producers' demand, etc. The State also aimed to improve the capacity of the producers' organizations to provide services to their members and make their voices heard in decision-making processes.

Beside the State technical services, other actors such as the Basic Community Organizations (BCO), the Organizations of Agricultural Producers (OAP), the platforms of rural dialogue, the specialized national NGOs, the development projects, the private structures, etc., have embarked on the supervision of rural people with differentiated approaches, either by inter-village actions or agro-ecological zones, the purpose of which lies in defending the common interests of producers and the provision of goods and services to boost productivity levels and living conditions of rural people.
On that point, many of them have unsuccessfully attempted to make meet the quality of demand with the supply of agricultural advisory services. Paradoxically, those service providers were, unintentionally, on a course of planning the needs of the rural world and a top-down popularization approach. The result is a wide range of uncoordinated service supply that implied competitions, confusions, overlaps and duplications whose effectiveness is called into question by the producers themselves.

The lack of regulation of the agricultural and rural advisory system, the non-compliance with existing rules (NGO intervention charter), the attractiveness of the sector, etc., caused the arrival on the market of unqualified and uncontrollable actors. The latter enter in competition with the function of suppliers of public goods (basic advice to small farming) entrusted by the State to ANCAR and other structures such as SAED, SODAGRI, SODEFITEX etc.

Despite those efforts by both public authorities and so-called civil society organizations, our producers, today more than ever, need to be supported by local and innovative services. This is the guarantee of the performance and the viability of family farms.

1-2. Matching between demand and supply of agricultural services

By devoting the most part to the agricultural sector, the council keeps mainly focused on crop production and does not sufficiently integrate upstream the issues of access to inputs, to equipments' financing, among others, but also downstream issues processing, the storage and the marketing of production. In addition, it does not sufficiently take care of the other dimensions of the producers' environment, such as the management of physical resources (water, soil) and biological resources (pasture, forest cover, preservation of fauna, etc.), as well as the economic management of farms.

The analyzes indicate that the demand origin has considerably varied according to the production areas, and at the same time, has become more complex, now covering a field of competence ranging from the basic technical advice to the management of on all the value chains.
As for the offer, it is characterized by a wide disparity of services depending on the production areas. The privileged areas are those where there is strong leadership from local leaders and substantial investments made in these localities.

With regard to animal production, it should be noted that the supply of advisory services, in most cases, does not meet all the needs of breeders. It is not interested enough in advice on herd management, in the exploitation of animal products and their derivatives, in raising awareness of animal health, in particular the risk of diseases in the rainy season, as well as in the fight against the wandering of animals, source of conflicts between farmers and breeders.

In any event, the difficulties encountered by producers are related, among other things, to:

- the lack of mastery of plot water management techniques and the heavy dependence on rain (2 to 3 months) to be able to carry out regular agricultural activities;
- the lack of mastery of irrigation techniques (leaks, poor connections, basic arrangements, etc.) within the agricultural holdings, in addition to a lack of care and maintenance of irrigation equipments;
- the degradation of the productive base (poor soils, salty land, croplands exposed to wind and water erosion, flooded land, etc.); resulting in low or almost zero production levels;
- the lack of control over the origins of plant protection products and their rational use in crop plots while respecting the environmental standards;
- the non-compliance with technical itineraries and good agro-sylvo-pastoral and fishery practices; the ignorance of adaptation strategies regarding the impacts of climate changes;
- the failure to master new techniques for diversifying agricultural productions;
- the significant post-harvest losses related to the bad storage, to the difficulty in getting products to markets; the weakness or even the absence of processing and preservation of products;
- the lack of control over the financial management of the farm, the difficult access to credit and its management;

- the strong reluctance of farmers to obtain agricultural insurance;
- the poor access to information on the markets for small producers;
- etc.

In order to meet these diverse and varied needs, service providers are many and as varied as the needs they think they can meet. The structures are as different as their funding, their legal status or their sizes. Unfortunately those different operators intervene without consultation with the technical advice dominance, which results, at the same time, in a great cacophony at the producers' level, and better still, an inconsistency in the mode of animation of the rural world.

