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Report No: ICR00005331

IMPLEMENTATION COMPLETION AND RESULTS REPORT

ON GRANTS

FROM IDA

IN THE AMOUNT OF SDR 41.9 MILLION
(US$ 60.8 MILLION EQUIVALENT)
(IDA- H855-NE AND IDA-D219NE)

AND TRUST FUNDS FROM

FROM THE GLOBAL ENVIRONMENT FACILITY (GEF) TRUST FUND
IN THE AMOUNT OF US$4.52 MILLION
(TF- 14700)

AND

FROM THE JAPAN POPULATION AND HUMAN RESOURCES DEVELOPMENT (PHRD) TRUST FUND
IN THE AMOUNT OF US$2.25 MILLION
(TF- A7627)

TO THE

Republic of Niger

FOR THE

NIGER COMMUNITY ACTION PROGRAM PHASE 3
{January 13, 2021}

Agriculture And Food Global Practice
Africa West Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective {Nov 31, 2020})

Currency Unit =	XOF
XOF 547.18 =	US$1
US$ 1.43 =	SDR 1

FISCAL YEAR
July 1 - June 30

Regional Vice President:	Ousmane Diagana
Country Director:	Soukeyna Kane
Regional Director:	Simeon Kacou Ehui
Practice Manager:	Chakib Jenane
Task Team Leader(s):	Elisee Ouedraogo
ICR Main Contributor:	Aimee Marie Ange Mpambara

ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
AIP	Annual Investment Plans
ANFICT	*Agence Nationale pour le Financement des Investissements des Collectivités Territoriales* (National Agency for the Financing of Municipalities)
APL	Adaptable Program Loan
ARENI	*Associations des Régions du Niger* (Niger Association of Regional Governments)
ASI	*Achats Service International* (International Purchasing Service Company)
CAP	Community Action Program
CAP3	Third Community Action Program
CAPCR	Community Action Project for Climate Resilience
CDD	Community-Driven-Development
CDP	Communal Development Plans
CERC	Contingent Emergency Response Component
CPF	Country Partnership Framework
CPS	Country Partnership Strategy
COGES	*Comités de Gestion des Sites* (Site Management Committees)
EFA	Economic and Financial Analysis
EIRR	Economic Internal Rate of Return
EX-ACT	Ex-Ante Carbon-Balance Tool
FCFA	Francs CFA
FCV	Fragility, Conflict, and Violence
FIL	*Fonds d'Investissement Local* (Local Investment Fund)
GEF	Global Environment Facility
GHG	Greenhouse gas
GoN	Government of Niger
GP	Global Practice
HC3Ni	*Haut Commissariat à l 'Initiative 3N* (High Commission for the 3N initiative)
ICRR	Implementation Completion Results Report
IDA	International Development Association
IRM	Immediate Response Mechanism
ISR	Implementation Status Report
LG	Local Government
M&E	Monitoring and Evaluation
MTR	Mid Term Review
3 N initiative'	*Les Nigériens Nourrissent les Nigériens* (Nigeriens feed Nigeriens initiative
NPV	Net Present Value
PAD	Project Appraisal Document
PDES	*Plan de Développement Economique et Social* (Economic and Social Development Plan)
PDO	Project Development Objective
PHRD	Policy and Human Resources Development
PNEDD	*Plan National de l'Environnement pour un Développement Durable* (National Environmental Plan for Sustainable Development)

RDP	Regional Development Plans,
SFM	Sustainable Forest Management
SLM	Sustainable land management
SLWM	Sustainable Land and Water Management
STEP	Systematic Tracking of Exchanges in Procurement
TF	Trust Fund
TTL	Task Team Leader
WB	World Bank

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P132306	NIGER COMMUNITY ACTION PROGRAM PHASE 3
Country	**Financing Instrument**
Niger	Investment Project Financing
Original EA Category	**Revised EA Category**
Partial Assessment (B)	Partial Assessment (B)

Related Projects

Relationship	Project	Approval	Product Line
Supplement	P143079-PSG: Integrated Ecosystems Management	31-May-2013	Global Environment Project
Additional Financing	P163144-Additional Financing for the Niger Community Action Phase 3	29-Jun-2017	IBRD/IDA

Organizations

Borrower	Implementing Agency
Republic of Niger	Ministry of Agriculture

Project Development Objective (PDO)

Original PDO

The Development Objectives (PDO) of the proposed CAP3 are to strengthen the Recipient's local development planning and implementation capacities, including the capacity to respond promptly and effectively to an eligible crisis or emergency, and to improve the access of the targeted population to socio-economic services.

Revised PDO

The PDO under the AF was slightly revised to strengthen the Recipientslocal development planning and implementation capacities, tosupport thetargeted population in improving agriculture productivity, and torespond promptly and effectively to an eligible crisis or emergency.

PDO as stated in the legal agreement

To strengthen the Recipient's local development planning and implementation capacities, to support the targeted population in improving agriculture productivity, and to respond promptly and effectively to an eligible crisis or emergency.

FINANCING

		Original Amount (US$)	Revised Amount (US$)	Actual Disbursed (US$)
World Bank Financing				
P132306	IDA-H8550	40,000,000	40,000,000	37,889,407
P132306	TF-A7627	2,250,000	2,250,000	2,162,607
P132306	IDA-D2190	20,800,000	20,800,000	20,477,500
P143079	TF-14700	4,518,000	4,089,083	4,089,083
Total		**67,568,000**	**67,139,083**	**64,618,597**
Non-World Bank Financing				
Borrower/Recipient		0	0	0
Total		**0**	**0**	**0**
Total Project Cost		**67,568,000**	**67,139,083**	**64,618,597**

KEY DATES

Project	Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
P132306	24-May-2013	07-Jun-2013	13-Oct-2015	22-Dec-2017	20-Jun-2020

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US$M)	Key Revisions
29-Jun-2017	34.30	Additional Financing Change in Project Development Objectives Change in Results Framework Change in Components and Cost Change in Loan Closing Date(s)
12-Dec-2019	59.49	Change in Loan Closing Date(s)

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Satisfactory	Moderately Satisfactory	Substantial

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US$M)
01	31-Dec-2013	Satisfactory	Moderately Satisfactory	3.33
02	01-Oct-2014	Satisfactory	Moderately Satisfactory	6.54
03	14-Apr-2015	Satisfactory	Satisfactory	11.38
04	15-Oct-2015	Satisfactory	Satisfactory	16.14
05	31-Dec-2015	Satisfactory	Satisfactory	18.97
06	13-Jun-2016	Satisfactory	Satisfactory	24.15
07	18-Dec-2016	Satisfactory	Satisfactory	29.48
08	05-Jun-2017	Satisfactory	Satisfactory	34.30
09	15-Dec-2017	Satisfactory	Satisfactory	41.16
10	26-Jun-2018	Satisfactory	Satisfactory	44.20
11	15-Jan-2019	Satisfactory	Satisfactory	49.42
12	28-Jun-2019	Satisfactory	Satisfactory	58.76
13	26-Dec-2019	Satisfactory	Satisfactory	59.60

