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Report No: ICR00003527

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-40940, IDA-52270, TF-90855)

ON A CREDIT

IN THE AMOUNT OF SDR 30.7 MILLION

(US$46.4 MILLION EQUIVALENT)

AN ADDITIONAL FINANCING OF SDR 13 MILLION

(US$20 MILLION EQUIVALENT) AND

A GRANT OF USD0.47 MILLION

TO THE

REPUBLIC OF MALI

FOR AN

AGRICULTURAL COMPETITIVENESS AND DIVERSIFICATION PROJECT

December 15, 2015

Agriculture Global Practice
Africa Region

CURRENCY EQUIVALENTS
(Exchange Rate Effective)

Currency Unit = CFAF
1.00 = US$[0017]
US$1.00 = [595.54]

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ACDP	Agriculture Competitiveness and Diversification Project
AF	Additional Financing
BCEAO	*Banque Centrale de Etats de l'Afrique de l'Ouest* (Central Bank of West-African States)
BCI	*Banque Commercial Internationale*
BMS	Budget Monitoring System
BNDA	*Banque Nationale de Développement Agricole*
CAS	Country Assistance Strategy
CDDP	Center of Demonstration, Dissemination, and Delivery
CFA	African Financial Community Franc
CFAF	Franc African Financial Community Franc
CNPO	National Steering and Guidance Committee
CRPO	Regional Steering and Orientation Committees
DNACPN	*Direction de l'assainissement du Contrôle des Pollutions* (National Directorate of Sanitation and Control of Pollution and Nuisance)
DNGR	National Directorate of Rural Engineering
DNPIA	National Directorate of Industrial and Livestock Production
DPA	Livestock Production Directorate
ECOWAS	Economic Commission for West African States
EIRR	Economic Internal Rate of Return
FII	Innovation and Investment fund (*Fonds d'innovation et d'Investissement*)
FM	Financial Management
GDP	Gross Domestic Product
GOM	Government of Mali
ICR	Implementation Completion and Results Report
IER	*Institut d'economie rurale* (Institute of Rural Economy)
IRCA	International Register of Certificated Auditors
IRR	Internal Rate of Return
ISN	Information Solution Network
M&E	Monitoring and Evaluation
MRD	Ministry of Rural Development
MI	Microfinance Institution
MPRD	Master Plan for Rural Development
MTR	Midterm Review
NPV	Net Present Value

PAD	Project Appraisal Document
PCU	Project Coordinating Unit
PDO	Project Development Objective
PP	Project Paper
QAG	Quality Assurance Group
SCD	Systematic Country Diagnostic
SES	*Structures d'Etudes et de Suivi* (Study on Monitoring Structures)
TEG	Technical and Economic Guideline
TTL	Task Team Leader
WAEMU	West African Economic and Monetary Union

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REPUBLIC OF MALI
Agricultural Competitiveness and Diversification Project

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A. Basic Information

Country:	Mali	Project Name:	Agricultural Competitiveness and Diversification Project
Project ID:	P081704	L/C/TF Number(s):	IDA-40940,IDA-52270,TF-90855
ICR Date:	12/14/2015	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	GOVERNMENT OF MALI
Original Total Commitment:	XDR 30.70M	Disbursed Amount:	XDR 43.70M
Revised Amount:	XDR 43.70M		
Environmental Category: B			
Implementing Agencies: Ministry of Rural Development			
Cofinanciers and Other External Partners:			

B. Key Dates

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	07/29/2003	Effectiveness:	04/04/2006	04/04/2006
Appraisal:	12/01/2004	Restructuring(s):		02/10/2011 11/07/2012 03/04/2013 11/27/2013
Approval:	07/05/2005	Mid-term Review:		
		Closing:	06/30/2012	06/30/2015

C. Ratings Summary

C.1 Performance Rating by ICR	
Outcomes:	Satisfactory
Risk to Development Outcome:	Moderate
Bank Performance:	Moderately Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)

Bank	Ratings	Borrower	Ratings
Quality at Entry:	Moderately Satisfactory	Government:	Satisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Satisfactory
Overall Bank Performance:	Moderately Satisfactory	**Overall Borrower Performance:**	Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators

Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	Satisfactory
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA):	Satisfactory
DO rating before Closing/Inactive status:	Satisfactory		

D. Sector and Theme Codes

	Original	Actual
Sector Code (as % of total Bank financing)		
Agro-industry, marketing, and trade	43	43
Crops	24	24

General finance sector	8	8
General public administration sector	7	7
Rural and Inter-Urban Roads and Highways	18	18

Theme Code (as % of total Bank financing)		
Export development and competitiveness	29	29
Other Private Sector Development	29	29
Rural markets	28	28
Rural services and infrastructure	14	14

E. Bank Staff

Positions	At ICR	At Approval
Vice President:	Makhtar Diop	Gobind T. Nankani
Country Director:	Paul Noumba Um	A. David Craig
Practice Manager/Manager:	Simeon Kacou Ehui	Mary A. Barton-Dock
Project Team Leader:	Yeyande Kasse Sangho	Patrick Labaste
ICR Team Leader:	Samuel Taffesse	
ICR Primary Author:	Samuel Taffesse and Ismael S. Ouedraogo	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document**)**

The project aims at fostering improvements in the performances of supply chains for a range of agricultural and livestock products, for which Mali has strong comparative advantage The proposed investment is expected to reinforce the competitiveness of both traditional (cotton, rice) and non-traditional (fruit, horticulture products, oil seeds, arabic gum, cashews, etc.) agricultural crops through targeted investment to remove critical constraints, improve productivity and efficiency and build organizational and institutional capacities, both private and public, along the supply chains. In the long run, the project should contribute to increasing and diversifying rural household incomes and economic opportunities. It supports the development of a vibrant and diversified commercial agriculture as a means to move away from subsistence agriculture, which is often synonymous to poverty for a majority of rural households.

Revised Project Development Objectives (as approved by original approving authority)

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Number of beneficiaries (of which women)			
Value quantitative or Qualitative)	N/A	7,000	9,000	16,000
Date achieved	06/30/2006	10/31/2014	05/31/2015	06/30/2015
Comments (incl. % achievement)	The project managed to reach an additional 7,000 beneficiaries or achievement was 178 percent of revised target. Women constituted 34% of the beneficiaries.			
Indicator 2 :	Volume of production (for three selected value chain products) in metric tons			
Value quantitative or Qualitative)	319,000	930,000	1,474,000	1,757,000
Date achieved	11/30/2006	10/31/2014	05/31/2015	06/30/2015
Comments (incl. % achievement)	Achievement was 119 percent of the revised target, which was made possible through provision of improved input, access to irrigation and TA.			
Indicator 3 :	Value of production (for three selected value chain products) in millions FCFA			
Value quantitative or Qualitative)	49,500	160,000	230,500	278,000
Date achieved	06/30/2006	10/31/2014	05/31/2015	06/30/2015
Comments (incl. % achievement)	Achievement was 121% of the target which was made possible due to improved access to market and quality improvements.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Number of Subprojects (micro-enterprises and SME)			
Value (quantitative or Qualitative)	0	350	550	612
Date achieved	06/30/2006	10/31/2014	05/31/2015	06/30/2015
Comments (incl. % achievement)	Achievement was 111 percent of the revised target.			
Indicator 2 :	Women benefiting from sub-projects (% of total)			
Value (quantitative or Qualitative)	0	50	35	34
Date achieved	06/30/2006	10/31/2014	05/31/2015	06/30/2015
Comments (incl. % achievement)	Achievement was 97 percent of the revised target.			
Indicator 3 :	Number of sizable [commercial agriculture] private investment projects in project targeted V/Cs.			
Value (quantitative or Qualitative)	0	4	4	4
Date achieved	06/30/2006	10/31/2014	05/31/2015	06/30/2015
Comments (incl. % achievement)	Achievement was 100 percent of the revised target -- the narrative section under achievement of project development objective discuss these investments.			
Indicator 4 :	Number of market information bulletins disseminated			

Value (quantitative or Qualitative)	0	20	39	22
Date achieved	06/30/2006	10/31/2014	05/31/2015	06/30/2015
Comments (incl. % achievement)	The achievement was 56 percent of the target.			
Indicator 5 :	Amount of guarantee granted (CFAF million)			
Value (quantitative or Qualitative)	0	800	880	836
Date achieved	06/30/2006	10/31/2014	05/31/2015	06/30/2015
Comments (incl. % achievement)	The achievement was 95 percent of the revised target.			
Indicator 6 :	Recovery rate of guarantee credits (percent)			
Value (quantitative or Qualitative)	0	90	94	96
Date achieved				
Comments (incl. % achievement)	Achievement was 102 percent of the revised target.			
Indicator 7 :	Number of commercial infrastructure implemented			
Value (quantitative or Qualitative)	0	8	18	15
Date achieved				
Comments (incl. % achievement)	Achievement was 83 percent of the revised target -- budget was reallocated to upgrading a cluster in Sikasso			

Indicator 8 :	Number of delegated management contracts			
Value (quantitative or Qualitative)	0	8	10	4
Date achieved				
Comments (incl. % achievement)	Achievement was 40 percent of the revised target -- the process is on-going that is expected to be completed by the government and possibly with the help from follow-on operation.			
Indicator 9 :	Number of national and regional steering committee meetings			
Value (quantitative or Qualitative)	0	30	40	40
Date achieved				
Comments (incl. % achievement)	The target was met with 8 national and 32 regional steering committee meetings conducted.			

G. Ratings of Project Performance in ISRs

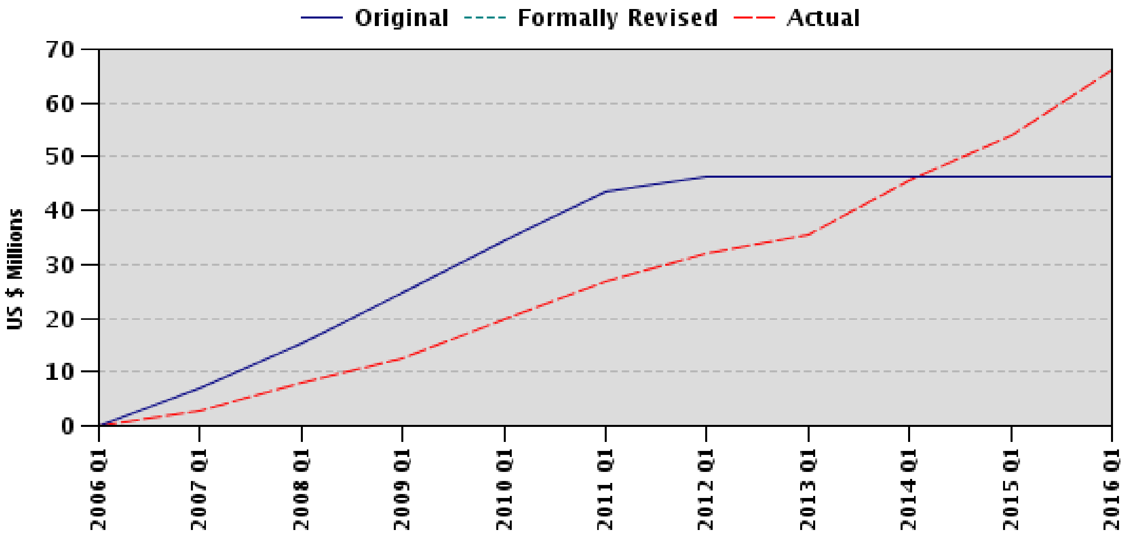
No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	12/29/2005	Satisfactory	Satisfactory	0.00
2	06/30/2006	Satisfactory	Satisfactory	2.86
3	10/05/2006	Satisfactory	Satisfactory	2.86
4	03/13/2007	Satisfactory	Satisfactory	5.66
5	06/29/2007	Satisfactory	Satisfactory	6.20
6	12/17/2007	Satisfactory	Satisfactory	9.34
7	05/29/2008	Satisfactory	Satisfactory	10.62
8	10/03/2008	Satisfactory	Moderately Satisfactory	12.67
9	04/22/2009	Satisfactory	Satisfactory	14.65
10	12/08/2009	Satisfactory	Satisfactory	21.05

11	06/11/2010	Satisfactory	Satisfactory	25.15
12	12/08/2010	Satisfactory	Satisfactory	27.62
13	02/02/2011	Satisfactory	Satisfactory	27.62
14	08/06/2011	Satisfactory	Satisfactory	32.07
15	12/20/2011	Satisfactory	Satisfactory	33.93
16	06/30/2012	Satisfactory	Satisfactory	34.98
17	01/19/2013	Satisfactory	Satisfactory	41.30
18	06/24/2013	Satisfactory	Satisfactory	43.14
19	02/19/2014	Satisfactory	Satisfactory	47.26
20	10/11/2014	Satisfactory	Moderately Satisfactory	55.18
21	01/13/2015	Satisfactory	Satisfactory	58.79
22	07/02/2015	Satisfactory	Satisfactory	65.81

H. Restructuring (if any)

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
02/10/2011		S	S	27.62	Reallocation of credit proceeds; extension of closing date; and modification of indicators.
11/07/2012		S	S	37.24	Six-month extension of closing date; and reallocation of proceeds.
03/04/2013		S	S	42.06	Additional financing of US$20 million equivalent; and extension of closing date by two years.
11/27/2013		S	S	45.71	Extended a covenant of the Financing Agreement from one month to three months after the effectiveness of the project.
05/06/2015		S	S	60.82	Reallocated credit proceeds among categories.

Disbursement Profile



1. Project Context, Development Objectives and Design

1. **Mali was (and still is) one of the world's poorest countries, with its per capita income of US$300 (in 2004) and a poverty rate estimated at 64 percent.** Poverty in Mali was essentially a rural phenomenon with the incidence of poverty being three times higher in rural areas than in urban centers. The poorest of the population also remained rural households engaged in subsistence agriculture.

2. **Growth in the agricultural sector was constrained by low and erratic rainfall, poor and fragile soils, and generally low productivity because of widespread use of traditional technologies.** At an aggregate level, economic growth was severely handicapped by weak infrastructure, particularly transport and communications and underdeveloped human capital, as shown by indicators on health and education levels.

3. **The policy direction and quantitative objectives of the 2002 Poverty Reduction Strategy Paper (PRSP), which integrated the policy priority action programs of the long-term Master Plan for Rural Development (MPRD)[1] of the Ministry of Rural Development (MRD), were based on a vision of sustained and poverty-reducing growth.** The strategy laid out four pillars: (a) create a macroeconomic environment for accelerated and re-distributive growth in a context of macroeconomic stability and openness, driven by the private sector; (b) promote institutional development, governance, and participation; (c) develop human resources and access to quality basic services; and (d) build basic infrastructure and develop productive economic activities.

4. **The Project Appraisal Document (PAD) identified four key constraints and issues in rural development in Mali**: (a) declining and erratic rainfall; (b) low productivity of agriculture; (c) limited access to markets because of poor basic rural infrastructure; and (d) insufficiently diversified rural economy and weak private sector in rural areas.

1.1 Context at Appraisal

5. **The PAD argued that poverty in Mali is essentially a rural phenomenon and therefore fighting poverty means improving incomes and livelihoods and, more generally, providing economic opportunities to rural dwellers.** The World Bank had been strongly supporting the implementation of the government's rural development strategy in the framework of its overall poverty reduction strategy and in line with the Country Assistance Strategy (CAS) for the period 2004–2006 and the government's MPRD. One of the key pillars of this overall strategy was to accelerate broad-based growth by systematically tapping more into the country's important agricultural potential and strengthening capacities of the private sector to seize market opportunities. To achieve this objective, this Agriculture Competitiveness and Diversification Project (ACDP) was designed to have a strong private sector focus and market orientation and included investment in communication and marketing infrastructure for commercial agro-supply chains. Hence, it was argued that this ACDP would

[1] The Master Plan, drafted in 1992 and updated in 2001, laid out nine priority action programs: (a) support to agricultural services and producer organizations; (b) development of rural infrastructure and farming equipment; (c) promotion and improvement of the competitiveness of agricultural supply chains; (d) stimulation of exports of agricultural, forestry, livestock, and fishery products; (e) intensification and diversification of agricultural production; (f) reinforcement of food security; (g) promotion of financing of the rural sector and rural credit; (h) management of natural resources to sustain rural development; and (i) contribution to finalizing and implementing local development plans.

complement other IDA-funded Agricultural Service and Producer Organization Project (PASAOP), community-based rural development, and decentralization and large-scale infrastructure (National Rural Infrastructure Project [PNIR]) projects.

6. **One of the key objectives of the then prevailing Bank's strategy was to accelerate broad-based growth** by tapping more systematically into the country's important agricultural potential and strengthening capacities of the private sector to seize market opportunities. As specifically identified in the 2004–2006 CAS, the proposed ACDP was an attempt to respond to the pressing needs for income generation, diversification of products, and improving food security.

1.2 Original Project Development Objectives (PDO) and Key Indicators (*as approved*)

7. The PAD, on the other hand, stated the objective as follows: "The project aims at fostering improvements in the performances of supply chains for a range of agricultural, livestock, fishery, and gathering products, for which Mali has a strong comparative advantage." The PAD correctly reflected the PDO that came out of the QER meeting (with a minutes date of November 9, 2004) which advised the project preparation team to focus on the improvement of supply chains performance – including increases in physical outputs as its target. According to the original Credit Agreement (Loan No. IDA-40940), the objective of the project is "to increase and diversify rural incomes through improvements in the performances of supply chains for agricultural, livestock, fishery and harvesting products for which the borrower has a comparative advantage." Thus, the PDO that the QER meeting advised to be changed mistakenly found its way back to the legal agreement.

8. During the Additional Financing (AF), the Financing Agreement (dated May 27, 2013) reflected almost entirely the PDO as stated in the PAD but without including "fishery and gathering" and replacing supply chain with value chain. The AF PP specifically stated that: "The PDO under the AF extension phase remains unchanged". The AF Financing Agreement PDO statement was "to foster improvements in the performances of value chains for a range of agricultural and livestock products, for which the Recipient has a strong comparative advantage." Thus, there was no legal basis to claim the PDO has changed. However, what is clear is that there was lack of consistency across project documents. The project team could have done a better job in ensuring the consistency of the PDO across project documents. During implementation, the PDO that was tracked was this same PDO that was confirmed during the AF. During this ICR, the inconsistencies across project documents provided the impression that the PDO was changed. It required further detailed review and the confirmation of the AF PP and the Financing Agreement to conclude that it was error of reporting than actual change.

9. This is the PDO that finally found its way across the different documents and since it was part of the Legal Agreement, this Implementation Completion and Results Report (ICR) will use this PDO in reviewing project achievements.

10. The PAD stated that progress toward the objectives will be monitored by key results indicators covering project performance at all levels and identified six that it referred to as key result indicators. On the other hand, the Results Framework of the PAD summarized the PDO as "to increase rural incomes and diversify economic opportunities in rural areas" and had only two compound outcome indicators: (a) broader range and increased volume of agricultural products marketed in Mali and (b) increased market shares for Malian products on regional and international markets.

11. **The project chose four of the eight regions of Mali** (Koulikoro, Sikasso, Segou, and Mopti) and Bamako District (in its rural areas) for project intervention. The choice of these regions was justified by the fact that these are areas of high agricultural production potential, possess relatively well-developed support infrastructure, and were also home to some manufacturing entities.

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

12. The PDO was not revised.

13. **As part of the 2013 AF restructuring, the key performance Indicators were revised.** The new set of key performance indicators focused on the number of beneficiaries and value and volume of production for three selected value chain produces (see table 1).

Table 1. Changes in Project Outcome and Results Indicators

Indicator		Unit	Original target	AF targets	Revised targets
OUTCOME INDICATORS					
Beneficiaries		Number	7,000	2,000	9,000
Volume of production marketed by project-supported V/Cs	Mangoes	Metric tons	70,000	49,000	119,000
	Shallots		645,000	380,000	1,025,000
	Potatoes		215,000	115,000	330,000
Value of production marketed by project-supported V/Cs	Mangoes	CFAF million	35,000	21,000	56,000
	Shallots		87,000	35,000	122,000
	Potatoes		38,000	14,500	52,500

Source: Additional Financing Project Paper.
Note: V/C = Value Chain.

1.4 Main Beneficiaries

14. **Project beneficiaries were not explicitly stated in the original PAD.** The AF Project Paper (PP) was able to identify that the PAD failed to include beneficiaries as a core indicator and also reported that up to that point the number of project beneficiaries had reached 7,000 and that the AF will raise the target figure to 9,000. However, the AF PP also failed to explicitly define who the beneficiaries of the project are although it mentions, among others, small and micro enterprises as beneficiaries. The economic analyses included in the PAD did not specifically mention beneficiaries.

15. **The government completion draft report helped identify the following as direct project beneficiaries (including women):** producers (of mangoes, onions/shallots, potatoes, and papaya; livestock; and fish); processors (of mangoes, onions/shallots, milk, meat, and fish); traders/service providers; collectors (of mangoes); exporters; and artisans.

1.5 Original Components (*as approved*)

16. The project was structured along five components.

Component 1: Demonstration and dissemination of irrigation, post-harvest, and value-adding technologies (US$10.35 million)

17. This component's aim was to provide support to the demonstration and dissemination

by private sector providers of low-cost, simple, and adapted techniques and technologies to improve the production, productivity, processing, and marketing of selected high-value agricultural products. The component included three subcomponents: (a) demonstration and promotion of technological innovations, particularly through the establishment of on-farm pilot plots and demonstration centers at the regional level; (b) development of private sector capacities to provide equipment, inputs, and advisory services; and (c) dissemination of techniques and technologies and support to investment subprojects, particularly through a matching grant mechanism.

Component 2: Improvement of performances of agricultural supply chains (US$7.07 million)

18. The component's aim was to improve the organization and performances of agricultural supply chains, reinforcing private sector capacities to respond to market opportunities and improving the competitiveness of agricultural products, both traditional and new high-value products, for which Mali has comparative advantage. The component was designed to support (a) market research and improvement of the information base on supply chains; (b) improvement in supply chain organization and inter-professional dialogue, through institutional capacity building and training; (c) promotion of private investment and improvement in the provision of private services; and (d) quality and food safety management.

Component 3: Access to financing (US$2.93 million)

19. This component's aim was to facilitate access to capital and financial services for the various private actors and operators involved in the agricultural supply chains and strengthening the current agriculture credit market in Mali. The component was composed of three subcomponents: (a) technical assistance for operators and financial institutions and reinforcement of their capacities to appraise and supervise subprojects and operations in the sector; (b) technical assistance for the operation of a partial guarantee fund to help financial institutions engage more actively in the sector by providing partial guarantee coverage for loans; and (c) support to the creation and development of a range of financing instruments adapted to serve small farmers, artisans, service providers, rural entrepreneurs, agro-enterprises, and agribusinesses.