Lack of training is also one of the major limitations to the good provision of quality advisory support services. Among the agricultural advisers, the majority have not received appropriate training in agriculture, not speaking of agricultural machinery to provide services.

Despite the multiplicity of actors, the offer of advice is homogeneous neither between the zones of the country, nor within the same zone. In other words, all the productive areas in the country are not covered and where advice is provided, it is not often available to all producers. This is the case for areas far from centers of human and economic concentration, and those that are difficult to access due to their isolation. Imbalances are also noted in the activity sectors such as livestock and especially fishing for which the advice is very weak.

2. ESTABLISHMENT OF UMSA

The EFRs will have to rely on local rural support and benefit, through the UMSA, from quality services provision, which is the only guarantee of their economic profitability, thereby ensuring their sustainability. That is why, the UMSA, equipped with motorized agricultural equipments, will be installed concomitantly with the establishment of EFRs with the objective of significantly increasing production and income by improving agricultural practices.

Definition and function of the UMSA

- The UMSA are economic entities carried by young people identified in the regions and most of whom already have know-how acquired in training centers and are already showing a commitment on the ground, having initiated agricultural or not agricultural activities.
- Each UMSA has 2 or 3 young people at most; it will be equipped with appropriate and practical modern equipment meant to provide rapid services to producers. The UMSA claims to offer farmers paid quality services by gradually training them for better control of their farms in order to strengthen and protect their livelihoods in a sustainable manner.
- Specifically, it will aim to:
- strengthen the operators' capacities to control the functioning of their operations;
- promote the appropriation by operators of simple technical and economic management tools for their operations;

- create the conditions for a rapid adoption of modern agro-sylvo-pastoral and fishery production techniques so as to reach high productivity levels;
- encourage behavior changes by making operators take better decisions allowing an increase in added value in their production activities.
- provide the EFRs with the required technical services so as to properly conduct their production activities and achieve high performance levels.

3. UMSA BUSINESS MODEL

The UMSA to be set up will, at the start of the project, be made up of two types (plant production UMSA and animal production UMSA), and will mainly operate at the level of the production unit that is the EFR.

3-1. Plant Production business model UMSA

The Plant Production UMSA will be made up of 02 to 03 young people, equipped with two (2) motorcycles allowing them to provide rapid interventions with 40 EFRs, on average, within a radius of action of 15 to 20 km. Its investment plan and its profitability forecasts are presented below :

Business model of the UMSA plant production				
Composition of the kit for 1 ha				
N°	**Description**	**Quantity**	**U.P (CFA.F)**	**Amount (CFA. F)**
Equipments				
1	Tractor	1	3 500 000	3 500 000
2	Moto 125	2	1 400 000	2 800 000
3	Tripper agricultural trailer	1	1 700 000	1 700 000
4	Herse	1	350 000	350 000
5	Tiller+accessories (plowing, ridges,seed drill,transport)	2	2 600 000	5 200 000
6	Weeder/Mower	2	400 000	800 000
Equipment sub total				**14 350 000**

	Estimated revenue forecast				
	Services	Quantity	Number of EFR	Unit Cost	Total Cost
1	Summary table	3	40	10 000	1 200 000
2	Désherbage	12	40	3 500	1 680 000
3	Semis	6	40	5 000	1 200 000
4	Sarclage	12	40	3 500	1 680 000
5	Sarclobinage	12	40	3 500	1 680 000
6	Traitement	12	40	5 000	2 400 000
	Total revenue				**9 840 000**

Summary table				
No	**Rubriques**	**Expenses**	**Income**	
A	**Realization and installation of kit**			
1	Équipments	14 350 000		
Sub total				
B	**Exploitation charges**			
1	Exploitation charges	3 081 050		
Sub total		**3 081 050**		
C	**Forecast revenue**			
1	Forecast revenue		9 840 000	
Sub total			**9 840 000**	
D	**Annual depreciation**			
1	Annual depreciation	2 916 667		
Sub total		**2 916 667**		
Net operation margin			**3 842 283**	