14	22-Mar-2020	Satisfactory	Satisfactory	60.53
15	29-Jul-2020	Satisfactory	Satisfactory	60.53

SECTORS AND THEMES

Sectors

Major Sector/Sector	(%)
Agriculture, Fishing and Forestry	**50**
Agricultural Extension, Research, and Other Support Activities	10
Other Agriculture, Fishing and Forestry	40
Public Administration	**30**
Other Public Administration	30
Social Protection	**20**
Social Protection	20

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)
Public Sector Management	**30**
Public Administration	30
Municipal Institution Building	30
Urban and Rural Development	**40**
Rural Development	40
Rural Non-farm Income Generation	10
Land Administration and Management	30

Environment and Natural Resource Management	**30**
Climate change	10
Mitigation	10
Renewable Natural Resources Asset Management	20
Biodiversity	10
Landscape Management	10

ADM STAFF

Role	At Approval	At ICR
Regional Vice President:	Makhtar Diop	Ousmane Diagana
Country Director:	Ousmane Diagana	Soukeyna Kane
Director:	Jamal Saghir	Simeon Kacou Ehui
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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

1. At the time of project appraisal in 2013, Niger was facing long term development challenges including rapid population growth and climate variability and drought. With 84 percent of the population dependent on natural resources, the vulnerability of livelihoods to shocks was very high. Though poverty had marginally declined since the early 1990s, its incidence remained high. Public finances were being affected by declines in commodity prices. The country was also threatened by the deterioration of the security situation caused by the Libyan crisis and by social unrest in Mali and Northern Nigeria.

2. Niger was ranked last in the world in the Human Development Index with more than 50% of the population affected by food and nutrition insecurity. Over the three decades 1980-2011, the rate of growth of food production had lagged the rate of population growth, with the increase in the food deficit being filled by imports. An estimated 2.5 million people in Niger were chronically food-insecure and unable to meet their basic food requirements even during years of average agricultural production and many millions more were vulnerable at times of bad harvests. Some 40% of children under five were underweight, malnutrition accounted for more than one-third of child mortality in the country and micronutrient and vitamin deficiencies were major public health problems. Subsequently the situation did not improve. Niger remains last in the UNDP's Human Development index and poverty remains high with the extreme poverty rate at 41.4% in 2019, affecting more than 9.5 million people. Food insecurity and malnutrition also remain high.

3. To address these challenges, the country had developed a range of policies and strategies. At the time of appraisal, these policies and strategies had been consolidated in a medium - term plan, the *Plan de Development Economique et Social* 2012-2015, (PDES) adopted in August 2012. The Plan was organized in four strategic areas: (i) creation of conditions conducive to sustainable, equitable and inclusive development; (ii) food security and sustainable agricultural development; (iii) promotion of a competitive and diversified economy; and (iv) promotion of social development. The food security and sustainable agricultural development strategy was to be carried out through the ''3 N Initiative''(*Nigeriens feed Nigeriens*) of which the objectives were to protect communities from hunger and malnutrition and to guarantee them adequate conditions to participate in production and income generating efforts.

4. Decentralization, which had been a central policy since the 1990s, was considered as one the key factors for the success of the PDES Plan. Empowering local government was viewed as the pathway both to strong democratic governance and engagement and to accountability in local development.

5. It was in the context of these policies and strategies that in 2004 the World Bank embarked on support to decentralization and local development initiatives through a twelve year three-phase adaptable program loan (APL). The overall objective of the Community Action Program (CAP) was to support the Government of Niger (GoN)'s decentralization efforts by using a community-driven development (CDD) approach to improve access to services for local communities and to address the issues of poverty and food insecurity. From its inception, the CAP APL introduced a change from previous World Bank-financed rural projects, which had focused mainly

on agriculture. The APL took a CDD approach to services across sectors. Local administrations and communities were to take the lead in the identification and implementation of development investments[1].

6. The design of the first phase, CAP-1, had a strong focus on building community capacity for decentralized and inclusive decision-making and planning, and on micro-projects managed by local government at commune level to incentivize and shape the process of decentralization and community-led decision making. CAP-1 was implemented in 54 of Niger's 266 communes.

7. The second phase (CAP-2) scaled up the work to 164 communes (65 percent of the country's communes), while also increasing the capacity of local governance structures to design and implement development plans and projects.

8. The third phase – the present project, CAP-3 – was to scale up the support to cover all 266 local governments of Niger, while focusing on the sustainability of the APL results. Prepared just after the enactment of the 3 N initiative, CAP 3 was to contribute to the implementation of this initiative. It put more emphasis on the food security agenda than the previous phases by targeting investments aligned with the 3 N Initiative packages. CAP-3 was also designed to test innovative forms of horizontal collaboration between communes and the strengthening of the capacities of regional councils through a special funding window for inter-communal micro-projects. At the time of the restructuring and additional financing of CAP-3 in 2017, GoN's request for a stronger emphasis on food security and agriculture resulted in a change to focus on agriculture productivity.

Table 1: Three phases of the CAP program

Phase	Period	PDO	Geographic coverage
CAP 1	2004-2007	Assist the Government to design and implement planning and implement decentralized, transparent and participatory development mechanisms by involving local governments; and to promote a sustainable, community-based management of ecosystems	54 communes
CAP2	2008-2012	Improve local government capacities in the participatory design and implementation of local development plans and budgets in order to improve rural livelihoods	164 communes
CAP 3	2013- 2020	Strengthen the Recipient's local development planning and implementation capacities, including its capacity to respond promptly and effectively to an eligible crisis or emergency; and improve the access of the targeted population to socio-economic services	266 local governments entities (91 new communes and 164 communes from phases 1 and 2), 7 regional councils and 4 urban councils
CAP 3 AF	2017-2020	Strengthen the Recipient's local development planning and implementation	266 local governments entities (91 new communes and 164 communes

[1] CAP 1 and CAP 2 ICRRs

		capacities, to support the targeted population in improving agriculture productivity, and to respond promptly and effectively to an eligible crisis or emergency	from phases 1 and 2), 7 regional councils and 4 urban councils Focus on nutrition in 5 communes (2 in Maradi and 3 in Tahoua regions)

9. The Project was firmly embedded in the Government's decentralization and food security agenda. It was aligned with the four implementation principles of the 3 N Initiative, which were: (i) working through local governments/communes; (ii) involving beneficiaries in planning and implementing development projects; (iii) developing resilient crops; and (iv) scaling up sustainable management of natural resources.

10. The GoN has always recognized that rural productivity is constrained by land degradation, soil infertility and climate hazards. In that regards, the CAP program was designed with a strong ecological focus and received funding from the Global Environment Facility (GEF) and the Biocarbon Fund to finance environmental activities integral to the project such as landscape restoration and afforestation, the latter being eligible for carbon credits. These investments were made in parallel to other environmental investments across the Sahel that formed part of what is referred to as the Great Green Wall. The GEF grant was closed in 2017.