Component 4: Market-oriented infrastructure (US$21.49 million)

20. This component was designed to provide resources to carry out an investment program aimed at improving basic commercial and communication infrastructure, to improve linkages to markets and reduce transaction costs. The component included two subcomponents: (a) construction of commercial infrastructure such as export facilities, cold chain equipment, storage facilities, pack houses, wholesale markets, and so on and (b) rehabilitation of rural roads, particularly in cotton-growing areas, and access roads for post-harvest processing and commercial infrastructure built with the assistance of the project.

Component 5: Project management and Monitoring and Evaluation (US$5.61 million)

21. This component aimed at providing the resources necessary to ensure adequate project management, particularly overall coordination, financial management (FM), and procurement of goods and services, as well as monitoring of implementation and evaluation of results.

1.6 Revised Components

22. **No new component was introduced.** However, for the component activities supported under the project there were some revisions made to Components 1 and 4. Under Component 1, the importance of a matching grant facility to finance more subprojects were enhanced by reallocating more resources to the component. Under Component 4, rural road rehabilitation was dropped and later upgrading market facilities was undertaken. So the share of Component 1 from the overall credit (including the AF) was raised from 21 percent of the original allocation to 40 percent by the end of project. On the other hand, allocation for Component 4 was reduced from 42 percent to 25 percent.

1.7 Other Significant Changes

23. **The project had a total of five restructurings.**

24. **The first restructuring done in 2011 had three changes:** (a) modified the project's intermediate result indicators; (b) reallocated the credit proceeds; and (c) extended the closing date by six months to December 31, 2012. The PP explained that the change in intermediate indicators was necessitated due to larger subprojects funded by the project than originally envisaged while the rationale for the extension was to compensate the project for the observed procurement delays.

25. **The second restructuring done in 2012 made two changes:** (a) a six-month extension of the project closing date from December 31, 2012 to June 30, 2013 and (b) a reallocation that was characterized by the PP as 'limited/slight'. The restructuring also requested for a resumption of ACDP implementation activities, as allowed after the September 12, 2012 decision of the Bank management on lifting the suspension and a gradual reengagement. Annex 5 of the second restructuring PP (Results Framework and Monitoring) stated the PDO as, "The project aims at fostering improvements in the performances of supply chains for a range of agricultural, livestock, fishery, and gathering products, for which Mali has a strong comparative advantage." This was an improvement over the way the PDO was stated under the Results Framework and Monitoring section of the PAD.

26. **The third restructuring dated March 2013 provided AF of US$20 million equivalent and extended the project closing date by two years to June 30, 2015.** In addition, the PP for the AF made some changes to the indicators. The rationale for the AF, according to the restructuring paper, was to help finance the costs associated with the scaling up of ACDP activities, with a view to securing a higher-level achievement of the PDO over an additional two-year project implementation period.

27. **The fourth restructuring dated November 27, 2013 made a minor restructuring that extended the project second dated covenant provided in Section I.A.3 of Schedule 2 of the Financing Agreement** from one month to three months after the effectiveness of the project. The convenient was about the contracting a field-based team for which the contracting was delayed. due to the suspension by the World Bank of the then selected operator SOFRECO.

28. **The fifth restructuring in May 2015 made a reallocation of resources among** categories that resulted in allocating unused funds to Category 3 (matching grant) from Category 1 (consultants, goods, services) which were earmarked to finance subprojects.

29. **In summary, based on implementation progress and assessment of the prevailing situation, the focus of the project was adjusted.** Among these, two changes were made: (a)

the emphasis on cotton promotion was dropped due to delays in sector reforms after which the project focused on rehabilitation of rural roads in the cotton producing zone (1,101 km rehabilitated by the project) and (b) the project focus was reduced from 18 value chains to six priority value chains (mango, potato, onion/shallots, papaya, fattening of livestock, and milk) in 2009 following the recommendation made at the Midterm Review (MTR).

2. Key Factors Affecting Implementation and Outcomes

30. **Military coup (and the armed rebellion) and its aftermath.** Following the military coup of March 22, 2012, the Bank suspended development assistance and as a result the activities of this project were stalled for six months. Project supervision in the northern part of the country became impossible due to the armed rebellion in the area. Project supervision was de facto suspended in the Mopti area, the so-called 'red zone'. However, the task team leader stationed in the Bamako office conducted close follow-up and monitoring by organizing teleconference from the Bank's Bamako office with the Project Coordinating Unit (PCU) and the regional coordinators of the project.

31. **The 2010–2011 post-electoral political crisis in Cote d'Ivoire** resulted in the shutdown of the port of Abidjan, which is the key outlet for export/import of goods accounting for 70 percent of Mali's trade. The project and its beneficiaries had to scramble and establish new access ports in Togo, Ghana, and Senegal. These alternative routes were more expensive; for example, the Ghanaian corridor was 73 percent[2] more expensive than the Cote d'Ivoire access port.

32. **The impact of the 2012 political crisis affected the project implementation pace, as the absence of an elected government delayed the effectiveness of the AF**. The project was declared effective in October 2013, nearly seven months after the Board's approval and made its first disbursement in February 2014—almost a year after the Board's approval.

2.1 Project Preparation, Design and Quality at Entry

33. **The project clearly reflected the priorities identified in the CAS (2004–2006).** The CAS emphasized the importance of supporting competitive, broad-based growth in the rural sector by supporting increase in agricultural productivity and production in a sustainable manner, exploiting further the potential for irrigated agriculture, diversifying agricultural and livestock production, and by implementing natural resource management programs. The project was a good fit with the activities that the CAS emphasized.

34. **Project design reflected key sectoral strategies and programs of the government.** Operationally, it was the formalization of the elements of the government's MPRD into program activities (see PAD, p. 2 for detail). The government was committed to the project and had established clear sectoral strategy, policy, and priorities related to agriculture and rural development. The initial amount earmarked for the project was US$35 million credit but was raised to US$46.4 million as Mali was rated a good performer under the IDA Country Performance Ratings (PAD, p. 4). Thus, during project preparation, Mali was able to demonstrate its readiness for the project.

35. **The preparation relied on pertinent studies and pilot tests, with the participation of Malian public and private sectors.** The studies included (a) an analysis of the institutional

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[2] Ministry of Rural Development. *ACDP Implementation Completion Report.* July 2015.

design options; (b) a study on the mechanisms of, and access to credit; (c) environmental and social studies; (d) economic and financial analysis of the program; (e) a study of the need for market infrastructure and their management schemes; and (f) a study on agriculture sector financing. In addition, the project design made use of valuable lessons and experiences from similar operations in Mali and elsewhere.

36. **The project design identified critical risks and mitigation measures.** These risks, to a large extent, were mitigated. Delays in procurement were an issue since recruitment and, sometimes, renewal of contracts were taking longer than was originally envisaged.

37. **However, project design has shown some elements of over-ambitiousness and an overreach that included targeting 18 value chains.** These value chains was selected based on a study[3] conducted by an international firm and after consultation with stakeholders. During implementation, it was found that supporting such a number of supply chains would thinly disperse project activities that would have resulted in diluting the project outcome. With respect to quality of the project document, there were some glaring inconsistencies. The major one was the two versions of the PDO statement that were found across project documents and in the financing agreement.

38. **The project was reviewed for quality of design and supervision by the then Quality Assurance Group (QAG).** The results of the QAG are discussed under the Assessment of Bank Performance section.

2.2 Implementation

39. **Overall, the ACDP's implementation faced four key hurdles:** (a) deteriorating political conditions, including rendering some regions inaccessible; (b) suspension of disbursement; (c) instability in Côte d'Ivoire that is the main artery for the import and export for Mali; and (d) delay in processes, mainly procurement related, and effectiveness delays. These implementation impediments did have a lingering effect after they occurred.

40. **The project was approved by the Board on July 5, 2005 and became effective on April 4, 2006 (a full 9-month delay).** However, once the initial hurdles were overcome, the project moved "off to a good start…" as noted in the Independent Evaluation Group's CAS Completion Report (CASCR) review dated January 17, 2008. The project also suffered from the Bank's suspension of funds in response to the 2012 coup and the threats from armed rebels on the project's personnel and assets in the north. According to the Interim Strategy Note (ISN) for 2012–2013 (p. 8) "Agricultural output in the North has been impacted by the disruption of farming activities, marketing channels, inputs, and financing."

41. **Project steering guidance and oversight were provided at the national and regional levels** by a National Steering and Guidance Committee (CNPO) chaired by the minister of Agriculture (the Ministry of Agriculture was later changed to MRD) at the national level and the Regional Steering and Orientation Committees (CRPOs) chaired by regional governors. The CNPO and the CRPOs were constituted by representatives of other ministries (or their decentralized technical services) of Agriculture, Livestock, Environment and

[3] Ministère de l'Agriculture de la République du Mali Programme Compétitivité et Diversification Agricoles (PCDA). Profil Strategique pour le developpement de la competitivite des filieres agricoles de mali. Identification des opportunités stratégiques de valorization et de diversification de l'agriculture malienne. Projet GEOMAR International n° 45710. JUILLET 2006.

Sanitation, and Transportation as well as of financing institutions, chambers, and actors of targeted sectors. The CNPO and CRPOs met once a year and approved work plans and annual budget submitted to them by the PMU and the regional coordination units, respectively. They also analyzed and approved the financial reports. The PMU implemented the project directly at the national level and through private operators at the regional level.

42. **During implementation the project also implemented a PHRD TF (TF-90855).** This PHRD TF for smallholders' tree plantation project was made available for plantation of Acacia Senegal on a 10,000 ha. The project had its separate GRM and the achievement was reported separately with a total disbursement of US$428,722 (out of the total grant amount of US$474,900). The Grant closed unsatisfactorily after planning 1,716 ha with Acacia Senegal. Clearly, this grant has no relationship with the PDO but the MORD wanted to use the exiting PCU of ACDP to manage the resource and thus it was attached to this project.

43. **The MTR [4] provided guidance and set the stage, among others, for the restructuring that ensued.** It made a recommendation for the project to focus on a limited number of priority value chains and a shift from on-station to on-farm demonstrations.

44. **Acting on key lessons learned, the project maintained its innovative institutional arrangement feature**, which was to contract private service providers to implement project activities for the benefit of its targeted private sector actors. The project also maintained the second pillar of its private-led approach, which was to build the capacity of professional organizations to take over the management of the market infrastructure and provide basic services to beneficiaries to sustain and amplify the project's momentum after the ACDP closed.

45. **Overall, the project faced some adverse conditions during its implementation.** However, the adjustment in project implementation was effectively used to ensure that the project remained focused on its outcomes.

2.3 Monitoring and Evaluation (M&E) Design, Implementation, and Utilization

M&E Design

46. **The M&E design recognized the weaknesses and the legacies of past projects' failure in establishing a sound M&E.** Therefore, the design determined that establishing an effective M&E system was "critical to ensure a close and reactive monitoring of supply-chain performances and project's impacts." The design also foresaw that the M&E system "will be closely supervised regarding staffing, design, and data analysis and dissemination." (PAD, p. 7).

47. **The design correctly identified the need to have a decentralized structure to report progress and therefore, the PAD provided for contracting M&E specialists at the national level and for each region by the regional operators.** In addition, the M&E system design ensured that it was a collaboration with other agencies such as the Rural Economy Institute of Bamako that was in charge of carrying out the baseline study. Overall, the design of the M&E system was appropriate to the project needs.

[4] See the aide memoire for the May 20 to June 5, 2009 MTR mission.

M&E Implementation

48. **The M&E system became fully functional by 2008–2009 after long delays**. The baseline data was not established at the start of the project (November 2006) but much later in 2008–2009. The QAG reported that "despite the attention given during the design phase, M&E started slowly and [was] not performing satisfactorily, particularly as regards evaluation, four years after effectiveness." However, the QAG assessment noted that the monitoring aspect was performing well and that the major weakness was with the evaluation aspect.

49. **As planned, implementation of the M&E relied on a specialist at the national level to establish a database to manage, analyze, and disseminate data originating from contracted operators and specialists at the regional level.** Once it became operational, it delivered strong results, including the following: (a) dynamic database of characteristics and technico-economic results of supported subprojects; (b) technical implementation, M&E, and annual reports; (c) three impact analysis reports; (d) environmental monitoring reports; and (e) reports to support over 30 field supervision missions in the region.

M&E Utilization

50. **The M&E system was instrumental in project monitoring and was the basis for all reports prepared by the PCU.** Also, the M&E system provided critical data and input in communication of project results. The M&E system reports were made available to the public through a website (by November 26, 2015, the website registered a total of 152,251 visitors). The M&E database provided considerable information to the general public, summarized in tables to avoid overwhelming the general user with technical details.

51. The Bank implementation support missions relied on progress reports prepared based on the M&E system. The choice made to focus on selected value chains was informed by the monitoring of the progress and the MTR evaluation. Overall the M&E evaluation was used at different levels and for making the necessary correction in project execution.

2.4 Safeguard and Fiduciary Compliance

Safeguard Compliance

52. **The project was classified as Category B and triggered three safeguards:** (a) OP 4.01 - Environmental Assessment, (b) OP 4.09 - Pest Management, and (c) OP 4.12 - Involuntary Resettlement. All safeguard instruments were prepared, consulted upon, and disclosed before AF appraisal. At the end of the ACDP, the Environmental and Social Management Plan prepared for the original project provided guidance on management and mitigation measures for environmental and social impacts of the subprojects, such as road rehabilitation and construction of processing facilities. The project did not require the preparation of any Resettlement Action Plans as no land was acquired nor was there any loss of economic assets/properties to trigger involuntary resettlement and/or restrictions of access to resources and livelihoods. The environmental and social mitigation measures summarized in the Environmental and Social Management Framework, Project Management Plan, and the Resettlement Policy Framework, as well as the approved specific mitigation measures, were executed, monitored, and periodically reported.

Financial Management Compliance

53. **At early project implementation stage, the review of both FM and audits identified shortcomings, mostly in the areas of internal controls, mastering of the accounting software, and delay in the auditor recruitment.** However, all related weaknesses were duly and promptly addressed by the project team contributing continuously to strengthen the internal control environment. The audit opinion and FM performance moved respectively from qualified and moderately satisfactory to unqualified and satisfactory ratings. The strong involvement and commitment of the project team to ensure good FM quality has contributed to maintaining a sound internal control environment with a moderate FM risk rating during much of the project life, until its closing.

Procurement Compliance

54. **There were a number of procurement delays in project implementation and this has also been true during the final days of project implementation.** At times there was insufficient proactivity, unrealistic planning on the part of the actors, and insufficient monitoring and control of the work by the Delegated Contract Managers. However, during the final supervision mission there was no request pending.

55. **With respect to the integrity of the procurement system established under the project, the system served the project very well.** The final mission noted that efforts have been made to improve the filing and archiving of procurement records. A dedicated room was built and storage and conservation equipment was acquired. This room also contains the FM records.

56. **Disbursement.** Disbursement was not formally revised. Following the political instability in the country, disbursement was suspended for six months, which resulted in 46 percent reduction in disbursement in FY12 compared to FY11. However, disbursement picked up quickly and by FY13, it increased by 183 percent from the reduced level of FY12.

57. **Overall, the project disbursed all of its IDA credit.** Out of the total US$66.4 million equivalent made available to Mali under this project, 99.9 percent of the credit was disbursed. This level of disbursement, while being fully satisfactory on its own, also compares positively with the level of execution by other donors (56 percent in 2010 and 69 percent in 2011).

2.5 Post-completion Operation/Next Phase

58. **The government is fully committed to developing the agricultural sector.** A Systematic Country Diagnostic (SCD)[5] of 2015 (p. 13) reported that the "government has placed the agricultural sector at the top of its development priorities for several decades." In 2014, budget allocations to the sector increased from 11 percent to 15 percent of the total budget. The approval of a National Strategy for Agribusiness Development demonstrates the government's unwavering commitment to this agenda.

59. **Encouraged by the achievement made under the ACDP and taking the lessons learned, the government of Mali (GOM) is preparing a new operation.** For this proposed new project (Mali Support to Agroindustrial Competitiveness Project - P151449), also known

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[5] World Bank. 2015. *Republic of Mali: Priorities for Ending Poverty and Boosting Shared Prosperity - Systematic Country Diagnostic (SCD).* Report Number: 94191.

as the Agripole project, the draft PCN under discussion stated that, “Some value chains (fruits, vegetables, etc.) have already demonstrated their competitiveness in domestic and international markets, and their consolidation, expansion and move towards higher value added products constitute the main challenges.” Thus, this proposed Agripole project will take off from where the ACDP left off.

60. **Some products have already established a reliable market and in some cases it has become a question of fulfilling the demand originating from abroad.** The value chains supported through the ACDP are linked to market and are on an expansionary trajectory. A dynamic entrepreneurship standard is taking shape that will ensure further gains beyond the current level of achievements.

61. **Overall, the continuation of the activities started remains on a very solid ground** given the government’s commitment to the policy of expanding agribusiness; the growing interest by the private sector to invest; and donors willingness to support value chain development.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design, and Implementation

62. **The relevance of the PDO is High.**

63. **The PDO reflected the priorities of the government and responded to the circumstances prevailing during project preparation and is also relevant to the current situation in Mali’s** agriculture sector, specifically in the agribusiness subsector. Project design derived from the government’s policies and strategies as defined in the different documents, including national policy and strategy documents: (a) the sector policy letter of 2001, which provides the institutional vision of agricultural and rural sector by 2010; (b) the Master Plan for the Rural Development Sector (SDDR) (1992) updated in 2002 for the period 2002–2010; and (c) the Poverty Control Strategic Framework for 2002–2006. Agriculture and value chain strengthening and expansion still remain a priority of the government as reflected in the Government Action Plan (*Plan d’Action Gouvernemental*) developed in 2013 for the period 2013–2018 that reiterated the new government’s commitment; the adoption of the Agriculture Master Law (*Loi d’Orientation Agricole*); and the approval of a National Strategy for Agribusiness Development.

64. **The project’s objectives are perfectly aligned with the GOM’s current global priorities**[6], including the GOM’s two pillars for rural development: (a) transformation of family subsistence agriculture to market-oriented, family commercial agriculture and (b) creation of synergies (agriculture, energy, irrigation, transport, commerce, and so on) to promote private agricultural enterprises in agripoles.

65. **Once relative stability ensued, the mode of operation focused on post-crisis recovery under which agriculture still featured prominently in helping the recovery.** The ISN for 2014–2015 reported that increasing the performance of the agriculture sector will be one of the “urgent priorities to ensure the resumption of economic activity.” To this end, in the “immediate aftermath of the conflict, the Bank quickly prepared four operations, including

[6] According to the Impact Study, the GOM relied on the ACDP’s experience to develop its Country Development Policy (CDP) in 2013 and National Agriculture Sector Investment Program (PNSIA) in 2015 (PACD - *Rapport d’achèvement, 2015, Meimo*).

additional financing in agriculture (IDA, US$20 million)" for the ACDP, as part of the Bank's response. This demonstrated that the objective remained robust under changing circumstances.

66. **The 2015 SCD[7] provided a powerful justification on the importance of agriculture and the relevance of expanding and strengthening supply chains in agriculture.** The rationale for continuing working on improving competitiveness of agricultural products was due to the realization that "Typical labor opportunities open to the poorest are associated with agriculture." (SCD 2015, 33). Thus, the SCD recommended that in Mali "the development of selected value chains are the most pressing issues." (SCD 2015, 92).

67. **The objective of the project is also in line with the dominant current thinking on agricultural development through the development of supply chains.** A study done in 2013[8] concluded that "Agribusiness can play a critical role in jumpstarting economic transformation through the development of agro-based industries that bring much-needed jobs and incomes. Successful agribusiness investments in turn stimulate agricultural growth through the provision of new markets and the development of a vibrant input supply sector." Thus, assessed from the prevailing sectoral and thematic angle, the objective is on firm ground and still relevant.

Relevance in Design and Implementation

68. The relevance of design and implementation is rated as Substantial.

69. **The project grew out of pilot activities and relied on informative lessons learned from these interventions and on the Bank's worldwide experience.** In Mali, before the ACDP, the Bank supported the promotion of small-scale irrigation, as well as trading and processing of agricultural products. Critical operational guidance were developed out of these pilot projects, which led to the design of effective approaches and programs to enhance the development of a diversified and commercially oriented agriculture and agribusiness sector.

70. **By design the project was selective.** The project design selected a limited number of regions with high potential. Based on previous Bank experience, the design was based on the belief that small-scale projects targeted at one or a limited number of supply chains are not necessarily cost-efficient and have limited results and impact. This assumption, however, may have been stretched to push the design to be ambitious in the selection of 18 value chains to be supported under the project.

71. **The design relied on diagnosis of a given supply chain on a holistic basis, which looks at the supply chain as a whole, from farming and production to marketing, to identify specific constraints and bottlenecks.** The project then opted for removing the specific constraints and bottlenecks in the supply chain than a blanket support for the development of a supply chain.

72. **The project approach is also validated by current studies and strategies.** The fact that the ISN and, most importantly, the 2015 SCD recommended further expansion of the supply chain approach developed by the ACDP project and the fact that the government requested for a follow-on project to scale up and include other supply chains clearly reflects the relevance of the design.

[7] World Bank 2015.
[8] World Bank. 2013. *Growing Africa: Unlocking the Potential of Agribusiness.* Report Number: 75972.

73. **Implementation was further enhanced through the AF and reallocation of resources to the most-effective components of the project.** Reducing the focus of the project to only 6 value chains (from 18) was instrumental for achieving the desired results. Extension of the closing date also compensated the project for the time lost following the crisis in the country.

74. **However, design showed some weaknesses.** The design was ambitious on the number of supply chains it identified for support under the project. As part of that, the number of subprojects to be implemented and financed were also optimistic. However, during implementation it was quickly learned that continuing with the number of supply chains originally selected for the project support would have distributed the project thinly and diluted project impact. The downward revision of the number of supply chains did make the design more realistic.

Overall Relevance

75. With a relevance of objectives rated as high and a relevance of design and implementation rated as substantial, the overall relevance is rated Substantial.

3.2 Achievement of Project Development Objectives

Rating: Substantial

76. **The project has achieved its development objectives, as measured by the key performance indicators and related impacts.** The project was designed to directly benefit 9,000 people (a target revised upward by 29 percent from the original target of 7,000). By the end of the project, it directly benefited 16,300 people, which is 233 percent of the revised target.

77. **Clearly, the project markedly improved the performances of supply chains selected for support under the project.** Both the targets set for volume and value were exceeded, indicating the much improved performance of these selected supply chains. Table 2 demonstrates the improvement in the performance of the six value chain products.

Table 2. Volume and Value Achieved in the Five Selected Value Chain Products

Product	Target	Actual (EOP)	Achievement of Target (%)	Product	Target	Actual (EOP)	Achievement of Target (%)
Volume of production (tons) - Livestock (head count of cattle)				Value of production (CFAF, billions)			
Potato	330,000	389,000	117	Potato	52	67	128
Shallot/Onion	1,025,000	1,234,000	115	Shallot/Onion	122	148	121
Mango	119,000	128,000	107	Mango	56	60	107
Milk	n.a.	1,320,137	–	Milk	n.a.	462	–
Papaya	n.a.	17,200	–	Papaya	n.a.	15,920	–
Livestock fattening	n.a.	9,615	–	Livestock	n.a.	9,422	–

Note: EOP = End of Project; n.a. = Not Available;
Source: Compiled from Impact Evaluation, *(Etude d'impact du PCDA)*2015 .