3-2. Animal Production business model UMSA

The Animal Production UMSA will also be made up of 02 to 03 young people who will be provided with technical breeding equipment allowing interventions in the fish farming, poultry farming, beef and sheep fattening, and milk production.
The business plan of this UMSA is presented below:

Business model of the l'UMSA Animal production				
Kit composition for 1 ha				
N°	Description	Quantity	Unit Cost (F.CFA)	Amount (F.CFA)
Equipments				
	Fishing			
1	Moto 125	2	1 400 000	2 800 000
2	Water pump (fishing pond)	1	1 000 000	1 000 000
3	Multi parameter oximeter with a thermometer and PH meter	1	1 100 000	1 100 000
4	Salinomter	1	250 000	250 000
5	Control fishing net	1	100 000	100 000
6	100kg scale	1	40 000	40 000
	Sub total fish farming			**5 290 000**
	Livestock (poultry + fatterning)			
1	Blade package	1	10 000	10 000
2	Stainless ste medical scissors	1	1 000	1 000
3	Stainless steel pruner	1	2 000	2 000
4	Gloves package	1	10 000	10 000

5	Blouse	1	10 000	10 000
6	Biller	1	10 000	10 000
7	Thermometer	1	2 000	2 000
8	Stethoscope	1	15 000	15 000
9	20 ml syringe package	1	15 000	15 000
10	10 ml syringe package	1	15 000	15 000
11	Scalpel blade	1	10 000	10 000
12	Lancet handle	1	5 000	5 000
13	Heart clip	4	5 000	20 000
14	Paquet of pressed silk suture	1	10 000	10 000
15	Chrome catgut	1	10 000	10 000
	Sub-total breeding			**345 000**
Total equipment				**5 635 000**

Operating charges					
1	Fuel (motocycle)	2	1100	595	654 500
2	Maintenance of rolling stock Upright tractor + tricycle)		1	490 000	490 000
3	Veterinary products	One	1	200 000	200 000
Sub total charges					**1 344 500**
UMSA TOTAL Kit					**7 582 750**
Estimated revenue forecast					
	Services	Quantity	Number of EFR	Coût Unitaire	Coût Total
1	Fish farming services	12	40	10 000	4 800 000
2	Poultry services	1	40	22 000	880 000
3	Breeding services	1	40	42 000	1 680 000
	Total revenue				**7 360 000**

Summary table			
No	Rubriques	Dépenses	Recettes
A	Realisation and installation of the Kit		
1	Equipments	5 635 000	
Sub total		**5 635 000**	
B	Exploitation charges		
1	Exploitation charges	1 344 500	
Sub total		**1 344 500**	
C	Forecast revenue		
1	Forecast revenue		7 360 000
Sub total			**7 360 000**
D	Annual depreciation		
1	Annual depreciation	1 386 667	
Sub total		**1 386 667**	
Gross operating margin			**4 628 833**

3-3. Establishment of a shared management platform for UMSA equipment

Any agricultural development scheme favoring the promotion of mechanized service provision always has the main objective of supporting agricultural productivity and improving the incomes of rural actors. Due to the high costs associated with the acquisition of mechanized agricultural equipment, cooperatives for the mutual use of agricultural equipment are increasingly being implemented. The determining factor in the pooling of agricultural equipment finds its justification in: (i) the difficulties encountered by users in properly planning their activities on the farm, in correctly manage spare parts and equipment maintenance; (ii) the lack of qualified technical personnel, etc.

That is why, the good management of the mechanized agricultural equipment used by the UMSA is one of the key elements of the success of the support of the EFR while allowing a possibility of return of investment, thanks to the various services provided in the process of plant and animal production (soil preparation, sowing, crop maintenance, crop protection, harvesting, maintenance of fish ponds, animal monitoring (cattle, sheep), etc.

As a result, it is planned to set up a platform for managing agricultural equipment and UMSA equipment; which implies the transition from individual management to joint management under management. It also makes it possible to optimize the use of the fleet of agricultural equipments and other support services (spare parts, maintenance, repair, etc.).

Composition and organization of the platform :

Considered as a service and logistical support center, the platform will bring together all of the UMSA installed over a radius of approximately 15 to 20 kilometers. The number of mutualist UMSA will depend on the number of EFRs installed in a region and the UMSA necessary for their support. The basic rule states that it is needed 40 EFRs for one UMSA.

