

***EX-POST* EVALUATION OF PROJECT
STDF/PG/283**

**PROJECT TO SUPPORT THE CONTROL OF SANITARY AND PHYTOSANITARY
RISKS IN MALI'S MANGO EXPORT SECTOR**

Final Report

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LIST OF ABBREVIATIONS AND ACRONYMS

ANSSA	National Food Health and Safety Agency
ARMD	Government Procurement and Concessions Authority
CDP	Project Steering Committee
COLEACP	Europe-Africa-Caribbean-Pacific Liaison Committee
CTE	Project Technical Implementation Unit
DGMP	General Directorate of Procurement
DNA	National Agriculture Directorate
ECOWAS	Economic Community of West African States
EIF	Enhanced Integrated Framework
EU	European Union
EU RASFF	EU Rapid Alert System for Food and Feed
FAO	Food and Agriculture Organization of the United Nations
GAP	Good agricultural practices
GHP	Good hygiene practices
GMP	Good manufacturing practices
IFM	Mango Trade Association
ISO	International Standardization Organization
OPV	Plant Protection Office
PCDA	Competitiveness and Agricultural Diversification Programme
SPS	Sanitary and phytosanitary measures
STDF	Standards and Trade Development Facility
TBT	Technical barriers to trade
WAEMU	West African Economic and Monetary Union
WTO	World Trade Organization

EXECUTIVE SUMMARY

This report summarizes the *ex-post* evaluation of Project STDF/PG/283 to support the control of sanitary and phytosanitary risks in Mali's mango export sector, implemented between **May 2010 and November 2012**.

Identified in March 2010, with backing from Mali's National Food Health and Safety Agency (**ANSSA**) and Plant Protection Office (**OPV**), the project was expected to last **24 months** and cost a total of **US\$508,800**. The operation was financed with US\$70,400 equivalent from the Malian national budget and US\$438,400 from the Standards and Trade Development Facility (STDF) of the World Trade Organization (WTO).

With the **aim of improving access to export markets** for Malian mangoes, Project STDF/PG/283 sought to **strengthen the national infrastructure for controlling the sanitary risks** associated with mango production in the country.

This entailed:

- harmonization of the standards adopted in the mango sector and national laws with international standards and directives;
- completion and adoption of the National Mango Traceability System; and
- risk assessment capacity building for phytosanitary inspectors at import/export control and certification posts.

This project was implemented by the ANSSA and OPV, and the main beneficiaries were **stakeholders in the Malian mango sector**.

The project was evaluated by Christian TAUPIAC, an independent expert specializing in rural development, pursuant to the "Guidelines for the evaluation of STDF-funded projects". The evaluation involved an analysis of reports, consultations with partners and beneficiaries, and a five-day field visit (21-26 March 2016). It proceeded without major difficulties other than those arising from the fact that over three years had elapsed since the end of operations, which made it hard to find and convene stakeholders with "experience" of the project.

The results of this evaluation can be summarized as follows:

Relevance: The project addressed the real needs and priorities of the mango "export" sector in Mali, namely: **(i)** lack of dialogue between sector stakeholders (different private stakeholder groups, authorities, etc.); **(ii)** few stakeholders aware of the need for a policy on "quality"; and **(iii)** the imperative need for harmonization of legislation on phytosanitary safety, and also in respect of national, regional (WAEMU) and international (specifically European) regulations and standards. In this regard, the project proved highly relevant.

Effectiveness: All of the planned actions were undertaken except for one: the monitoring of 20 mango packing plants, owing to administrative difficulties in choosing an operator.

Efficiency: Overall, the project was implemented according to schedule. A three-month delay in start-up, caused by difficulties in raising financial resources, was not made up for; and procedural difficulties undermined the project's efficiency somewhat. These related to staff recruitment problems, particularly the impossibility of recruiting an operator to supervise the 20 packing plants (see above). The loan was 91.8% executed.

Impact: Three years after completion, the project's impact is mixed. Malian production of mangoes for export has grown only modestly, by 10% from 2009 to 2014, compared to 100% in other West African countries; but this was compensated by expanding markets outside the EU. The frequency of interceptions upon entry into the European market did not decrease.

Unexpected impact: the dialogue which the project elicited between private stakeholders in the mango sector led to the creation of a Mango Sector Trade Association (IFM).

Sustainability: The project's main benefit is precisely that it revealed and clarified the complementary nature of the roles of the authorities and the private sector in the mango sector. The effectiveness of the Trade Association (IFM) set up in 2012, outside the project, but benefiting from contacts between stakeholders in the project's workshops, awareness-raising and training sessions, is an important factor underpinning sustainability in the project's actions.

The latter will need to be observed and analysed regularly for:

- Continuous harmonization of legislation within the Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union (WAEMU), and with regard to the importing countries (particularly the EU) by an observatory to be piloted by the IFM.
- Stakeholders' awareness and knowledge of the concepts of quality and phytosanitary risk, throughout the sector, which should be a permanent concern (regular surveys).
- Upgrading of the National Traceability System, which is imperative.

Lessons learned:

Implemented in a difficult political context, this project achieved remarkable but under-publicized results among Malian stakeholders (heavy demand for an extension of the measures adopted in the pilot zones), as well as other donors and countries in the region. An additional communication effort would have been welcome. This is the only project in the region to have taken steps to make regulations and standards mutually consistent, and set up a National Traceability System.

This evaluation has made it possible to draw lessons which either: (i) are specific to this project and its Malian context; or else (ii) relate to technical assistance projects more generally. In terms of project-specific lessons, it is recommended to:

1. Set up a monitoring system to capitalize on this project's achievements, through: (i) the creation of an observatory to keep legislation and regulations harmonized within the ECOWAS region and with those of importing countries; (ii) the holding of regular surveys to ensure that a culture of quality is maintained among stakeholders; and (iii) the permanent updating of the National Traceability System created under this project.
2. Support the Mango Trade Association (IFM) in organizing efforts to improve quality within the sector.

More general recommendations aim to improve project design through:

3. *Ex ante* cost-benefit studies to ensure the relevance of projects at the design stage.
4. Inclusion in project scheduling of a three to six months phase of post-activity follow-up, to allow activities to be completed and for a self-evaluation by the project owner (*maitre d'ouvrage*).
5. More formal inclusion of results dissemination in project priorities.
6. Inclusion of evaluation principles in training/awareness-raising operations and in project management.
7. Improvement of the quality of project logical frameworks, to facilitate evaluation.

The following recommendations are made with a view to improving procedures:

8. Improve the capabilities of target country institutions in monitoring and evaluation techniques.
9. Adapt training contents and materials to the local situation, particularly in training for small-scale producers.
10. Reconsider the project closure procedures following the end of the African project, with: (i) a factual-technical and financial report produced by the project owner immediately after the end of technical operations; and (ii) an *ex-post* assessment by an independent expert within two to three years.
11. Organize the components by implementation responsibility rather than the technical rationale of the operations (one component <-> one entity in charge).

Lastly, the following recommendations are made on complementarities and synergies:

12. Organization and involvement of the private sector should be at the heart of all sector projects.
13. Organization of financing in "trust funds" to facilitate complementarities and dealings with successive partners.