78. **Performance improvement is also evident from improvement made in productivity**. The project had a major achievement in improving productivity of the value chain products it supported. Table 3 shows results from representative beneficiary farms. The gains in productivity in most cases are double the original amount. While the project has not done a quality analysis of the products, it is clear that quality has also improved as a result of

product specification of the market that farmers have to adapt and follow. For instance, the impact study indicated that both the quality and weight of livestock was higher post-ACDP compared to the period before the project.

Table 3. Improvement in Productivity in Selected Farms

Sectors	Output before Improvement (Pre-ACDP) (kg/ha)	Output after Improvement (Post-ACDP support) (kg/ha)	Achievements (%)
Shallot	12,000	26,000	216.67
Potato	10,500	21,000	200.00
Papaya	13,400	26,000	194.03
Mango	10,000	17,500	175.00
Fattening	6 heads/year	60 heads/year	1,000

Source: Extracted from the Final Evaluation, 2015.

79. **This gain in productivity was successfully transferred to gains in income.** The impact study, for example, reported that the income of potato farmers increased from CFAF 157,900 to CFAF 1,262,100 (a net increase of 700 percent); of shallot/onion producers' income from CFAF 475,300 to CFAF 884,400 (an increase of 80 percent); and that of papaya farmers from CFAF 460,500 to CFAF 507,000 (a modest but respectable increase of 10 percent).

80. **The project also contributed in reducing unemployment.** The survey conducted as part of the impact study, reported that out of a total of 5,248 jobs created or consolidated, 4,710 (89.7 percent) were the result of ACDP support.

81. **The project also enhanced the volume of products marketed.** The project impact study reported that the amount of mango marketed in regional and local markets registered a net increase of 668 percent in 2014 compared to its level in 2006. The project also resulted in improving access to foreign markets for the supply chains supported under the project. Export of mango, for example, showed a net increase of 990 percent in 2014 compared to its level in 2006.

Figure 1. Quantity of Mango Exported (tons)

82. **The project significantly contributed to enhancing value added by beneficiaries.** The project was one of the new generation of projects that strived to enhance value added to agricultural products as they transfer and move through the supply chains. The value added by

the ACDP beneficiaries reached CFAF 10.2 billion in 2014 from its level of CFAF 0.5 billion in 2005.

83. **In addition to reducing post-harvest loss and allowing farmers to sell at higher prices (CFAF 125 per kg during harvest season compared to an average of CFAF 775 per kg after the harvest period), storage facilities allowed reserving of seeds for the planting season.** According to the SCD, in Sikasso, the coefficient of variation of producer prices is high. Thus farmers were losing twice, when they sell during the harvest season at a time when the price is low and when they buy seeds when the price is high. A village dealer in Tabakoto reported that his turnover increased by close to nine fold (from an average of CFAF 1,200,000 before the project to CFAF 10,350,000 after—a 762.5 percent net increase). The project supported storage and conservation facilities that resulted in an increase in the quantity of shallot stocked, a decrease in the rate of shallot losses, and improvement in option in choosing the timing for marketing and improvement in the quality of the marketed product, which jointly resulted in improving the income of beneficiary farmers.

84. **The agricultural sector is clearly showing a new dynamism as demonstrated by the increasing emergence of agricultural enterprises related to food processing, upstream activities, and downstream industries.** The project has ushered in a new culture that sees agriculture as a business. The project has been transformational, by helping Mali diversify further into fruits and vegetables and agro-processing; assisting Malian entrepreneurs to also diversify their businesses by seizing new opportunities in food production, processing, and export to regional and international markets; and introducing a new spirit of entrepreneurship and innovativeness in Mali. Most importantly, in addition to the direct impact the project had in improving the performance of selected supply chains and the agribusiness enterprises, it has also indirectly affected the agribusiness sector through the demonstration effect and policy improvement for the observed new dynamism created in the country. The project outreach and communication campaign contributed to create interest and willingness by public servants to start an agribusiness and develop it into a successful enterprise. Testimonies from new agribusiness entrepreneurs indicate that they have been galvanized directly or have taken the cue from the project in launching their businesses.

85. **Furthermore, the beneficiaries of the ACDP, in all categories, have improved their human and social capital through training, study tours and exchanges**, fairs, visits of the Centers of Demonstration, Dissemination, and Delivery (CDDP), and so on. The project also enabled the beneficiaries to secure access to factors of production such as materials and equipment for irrigation and processing of products as well as the commercial infrastructure and conservation/storage facilities. Professional organizations and regional bodies have been structured and/or strengthened.

86. **The ISN (2013) recognized that in agricultural competitiveness, there was success in the development of new crops such as mangoes and reported that farmers were adopting the new technologies.** Private operators and producers of fruit and vegetables have been organized, which contributed to increased efficiency. Professional entities are established for a number of products, including cotton and mangoes. The ISN also acknowledged that supply chains and diversification were being supported by the ACDP, which was under implementation during the preparation of the ISN.

87. **Additional impact of the project was its promotion of private investment.** The project managed to implement four private investment projects in joint venture as originally targeted. The four are (a) a commercial mango plantation of 200 ha (50 ha were already

developed); (b) a cardboard factory that produces packaging for agricultural products; (c) a commercial plantation of 500 ha by the BAGOE company; and (d) the development of 1,000 ha for the production of potatoes, rice, and power by AGRIZED. This is a very important achievement given that the public sector cannot finance all agricultural developments. Such private sector investments would allow the GOM to focus on delivering public goods for the efficient operation of the sector.

88. **In summary, the ICR team leaned toward rating the achievement of project objective as High.** However, the team took into account the number of years (ten) it took the project to achieve recognizable results (granted that this was beyond the control of the project and given by default that the AF requires an additional implementation period). Further, the team recognized that the project achieved these results with an additional 30 percent resources. The team also recognized that the disruptions created by the political unrest have a cost and that the indicators were also adjusted upward. The number of value chains supported and the fact that the management of the infrastructure developed has not been fully transferred to the private sector weighed very strongly in reducing the rating to Substantial. The ICR recognized the big achievements made by the project but the team also was cognizant that Mali started from very low level that made the impact significant.

3.3 Efficiency

Rating: Substantial

89. **The PAD argued that the project will provide many sources of economic and social benefits.** Annex 5 of the PAD presented a cost-benefit analysis at the level of the whole project. The economic internal rate of return (EIRR) for the whole project was 16 percent. The PAD also performed an estimate of the EIRR for selected products and the return ranged between 64 percent for tomatoes under improved capacity for irrigation and agricultural practices and 178 percent for onions under improved storage. During the AF, the project revisited the cost-benefit analysis and found that the EIRR was almost the same as the PAD estimate with a Net Present Value (NPV) of CFAF 1,350 million.

90. **The ex post review conducted analyses of the NPV and the financial Internal Rate of Return (IRR) of individual enterprises and the EIRR for the whole project**. The evaluation noted that direct comparison with the ex-ante was difficult given the changes in the importance of products the project made during implementation. That said, the returns by themselves are robust and demonstrate the high return the project managed to achieve.

91. **The ex post evaluation confirmed the high return of this project.** The NPV for investments at business level is approximately US$3,533 million as opposed to an actual investment of US$59.2 million. The EIRR for the whole project is estimated at 15 percent. These results are similar to the estimation made as part of the AF, which was 16 percent. (See the detailed analyses under annex 3.)

92. **A sensitivity analysis was performed assuming 10 percent, 20 percent, and 30 percent increase in the costs of the project** (other than those of investments at business level). This analysis gives a profitability rate of 14.1 percent, 13.3 percent, and 12.5 percent. When the flow of benefits is delayed by one or two years, the respective EIRRs are 13.6 percent and 12.4 percent. Thus, the results are robust and hold even under different assumptions.

93. **The analysis identified key activities for the observed high level and robust achievements.** The success emanated from project investment in improved irrigation,

processing techniques, improved technologies, and the availability of commercial infrastructure, which contributed to improving the quality of products, and due to the capacity building work undertaken that allowed sector stakeholders to improve the utilization of technologies (and techniques) made available by the project. Overall, these results can be compared with those of the initial project and the AF as provided in table 5.

Table 4. Comparison of EIRR and NPV at Different Stages of the ACDP

Project Stage	EIRR (%)	NPV (CFAF, millions)	
Original credit * (PAD)	16.00	n.a.	NPV to 10%
AF ** (PP)	16.10	1,350.0	NPV to 10%
Whole project*** (Final Impact Evaluation)	15.00	20,379	NPV to10%

Sources: * PAD financial and economic analysis, 2004.
** PAD Additional financing, Annex financial and economic analysis, 2013.
*** Calculation of the ACDP completion review mission, 2015.

94. The cost-benefit analyses consistently confirmed that the project showed a high rate of return. With regard to resource utilization, the project used all of its resources by project closing.

95. **Estimation of turnover resulting from project investment shows a high percentage of return.** Total project cost (including the contribution of the GOM, the beneficiaries and the Bank) amounted to US$71.8 million. The total turnover generated by the beneficiaries of the ACDP who were covered by the survey amount to US$51.5 million. Beneficiaries of the ACDP who were covered by the survey represent half of the total number of beneficiaries. If this is extrapolated to the total beneficiaries, the total turnover would be an estimated US$103 million, which covers the total project cost and yields a surplus of US$31.2 million. The turnover generated by the beneficiaries of the ACDP represents 143.5 per cent of the total cost of the project at this point of the project without accounting for the flows that will accrue in the future.

96. On improving efficiency, the project contributed to post-harvest reduction for selected beneficiary farmers but the main contribution was establishing a system and demonstrating its positive impact on income. One characteristic feature of Mali agriculture was (and still is) high post-harvest loss. Consider the case of shallots: 50 to 70 percent of the initial stocks were lost during the six months following a harvest. In Sikasso, the most developed agricultural region of the country, only 30 percent of communities have a storage facility. Thus, post-harvest loss is very significant. This is more pronounced in the case of perishable products such as mangoes, onions, and shallots. A shallot dealer who is a resident of Tabakoto village, close to Bandiagara, and who benefited from the ACDP cofinanced storage and conservation facility, reported a huge reduction in post-harvest loss. Before the ACDP, post-harvest lost stood at 67 percent of the total commercialized quantity. As a result of the infrastructure works and the training provided, the loss reduced to a mere 8.7 percent of the commercialized volume—which is a 667 percent reduction in loss.

97. **Efficiency also was gained in water use in irrigation due to improvement to the system and provision of water-efficient technologies such as drip irrigation systems.** Provision of improved seeds also contributed to efficiency given that productivity has risen significantly. Improving access roads also meant that products can be delivered on time, especially perishable products, which again implies improvement in efficiency. All these demonstrate that the project had a major impact in improving the efficiency of the value chains

it supported. Therefore, efficiency is rated Substantial.

3.4 Justification of Overall Outcome Rating

Rating: Satisfactory

98. Based on the ratings of the three items above (relevance, achievement of PDOs, and efficiency) and cognizant of the Independent Evaluation Group's outcome ratings guidelines, the ICR team rates the overall project outcome as Satisfactory.

Table 5. Summary of Overall Outcome Rating

Rating Class	Rating
Relevance	High
Achievement of Objectives	Substantial
Efficiency	Substantial
Overall Outcome Rating	Satisfactory

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

Impact on Poverty

99. **The areas selected for intervention by the ACDP are geographic regions with a high concentration of poor.** Occupationally, farmers are the poorest, with a poverty rate of 57 percent to 81 percent incidence, 85 percent to 86 percent for depth and severity. Thus, the main beneficiaries from job creation by agribusiness came from the ranks of the unemployed (or partially employed) and therefore are poor. The project by design is pro-poor. However, the impact of the project on poverty is not systematically captured and it is therefore difficult to present a consolidated figure. One direct impact is the number of jobs (about 5,248 jobs)[9] that was directly created as a result of the ACDP and it was the rural poor who directly benefited from the project.

100. **Gender aspects**. The project made conscious efforts to target women so that they can benefit from the project directly. Of the 5,248 jobs created, 42 percent went to women. This is a big achievement given that women have not fared well in the past and were passed over by development interventions. Women constituted 34 percent out of the total project beneficiaries. Of the 612 subprojects supported by the project, 29 percent were managed by women. The lower business ownership compared to the 34 percent of total beneficiaries was the result of difficulties encountered by women in mobilizing sufficient resources (such as securing loan) to cover the cost of their cofinancing. These businesswomen were among the most dynamic of entrepreneurs working with the project. By promoting the creation of businesses and jobs in rural areas, the project certainly contributed to the advancement of women and their positioning in the Malian economy and the agricultural sector.

101. **Social development.** The project had significant social development impact resulting from the different core project activities. These included (a) a number of trainings (hands-on workshops in a range of tasks from production to marketing/exporting were provided under the ACDP); clearly an improved capacity is in operation under the value chains that were supported under the ACDP; (b) formation and strengthening of a number of organizations, especially at the regional level, which is an important development that the regions can build on; and (c) the

[9] The impact analysis indicates 5,248 jobs declared but also says that about 5,500 jobs were created.

project determination and focus to ensure women benefited from the project.

102. **Further, in addition to strengthening of existing agribusiness operators, through the 612 subprojects that the project cofinanced, the ACDP also mobilized women, farmers, and private sector operators;** created and improved knowledge on market access; demonstrated working partnership among producers and processors; and the host of other activities the project supported had significant social development impacts. Further, the fact that the project operated at the farm level with private business operators meant its contribution to social development was significant and that bodes very well for the sustainability of project outcome. These subprojects benefited from improved access to financing, which the project supported by building the capacity of financial institutions to service agribusiness investors. These financial institutions provided a partial guarantee fund to the tune of 836 CFAF, which was a 95 percent achievement of the revised target of 880 CFAF.

103. **One important contribution of the ACDP project was reducing the drudgery of labor at the farm level.** The use of improved farm equipment and irrigation technologies promoted by the project contributed to reduce the drudgery of labor and help increase the productivity of producers. The impact study shows that compared to the baseline situation, the average cultivated area per farm has increased from 0.95 ha to 3.08 ha for potatoes, 0.5 ha to 1 ha for shallot/onions and 0.3 ha to 1.5 ha for papayas that came about due to improvement in technology that relatively reduced the level of toiling.

(b) Institutional Change/Strengthening

104. **Institutional development will remain a major hallmark of the project**. Here, institutional development will include changes in the rule of the game in addition to organizational formation strengthening and improving policy and legal frameworks, among others. Institutionally, the project was transformative in that it supported the private sector actors to implement a new operating standard and established a spirit of entrepreneurship and innovativeness as it applies to agricultural value chain development. Building the capacity of value chain professional organizations was the cornerstone in this approach. The institutional arrangements were designed to ensure that participating organizations become self-sufficient and vibrant undertakings. Critical milestones in this capacity-building process have been reached, including the creation of functional networks in the key value chains (mango, potato, onion/shallots, papaya, and livestock). The project has strengthened the capacity of Malian agricultural exporters to effectively compete in international markets by assisting 16 exporters secure GlobalG.A.P. certification, training of 9 quality control auditors, and the certification of mango export facilities (Bamako and Sikasso). Project beneficiaries have improved their skills, either in production techniques and practices, processing, or management or in all of those.

105. **A major achievement is also made in establishing functioning partnerships to deliver project results.** Before the advent of the ACDP, institutions whose activities are complementary operated independently. The ACDP systematically built and nurtured a significant number of partnerships. The government technical service agencies, research institutes, research and consulting firms, and nongovernmental organizations conducted studies and provided trainings and technical support. On the other hand, financing institutions delivered financial services to the beneficiaries of the ACDP. These partnerships made it possible to implement ambitious (both by geographic coverage and thematic areas covered) and extensive work programs. For instance, these partnerships allowed financing institutions to develop confidence in providing loans to some agricultural subprojects, which would have been impossible without this joint work program.

106. **The project has created a remarkable set of organizations that will ensure that the project will build on what has been achieved and will serve as a demonstration for others.** For example, the four CDDPs that are set up with the support of the ACDP serve as 'showcases' of five drip irrigation technologies and techniques and eight technologies and techniques for processing shallots. In other circumstances, enough capacity has been created, allowing the future expansion of the promising value chain achievements. Consider the case of mango packaging in which the project created a total capacity of 5,000 tons per year. Only 36.5 percent of this installed capacity is used, ensuring sufficient capacity for future expansion to fulfill the increased demand for packaged mango that has been growing substantially.

107. **While maintaining its private sector focus, the project also collaborated with several public institutions to improve public support to private sector actors during implementation and expectedly after project closing.** The project collaborated with the Institute of Rural Economy (*Institut d'economie rurale*, IER) to develop, and later take over, demonstration plots and pilot project tests in food processing. It also worked with the IER's food laboratory to upgrade its capacity to perform food safety tests to support agribusinesses.

108. **Finally, the ACDP supported the development of a number of strategies and drafting of legislation as they relate to improving the enabling environment for agricultural business and in facilitating the further development of value chains.** The project also financed and produced at least 65 reports ranging from technical studies and diagnostic analyses of value chains to strategic development plans and feasibility studies that will be the basis for future works in value chain development.

(c) Other Unintended Outcomes and Impacts (positive or negative)

109. There was no unintended negative impact observed during implementation.

110. **The project resulted in a positive effect on microfinance institutions (MI).** With growing confidence in the feasibility of agribusiness and seeing that the regions in which the ACDP operated was changing toward a better economic future, the *Banque Nationale de Développement Agricole* (BNDA) opened 17 branches in the areas that the ACDP was operating.

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

111. No beneficiary survey was conducted.

4. Assessment of Risk to Development Outcome

Rating: Moderate

112. **The design of the project clearly provided room for sustainability of project outcomes.** From the beginning, implementation was expected to focus on the continuation of activities initiated and demonstrated under this project after closing of the credits. The project aimed to institutionalize the methodology developed under it. As part of this institutionalization effort, eight Malian businesses exporting mangoes have received the prestigious GlobalG.A.P. certification.[10] There is strong evidence that the selected value chains that were targeted by the

[10] GlobalG.A.P. is the world's leading farm assurance program, translating consumer requirements into Good Agricultural Practice in a rapidly growing list of countries—currently more than 100. The certification helps producers comply with Europe-wide accepted criteria for food safety, sustainable production methods, worker and animal welfare, and responsible use of water, compound feed, and plant propagation materials. Harmonized

project institutionalization of agribusiness achieved a certain level of development albeit it is still at early stage of development. A milestone was reached in building the capacity of professional organizations; although they are not yet fully self-sufficient, they are operational, with elected leaders and mandates.

113. **Market diversification will also allow project outcomes to not falter due to loss or lack of markets.** The agribusinesses supported under the ACDP are operating in local, national, subregional, and international markets. For example, papaya is marketed only domestically. There is still unmet demand to fulfill; for other value chains, diversification of markets has been pursued.

114. **One important element that contributed to the success of enterprises supported under the grant scheme was the rigors screening that subprojects have to undergo for receiving a matching grant in addition to their direct financial contribution.** The cost-benefit analysis found out that the financial analysis made on beneficiary enterprises investments are encouraging. Although each recommended technology has required new skills and increased spending, financial analysis shows that these investments have contributed to a substantial increase in revenue and gross margin of the companies, demonstrating that business models promoted are very profitable and thus sustainable. The project made grants totalling CFAF 3,244 million to subproject entrepreneurs, through the investment and innovation fund. This necessitated contributions of up to CFAF 2,000 million from the beneficiaries.

115. **The follow-on project will build on the achievements of the ACDP.** Although this project successfully supported agribusiness development by diversifying production and the development of supply chain in high-value products, this is not a task to be completed by one project and a single intervention alone. Cognizant of this fact, the government has requested for a follow-on operation that will build on the gains made under the ACDP. In addition, other donors are also supporting value chain development currently and have shown interest to continue providing support.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry
Rating: Marginally Satisfactory

116. **This project was a continuation of a series of Bank interventions in the agriculture sector and therefore the project built on the gains made in the past.** Also, as a continuation of past interventions, this project reflected lessons learned from past experience. The selection of the regions was appropriate given the need to intentionally focus on regions that are the most fertile area for diversification of agricultural production and with high concentration of unemployed poor.

117. **The project design embodied or was the operationalization of the Bank's assistance to the GOM's implementation of the Rural Master Plan.** As result, the project focused on the results of the different diagnostic works identified and reflected the priorities of the government. The design also provided priority to those crops for which it was shown by

certification also meant savings for producers, as they would no longer need to undergo several audits against different criteria every year.

the studies conducted that there was sufficient market demand.

118. **The project design was well informed by pilot activities and experience in Mali and other countries.** Extensive consultation was conducted at different levels, including with donors and private sector operators. The implementation arrangement included all relevant stakeholders. It is important to note that contracting out the implementation of activities in which the private sector has a clear comparative advantage and the know-how was the right choice.

119. **Overall, project components reflected the support needed and were well aligned and logically structured to support the achievement of the PDO**. The soundness of the components chosen is clearly demonstrated by the fact that they were not changed during the different restructurings. The arrangement made for M&E, both at the national and decentralized levels, was also right given the number of subprojects the project supported. It would have been difficult to collect and consolidate at the national level without close monitoring and reporting by the regional outfits.

120. **The design was also able to identify a list of trainings needed**—from farm level in handling improved equipment to processing and packaging of products. Without such training, it would have been difficult to receive certification, which mean that it would have been difficult to penetrate the European market. In one email (in 2010) the former TTL for this project argued that, "the two-day workshop held in December 2007 in Bamako on the strategic profile of agricultural exports and the range of programming instruments that have been developed (competitiveness plan, strategic action plan) are best practice region-wide…" The point here is that the Bank team organized a number of consultations to disseminate widely and create awareness about supply chains that was at best rudimentary before this project.

121. **However, the design did have some limitations.** The design was acutely aware of the need to focus project activities on selected supply chains and made a specific statement regarding this. However, it still ended up selecting 18 supply chains that were later found to be unmanageable. It also appears that including cotton was a distraction, to the point that the project initially looked like two suboperations, one focused on cotton and the other on fruits and vegetables. Further, consistency across project documents left much to be desired.

122. **The project Quality Enhancement Review (QER) was fully aware of the different elements that the project PDOs was covering**. The minutes of the QER dated November 9, 2004 noted that there are two important and interconnected objectives of increasing incomes and diversifying economic opportunities through the development of commercial agriculture and agricultural supply chains. The team was then advised that, "The objectives of increasing incomes of rural households should be kept at the overarching objective of the project, while the improvement of supply chains performance—including increases in physical outputs—could be the more specific targets set during project duration." Although the advice of the QER was followed, it was not reflected across all project documents, clearly showing not a design problem but final editing and checking.