Those UMSAs will each appoint a member who will be their representative in the Management Committee of the platform. Unanimously and democratically, the latter will appoint among them a Manager for the said committee and whose profile would indicate a good knowledge of the various agricultural production systems and a confirmed mastery of the management and maintenance of motorized farming materials and equipments.

A handbook of organization and management will be drawn up and shared by the mutualist UMSA. That manual will indicate to the promoters of the UMSA the conditions for the provision of materials and equipments to the platform, the programming of the activities and the types of required services, the costs of providing the services, the management system of the charges, the distribution key of the income, the mode and schedule of equipments' maintenance and inventory management of spare parts, the terms of depreciation and renewal of shared materials and equipments.

Attributions of the platform :

- Ensure the operation of the fleet of equipments and materials by planning the farming operations at the level of the contracting EFRs;
- Manage fuel allocations;
- Ensure the monitoring of service contracts;
- Conduct the collection of revenues and their distribution;
- Ensure the follow-up of after-sales service (ASS) with suppliers;
- Ensure the diagnosis of anomalies and breakdowns and validate the related quotes;
- Conduct the purchases of spare parts, lubricants and other inputs;
- Ensure routine maintenance and certain summary repairs;
- Play the role of advisor and trainer with UMSA members of the platform.

Platform equipments

The platform has logistics to support animal and plant production, a warehouse for the storage of equipments and tools required during technical interventions, and a storage area for products intended for the maintenance of various equipments :

- Agricultural tractors
- Tipper agricultural trailers
- Harrows
- Tillers + accessories (plowing, ridges, seed drill, transport)
- Weeder / Mowers

- Complete mechanical, electrical, sheet metal, welding toolbox.
- Fuel, lubricants,
- Spare parts stocks.

3-4. Impact on the sustainability of the EFRs and youth employment

The establishment of the UMSA through the exploitation of economic opportunities on entrepreneurship and rural self-employment, will set the real milestones for the increase of agricultural production through the development of skills and provision of appropriate agricultural services and, ultimately, strengthening of food safety and incomes of rural households.

While facilitating the emergence of profitable and sustainable family farming systems, the UMSA further promote the culture of entrepreneurship among young graduates or not so that they become real actors of positive change in rural areas by making them more resilient and concerned about adapting to climate changes.

4. FINANCING METHOD OF THE UMSA

Access to credit is one of the major constraints regularly faced by Micro, Small and Medium Enterprises (MSME), particularly the agricultural and rural ones. As a matter of fact, rural financial markets remain underdeveloped and most often offer low-paying and unsuitable rates for financing structuring investments.

This is why, in order to facilitate access to credit for the UMSA, the Coordination Unit will set up, in conjunction with financial partners, an adapted and sustainable financing system, taking into account the nature of the activities carried out by the beneficiaries.

4-1. Funding sources

The resources required to finance UMSA can come from several sources:

- from the State (FASAR, DER, etc.);
- grants from technical and financial partners;
- from financial aid from bilateral or multilateral conventions;
- from donations and legacies;
- or any other financial resources authorized by the regulations in force.

4-2. Global financing strategy

In its intervention strategy, SE-CNSA, through the NTR Coordination Unit, will implement a financing mechanism adapted for the benefit of UMSA in relation to technical and financial partners, taking care to clarify the roles, the responsibilities and the modes of intervention of each actor.

In addition, for a good security of the financing, strategic partnerships will be sealed with the FONGIP (Guarantee Fund for Priority Investments) for guaranteeing the investments; and the CNAAS (Compagnie Nationale d'Assurances Agricole du Sénégal)

for assuming the risk inherent in any agricultural activity. In this context, a subsidy of 40% of the total amount of UMSA investments could be applied depending on the volume of resources mobilized by the UC.

Anyway, the UMSA should be able to benefit from approved financial institutions for financing in operating materials, raw materials and working capital; and to properly repay the credits granted. The regular monitoring which will be ensured by the Coordination Unit and its partners will help minimize the risk of credit diversion for other purposes, thereby ensuring its security.