11. The Project was fully aligned with the Bank's Country Assistance Strategy (CAS) for Niger for FY13-16. The CAS was framed around two strategic pillars: (a) promoting resilient growth; and (b) reducing vulnerability. The Project design, which focused on empowering local governments and communities to participate in local development planning, access investment facilities to better manage their natural resource base, improve livelihoods, diversify incomes, and improve access to social services was well suited to respond to these CAS objectives and contributed to three of the CAS's outcomes : Outcome 1.3 Increased Agricultural Productivity of Selected Crops in Selected Areas ; Outcome 2.2 Increased Access of Poor and Food Insecure People to Safety Net Programs; and Outcome 2.3 Increased Adoption of Climate Resilience Policies and Actions in Targeted Communes.

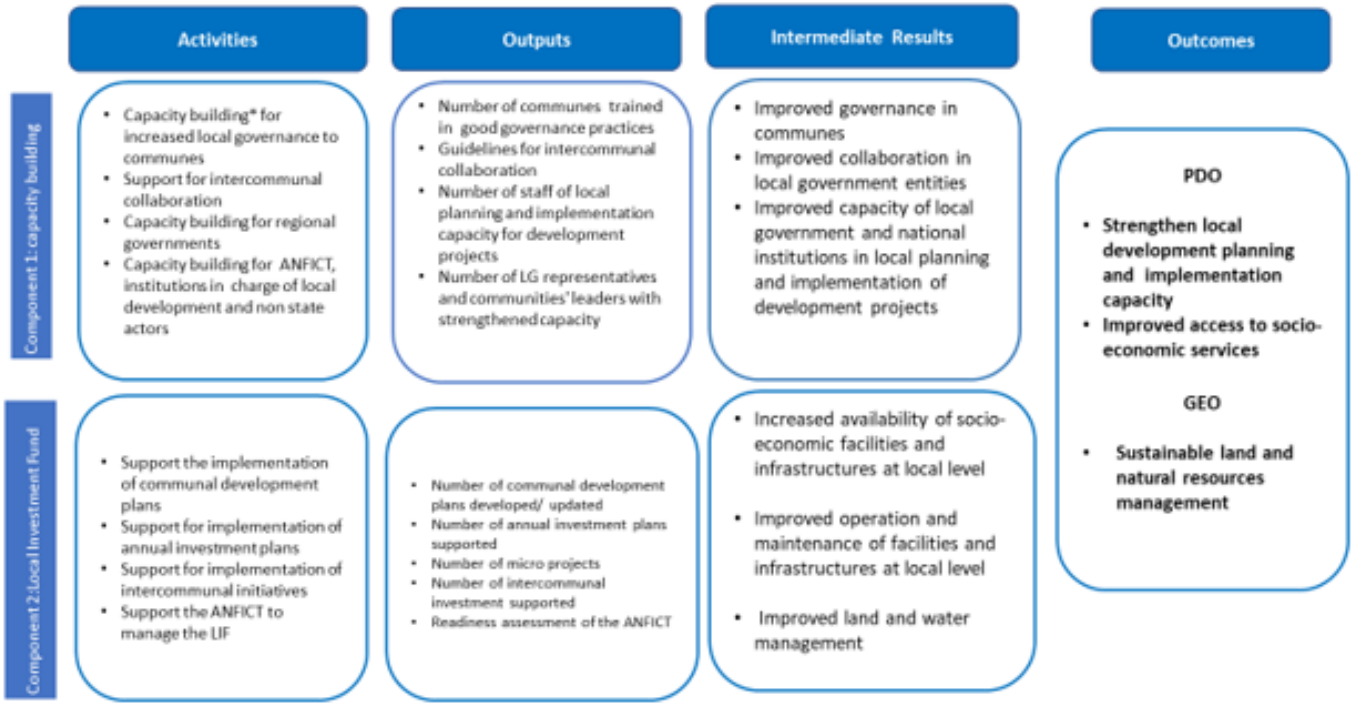
Theory of Change (Results Chain)

12. CAP-3 was designed around two outcomes contained in the PDO: (i) strengthened local development planning and implementation capacities, and (ii) improved access of the targeted population to socio-economic services. These outcomes were to be achieved by targeted capacity building to communes; by preparing tools to help communes implement and operate local development projects; and by funding local development micro-projects. A third outcome – strengthened capacity to respond promptly and efficiently to an Eligible Crisis or Emergency – referred to the Contingent Emergency Response component which was not in the event used and which is therefore not considered further in this evaluation.

13. While the PAD did not include a Theory of Change or a Results Chain, one is presented in Figure 1 below, as inferred from the Project description at appraisal. Throughout, the achievement of the outcomes rested on two critical assumptions, namely effective collaboration between central and local government, and local capacity to operate and maintain project investments sustainably. To address these assumptions, project design focused on

building the capacity of communes and of local development committees as well as of national institutions which were to continue support to local development after the end of the APL.

Figure 1: Theory of Change for the CAP3 project



*Capacity building focused on 4 areas: participation, equity, social accountability, and natural resources management

Project Development Objectives (PDOs)

14. As stated in the Financing Agreement (FA), the objectives of the project were to: *(i) strengthen the Recipient's local development planning and implementation capacities, including its capacity to respond promptly and effectively to an Eligible Crisis or Emergency; and (ii) improve the access of the targeted population to socio-economic services*.

15. GEF was also a partner with IDA in project financing. The Global Environment Objective for the GEF financing was to: *promote sustainable land and natural resource management and productive investments at the commune level in selected areas of Niger*.

16. Achievement of the PDO was to be measured by the following indicators:

- Percentage of newly targeted communes that have defined and put in place governance practices in the areas of participation, financial accountability, and social equity.

- Percentage of targeted communes that are enabled to sustain proper operation and maintenance of local development investments.
- Direct project beneficiaries (number), of which female (percentage) [IDA core indicator]
- Percentage of farming households which have adopted sustainable agro-sylvopastoral practices and technology promoted by the project [IDA core indicator].
- Additional land area under sustainable land and water management (SLWM) and Sustainable Forest Management (SFM) practices (hectares) [GEF indicator].
- Time taken to make funds available as requested by Government in case of an eligible crisis or emergency [Immediate Response Mechanism (IRM)-related indicator

Key Expected Outcomes and Outcome Indicators

17. It is clear from the project documents that appraisal design aimed at two broad outcomes:

    - Strengthened capacity of local government, which was measured by PDO indicators 1 and 2.
    - Improved access to socio-economic services by the targeted population, which was measured by indicators 3,4 and 5.