123. **The project was assessed by the QAG and a July 7, 2010 memo rated quality of design as Satisfactory.** Specifically, the QAG reported that the design exhibited many strengths, which included the following: (a) the supply chain approach to commodities (other than cotton) could be pursued without any further policy change; (b) the core PDO is of strong strategic relevance; (c) once the PCU staff recruitment issue was solved, implementation commenced promptly, reflecting thorough preparation; (d) sector and operation-specific risks

were well documented in the PAD—both for identification and mitigation; (e) the project relied on sound and proven technologies. It provides scope for innovation but the estimated returns do not depend on innovations being successful; and (f) fiduciary, safeguard, and governance aspects of the project were handled fully satisfactorily. However, the QAG also pointed out some shortcomings in design:

(a) The Results Framework contains a PDO which is different from the one shown in the PAD as well as the one shown in the Legal Agreement, leading to confusion about the overall objectives (as well as key indicators) of the project. (For this ICR this is not a design problem but rather more of diligence in ensuring consistency across project documents.) Management should have insisted on a uniform and simplified PDO and greater selectivity in the indicators.

(b) The principles of the financial arrangements proposed for the use of project-financed facilities by the private sector were not clearly established at design.

(c) Ex ante rates of return to irrigation are very high but of questionable plausibility without any citation of ex post returns obtained in other projects or any other evidence.

(d) The calculated rate of return to the overall project investment is 16 percent, which is based on a series of assumptions that the panel considers to be of no value added.

124. **The overall quality at entry is rated as Marginally Satisfactory.** The ratings considered that the project team got the technical design elements right, but also manifested minor shortcomings related to documentation and follow-up of recommendations. On the technical design the main shortcoming was the initial ambitiousness of the preparation that revealed itself in the choice of 18 value chains. Both QAG and the 2013 ISN confirmed that the project took off relatively quickly once contracting issues were resolved. This indicates that the project was well prepared and ready for implementation. This is a major achievement in a country where support to supply chain was at infancy and some of the design elements had to be negotiated with the government—such as executing some components of the project with contracted entities outside the government bureaucracy. The team got the design right.

(b) Quality of Supervision
Rating: Moderately Satisfactory

125. **Supervision was result focused and made the necessary correction during implementation.** Supervision missions, in collaboration with Malian counterparts, were fielded regularly according to recommended frequency (two per year). The supervision team was composed of all relevant specialists and provided close support in addressing implementation issues, restructurings, reallocating funds to boost the matching grant facility, trimming the number of value chains supported, and revising output indicators. The project team was also result focused. The rationale given to the AF was to scale up the results of the project. This clearly demonstrates that staff were fully focused on results.

126. **There was continuity in the Bank's supervision team**, with only two TTLs having served on the project. The project definitely benefited from the presence of the TTL in the country office. This allowed in informally and formally providing implementation support, advice, and follow-up, among others. This arrangement was very critical in the continuation of the project, specifically keeping the dialogue ongoing during disbursement suspension.

127. **Supervision missions traveled to project sites especially to visit and appraise subprojects**. This was very helpful to learn firsthand from the beneficiaries and exchange views on how such projects operated in other areas of Mali or in other countries. The project team also come across as credible in their appraisal of project implementation progress. They also revised the targets upward once it became clear the project will achieve a higher result.

128. **The QAG rated supervision quality as Satisfactory.** In assessing the quality of Bank supervision, the QAG panel gave more weight to the focus on development effectiveness, which was considered to be fully satisfactory. The QAG also identified particular strengths in supervision that included the following:

(a) The Bank insisted that the project management team be selected according to agreed competitive procedures aimed at ensuring quality selection. This entailed a delay of six months in effectiveness to ensure the desired quality, but this delay was amply justified.

(b) The Bank has been on top of problems from the outset by fielding timely missions and maintaining frequent contact with the implementing units.

(c) Supervision efforts focused on the (substantial) risk of weak performance from contracted service providers by much hand-holding and frequent guidance and, in FY10, by providing for a smooth transition from the first batch of three-year contractors to the next.

(d) Aide memoires contain good descriptions of problems and challenges, which are nicely summarized in ISRs.

(e) FM supervision provided high-quality oversight.

(f) Supervision skill mix needed to be broad for this multifaceted project and it was—at least on the one main mission each year. Skill mix on the other mission was more selective and this was appropriate.

129. **However, on the other hand, there were some weaknesses in the supervision.** The team should have addressed the inconsistency of PDO across project documents early during implementation. QAG also identified that there was no systematic attention to social issues until the MTR. The QAG panel stated that it agrees that at no point should this operation have been declared a problem project and therefore ratings reflected actual project status.

130. **The MTR confirmed the relevance of the project objective** and stated that the PDO will remain, "to increase rural incomes through improvements in the performance of the value chain for agriculture, livestock, fishing and other products for which the borrower has comparative advantages." This was one major drawback of the MTR since it did not resolve the observed differences in the PDOs across project documents mainly between the PAD and the Legal Agreement.

131. **Overall quality of supervision is rated Moderately Satisfactory.** The weaknesses observed were more on the process side and did not have substantive ramifications on the project outcome. Supervision mission was well focused on results and outcome and they have been proactive in addressing implementation problems timely. The fact that the Bank team was able to convince the government to finance the project during disbursement suspension was a

major coup for continuity of the project. Further, the Bank team has also convinced the government to bridge the gap between the ACDP and the proposed project under preparation (Agripole) by financing the continuation of the PCU and activities to be continued. Thus, quality of supervision is rated as Moderately Satisfactory.

(c) Justification of Rating for Overall Bank Performance
Rating: Moderately Satisfactory

132. The Bank team got the design right and worked very closely with the counterpart in ensuring successful implementation. The fact that the TTL was stationed in the country office was instrumental for the close support the project enjoyed. Overall, the Bank team did very well in designing and implementing this project.

5.2 Borrower Performance

(a) Government Performance
Rating: Satisfactory

133. The GOM, particularly the Ministry of Agriculture (and later renamed MRD) was strongly committed to the project. All the necessary reforms to facilitate the implementation of this project was already implemented. The government also has made a clear policy statement in support of the project and requested an advance for preparing the project. The GOM played a major role in stakeholders' dialogue during project preparation. The government partnered with the Bank team in creating wide awareness about supply chain development.

134. **The government support was instrumental in facilitating project implementation.** According to the QAG, government ownership and commitment remained strong. Although some in the ministry were initially reluctant to go along with the contracting out of the management of components that reluctance has been overcome by success. Unlike in some other countries, the project has not been sabotaged by 'disempowered' bureaucrats. Also, as QAG observed: "as the project has begun to demonstrate success, other ministries have become more supportive: the clash with Commerce/Industry that arises in many countries has not happened."

135. **In addition, the government provided wide latitude to the PCU to do the real coordination work** and ensured that the PCU remain well staffed. The governance bodies of the project, at the national and regional levels, operated as anticipated. The government has provided the necessary budgetary support and raised its expenditure in agriculture. Also, the government showed willingness to continue financing project activities after the project closed; it has committed resources to finance the PCU and project activities until the end of December 2015.

136. **The PCU's leadership was put in place without much delay after project effectiveness.** The government was supportive of the need for personnel changes at the level of the specialists; hiring of new experts (in irrigation, processing, and market infrastructure); and promotion of M&E and communications assistants to specialist positions. The willingness of the government allowed the PCU to adjust to changing circumstances as events evolved. The government also played a critical role in ensuring that the project adjusted to changing circumstances including reducing the number of value chains to manageable level.

137. **If there were weaknesses, they were mainly due to capacity limitations.** The GOM,

for example, did not take the necessary appropriate action to avoid the lengthy delay between Board approval and effectiveness. The AF experienced a similar delay, although this delay was due in great part to the political crisis facing the country in 2012 and was a factor outside the control of the government. The delays in the recruitment and contract renewal of private service providers can also be traced to inefficiencies in procurement in the Ministry of Agriculture and not due to lack of commitment.

(b) Implementing Agency or Agencies Performance

Rating: Satisfactory

138. **The PCU actively participated in Bank supervisions, provided the necessary M&E, fiduciary, and safeguard documents for Bank review.** It maintained a dynamic M&E database and produced several communications materials to showcase and promote the project. It provided the necessary coordination for the regular meetings of the national and regional committees. It also monitored and evaluated the private service providers and, when their renewal was delayed, the PCU moved to recruit contracts as replacements and even took over their activities for a few weeks. Overall, the PCU performed satisfactorily in spite of many difficulties.

139. **Personnel changes were also made in the PCU during implementation but to a large extent the PCU remained stable.** The project relied on staff directly contracted for the PCU and also used professional organizations in filling specific position that were not easily available in the country. Also, the PCU quickly added specialists in infrastructure, irrigation, and processing as the need arose during implementation. The private service providers also performed satisfactory (when they had a standing contract). At times, cooperation and coordination of the private sector with the PCU was difficult because of the sheer number of entrepreneurs in the face of a limited capacity within the PCU.

(c) Justification of Rating for Overall Borrower

Rating: Satisfactory

140. With the government performance rated as satisfactory and the significant work the PCU was able to accomplish in coordinating the implementation of the project, overall the borrower performance is rated Satisfactory.

6. Lessons Learned

141. The following lessons were learned from the assessment of the project design, implementation, and supervision.

142. **In countries with limited capacity, it is very critical to start with a lower number of areas for intervention (number of regions or supply chains) and scale up once the system is found to be working.** The ACDP showed its selectivity by limiting the regions of intervention and targeting the fertile areas. However, with regard to value chains, it was ambitious.

143. **The introduction of efficient irrigation and processing technologies will not necessarily kill jobs.** In case of the ACDP, it contributed to create/consolidate jobs. During the selection of this technology, it was stated that technologies that improve the performance of irrigation will reduce the demand for labor. With selection of the appropriate technology, this predication failed to materialize; instead more jobs were created. The fact that farmers

expanded their plots also helped in creation of jobs.

144. **Contracting a private service provider with experience and expertise in the sector to implement project activities is the best approach in countries or regions with limited capacities.** This project relied on the private sector and nongovernmental organizations for executing project activities that reduced the burden on the PCU. Hiring a single lead contractor, charged with hiring and supervising the necessary experts for the job to be done, can bring about the desired outcome.

145. **It is necessary to include both investment and operating costs in business plans, which provides a fuller picture of resources needed to finance proposals prepared by beneficiaries.** It helps both the project and the beneficiary determine the appropriate size of the matching grant for a viable activity, the level of beneficiary's own fund contribution, and the required additional bank credit. During this project implementation, banks provided loans thinking it was the full financing requirement for the business plans they approved. When entrepreneurs later approached the banks for additional credit for working capital, the banks were reluctant to provide additional loans.

146. **In addition to demonstration, dissemination, and adoption of innovative technologies, projects with support to value chains should include an incentive mechanism, preferably with grant or technical assistance to encourage developers to acquire and adapt innovative technologies and techniques promoted by the project.** This project promoted appropriate technologies but these projects were adopted because of the grant mechanism the project provided.

147. **An agribusiness and value chain development requires a multifaceted integrated support both within the sector and without.** These include improving compliance, support in capacity improvement in certified processing, packaging, and preservation; establishment of packaging facility and cold storage; training on international standards that improved quality to meet export standards; providing logistic staging-area; and facilitating contact with buyers, among others. Externally, providing the necessary infrastructure, such as roads, is also an important ingredient for success. Underlying all these is support to improvement of productivity through agricultural input support especially to small farmers.

148. **The dividend from reducing post-harvest loss, improvement in conservation, processing and packaging is very substantial that sufficient resources should be allocated early in project design.** A corollary point to this is that projects should actively promote to the private sector the need for investing in these areas that have a huge returns.

149. **Establishment of financial accounts by project beneficiaries will help and ease access to capital and bank credits.** Thus, beneficiaries should be supported to improve their financial literacy and encouraged to establish financial accounts. It will also support the banks' processing of loans since this will allow them to assess financial accounts spanning several years to gauge the credit worthiness of their applicants.

150. **In projects that support the development of value chains, a rigorous study of the demand for the specific product and possibility of market penetration should inform the choice of products and supporting activities to be financed**. Products supported under ACDP had sufficient markets that ensured successful outcome and sustainability of the operations.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies

(b) Cofinanciers

None

(c) Other partners and stakeholders

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in US$, million equivalent)

Components	Original Allocation		Additional Financing		Total	
	Amount	%	Amount	%	Amount	%
Demonstration and dissemination of irrigation, post-harvest and value-adding technologies	10.34	22	12.76	52	23.10	32
Improvement of agricultural supply chains performance	7.07	15	3.20	13	10.27	14
Access to financing	2.93	6	2.96	12	5.89	8
Market and Communication Infrastructures	21.49	45	3.34	14	24.83	35
Project Coordination and Management	5.61	12	2.13	9	7.74	11
Total	47.45	100	24.39	100	71.84	100

(b) Financing

Sources of Funds	Type of Financing	Appraisal Estimate (US$, millions)	Additional Financing (US$, millions)	Total Revised Estimate (US$, millions)	Actual/ Latest Estimate (US$, millions)	Percentage of Revised Estimate
Borrower	Cofinancing	1	4.4	5.4	1	18.52
IDA	Credit	46.4	20	66.4	66.4	100
Beneficiaries	Cofinancing				4.8	
Total		47.4	24.4	71.8	71.8	100.00

Annex 2. Outputs by Component

Component 1: Demonstration and dissemination of intensification and value-adding technologies

Subcomponent "demonstration and dissemination of technologies"

1. Demonstration of new technologies was done through four CDDPs, which were established with the support of the IER; the technical services of the MRD (Livestock Production Directorate [DPA], National Directorate of Industrial and Livestock Production [DNPIA], and National Directorate of Rural Engineering [DNGR]); and the regional coordinating bodies. The CDDPs constituted 'display cases' for five new technologies and techniques of drip irrigation, corrugation irrigation, and spray irrigation, as well as eight technologies and techniques in processing shallots (slicing, straw chopper, drying furnace, tunnel, and so on).

2. The capitalization on the results of the use of these technologies was done through 26 (target was 21) technical and economic guides (TEGs) translated into 17 kits or practical guides developed at the level of the CDDP with the participation of actors of the concerned value chains, regional coordinating bodies, the IER, and the decentralized services of the MRD. Producers and students supervised by the technical services of the MRD and staff of regional coordinating bodies were the target audience. Their participation in demonstrations was done through guided tours organized within these CDDPs and/or through the use of CDDPs, including their transformation component as well as delivery of services in slicing/drying of shallots, cutting/drying of meat, and so on.

3. New technologies were disseminated through subprojects whose design was greatly inspired by TEGs and kit (practical guidelines) produced within the framework of the project, as well as placing the produced TEGs and kits at the disposal of the services of the MRD and producers/promoters of subprojects.

Subcomponent "Inter-Professional consultation"

4. This subcomponent helped achieve two major results. The establishment of five sectoral inter-branch organizations: mango, potato, shallot/onion, papaya, livestock/meat on a forecast of six and ten consultation frameworks in the four regions of intervention of the project. These inter-branch organizations have not earned legal recognition yet, but those mango, potato, shallot/onions, and papaya value chains have a strategic development plan for their respective value chains.

Component 2: Improving the performance of agricultural supply chains

5. The main results of this component are (a) the organization of commercial events (marketing test, market exploration missions, and participation in trade events); (b) the acquisition of GlobalG.A.P. certification for 8 Malian mango-exporting companies; (c) the skills training of 9 Malian nationals for International Register of Certificated Auditors (IRCA) certification and 16 Malian consultants in GlobalG.A.P. to provide support services to businesses; (d) the preparation and dissemination of 4 quality standards on mango, potato, shallot, and meat, to actors of the value chains; and (e) facilitating of the understanding of the value chains through the production and dissemination of various strategic documents, including 11 strategic development plans, 9 value chains competitiveness plans, 5 priority

action plans, and 1 business intelligence system for mango, potato, shallot, and livestock meat value chains, with the support of inter-branch organizations. The collected commercial information was disseminated by cellphone SMS.

6. The combined effects of these achievements are the diversification of markets for the exportation of Malian products (Europe, Maghreb, and Economic Commission for West African States [ECOWAS]), the reappearance of Mali as a recognized origin in European statistics (requires an average annual exports exceeding 10,000 tons), with Mali exporting 128,000 tons with a turnover of more than CFAF 60 billion between 2007 and 2014.

Component 3: Access to financing

Subcomponent 1: Establishing partial guarantee funds

7. The major result achieved under this subcomponent is the establishment and operationalization of a partial guarantee fund of an anticipated amount of CFAF 750 million through agreements of CFAF 250 million, CFAF 150 million, and CFAF 250 million through the BNDA, *Banque Commercial Internationale* (BCI), and the Budget Monitoring System, respectively and the approval by financing institutions of 32 credit files for a total guarantee of CFAF 836 million against a forecast of CFAF 880 million.

Subcomponent 2: Technical Assistance

8. The following main results were achieved under this subcomponent: (a) easier access to credits, which allowed actors in the agricultural value chains to obtain credits of more than CFAF 983 million, which was 89.4 percent of the target of CFAF 1,100 million; (b) provision of technical assistance that allowed the setting up of management tools with 285 subproject promoters; (c) training for 4 experts of regional coordinating bodies and 16 Study on Monitoring Structures (*Structures d'Etudes et de Suivi*, SES) to use the management tools; and (d) training of 100 members of financial institutions on the analysis of agricultural risk.

Subcomponent 3: Promoting innovative financial instruments

9. The following results were achieved under this subcomponent: (a) two studies on 'new' financial products—collateral management and leasing and (b) test transaction on collateral management. This transaction, which related to cardboard packaging for mango exporters, showed the limits of this financial product. Other tests are being considered for dried products (dried shallots) or storage in cold room (potato) at the level of centralization poles. However, the leasing product could not be tested because no participating financial institution is applying the appropriate legislation of Central Bank of West-African States (*Banque Centrale de Etats de l'Afrique de l'Ouest*, BCEAO) with regard to this product.

Subcomponent 4: Management of Innovation and Investment Fund

10. The management of the Innovation and Investment Fund, which was initially part of Component 1, was transferred to Component 3 following the MTR of the project. Its main result is the financing of 610 subprojects on an initial forecast of 550 subprojects, through partial grants. Nearly 55 percent of this support was provided between 2014 and early 2015. The government has taken appropriate steps to provide advisory support in the setting up of investments and management tools for one year. The ACDP gave grants totaling CFAF 3,244

million to subproject promoters, through the Innovation and Investment Fund. This necessitated contributions of up to CFAF 2,000 million from promoters.

Subcomponent 5: Promoting private investment

11. Promoting private investment was initially part of Component 2. It was transferred to Component 3 as a subcomponent following the MTR of the project.

12. The main result achieved under this subcomponent is the ongoing implementation of four private investment projects in a joint venture, against a target of four. These are (a) a commercial mango plantation of 200 ha (50 ha were already developed); (b) a cardboard factory whose financing agreement with *Banque Ouest Africaine de Développement* (BOAD) was signed on September 22, 2014, for a total cost of CFAF 4.6 billion; (c) the company BAGOE for a commercial plantation of 500 ha; and (d) the company AGRIZED for the development of 1,000 ha in Bewani for the production of potatoes, rice, and power.

13. The ACDP also provided support to CEDIAM (a company which specializes in the processing of mashed mangoes) in the fight against fruit flies and the facilitation of the supply of raw materials, ATRAFEL (a fruit and vegetable processing company), and the company NARDONE & SONS in their efforts to find strategic partners.

Component 4: Market-oriented infrastructure

Subcomponent 1: Construction of commercial facilities

14. The main results achieved under this subcomponent are the rehabilitation/creation of nine commercial facilities: the cold storage and mango packaging facility of Sikasso, the shallot and potato centralization poles of Niono and Sikasso, the Improved Logistics Perimeter in Airport Area (PLAZA) in Bamako, the Food Technology Laboratory (LTA) of the IER, Mandela packaging area, and three regional slaughterhouses in Sikasso, Segou, and Mopti against a target of twenty-one. The gap between the achievement and the targets was explained by the fact that the facilities of Konna and Bandiagara were supported by other donors and the resources for the commercial platform, the cold room of Kati and three butcher shops, and the commercialization facilities of Loulouni and Dara were reallocated to the additional works of upgrading of the existing commercial facilities, Sikasso, Niono, and PLAZA.

Subcomponent 2: Rural roads

15. The following results were achieved under this subcomponent: 1,101 km of roads were rehabilitated and transferred to the National Directorate of Roads, against a target of 1,100 km.

Subcomponent 3: Operational management of commercial facilities

16. The following results were achieved under this subcomponent: (a) four private management delegation agreements were signed for the three rehabilitated slaughterhouses and Mandela commercialization area; (b) a study was conducted to define the legal status and management arrangements of the PLAZA; (c) a consultant was recruited to support the process of private management of facilities; and (d) a transitional management system was set up at the level of two packaging areas (mango pole of Sikasso, shallot/onions pole of Niono).

Component 5: Project management and Monitoring and Evaluation

Subcomponent 1: Coordination of project implementation

17. The following results were achieved under this subcomponent:

Financial Management

18. At the end of the initial financing on April 30, 2014, the project had reached a disbursement rate of 99.99 percent. As of May 19, 2015, the disbursement rate on the AF credit was 79 percent, with an implementation rate of 65 percent for a target of CFAF 10 billion. The anticipated implementation rate for June 30, 2015 (completion date of the project) is 99 percent. The overall combined implementation rate of the project will be 99 percent for the aggregate allocated amounts of US$71.8 million.

External Audit

19. The ACDP was subject to an external financial audit each year. Thus, seven financial audits of the project were performed since the implementation of the project started. The audit of the project's 2014 financial statements started on April 10, 2015 and the final audit reports were expected to be submitted to the Bank and the GOM no later than May 31, 2015. The audit of the project's 2015 financial statements will be performed in the second half of 2016.

Environmental and social safeguards at the level of the ACDP subprojects

20. The following main results were achieved: (a) the relevance of the environmental and social safeguard policies (OP 4.01 and OP 4.12) was confirmed; (b) the project's classification in Category B was confirmed; (c) the effective application of the developed safeguard measures was confirmed (solid and liquid waste management, hygiene and sanitation, product storage warehouse management, and so on); (d) an environmental screening of subprojects was performed; (e) the capacities of subproject promoters were strengthened in environmental and health risks management approaches; (f) support to the establishment of health and environmental standards in the field of agro-industrial processing; (g) development of reliable waste management systems for marketing, storage, preservation, packaging, and processing facilities; (h) an environmental audit was performed at the end of the project and the results are expected by June 30, 2015.

21. These provisions and measures do not seem to be applied correctly by the majority of subprojects promoters due to the lack of sufficient ownership of the approach and tools, which is due to the low levels of awareness raising and coaching efforts.