1 INTRODUCTION

1.1 General context and rationale for the evaluation

(a) General context of the project

At the time of project identification in 2010, Mali's annual mango output was estimated at 200,000 tonnes. About 10,000 tonnes were exported¹, 4,800 tonnes of which to the European Union (EU), making mango Mali's leading export fruit.

Despite its great potential, the mango export sector was facing sanitary and phytosanitary constraints, including the fruit fly problem, which has become a key issue for the future of the sector. After a new invasive fruit fly species, *Bactrocera invadens*, was discovered in West Africa in 2005, the damage caused by this pest has become a major economic and social problem.

Fruit fly has become the main reason for the increase in interceptions and destruction of mangoes upon entry into the EU. As a result, exporters have to confine their exports to periods when fruit-fly infestation rates are low, which means shorter export seasons, smaller volumes exported and lower incomes for exporters, including grassroots producers - most of whom are small-scale family farmers who rely on mango sales as an essential income source.

The Europe-Africa-Caribbean-Pacific Liaison Committee (COLEACP) has detected a relation between interceptions of infested mango shipments entering the EU from West Africa (102 interceptions in 2011, of which 79 between May and July) and the shrinking of market share for West African mangoes (9% in 2011 compared to 14% in 2007), even though total European imports of mangoes grew by 8%.

These problems, identified as early as 2007, have been the subject of many public or private programmes, aimed at improving compliance by enterprises and products with the provisions of sanitary and phytosanitary (SPS) measures and customer requirements. Nonetheless the different projects and programmes had three shortcomings: (i) they only targeted a small number of participants in the sector; (ii) the sector's professional stakeholders lacked links with each other; and (iii) previous actions had not fully harmonized the legislative, regulatory, and normative texts applicable to the products, procedures, and criteria for product conformity assessment.

As part of government policy, through the Integrated Framework of the National Trade and Competition Directorate (DNCC), Project STDF/PG/283 was one of the few operations to upgrade national food safety infrastructure in order to bring it into line with the basic principles of the SPS Agreement. Moreover, it has **supplemented other STDF actions**, specifically the operation to upgrade the application of SPS measures for the development of trade in fruit and vegetables in Mali (STDF 146)², implemented from July 2007 to February 2010, and the regional projects of the West Africa Fruit Fly Initiative (WAFFI)³, of which Mali is a beneficiary country.

(b) Specific context of the evaluation

This evaluation forms part of a "*meta*-evaluation" of four projects (STDF 255, 283, 287 and 313) all relating to the fruit fly problem in West Africa, although only STDF 283 is specific to Mali.

1.2 Aim of the evaluation

As this is an *ex-post* evaluation, its purpose is to review the completed project and mainly analyse its relevance, effectiveness, efficiency and impact, and the sustainability of the results achieved.

¹ *Stat agri mangoes*: high levels of heterogeneity in statistical data on production and even exports, according to various sources (FAO, Eurostat, Ministry of Agriculture, Trade Association).

² STDF Operation 146 allowed for: (i) the drafting of phytosanitary legislation (law and decree on plant protection); (ii) the preparation of three procedural manuals on the phytosanitary control of seeds, fruits and vegetables, and other vegetables and plant products for import and export; (iii) the development of a database and an Internet site on harmful infections of mango and other fruits and vegetables. The project delivered: (iv) technical training for technical workers, producers, and supervisors; and (v) the equipping of the phytosanitary control post at the Bamako airport and the OPV phytosanitary diagnostic laboratory.

³ The West Africa Fruit Fly Initiative (WAFFI) encompasses four World Bank programmes implemented between 2008 and 2011 (using EU and STDF funds), which aimed to identify and implement methods to combat the offending insects; preparation of technical dossier; training for stakeholders in seven countries (Benin, Burkina Faso, Côte d'Ivoire, Ghana, Guinea, Mali, Senegal); and the identification of pilot orchards.

It should also draw on lessons learned from the project's implementation to make recommendations for future actions.

The STDF Secretariat chose Christian Taupiac as independent consultant for the *ex-post* evaluation of Project STDF/PG/283. Mr Taupiac is an expert in international development, specializing in rural development and the environment. He has worked in France, but mostly abroad for the French Government (Ministry of Agriculture, Ministry of Cooperation, Ministry of Foreign Affairs), the World Bank (Africa Division) and for ECOWAS. He has implemented or led several projects, participated in the drawing up of sectoral policies and conducted numerous evaluations in Europe, South America, and above all in Africa, in relation to capacity building in developing countries. Mr Taupiac is independent of all the parties concerned and has no conflict of interest that could affect the conduct of this evaluation.

The evaluation was carried out in accordance with the "Guidelines for the evaluation of projects funded by the Standards and Trade Development Facility (STDF)". In line with the terms of reference for this evaluation (see Annex I), the objectives were the following:

- to check whether the objectives defined in the project document were attained;
- to verify whether the project is consistent with, and had an impact on, the objectives underlying the action supported by the STDF, namely: improvement of market access;
- to identify the key lessons learned, both for beneficiaries and for developing future programmes financed by the STDF or other technical and financial partners.

1.3 Overview of the project, including objectives, activities, budget, and outputs (Table 1)

The scoping studies were undertaken by the ANSSA and the OPV of Mali, supervised by the Ministry of Trade and Industry (through the DNI), and the Ministry of Agriculture (through the DNA), on behalf of the State of Mali, the project owner.

Implementation was entrusted to the ANSSA and OPV under the control of a steering committee essentially comprising government entities (DNA, ANSSA, OPV, PCDA, Integrated Framework Programme) with a direct link to the project's field of action.

Table 1: Overview of Project STDF/PG/283

General objectives
Project STDF/PG/283 aimed to improve access to the export market for Malian mangoes by strengthening the national infrastructure for applying SPS measures.
Specific objectives
<ol style="list-style-type: none"> 1. Align Malian standards on fruit and vegetables with international standards and directives. 2. Align national legislation governing the organization of production, packaging and marketing of fruit and vegetables with international standards and directives. 3. Align the procedures and criteria for product conformity assessment with regional or international standards and directives. 4. Harmonize national legislation applicable to the products. 5. Set up a National Mango Traceability System for Mali. 6. Train phytosanitary inspectors at the import/export control and certification posts in the field of risk assessment (according to Codex Alimentarius principles). 7. Train phytosanitary inspectors at the import/export control and certification posts in the new approach to conformity assessment and certification of fruit and vegetable imports and exports. 8. Train/raise awareness and support stakeholders in implementing food safety measures.
Activities planned
Implementation operations, which began in August 2010 (following a three-month start-up delay owing to problems in raising funds) were completed in November 2012. These were organized around four components:
Component 1: Alignment of national standards and legislation with international standards
<ul style="list-style-type: none"> - Awareness raising concerning Regulation No. 07/2007/CM/UEMOA. - Harmonization of legislation applicable to the mango sector. - Harmonization of mango standards.

- Reappraisal of Mali's export mango specifications.
- Harmonization of procedures and criteria for mango conformity assessment and the rules for awarding the community conformity seal.
- Regulatory and normative oversight.

Component 2: Implementation of a National Mango Traceability System for Mali

- Preparation of a map for each commune and *cercle* (pilot zone).
- Production of kits illustrating Mali's national export mango traceability system.
- Support for farms and packing plants in their implementation of the traceability system.