18. In addition, the PDO included a contingent outcome: *capacity to respond promptly and effectively to a crisis or emergency*. In the event that crisis or emergency action were to be triggered, this outcome would have been measured by indicator 6

Components

19. **Component 1: Capacity Building (appraisal: US$8.35 million; at closing U$11.61 million[2]).** Under this component, the activities aimed at capacity building of local stakeholders by (i) enhancing the governance of communes for inclusive planning and implementation of local development activities and sustainable use of natural resources; and (ii) enhancing the capacity of community organizations through activities aimed at awareness raising and behavior change to increase adoption of sustainable agriculture practices and improved household nutrition. The project also funded activities aimed at: promoting transversal collaboration among communes (intercommunal collaboration); and capacity enhancement of regional government such as capacity needs assessments and strengthening regional planning. The component also supported the capacity of the National Agency for the Financing of Municipalities (ANFICT) to enable it to manage funds to be allocated to communes for their respective investments. Capacity building was also to be provided for sectoral line departments and non-state actors supporting the national agenda for decentralization in local development planning and monitoring. The component had four sub-components:

    - Capacity building for communes and communities and improving local governance.
    - Promoting inter-communal collaboration.
    - Building capacities of Regional governments.

[2] The end-of-project disbursement for this component was US$ 11.3 million

- Building the capacities of the Agency for the Investment of Local Governments, sectoral line departments and non-state actors.

20. **Component 2: Local Investment Fund (appraisal: US$29.39 million; at closing US$45.14 million)[3]** Under this component, the project was to assist communes to make investments through a Local Investment Fund (FIL). The FIL was to be established to support microprojects identified and planned by local beneficiaries under the leadership of their local governments. The FIL comprised two 'windows': a first window of 95% of the total FIL, for investment in individual communes; and a second 'window' of 5% to fund pilot initiatives defined and implemented by two or more communes (intercommunal development initiative). The GEF funds would be used for sustainable land management activities and, and to promote climate smart technologies and agriculture. The component, which was implemented using a CDD approach, had two sub-components

    - Implementing targeted investments of Commune Development Plans (PDCs); including: (a) Sustainable and improved land and water management practices (estimated 40% of total funds), focusing on: (i) improving the sustainability of protected area systems; and (ii) mainstreaming biodiversity conservation and sustainable use into production landscapes and sectors[4]. The project was also to promote energy efficient cook stoves and other technologies aimed at reducing pressure on forest and woodlands. (b) Diversification of income generating activities (estimated 35% of total funds), aimed at improving income of individuals and households, improved nutrition, and reducing pressure on natural resources. And (c) Creation and maintenance of collective economic facilities and infrastructure (estimated 25% of total funds), focusing on rural infrastructure such as cereal banks, storage of agricultural and veterinary inputs and equipment, workshops to repair agricultural equipment and engines, livestock market-related facilities, slaughterhouses, vaccination parks, livestock transhumance corridors and access ways to water points, rural radio facilities, facilities for the sale of non-timber forest products, etc.

    - Implementing targeted investments of inter-communal development initiatives. This sub-component was to focus on two areas: (i) sustainable management of intercommunal natural resources, and (ii) provision of inter-communal social services.

21. Under this component, the project also supported activities related to the Bio-Carbon Initiative that were to receive carbon financing through the Clean Development Mechanism of the United Nations Framework Convention on Climate Change.[5]

22. **Component 3: Project Coordination, Management, Monitoring and Evaluation and Communication (appraisal: US 6.78 million; at closing US$10.81 million)[6]** This component covered Project management costs, safeguards, M&E, and communication and knowledge management. There were three sub-components:

    - Coordination and management activities.

[3] The end-of-project disbursement for this component was US$ 45 million
[4] Practices and techniques included: soil/moisture conservation methods, water harvesting, reduced tillage, agro-forestry, nutrient-enhancing rotation systems, animal health and nutrition; and improved gum tapping practices.
[5] This included maintenance of Acacia Senegal trees in 26 sites
[6] The end-of-project disbursement for this component was US$ 14.1 million

- Planning and M&E.
- Communications, knowledge management and sharing.

23. **Component 4: Contingent Emergency Response (appraisal: US$ 0 million; actual: US$ 0 million)**. The component to be used to provide immediate response to an eligible crisis or emergency, channeling resources from a rapid restructuring.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

Revised PDOs and Outcome Targets

24. **June 2017 major restructuring.** In June 2017, the project was restructured with additional financing of a US$22.85 million grant (of which $20.8 million IDA and $2.25 million PHRD). The closing date was extended by two years from December 20, 2017 to December 20, 2019 for the IDA funds, but there was no extension for the GEF funding.

25. The PDO was revised as "*Strengthen the Recipient's local development planning and implementation capacities, to support the targeted population in improving agriculture productivity, and to respond promptly and effectively to an eligible crisis or emergency*". Essentially the outcome contained in the original PDO of improved access to socio-economic services was narrowed down to the more specific outcome of improved agriculture productivity.

Revised PDO Indicators

26. The revised PDO indicators after the restructuring and additional financing were:

- Number of farmers adopting improved agricultural technology, of which female [NEW]
- Number of farmers reached with agricultural assets or services, of which female [NEW]
- Area provided with new/improved irrigation or drainage services [NEW]
- Increase in agricultural productivity of major crops - (tomato, cassava, onions, pepper) [NEW]
- Number of direct project beneficiaries, of which female [TARGET REVISED]

27. All of the original PDO indicators were dropped with the exception of # 5 Number of direct project beneficiaries, where the target was increased. All the other indicators were new and all related to the new agricultural productivity outcome

Revised Components

28. The 2017 restructuring revised the scope of components and sub-components to focus more on agriculture productivity and nutrition. With a focus on agriculture, the project was to invest more in small scale irrigation and horticulture production and to discontinue investment in health facilities and schools. The intercommunal investments also were discontinued due to lack of interest from the communes. The sub-components for three components were also revised.

29. **Component 1: Capacity Building.** Under this component, the previous emphasis on supporting the participatory design and management of local development, through the Communal Development Plans (CDPs) was reduced. Instead activities focused more on targeted training and agricultural advisory services needed by small farmers for the implementation of agricultural micro-projects. PHRD funds were to be used to build the capacity of small farmers and producer organizations to increase their knowledge for increasing agricultural productivity, with a focus on high nutritional value crops. The number of sub-components was reduced from four to two:

    - Strengthening the contracting capacity of communes and delegated contract management capacity of communes and communities.
    - Strengthening capacity of smallholder farmers.

30. **Component 2: Local Investment Fund.** Under this component, the project continued to support micro-projects in the areas of sustainable land management micro-projects; income generating activities, socio-economic infrastructures. The focus of the micro-projects was, however, shifted towards increasing agriculture productivity through promotion of soil and water conservation technologies for agro-sylvo-pastoral purposes[7], small scale irrigation, improved seed production and distribution to increase productivity of agricultural and pastoral land, livestock fattening, livestock replenishment, and post-harvest structures/equipment (storage and processing). PHRD funds were earmarked for small scale irrigation for 5,000 women in five selected communes.[8] The component had three sub-components:

    - Sustainable and improved land and water management.
    - Diversification of income generating activities and an increase in agricultural productivity (including through small-scale irrigation).
    - Creation and/or maintenance of essential socio-economic infrastructure.