Subcomponent 2: M&E of activities and impacts

22. The following main results were achieved under this subcomponent: (a) an adapted and operational M&E system with appropriate data collection tools; (b) a dynamic database on the achievements, as well as the technical and economic results of the subprojects that were financed; (c) 39 technical implementation reports to supplement Financial Monitoring Reports; (d) 9 annual reports and more than 20 M&E reports; (e) 3 study reports on the assessment of the impacts of the project, (f) 4 environmental monitoring reports of the National Directorate of Sanitation and Control of Pollution and Nuisance (*Direction de l'assainissement du Contrôle des Pollutions*, DNACPN); and (g) more than 30 internal monitoring missions conducted on the ground. These results are interesting. However, the lack of a harmonized format for data

collection and processing tools makes it difficult, not to say impossible, to produce a data series and analysis. Furthermore, there was not sufficient regular monitoring (and therefore regular data collections) about the subprojects during the eight years of implementation to avoid systematically reconstituting data. The quality of the data from the dynamic database should therefore be considered as relative.

Subcomponent 3: Communication

23. The following main results were achieved under this subcomponent: (a) a comprehensive communication strategy developed to support the implementation of the project; (b) partnership protocols were signed with the radio stations of the areas of intervention of the project for the airing of quarterly broadcasts; (c) more than 200 reports on television news about the flagship activities of the project; (d) 30 press inserts; (e) more than 150 radios broadcasts by regional coordinating bodies; (f) 10 infomercials INFO PLUS advertorials; (g) 6 video magazines of 26 minutes on the results of the project broadcasted on the national television channel ORTM (and viewing on the website of the project); (h) the website of the project was visited more than 150,000 times till date; (i) 12 issues of the information magazine ‘FILIERES MAG’ disseminated; (j) technical and economic guides, kits, technical guides, and quality repositories of the value chains produced and disseminated; (k) a lot of communication materials produced to support communication on the results of the project.

Subcomponent 4: Supervisory and control bodies

24. The following main results were achieved under this subcomponent: 8 sessions of the national steering and orientation committee held, against a target of 8; 32 sessions of regional steering and orientation committee held, against a target of 32, or 8 for each regional coordinating body; 14 joint (Bank and Malian government) supervision missions conducted; more than 10 visits to project sites to verify and monitor the achievements of the project and organized study tours. More than 140 reports on studies, missions, techno-economic repositories, and practical guides.

25. The causal linkages between components’ outputs and PDO outcomes are readily apparent.

- Component 1’s demonstrations of innovative irrigation and processing techniques, along with the availability of the matching grant (up to 70 percent of investment cost) provided strong incentives for entrepreneurs to set up about 600 subprojects on commercial agriculture.[11]

- Component 2 facilitated Malian producers/exporters’ access to domestic, regional and international markets by conducting market studies and logistical tests; building the capacity of professional organizations; assisting producer exporters to obtain the critical EuroGap certification; training 10 quality control auditors; and providing valuable market intelligence on destination markets. Without proper coordination in the use of common market platform (for example, mango pre-cooling station) by professional organizations and certified exporters, Mali could not have exported fruits and vegetables to the European Union.

[11] Estimates used in the economic and financial analysis of the final evaluation.

- Component 3 assisted with access to additional credit to complete the subproject financing by building the capacity of financial institutions to service agribusiness investors, and setting up a partial guarantee fund (reaching CFAF 863 million) to facilitate project-supported investors' access to bank credit (of CFAF 983 million).

- Component 4 financed the construction/rehabilitation of the market infrastructure that allowed the packing of fruits and vegetables for export, as well as the storage (of onion/shallots and potato), and the meat market terminals to supply the domestic market. This component also helped build 1,100 km of feeder roads to open access of farmers' produce to the market

- Component 5 ensured that the implementation of the project was effectively coordinated and monitored; including revising it as necessary to ensure the achievement of the project PDO.

Major Results Achieved by Each Project Component

Component 1: Demonstration and dissemination of irrigation, post-harvest, and value-adding technologies

Subcomponent: demonstration and dissemination of technologies

Indicators	Unit of Measurement	Cumulative Target	Actual	Actual/Target (%)
1.1.1 CDDP set up and operational	Number	4	4	**100**
1.1.2 Irrigation and production techniques demonstration plot set up	Number	400	329	**82**
1.1.3 Post-production demonstration sites	Number	160	131	**82**
1.1.4 Technical and economic guides available	Number	24	26	**108**
1.1.5 Methodological guide	Number	20	21	**105**
1.1.6 Teaching tools	Number	24	23	**96**

Training of stakeholders and providers

Indicators	Unit of Measurement	Cumulative Target	Actual	Actual/Target (%)
1.2.1 Training of producers' processors	Number	3,600	3,704	**103**
1.2.4 Artisans and private service providers trained	Number	200	268	**134**
1.2.5 Teaching tools	Number	20	23	**115**
1.2.6 Artisans and private providers established	Number	60	7	**18**
1.2.7 Appui, Conseil et Approvisionnement ACAs recruited and trained	Number	52	40	**77**
1.2.8 Professional specialties trained to form a network	Number	0	6	**100**

Achievement of support to the dissemination of innovations

Indicators	Unit of Measurement	Cumulative Target	Actual	Actual/Target (%)
1.3.1 Subprojects approved by the CRAP	Number	865	865	**100**
1.3.2 Subprojects funded	Number	550	612	**111**
1.3.3 Irrigation small subprojects funded	Number	285	356	**125**
1.3.4 Post-production subprojects funded	Number	145	115	**79**
1.3.5 Women beneficiary of the fonds d'innovation et d'investissement(FII)	%	40	34	**83**
1.3.6 Producers and processors who have adopted innovative technologies	Number	1100	1271	**116**

Component 2: 'Improvement of performances of agricultural supply chains'

Knowledge of markets and sectors

Dissemination of information on markets and sector

Indicators	Unit of Measurement	Cumulative Target	Actual	Actual/Target (%)
2.1.1 Strategic development plans developed	Number	10	**11**	**110**
2.1.2 Sector competitiveness plans developed	Number	8	**9**	**113**
2.1.3 Priority action plans developed	Number	6	**5**	**83**
2.1.4 Market research in priority sectors conducted	Number	5	**5**	**100**
2.1.5 Commercial database on 3 sectors	number	3	**3**	**100**
2.1.6 Potential of mango production evaluated	Study	1	**2**	**200**
2.1.7 Commercial testing for the priority sectors	Number	11	**13**	**118**
2.1.8 Problematic study of packaging	Number	1	**1**	**100**
2.1.9 Business intelligence	Number	1	**1**	**100**
2.1.10 SMSs exchanged	Number	-	**450,000**	**–**
2.1.11 Agricultural seasons monitored	Number	22	**30**	**136**
2.1.12 Background notes disseminated	number	**35**	**22**	**63**

Subcomponent 2: Promoting service environment

Indicators	Unit of Measurement	Cumulative Target	Actual	Actual/Target (%)
2.2.1 Feasibility studies of processing businesses conducted	Number	8	**15**	**188**
2.2.2 Business plans developed	Number	8	**15**	**187**
2.2.3. Stakeholders trained on best agricultural, health, hygiene practices	Number	100	**110**	**110**
2.2.4 Certified IRCA ISO auditors trained	Number	6	**9**	**150**
2.2.5 Certified GLOBAL GAP auditors trained	Number	10	**16**	**160**
2.2.6. Private and public providers on quality management	Number	8	**7**	**88**
2.2.7. Stakeholders of public and private sectors on the control of health plant health risks	Number	20	**30**	**150**
2.2.8. Public service employees on the analysis of value chains	Number	20	**30**	**150**
2.2.9. Exporters and technical personnel trained on marketing techniques in Morocco	Number	10	**30**	**300**

Subcomponent 3: Quality of products and their marketing

Indicators	**Unit of Measurement**	**Cumulative Target**	**Actual**	**Actual/Target (%)**
Participation in trade events				
2.2.1 Trade events in which stakeholders have participated	Number	12	26	**217**
2.2.2 Stakeholders of the agricultural and livestock sectors who have participated in these events	Number	250	260	**123**
Promotion of Mali origin				
2.2.3 Market prospectus organized	Number	10	13	**130**
Product certification				
2.2.5 Upgrade audits of processing units and	Number	**20**	26	**130**
2.2.6 Upgrade audits of the PLAZA and new packaging infrastructure	Number	4	4	**100**
2.2.7 Processing units recorded to get the upgrade authorization	Number	20	9	**45**
2.2.8 Certified mango export companies GlobalG.A.P.	Number	7	10	**140**
2.2.9 Specifications of 4 priority sectors developed and disseminated to stakeholders	Number	4	4	**100**
2.2.10 Guides (kits of best practices, technical supports) for 4 priority sectors	Number	4	4	**100**
2.2.11. Analyses of updated value chains	Number	6	5	**83**
2.2.12 Facilitating access of 3 tunnel drying units to biodegradable bags	Operation	1	1	**100**
Accreditation of laboratories				
2.2.13 Upgrade of existing infrastructure, setting up of a juice extraction chain, and training of the ATL personnel	Batch	1	1	**100**
2.2.14 Equipping the Central Veterinary Laboratory (CVL)	Batch	1	1	**100**
2.2.15 Study travels of the personnel of the ATL and CVL to Morocco and Côte d’Ivoire	Number	1	2	**200**

Component 3: Access to financing

Establishing partial guarantee fund

Indicators	Unit of Measurement	Cumulative Target	Actual	Actual/Target (%)
3.1.1 A guarantee fund is established and operational	Number	1	1	**100**
3.1.2 Available amount for the endowment fund	Number	650	650	**82**
3.1.3 Number of loans granted	Number	40	36	**90**
3.1.4 Amounts of loans granted	CFAF	1 100	983	**89**
3.1.5 Loan reimbursement rate	%	90	95	**95**
3.1.6 Total value of securities granted	CFAF	880	836	**95**

Technical Assistance

Indicators	Unit of Measurement	Cumulative Target	Actual	Actual/Target (%)
3.2.1 Number of partnership protocols signed with MIs	Number	1	1	**100**
3.2.2 Number of partnership protocols signed with banks	Number	3	3	**100**
3.2.3 Number of training sessions offered to employees of banks/MIs/SES	Number	8	20	**+100**
3.2.4. Total number of people trained	Number	24	26	**108**
3.2.5. Total number of people trained	Number	N/A	365	**–**
3.2.7. Number of tools (software and others) made available to operators	Number	2	2	**100**

Promoting innovative financial instruments

Indicators	Unit of Measurement	Cumulative Target	Actual	Actual/Target (%)
3.3.1 Number of diagnostic studies conducted	Number	4	4	**100**
3.3.2 Number of feasibility studies conducted	Number	3	3	**100**
3.3.3 Number of pilot operations conducted	Number	5	5	**100**
3.3.4 Number of value chains covered by the pilot operations	Number	3	3	**100**

Promotion of private investment

Indicators	Unit of Measurement	Cumulative Target	Actual	Actual/Target (%)
3.3.1 Number of studies conducted on the promotion of private investment	Number	4	7	**+100**
3.3.2 Number of private investors' workshops/conferences organized	Number	3	1	**33**
3.3.3 Number of business plans developed	Number	3	5	**+100**
3.3.4 Number of investment proposals submitted for financing	Number	4	5	**100**
3.3.5 Number of joint venture investment projects created in the sectors	Number	4	7	**+100**

Component 4: Market-oriented Infrastructures

Construction of Commercial facilities

Indicators	Unit of Measurement	Cumulative Target	Actual	Actual/ Target (%)
4.1.1 Number of feasibility studies	Number	25	19	**76**
4.1.2 Number of commercial infrastructures built or equipped	Number	18	15	**83**
4.1.3 Rate of utilization of collective commercial infrastructures built	%	80	60	**60**
4.1.4 Number of infrastructures for which delegated contract management is in place	Number	9	5	**55**

Rural roads

Indicators	Unit of measurement	Cumulative Target	Actual	Actual/Target (%)
4.2.1. Number of tracks rehabilitated	Number	4	4	**100**
4.2.2. Number of kms of tracks transferred	kms	400	329	**82**

Annex 3: Project Economic and Financial Analysis

I. Executive Summary

1. **Methodology.** The ACDP supported the undertaking of investments in the value chains and the capacity building of the stakeholders involved under the initial project and AF. An ex ante evaluation of their economic and financial effects for beneficiaries as individuals and for the whole country was carried out. This document intends to conduct the ex post evaluation of the project (achievements). The results of this evaluation were compared with those of the ex-ante evaluations conducted during the formulation of the initial project and AF.

2. During the initial project and AF, the ACDP was designed and implemented as a 'framework' program for the promotion of the value chains targeted, including mango, onion/shallot, potato, papaya, and livestock/meat, with the main objective of supporting the corresponding production for both export and the domestic/regional market. From this perspective, the project focused on (a) the level of structural investments and capacity building of stakeholders in value chains and (b) investments in individual production and processing activities in enterprises ('subprojects') of strategic importance to the value chains. These activities were supported through the cost-shared grant mechanism.

3. The advantages of structural investments in value chains are quite positive but difficult to quantify. No attempt was made to quantify these provisions under this analysis. They were therefore not taken into account in calculating the project profitability. In terms of investments at business level, the ACDP through the shared-cost grant, allocated grants to investors to support investments in new technologies, conquer new markets, and facilitate access to credit with financial institutions. The data drawn from the project database provided information on the number of beneficiaries, the nature of the support received from the project, the nature and costs of investments, and the benefits drawn from the activity.

4. These data helped calculate the NPV and the financial IRR of individual enterprises and the EIRR of the whole project.

Analysis of Investments at Business Level

5. The results of the financial analysis of investments in enterprises are encouraging. Although each recommended technology required new skills and increase in expenses, the financial analysis shows that these investments significantly increased the incomes and gross margin of enterprises, showing that the promoted business models are very profitable. Indeed, with the grant, the IRR at production level stood at 36.6 percent for shallot, 60.7 percent for papaya, 62.4 percent for cattle fattening, 73.5 percent for mango, and 134.4 percent for potato. At the processing/preservation level, the IRRs were in the range of 75.4 percent for dried meat, 82.2 percent for mango processed in juice, and 84.0 percent for preserved shallot. The NPVs for these business models with 10 percent of interest rate are CFAF 8.2 million for shallot, CFAF 39.5 million for potato, CFAF 10.1 million for papaya, CFAF 58.5 million for mango, CFAF 32.5 million for fattening, CFAF 13.0 million for preserved shallot, CFAF 14.9 million for the production of mango juice, and CFAF 67.4 million for dried meat.

6. The financial analysis also confirms the relevance of the cost-shared grant mechanism promoted under the ACDP. In an environment where access to credit is limited, this mechanism significantly helped to improve the cash flow of enterprises during the critical period of financial crisis when producers set up or developed their activity. Measures to review in depth investors' investment proposals are economically justified. Hence the need for an Operations

Manual of the cost-shared grant mechanism that best meets the needs of entrepreneurs expressed in their business plans and strict compliance with the procedures outlined in this manual during the review of files.

Profitability of the Whole Project

7. The economic analysis relied on the following assumptions: (a) the considered period is 25 years corresponding to the lifetime of mango orchards considered as investment with the longest life cycle; (b) 100 percent of the cost of Components 2 and 3 and 25 percent of the cost of Component 1 (FII being taken into account of Component 1); (c) the cost of Components 4 and 5 was not considered; (d) 100 percent of the gross margin due to the project (financial prices of products were considered as similar to the economic prices due to the low level of exchanges of these products between Mali and other countries outside the West African Economic and Monetary Union [WAEMU]); (e) the labor economic cost corresponding to 50 percent of the financial wage cost; (f) the opportunity cost of the selected long-term capital is 6 percent; and (g) the cost conversion factors of the chosen project is 85 percent.

8. Based on these assumptions, the NPV economically for investments at the business level is approximately US$3533 million as against an actual amount invested of US$59.2 million. When the advent of benefits is delayed by one or two years, the respective NPV is US$30.3 million and US$25.6 million. The EIRR for the whole project is estimated at 15 percent. These results are similar to those of the initial project and AF, which were 16 percent in each case.

9. The sensitivity analysis was performed based on an increase of 10 percent, 20 percent, and 30 percent of the project costs (other than those of investments at business level). This analysis gives profitability rates of 14.1 percent, 13.3 percent, and 12.5 percent, respectively. The sensitivity analysis was also conducted based on the margin due to the project of 10 percent, 20 percent and 30 percent compared to the gross margin of participating investors. It gives respective profitability rates of 14.0 percent, 12.9 percent, and 11.7 percent. When the advent of benefits is delayed by one or two years, the respective EIRR is 13.6 percent and 12.4 percent.

10. The analysis of these data shows that the project remained economically profitable. The EIRR can be explained by the increase in returns due to the improved irrigation and processing techniques and technologies and the availability of commercial infrastructure, which contributed to improving the quality of products and building the capacity of sector stakeholders to use the disseminated technologies and techniques. Overall these results can be compared with those of the initial project and the AF.

II. Beneficiaries and Benefits

A. Beneficiaries

11. The ACDP did the demonstration and dissemination of effective technologies and techniques of irrigation and processing of products and the development of inter-branch professions for priority sectors (mango, potato, shallot/onion, papaya, and livestock/meat) (Component 1), participation in training courses, study travels, trade events (fairs, commercial testing), access to strategic information (Component 2), adoption of effective technologies and techniques (Component 3), and development of trade infrastructure (Component 4). To this end, the project targeted 16,300 people including 615 promoters of subprojects or businesses.

B. Direct Benefits

12. The direct benefits of the project correspond to the results achieved in each component, notably:

13. **Component 1: Demonstration and dissemination of Irrigation, post-harvest, and value-adding technologies**

(a) Four CDDPs set up with the support of the IER, the technical directorates of the MRD (Agricultural production—DPA, Industrial and Animal Productions—DNPIA and Rural Engineering—DNGR) and the regional coordination bodies. They serve as 'showcases' of five drip irrigation technologies and techniques—, aspersion and eight technologies and techniques for processing shallots (slicing), straw chopper, Attesta, tunnel drying kilns, and so on.

(b) At the CDDP level, 26 technical and economic references translated into kits or practical guides were developed and disseminated, with the involvement of the stakeholders of the relevant sectors, regional coordination bodies, the IER, and decentralized services of the MRD.

(c) Several guided visits organized within the CDDPs and several sector stakeholders used the services provided by the CDDPs, especially their processing component.

(d) Five inter-branch professions of the sectors of mango, potato, shallot/onion, papaya, livestock/meat set up and ten consultation frameworks in the four interventions regions of the program.

(e) Six-hundred-twelve subprojects were set up.

14. **Component 2: Improving the performance of agricultural supply chains.** (a) Eight Malian businesses exporting mangos received the GlobalG.A.P. certification; (b) nine Malian auditors received skills training on the IRCA certification; (c) sixteen Malian consultants in GlobalG.A.P. were trained to support businesses; (d) four quality references on mango, potato, shallot, and butcher's meat were developed and disseminated to sector stakeholders; (e) eleven strategic development plans, nine sector competitiveness plans, and five priority action plans were produced and disseminated to improve knowledge on the targeted sectors; (f) one business intelligence system for the sectors of mango, potato, shallot, and livestock/meat was set up and facilitated with the support of inter-branch professions; and (g) several trade events (marketing test, prospection missions, and participation in fairs) were provided.

15. **Component 3: Access to financing.** (a) One partial guarantee deposit in the amount of CFAF 750 million, including CFAF 250 million, CFAF 150 million, and CFAF 250 million, through the agreements signed with the BNDA, BCI, and BMS, respectively, was set up and operationalized; (b) technical assistance in negotiating with financial institutions has been established; (c) 285 promoters of subprojects equipped with accounting and financial management tools; (d) four experts from the regional coordination bodies and sixteen SES trained on the use of management tools; (e) 100 agents of financial institutions trained on management of agricultural risks; (f) two studies on 'new' financial products: third-holding and leasing and an operation test on third-holding; (g) four private investment projects entered into in joint venture (i) a commercial mango planting on 200 ha, (ii) a carton factory, (iii) BAGOE company for commercial planting of 500 ha, (iv) AGRIZED company for the

development of 1,000 ha in Bewani; and (h) three companies were supported, mango puree processing CEDIAM company for fight against fruit flies and facilitating supply of raw materials, ATRAFEL company for processing of fruit and vegetables, and NARDONE & SONS company to seek strategic partnerships.

16. **Component 4: Market-oriented infrastructure.** (a) Nine trade infrastructure rehabilitated or upgraded, namely the mango cooling and packaging infrastructure in Sikasso; the shallot and potato centralization centers in Niono and Sikasso; the Developed Logistic Area in Bamako Airport Zone (PLAZA); the Food Technology Laboratory (FTL) of IER; the packaging area in Mandela; and three regional slaughter houses in Sikasso, Segou, and Mopti and (b) 1,100 km of roads rehabilitated.

17. Moreover, the ACDP contributed to the socioeconomic well-being of Malians. It generated and offered direct socioeconomic benefits to at least 16,300 stakeholders in the priority sectors. These benefits are the increase in productivity and agricultural production because of the use of adapted irrigation and processing technologies, quality seeds/seedlings, registered fertilizers and pesticides, as well as the compliance with the appropriate technological itineraries (weeding, use of compost/droppings, and so on), and the improvement of the access to financing (subsidy and credits) and access to markets. The financing partners of the project accepted thirty two applications for credit for a total guarantee value of CFAF 836 million and granted to sector stakeholders credits in a total amount of over CFAF 983 million. These have also received CFAF 3,244 million in grant and contributed CFAF 2,000 million to fund 612 subprojects or businesses. Moreover, the exports of Malian products to Europe, Maghreb, and ECOWAS totaled more than 10,000 tons per year or over 128,000 tons between 2007 and 2014 and generated an accumulated turnover of more than CFAF 60 billion. This led to the reappearance of Malian origin in European statistics.

18. The project also contributed to reducing unemployment particularly among youth and women through the creation and strengthening of over 5,500 jobs.

C. Indirect Benefits

19. The main indirect benefits are the following: (a) development of public-private partnership through the establishment of trade infrastructure, the management of which is being privatized, the support of businesses entering joint-venture contracts and the cost-share grant with promoters of subjects; (b) strengthening state technical services and private service providers; (c) development of business partnerships between sector stakeholders and financing institutions; (d) improvement of product quality through training on quality, hygiene, and standards, as well as upgrading of trade infrastructures and the establishment of environmental safeguard measures in the subprojects; and (e) capacity building of sector stakeholders and their organizations including inter-branch professions.

III. Financial Analysis

A. Methodology and Assumptions

20. **Conceptual framework.** The ACDP intervened in four regions of Mali (Koulikoro and Bamako Districts, Mopti, Segou, and Sikasso). It targeted six priority sectors (mango, potato, shallot/onion, livestock/meat, papaya, and milk) and six secondary chains (cashew, cereals, gum Arabic, tomato, fish, and nursery). The project intervention regions are the main production basins of the country for six targeted priority sectors. In each of these regions, the

project supported the activities grouped within the four technical components, through the regional coordination units and the operators of Components 2 (C2) and 3 (C3) and the infrastructure component of the Project Management Unit.