Component 3: Capacity building among sector stakeholders

- Awareness raising/information of sector stakeholders concerning the WTO TBT and SPS Agreements.
- Risk analysis training for senior technical personnel.
- Training for phytosanitary inspectors in assessing the conformity of mangoes for export.
- Good practices (HACCP, ISO 22 000) training/support for producers and packing plant operators.

Component 4: Management and monitoring/evaluation of the project's activities

Results expected and indicators of success

In **Component 1** (Harmonization of standards and legislation)

- Stakeholders in the export mango sector informed and made aware of Regulation No. 07/2007/CM/UEMOA.
- Legislation and standards revised.
- Specifications revised.
- Procedures and criteria for mango conformity assessment and rules for awarding the community conformity seal harmonized with WAEMU rules.

In **Component 2** (Implementation of a National Mango Traceability System for Mali):

- Identification and survey of pilot orchards.
- National traceability system implemented for Mali's export mango sector.

In **Component 3** (Capacity building among sector stakeholders):

- Stakeholders in agricultural sectors made aware of, and trained in, the WTO TBT and SPS Agreements.
- Senior technical personnel from the National Agricultural Directorate (DNA) trained in risk analysis.
- Phytosanitary inspectors trained in mango export and import conformity assessment.

Main achievements

The three components were implemented successfully, in particular:

- Implementation of a regulatory framework and standards aimed at minimizing rejections of mangoes exported to Europe.
- Implementation of a National Traceability System allowing the health quality of mangoes to be monitored throughout the sector.
- Training of sector stakeholders.

See details in paragraph 3.2 below.

2 METHODOLOGY

2.1 Criteria and phases of evaluation

The evaluation of Project STDF/PG/283 reviewed the project's implementation and results. To that end, it used the key criteria of relevance, effectiveness, efficiency, impact and sustainability, and the lessons learned/recommendations to be made, pursuant to the evaluation guidelines defined by the STDF.

The assessment was conducted in three distinct phases:

(a) Study of project documentation (desk study)

The first phase of the evaluation consisted of a detailed study of the documentation provided by the STDF Secretariat and financial partners such as the African Development Bank (AfDB) and the World Bank. The aim was to consult the available information: project identification documents, mid-term reports, final report, and all other material deemed useful for performing the evaluation. The entities responsible for executing the project (ANSSA and OPV) were also consulted and questioned to obtain complementary information and/or clarifications.

Exchanges with the STDF Secretariat via telephone calls and numerous email exchanges made it possible to obtain maximum information and clarity on the implementation of this project.

(b) Compilation of the opinions and impressions of beneficiaries and project managers

The second phase focused on collecting opinions and impressions and an exchange of views from the project's beneficiaries and partners. To that end, in collaboration with the STDF Secretariat, a **questionnaire was prepared (Questionnaire A)**⁴, while also considering the evaluation criteria and objectives assigned to this project. The questionnaire was sent to the Malian beneficiaries⁵ of the project, the managers of Project 283, and representatives of the competent authorities and industrial partners, and also to donors mentioned in the national and/or regional reports. The STDF Secretariat assisted in sending this questionnaire to donors, to ensure its maximum consideration.

The evaluator sent these questionnaires either directly online or through the ANSSA and OPV (on behalf of the project owner) to reach beneficiaries without Internet access.

In addition to the questionnaires, a **five-day mission was held on 21-26 March 2016**, to interview the project's main beneficiaries, and to collect other information and documentation, and request clarifications. During the visit, it was possible to meet key individuals and persons who had had responsibilities in this project, despite the long time that had elapsed since it came to an end.

Special emphasis was placed on discussions with the private sector in two meetings, one organized in Bamako (23 participants), and the other in Sikasso in Mali's leading mango production zone (nine participants), and a specific meeting with the representative of the Mango Trade Association (IFM) and exporters.

Specific meetings were held at the Ministry of Agriculture: DNA, OPV, ANSSA; the Ministry of Trade (DNCC, AMANORM); and the Ministry of the Economy (Planning and Development Directorate). A debriefing meeting also received an update from the coordinator of the Enhanced Integrated Framework (EIF).

This field mission added value by facilitating the project's *ex-post* evaluation, particularly in this country where recent political and security events have contributed to high rates of turnover and hence institutional memory loss.

⁴ As part of this *meta*-evaluation, a Questionnaire B was also sent, dealing with regional-scope operations (STDF 255, 313, 287).

⁵ A list of recipients was produced from the training workshop participant registers. As these events took place more than five years before, about 30% of the questionnaires sent could not be delivered (invalid addresses or change of recipient status).

(c) Analysis of data collected and finalization of recommendations

The results of the study of the reports, all the information obtained from the review of the questionnaires, and information/explanations collected during the mission, were analysed. During the on-site visits, targeted individuals were interviewed to gain a better understanding of unresolved issues; and other interviews were held by telephone to obtain replies to questions that remained open from the results of the questionnaire and the interviews held in the country.

Based on the data obtained (questionnaire/interviews/meetings) a draft final report was prepared, on which the STDF Secretariat was invited to comment. The comments were taken into consideration when preparing the present final report.

2.2 Limitations and challenges

The limitations encountered were mainly linked to:

- The long time that elapsed between the end of the project and its evaluation: The project concluded in late 2012, in other words **more than three years** before the evaluation started (January 2016). This made it difficult to: (i) identify, locate, and find the main beneficiary stakeholders and partners; and (ii) obtain reliable and verifiable information. Many email addresses identified in the reports (particularly training workshops) failed to reach the workshop participants because many were obsolete, either because of a change in professional activities, or retirement, or lack of interest, or death.
- The beneficiaries' somewhat vague perception of the link between the operation itself and the donor (STDF), owing to the fact that the project was implemented by the World Bank. Only the senior administrative staff directly related to project management understood the project/lender relation. This resulted in a small number of replies to the questionnaire, with respondents unable to clearly recall the project. In the end, 131 beneficiaries were identified; but the consultant estimates that 90 of them proved unreachable, according to error messages citing non-delivery. A total of **39 replies were recorded**: 8 from producers, 5 from intermediaries known as "*pisteurs*", 3 from processors, 4 from exporters, 11 from civil servants, 3 from donors, and 5 miscellaneous (trainers, experts, researchers). This was thanks to the EIF coordinator in Mali, who played a key role in distributing the questionnaires and in reminding recipients.
- A high degree of variability in the replies: owing partly to the time elapsed between when the operations were carried out and their evaluation (see above), but particularly to the **diversity of the subjects and the beneficiaries concerned** (see project components). It would almost have been necessary to send a questionnaire for each component, which would have complicated the task considerably. Nonetheless, the replies were constructive and usable (see Annex V).

To make up for these limitations, a lot of attention was paid to all of the workshop reports, emphasizing the activities undertaken in them, the evaluation/feedback from the participants, the support material used for training, and the field visits conducted during these workshops. The in-depth review of the reference documentation thus made it possible to at least partly offset the shortcomings of the information received.