4-3. Financing Plan

The operational scheme for the financing of the UMSA will be built around protocols defining the rules of intervention by each stakeholder, the conditions for the provision of credit lines and refinancing of beneficiaries, and the sustainability of the financial scheme.

Selection of Financial Institutions (FI)

Along with the partnerships with FONGIP and CNCAAS, the selection of financial credit institutions (Banks, MFIs) is a crucial step in the process of financing UMSA.

The FIs which will be responsible for funding the UMSA will be chosen on the basis of a call to tenders for services which will compete with those offering the best conditions of access to funding (interest rate in particular) and the best proposals of leverage effect for the provision of additional financing. Anyway, given the beneficiaries profile, the decisive question is to agree with the FI on the instruments tending to optimize their operational efficiency and on a relatively low level of profit.

Provision of funds to partner FIs

Once the selection is complete, the funds will be made available to partner FIs by using a protocol duly established between the different sides, which sets out the general and specific conditions of access to credit lines and the practical funding arrangements of the UMSAs.

That provision of funds should be accompanied by an adapted mechanism of leveraged funds which makes it possible to ensure the correct and sustained financing of UMSAs. The credit conditions (interest rate, duration, repayment terms, other fees, etc.) will be discussed between the stakeholders and translated into clear terms in those protocols.

In order to guarantee the expected success of that funding scheme, it will be mutually agreed to do periodic evaluations of those protocols in order to measure their scope, constraints / limits, express solutions to be provided, etc.

Financing of UMSAs by the FIs

To guarantee the credit security, the financing of beneficiaries by FIs will be carried out

according to the practical methods set out in the protocols in force. In principle, it will revolve around the following operations:

- UC / NTR: setting of resources, subsidy and / or interest rate subsidy
- UMSA: legal identity, business model, credit file requested from the FIs
- FI: partial or full funding of UMSA with consensual interest rates, deferrals and reimbursement deadlines and amounts that UMSA can bear, flexible non-reimbursement penalties; etc.

Incomings collection and credit repayment

At the start of the activity, a service delivery protocol is designed and signed between the three parties that are: the UMSA service provider, the beneficiary producer and the platform as manager. The various services of the UMSAs will be invoiced and the correspEonding amounts are released at the end of each production cycle.
The sheets of carried out service will be kept by the operator, the service provider and the platform, and left to the latter to make the final score and to recover the due amounts from the producer-operators.
The platform will thus deduct its operating costs and the amounts of the credit deadlines from the collected incomings; the balance is to be remitted to the provider UMSA as the net result.

4-4. Sustainability of the funding system

The sustainability of the financial support of UMSA supposes that the financing scheme be reproducible for the latter, because they are capable and ready to continue the experience of the proposed financing and to support the conditions attached to it. However, that sustainability principle must revolve around the following conditions :

- UMSA funding must be provided by a viable and sustainable financial institution;
- the interest rate applied by the FI must be bearable by the UMSA;
- UMSA must be profitable enough to pay the correct repayment of the credit.

5. IMPLEMENTATION FRAMEWORK

5-1. Selection process of young UMSA promoters

The selection of young UMSA promoters will be direct and voluntary and will mainly concern those who are trained in dedicated schools or training centers (universities, technical high schools, higher technical and vocational education institutes, training center for clusters in agriculture, training center for agro-sylvo-pastoral trades, etc.) but also in existing incubators (ANIDA, ANA, etc.).

Those young people can also be selected from an on-the-job identification at the level of the villages where the EFRs are located and without their having been trained in a conventional manner. In that case, the selection criteria can mainly be related to their commitment materialized in the field by visible basic initiatives and translated in form of successful experiences.

So, those young people, men or women, already carrying out agro-pastoral and fishery projects will be identified in the respective regions, sensitized and oriented towards sectors of high added value activities such as rural businesses providing agricultural services which allow improving their living conditions and strengthening the resilience of their communities.