21. The ACDP was designed and implemented as a 'framework' program for the promotion of targeted value chains including mango, onion/shallot, potato, papaya, and livestock/meat, with the objective of sustaining the corresponding production both for export and for the domestic/regional market. It went through two major phases: the initial project and the AF. Each phase was the subject of a formulation in which the economic and financial analyses ex ante (forecast) of proposed investments were conducted to determine their economic and financial impact on beneficiaries as individuals and the country as a whole. The ex post evaluation (achievements) of the project is conducted as part of this document. Its results were compared with those in the forward-looking assessments in the formulation of the initial project (2004) and the AF (2013).

22. This exercise was not easy since, unlike economic and financial analyses of the initial project and the AF performed using the data respectively from sectoral parameter average of the results achieved at national level, the financial and economic analysis of the ICR is built on actual data on promoters supported under the project. Moreover, between 2004 and 2015 (years in which the first and last economic and financial analyses were conducted), the project has experienced internal and external developments. Indeed, some technologies and techniques (hand auger, manual drainage, low-density mango orchards, and so on) have been abandoned in favor of others (motorized auger, motorized or solar pumping, high-density mango orchards, mango and papaya combination, drying tunnel furnace, and so on). The adoption of these technologies has led to both a reduction of drudgery and increased labor productivity, investment costs, and operating expenses relative to baselines (initial project, AF, pre-project situation). The technical data (area, yield, number of laborers, performance of mobilized technologies) and financial data (capital cost and operating costs) are not the same at the level of these technical or expenditure positions. In the CDDP, where TEGs were produced, cultivated areas were between 0.15 and 0.25 ha. With the changes introduced in the level of investment to be considered, where the area is between 1 ha and 3 ha for small businesses, the amount of calculation of the subsidy increased from CFAF 6 million to CFAF 15 million and the subsidy rate from 50 percent to 75 percent. These changes in the funding mechanism have been accompanied by an increase in working capital and therefore a need for promoters to resort to credit to ensure their personal contributions.

23. During its implementation, the project supported (a) the establishment or upgrading of structural investments of strategic importance to the value chain and capacity building of stakeholders and (b) investments in individual activities of production and processing at the company level ('subprojects'). These activities were supported through the matching grant mechanism related to the credit for which access has been facilitated by a security deposit and technical assistance in negotiating with financing institutions.

24. The benefits of structural investments in value chains are quite positive, but difficult to quantify. No attempt was made to quantify these benefits as part of this analysis. They have therefore not been taken into account in the calculation of the profitability of the project. The easily quantifiable benefits selected for economic and financial analysis are those generated through investments in individual production and processing activities at the company level ('subprojects'). They particularly enabled the acquisition of new technologies, market conquest, and the development of strategic partnerships. The information on these businesses and their year of entry into the ACDP portfolio are detailed in table 3.1.

Table 3.1. Businesses and Year of Entry in ACDP Portfolio

Categories	Representative Number of Subprojects Financed by product type								Total
	2007	2008	2009	2010	2011	2012	2013	2014	
Cashew processing	–	1	–	–	2	1	0	0	4
Craftspeople	–	–	1	3	1	–	1	2	8
Banana	–	–	–	–	1	1	1	2	5
Cereals processing	–	–	–	2	5	–	–	11	18
Shallot production	–	–	3	9	17	6	1	28	64
Shallot processing	–	–	3	3	4	1	2	9	22
Cattle fattening	–	2	–	4	3	2	3	51	65
Gum Arabic	–	–	–	–	–	1	–	–	1
Milk production	–	–	1	5	4	1	6	25	42
Milk processing	–	–	–	1	2	–	–	5	8
Mango production	–	–	1	2	7	5	7	78	100
Mango processing	–	–	4	5	3	4	2	6	24
Papaya	–	–	–	8	10	11	19	68	116
Tree nurseries	–	–	2	–	–	–	–	–	2
Fish production	–	–	1	–	–	1	–	1	3
Fish processing	–	–	1	–	–	–	–	1	2
Potato production	–	3	1	–	5	–	4	24	37
Potato processing	–	–	1	–	–	–	–	2	3
Processing of diverse agricultural produce	–	–	2	2	1	1	–	19	25
Tomato production	–	–	–	–	1	–	1	–	2
Meat processing	1	–	–	–	3	5	3	3	15
Total	1	6	21	44	69	40	50	335	566

Source: ICR based on ACDP data 2015.

25. Analysis of these data indicates that 59 percent of companies in the ACDP portfolio joined the project portfolio in 2014. Their benefits will appear only after the project. This situation helps limit the effects of the project.

26. Despite the difficulties, the mission produced an economic and financial analysis. It is based on the technical and financial operating data and taking the average of the data of all farms of the sector and subsectors considered. These data were collected by subproject owners with the help of the C3 operator, at their respective companies, and have established the operating accounts at the end of each cycle of activities (or production cycle). The actual

information on their activities of production and processing/storage of products or service deliveries were sent to the project. With the help of C1 operators, subproject promotors had produced or replenished the operating accounts of the year that preceded the conclusion of the partnership with the ACDP. These accounts were used in the analysis as those of the situation before the project. The analysis of the results of the circumstances prior to the project against those in the situation with project support shows the financial benefits due to the project.

27. In Mali, the price system is free. The market prices are determined by the law of supply and demand. Prices used in the standard business models are those indicated by the promoters during each crop year. During these years, there were no major policy distortions in the prices of inputs or outputs. Therefore, financial prices and economic prices for tradable goods were essentially identical for transfers and taxes. Trade barriers with key trading partners (Côte d'Ivoire, Senegal, Niger, and Burkina Faso) were negligible because of their membership in ECOWAS and WAEMU. The distortions in exchange rates are close to zero because of the membership of these countries in the same monetary zone, the CFAF. As for the factors of production, labor opportunity cost was used for economic analysis. This price was deemed appropriate given the limited employment opportunities in rural Mali. The mission considered that this price is half the cost of unskilled labor indicated in the operating accounts produced by the developers.

28. The project's profit reflects the difference between the benefits of the situation with project support and the advantages of the situation without project support at the level of each operating model. In all models, the wages of farm managers have not been recognized. Their compensation reflects the net margin generated.

B. Financial Results of the Business Models

29. The business models are as follows: (a) milk production, (b) milk processing, (c) cattle fattening, (d) beef processing, (e) grain processing, (f) shallot production, (g) shallot conservation, (h) potato production, (i) papaya production, (j) mango production, (k) mango processing, (l) cashew processing, (m) nursery, and (n) crafts.

30. Without-project situation, the promoters of subprojects grow very small acreage because watering is done using a watering can and requires going a long way to fetch water. The resulting drudgery of work deters many to embark on this activity outside the *Office du Niger* zone. In the situation with project support, developers have access to a set of performing technologies and techniques: certified and well-preserved seeds, approved treatment products, performing irrigation (water point, water pumping and distribution equipment) or processing (water point, pumping equipment, processing equipment) system, and better access to finance, training and support, and advice. This set of factors have helped improve technical performance, financial, and commercial enterprises. Access to and adoption of these technologies by investors resulted in an increase in crop yields of 75 percent for mango, 94 percent for papaya, 100 percent for potatoes, and 166.7 percent for shallots. The number of animals fattened annually per farm has increased ninefold.

31. **Main financial results**. These are (a) gross margin, (b) the IRR, (c) NPV at the level of each operating model, and (d) the daily remuneration of family labor.

32. **Gross margins**. The farm models 'crafts', 'meat drying', 'milk processing', 'mango production', and 'cereal processing' are the most profitable as shown in table 3.2. 'Shallot

conservation', 'papaya production', 'milk production', and 'nursery' models are the least profitable. These data are summarized in table 3.2 and are detailed in annex 1.

Table 3.2. Gross Margin per Model Analyzed

Business Models	Gross Margins (CFAF)	Business Models	Gross Margins (CFAF)
Milk production	4,199,375.0	Milk processing	23,626,580.0
Cattle fattening	9,381,350.0	Shallot conservation	3,500,000.0
Cereal transformation	20,608,625.0	Meat drying	27,477,800.0
Papaya production	3,705,510.0	Potato production	13,136,250.0
Mango production	23,395,000.0	Crafts	35,481,250.0
Nursery	3,754,000.0	Mango transformation into juice	4,904,400.0
		Cashew processing	5,675,551.0

Source: Financial and Economic Analysis of the ACDP Completion Report 2015

33. **Financial IRR.** The results of the financial analysis of investments by the companies are encouraging. Although each recommended technology has required new skills and increased spending, financial analysis shows that these investments have contributed to a substantial increase in revenue and gross margin of the companies, demonstrating that business models promoted are very profitable. Indeed, without subsidy, the IRR at production level stood at 36.6 percent for shallot, 60.7 percent for papaya, 62.4 percent for cattle fattening, 73.5 percent for mango, and 134.4 percent for potatoes. At the processing/storage, the IRRs were at 75.4 percent for dried meat, 82.2 percent for processed mango juice, and 84.0 percent for stored shallot. The NPV for these business models at a 10 percent interest rate is CFAF 8.2 million for shallot, CFAF 39.5 million for potatoes, CFAF 10.1 million for papaya, CFAF 58.5 million for mango, CFAF 32.5 million for cattle fattening, CFAF 13.0 million for stored shallots, CFAF 14.9 million for the production of mango juice, and CFAF 67.4 million for dried meat. These data are presented in table 3.3.

Table 3.3. Technical and Economic Data of Selected Businesses

Sectors	Improvement of Irrigation + Farming Systems					Improved Storage/Processing		
	Shallot	Potato	Papaya	Mango	Cattle fattening	Shallot	Mango (nectar)	Dried meat
Size of representative farms	0.5 ha	10 ha	1 ha	4 ha	20 heads/ exploit.	3 tons/exploit.	3 tons/exploit.	5 tons/exploit.
Price of product (CFAF/kg or CFAF/liter)	175	120	300	175	320,000	550	1,250	9,500
Investment (CFAF, millions)	8,450	14,500	4,907	26,400	10,360	7,000	6,316	7,628
Yield before improvement (kg/ha)	12,000	10,500	13,400	10,000	6 heads /year	–	–	–
Yield after improvement	26,000	21,000	26,000	17,500	60 heads /year	–	–	–
IRR (%)	36.6	134.4	60.7	73.5	62.4	84.0	82.2	75.4
NPV (CFAF, millions)	8.2	39.5	10.1	58.5	32.5	10.0	14.9	67.4

Source: Financial and Economic Analysis of the ACDP Completion Report, 2015

34. The financial analysis also confirms the relevance of the matching grant mechanism promoted under the ACDP. In an environment where access to credit is limited, this mechanism has significantly helped improve corporate cash flow during the critical time of financial crisis where producers/processors have installed or developed their activity. Measures aiming at making an in-depth assessment of the investor's investment proposals were essential to ensuring that the selected investments were economically sound. Hence the need to have the Operations Manual of the matching grant mechanism which best meets the needs of entrepreneurs expressed in their business plans and in strict compliance with the procedures outlined in this manual during the evaluation of the documents.

35. **Monthly remuneration of family labor.** The permanent workforce receives a monthly pay ranging from CFAF 12,000 to 50,000 per person, based on availability and demand. The salary applied by each promoter was considered in farm models retained in the situation with project support and that without project support. The casual labor is paid between CFAF 400 and 1000 per day depending on supply and demand.

36. The business models proposed required a maximum of four months of work per year. The estimated compensation is by far higher than that in force in the project area (see table 3.4). The project doubled at the minimum of the monthly wage of family work compared to the without-project situation.

Table 3.4: Monthly Remuneration of Family Labor

Business Models	Gross Margins (CFAF)	Family Labor		Business Models	Gross Margins (CFAF)	Family Labor	
		Quantity	Value			Quantity	Value
Milk production	3,710,000	36	103,056	Milk processing	23,626,580	3	7,875,527
Shallot production	4,199,375	2	2,099,688	Shallot storage	3,500,000	4	875,000
Cattle fattening	9,381,350	36	260,593	Meat drying	27,477,800	5	5,495,560
Grain transformation	20,608,625	1	20,608,625	Potato production	13,136,250	3	4,378,750
Papaya production	3,705,510	12	308,793	Crafts	35,481,250	5	7,096,250
Mango production	23,395,000	12	1,949,583	Mango juice production	4,904,400	2	2,452,200
Tree nurseries	3,754,000	12	312,833	Cashew processing	5,675,551	4	1,418,888

Source: Financial and Economic Analysis of the ACDP Completion Report, 2015.

IV. Economic Analysis

A. Assumptions

37. The economic analysis is built upon the following assumptions: (a) the period considered is 25 years, which corresponds to the life time of mango trees considered as the longest lifecycle investment; (b) 100 percent of the cost of Components 2 and 3 and 25 percent of the cost of Component 1 (the FII being taken into account of Component 1); (c) the cost of Components 4 and 5 has not been considered; (d) 100 percent of the gross margin related to the project (financial product prices were considered to be similar to economic prices because of the low level of trade related to these products between Mali and other countries outside the WAEMU); (e) economic cost of labor is 50 percent of the financial wage costs; (f) the opportunity cost of retained long-term capital is 6 percent; and (g) cost of conversion factors for successful project is 85 percent.

B. Results of the Economic Analysis

38. Based on these assumptions, the NPV for investments at firm level, from an economic point of view, is approximately US$35.3 million as against an actual amount invested of US$59.2 million. When the advent of benefits is delayed by one or two years, the respective NPV is US$30.3 million and US$25.6 million. The EIRR for the whole project is estimated at 15 percent. These results are similar to those of the initial project and the AF, which were 16 percent in each case.

39. The sensitivity analysis was based on increase rates of 10 percent, 20 percent, and 30 percent in project costs (other than investments at enterprise level). This analysis yields return rates of 14.1 percent, 13.3 percent, and 12.5 percent. The sensitivity analysis also took into

account the decline of 10 percent, 20 percent, and 30 percent in the project-related margin, as compared to the gross margin of participating investors. This results in rates of return of respectively 14.0 percent, 12.9 percent, and 11.7 percent. When the advent of benefits is delayed by one or two years, this results in respective EIRRs of 13.6 percent and 12.4 percent.

Table 3.5. Sensitivity Analysis

Economic Analysis			
Assumptions			
100% cost of Components 2 and 3 and 25% cost of Component 1, cost of Components 4 and 5 are not considered			
100% gross margin due to the project			
Labor opportunity cost: 50% of financial salary			
Capital opportunity cost: 6%			
Duration: 25 years			
Conversion factor price of imported inputs and equipment and economic cost: 0.85			
Results	**IRR (%)**	**NPV**	
		CFAF, millions	US$, millions
Base (NPV = 0)	15	20,379.0	35.3
If costs increase by 10%	14	19,262.1	33.4
If costs increase by 20%	13	18,145.3	31.4
If costs increase by 30%	13	17,028.5	29.5
If costs increase by 50%	11	14,794.8	25.6
If gross margin decreases by 10%	14	17,224.2	29.9
If gross margin decreases by 20%	13	14,069.5	24.4
If gross margin decreases by 30%	12	10,914.8	18.9
If gross margin decreases by 50%	9	4,605.3	8.0
If profits delayed by 1 year	14	17,511.4	30.3
If profits delayed by 2 years	12	14,799.9	25.6

Source: ICR 2015.

40. The analysis of these data shows that the project remains economically viable. The EIRR is explained by the returns that have increased due to improved techniques and technologies of irrigation and processing and the availability of trade facilities that contribute to improving the quality of products and building the capacity of sector stakeholders to use disseminated technologies and techniques.

V. Appendices

Financial Results Per Business Model

Table: 3.1 Financial Results - Milk Production (5 Dairy Cows, 180 Days of Lactation) (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	1,125,000.0	12,180,250.0	0.0	0.0	0.0	1,039,537.5	0.0	0.0	5,250,000.0	1,039,537.5	0.0
Operating costs	282,000,0	1120000,0	1120000,0	1120000,0	1120000,0	1120000,0	1120000,0	1120000,0	1120000,0	1120000,0	1120000,0
Gross income	1,650,000.0	4,200,000.0	4,830,000.0	4,830,000.0	4,830,000.0	4,830,000.0	4,830,000.0	4,830,000.0	4,200,000.0	4,830,000.0	4,830,000.0
Gross margin	243,000.0	-9 100,250.0	3,710,000.0	3,710,000.0	3,710,000.0	2,670,462.5	3,710,000.0	3,710,000.0	-2 170,000.0	2,670,462.5	3,710,000.0
EIRR		28.5 %									
NPV		5,828,133									

Table: 3.2 Financial Results - Milk Processing (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	130,000.0	9,837,030.0	0.0	0.0	0.0	0.0	4,426,663.5	0.0	0.0	0.0	4,426,663.5
Operating costs	10,089,500.0	15,831,500.0	15700860,0	20173420,0	20,173,420.0	20,173,420.0	20,173,420.0	20,173,420.0	20,173,420.0	20,173,420.0	20,173,420.0
Gross income	14,400,000.0	18,700,000.0	22,900,000.0	33,800,000.0	43,800,000.0	43,800,000.0	43,800,000.0	43,800,000.0	43,800,000.0	43,800,000.0	43,800,000.0
Gross margin	4,180,500.0	-6,968,530.0	7,199,140.0	13,626,580.0	23,626,580.0	23,626,580.0	19,199,916.5	23,626,580.0	23,626,580.0	23,626,580.0	19,199,916.5
EIRR		82.9%									
NPV		66,379,056									

Table: 3.3 Financial results - Cattle fattening (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	295,000.0	10,360,000.0	0.0	0.0	0.0	0.0	0.0	1,657,600.0	0.0	0.0	663,040.0
Operating costs	1,085,750.0	5,541,080.0	9,150,300,0	12,518,650.0	125186500	12,518,650.0	12,518,650.0	12,518,650.0	12,518,650.0	12,518,650.0	12,518,650.0
Gross income	1,500,000.0	5,250,000.0	12,375,000.0	21,900,000.0	21,900,000.0	21,900,000.0	21,900,000.0	21,900,000.0	21,900,000.0	21,900,000.0	21,900,000.0
Gross margin	119,250.0	-10,651,080.0	3,224,700.0	9,381,350.0	9,381,350.0	9,381,350.0	9,381,350.0	7,723,750.0	9,381,350.0	9,381,350.0	8,718,310.0
EIRR		62.4 %									
NPV		32,505,913									

Table: 3.4 Financial Results - Processed Meat (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	103,800.0	7,627,650.0	0.0	0.0	0.0	1,144,147.5	0.0	0.0	0.0	1,144,147.5	0
Operating costs	3143950,0	2343350,0	3102100,0	6043450,0	6197400,0	11439000,0	21922200,0	21922200,0	21922200,0	21922200,0	21922200,0
Gross income	4,916,590.0	4,275,000.0	5,700,000.0	12,350,000.0	12,350,000.0	24,700,000.0	49,400,000.0	49,400,000.0	49,400,000.0	49,400,000.0	49,400,000.0
Gross margin	1,668,840.0	-5 696,000.0	2,597,900.0	6,306,550.0	6,152,600.0	12,116,852.5	27,477,800.0	27,477,800.0	27,477,800.0	26,333,652.5	27,477,800.0
EIRR		75.4 %									
NPV		67,370,144									

Table: 3.5 Financial Results - Cereals Processing (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	130,400.0	25,592,400.0	0.0	0.0	0.0	8,957,340.0	0.0	0.0	0.0	8,957,340.0	
Operating costs	1,864,250.0	9,478,000.0	11,483,375.0	17,683,000.0	19,581,875.0	24,536,875.0	20,099,375.0	24,536,875.0	20,099,375.0	24,536,875.0	20,099,375.0
Gross income	2,335,000.0	15,364,000.0	22,806,400.0	29,818,000.0	39,508,000.0	40,708,000.0	40,708,000.0	40,708,000.0	40,708,000.0	40,708,000.0	40,708,000.0

Gross margin	340,350.0	-19 706,400.0	11,323,025.0	12,135,000.0	19,926,125.0	7,213,785.0	20,608,625.0	16,171,125.0	20,608,625.0	7,213,785.0	20,608,625.0
EIRR		63.8 %									
NPV		57,108,186									

Table: 3.6 Financial Results - Shallots Production on 0.75 ha Area (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	225,000.0	8,450,000.0	0.0	0.0	2,957,500.0	0.0	0.0	1,267,500.0	0.0	0.0	1,267,500.0
Operating costs	960,000.0	1,225,625.0	1,225,625.0	1,225,625.0	1,225,625.0	1,225,625.0	1,225,625.0	1,225,625.0	1,225,625.0	1,225,625.0	1,225,625.0
Gross income	1,780,000.0	3,775,000.0	4,125,000.0	4,725,000.0	5,425,000.0	5,425,000.0	5,425,000.0	5,425,000.0	5,425,000.0	5,425,000.0	5,425,000.0
Gross margin	595,000.0	-5 900,625.0	2,899,375.0	3,499,375.0	1,241,875.0	4,199,375.0	4,199,375.0	2,931,875.0	4,199,375.0	4,199,375.0	2,931,875.0
EIRR		36.6 %									
NPV		8,206,089									

Table: 3.7 Financial Results - Shallot Preservation (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	250,000.0	7,000,000.0	0.0	0.0	0.0	1,015,000.0	0.0	0.0	0.0	1,015,000.0	
Operating costs	1,090,000.0	4,337,500.0	4,337,500.0	4,337,500.0	4,337,500.0	4,337,500.0	4,337,500.0	4,337,500.0	4,337,500.0	4,337,500.0	4,337,500.0
Gross income	1,430,000.0	7,672,500.0	7,590,000.0	7,700,000.0	7,755,000.0	7,810,000.0	7,837,500.0	7,837,500.0	7,837,500.0	7,837,500.0	7,837,500.0
Gross margin	90,000.0	-3 665,000.0	3,252,500.0	3,362,500.0	3,417,500.0	2,457,500.0	3,500,000.0	3,500,000.0	3,500,000.0	2,485,000.0	3,500,000.0
EIRR		84.0 %									
NPV		12,997,368									

Table:3.8 Financial Results - Potato Production on 10 ha Area (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	610,000.0	14,500,000.0	0.0	0.0	0.0	2,175,000.0	0.0	0.0	0.0	2,175,000.0	0.0
Operating costs	2,095,000.0	706,3750.0	706,3750.0	706,3750.0	706,3750.0	706,3750.0	706,3750.0	706,3750.0	706,3750.0	706,3750.0	706,3750.0
Gross income	9,550,000.0	18,600,000.0	18,650,000.0	19,750,000.0	20,075,000.0	19,775,000.0	20,200,000.0	20,200,000.0	20,200,000.0	20,200,000.0	20,200,000.0
Gross margin	6,845,000.0	-2 963,750.0	11,586,250.0	12,686,250.0	13,011,250.0	10,536,250.0	13,136,250.0	13,136,250.0	13,136,250.0	10,961,250.0	13,136,250.0
EIRR		134.4 %									
NPV		39,490,226									