3 MAIN FINDINGS

3.1 Relevance

Project STDF/PG/283 addressed some of the problems identified in Mali's mango sector, in three complementary ways:

1. Firstly, it followed up the conclusions and recommendations of the third meeting of the National Food Health and Safety Council (CNSSA 2009), the National SPS Workshop (PNI SPS 2008), the fourth meeting of the National Codex Committee (NCC 2008), the evaluation of agri-food units in Mali (ANSSA 2008), the workshop on food standards (ANSSA 2006) and the diagnostic trade integration study (DTIS, 2006), which confirmed that Mali's **national food safety infrastructure did not comply with the terms of the**

SPS Agreement. It was found that to maintain access for Malian agri-food products on subregional and international markets, sustained efforts had to be deployed in order to apply sanitary and phytosanitary (SPS) measures, particularly by:

- Upgrading the national legislative and regulatory framework to bring it into line with international standards and guidelines.
 - Ensuring that standards and legislation were applied by enterprises and professionals in the agri-food sector.
 - Ensuring the safety and traceability of foodstuffs throughout the chain ("from the farm to the table").
 - Bringing the competent authorities responsible for conformity assessment up to date on new approaches to the control of food products.
2. Secondly, it addressed the need for coordination and complementarity in national legislation and standards. Mali had benefited from several operations targeting the mango sector between 2010 and 2012, but these had neglected regulatory aspects relating to SPS compliance of its mango exports.
 3. Lastly, as previous actions in Mali had targeted an insignificant number of sector stakeholders, this project made it possible to reach a larger number of stakeholders within the sector, thus meeting a widely shared need.

Comments and conclusions on relevance:

91% of stakeholders questioned rated this project as highly relevant overall. Nonetheless, this relevance could have been confirmed more effectively if the project identification had included an economic analysis of the real cost of non-compliance, both for the stakeholders and for the country. What does it cost producers/exporters in cash terms, and the country in general in terms of image, when consignments of fruit are shipped only to be returned and discarded owing to non-conformity? An analysis of this cost would have provided supporting figures to justify investment to upgrade the compliance system.

3.2 Effectiveness

Project STDF/PG/283 underwent regular monitoring, involving quarterly progress reports and a mid-term evaluation of the situation in late 2011. The most recently available status report in terms of technical achievements was dated June 2012, i.e. six months before the end of the operations. The situation at the end of the project was obtained by the consultant from information supplied by the ANSSA/OPV team responsible for implementation in the Technical Implementation Unit (CTE), and supplemented by the consultant's mission to Mali.

This situation adhered to the project's logical framework accepted when the project was approved and was not contested by the Steering Committee at its successive meetings.

The status of each component was as follows:

(a) Component I: Harmonization of national legislation and standards with international norms, and regulatory and normative oversight

The results obtained:

- 53 stakeholders in the export mango sector were informed and made aware of Regulation No. 07/2007/CM/UEMOA.
- Six orders (*arrêtés*) and 17 standards applicable to the mango sector were harmonized following technical working meetings that brought together different stakeholders in the sector. The standards were approved by an order issued by the Minister of Industry, who is responsible for standardization, (Order No. 2012-1387/MICMI of 4 June 2012 approving Malian standards).

- Mali's export mango specifications were reviewed under the supervision of the Malian Mango Trade Association (IFM), and submitted to the **National Agricultural Directorate (DNA)** for adoption by the competent authorities (Minister of Agriculture and/or Minister of Trade). Given the complicated political situation prevailing in Mali (security crisis in the north affecting the entire country), they were only adopted after the project had ended.
- The procedures and criteria for assessing the conformity of mangoes and the rules for awarding the community conformity seal were harmonized with those of WAEMU.

Evaluator's comments (Component I)

The project aimed to harmonize regulatory texts, and legislation in particular. Nonetheless, loopholes within the range of available texts were revealed and some texts had to be drafted during the project implementation phase, such as the draft law on phytosanitary control and packaging of agricultural products, and its implementing decree. The adoption of these two texts gave rise to many difficulties: the DNA (Agriculture), the government entity responsible for legislation in the agricultural sector, was unable to ensure their immediate adoption, owing to the conjunction of two constraints: (a) passing the law depended on the agenda of the National Assembly, which only holds sessions twice a year; and (b) the functioning of Malian institutions was seriously disrupted by the political, institutional and security crisis of 2008-2013. Ultimately, the texts in question were adopted after the project had ended.

In the case of standards, collaboration with the DNI (Industry) was much more effective because the relevant texts completed the adoption process within the established time frames (meeting of the National Standardization and Quality Control Board on 12 January 2012), and all were approved by an order issued by the Minister of Industry.

For information purposes, the 17 standards are:

1. Mango: refrigerated storage
2. Mango: quality criteria for export
3. Ware potatoes
4. Early potatoes
5. Garlic
6. Shallot
7. Fresh okra: export criteria
8. Hot pepper (fresh)
9. Recommended code of practice for the packaging and transport of fruit and vegetables
10. Jams, jellies, and marmalades
11. African "N'goyo" aubergine
12. Ethical code of international trade in food products, including in the context of preferential transactions and food aid operations
13. Code of hygiene practice for the transport of bulk and semi-packaged food products
14. Code of practice for the prevention and reduction of aflatoxin contamination in ground nuts
15. General standard on contaminants and toxins present in food and feed
16. Code of hygiene practice in respect of powdered food preparations for infants and young children
17. Quality management system requirements

Not all of the standards adopted directly affect mangoes, which were the main focus of the project. Nonetheless, they have an impact on the development of Mali's fruit and vegetable sector; and the development of the mango sector could have a knock-on effect in other sectors. The development of standards for other products was considered an indirect benefit of Project STDF/PG/283.

Points to be improved:

1. *The targeted stakeholders were informed, but the coverage rate was poor (53 out of several hundred). No evaluation (survey) was made of how this awareness had been put into practice.*

2. The (a) regulatory and (b) normative texts were validated (particularly those under the responsibility of the Ministry of Agriculture, which were validated, but not until the project had ended). As yet, there is no Malian or regional structure to monitor the evolution of standards in importing countries (regulatory and normative monitoring) to identify updating needs.

(b) Component II: Implementation of a National Mango Traceability System for Mali

- Orchard maps were produced for each *commune* and *cercle* in two production basins (Sikasso and Bougouni) out of the three planned. Bamako remained pending (insufficient financing), but the corresponding maps were produced after the end of the project (financing from WB/PCDA).
- The export mango traceability kits were produced, validated and distributed, following a workshop held for 40 participants representing the four groups of mango sector stakeholders (producers, nurseries, *pisteurs*, processors), the Mango Trade Association and the technical structures concerned;
- 300 farms and 20 packing plants (out of 30 initially planned) were assisted in implementing the traceability system.

Evaluator's comments (Component II):

The implementation of this component was a key feature of the project in the Malian mango sector; and implementation of the traceability system is recognized as a clear gain both for the product itself and for the behavioural change it elicited among sector stakeholders.

A few reservations:

(i) The project was too short for operations on this scale, which require the involvement of specialists and use of tendering procedures (incompatible in its implementation with the project's time constraints).

(ii) Insufficient communication about this operation (pilot status) and insufficient dissemination of the outputs and gains (such as traceability kits).

(c) Component III: Capacity building among sector stakeholders

The main results obtained were:

- Information and training on the WTO Agreements (SPS and TBT): four workshops held in the mango production basins of Bamako on 23-24 December 2010, Koulikoro/Sotuba on 6-7 January 2011, Sikasso on 14-15 January 2011 and Bougouni-Yanfolila-Kolondiéba on 17-18 January 2011). These workshops were attended by **107 sector stakeholders**.
- Training in SPS risk analysis: for the **27 DNA senior technical personnel** (according to FAO guidelines)
- Training in export-import conformity assessment: a three-day workshop (23-25 March 2011, in Bamako) held for **20 phytosanitary inspectors**.
- Training and support in good agricultural practices (GAP): 20 training sessions held (from 14 March to 6 April) for **514 producers**, and support for **100 farms** in implementing the GAPs (13 April to 26 May 2012).