31. **Component 3: Project Coordination, Management, Monitoring and Evaluation and Communication.** This component covered Project management costs, safeguards, M&E, and communications and knowledge management. It included also funds to finance key studies on agricultural sector development and for the preparation of another agricultural project. PHRD funds were to be used for targeted nutrition communication and M&E activities. The component had four sub-components

    - Coordination and Management.
    - Planning, M&E, and Preparation of Studies.
    - Communication and Knowledge Management.
    - Nutrition-related Activities and M&E.

[7] The upgrading was done through mechanical recovery techniques (half-moons, zai, wood plantations, Acacia Senegal) and seeding of herbaceous species with high pastoral values, and included development of food crops as an adaptation to the adverse effects of climate change.
[8] Two communes in Maradi (Korgom and Hawandawaki) and in three communes in Tahoua (Kao, Bombèye, and Bangui)

Rationale for Changes and Their Implication on the Original Theory of Change

32. As the original project neared completion, it was evident that the CAP APL, implemented over nearly thirteen years had substantially achieved its targets, but also that poverty, food insecurity and malnutrition remained Niger's principal challenges. GoN's priority was therefore to accelerate implementation of its 3N Initiative.

33. In line with this national priority, GoN and the Bank agreed that the well-performing CAP program should be extended and scaled up with additional financing (AF) with a specific focus on increasing agricultural productivity. This restructuring was also an opportunity to pilot approaches to reducing malnutrition, and a PHRD grant[9] was added to the financing for this purpose. The project was reappraised, and a full Project Paper formed the basis for Bank approval of the AF in June 2017.

34. The changes introduced with the additional financing and the focus on irrigation, agriculture productivity and nutrition resulted in a slight departure from the original theory of change, replacing the outcome "improved access of the targeted population to socio-economic services" by "increased agriculture productivity".

35. **Second restructuring:** In a second restructuring approved in December 2019, the closing date was extended by six months, from December 20, 2019 to June 20, 2020. Almost all project activities had been completed except for those related to nutrition-sensitive agriculture which had been delayed because the approval of the grant agreement by the Japanese Ministry of Finance took longer than expected (the grant was signed only in September 2018). The extension also allowed the project to support the completion of the first disbursement of the carbon credits through the Biocarbon Fund.

II. OUTCOME

A. RELEVANCE OF PDOs

36. *PDO Relevance Rating:* ***High.*** The PDO remained aligned with the World Bank Country Strategies (CPS 2013-16, CPF 2018-22) throughout the duration of the project. The original PDO was consistent with the CPS 2013-16 objective of promoting resilient growth and reducing vulnerability by empowering local governments and communities to access investment facilities to better manage their natural resource base, improve access to social services and increase agriculture productivity.

37. The 2017 revised PDO continued to be relevant and was in line with CPF 2018-22, especially its objective 'increased rural production with diversified output in the agriculture and livestock sectors'. It also contributed to the CPF objective on governance "strengthened public finance (which includes planning and implementation of investments) and human resource management for improved service delivery".

38. Throughout its duration, the project was in line with long-term GoN policy (see Section 1A above). It was also consistent with the updated Economic and Social Development Plan (PDES 2017–2021) and with the 3N Initiative (2012) and its action plan 2016-2020. In particular, PAC-3 was well aligned with the 3N initiative principle of empowering local government in project implementation and scaling up sustainable management of natural

[9] PHRD grant which was aimed at supporting nutrition sensitive agriculture activities in five selected communes.

resources. Working in all communes of Niger, the Project was considered as one of the key programs supporting the roll out of the 3N initiative.

B. ACHIEVEMENT OF PDOs (EFFICACY)

39. This ICRR unpacks the PDO into three outcomes and applies a split rating. Before the restructuring, the efficacy of the project is assessed against the two outcomes that were contained in the original PDO (1) improved local development and implementation capacities; (2) increased access to socio-economic services. Outcome (3) increased agricultural productivity is introduced after the restructuring.

40. The use of split ratings is justified by the change in the PDO at restructuring, which replaced the outcome "increased access to socio-economic services" by "increased agricultural productivity", a significant change which narrows down "economic services" to "agriculture".

Assessment of Achievement of Each Objective/Outcome

41. **Outcome 1 Increased planning and implementation capacities of local government (substantial).** Project achievements on this outcome were measured by the PDO indicator 'percentage of communes implementing good governance practices. The original target of 85% was fully achieved at the time of the 2017 restructuring. By completion all communes except a small handful were complying. The indicator was based on ten criteria for participation, accountability and equity. Surveys measured the satisfaction of beneficiaries (both men and women) against these criteria as well as objective factors like timely accounts and clean audits.

42. The rating of this outcome is **substantial** both before and after the restructuring. Assessment of this outcome is supported by the four intermediate results indicators where the original targets were exceeded by the time of the 2017 restructuring, and the higher targets then set were either met or exceeded after the restructuring (see Table 2).

Table 2: Increased planning and implementation capacities of local government

Indicator	Original target	Achieved 2017	Revised target	At closing
Outcome Indicators				
Communes with good governance practices (%)	85%	87%	98%	98%
Intermediate Results Indicators				
1. Communes delivering timely financial reports (%)	75%	76%	76%	98%
2. Communes with working grievance mechanisms	65%	75%	85%	100%
3. Deconcentrated line departments strengthened	90%	90%	99%	99%
4. Regional agencies planning capacities strengthened	60%	85%	85%	87%

43. This assessment is supported by qualitative evidence in the project final report which illustrated good progress in development of commune capacities, especially as related to participatory planning and ability to maintain investments.

44. These results are in line with the data from the World Bank Governance Team[10] showing participation in budget planning at the local level in Niger, as well as high levels of citizen engagement with, for example, 73 percent of communes having citizen participation in budget preparation and 90 percent of budgets explained to citizen in public settings.

45. **Outcome 2 Increased access to socio-economic services (substantial).** This outcome was measured by the PDO indicator "percentage of communes enabled to operate and maintain local development investments sustainably." The target of 100% was met at the time of the 2017 restructuring with minimal exceptions (99%). The indicator continued to be tracked after restructuring and reached the revised 100 % target.

46. This outcome is also tracked by the intermediate results' indicators that measured how efficiently communes put their investment allocation to good use. At the time of the restructuring, the original target had been exceeded, and by completion the achievement had reached 100%, well ahead of target. However, at the time of the 2017 restructuring, the project had not achieved the two intermediary results related to access to education and to health and nutrition services. Nonetheless, it did achieve by completion the target for the new intermediary result of access to nutrition services which had been introduced at the time of the restructuring (Table 3). After restructuring, the project also supported (through the PHRD grant): (i) horticulture production on small-scale irrigation sites, with 375 tons of fruits and vegetables produced in 2020; (ii) nutrition-related education for health center staff; and (iii) targeted communication and cooking demonstrations to promote home consumption of nutritious food. The last project household survey conducted in 2019 showed that 183,040 beneficiaries reported increased consumption of fruits and vegetables.

