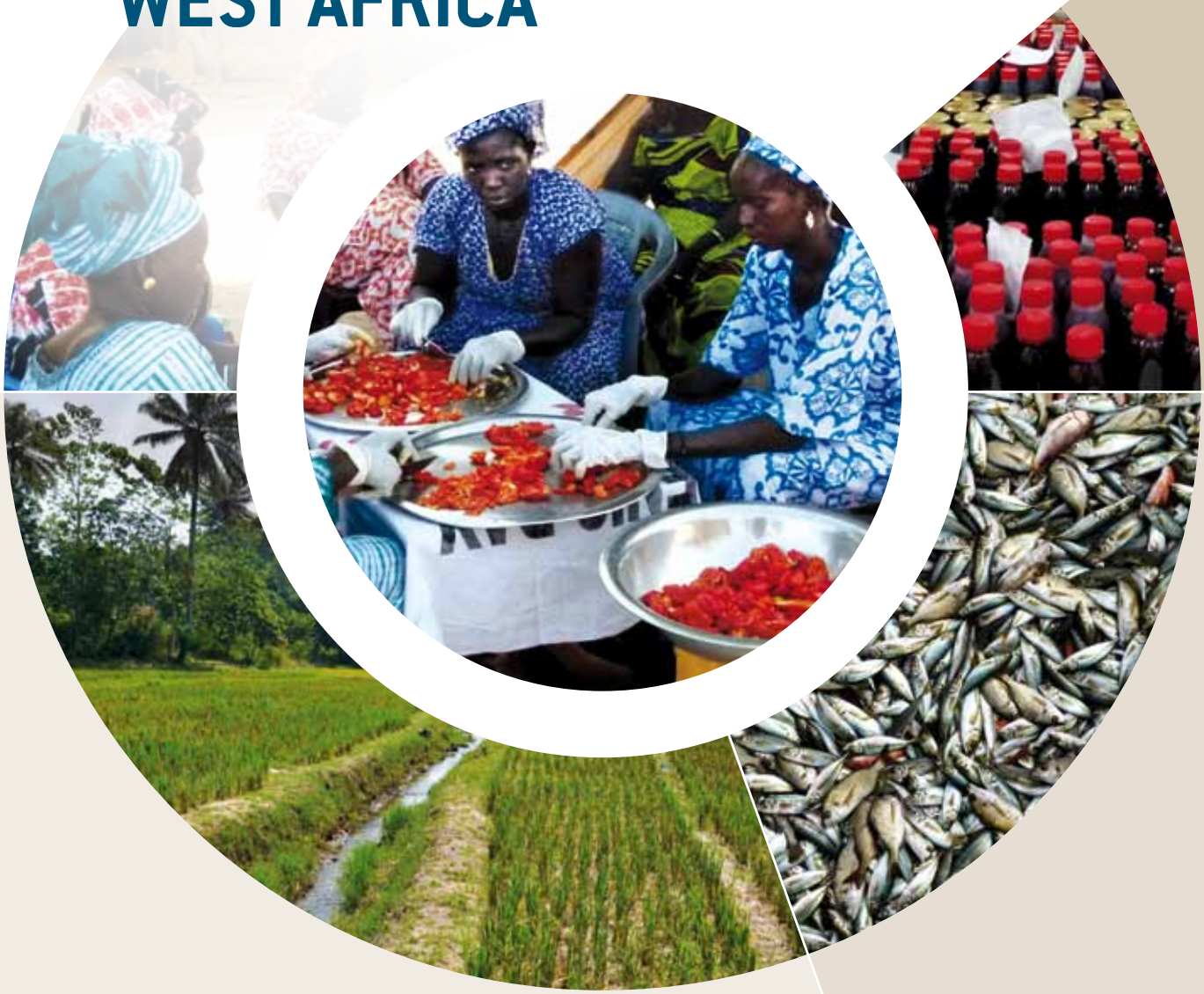
BEST PRACTICES AND LESSONS LEARNT FROM
THE DEVELOPMENT OF VALUE CHAINS

THE FOOD SECURITY THROUGH COMMERCIALIZATION OF AGRICULTURE PROGRAMME IN **WEST AFRICA**



Cooperazione Italiana
allo Sviluppo
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Food and Agriculture Organization of the United Nations
Rome, 2013

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This report is based on a review of papers, presentations and reports prepared by staff and consultants working for the Italian-funded FAO Food Security through Commercialization of Agriculture (FSCA) projects in West Africa. A capitalization mission also took place in three countries (the Gambia, Guinea and Senegal). Laurent Roy, an FAO consultant, prepared the preliminary report. The main contributions have been made by Moussa Djagoudi, the Programme's Regional Coordinator based in Dakar, and Florence Tartanac, Senior Officer, Market Linkages and Value Chains Group, FAO, Rome.

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ACRONYMS

ABC	Agricultural Business Centre
AGS	FAO's Rural Infrastructure and Agro-Industries Division
APOQ	*Association des Producteurs d'Oignon de Qualité*
CILSS	Committee for Drought Control in the Sahel
CFAF	West African CFA (*Communauté Financière d'Afrique*) Franc
COOPEF	*Coopérative des Producteurs de Fruits de Friguiagbé, Guinea*
CRAF	*Centre de Recherche Agronomique de Foulaya*
CRRA	*Centre Régional de Recherche Agronomique*
DISEM	*Direction des Semences*
EIG	Economic Interest Group
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field School
FG	Guinea Franc
FO	Farmers Organization
FSCA	Food Security through Commercialization of Agriculture
FTC	Food Technology Centre
GI	Geographical Indication
GMD	Gambian Dalasi
IPPM	Integrated Production and Pest Management
ITA	*Institut de Technologie Alimentaire*
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
OCP	Office for Communications, Partnerships and Advocacy
OVOP	One Village One Product
PISA	*Programme Italien de Sécurité Alimentaire*
REDD	*Réseau d'Echanges pour le Développement Durable*
RGTA-DI	*Réseau Guinean pour la Traction Animale et Développement Intégré*
SME	Small and Medium Enterprises
TCSF	Integrated Food Security Support Service of FAO's Technical Cooperation Department
UNIOGBIS	United Nations Integrated Peace-Building Office in Guinea-Bissau
USD	United States Dollar


PISA

CHAPTER 01

BACKGROUND

1.1 PROGRAMME BACKGROUND

As part of the activities being implemented through the Italian contribution to the FAO Trust Fund for Food Security and Food Safety, several projects in different countries and regions are following a common strategy.

In West Africa this Programme, "Food Security through Commercialization of Agriculture" (FSCA), or «Programme Italien pour la Sécurité Alimentaire» (PISA), was conducted in a group of seven countries (the Gambia, Guinea-Bissau, Guinea, Liberia, Mali, Senegal, and Sierra Leone), in addition to a Regional Coordination project based in Dakar. The Programme has been financed with an overall budget exceeding USD 21 million.

The FSCA/PISA was designed and implemented as a pilot scheme, incorporating innovative elements from the design phase onwards:

- considering the incorporation of smallholders in value chains with the aim of transforming subsistence agriculture into commercial agriculture;
- developing the market demand-led approach, focusing on marketing commodities in order to improve the food security of the rural populations;
- adopting a regional dimension, homogeneously steering the countries of the same region, namely West Africa.

Left:
Mali, Dogon Region, Ganda Kilema. Improved traditional household shallot store.

BOX 1.
PRESENTATION OF THE FSCA/PISA STRATEGY

The vast majority of poor communities in developing countries live in the rural regions. Consequently, strengthening the agriculture sector means not only improving access to better nutrition but also creating a sustainable environment that can improve food security and drive economic development. These smallholders find it difficult to produce food and suffer from heavy post-harvest losses. They also suffer from the almost total absence of links with the domestic and international markets and they add very little, or no value to their agricultural output. They lack access to water and to technology as a result of inadequate investment and the depletion of their natural resources. All these factors have negative repercussions on their incomes and create household food insecurity.