Evaluator's comments (Component III):

Support for packing plants on the ISO 22000 standard. Component III of the project aimed to provide this support to 20 packing plants. This was not achieved because of administrative complications relating to the recruitment of the operator. The activity was based on a budget of US\$97,000 (over CFAF 58 million), which subjected it - as all operations of CFAF 15 million (US\$26,064) and over - to the procedures of the General Directorate of Public Procurement (DGMP) and to the application of national procedures for selecting bidders as required by the Project Steering Committee (CDP). These specify a minimum 96-day contracting period, which was incompatible with the time frames for implementing the project. Moreover, the implementation of ISO 22000:2005

(US\$97,000) was challenged by a bidder that was eliminated by the Bid Evaluation Committee, chaired by the DGMP. The challenge was submitted to arbitration by the Regulatory Authority for Procurement and Concessions (ARMD). Given the political and institutional situation prevailing in Mali, the ARMD verdict rejecting the appeal was handed down after the official closure of the contract.

*Analysis of the questionnaire showed that these **training activities were as beneficial in terms of the quality of the technical message delivered as in the opportunity they gave to stakeholders to meet and create synergy** (a point discussed further below – see "Lessons learned").*

A few reservations:

The training should have been:

(i) decentralized in the production zones (as requested by producers for whom travel to the major centres posed problems);

(ii) given in the Bambara language; and

(iii) repeated (heavy demand: to complete training after returning to the family farm and trying out the initial training received).

Some beneficiaries also wanted trainers to use materials obtained from Malian rather than Ivorian experience (Note: respect "national" sensitivities as far as possible).

(d) Component IV: Management and follow-up/evaluation of project activities

Information and stakeholder endorsement: Despite written and televised media coverage of the workshops, three years after the end of the project the replies to the questionnaire still reflect a lack of information. Otherwise stakeholder endorsement was almost total (see Annex V - Analysis of the questionnaire).

Follow-up: This project was subject to thorough follow-up, through:

- A workshop held to validate the mid-term evaluation report of the BEDR in Sikasso (8 February 2012);
- Two ANSSA/OPV/PCDA supervision missions undertaken on the GAP training activity with a meeting to provide feedback on the results to the Regional Mango Trade Association of Koulikoro and Sikasso (14-25 March 2012);
- Two ANSSA/OPV/PCDA supervision missions undertaken on the activity to assist the 100 farms implement GAPs, with a meeting to provide feedback on the results to the Regional Mango Trade Association of Koulikoro and Sikasso (30 April to 8 May 2012 and 20-28 May 2012);
- An internal audit mission on management of project financial resources undertaken by the ANSSA accountant;
- Posting of the project's results on the website of the Ministry of Health and the PCDA (orchards census and codification map, GAP training modules, register of GAPs implemented in the orchards);
- *Ex-post* evaluation performed in 2016. This had the disadvantage of having to "dig up information", but also the benefit of hindsight in relation to the actions undertaken, which made it possible to gauge their impact and sustainability.

Evaluator's comments on Component IV:

This component was executed and the objectives were achieved.

Only reservations:

(i) All actions, including training, awareness raising, etc. need to provide for an evaluation to compare the level of knowledge and practices applied both before and after the training. This type of evaluation was not included in the project scheduling.

(ii) Implementation adhered to the logical framework. Nonetheless, it seems that the project owners were not bothered about self-evaluation. "What is the purpose of what I am expected to do?" Execution alone is not sufficient. It must also be possible to modify the planned actions in a potentially evolving context or in response to stakeholder reactions. While this evaluation made it possible to verify that the project's Technical Unit (CTE) had taken account of this logical framework in its "operations programme" segment, the same cannot be said of the "evaluation parameters" part. The indicators of success seem to have been somewhat overlooked. In the CTE's defence, the pressure generated by a delay in implementation made it hard to follow a self-evaluation procedure.

(iii) The evaluator regretted being unable to find an external audit of the technical and financial achievements at the end of the project.

Conclusions on effectiveness:

Overall, the replies to the questionnaires, corroborated by the meetings and interviews held during the two field visits (Sikasso and Bamako), showed that the project had attained its objectives, apart from the support for packing plants, which is the only activity not completed. It can be claimed that Project 283 attained its main objectives, particularly in terms of a better understanding and assimilation of international standards and all the SPS sanitary requirements demanded by importing countries. The workshops focused on training and raising awareness on the SPS measures applicable to fruit. The project consolidated the training of the administrative authorities. It strengthened the capacity of inspectors to perform sanitary inspection and certification, to conduct analytical controls in accordance with the regulations, to strengthen the skills of personnel already working in that sphere, and upgrade those of newly recruited senior personnel. The training of sector stakeholders strengthened the capacity of processing establishments to design, implement, and follow up on self-monitoring activities.

A few reservations however: the awareness raising and training actions would have been better if preceded and followed up by surveys to gauge the participants' level of knowledge and motivation. The capacity-building activities, including the training actions, planned within a given project should, as far as possible, be preceded by a precise reassessment of the needs of the target public. This could be done through general evaluations conducted by consultants at the start of the project, or questionnaires submitted to the beneficiaries prior to the training sessions. Such evaluations make it possible, firstly, to define baselines and make it easier to measure the impact of a given project in the future; and, secondly, to address needs more effectively by taking account of their potential evolution between project formulation and the time of its implementation (e.g. owing to other capacity-strengthening activities that were carried out at the same time, a crisis situation, etc.)

Furthermore, the small number of beneficiaries of the actions (producers, sector stakeholders, inspectors) relative to needs, calls for the activities to be extended.

3.3 Efficiency

The project was globally implemented according to the established schedule and with the expected resources.

- A three-month start-up delay, owing to difficulties in raising financial resources, was not made up for. Procedural difficulties impaired the efficiency of the project to some extent. These concerned problems in recruiting staff and particularly the impossibility of recruiting an operator to supervise the 20 packing plants.

- Loans were not fully executed: the level of disbursement by the STDF was **92.2%**. Failure to carry out Activity 3.7. "Support the 20 packing plants in implementing ISO 22 000: 2005" (for the reasons described above; see paragraph 3.2, Component III) gave rise, on 30 September 2013, to a "reimbursement of unused funds" by ANSSA amounting to CFAF 23,878,276 (about US\$41,491) out of a total of US\$508,800.
- At the end of the project a financial report was produced by an accountant of the implementing organization (ANSSA), which cannot be regarded as an independent audit. This report indicates the amount of loan execution per component (but not per action).

Evaluator's comments on efficiency:

Financial resources: The evaluator did not obtain information making it possible to confirm that this project was fully efficient. Admittedly, 92% of the funding was used; but it was impossible to know whether more could have been done with the same resources. Current procedures in Mali were apparently followed (there was no external audit at the end of a project to verify this). It is not hard to imagine that given the short duration of the project, most of the energy of the implementation team (CTE) was used to fulfil the heavy schedule.