Table 3: Increased access to socio-economic services

Indicator	Original target	Achieved 2017	Revised target	At closing
Outcome Indicators				
1. Communes able to operate and maintain investments sustainably (%)	100%	99%	100%	100%
Intermediate Results Indicators				
1. Communes using at least 80% of their investment allocations (%)	80%	86%	86%	100%
2. Population of newly targeted communes whose access to education improved	90%	20%	DROPPED	DROPPED
3. Percentage of populations in targeted communes whose access to health and nutrition services improved	90%	23 %	DROPPED	DROPPED
4. Populations of newly targeted communes whose access to nutrition services improved[11]	NA	NA	50%	50%

47. **Outcome 3: Increased agricultural productivity (substantial).** This outcome was added to the PDO at the time of the 2017 restructuring and is assessed only after restructuring. Outcome indicators were set in terms of the number of farmer beneficiaries and in terms of increased yields of basic food crops (cassava) and of cash crops. The number of farmer beneficiaries adopting improved agricultural technologies was double the target. The ICRR

[10] WB Local Government Census, 2019
[11] This indicator replaced the indicator "Percentage of populations in targeted communes whose access to health and nutrition services improved"

team used data from the 2019 field survey (collected before COVID-19 pandemic)[12] for yields estimate which seems to be more accurate. Although net yield increased in the project sites that were in some cases below the ambitious increased yields targeted (see Table 4), these yield increases after just one year of project activity were significant compared to yields in other sites in the same areas[13].

Table 4: Increased agricultural productivity – outcome indicators

Indicator	Target	At closing
1. Number of farmers adopting improved agricultural technologies	109,800	202,060
2. Increase in agricultural productivity of major crops – tomato (tons/ha),	60 t/ha	42.5 t/ha
3. Increase in agricultural productivity of major crops - onions (tons/ha)	50 t/ha	43.t/ha
4. Increase in agricultural productivity of major crops - pepper (tons/ha)	35 t/ha	28 t/ha
5. Increase in agricultural productivity of major crops -, cassava (tons/ha),	30 t/ha	31 t/ha

48. **Sustainable land management.** With the GEF financing (see Section IA above), PAC-3 aimed at the outcome of sustainable land and natural resource management at the commune level. Initially, the GEF outcome was tracked by the PDO indicator 'additional land area under sustainable land and water management and sustainable forest management practices. Although the indicator was dropped from the results framework at the 2017 restructuring, after the closing of the GEF grant, the M&E system tracked it throughout the project life.

49. By April 2017, 86,000 hectares had come under improved management. By project closing, boosted by the new focus of the project on agriculture, more than a quarter of a million hectares (254,000 hectares) had come under improved soil and water management practices. This area included: areas of natural regeneration (197,725 ha); dune stabilization (1,389 ha); agro-forestry (9,055 ha); pasture management improvement (7,250 ha); and improved water management, including half-moons, *zai* and soil erosion control (38,790 ha). The impacts included both soil and water conservation, ecosystem restoration, and increased production – for example, an additional 130,000 tons/year of fodder production.

50. Taken together, sustainable land management activities and the Biocarbon Initiative made a substantial contribution to the Sahel-wide initiative, the *Great Green Wall* (see the box below)[14].

[12] PAC 3 and MAGEL statistics survey, December 2019
[13] Yields from national statistics in the same areas are: 25.1 t/ha for tomatoes; 30.6 t/ha for onions; 18.6 for pepper and 25.3 for cassava
[14] This needs to be taken in the context of a growing discussion about the attribution of the greening of the region, which could be from increasing rains.

Regreening Niger: 'A vast transformation'

Evidence shows regreening of degraded land in Niger as a result of joint actions for land restoration which took place during the implementation period of CAP and were in part supported by it. A USGS study reported:

'High resolution images present a timeseries view of an agricultural landscape typical of the heavily settled plains south of Zinder, in 1957, 1975, 2005, and 2014. The timeseries highlights the increase in on-farm tree density between 1957 and 2014.

Satellite images confirm that a vast transformation has taking place. Trees reduce wind speed and evaporation, produce at least a six-month supply of fodder for livestock, and provide firewood, fruit, and medicinal products that farm households can consume or sell.

Today, the agricultural landscapes of southern Niger have considerably more tree cover than they did 30 years ago. These findings suggest a human and environmental success story at a scale not seen anywhere else in Africa'.

Source: https://eros.usgs.gov/westafrica/case-study/transforming-farmlands-through-farmer-managed-re-greening-success-story-southern-niger

Justification of Overall Efficacy Rating

51. Overall efficacy rating is **Substantial** for both phases of the project**.** The project achieved its two outcomes before the restructuring and the revised outcomes after the restructuring. The project delivered on both the initial and the revised PDO apart from the shortfall on two intermediate results which had been only partly met when the two results were discontinued in the restructuring, and from the somewhat lower yields than targeted, which can be explained both by over-ambitious targets and by the fact that only one year's productivity improvement could be counted, with data on 2020 yield increase not available at the date of this ICRR. Overall, the indicators are comprehensive and there are solid grounds to justify the achievements both from performance against indicator targets and from comparisons with other sources of information

C. EFFICIENCY

Assessment of Efficiency and Rating

52. Financial and economic analysis. Financial and economic analysis at appraisal was complicated by the demand-driven nature of the project and its significant institutional development and capacity building components which were non-revenue earning. Although some estimates of expected household income increases were made, no overall economic analysis was conducted. At the time of the 2017 restructuring, financial and economic analysis was conducted based on expected benefits from the agricultural micro-investments. This analysis found an expected 19% Economic Internal Rate of Return (EIRR) based only on the AF financing.

53. The analysis at completion followed the 2017 methodology and was based on empirical data and on investments made in the Local Investment Fund component of the project. The financial and economic analyses were derived from models of eight activities undertaken through the Local Investment Fund. Together these activities account for 71% of total micro-project expenditures. All other project costs were then added into the analysis. The

resulting NPV was US$ 108 million and the EIRR was 52 percent. [15]

54. Given the project's strong focus on soil and land management, the project greenhouse gas (GHG) balance was also estimated for the economic analysis.[16] The World Bank uses the Ex-Ante Carbon-Balance Tool (EX-ACT) to estimate the impact of agricultural investment lending on greenhouse gas (GHG) emissions and carbon sequestration. EX-ACT is a land-based appraisal system for assessing a project's net carbon balance—the net balance of tons of CO_2 equivalent (tCO_2eq) of GHGs that were emitted, or carbon sequestered as a result of project interventions—compared to a "without project" scenario. While the tool is designed for ex-ante estimates, it was used in this case to estimate GHG emissions where ex-post project data was not available, mostly soil and land management activities other than the biocarbon sites. Based on a set of assumptions presented in Annex 4, the project has a total balance of -194,887 tons of CO_2 equivalent ($TCo_2eq.$), excluding the biocarbon site additional carbon sink, which means that the project resulted in a carbon sink. Economic results accounting for the project GHG emissions are presented in Annex 4.