To address these issues, the FSCA/PISA Programme offers opportunities to the smallholders and Small and Medium Enterprises (SMEs) involved in agricultural production. It provides farmers with new agricultural technologies and engages all stakeholders in every phase of the food chain (production, processing, trade and consumption) in order to overcome a variety of constraints that constitute weaknesses and bottlenecks, such as the weakness of links with the marketing channels, problems of quality and food security, poor production levels and low productivity.

Bolstering agricultural marketing in the regions with a recognized commercial potential helps to target new markets. Supporting the adoption of technologies helps to raise production, improve productivity and increase farm incomes. This approach also curbs price instability and promotes the sustainable use of natural resources – all factors which are capable of guaranteeing long-term food security.

The FSCA/PISA strategy is based on the main components (see the Figure opposite) indicated below.

The FSCA project not only helps the direct beneficiaries, but indirectly assists many stakeholders in the food sector, such as local and national traders, agrifood industries, buyers and consumers. The whole community can also benefit from the increased availability of high-quality food.

The Italian-financed projects are pooling their experiences and the practical lessons learned from them, and the successful pilot schemes are being replicated at the national and/or regional levels.

SUPPORT TO FARMERS' ORGANIZATIONS BY STRENGTHENING THEIR CAPACITIES TO BECOME EFFECTIVE ECONOMIC PLAYERS WITHIN THE FRAMEWORK OF STRATEGIES TO INCREASE FOOD PRODUCTION, ADDED VALUE AND MARKETING

SUPPORT TO VALUE ADDITION, WITH AN EMPHASIS ON IMPROVED QUALITY AND A BETTER UNDERSTANDING OF CURRENT DOMESTIC AND REGIONAL MARKET STANDARDS

STRENGTHENING SERVICE PROVISION, WITH A PARTICULAR EMPHASIS ON DEVELOPING THE PRIVATE SECTOR TO SUPPORT PROGRESS IN DIFFERENT SECTORS AND COORDINATING AND LINKING THEM

SUPPORT TO THE INSTITUTIONAL FRAMEWORK IN ORDER TO FOSTER THE DEVELOPMENT AND PROMOTION OF MARKETS AND PUBLIC/PRIVATE PARTNERSHIPS FOR INNOVATION IN THESE SECTORS. THIS COMPONENT CAN ALSO INCLUDE SPECIFIC PROPOSALS FOR REGULATORY REFORM TO BE ADVOCATED WITH THE RELEVANT MINISTERIAL AUTHORITIES

Source: http://www.fao.org/tc/faoitaly/italiantrustfund-home/faoitaly-fsca/fr/#c105838

The overall purpose of the Programme is to make a significant contribution to transform African agriculture into a modern, competitive and commercially dynamic sector.

This entails supporting the development of entrepreneurship among small farmers and developing a local private sector capable of guaranteeing the necessary inputs and production flows. Field activities should be accompanied by improving the capacities of farmers' organizations (FOs), in conjunction with ministries of agriculture and the local support structures specializing in capacity development.

However, this global approach was not fully articulated in the initial drafting of the projects, which may be considered to have been first-generation projects within the framework of the Programme. This process of change, which was intended to make a sustainable contribution to reducing the beneficiaries' food vulnerability and insecurity, was not made explicit. A second major weakness has been the lack of a programme-based approach: the drafting of the five initial projects preceded the drafting of the inter-country coordination project. The regional coordinator was only the inter-country project coordinator and not the regional coordinator of the seven FSCA/PISA projects. He had no control over, or responsibility for, the national projects, and each one had its own national coordinator and budget director (the FAO Representative).[1] The projects had originally been formulated and monitored by the Integrated Food Security Support Service (TCSF) of FAO's Technical Cooperation Department; it was only after November 2012 that **FAO's Rural Infrastructure and Agro-Industries Division (AGS)** conducted the technical monitoring of the projects, when it became the Lead Technical Unit.

Therefore, some of the components originally programmed had to be revised during the course of implementation. These initially had to do with regional trade and the Programme's regional approach, but other activities, such as improving production quality, infrastructure and processing facilities, have become predominant, along with corresponding needs for training and management skills development.

1 FAO, Evaluation of FSCA /PISA Programme, final report, 2012

1.2 OBJECTIVES OF THE PROJECTS

The overall objective of FSCA/PISA is to promote food security and to reduce poverty by enhancing and marketing crop production.

The priority areas shared by all the national projects are:

- fostering food security and supporting specific national policies to introduce sustainable production, processing and marketing systems;
- supporting the enhancement of agricultural biodiversity and expanding local, regional and international markets;[2]
- developing appropriate communications tools to enable grassroots farmers' organizations/associations to play a central role in implementing the proposed measures, with a specific focus on gender issues.

As previously indicated, however, it is necessary to introduce diversity into the substance of these objectives on a country by country basis.

The following table shows the objectives of each project, country by country.

TABLE 1. **PRESENTATION OF THE OBJECTIVES, COUNTRY BY COUNTRY**

	OVERALL OBJECTIVE	SPECIFIC OBJECTIVE 1	SPECIFIC OBJECTIVE 2	SPECIFIC OBJECTIVE 3
Senegal[3]	Contribute to poverty reduction in three identified rural communities: Wack N'gouna (Kaolack region), Toubacouta (Fatick region) and Léona (Louga region).	Improve the technical and organizational capacities of about 60 FOs by enhancing agricultural (onions, cereals, other fruits and vegetables) and fisheries supply chains	Increase and diversify grain and vegetable production by improving water management conditions, and supporting agricultural facilities. Enhance fish production by improving the quality of products processed and gathered.	Improve commodity storage, packaging and marketing capacities by building storage infrastructure facilities to meet market needs.

2 A cooperative venture with the Italian Slow Food Foundation for Biodiversity, designed to promote local products and expertise and agricultural biodiversity, will be implemented by the various projects.

3 Senegal has developed its objectives in three sub-projects, for three geographically and thematically distinct zones.

	OVERALL OBJECTIVE	SPECIFIC OBJECTIVE 1	SPECIFIC OBJECTIVE 2	SPECIFIC OBJECTIVE 3
Guinea	Intensify, diversify and enhance agricultural production in the Kindia region.	Sustainably intensify and diversify agricultural and horticultural production by enhancing the hydro-agricultural potential and improving the managed lands.	Improve food crop and horticultural production throughout the value chain by strengthening FOs in processing, storage and commercialization.	Strengthen the support/ advisory, planning, management, and M&E capacities of the stakeholders supporting agricultural and horticultural supply chains.
Guinea-Bissau	Diversify, intensify and enhance local agricultural production in the Oio and Bafatá regions.	Diversify and intensify agricultural production.	Improve storage, processing and commercialization for agricultural production.	Strengthen the capacities of farmers, women and their organizations.
Mali	Support small farmers' associations in the Dogon Plateau to improve the value of their horticultural production.	Strengthen the capacities of FOs and support extension services provided by the State and non-state agencies involved in horticultural management in the Mopti region.	Diversify and safeguard horticultural supply chains by facilitating resource and input access (rehabilitating small dykes, creating water-saving irrigation systems, introducing new crop varieties).	Improve the value of horticultural products and raise the incomes of vulnerable target groups through building a packaging centre, processing, market access, competitiveness and modernization.
The Gambia	Sustainable improvement of agricultural productivity, products commercialization and FOs and small processing enterprises incomes, leading to improved subsistence resources and food security in two regions: North Bank Region and Central River Region.	Improve the provision of services to farmers and their organizations by enhancing the necessary capacities.	Support added value and commercialization to improve the capacities of the farmers and processors for market-oriented production, value-added methods, enterprise development, and input/product management and links.	
Sierra Leone, Liberia	Sustainable improvement of agricultural productivity, products commercialization and FOs incomes, leading to improved subsistence resources and food security.	Support FOs to establish and improve sustainable organizations that can operate as effective commercial mechanisms to raise production and improve added value and commercialization.	Support added value and commercialization based on the capacities of the FOs supported under Objective 1 and strengthen the provision of added value support services and of coordination and relationships within the value chains.	