Human resources used: This team was drawn from the ministries' own resources (Agriculture/ANSSA and OPV). The replies to the questionnaire showed that coordination between these services could be improved.

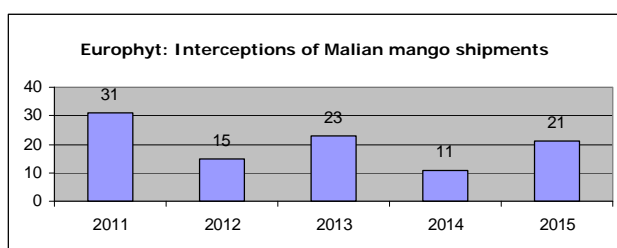
Cost sharing: The actions of this project aimed to develop the capabilities of Malian operators to access world markets, thus as exporters, all from the private sector. Nonetheless, under Regulation No. 07/2007/CM/UEMOA concerning the health safety of plants, animals and food in WAEMU, and the National Food Safety Policy adopted by the Government of Mali in 2002, economic operators are responsible for the health quality of the food products they put on the market. Implementation of prior self-checking requires the person responsible for the first placement on the market to provide the necessary justification. Accordingly, it can easily be imagined that funding for this type of project could require financial participation by the private operators involved. When this project was being implemented, the Trade Association (IFM) had not yet been created and the possibility of private financial participation was not considered. Should there be a follow-up to this project, that possibility ought to be reviewed, particularly now that the Trade Association exists.

3.4 Impact

Three years after its completion, **the project's impact is mixed**. Mango production for export has increased significantly, but the number of interceptions on entry into the European market has not dropped, and an increase in producer incomes remains to be demonstrated. This project's real impact is in the results of awareness raising and training, but also and above all, in its institutional dimension.

- Impact on total production: Despite growing from 49,000 tonnes in 2008 to 62,000 tonnes in 2015 (source IFM), i.e. over 26% growth in seven years, an analysis of the questionnaires reveals the project's weak impact on total production. Interviews with producers during the field visits to Bamako and Sissako showed that the project was concentrated on too few pilot zones to have a significant impact on total production. Even in those zones, the producers did not detect any substantial impact of the project on total production. Private experts (Trade Association) regretted the failure to monitor total production owing to cuts in the operating budgets of the agricultural statistics services. The Trade Association has insufficient resources as yet to take over (should it wish to take on something other than knowledge of export mango statistics).

- Impact on exports: The replies to the questionnaire are unanimous in considering the project as the main cause of the net increase in exports (up by 4,200 tonnes⁶ to 25,431 tonnes from 2009 to 2015). Nonetheless, the analysis of the figures does not make it possible to categorically confirm this opinion. The difference in the structure of Malian mango exports shows that these have recently targeted North Africa. Exports to Europe, which the project was intended to promote, certainly grew significantly (from 3,600 tonnes to 3,833 tonnes from 2009 to 2014, an increase of 10%); but this is modest compared to the growth of exports to Europe by other countries in the region in the same period (Ghana: +170%, Guinea: +161%, Côte d'Ivoire: +75%) (see Annex V). In fact, the strong export performance in 2015: 25,431 tonnes (of which 7,032 tonnes went to Europe) are attributable just as much to the know-how of exporters that have opened up North African markets (Morocco, Mauritania etc.) for Malian mangoes, as to the consequences of the project in raising the awareness of producers to good agricultural practices (GAP). Orchard maintenance, treatment techniques, kits on the methods for combating fruit fly, efforts by nurseries (selection of good grafts and rootstock) and producers (maintenance pruning, end-cycle work), all helped to raise the efficiency of these different phytosanitary treatment techniques. Overall, these are widely regarded as benefits of the project.



- Impact on interceptions: The project's impact on interceptions is questionable. The graph showing Europhyt figures for Malian mangoes reveal that interceptions declined after the end of the project (2012) before rising again in 2013. The reasons for the ineffectiveness of the project measures is explained as follows: (1) tentative beginnings of the Trade Association (created in 2011, but not yet sufficiently equipped to have an impact on producers); and (2) the appearance of new small-scale exporters that are described as "opportunist" by older operators, unaware of the need for a "quality" process, and that are seen as having "contaminated" Malian exports to Europe in 2015.
- Impact on producer incomes: Increasing producer incomes was another of the aims of the project. The replies to the questionnaire suggest this did occur. But no household survey before, during, or after the project, makes it possible to verify this. In terms of prices, the impact is mixed: although the prices of fresh mangoes exported by sea rose to CFAF 700/kg in 2015, compared to CFAF 595 in 2014 (+118%), exports by air-freight and those destined for the subregion have seen prices fall (by -21% and -30%, respectively) in relation to the 2014 season, with prices of CFAF 1,400/kg and CFAF 150/kg in 2015 compared to CFAF 1,700 and CFAF 214 in the earlier year. Overall, the Trade Association estimates that sales (mangoes for export) increased very considerably, from CFAF 3 billion to 7.8 billion (+160%) in three years. However, **there is no way of verifying that the value added was equitably distributed along the value chain.** This is perhaps one of the key short-term challenges facing the Trade Association.
- Indirect impact on the institutional aspect: One of the benefits, not initially targeted by the project, is the revelation and clarification of the complementary roles played by the authorities and the private sector. The many meetings held under Project STDF/PG/283 in the form of training sessions and workshops to analyse and validate legislation or regulations etc., including (i) sector operators, (ii) between the latter and the authorities; (iii) among the authorities themselves, and (iv) the multiplication of contacts between families of sector stakeholders to implement the project activities were a decisive factor in creating the Trade Association (IFM) in late 2011, and a positive element in its success today.

⁶ The sources (FAO, Eurostat, Ministry of Agriculture, Malian Customs, etc.) provide widely differing information on total exports. Since 2014, the IFM has generated its own statistics on the sector.

Evaluator's comments on impact:

The evaluation was unable to prove an undeniable impact of the project in terms of the expected results, whether in terms of increasing the quantity exported and raising producer incomes, or in terms of a reduction in interceptions on entering the EU. The difficulty arises because the objectives set were too general to be verified in such a short project. The responsibility for this therefore rests more with the designers of the project's logical framework than with its executing agency.

3.5 Sustainability

Firstly, the questionnaire's questions on sustainability, like the field interviews, did not elicit well-reasoned replies. Moreover, this notion was not explicitly considered in the project document.

The field visits revealed that the creation of the Trade Association (IFM) in 2012, despite occurring outside the framework of the project, is viewed as one of its consequences (see above). This is an important factor of sustainability of the project's actions.

Moreover, steps are being taken with a view to the establishment (ongoing) of a National SPS Committee supported by the African Union. The ANSSA and OPV are tasked with implementing this Committee, which will be responsible for activities to ensure the sustainability of the project's results. The National SPS Committee will work in close collaboration with the Mango Trade Association on the sustainability of the project's actions through time and space, covering other agricultural production zones in Mali and other agricultural products that represent promising sectors for Mali.

Although three years have passed (which can partly explain the low rate of reply to the questionnaire on this subject), the replies received and the persons interviewed can be divided into two groups: (i) those that indicated that the project was sustainable in the medium term, stating that the workshops were useful for the beneficiaries in their daily activities, and that this raised other training needs, whether to update the training received or in other spheres of activity; and (ii) those who considered that if the personnel trained and made aware of the SPS risk management systems were unable to apply the knowledge obtained, sustainability would be a problem.