55. Overall the analysis shows that the project generated very substantial returns on investment, especially considering that some project benefits could not be quantified, for instance the nutritional benefits of the Japanese grant, the longer-term impact of capacity building activities and the project's contribution to improving gender equality. In particular, the project invested significantly in local capacity building, which should increase the fiscal multiplier of local public spending over the long term. Nonetheless, the analysis found significant disparities in the returns on individual activities. For instance, while irrigated horticulture plots are extremely profitable, the livestock feed warehouses were not profitable and the sheep fattening was only profitable if the entrepreneur sold the sheep during the Tabaski[17] holiday, when sheep prices peaked.

Table 5: Financial Results

Micro-project	Margin, year 3, US$	NPV,' 000 FCFA	NPV, US$	NPV per beneficiary, US$	IRR
Horticulture	10,786	24,311	43,779	3,660	94%
Sheep fattening	20	52	93	93	NA
Goat breeding	347	694	1,249	1,249	345%
Livestock feed warehouse	-5,284	-26,914	-48,467	-10	NA
Cassava processing	2,804	294	530	0	11%
Zai	17	9	17	2	22%
Half moon	101	86	156	14	27%
Biocarbon sites	130	97	174	93	22%

[15] The socio-economic infrastructures not focused on agriculture in the first phase of the project, such as the building of classrooms, are not modelled due to insufficient data, but they did not account for a significant share of project outputs. One activity was quite significant in terms of budget and could not be modelled: the regénération naturelle assistée, which amounted to 25% of the SLM expenditure (10% of all MP expenditure).

[16] For the biocarbon sites, the benefits of carbon sink were directly included in the financial and economic model of the sites. The sites were not included in the EX-ACT to avoid double counting these benefits.

[17] Muslim Aïd el-Kebir festival

56. M&E data confirm that the project succeeded in increasing beneficiaries' incomes. The estimates of income increases made at appraisal (80 percent of beneficiaries would receive a 30 percent increase in income) and at the 2017 restructuring (90 percent of beneficiaries) were met at completion, when 91 percent of beneficiaries reported enjoying a 30 percent increase.

57. Value for money. Costs per beneficiary were lower than planned: 3.1 million beneficiaries were targeted with a total cost per beneficiary of US$23.1. At completion, 3,2 million beneficiaries were reached at cost per beneficiary of US$21.6. Costs for selected investments were in line with experience in Niger (for example for the water harvesting and sustainable land and water management investments) or with expectations at appraisal (for example, for investments in sheep fattening and goat breeding).

58. Administrative efficiency. The project delivered its outputs and achieved its targeted outcomes without cost overruns on investments. However, management costs were relatively high, and the project overran the management budget (130%). This is explained mostly by the wide compass of the project and the additional tasks that were put upon it, rather than by inefficiency. The IDA financing closed 96 percent disbursed. The closing date was extended by six months to compensate for the delay in approval of the PHRD grant and did not result in cost overruns.

59. Overall, the evidence is adequate to assess project efficiency as **substantial**. Although management costs were on the high side and analysis showed wide disparities in the profitability of different investments, the project was overall efficient.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

60. The project objectives were relevant at appraisal and at the 2017 restructuring and remained so at the time of closing, justifying a rating of Substantial. The results tracked by the results framework together with contributory evidence demonstrate the efficacy of the project in achieving its objectives, justifying a rating of Substantial. Although methodologies for evaluating efficiency in a CDD project with a very heavy institutional development component are inevitably constrained, the evidence is enough to rate project efficiency Substantial. The overall outcome rating is **Satisfactory**, based on these assessments. Table 6 provides the detailed split rating analysis.

Table 6: Split rating assessment

	Before restructuring	**After restructuring**
Relevance of PDO	High	
Efficacy (PDO)	Substantial	Substantial
Outcome 1: Increased planning and implementation capacities of local government	Substantial	
Outcome 2: Increased access to socio-economic services	Substantial	
Outcome 3: Increased agricultural productivity		High
Efficiency	Substantial	
1. Outcome rating	Satisfactory	Satisfactory
2. Numerical value of the outcome rating	5	5

3. Disbursement	US$38.39 million	US$67.14 million
4. Share of disbursement	0.57	0.43
5. Weighted value of the outcome rating	2.85	2.15
6. Final outcome rating	(5) Satisfactory	

E. OTHER OUTCOMES AND IMPACTS (IF ANY)

Gender

61. From the outset the project promoted gender equity and female participation. More than 53 percent of project beneficiaries were women. The Intermediate Outcome indicator '*communes whose approved projects integrate gender equity'* set a 90 percent target which was consistently exceeded, reaching 98 percent by project end.

62. The project enabled large numbers of women to increase their incomes mostly from income generating activities such as animal fattening and agro-processing. More than 100,000 women adopted improved agriculture technologies.

63. At restructuring in 2017, the design of the agricultural productivity components specifically identified "women only activities", for example on specific sites for small scale irrigation. The project also supported other women-specific capacity building activities related to agro-processing. The PHRD grant specifically targeted women not only for nutrition but also to build their capacity in horticulture production.

64. Focus group discussions with women beneficiaries by the ICRR team confirmed these high levels of participation and benefit. They did, however, reveal areas where lessons could usefully be learned. One is on women's access to land, where irrigation investments remain doubtful because women could not obtain long term tenure.[18] Another is on budgeting: it emerged that women spent much of the extra income generated through the project on socio-cultural and religious events such as weddings and baptism celebrations. More guidance on managing their finances might have helped women to improve the balance between consumption and reinvesting some of their earnings in developing their income-generating activities further.

Institutional Strengthening

65. Institutional development and capacity building were central to the entire CAP program and its objectives. CAP-3 continued the strong commitment to strengthening the institutional capacity of local governments and community organizations for local development planning and for implementing and managing local development projects. All six of the indicators for Outcome 1 - *Increased planning and implementation capacities of local administration*[19]– measured the strengthening of planning and administration capacities of local government, and all six were successfully achieved.

[18] In the design of the additional financing, it was proposed that irrigation investment be made on sites with certified security of tenure for the female farmers' groups for a period of 30 years However, in Niger, women are rarely landowners in their own right and in practice this activity worked with women who had only short term (less than five years) or even seasonal leases.
[19] See Section III B above and Table 2.

66. Specific activities for institutional strengthening for local government planning included the adoption of local government planning tools.[20] The project also invested heavily in reinforcing the capacity of the more than 700 local management committees (COGES) which were key to ensuring the maintenance and sustainability of different investments. For many committees, considerable capacity building has been provided over the fifteen years life of PAC. However, some committees created towards the end of PAC-3 may need further strengthening, and a measure of continued institutional support could be required for all COGES. It was also not clear how these COGES would continue to be supported without a specific project.