1.3 PROJECT BUDGETS AND TIMEFRAMES

The Programme was initially implemented in five countries; however, in December 2008, it was extended to take in the Gambia and Guinea, following the decision of the Italian Government to increase its support and funding. The Programme budget eventually rose to USD 21 million.

The budget breakdown for each country is shown in the following table:

TABLE 2. **COUNTRY BUDGETS (USD '000)**

COUNTRY	GUINEA-BISSAU	LIBERIA	MALI	SENEGAL	SIERRA LEONE	THE GAMBIA	GUINÉE	ICC	TOTAL
Initial budget	1 500	1 500	2 000	2 000	2 000	2 000	2 000	905	13 905
Final budget	1 500	2 142	4 098	3 335	3 487	1 949	1 970	2 312	20 793

The FSCA/PISA Programme in West Africa began in 2008 and was scheduled for completion by 31 December 2012. Requests to extend the Programme were accepted for the projects in Guinea and Mali in view of the political environments and the level of disbursements for these two countries.

The following table sets out the project implementation timeframes.

TABLE 3. **PROJECT IMPLEMENTATION TIMEFRAMES BY COUNTRY**

SEMESTERS	2008-1	2008-2	2009-1	2009-2	2010-1	2010-2	2011-1	2011-2	2012-1	2012-2	2013-1	2013-2
ICC	01/04										Ongoing	
Senegal		01/07								31/12		
Guinea-Bissau		24/07						31/12				
Liberia		01/07								31/12		
Sierra Leone		01/07								31/12		
Mali		01/07/08									Ongoing	
The Gambia				25/11/09						31/12		
Guinea					01/02/10						Ongoing	

1.4 NATIONAL CONTEXTS

The seven national projects are being implemented in very different contexts, depending upon the specificities of each country regarding climate and the geographical, socio-economic and political conditions.

1.4.1 Geographical conditions

The northern areas of Senegal and Mali have a Sahelian climate, with annual precipitation of between 300 and 600 mm. The Gambia has a tropical climate, but over the past three decades rainfall has declined by 30 percent.

Guinea-Bissau, Guinea, Liberia and Sierra Leone lie in the humid tropical zones, which are favourable to agriculture, with annual rainfall of at least 2 000 mm.

The production sectors included in the projects varied widely, the main ones being indicated in the following table:

TABLE 4. **MAIN PRODUCTS SUPPORTED BY THE PROGRAMME, BY COUNTRY**

	ONIONS, SHALLOTS	OTHER MARKET GARDENING PRODUCTS	FISH, SHELLFISH	CASSAVA	FRUIT	RICE	OTHER CEREALS	GROUND-NUTS	HONEY
Senegal	xx	x	xx		x	xx	x		
Guinea-Bissau		x				xx			
Liberia		x	xx	x		xx			
Sierra Leone				x		xx			xx
Mali	xx	x				x	x		
The Gambia	x	x			x	x	x	x	
Guinea		xx			xx	xx	x		

1.4.2 Socio-economic conditions

Both Liberia and Sierra Leone are currently in post-conflict situations following several years of civil war (Liberia was at war for 14 years, ending in 2003, and Sierra Leone from 1998 to 1999). The projects in these countries, in particular, faced a shortage of local skills and expertise for the recruitment of local project staff (the coordination team was replaced after two years, due to a lack of results) and for certain technical support missions.

For the mineral resource-rich countries, such as Guinea, Liberia and Sierra Leone, extractive activities have had repercussions on farming because of their impact on the arable lands, water resources and the availability of farm labourers (including the projects' direct beneficiaries).

FIGURE 1. **GEOGRAPHICAL SITUATION OF THE PROJECTS**

TABLE 5. **ECONOMIC AND GEOGRAPHIC DATA**

	SENEGAL	GUINEA-BISSAU	LIBERIA	SIERRA LEONE	MALI	THE GAMBIA	GUINEA
Land area (km²)	196 722	36 130	111 370	71 740	1 240 190	11 300	245 857
Population (millions)	12,9	1,61	4,35	6,26	16,81	1,87	10,7
of which % agriculture	75%		70%	75%	80%	70%	80%
GDP USD billion	11,85	0,88	0,99	1,90	9,25	0,81	4,51
of which agriculture	16%	56%	80%	44%	40%	30%	24,9%
Industry	24%	13%	nd	20%	21%	nd	46,7%
Services	61%	31%	nd	36%	39%	nd	28,4%
GDP/ per capita	1 819	540	200	340	600 (2012)	530	498

Source: (FAO Country profiles) /www.ruralpovertyportal.org/

1.4.3 Political conditions

Political life in the project countries has had a direct or indirect influence on the implementation of the projects. For example:

- In Liberia, the 2011 general election (for President, renewal of half the Senate seats and complete replacement of the House of Representatives) was marred by abstentionism and violence. However, conditions seem to have changed since the election, at which the incumbent president was re-elected; the political situation in the country has now considerably improved.
- In Guinea, following the death of President Lansana Conté in December 2008 and until confirmation of the election of the new president, Alpha Condé, in December 2010, the country passed through a turbulent period. Since the autumn of 2012, the social and economic situation has made it difficult to plan parliamentary elections.
- In Senegal, following a tense period during the presidential campaign in 2011-2012, the country is now in a new calm period of political alternation.
- Guinea-Bissau has experienced recurrent political instability since its independence in 1974. Devastated by the 1998-1999 civil war, it has suffered from political instability since 2009, with a succession of coups d'état. The United Nations Integrated Peace-Building Office in Guinea-Bissau (UNIOGBIS) was established in 2009 with the following main mandates: to implement reform of the security sector, to combat impunity, and to combat drug trafficking.
- Until 2012, Mali stood as the benchmark for democracy. However, the events that occurred in January and March 2012 created a state of very severe insecurity in the areas in which the project was being implemented, leading to the suspension of operations several times[3] and even to removing the project facilities from the Ménaka zone, which is the project's livestock zone.

3 Final Report on GTFS/MLI/030/ITA – February 2013

1.5 FSCA/PISA PROGRAMME CAPITALIZATION PROCESS

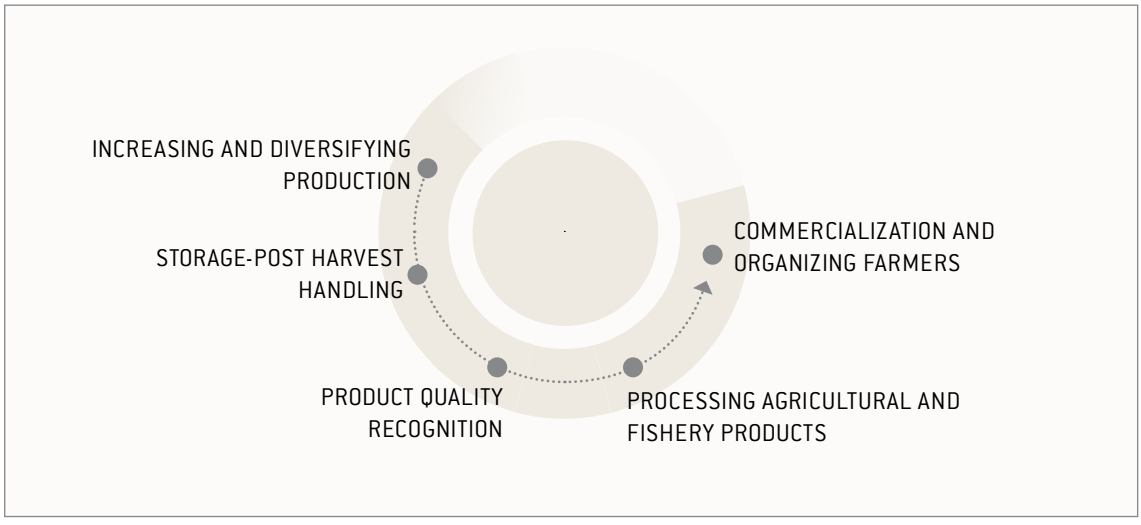
The Programme's final evaluation report, published in the latter half of 2012, highlighted the difficulties encountered during the implementation of the projects. It focused in particular on M&E weakness and the failure to capitalize on the experiences of the Programme. The purpose of this document is to make up for this weakness and to enable the Programme to exploit the lessons learned.