These replies did not make it possible to gauge the sustainability of the actions three years after the project had ended.

Evaluator's comments on effectiveness:

The evaluator considers that success in terms of stakeholder awareness-raising, the creation of a space for dialogue and the establishment of a trade association are gains that will bear fruit in the future.

The sustainability of the project's actions should be continuously monitored and analysed with a view to:

- *ongoing harmonization of legislation and regulations within the region (ECOWAS/WAEMU) and in regard to important countries (particularly the EU) by an observatory to be piloted by the Trade Association;*
- *maintaining the level of awareness and knowledge of the concepts of quality and phytosanitary risk among stakeholders throughout the sector, which should be a permanent concern (regular surveys to be held);*
- *keeping the National Traceability System up to date, which is imperative.*

4 GENERAL CONCLUSIONS OF THE EVALUATION:

This project was **particularly relevant** for the evaluator and for the persons questioned (91%) because it responded to needs expressed by all stakeholders in the sector.

It was almost fully effective: globally, apart from the monitoring of packing plants, which is the only activity that was not completed, the replies to the questionnaires, corroborated by the

meetings and interviews held during the two field visits (Sikasso and Bamako) show that Project 283 achieved its objectives across the four components, particularly in terms of better understanding and assimilation of international SPS and Codex standards and all sanitary requirements imposed by the importing countries.

Evaluating the **efficiency of the project** posed a problem. Although 92% of the funding was used, the absence of an external final financial audit made it impossible to judge whether more could have been done with the same resources.

In terms of **impact**, the evaluator was unable to prove an undeniable impact of the project in terms of the expected results, as regards: **(i)** an increase in the amount exported, which is real (+10% between 2009 and 2014) but weak compared to the growth achieved by other West African countries in the same period (100%); **(ii)** higher producer incomes (unverifiable); and **(iii)** a reduction in interceptions on entering the EU (little evidence).

Sustainability was evaluated from the replies to the questionnaire and the interviews. Although sustainability was not explicitly considered in the project design phase, and although three years have since passed (which explains the low response rate), the replies received and the persons met indicated that the project was sustainable in the medium term. The workshops were very useful to the beneficiaries in their daily activities. The beneficiaries of the training and awareness raising reported other training needs, both in other spheres of activity and to update the training received. Supervisors stressed that merely providing training was not sufficient; it was necessary to ensure opportunities to make use of this information, which was clearly not the case at the present time. This casts doubt on the sustainability of the project's actions.

The analysis of the questionnaire reveals that the training was a decisive element of the project, both for the quality of the technical message delivered and for the opportunity that it gave stakeholders to meet and create synergy. These meetings resulted in the creation of a space for dialogue in the form of the Trade Association.

5 RECOMMENDATIONS

5.1 Applicable specifically to this project

Recommendation No.1: Set up a follow-up system to capitalize on the achievements of this project

The sustainability of the actions under this project (and others) should be monitored and analysed regularly, for the purpose of:

- ongoing harmonization of legislation and regulations within the region (ECOWAS/WAEMU) and in regard to importing countries (particularly in the EU), by an observatory to be piloted by the Trade Association. This observatory would exercise regulatory and normative oversight, and would work with the National SPS Committee which is currently being set up;
- maintaining the level of awareness and knowledge of the concepts of quality and phytosanitary and sanitary risk among stakeholders throughout the sector, by holding regular surveys and keeping statistics on non-compliance in order to analyse trends.
- keeping the national traceability system up-to-date.

The STDF has played a pilot role in the harmonization of legislation and regulations in the Malian context. To help identify updating needs, the Malian authorities could receive collaboration in the future from other donors, such as the EU, the AfDB and the World Bank.

Recommendation No. 2: Support the Mango Trade Association (IFM) in organizing the pursuit and improvement of quality in the mango sector

In view of Mali's constraints in terms of production of mangoes for export (land-locked, with mainly a family-farming micro-orchard structure), it is unanimously recognized that the future of this sector in Mali involves investing in quality (bio, label...). Most producers who chose to run their orchards as proposed by the project (application of GAP, GRP and GHP) lament the fact that their farms are surrounded by orchards that have not yet, owing to lack of information and awareness,

decided to take their orchards in the direction of quality and that, in fact, are centres of infestation. The Trade Association must serve as the hub of this "quality" mobilization, in an effort that needs to be shared among all sector stakeholders. This incipient institution does not yet have sufficient resources. To enable it to fully play its role of guaranteeing quality, the IFM needs to be strengthened in order to:

- Involve it as a key partner in future projects targeting the sector. For example, the implementation of a programme to combat fruit fly (PLMF), financed by the EU, the AfDB and ECOWAS in eight countries, is just starting and involves quality-promoting actions. The STDF could play a coordination role to ensure that the PLMF project allows significant IFM involvement in its actions.
- Enable it to set up exchanges to harmonize legislation and regulations among countries in the region (WAEMU, ECOWAS), through the creation of a regional network of trade associations.

5.2 General recommendations applicable to all technical assistance projects

(a) Recommendations aimed at improving project design

Recommendation No. 3: Carry out *ex ante* cost-benefit studies to verify the relevance of projects at the design stage

Project relevance should be also verified by an economic analysis based on the real cost of non-compliance, both for the stakeholders and for the country. This should quantify the cost, imposed on producers/exporters in cash terms and on the country generally in terms of image, of shipping consignments of fruit that are then rejected and returned as non-compliant, compared to the cost of the project under consideration.

Recommendation No. 4: Include a "post-activity follow-up" phase in project schedules

It would be useful to include a "post-activity follow-up" phase in project schedules, in which the project would remain administratively active for three to six months after the final workshop. This does not remove the need for an independent *ex-post* evaluation, strictly defined, about three years after the end of the project, to verify its impact, sustainability, and lessons learned. This phase would be used:

- (a) to enable operations that have been delayed for procedural reasons to be completed;
- (b) for the project owner to conduct follow-up and self-evaluation activities. This procedure would enable national institutions responsible for implementing projects to hone their evaluation techniques and inculcate a culture of performance and accountability with respect to the results.
- (c) to enable the project beneficiaries, broadly defined, to internalize the evaluation and assume ownership of the conclusions.

Recommendation No. 5: Make the communication of results a formal project priority

Despite the high quality of the results obtained in this project, many of the people questioned reported ignorance of the technical achievements (National Traceability System, kits distributed, etc.) or of the regulatory improvements (texts revised to update Mali's legislative and regulatory framework ...).

To make the results more widely known, communication should be an integral part of the project. From the outset, provide for a specific line or component on communication and appropriate indicators. This communication should target:

- the competent authorities, to publicize the validity of the actions undertaken by the TFPs;
- the public, to inform it of the dynamics of the sector;
- other sectors, in that the project may have a knock-on effect and encourage use of the results achieved (e.g., use of standards, trade association);
- other donors, to encourage them to pursue and replicate the actions undertaken (awareness raising, training of a larger number of producers, stakeholders, etc.).

Recommendation No. 6: Include evaluation principles in the training/awareness-raising operations in project management

Capacity-building activities, including training, in the context of a given project should, as far as possible, be preceded by a precise re-assessment of the target public's needs. This can be done in the form of general assessments by consultants at the start of the project, or questionnaires submitted to beneficiaries before the training sessions. Such assessments make it possible to define benchmark situations and to make it easier to measure the impact of the project in the future; and also to determine needs more accurately, taking account of their potential evolution between the project's formulation and the time of its implementation (owing to other capacity-building activities taking place at the same time, a crisis situation, etc.).