5-2. Training, support and monitoring

The approach recommended here constitutes an innovation in the methodological approach, for it revolves around a pooling of technical and financial efforts in training and support in relation with public or private structures (ANIDA, ANA, ANCAR, BFPA, CIFA, ONFP, ANPEJ etc.) able to provide advisory services, job profiles of young people already trained, capacity building and supervision programs to well-defined targets.

Those structures will act on behalf of the NTR Project as operators for strengthening technical skills for the benefit of young UMSA promoters. Within the framework of memorandums of understanding, they will each intervene, as far as they are concerned and in relation to their trade association, in the training process, in order to optimize the final settlement of young people as independent providers of agricultural services.

The young people will be entitled to in situ training sessions both on a practical and a theoretical level, with more emphasis on practical and technical aspects. That combination of the two approaches throughout the process will allow beneficiaries to really discover the vocation of a rural entrepreneur and appreciate the breadth of business opportunities related to the agro-sylvo pastoral and fishery sector in general.

At the end, each UMSA will have training manuals and practical guides for a good duplication of the knowledge acquired, and thus make sustainable its agricultural service delivery activities. In addition, specific training sessions in the management and driving of motorized agricultural equipment will be held with the suppliers, while taking care to involve young people in technological choices for a better appropriation and a greater control of their activity.

Finally, for each stakeholder, a precise and consensual specification will be defined in order to better support the UMSA until their final installation in the regions.
With regard to post-installation monitoring, arrangements will be made to that effect and recorded in the memoranda of understanding with the stakeholders so that they do the monitoring every quarter with the participation of the Regional Food Security Offices (BRSA).
As to the evaluation of the system, it will be done jointly 01 time a year, using performance indicators defined by consensus by all the actors involved in this NTR project.

CONCLUSION

The NTR Project, which aims to be an economic response to a humanitarian and social problem, sets the real milestones for a new constructive methodological approach in addressing food and nutritional insecurity for rural households.

While displaying this ambition to provide a structural response to food insecurity in Senegal, the NTR Project brings some innovations which can be appreciated in particular through :

1. the integration of 02 production systems (plant and animal) in the same family farm, according to the environment conditions
2. the promotion of agro-ecology through the adoption of production techniques that minimize the use of chemicals and fertilizers, the recycling of the charged water of the fish pond for the market gardening needs;
3. the gateway to rural development is then the household which is considered as a working and consumption unit;
4. the modernization and professionalization of the family farms by providing modern agricultural equipments and long-term support by specialists;
5. the provision of local services by young people (graduated or not) equipped with modern motorized equipments;
6. taking into account the problem of climate change in the implementation of EFR and the types of service provision by UMSA.

Thus, the new approach printed by the NTR suggests that the promotion of local economic development is based primarily on a good knowledge of the rural environment and endogenous dynamics, which justifies the relevance of SIRT, a system that allows the superimposition and the interaction of social, biophysical and economic information. Much of this information will be used to set up EFRs for the benefit of vulnerable households, by providing them with plant and animal productions all the year round, a source of healthy and nutritious food.

In terms of impacts, the EFR will, among other things, significantly reduce the prevalence of malnutrition and improve the dietary diversity of rural households, improving the purchasing power of beneficiaries, facilitating access to other basic products necessary for their daily consumption, the contribution to the stockpiling of the Local Food Reserve (RAL), the regular and diversified supply of school canteens with food products.

As to the UMSA, their installation will set the real milestones for increasing rural production through the development of appropriate agricultural services, thereby promoting the emergence of profitable and sustainable family farming systems.

That will also be an opportunity to further promote the culture of entrepreneurship among young people (graduated or not) so that they become real actors of a positive change of the rural areas by making them more resilient and concerned about adapting to climatic changes.

RÉPUBLIQUE DU SÉNÉGAL

Un Peuple ▪ Un But ▪ Une Foi

—

SECRÉTARIAT GÉNÉRAL DU GOUVERNEMENT

Secrétariat Exécutif du Conseil National de Sécurité Alimentaire
Point E, Rue de Fatick x Bd du Sud, Immeuble Abdoulaye Seck, 3, 4 & 5èmes étages
Dakar, BP 27 161, Tel: + 221 33 865 30 35, mail: secnsa@secnsa.sn