Table: 3.9 Financial Results - Production of Papaya on 1 ha Area (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	750,000.0	4,907,000.0	0.0	0.0	0.0	0.0	0.0	1,717,450.0	0.0	0.0	1,717,450.0
Operating costs	1,344,500.0	3,435,000.0	3,435,000.0	3,435,000.0	3,435,000.0	3,435,000.0	3,435,000.0	3,435,000.0	3,435,000.0	3,435,000.0	3,435,000.0
Gross income	2,535,560.0	5,200,710.0	4,983,360.0	6,490,710.0	7,140,510.0	7,140,510.0	7,140,510.0	7,140,510.0	7,140,510.0	7,140,510.0	7,140,510.0
Gross margin	441,060.0	-3 141,290.0	1,548,360.0	3,055,710.0	3,705,510.0	3,705,510.0	3,705,510.0	1,988,060.0	3,705,510.0	3,705,510.0	1,988,060.0
EIRR		60.7 %									
NPV		10,019,821									

Table: 3.10 Financial Results - Production of Mangoes and Other Crops on 4 ha Area (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	830,000.0	26,400,000.0	0.0	0.0	0.0	9,240,000.0	0.0	0.0	0.0	9,240,000.0	0.0
Operating costs	980,000.0	1,827,960.0	1,632,000.0	1,632,000.0	1,737,000.0	3,780,000.0	3,780,000.0	4,525,000.0	4,525,000.0	4,525,000.0	4,525,000.0
Gross income	5,350,000.0	15,020,000.0	17,420,000.0	17,420,000.0	17,420,000.0	23,020,000.0	25,820,000.0	27,920,000.0	27,920,000.0	27,920,000.0	27,920,000.0
Gross margin	3,540,000.0	-13 207,960.0	15,788,000.0	15,788,000.0	15,683,000.0	10,000,000.0	22,040,000.0	23,395,000.0	23,395,000.0	14,155,000.0	23,395,000.0
EIRR		73.5 %									
NPV		58,454,768									

Table: 3.11 Financial Results - Mango Processing (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	200,000.0	6,316,000.0	0.0	0.0	0.0	947,400.0	0.0	0.0	0.0	947,400.0	
Operating costs	788,500.0	1,843,600.0	2,041,600.0	2,053,600.0	2,083,600.0	2,095,600.0	2,095,600.0	2,117,000.0	2,117,000.0	2,117,000.0	2,117,000.0
Gross income	2,013,050.0	4,825,000.0	6,550,000.0	6,875,000.0	6,962,500.0	7,000,000.0	7,000,000.0	7,000,000.0	7,000,000.0	7,000,000.0	7,000,000.0
Gross margin	1,024,550.0	-3 334,600.0	4,508,400.0	4,821,400.0	4,878,900.0	3,957,000.0	4,904,400.0	4,883,000.0	4,883,000.0	3,935,600.0	4,883,000.0
EIRR		82.2 %									
NPV		14,914,608									

Table: 3.13 Financial Results - Handicraftsmen (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	6,750,000.0	9,730,000.0	0.0	0.0	0.0	1,459,500.0	0.0	0.0	0.0	1,459,500.0	0.0
Operating costs	5,884,000.0	14,143,750.0	16,243,750,0	17,793,750.0	18,393,750.0	18,393,750.0	18,393,750.0	18,393,750.0	18,393,750.0	18,393,750.0	18,393,750.0
Gross income	16,837,500.1	10,845,000.0	18,815,000.0	34,900,000.0	51,400,000.0	53,875,000.0	53,875,000.0	53,875,000.0	53,875,000.0	53,875,000.0	53,875,000.0
Gross margin	4,203,500.1	-13,028,750.0	2,571,250.0	17,106,250.0	33,006,250.0	34,021,750.0	35,481,250.0	35,481,250.0	35,481,250.0	34,021,750.0	35,481,250.0
EIRR		71.6 %									
NPV		103,868,813									

Table: 3.14 Financial Results - Nursery Garden (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	2,500,000.0	3,365,000.0	0.0	0.0	0.0	504,750.0	0.0	0.0	0.0	504,750.0	0.0
Operating costs	1,587,000.0	6,529,000.0	6,529,000.0	6,529,000.0	6,784,000.0	6,784,000.0	6,784,000.0	6,784,000.0	6,784,000.0	6,784,000.0	6,784,000.0
Gross income	4,685,000.0	7,766,000.0	8,695,000.0	9,195,000.0	9,761,000.0	10,311,000.0	10,538,000.0	10,538,000.0	10,538,000.0	10,538,000.0	10,538,000.0
Gross margin	598,000.0	-2 128,000.0	2,166,000.0	2,666,000.0	2,977,000.0	3,022,250.0	3,754,000.0	3,754,000.0	3,754,000.0	3,249,250.0	3,754,000.0
EIRR		74.1%									
NPV		10,716,030									

Table: 3.15 Financial Results – Cashew Nuts Processing (CFAF)

	Without project support	With project support									
		YEAR1	YEAR2	YEAR3	YEAR4	YEAR5	YEAR6	YEAR7	YEAR8	YEAR9	YEAR10
Investment	850,000.0	8,059,500.0	0.0	0.0	0.0	1,336,425.0	0.0	0.0	0.0	1,336,425.0	0.0
Operating costs	1,835,000.0	4,411,224.0	5,398,524.0	6,124,449.0	6,124,449.0	6,124,449.0	6,124,449.0	6,125,825.0	6,125,825.0	6,125,825.0	6,125,825.0
Gross income	4,480,000.0	8,000,000.0	10,400,000.0	11,800,000.0	11,800,000.0	11,800,000.0	11,800,000.0	11,800,000.0	11,800,000.0	11,800,000.0	11,800,000.0
Gross margin	1,795,000.0	-4 470,724.0	5,001,476.0	5,675,551.0	5,675,551.0	4,339,126.0	5,675,551.0	5,674,175.0	5,674,175.0	4,337,750.0	5,674,175.0
EIRR		54.5 %									
NPV		12,664,281									

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team Members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Francois G. Le Gall	Adviser	GFADR	
Yeyande Kasse Sangho	Senior Agribusiness Specialist	GFADR	
Virginie A. Vaselopulos	Senior Program Assistant	GENDR	
IJsbrand Harko de Jong	Lead Water Resource Management	GWADR	
Supervision/ICR			
Hugues Agossou	Sr Financial Management Specia	GGODR	
Pin Foon K. F. Ah-Kee	Procurement Analyst	AFTA1 - HIS	
Malick Daniel Antoine	Consultant	CAFW1	
Andrew Osei Asibey	Senior Monitoring & Evaluation	GPSOS	
Jean-Claude Balcet	Consultant	GENDR	
Tamar Bocoum	Team Assistant	AFCW3	
Nestor Coffi	Country Manager	AFMNE	
Aissata Diop Diallo	Program Assistant	AFCW3	
Abdoulaye Mohamedine Dicko	HQ Consultant ST	GFADR	
Mahine Diop	Senior Municipal Engineer	GSURR	
Yvette Laure Djachechi	Senior Social Development Spec	AFTCS - HIS	
Olivier Durand	Sr Agricultural Spec.	GFADR	
Bleoue Nicaise Ehoue	Senior Agriculture Economist	GFADR	
Maimouna Mbow Fam	Sr Financial Management Specia	GGODR	
Marie-Claudine Fundi	Language Program Assistant	GFADR	
Jean-Noel Guillossou	Program Manager	GTIDR	
Guillemette Sidonie Jaffrin	Lead Private Sector Developmen	GTCDR	
Amadou Konare	Senior Environmental Specialis	AFTN1 - HIS	
Patrick Labaste	Sector Leader	GFADR	
Gnoleba Mathieu Meguhe	Consultant	GGODR	
Francois Onimus	Sr Water Resources Spec.	GWADR	
Moustapha Ould El Bechir	Senior Procurement Specialist	GGODR	
Christophe Ravry	Senior Industry Specialist	CMGAF	
Andre Rodrigues de Aquino	Sr Natural Resources Mgmt. Spe	GENDR	
Andre Ryba	Consultant	GFMDR	
Rokhayatou Sarr Samb	Procurement Specialist	AFTPE - HIS	
Yeyande Kasse Sangho	Senior Agribusiness Specialist	GFADR	
Moussa Fode Sidibe	Program Assistant	AFCW3	
Cheick Traore	Senior Procurement Specialist	GGODR	

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	US$, thousands (including travel and consultant costs)
Lending		
FY03		74.71
FY04		223.92
FY05		281.55
FY06		12.38
FY07		-0.01
FY08		0.00
Total:		592.55
Supervision/ICR		
FY03		0.00
FY04		0.00
FY05		0.00
FY06		148.70
FY07		250.68
FY08		324.28
Total:		723.66

Annex 5. Beneficiary Survey Results

No survey conducted

Annex 6. Stakeholder Workshop Report and Results

No stakeholder workshop organized

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

1. Le Projet de Compétitivité et de diversification agricole (PCDA), s'est achevé le 30 juin 2015 et a clôturé le 31 Octobre 2015. Conformément à l'Accord de Crédit, l'Emprunteur représenté par le Ministère de l'Agriculture et la Banque mondiale élaborent chacun un rapport d'achèvement du PCDA. Le présent rapport est celui de l'Emprunteur. Il a pour objectifs de : (i) réaliser une autoévaluation de la conception et de l'exécution du projet par l'Emprunteur et (ii) tirer les enseignements utiles pour d'éventuelles interventions futures.

2. La méthodologie adoptée a reposé sur le recueil et l'exploitation des rapports fournis par l'Unité de Coordination du Projet (UCP), les coordinations régionales (CR) et les Opérateurs privés, le bureau pays de la Banque mondiale. Les informations y collectées ont été complétées, actualisées, ou validées par celles recueillies pendant les entretiens de la mission avec des représentants des parties prenantes dans la mise en œuvre du projet au niveau central et des régions couvertes. La mission s'est rendue du 04 au 22 juin dans les Régions de Sikasso, de Mopti, de Ségou, de Koulikoro et du District de Bamako et a rencontré les acteurs des filières et les institutions partenaires du PCDA. A chaque entrevue et réunion organisée dans ce cadre, la mission a échangé et restitué les constats majeurs, les mesures convenues et les leçons apprises avec les représentants des parties prenantes.

3. Le PCDA est cohérent avec les stratégies et politiques nationales. Il a été conçu pour répondre à trois défis majeurs du Mali:

   (i) augmenter la contribution du secteur du développement rural à la croissance économique du pays ;

   (ii) intensifier et diversifier la production agricole, en vue de renforcer la sécurité alimentaire et de développer les exportations agricoles ;

   (iii) et améliorer les revenus et les conditions de vie des populations rurales.

4. Ces défis sont détaillés dans les documents de politiques et de stratégies nationales notamment : (i) la lettre de politique sectorielle de 2001 qui définit la vision institutionnelle du secteur agricole et rural à l'horizon 2010 ; (ii) le Schéma Directeur du secteur du Développement Rural (SDDR) (1992) actualisé en 2002 pour la période 2002-2010 ; (iii) le Cadre Stratégique de Lutte contre la Pauvreté (CSLP) pour la période 2002-2006, actualisé pour la période 2007 – 2011..

5. Le PCDA est aligné sur la stratégie d'assistance pays (CAS) 2006, de la Banque mondiale pour la république du Mali. Il représente l'une des contributions[12] de la Banque mondiale à l'opérationnalisation des politiques et stratégies maliennes.

6. La zone d'intervention du projet comprend les régions de Bamako/Koulikoro, Mopti, Ségou et Sikasso, considérées comme principaux bassins de production des filières d'intervention : mangues, échalote/oignon, pomme de terre, bétail/viande (embouche bovine et lait) et papaye, filières horticoles prioritaires pour lesquelles le Mali dispose d'avantages comparatifs.

7. L'objectif de développement assigné au PCDA était de contribuer à la levée des contraintes critiques au développement d'un certain nombre de filières commerciales agricoles, d'élevage et de pêche pour lesquelles le Mali jouit d'un avantage comparatif et d'opportunités de marché confirmées. Plus spécifiquement, le projet visait à (i) améliorer les performances techniques et économiques des systèmes de production et de valorisation des produits agricoles ; (ii) améliorer les performances commerciales et économiques des filières agricoles ; (iii) faciliter l'accès au financement ; (iv) réaliser des infrastructures commerciales et réhabiliter des pistes rurales d'accès.

[12] Sur la période, la Banque mondiale finançait également le PASAOP et le PACR.

8. Le PCDA s'articulait autour de cinq composantes elles-mêmes subdivisées en sous-composantes : Composante 1 : Démonstration et diffusion des technologies d'irrigation et de post récolte performantes. Elle comprend trois sous composantes (i) Démonstration et promotion des innovations technologiques, (ii) Renforcement des capacités des acteurs de la filière, (iii) Appui à la diffusion des innovations technologiques et (iv) Concertation et promotion interprofessionnelle. A la revue mi-parcours, le mécanisme de financement des innovations technologiques, le fonds d'innovation et d'investissement (FII), initialement géré par la composante 5, a été transféré à la Composante 3. Composante 2 : Amélioration des performances techniques et commerciales des chaines de valeur comportant trois sous-composantes (i) Connaissance des marchés, des filières et des opportunités, (ii) Promotion de l'environnement des services, de l'investissement et appui au développement des filières et (iii) Qualité des produits et de leur commercialisation. A la revue mi-parcours en 2009, la promotion des investissements privés a été rattachée à la composante 3. Composante 3 : Facilitation de l'accès au financement et gestion des risques comptant quatre sous composantes (i) Fonds de Garantie et Gestion du Fonds d'innovation et d'Investissement (FII), (ii) Assistance Technique ; (iii) Promotion d'instruments financiers novateurs et (iv) Promotion de l'investissement privé ; Composante 4 : Infrastructures ayant deux sous composantes (i): Infrastructures commerciales et (ii) Pistes rurales. Composante 5 : Coordination et Gestion du projet composée de quatre sous composantes (i) Coordination de la mise en œuvre du programme, (ii) Suivi/évaluation des résultats et des impacts, (iii) Communication et (iv) Supervision et Contrôle.

9. Le PCDA, placé sous la tutelle du Ministère chargé de l'Agriculture (MA) qui en a assuré la maîtrise d'ouvrage générale, l'a délégué à une Unité de coordination du projet (UCP). La maîtrise déléguée des infrastructures commerciales et des pistes a été confié à l'AGETIER, l'AGETIPE et la Direction nationale des routes (DNR). Le pilotage et l'orientation du projet ont été assurés aux niveaux national et régional respectivement par un Comité national de pilotage et d'orientation (CNPO) présidé par le Ministre de l'Agriculture et des Comités régionaux de pilotage et d'orientation (CRPO) présidés par les gouverneurs de régions. Le CNPO et les CRPO étaient composés de représentants des Ministères (ou leurs services techniques déconcentrés), de l'Agriculture, de l'Elevage, de l'Environnement et Assainissement, des transports ainsi que des institutions de financement, des chambres consulaires et des acteurs des filières ciblées. Le CNPO et les CRPO se réunissaient une fois par an et approuvaient les plans de travail et budget annuels qui leur ont été soumis par respectivement l'UCP et les Coordinations régionales. Ils ont également analysé et validé les rapports financiers. La création par voie règlementaire du CNPO et de l'Unité de coordination du projet (UCP) financièrement autonome a constitué des conditions d'entrée en vigueur du crédit IDA. L'exécution des plans de travail et budget annuels approuvés par le CNPO était placée sous la responsabilité du Ministère de l'Agriculture qui a désigné le Coordinateur du projet et signé avec lui un contrat de performances évalué annuellement.

10. L'UCP comportant une équipe d'experts de haut niveau placés sous la supervision directe du coordinateur du projet, a exécuté les composantes 4 « Infrastructures » et 5 « Coordination et gestion du projet ». La composante 4 l'a été sous la maîtrise d'ouvrage déléguée de l'AGETIER et de l'AGETIPE. La Direction nationale des routes (DNR) a co-supervisé le volet pistes rurales de la composante.

11. En sa qualité de Maître d'Ouvrage Délégué, l'UCP, a au niveau des régions, mis en œuvre à travers les opérateurs privés, des plans d'actions annuels validés par les représentants des filières à travers les CRPO. Ces opérateurs privés régionaux ont après l'UCP, constitué le deuxième niveau opérationnel du PCDA. Véritables Maîtres d'œuvre régionaux, ils ont à la fois, exécuté la composante 1 et coordonné les prestataires spécialisés qu'ils ont sélectionnés et recrutés pour l'exécution des tâches qui leur ont été confiées. L'un des deux opérateurs a couvert les bassins de production de Bamako-Koulikoro-Sikasso et l'autre, celui de Ségou-Mopti. Ces opérateurs étaient aussi chargés de la coordination des activités régionalisées des composantes 2 et 3.

12. Les composantes 2 et 3 ont été mises en œuvre chacune par un Opérateur constitué d'une firme internationale et d'une firme malienne. Ces Opérateurs ont chacun signé un contrat de performance avec l'UCP. Leurs experts recrutés et en charge de l'exécution des activités régionalisées, ont été implantés dans les Coordinations Régionales (CR) mais sans liens fonctionnels avec les coordinations régionales.

13. Le financement global prévisionnel du projet était de 71,8 millions de $US (35,9 milliards de F CFA) dont 46,4 millions de $US (23,2 milliards de F CFA) pour le projet initial et 24,4 millions $US pour le financement additionnel. La contribution de l'IDA s'élevait respectivement à 43, 153 millions de US$ et 20, 00 millions de US$. Le gouvernement avait apporté respectivement 1,0 million de US$ et 3,2 millions de US$ respectivement sur le projet initial et le Financement additionnel. Les bénéficiaires ont apporté 4.950 millions de $US (2.050 millions de $US dans le projet initial et 2.900 millions de $US dans le Financement additionnel) au titre de leur contribution au financement des sous-projets.

14. L'Accord de crédit n°4094-MLI relatif au PCDA a été signé le 8 septembre 2005 entre le gouvernement de la République du Mali et la Banque mondiale. Il est entré en vigueur le 4 avril 2006. Le démarrage effectif du projet a été affecté par le retard pris dans le recrutement et l'installation des opérateurs en charge de sa mise en œuvre, la mobilité du personnel de l'UCP et des opérateurs. L'exécution du projet a été perturbée par des crises sociopolitiques intervenues en Côte-d'Ivoire (2008 – 2010) et dans le pays en 2012. Ces événements ont eu pour conséquences, un faible taux d'exécution et de réalisation des objectifs du projet, et qui subséquemment ont occasionné les deux prorogations de la durée du projet initial (2006 – 2013 contre 2006 – 2012 initialement prévus).

15. Le PCDA fit l'objet de trois modifications majeures, la première a eu lieu le 17 février 2011 et a concerné : (i) la révision des résultats intermédiaires (nombre de sous-projets, notamment), (ii) la réallocation des fonds de la composante 4 (infrastructures) et des non alloués vers les composantes 2, 3 et 5 du projet ; et (iii) la prorogation de la durée du projet de 6 mois pour intégrer le retard accusé dans la mise en œuvre dû au recrutement des opérateurs. La deuxième modification est intervenue après la crise sociopolitique de mars 2012 et a porté sur la prorogation de la durée de l'exécution du projet afin de prendre en compte la suspension des décaissements du crédit. La troisième modification a porté sur la mise en œuvre du financement additionnel qui a permis d'appuyer la consolidation des acquis et leur mise à l'échelle.

16. Malgré ces événements qui ont ralenti ou retardé l'exécution du projet, la performance du PCDA a été jugée globalement satisfaisante. Ce résultat est expliqué par trois facteurs majeurs : d'une part, une bonne collaboration (entente) entre l'Emprunteur et la Banque mondiale qui ont dialogué constamment, fait dans les meilleurs délais des ajustements qui s'imposaient et suivi leur application, d' autre part, des équipes de l'UCP et de cinq opérateurs privés dynamiques et engagées à réaliser leurs objectifs contractuels respectifs et d'autre part encore, la prolongation d'une année de la durée initiale du projet ainsi que le financement additionnel.

17. Au 30 juin 2015, le taux de mobilisation des ressources était de 98% du financement global, 93% sur les ressources IDA, 100% sur la contribution du gouvernement. L'absence des allocations dans le projet initial n'a pas permis de calculer le taux de mobilisation des apports des bénéficiaires. Même non pris en compte dans le coût estimatif global, la contribution des institutions de financement (banques commerciales et SFD) à travers des crédits accordés aux bénéficiaires du PCDA, a été de 1 819 millions de F CFA, soit 3,6 millions de $US, grâce à la fois, au fonds de garantie et à la facilitation par l'assistance technique à la négociation avec les institutions de financement.

18. Réalisation des objectifs contractuels (cadre des résultats du projet). Le PCDA a pu réaliser quasiment tous les objectifs contractuels consignés dans le cade des résultats. En effet, la Composante 1 a délivré l'essentiel de ses résultats : 26 Référentiel Technico Economiques (RTE) sur 24 prévus et 17 KIT de modèles d'entreprises préparés à partir des RTE tous validés, édités et diffusés (la sous composante 1.1), 612 sous-projets sur 550 prévus (sous composante 1.2) ; 05 interprofessions des filières prioritaires (mangue, pomme de terre, échalote/oignon, bétail/viande et papaye sur une prévision de 6 (sous-composante 1.3), soit un taux de réalisation de 108% pour les RTE, de 109% pour les sous projets et de 83% pour la mise en place des Interprofessions.

19. Le PCDA a touché 16300 bénéficiaires contre une prévision de 9000, soit un taux de réalisation de 181%. Pour les filières cibles, les productions commercialisées ont, en volume comme en valeur, dépassé les prévisions : 389 000 contre 330 000 tonnes pour la pomme de terre ; 1 234 000 contre 1 025 000 tonnes pour l'échalote/oignon et 128 000 contre 119 000 tonnes pour la mangue, soit une réalisation des objectifs contractuels respectivement de117% pour la pomme de terre, 115% pour l'échalote/oignon et 107% pour la mangue. Ces produits ont été commercialisés sur différents marchés (national, sous régional et international) et ont généré un chiffre d'affaires cumulés de 148 milliards de F CFA contre une prévision de 122 milliards de F CFA pour l'échalote/oignon ; 67 milliards de F CFA contre une prévision de 52, 5 milliards de F CFA pour la pomme de terre et 60 milliards F CFA contre une prévision 56 milliards de F CFA pour la mangue. Le projet a réalisé les objectifs qui lui ont été assignés à 128%, 121% et 107% respectivement pour la pomme de terre, l'échalote / oignon et la mangue.

20. Ces résultats montrent que le PCDA a eu un impact positif sur les bénéficiaires qui ont vu augmenter leurs revenus, le secteur agricole et l'économie malienne qui désormais sont marqués par l'émergence des entreprises agricoles, agroalimentaires et d'activités amont et aval des filières, l'accroissement de la contribution du secteur agriculture au PIB, la réduction du chômage.