It would also be possible to plan evaluations of the impact of the training after six months, a year, or at the end of the project (to evaluate how the training has changed behaviour ... or led to further needs!)

Recommendation No. 7: Improve the quality of project logical frameworks to facilitate the evaluation

A logical framework was clearly defined for this project, and it was clearly adhered to by the CTE in terms of the actions to be undertaken. Nonetheless, the evaluator doubts whether the consultation of this logical framework went as far as becoming aware of the impact indicators. The reason is that the executing agency (CTE) was under twin pressures: (i) the short duration of the operation and the need to focus most energy on implementation; and (ii) an incomplete mastery of the evaluation concepts.

The evaluation was therefore unable to precisely identify the project's impact, given the unduly general objectives set for such a short project (e.g. producer income), and because no measurement (household survey?) was planned, either before or after the project.

Accordingly the following is recommended:

- Take greater care in preparing the logical framework and particularly the choice of indicators.
- Have the logical frameworks prepared by an evaluation professional.
- Check that the executing agency was directly involved in the preparation of the logical framework, so that it takes ownership of the content and prepares the monitoring of indicators from a self-evaluation perspective.

(b) Recommendations on procedures

Recommendation No. 8: Improve the capabilities of developing country institutions in terms of follow-up/evaluation techniques

This evaluation revealed a serious lack of knowledge among Malian institutions responsible for implementing the project, in follow-up and evaluation techniques and use of the logical framework. This resulted in efforts being focused on carrying out the activities without concern for the rationale of the project. "What is the purpose of what I am expected to do?" Execution alone is not sufficient, it must also be possible to modify the planned actions in a potentially evolving context or in response to stakeholder reactions. The principles of self-evaluation should have been included in the management principles imposed on the executing agency. These needs are generally identified in other developing countries. The recommendation is to provide training in logical frameworks and their use for senior personnel responsible for implementation.

Recommendation No. 9: Take steps to adapt training content and materials to the local situation, particularly in training for small-scale producers

Based on suggestions made during the interviews and in the questionnaires, the evaluation revealed the need to ensure that training sessions are given in the local language, so as to be more widely beneficial, particularly for farmers who do not have a sufficient command of the French language. Beneficiaries also asked for training materials (visuals and other items) to be drawn from the Malian experience. Apart from the fact that this makes it possible to respect national sensitivities, it is generally agreed that the target public identifies more strongly with a situation drawn from their own life experience.

Recommendation No. 10: Reconsider project closure procedures

This project was evaluated more than three years after its completion. Many beneficiaries, whether among the authorities or among senior staff in professional establishments, had changed jobs, administrative position, or had even left the sector. This made it very difficult to trace the strengths and the weaknesses of the project. Others confused the many technical assistance and capacity-building projects delivered in the last few years preceding the evaluation.

An evaluation such as this, performed more than three years after the end of the African project, has certain advantages, such as the benefit of hindsight to measure the project's achievements and particularly its real impact and sustainability. But the disadvantage is that it is harder to find stakeholders that experienced the technical and financial reality of the project, so that memories become confused with those of other, subsequent operations. The data that would have made it possible to gauge the efficiency of the project (cost, human resources used) were judged on the basis of communications whose objectivity could not be assessed.

It would be advisable to sequence project closure as follows:

- (a) Immediately following the end of technical operations (e.g. before the last Steering Committee meeting): a factual, technical and financial activity report should be produced or supervised by the project owner in conjunction with the financial partner(s). The report identifies the project's technical and financial achievements in terms of the achievement indicators specified in the logical framework when the project was identified. It is recorded by the project Steering Committee.
- (b) An *ex-post* evaluation should be conducted by an independent agent two to three years later. This identifies, with hindsight, the impact of the actions, and their sustainability. It draws on lessons from the actions, particularly in relation to operations implemented, sometimes simultaneously, with support from other financial partners.

Apart from the difficulty caused by the time elapsed since the end of the project, a merger of the two exercises, as occurred in this operation, causes additional confusion in terms of the rationale of the exercise and its purpose.

NB: Although there was no **external** financial audit at the end of the operations to determine the actual situation and procedural compliance in regard to expenditure (donor and particularly the project owner), the question of the need for such an audit remains open. Nonetheless, this seems an unduly burdensome requirement to impose in short-duration operations (less than three years).

Recommendation No. 11: Organize components on the basis of implementation responsibility rather than on technical rationale

Lastly, it was found that the project had been divided into components according to a technical rationale which, at first glance, appeared understandable. An alternative would be to divide the components according to implementation responsibilities. In this specific project, different degrees of reactivity were noted between the entities in charge (e.g. DNI and DNA, or ANSSA/OPV), as well as varying effectiveness in terms of implementation (e.g. non-validation of texts within the competence of the Ministry of Agriculture, unlike those emanating from the Ministry of Industry and Trade, could have jeopardized the overall success of the operation).

It would be advisable to distinguish the components on the basis of implementation responsibility rather than technical rationale: one component = one person responsible for implementation. This in no way precludes distinguishing activities that have been put together on technical grounds. An implementation contract should be signed between the project owner, the financial partners and the entity responsible for the component.

The fact that such an approach holds the departments or actors in charge accountable is particularly relevant in this project, since the OPV and ANSSA had to draw on their own budgets to partly finance the project's operations. An approach of this kind avoids diluting responsibilities and, in the event of difficulties, prevents responsibility for shortcomings being shifted on to others.

In a context where public-private partnerships are likely to become more frequent, such a measure provides reassurance for the private sector to act in conjunction with government entities, but with clearly identified, independent, and (hopefully) complementary, commitments.

(c) Recommendations on complementarities and synergies (geographic, partnerships...)

Recommendation No. 12: Private-sector organization and involvement should be central to all sectoral projects

One of the project's major benefits has been to improve dialogue within the sector and awareness of the benefits of working together, as emerged from the training sessions and the awareness-raising activities organized during the project, which led to the creation of the IFM. The Trade Association will in future be crucial for keeping up this awareness among those (53) who benefited, and for extending it to a wider range of operators in the sector (over 10,000). Beyond the mango sector itself, it would clearly be in the IFM's interest to enter into exchanges with other Malian sectors (e.g. shea nuts, beef) currently being structured.

Recommendation No. 13: Establishment of trust fund-type financing arrangements to facilitate the pooling of funds and the pursuit of operations targeting a given sector or theme

The components of this project varied greatly in content (training, awareness raising, review of legislation, mapping, censuses, support for packing plants and farms, etc.). This diversity, coupled with the number of stakeholders involved, necessarily gave rise to two situations: (i) contingencies; and (ii) the inevitable call for an extension of activities.

The funds made available for this project were not sufficient to finance all of the actions initially planned. New needs arose, particularly among producers in the outlying parts of the pilot zones.

The fact that the Malian authorities engaged with other donors (e.g. the PCDA/WB project) required the beneficiary countries to successively adapt to the procedures of two donors (STDF and WB) in the same operation.

Setting up a trust fund for such operations could guarantee simplification and continuity for the beneficiary country.