A number of good practices and case studies have been identified in each country, as well as recurrent issues that could not be resolved by the projects themselves, such as transport infrastructure (e.g. roads and tracks). It is useful to identify and study the positive results of the projects in order to capitalize on and learn lessons from them and, at the same time, analyse and understand the less satisfactory elements, in order to avoid them in future.

At the final regional workshop held in April 2013, in Dakar, participants agreed on the following themes to be used for capitalization, in order to ensure a coherent approach based on the achievements of each project.

The rest of this document will address these five themes and their main results.

FIGURE 2. **THEMES DEFINED IN THE FSCA/PISA PROGRAMME CAPITALIZATION PROCESS**



CHAPTER 02

INCREASING AND DIVERSIFYING PRODUCTION

The main activities initiated by the projects to enable farmers to raise production volumes were: improve bottomland management, promote use of quality seed, establish fertilizer and phytosanitary product supply facilities, where needed, and introduce new cropping methods with draft cropping or use of the Integrated Production and Pest Management (IPPM) approach.

In many areas – and for cereal farmers in particular – raising production does not automatically mean increasing marketed volumes of the product; the first phase for the farmers is to guarantee daily food security for their families. Therefore, many farmers aim to store the produce harvested for family consumption and for creating seed stocks. Only after the farmers' needs are met will they sell or barter their products to meet other priority needs of equal importance (healthcare, education, welfare, etc.).

2.1 IMPROVING SEED OR PLANT SUPPLIES

The projects have set up systems to facilitate access by farmers to new varieties of higher-quality seed, by training seed farmers through field schools and supplying basic or improved seeds. Activities have been implemented for rice seed, onions, and banana or cassava plants to meet the farmers' requirements. Seed farmers are able to sell their output for 15 to 30 percent more than for cereals or consumer products.

Where there are no structured networks for seed distribution, the project leaders, along with the farmers, have an important part to play in circulating information regarding dissemination of the seeds or of the improved plants.

It should be noted that, despite the introduction of improved seeds, some farmers continue using their traditional seeds, which have good production potential even under difficult conditions (irregular or inadequate rainfall, and little or no fertilizer).

In Guinea, one farmer of improved banana plants at Goléya has fully adopted the rapid plant multiplication method and is now preparing to train three other farmers to use this new technique. The first year, he obtained 150 improved plants from the project and, after an initial plant multiplication cycle, distributed over 500 plants to interested neighbouring farmers; he has now created a plot with 750 plants. In the second year, his aim is to produce 1 000 plants and subsequently extend production to the household bottomland.

The project has also worked to produce rice seed in close cooperation with the local seed production centre in Guinea. Without any formal contractual relationship, the centre rents rice-threshing equipment to the farmers and buys back the rice seed for FG 4 000 /kg. After cleaning and bagging the rice, the centre sells the seed for 5 000 FG/kg. Farmers may also sell their harvested seed directly to other farmers.

This partnership between farmers on the managed bottomland at Sabendé in Guinea (14 hectares, newly rehabilitated by the project) and the local seed production centre has made it possible to establish a win-win situation which has encouraged the farmers to become closely involved in developing and improving the whole of the bottomland.

Similarly, in Mali, the organization of shallot seed production has been improved by using quality improvement procedure based on geographical origin (see Chapter 5).

In Senegal, cooperation with the Regional Seed Directorate (DISEM) at Kaolack has made it possible to improve the quality of local seed production, monitoring and storage systems.

2.2 FACILITATING WATER, EQUIPMENT AND MATERIAL SUPPLIES – INTRODUCING NEW CROPPING TECHNIQUES

Bottomland management in Guinea

In order to control water supplies in certain areas throughout the year, 170 hectares of bottomland have been developed in Guinea. After the potential target areas were identified by agreement with the local farmers and the local authorities, development operations were conducted, which involved the farmers in some of the work. New farmer groups were set up, trained to manage the irrigated perimeters in terms of water control and dyke maintenance. Results have been very positive for the beneficiaries; the farmers have not only increased yields per production cycle, but they are now able to farm off-season bottomland crops.

Providing training in the field schools has made it possible to disseminate techniques for using nurseries and line cropping in the paddy fields. These techniques, combined with the use of improved seed and fertilizer, have made it possible to reduce the amounts of seed used and the maintenance of the rice crops, as well as to considerably increase yields in the cultivated areas.

Left to right:
Guinea, Kindia region, Lalèn bottomland.
© FAO/A. Proto

Njawara, North Bank, the Gambia. Hibiscus flower, used for the preparation of juices and jam.
© FAO/A. Proto

Garden management in Senegal

As part of the work to support bottomland farmers, garden enclosures have been built and wells have been rehabilitated. Mesh enclosures have been installed to prevent feral animals in the cropping zone from destroying the bottomland crops.

Promotion of Integrated Production and Pest Management in Mali

IPPM is based on the principle that the production of healthy crops should cause the least disturbance possible to the agro-ecosystems. It encourages use of natural phytosanitary

procedures and the use of pesticides or other measures at levels that are environmentally and economically sustainable in the long term.

The Farmer Field School (FFS) is a place for giving and receiving, with everyone freely sharing knowledge and experience and learning from each other. This exchange allows both the traditional production method and the integrated management approach to be employed simultaneously.

Farmers engage in research and activities in their own fields and identify their own problems and solutions. This approach enables farmers to design their own methods of operation. Pesticide use is always a last resort: "Produce well in a healthy environment".

The project trained extension workers and leaders of the partnering Non-governmental organizations (NGOs), and they subsequently trained farmers in the FFS in all of the IPPM modules.

Under the project, more than 500 composters[4] have been built for 500 beneficiaries. The owner of each composter receives not only technical training for producing compost but also financial and material support (a wheelbarrow, spade, fork, hammer and CFAF 50 000).

Thanks to the development of the lands, in three years (from 2009/10 to 2011/12) shallot yields rose by 17 percent, compared with only 3 percent over the first seven years in this period. Training in the new production techniques, including the use of organic fertilizer, has also clearly played a major part in improving yields over this period.

IPPM methods have also been disseminated in Senegal for onions and other horticultural products.

Dissemination of animal traction in Guinea

In the Kindia region in Guinea, the FSCA/PISA project has helped to promote the use of animal traction in partnership with the NGO *Réseau Guinean pour la Traction Animale et Développement Intégré (RGTA-DI*). A group of 20 ox-herders were equipped with ten yokes and trained to use ten pairs of oxen. Farmers recognized the benefits of this technique and using the supplementary income gained from this more efficient production method, they were able to invest in post-harvest processing equipment. Now they plan to invest in carts (which will enable them to transport their produce to the nearest road or nearby markets for sale). The local partner who specializes in promoting animal traction has extensive regional experience

4 As it is not possible to dig ditches in the Dogon Plateau, the compost is produced in an enclosure comprising three compartments. It takes 45 days to compost the first 1.2 tonnes, and then 1.2 tonnes can be produced every 15 days.

in supporting farmers to use animal traction; this partner sells the equipment, provides training and counselling, and conducts technical monitoring. Following the initial training, a second refresher course was conducted one year later. In the villages, ten blacksmiths were trained to repair or replace worn animal traction equipment items. Taken together, all these actions are helping to enhance the use and sustainability of animal traction.