21. L'atteinte de ces résultats a reposé en grande partie sur cinq principaux facteurs : (i) la mise en œuvre des activités par cinq opérateurs privés (firmes/ONG internationales associées aux firmes et ONG maliennes recrutés sur appel à la concurrence) placés sous la supervision d'une UCP résolue à réaliser son contrat de performances ; (ii) l'adaptation, la démonstration et la diffusion des technologies innovantes d'irrigation et de transformation de produits ; (iii) le mécanisme de financement (subvention à coût partagé et crédits) mis en place pour permettre aux promoteurs de sous-projets d' acquérir et adopter les technologies et techniques innovantes adaptées promues par le projet ; (iv) les infrastructures commerciales participant à l'amélioration de la compétitivité des produits maliens à l'international ; (v) les formations et l'accompagnement des acteurs des filières pour mieux connaitre et maîtriser l'utilisation et la gestion de technologies nouvelles, des infrastructures et de leur exploitation ainsi que pour améliorer leur accès aux marchés d'approvisionnement en biens et services essentiels (y compris les services financiers), au développement des filières et aux marchés des produits (participation aux manifestations commerciales).

22. Cependant, ces résultats auraient pu être plus importants si seulement si : (i) le nombre d'opérateurs était moins élevé (deux au maximum) pour permettre à l'UCP d'assurer une meilleure coordination et gestion et de limiter les coûts liés aux opérateurs ; (ii) les interrelations et interactions entre les opérateurs (C1, C2, C3 et UGP volet infrastructures) étaient maîtrisées pour développer des synergies et complémentarités ; (iii) la mise à niveau des infrastructures commerciales était achevée et la logistique de transport, mieux maîtrisée pour limiter la durée de conservation des produits dans les chambres froides au niveau de ces infrastructures ; (iv) l'apport des promoteurs (contribution pour l'accès à la subvention et fond de roulement) était moins important (dans un contexte d'accès limité au crédit, le niveau actuel de l'apport total du promoteur en question était si lourd que sa mobilisation a retardé l'exécution de l'activité et/ou sa réalisation était faible (après 2 années, la Société générale d'alimentation par exemple avait un taux d'exploitation par rapport à la capacité installée inférieur au seuil de rentabilité ; (v) le montant de la subvention n'était pas unique mais plutôt adapté à la nature de l'activité, les besoins financiers variant d'une activité à une autre ; (vi) l'appui conseil technique, en gestion de la qualité et en gestion comptable et financière notamment était assuré et adapté aux besoins des acteurs des filières ; (vii) les ressources du financement additionnel avaient moins servi à financer les nouveaux sous projets mais plutôt destinées principalement à terminer les mises à niveau des infrastructures commerciales y compris le renforcement de leur gestion opérationnelle, à accompagner les bénéficiaires qui avaient de difficultés à mettre en route leurs sous projets du fait du poids important de l'apport personnel (pour obtenir la subvention et constituer le fonds de roulement nécessaire) ; (viii) les mécanismes de pérennisation mis en place avaient aboutis et opérationnels avant la clôture du projet.

23. Cet ensemble des conditions pour amplifier les résultats du projet montrent que les acquis du PCDA restent fragiles et leur durabilité peut être rapidement hypothéquée en l'absence de mesures de consolidation conséquentes relatives à la pérennisation de l'accès des entrepreneurs aux services financiers, aux services non financiers et aux technologies innovantes. Certaines de ces mesures doivent être rapidement prises. Elles pourraient donc l'être dans le cadre d'une opération transitoire. D'autres mesures doivent être prises à moyen terme dans le cadre d'une nouvelle intervention.

24. Mesures de court terme dans le cadre d'une opération de transition. Les activités à conduire à court terme sont les suivantes :

- Confirmer la mise en place du PCDA de transition et lui doter de moyens requis pour mener cette phase de transition.
- Cibler les acquis à consolider, les activités à achever et celles à mettre en place. Pendant cette phase de transition, l'accent devra être plus mis sur la consolidation, l'achèvement des activités déjà amorcées (renforcement des interprofessions, mise à niveaux des infrastructures commerciales, et l'accompagnement des promoteurs qui ont bénéficié de peu de suivi et d'appuis conseils techniques, en gestion de la qualité, en gestion financière et comptable et en négociation avec les institutions de financement, les fournisseurs d'intrants et les acheteurs de produits. Vu la durée de la phase de transition limitée à une année, limiter au maximum possible l'installation de nouvelles entreprises, car elles auront besoin de beaucoup de temps d'accompagnement pour maîtriser les nouvelles technologies et les marchés d'approvisionnement et des produits. De plus, s'appuyer le plus possible sur les cadres et les agents qui ont participé à la mise en œuvre du projet afin de ne pas consacrer plus de temps à l'apprentissage de l'approche et des principes PCDA, dont auront besoin les personnes qui ne connaissent pas le projet.
- Mobiliser de ressources nationales additionnelles et affectation de ces moyens vers les acquis et les activités ciblées ; le gouvernement du Mali a démontré sa volonté de politique en inscrivant au budget national plus de 2 milliards de FCFA pour le PCDA de transition. La mise à disposition de ces ressources devra être programmée de façon à permettre au PCDA de transition d'élaborer un plan de travail et budget annuel.
- Poursuivre les actions relatives à la veille commerciale et la diffusion des informations qui en résultent afin d'armer les entrepreneurs en outils d'aide à la gestion de la variabilité des prix des intrants et des produits ;
- Renforcer les capacités des promoteurs et des interprofessions à améliorer leur accès aux services financiers et aux services non financiers, à négocier avec les fournisseurs des biens et services dont ils ont besoin et avec les acheteurs de leurs produits en leur assurant l'éducation financière de base, les formations sur la négociation, la gestion financière et comptable des exploitations, la rédaction et lecture des contrats, etc. ;
- Poursuivre la diversification des outils de financement (crédit bail, warrantage, alliance productive, assurance agricole, joint venture, etc.) tout en accélérant le rythme de formation des institutions de financement sur les risques agricoles et de mise en relation de ceux-ci avec des promoteurs des entreprises afin d'améliorer l'accès de ces derniers aux services financiers adapté afin d'obtenir du crédit qui leur permettront d'acquérir les technologies et techniques performantes ;
- Poursuivre et amplifier le renforcement des capacités des prestataires privés et publics de services de qualité en les impliquant davantage dans le suivi et l'accompagnement des acteurs des filières ciblées et/ou en les recyclant sur la conduite de ces activités, signant avec le Ministère de tutelle des contrats de performance avec des indicateurs précis et réalisables et

en leur versant une prime ou indemnité pour charges additionnelles aux résultats, aux fins du développement des entreprises et de l'amélioration de leur compétitivité ;

- Poursuivre voire même amplifier les négociations avec les partenaires au développement pour mobiliser les ressources pour une nouvelle intervention pour la promotion de l'entrepreneuriat rural.
- Définir le contenu de la nouvelle opération sur le développement des entreprises rurales.

25. Mesures de moyen terme dans le cadre d'une nouvelle opération. Les activités à conduire à moyen terme sont les suivantes :

- Appuyer la préparation d'une nouvelle intervention pour valoriser les acquis du PCDA. Une partie de ressources mobilisées par le gouvernement du Mali peuvent être allouées au démarrage de cette initiative ou des études préalables.
- Renforcer l'approche agropole initiée par le département de tutelle du PCDA, qui permet de concentrer les activités dans une zone géographique délimitée, en vue d'accroître la densité des entreprises à la surface, de réduire le coût d'opération, de mutualiser certains coûts et de développer les similitudes et complémentarités qui contribuent à l'émergence des relations (formelles, informelles, matérielles, immatérielles, marchandes et non marchandes) d'intensité plus ou moins forte induite par une proximité physique, institutionnelle, sociale, professionnelle, culturelle construite par les bénéficiaires eux-mêmes au niveau des filières et des bassins de production.
- Inciter au développement des prestataires de service privés et publics dans les zones rurales concernées en contribuant au financement de leur installation et /ou leur renforcement.
- Renforcer le fonds de garantie et poursuivre son utilisation, qui réduit le risque pour les institutions de financement et les incite à prêter au secteur agricole et d'agro-business aux fins (a) des investissements à moyen et long terme ; (b) des financements à court terme (fonds de roulement, crédit de campagne, etc.) ; et (c) du refinancement des institutions de micro-finance par le banques.
- Poursuivre la mise en œuvre du mécanisme de financement (subvention à coût partagé et crédit) mis en place dans le cadre du PCDA et relire le manuel d'opération de la subvention de façon que la base de son calcul ne soit plus le coût de l'investissement mais plutôt, le coût du plan d'affaires.
- Faciliter l'accès au crédit à travers (a) les Partenariats productifs ('alliances productives') entre les acteurs des différents maillons des chaînes de valeurs, (b) le 'Contract farming'/ noyau de production centrale avec petits producteurs organisés, qui permet par le biais du noyau central de production en régie, d'obtenir une production minimale pour assurer la rentabilité des opérations de transformation ; (c) l'Agro-entreprises leader capables de montrer la voie aux entreprises nouvelles en développement ; (d) le grappes ou réseau de proximité des acteurs qui leur permet de rentabiliser la logistique de collecte et de commercialisation notamment pour des animaux embouchés, le lait, les produits maraîchers.
- Déterminer le montant de subvention en fonction des maillons de filières et adapter l'appui conseil technique, en gestion de la qualité et en gestion comptable et financière aux besoins de chaque niveau de développement de l'entreprise.
- Reconduire le principe de « faire-faire » par les opérateurs privés mais composés cette fois d'une firme ou ONG internationale et d'une firme ou ONG malienne pour deux régions, recrutés sur appel à concurrence ayant une autonomie de gestion et placés sous la supervision de l'UCP et évaluer périodiquement leurs performances ; cet arrangement institutionnel

permettra de diminuer le nombre d'interlocuteurs de l'UCP et donc des partenaires à suivre, de réduire les coûts, de développer les interrelations et interactions entre les parties prenantes, de valoriser l'expérience acquise par les Maliens qui connaissent mieux le terrain que certains experts internationaux recrutés.

- Renforcer les capacités des institutions de financement à adapter les produits financiers aux besoins des acteurs des filières agricoles, à promouvoir les nouveaux produits financiers (tierce détention sur les oignons/ échalotes et la pomme de terre en utilisant les pôles de commercialisation de Sikasso et de Niono, le Leasing /crédit-bail pour le financement des véhicules et engins d'entreprises de moyenne et grande taille, l'assurance agricole notamment l'assurance climatique couvrant les déficits pluviométriques et l'assurance indicielle garantissant contre certains autres risques auxquels est soumise la production agricole, et à réaliser des simulations économiques et financières sur les entreprises qu'elles envisagent de financer, le crédit long terme avec différé d'amortissement pour accompagner la mise en place de nouvelles plantations avec entrée en production différée de plus de deux années), en leur apportant une assistance technique générale pour l'accompagnement opérationnel des PME agricoles, en les soutenant pour la connaissance des activités agricoles, la gestion des risques agricole et la préparation/ évaluation des business plans des sous-projets agricoles reposant sur les RTE et les Kits du PCDA.

- Engager des actions de promotion de l'entreprise rurale, du métier d'entrepreneur rural et de ses produits. En lien avec le besoin de revaloriser ces métiers et ces produits afin de les rendre plus attractives, des stratégies de communication décentralisée, s'appuyant sur les Collectivités Territoriales et/ou les organisations professionnelles des filières, pourront être définies et mises en œuvre par ces organismes. Elles auront pour objectifs de valoriser les métiers d'entrepreneur dans des filières agro-sylvo-pastorales.

- Accroître les financements du secteur en réallouant des ressources entre les sous secteurs du développement rural, de façon à augmenter progressivement la part de la promotion de l'entreprises rurale, en mobilisant plus et /ou en orientant mieux l'allocation des ressources extérieures et en explorant la piste de la fiscalité ou celle de prélèvement des recettes spécifiques sur les flux des biens et des services dans les filières agro-sylvo-pastorales. Des taxes et des impôts levés ainsi que les prélèvements peuvent ensuite être reversés au financement des entreprises rurales.

- Appuyer la création d'une agence nationale de promotion de l'entreprise rurale. Son fonctionnement et ses interventions peuvent être financés à partir : (i) de recettes spécifiques prélevées sur les flux des biens et des services dans les filières agro-sylvo-pastorales, (ii) de crédits budgétaires programmés pour le développement rural dans les différents départements ministériels compétents (Développement rural, Environnement et Assainissement, Commerce et Industries). Il conviendrait à cet effet, d'aménager la programmation budgétaire et le plan de la promotion de l'entreprise rurale et de spécialiser dès la programmation du budget 2016, les crédits par destination en considérant, lorsque nécessaire, ceux destinés à l'entreprise rurale comme une unité fonctionnelle au budget. Pour des questions de flexibilité, la gestion de l'agence devra s'affranchir en partie du droit public et relever du droit privé. Il pourra s'agir d'une société anonyme avec pour principal actionnaire les chambres consulaires, éventuellement d'une société d'économie mixte ou d'une association sans but lucratif (ASBL).

Annex 8. List of Supporting Documents

1. Mali: Country Assistance Strategy (CAS) for the period FY2004–2006. July 7, 2003. Report No. 25663.

2. Mali: Interim Strategy Note for the Period FY14–FY15. May 20, 2013. REPORT No. 76233-ML.

3. Mali: Poverty Reduction Strategy Paper (PRSP). August 07, 2003. Report Number: 26565.

4. Mali - Systematic country diagnostic: priorities for ending poverty and boosting shared prosperity. June 22, 2015. Report No. 94191-ML.

5. Project Concept Note. Mali Support to Agroindustrial Competitiveness Project (P151449). Draft.

6. Project Appraisal Document. Agricultural Competitiveness and Diversification Project. June 6, 2005. Report No: 30326-ML.

7. Project Paper on a Proposed Additional Credit for the Agriculture Competitiveness and Diversification Project. March 4, 2013. Report No: 75531-ML.

8. MALI: ML:Agr Compet & Diversif (FY06) - (PCDA) (P081704): Second Quality Assessment of the Lending Portfolio (QALP-2) - Draft Report. Memo.

9. Minstry of Rural Development. Etude d'impact du PCDA. 2015.

10. Mission Aide Memoires.

11. Republic of Mali: Ministry of Rural Development – Project Coordination Unit. ACDP Implementation Completion Report. Final Report. July, 2015.

12. World Bank. IEG. CAS Completion Report (CASCR). January 17, 2008. http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2014/06/17/000470435_20140617143604/Rendered/PDF/422830REPLACEM0R0Box321464B00OUO090.pdf.

Annex 9: List of Study Reports produced during ACDP Implementation

1. Report Study Cashew sector in Mali - June 2006

2. Strategic Development Plan (SDP) of the livestock / meat sector in Mopti and Sikasso - September 2007

3. SDP of the Segou tomato chain

4. SDP of the shallot / onion chains of Segou and Mopti - August / September 2007

5. SDP of the fish chain Mopti - September 2007

6. SDP of the Mango sector in Sikasso and Koulikoro/Bamako - October 2007

7. SDP of the Shea value chain in Bamako/Koulikoro

8. SDP of the Papaya sector- June 2008

9. SDP of the potato sector in Sikasso - September 2007

10. SDP of the Banana chain - April 2007

11. Competitiveness Plan of the Mango sector - 2007/2008

12. Competitiveness Plan of the Shallot sector - 2007/2008

13. Competitiveness Plan of the Potato sector- 2007/2008

14. Competitiveness Plan of the Livestock/Meat sector- 2007/2008

15. Competitiveness Plan of the Fish sector - 2007/2008

16. Competitiveness Plan of the Papaya sector - October 2008

17. Study report on the potential for production and marketing of bananas - April 2007

18. Analysis of the Supply Chain of the Livestock and Meat sector - May 2008

19. Feasibility study report of the mango puree in Mali - January 2009

20. Study Report on the improvement of the performance of the sector of processed mango products in Burkina Faso and Mali - February 2009

21. Evaluation of the agricultural production potential and implementation of a production monitoring system combining statistical analysis, remote sensing and field survey on behalf of the ACDP - December 2009.

22. Feasibility study report of the commercial orchards in Sikasso - June 2010

23. Parameter Study Report of commercial papaya orchards - December 2010

24. Report on finalization of the feasibility study for the establishment of a shallot consolidation center in Niono - June 2010

25. Report on finalization of the feasibility study for the establishment of a potato consolidation center in Sikasso - June 2010

26. Feasibility study report of the commercial orchards in Bamako/Koulikoro - December 2010

27. Feasibility study report of the implementation of a "potato seedlings" sector in Mali - December 2011

28. Feasibility study report on mango cubes production (IQF) in Mali and Burkina Faso for the EU market - December 2012

29. Economic analysis report of value chains of ACDP priority sectors - November 2012

30. Study report of the Business Plan of the Mopti slaughterhouse - November 2012

31. Study report of the mapping of the national market for potato - September 2012

32. Census and coding study report and potential of potato production areas of Sikasso and Bamako/Koulikoro

33. Study report on the packaging of dried products - September 2012

34. Study report of the socio-economic impact of ACDP rehabilitated roads - June 2015

35. Study report of the impact of ACDP interventions - May 2015;

36. ACDP Environmental and Social Audit Report - May 2015;

37. Environmental and Social Impact Assessment (ESIA) reports of the project to establish a "cardboard boxes and bags processing unit in Mali" - December 2013

38. Impact Assessment Report on ACDP interventions - October 2013

39. PAD - Additional Financing of the ACDP - March 2013

40. Update Report on the Environmental and Social Management Framework (ESMF) of the Additional Financing - January 2013

41. Interim study report on the Mali horticulture strategy - June 2015

42. Strategic Study Report on the development of shallot/onion interprofession (IFEO) - November 2014

43. Strategic Study Report on the development of Livestock / Meat (BSI) - November 2014

44. Strategic Study Report on the development of the Mango interprofession (IFM) in Mali - November 2014

45. Strategic Study Report development of inter Potato interprofession of Mali (GIPT) - November 2014

46. Strategic Study Report on the development of the Papaya interprofession (IFP) - November 2014

47. DNACPN Environmental monitoring Report - May 2014

48. Study completion report on the legal status and the PLAZA management system - February 2012

49. Study Report of the identification of dynamic actors in the potato sector -

50. Impact Assessment Report of the 1st phase of ACDP - December 2011

51. Update Report of the Populations Resettlement Policy Framework (RPF) of the Additional Financing of the ACDP - November 2012

52. Report on the Pest and Pesticides Management Framework (CGPP) of the Additional Financing - December 2012

53. Census and codification study report of mango orchards in the basins of Bougouni and Sikasso - August 2011

54. Census and codification study report of mango orchards in the basin of Yanfolila - September 2009

55. Review Report of the horticultural sector in Mali - April 2012

56. Update Study Report of the potential production of exportable mangoes - June 2015

57. Report characterization on the sub-regional livestock / Meat market - December 2014

58. Assessment Report on the implementation of environmental and social safeguards - October 2014

59. Evaluation Report of the "gender" dimension in the interventions of the ACDP - November 2014

60. Study Report on the technical review of subprojects - June 2012

61. Diagnostic study report on raw milk in flooded area of Mopti - November 2014\

62. Technical support mission report on the milk industry - July 2008

63. Support mission report on the milk sector in Mopti - January 2009

List of Technical and Economic Guides (TEGs) and KITS of subprojects disseminated by the ACDP

A- TEG

1. TEG on drip irrigation shallot

2. TEG on motorized auger

3. TEG on hand auger

4. TEG improved fish drying oven

5. TEG on milk pasteurizer

6. TEG on fish farming

7. TEG on South African tunnel dryer

8. TEG on potato conservation

9. TEG on shallot conservation

10. TEG on fruit juice production

11. TEG on dryer ATESTA made in Burkina Faso

12. TEG on dryer ATESTA made in Mali

13. TEG on single California irrigation system of shallot

14. TEG on California irrigation system associated with boom and flexible hose system for shallots

15. TEG on drip irrigation the mango tree

16. TEG on drip irrigation potato

17. TEG sprinkler system with hose for potato

18. TEG on hose with pedal pump irrigation system for potato

19. TEG on drip irrigation papaya

20. TEG on single Californian irrigation system for tomato

21. TEG drip irrigation tomato

22. TEG on cattle fattening

23. TEG on drip irrigation cabbage

24. TEG on microjet irrigation of the mango tree

25. TEG on slicing shallots with motorized cutter

26. TEG on grinding shallot with motorized CAFON model grinder

B - List of Kits of subprojects disseminated by ACDP

1. Mango production kit (commercial orchard) with irrigation system drop by drop over 3 ha

2. Papaya production kit with irrigation system drop by drop over 1 ha
3. Papaya production kit with irrigation system in California and hose ramp of 1 ha
4. Potato production kit with spray irrigation sprinkler system on 0,5ha
5. Potato production kit with drip irrigation system 0,5ha
6. Shallot production kit with irrigation system drip on 0,5ha
7. Shallot production Kit with California system and boom with flexible hose on 0,5ha
8. Cottage industry milk production kit
9. Dried meat processing kit
10. Fish farming kit
11. Semi-industrial milk production kit
12. Kit for conversion of dried shallot in slices
13. Shallot conservation kit - PACCEM and ALPHALOG stores model
14. Semi industrial juice, syrup and jam production kit
15. Cottage industry juice, syrup and jam production kit
16. Cattle fattening and livestock production kit
17. Kit for Mango drying with gas dryers (ATESTA, FAC 2000)

List of ACDP published hands-on guides

1. Irrigation handbook 1 on irrigation systems
2. Irrigation handbook 2 on water sources and irrigation
3. Irrigation handbook 3 on installing irrigation systems
4. Irrigation handbook 4 on the use of irrigation systems
5. Metal baler guidebook
6. Straw chopper guidebook
7. Fish smoking oven manual

MAP

IBRD 34083
MALI
AGRICULTURAL COMPETITIVENESS AND DIVERSIFICATION PROJECT
SELECTED CITIES AND TOWNS
PROVINCE CAPITALS
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
PROVINCE BOUNDARIES
INTERNATIONAL BOUNDARIES
MALI
Sahara Desert
ALGERIA
MAURITANIA
TOMBOUCTOU
KIDAL
GAO
MOPTI
KAYES
KOULIKORO
SÉGOU
SIKASSO
NIGER
BURKINA FASO
GUINEA
BENIN
GHANA
TOGO
SIERRA LEONE
CÔTE D'IVOIRE
Taoudenni
Araouane
Tessalit
Kidal
Tombouctou (Timbuktu)
Gourma Rharous
Bourem
Gao
Menaka
Ansongo
Niafounke
Hombori Tondo (1,155 m)
Douentza
Mopti
Bandiagara
Nioro du Sahel
Nara
Nampala
Kayes
Niono
Kolokani
Ségou
San
Kita
Kenieba
BAMAKO
Koulikoro
Koutiala
Bougouni
Sikasso
0 100 200 300 Kilometers
0 50 100 150 300 Miles
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