2.3 IMPROVING THE SUPPLY OF PHYTOSANITARY PRODUCTS

FAO's most common approach for supplying fertilizer is as follows: the project helps to purchase an initial stock of fertilizer which is entrusted to a FO, which then sells it to the members. With the income raised from this initial sale, an input fund can be constituted to be used in the following season to finance another purchase of fertilizer.

Training is provided to leaders of the FOs to ensure that the best use is made of these resources. It should be noted that, for each project, the organizations have all received the same training course regardless of their specific needs and their level of maturity. The most highly structured groups have made optimal use of the training received, and are now able to manage the funds independently; in the case of the less mature groups, the fund was very rapidly depleted.

In Guinea, the *Coopérative des Producteurs de Fruits de Friguiagbé* (COOPEF at Friguiagbé) implemented an action plan at the beginning of the season to assess its farmers' fertilizer requirements, based on the areas planned for each of its crops (rice, maize, vegetables, pineapple, banana, etc.). This approach allowed the required amounts of fertilizer to be established in advance, in order to pool its procurement.

Right:
The Gambia, Northwest region, Njawara.


FSCA

CHAPTER 03

ACTION ON PRODUCTION STORAGE

In order to enable both the farmers and their groups to schedule the sale of their produce and perform post-harvest processing under satisfactory conditions (e.g. drying in the case of onion) or to collect the volumes produced, new storage facilities have been built, or existing ones rehabilitated and fitted with the necessary equipment.

3.1 BUILDING OR REHABILITATING STORAGE INFRASTRUCTURE

The location, type and dimensions of the storage facilities were decided jointly with the farmers, existing groups and the municipal/communal authorities.

In Senegal, in the rural municipality of Léona, at the request of the *Association des Producteurs d'Oignons de Qualité* (APOQ), the project built a number of ventilated storage facilities with corrugated steel roofs and mesh walls, so that onions could be stored in sacks.

FAO has worked with APOQ to recruit a salaried manager to run the store. At the end of the project, having recognized the benefits of having a salaried manager, the association independently renewed his contract (financed out of its own resources) as well as contracts with the two maintenance staff.

A storage management manual has also been published, and officials of the APOQ and the store manager have been trained in its use. The first version was very pedantic in terms of procedures but it had the merit of clearly setting out the duties of each party and the limits of their responsibilities, mainly to ensure that the manager could work independently.

From the outset, the project focused on the issue of land tenure and the transfer of the buildings to the municipal authorities on the completion of the project. For this purpose an official transfer document was drafted and all the stakeholders familiarized themselves with it. This appears to be essential to guarantee that the infrastructure facilities will continue to be used in the future if the association currently using them were to be disbanded.

Left to right:
Storage facility in the Dogon region in Mali.
© FAO/F. Tartanac

Quality onion storage facilities built by the project in Léona, Senegal.
© FAO/Djagoudi

In Mali, the project has made it possible to improve the traditional storage silo for fresh shallots. Preparing the ground properly, introducing ventilation holes, strengthening the roof and supplying a reinforced (metal) door are all activities that have contributed to improving the conservation of shallot seed and increasing the volume that can be stored in the new silos. The project has motivated the 50 villages in which it is operating to build at least 700 improved traditional silos with a capacity of between 1 200 and 1 700 kg per unit.

Furthermore, a total of 22 communal storage facilities, with a storage capacity of 25 tonnes each, have also been built, including 16 built by the project and the Malian government. Other communal storage facilities were built, using locally available stone, by the beneficiaries themselves, as their contribution or participation. Each facility has been equipped with a tool management system, and the stock managers have been trained. Equipping the storage buildings with scales and humidity metres has made it possible to improve monitoring of stock quality and precision weighing. In 2011, five of the six storage facilities built were brought into operation.

Seventy-five tonnes of shallots were stored to create a revolving fund. Although stock losses in the first storage trial amounted to 59 percent of the total (ranging from 34 percent to 86 percent in the various facilities), the stores have supplied quality seed to 374 farmers, including 163 women.

Left to right:
Guinea Bissau, Bafata region, Sintchameta. The traditional storage system.
© FAO/A. Proto

Guinea Bissau, Bafata region, Fajonquito. Women farmers at the inauguration of the new store built by the project.
© FAO/A. Proto

3.2 FACILITATING ACCESS TO FINANCIAL SERVICES FOR STORAGE PURPOSES

To enable the farmers' groups to operate, the farmers repay in kind the seed and fertilizer given to them in advance. The groups are responsible for storing the products repaid by the members and for selling them when market prices rise.

With regard to the APOQ at Potou in Senegal (see section 3.1 above), the APOQ office has begun discussions with financial organizations in Léona to contract for a loan that would enable the organization to increase the revolving fund to finance its activities. On the basis of the activities already performed, the stock of onions produced by the group during the capitalization mission, and the site's development potential (50 percent of the site is still available for development), the office is confident of the success of the approaches it has already taken with its financial partners.

In the North region of Central Gambia, the FOs in the 20 villages involved in the project had a total membership of 1 407 men and 1 868 women at the end of 2012. Previously,

these groups had been fairly unstructured; the offices often lacked facilities and operated without any proper coordination. At the beginning of 2010, the project received a total of GMD 190 000 (USD 5 400) for inputs, and the FO managers were trained in how to manage the funds and keep the accounting records.

Keeping accounting records is a significant challenge in a context characterized by a high level of illiteracy. At the end of 2012 the FOs had generated GMD 867 375 (USD 24 760), an increase of over 300 percent over the amount originally received by the project. The rate of recovery of the loans for seed and inputs in the first year was 88 percent, and rose to over 90 percent in the second year. None of the groups had placed their savings with microfinance institutions because of previous bad experiences with them in the region. Nevertheless, they increased their savings by 160 percent collectively, between 2010 and 2012, from GMD 170 757 to GMD 450 180 (USD 4 800 to USD 12 853).

At the beginning of 2012, in another region involved in the project, a partnership agreement was concluded with a nationwide bank, Reliance Financial Services, to manage the accounts of the groups and the individual farmers. This experience has proven to be positive and now the bank is planning to gradually expand this service to more than 10 000 groups and farmers throughout the country by 2015. Having dynamic and competent field leaders to perform close-up monitoring of the groups' activities, coupled with the motivation and the involvement of the groups themselves, have been key factors in guaranteeing the success of these operations.

CHAPTER 04

PROCESSING AGRICULTURAL PRODUCTS

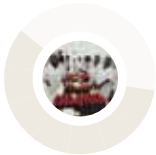
4.1 BUILDING OR REHABILITATING PROCESSING SITES

The Programme has also helped to fund the construction of simple processing units and has taken part in procuring processing equipment and materials, and providing training on good hygienic and processing practices.

4.1.1 In Senegal, facilities built to process fish and shellfish

In Medina, one of the project beneficiary fisheries site, an organization of 35 women used to collect shellfish as a group and individually process them at home, or at their workplace. Drying was carried out on the ground outside, or inside their homes within the reach of children and animals, leading to losses in terms of quantity and quality.

The project identified a processing site which was approved by the stakeholders. The design of the facilities is typically simple and functional, with a distinction drawn between the different stages in the process according to the "go forward" principle. The site is fenced in and connected to the municipal water main and electricity grid. At first the working areas were not roofed, but at the request of the women's group some areas were covered so that



they could provide the best possible conditions; now the women have a shady and well-ventilated place where they can work or hold meetings.

An organization of seven Economic Interest Groups (EIGs) has been established. These EIGs comprise a total of 219 women users of the site. The women in each group perform all the stages together, from collection to processing, and they acknowledge that the most important benefit from these new facilities has been the strengthening of the organization of the groups.

Left to right:
Senegal, Médina Sangako. Oyster processing centre.
© FAO/A. Proto

Senegal, Toubacouta, village of Soucouta. Oyster processing centre.
© FAO/A. Proto

The protection of natural resources and processing

Thanks to the construction of improved ovens that require less fuelwood, for drying and smoking the fish and shellfish, the consumption of fuelwood collected from the mangroves has been reduced.

At the same time, the project has provided training in a partnership with the Ministry of Fisheries to ensure compliance with legal sizes of the shellfish collected and with the biological pause for the harvesting mudflats, which are required for rational management of the resources.

Improved working conditions

A sanitary block (including water closet and showers) has also been built to enable the women to wash and change their working clothes before returning home, marking a huge change in their daily lives. The use of gloves for harversting oysters is also an advantage to the women who are now able to proudly display their henna-decorated hands.

Improved ovens built on the site at Médina, Senegal, making it possible to reduce fuelwood consumption. (In the background are the working area and the shower block.)
© FAO/L. Roy

Post-project considerations

The project handed over the site to the Ministry of Fisheries which did an upstream consultation work with the beneficiaries, local authorities, local and national representatives of the ministry. Franchise and sub-franchise rules were also jointly agreed upon, as were conditions for the use of the infrastructure and equipment.

In this case, the involvement and the motivation of the women, the project extension officer and the local authorities were crucial to the project's success.

4.1.2 In the Gambia, the "One Village One Product (OVOP)" concept has been adopted

Four processing buildings were built using the same floor plan, with two processing rooms, four small adjacent rooms for storage purposes and an office. The FOs were then supplied with heat engine-powered post-harvest processing equipment and a batch of small implements appropriate for food processing. The advantages of these facilities are that they create suitable places for processing and for the group members to meet.

However, the lack of boundary walls around the buildings, the lack of electricity, water supplies and washbasins, and the inadequate or non-existent ventilation (when hulling

cereals, the room very quickly fills with dust, and crushing chilli peppers irritates the skin, eyes and throat, which is compounded by the high temperatures in the buildings) are matters that need to be resolved to ensure that the infrastructure facilities will continue to be used in the future. Furthermore, for three of the centres that have been built, the "One Village, One Product" concept is limiting the period during which the installations will be used. In the case of chilli pepper, the processing period is between two and three months. This is the same period required for processing fonio, depending on the organization of the cereals storage group. If encouragement were given to diversify to processing of other products, the period for using the installations could be further extended and the work of the FOs could be improved (although this runs counter to the very concept of OVOP, which is more appropriate for farmers with two harvests a year, through use of an intensive system). By processing miscellaneous fruits and vegetables the Njawara FO is able to produce and market over a longer time frame.

4.2 PROVIDING TRAINING AND COUNSELLING FOR PROCESSING

The project has run numerous training courses on good hygiene and production/processing practices, with the support of such institutions as the Food Technology Centre (FTC) in the Gambia and the *Institut de Technologie Alimentaire* (ITA) in Senegal. Most of the beneficiaries directly or indirectly mention these training courses as having helped to improve the end quality of the processed products and the fact that buyers recognize the improved quality, in terms of taste and longer conservation period.

4.3 FACILITATING ACCESS TO SUPPLIERS OF EQUIPMENT, UTILITIES, PACKAGING AND OTHER INGREDIENTS

Suppliers of processing equipment

The projects have supplied equipment to some of the processing sites. In most cases the material is fit for its intended purpose, but there are too many cases in which the equipment is not appropriate, for various reasons, including: (i) in terms of the processing capacities of the farmers' groups, which affect the profitability of the site (the case of Guinea-Bissau);

Left to right:
The Gambia, Northwest Region, Nyangen. Before the construction of the agricultural product processing centre, farmers chopping the chilli to prepare the sauce.
© FAO/A. Proto

The end product: chilli pepper sauce.
© FAO/A. Proto

(ii) when poor-quality equipment breaks down rapidly (the case of chilli farmers in Nyengeng in the Gambia, who in the first few years were unable to afford the repairs or to return the equipment) or; (iii) the way in which energy is supplied is not suited to the site, creating extra cost for an electricity connection (the case of the hulling unit at Wack N'gouna in Senegal).

The processors at Sami Madina in the Gambia have obtained a Guinean prototype for processing fonio, the only model that is currently on the market. The defect in this prototype is the weakness of some of the mechanical parts, which became unsoldered or broken less than one year after being brought into service, and with no provision in the procurement agreement for them to be repaired. This is also a potential issue with equipment delivered to the beneficiaries after it has been lying around for several months on FAO premises; if the equipment breaks down after a year of use, the warranty may no longer be valid.

Lastly, for numerous projects (in the Gambia, Guinea and Senegal), the processing equipment was only delivered in the final months of the project, which meant the projects were unable to adequately teach the beneficiaries to use the equipment, seriously compromising their ability to adopt the new techniques, and the sustainability of the support provided.

The Gambia, Northwest Region, Njawara. Drying agricultural products to be sold on the market.
© FAO/A. Proto

Packaging procurement

The problem of access to appropriate packaging appears to be a recurrent issue for all the players involved in processing in all the countries served by the Programme. This difficulty, particularly in the case of the smaller processing units, has hampered development of the agrifood sector in these countries.

In Guinea, the project backed the establishment of a packaging supply group, taking note of the constraints and the difficulties reported by the FOs. The purpose of the packaging supply group is to identify the members' packaging requirements (plastic bags, packaging cartons, plastic trays, glass jars, etc.) and to pool procurement from the main suppliers identified in the country and in the sub-region. The group is supported in this work by the Research Centre at Foulaya, which helps to identify needs for packaging stocks and supports the implementation of an effective management system to guarantee sustainability.

In the Gambia, the chilli pepper processors in the village of Nyengeng realized that the plastic packaging used initially was not suitable for conservation of the chilli pepper sauce. To limit losses of the finished products, they chose to adopt glass packaging, but the supply of new glass containers was problematic because of scarcity. At the present time, the supply of recycled glass packaging is enabling the processors to extend the life of the product and improve its presentation. This is also the case in Guinea.

4.4 ON THE DIFFICULTY OF TRAINING PROCESSING UNIT MANAGERS

Support provided for food processing has often overlooked the issue of managing the processing units after they are put in place. Even when training has been organized, the practical results have not been very convincing. The use of simple record keeping tools for processing activities or the formalization of simple planning tools for determining raw material or volume requirements for marketing purposes are virtually non-existent.

At Soukouta, one of the project sites in Senegal, a processing centre has been built to improve hygiene practices in the processing of semi-preserved oyster and other shellfish products. A women's group has been trained in good hygienic and manufacturing practices. Aside from the fact that the marketing of a new product is always difficult, the site has not yet become operational for a variety of reasons, such as the lack of a leader to manage the site, need for working capital, lack of supply and production planning, and unsuitable labelling.

It should be kept in mind that, in order to produce credible economic operators and guarantee the sustainable development of the facilities, it is crucial not only to provide material support and technical training for processing but also effective training for the staff responsible for managing and planning operations. It is also necessary to closely support the FOs and their members, to ensure that they put into practice what they have learned in order to best exploit what has been accomplished and guarantee the sustainability of their activities.

CHAPTER 05

FACILITATING THE IDENTIFICATION OF QUALITY PRODUCTS BASED ON ORIGIN, IN ORDER TO PROMOTE THEM

Two different approaches have been used – in Guinea and in Mali – with regard to the identification of quality products based on their origin.

5.1 IN GUINEA, IDENTIFYING PRODUCTS OF KINDIA REGION

Numerous Guinean products are closely associated with the land, and farmers, consumers and traders in Guinea and elsewhere call them by their geographical names. In Kindia, the project has worked in partnership with the *Centre de Recherche Agronomique de Foulaya* (CRAF) and the Swiss NGO *Réseau d'échanges pour le Développement Durable* (REDD) to undertake a range of activities to identify these products. In 2012, an initial workshop was held to present the concept of Geographical Indication (GI), conduct a comprehensive inventory of the region's typical products (totalling about 30) and draw up an initial classification of them (13 of which were defined as priorities).

At a second workshop, applying more clear-cut selection criteria, six products were eventually identified. They are shown in the following table:

TABLE 6. **INVENTORY OF PRODUCTS ORIGINATING FROM KINDIA**

PRODUCT SELECTION CRITERIA	PRODUCTS IDENTIFIED
∘ Comparative advantage for production in the region (disease resistance, production costs, typical products) ∘ Acknowledged reputation ∘ Existence of farmers' organization ∘ Logistical convenience (roads, transport) linking the product to its market (towns) ∘ High value-added for the region (price, income for the community) ∘ Existence of production data (volumes, number of players involved) ∘ Export potential or facilities	∘ Samaya bananas ∘ Maferenya pineapple ∘ Benna small chilli peppers ∘ Friguiagbé pineapple ∘ Samaya avocado ∘ Kantinyi syrup

Following this identification process, the farmers become more aware of the quality of their products and the advantages of enhancing and protecting that quality. At the same time, for each product, a report was produced to facilitate the future work of drafting specifications. Lastly, a communications medium was designed to make the most of this first stage in dealing with the stakeholders in different product sectors.

Nevertheless, in April 2013 the following points were made at the Programme's regional workshop:

- At this stage the farmers were not yet ready to institute any form of protection for their products, but supporting the structuring of the unions and marketing was seen as a first step towards establishing product protection in the future. It was also seen to be necessary to have committed and well-organized farmers.
- Protecting products is a very long and slow process and the duration of the FSCA/PISA project was too short to begin introducing any protection procedures. It was necessary to seek outside expertise to draft specifications (due to inadequate local skills).

Despite the fact that the farmers are seriously interested and have a degree of know-how, the costs remain high and without external support they cannot move in the direction of Geographical Indication (GI).

5.2 IN MALI, APPROACH BASED ON TRAINING AND STRUCTURING SHALLOT FARMERS' ORGANIZATIONS IN THE DOGON REGION

In Mali, the approach focused on shallots, a product that was already recognized. The project there consisted of describing and enhancing the organization and cropping practices of FOs.

Sixty farmers were trained in improved kitchen garden vegetable seed production techniques, and 1 683 farmers received IPPM training. Documents were drafted to describe the shallot in terms of its physical, chemical and organoleptic qualities and to identify the cultivated varieties (by origin), production systems (establishing the geographical borders of the production zone) and processing requirements. Specifications were drafted in French, and technical descriptions of the local varieties of the Dogon Plateau shallot were circulated among its users.

At the same time, an organization was established to define and manage the Geographical Indication (GI). The *Centre Régional de Recherche Agronomique* (CRRA) in Mopti identified local ecotypes of the Dogon Plateau shallot and defined a varietal list of species. This made it possible to improve the availability of the seed of highly productive, top-quality shallot varieties, and to increase the varietal range of the shallot by regenerating certain species that were on the verge of extinction.

One of the lessons learned under the project is that establishing Geographical Indication (GI) in terms of quality (by improving varieties and cropping practices) gradually leads the farmers to meet the level of demand defined by the specifications and helps them to become part of the process.

CHAPTER 06

STRUCTURING AND PROFESSIONALIZING FARMERS' ORGANIZATIONS FOR MARKETING PURPOSES

The projects implemented a number of different actions in the area of marketing, although these were often undertaken at a late stage in the project cycle. Sector studies were conducted, some of which included identifying the main stakeholders and calculating the sale price for each product. This made it easier to link the farmers' groups to stakeholders in different commodity sectors.

A variety of strategies were implemented, depending on features of the markets and level of maturity of the FOs. These included facilitating the concentration of supplies, improving product quality, and becoming direct players in the market.

For example, for the sale of dried shellfish in Senegal, the women on Betenty Island contact the traders in Dakar or are directly contacted to fill orders.

In Médina, Senegal, the women farmers of dried shellfish no longer need to go to the market to sell their output. As a result of the improved hygiene conditions during processing, the improved quality of the product has attracted the buyers to the production site on the eve of market day. By concentrating the supply at the production site, the selling prices are

now higher than those charged previously, and the women farmers no longer need to spend long hours at the market to sell their products (for example, the selling price of dried oysters at the site is CFAF 4 000 /kg compared with CFAF 3 000-3 500 /kg in the market; the price of cockles is CFAF 1 750 /kg at the site, compared with CFAF 500-600 /kg on the market, and the price of dried catfish is between CFAF 1 000 and 1 500 /kg compared with CFAF 600- 700/ kg on the market). Nowadays these women only go to the market to do their own shopping.

Vacuum packing or plastic packaging of dried products was initially chosen to extend the life of the preserved product, reach out to new clients and increase value creation at site level; however, the group now markets all its output in bulk.

For the APOQ onion sellers in Senegal, even though the storage centre has only recently become operational, buyers who previously only procured products at specific collecting points now come to the association to buy onions. The storage centre is about to become a new place recognized for marketing quality onions (dried under optimal conditions) by collecting the supply and negotiating on behalf of the farmers. It should be noted that, throughout the duration of the project, the association had a portable telephone at its disposal, along with a computer and Internet access through the local leader. Since the end of the project, in order to access the Internet and exchange e-mails, the association must now go to Louga, 37 km from Potou, which is the nearest town offering Internet service. Communication with partners not represented in the village has again become more difficult for APOQ.

In the Gambia, the woman president takes care of transporting finished products to Banjul for the Chilla women's group, Dagudan of Chilla, which is made up of 15 women farmers who produce "Chilla Peanut Butter." She delivers to the customers and conducts market research. Selling her products and those of the other group members, she participates in direct marketing of the commodities. In her opinion, customers recognize the quality of the product, which is the result of good cropping practices (groundnut harvesting and preservation methods), effective sorting and selecting of groundnuts used, and high hygiene standards for groundnut processing – all accomplished through the support of the project. Selling prices have risen from GMD 250/kg to GMD 350/kg, while the volumes marketed have increased by 250 percent. The income of this woman has increased from below GMD 4 500 in 2010 to over GMD 12 000 in 2012 (from USD 120/year to around USD 325/year). The marketing training courses provided by the project, participation in two national trade fairs, and production of a television programme on the group have all helped to develop this activity.

KOINADUGU FOREST HONEY

HOW THE BEEHIVE DESTROYERS HAVE BECOME THE GUARDIANS OF THE BEES IN THE SIERRA LEONE FOREST

Sierra Leone, in Koinadugu District, the village of Musaia. Pastor Kamara and a new beehive.
© FAO/F. Cenci

In the early 1980s, Pastor John Kamara started working and studying with the missionaries who had settled in the Koinadugu region. There he saw the first improved beehive used by one of the priests who was dedicated to apiculture and, like all the villagers, he was highly sceptical at the sight of that wooden box.

When harvest time arrived, they compared production levels to see which beehive was the most efficient: the local hive, a cylindrical basket closed at both ends, produced twice as much as the improved beehive (4 kg of honey and wax), but the missionary gathered honey three times a year using the same hive and without killing off the colony, and continued to do so for several years in succession.

When the war ended, Pastor Kamara thought about apiculture as a means of enhancing the income of his paddy farm. In May-August, the farmers prepare their fields (to grow rice, groundnuts, vegetables, etc.) and need cash to buy seed and inputs. The harvesting of honey takes place shortly before that time, in April-May, offering a supplementary source of income during the preparatory work, and in the inter-season period.

The pastor soon became an expert on honey in the chiefdom, learning through hands-on experience in the field. He decided to set up a group of honey farmers and teach the members how to produce more honey and, above all, how to care for the bees. The Musaia beekeepers' group was established in 2007 with 25 members: 10 women and 15 men.

Prior to the project, the group had worked with 50 traditional hives and seven wooden hives, producing approximately 1.5 barrels of honey and half a barrel of wax a year. At that time, the members had nowhere to store the honey and so they sold the product to traders from Freetown and from Guinea and Liberia, without any possibility to negotiate with them. The price was low, around 80 000 Leones (USD 30) for a 20-litre jerrycan. The group had no way of transporting the honey to find other buyers, and had to wait for the brokers to come to their village. After an initial evaluation in 2008, the FSCA/PISA team, in conjunction with the Ministry of Agriculture, realized the

Sierra Leone, Koinadugu ward, village of Musaia. Honey production cell.
© FAO/F. Cenci

potential for this product, as well as the difficulties of producing, packaging and selling it. In 2011, after various technical support and training sessions run by international experts, the group installed 200 improved traditional beehives and Pastor Kamara became a resource for all the beekeepers in the region and throughout the country. He now works full-time on beekeeping, particularly on promoting sustainable apiculture, and learning how to exploit the forest resources through conservation rather than by burning, to make room for cropping and for harvesting fuelwood.

The President of the Republic, his Excellency Ernest Bai Koroma, has invited Pastor Kamara to ceremonies and meetings as a model smallholder. He has also been invited twice to Turin, Italy, to attend the Terra Madre event organized by the Slow Food Foundation. Recently he was contacted by international NGOs and asked to give apiculture courses in Sierra Leone.

The Sami Madina group in the Gambia, which produces fonio, now relies on a village transporter to convey the output to Banjul and market a portion of it. There is very strong market demand for Gambian fonio. At the present time, more than 75 percent of the fonio available in Banjul is imported from Guinea, and the Sami Madina group has a favourable environment for marketing its production.

Finally, in Sierra Leone, the project has built 30 Agricultural Business Centres (ABCs) in the Kono and Konadugu districts, by agreement with the national programme of the Ministry of Agriculture and Food Security and other stakeholders involved. These centres have concentrated all their agricultural and post-harvest equipment, storage, marketing and supply services (including mobile phone recharging services, fuelled by solar panels in some cases) on a single site. The approach used to build the ABCs was based on setting up FFS (300) and forming FOs (60) that were subsequently involved in building and operating the centres. This has helped to strengthen the farmers' social ties and to break down some social differences. These centres form part of a national network of 650 centres located in 13 districts that function as input and agricultural tool sales outlets, and venues for meeting NGOs, private partners, other service providers and buyers. Supplying mobile telephone services for each centre has also contributed to strengthening the role of the centre as a place for communication and exchange among farmers and other stakeholders. However, to guarantee the permanence of the centres set up under the Programme, the project team has emphasized the need for supplementary investments in packaging and custom packaging, and in marketing in the centres, as well as the need for training to strengthen the centres' involvement in the national network.

In Mali, a planned shallot packing centre was not built, because of the political and security situation in the country and because management procedures were not established before the end of the project. Thus, no large-scale production and marketing trials were undertaken.

CHAPTER 07

MAIN SUCCESS FACTORS IDENTIFIED

The Programme's main success factors have been:

- the initial identification of target groups and partner stakeholders;
- the selection of service providers or materials suppliers who were able to honour their contractual agreements;
- training in:
  - literacy;
  - professionalization of FOs (farmers/FOs/SMEs/partners);
  - good hygiene and manufacturing practices;
  - processing unit management;
- use of the value chain approach and familiarity with the environment and the potential partners, who are crucial for establishing linkages;
- involvement of permanent structures (public, private, NGOs).

A table of the main good practices identified follows.

TABLE 7. **SELECTED GOOD PRACTICES IDENTIFIED**

N°	TITLE	COUNTRY/REGION
	INCREASING PRODUCTION – FACILITATING INPUT ACCESS	
1.1	Farmers improved banana plants	Guinea
1.2	Sabendé bottomlands farmers' group	Guinea
1.3	Wack N'gouna seed-producing smallholders	Senegal
	STORAGE ACTIVITIES	
2.1	The Potou – APOQ onion farmers' group	Senegal –Léona
	PROCESSING OF AGRICULTURAL AND FISHERIES PRODUCTS	
3.1	Betenty Island women's group – Fish	Senegal – Toubacouta
3.2	Medina women's group – Shellfish	Senegal – Toubacouta
3.3	Sami Madina women's group – Groundnuts	The Gambia
3.4	Jal Healthy Food – Packaging	The Gambia – Banjul
	QUALITY IMPROVEMENT	
4.1	Product identification	Guinea
4.2	Dogon region shallot Geographical Indication	Mali
	STRUCTURING AND PROFESSIONALIZATION OF MARKETING FOS	
5.1	Betenty Island women's group – Fish	Senegal – Toubacouta
5.2	Médina women's group – Shellfish	Senegal – Toubacouta
5.3	Sami Madina women's group – Groundnuts	The Gambia
5.4	Honey farmers' group	Sierra Leone

CHAPTER 08

MAIN RECOMMENDATIONS TO STAKEHOLDERS

With regard to training provided to farmers' organizations, it would be appropriate to propose training courses geared to the level of maturity of the FOs, focusing on results rather than on the number of people who attend. Determining the appropriate training courses requires taking into account the age of the PO, the level of training given to officers, degree of independence for implementing activities, the type and effectiveness of the services proposed, the number and nature of relationships with other organizations or support services, and the level of formalization and planning of its activities. The budget for providing intangible support to FOs could therefore need to be substantially increased in order to provide training and counselling that are better adapted to the beneficiaries.

Emphasis should also be placed on the post-project period, and a close monitoring and beneficiary-coaching mechanism, with willing and committed leaders, should be put in place.

With regard to the construction of hydro-agricultural developments, conservation/storage facilities and processing units, the involvement of the beneficiaries in every stage would save time and make it possible to respond more appropriately to their needs. Supervising the construction work is the key to ensuring that it occurs according to the specifications and the agreed timeframe. The (excessive) time taken to deliver infrastructure or equipment has hampered their usefulness within the framework of the projects.

With regard to the sustainability of the processing and marketing activities the economic and environmental dimensions have often been neglected or not taken sufficiently into account before and during project implementation. Operational profitability and return on investment are rarely calculated and, when they are, too few beneficiaries have a real entrepreneurial vision of the new activities. Simplified management and piloting tools are still rarely used, even where they have been taught. Lastly, use of renewable energy for processing (in addition to drying) should be encouraged, in view of the short- and medium-term utilization costs.

There are too many groups that have received material support under the projects but are unable to name the supplier and the cost of the equipment or the services they have received. This hampers the sustainability of activities and the involvement of beneficiaries in maintaining and renewing equipment.

It is essential to introduce a functional system for monitoring activities in terms of both their implementation and the results produced. Despite all the recommendations that have been made routinely by support missions for the benefit of the projects, available data are rare, scattered and inadequate for the purposes of monitoring and evaluation or for piloting the project in the direct interests of the beneficiaries. This makes it difficult at a later stage to conduct a satisfactory, documented capitalization procedure that could disseminate the successful results to serve broader interests.

Familiarity with the capitalization cycle and with the tools to be used in conjunction with a monitoring and evaluation system is one of the topics that should be taught or further stressed for the teams taking part in future projects.

Promotion of marketing is a slow process which requires establishing relationships of trust among the FOs, processors, traders and consumers when it comes to quality, volumes, availability and prices of products. These relationships should be established as early as possible; in the majority of cases, supporting the producers/processors for a short time (less than one year) will not produce sustainable results.

Liberia- Maryland County, Village of Pleebo. Training workshop..
© FAO/F. Cenci

Thus, the recommendations take three directions:

- (i) **Reconsider the duration of the projects.** Three years is clearly not a long enough period to obtain significant results in terms of sustainability, taking into account the time needed to: identify the partners and the target groups; validate product and market selection; set up new units or upgrade existing installations; and provide appropriate training on techniques, products, food safety, management and marketing; in order to fully or partially establish the marketing network, promote the products, etc.
- (ii) **Review the objectives and/or the targets.** It is unrealistic to expect to convert farmers who were unable to meet their household consumption needs in year zero into entrepreneurs or effective economic players able to produce, process and market their products to meet the identified market demand identified in year three or four.
- (iii) **Reconsider the tangible and intangible assets to be brought into play to reach the objectives.** This also requires considering the corresponding budgetary implications.

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