67. At a higher level, the project supported the formulation of a number of decrees,[21] The project was also successful in developing and institutionalizing carbon financing know how.[22] Targeted support was also provided to the Niger Association of Regional Governments (ARENI) to develop capacity to continue the training provided by PAC after the closure of PAC-3.

68. One area of institutional development that was less successful was the project aspiration to build up the National Agency for the Financing of Municipalities (ANFICT) as a key part of PAC's 'exit strategy' – on ANFICT see Section IV B below.

Poverty Reduction and Shared Prosperity

69. The project targeted poor farmers, contributing to Niger's overriding objective of poverty reduction and also to the World Bank's twin goals of ending extreme poverty and boosting shared prosperity. By design, the project targeted poor communities and smallholders to improve their livelihoods and the success of this is shown by the high proportion of beneficiaries reporting substantial increase in their incomes.

70. Project design included two main activities that specifically targeted the poorest:

- ***Cash for work***: The project used cash-for-work in a labor-intensive approach to sustainable land management activities. This program provided 108,000 temporary jobs and a significant income boost to poor households. The calendar of the sustainable land management activity coincided with the local lean season, and these seasonal jobs helped build resilience for the poorest, especially women and youth. Income from these seasonal jobs have not only allowed beneficiaries to access food during the lean season, but also to make some small investments such as buying livestock, a key savings medium for poor households.

[20] Regional Development Plans (RDPs), Communal Development Plans (PDCs) and annual investment plans (AIPs).
[21] This included decrees for (i) transfer of skills and resources to municipalities and regions (Decree N°2016-75 and 2016-76/ PRN/MI/SP/DACR/MES/MSP/ME/F/MH/A/MESU/DD/MEP/T/MFP/RA of January 26, 2016); (ii) setting the legal regime for cooperation between local and regional authorities (Decree No. 2016-301 / PRN / MI / SP / D / ACR of June 29, 2016) and (iii) Law on the autonomous status of staff of local authorities and its implementing decrees (Law No. 2019-26 of June 17, 2019).
[22] Through the Bio Carbon *Acacia Senegal* activity, institutional capacity within the Ministry of Agriculture and Livestock and the Ministry of Environment was strengthened in areas of estimating carbon sequestration and different methods of verification for the carbon financing.

- ***Small Grants for income generating activities***: More 60 percent of the beneficiaries of seed funds and capacity building for income generating activities have built up capital to continue and expand their business. More than 20 percent have diversified into other major economic activities (for example, moving up from sheep fattening to cattle fattening, diversification of processing and trade activities, etc.).

Other Unintended Outcomes and Impacts

71. Reduced conflict between pastoralists and crop producers. The project supported improved pasture management (5,265 hectares of grazing areas) and transhumance corridors (200 km). These pastoral areas contributed to reducing conflicts between farmers and pastoralists. In particular, demarcation of transhumance corridors prevented cattle straying into croplands during the transhumance movements – this had been a traditional source of conflict between farmers and pastoralists. Much anecdotal evidence confirms this positive result.

72. Biocarbon Initiative. Over the life of the PAC program, support was provided to communities to benefit from the Biocarbon Fund. The initiative aimed at restoring degraded lands through plantation of Acacia Senegal (Arabic gum) trees), which were eligible for carbon credits under the Kyoto protocol. Planting started in 2006. A first partial payment was made in February 2020 for US$450,000 (carbon equivalent of 108 527 tons) for 26 sites benefitting 100,000 people. By 2020, the trees were also producing gum Arabic (1,200 kg/year). Under this initiative, the World Bank facilitated a deal worth US$ 3.5 million with a new buyer of carbon credits up to the year 2035, through which communities will continue receiving payments. At the date of this ICRR a second buyer had completed negotiations with the private sector partner of the initiative (ASI) for further carbon credits on the sites.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

73. Articulation with Government's objectives and continuity with previous CAP phases. CAP-3 was a third phase of the CAP program aimed at scaling up and consolidating activities of the first two phases. The project model was well-known and appreciated within the country. PAC-3 was fully aligned with the Plan for Economic and Social Development 2012-2015 and the new project was seen by the government as the main vehicle to roll out the 3N Initiative' ("Nigeriens feed Nigeriens") nationwide.

74. Clear design at appraisal. As this was essentially the third project in a series, implementation procedures and capacity were in place and the ways to implement the components were well understood by the experienced staff.

75. Inclusion of measures to prepare an exit strategy from the program. In addition to the classic measures of building local capacity and motivation, the design of PAC-3 also included specific measures to continue the institutional development activities (through ARENI) and financing (through ANFTIC).

76. Incorporation of multiple lessons learned from previous phases of CAP and other projects. The Project design took on board lessons that came through during the implementation of CAP-1 and CAP-2. Particular lessons were the approaches to sustainable land and water management, and ways to improve targeting of women and youth.

77. Continuity of the activities supported by the GEF and Bio Carbon Fund. These activities covered all three phases of the CAP. This allowed design to build on the past results of the sustainable land and water management activities and to bring the carbon financing activity to its first fruition.

78. Implementation readiness. As a final phase of an APL, the effectiveness requirements (key personnel, implementation manuals, steering committee in place) were met quickly and the project became effective in less than a month after approval.

B. KEY FACTORS DURING IMPLEMENTATION

Factor subject to government and project entity's control

79. Government support and monitoring. Government support for and interest in the project was strong. At the local level, all communes remained committed to the project till its closure. The project was also strongly supported by the Ministry of Agriculture and Livestock, which became increasingly involved as agricultural activities came to predominate. The ministry provided regular monitoring and technical audit missions which helped to diagnose and solve problems at field level.

80. Project staff turnover. Though the project had a complete team at the outset, which allowed a quick start, the project was faced by a high turnover of staff, including of the coordinators - by mid-term, the project was on its third national coordinator. However, this official did remain in place till the end of the project. As the end of the APL approached, project staff began moving to other projects and institutions. For example, at closure, there was no procurement specialist, which affected the project's ability to archive properly different contracts, especially those related to the communes' micro-projects.

81. Limited interest in inter-communal collaboration. In an effort to support efficient use of human and financial resources at the local level, the project design was to pilot inter-communal collaboration through a special window for projects proposed by two or more communes "*inter-communal projects"* in areas of sustainable land and water management and shared social services. However, the component was under-prepared: it took time for the project to prepare guidelines and to carry out the needed awareness and training program. In the event, only a few projects were financed. The pilot never gained traction as leadership at commune level preferred projects supporting their own constituencies. Activities and indicators related to this inter-communal collaboration were discontinued at the restructuring in 2017.

82. The challenge of ANFICT. One area that was less successful was the project aspiration to build up the National Agency for the Financing of Municipalities (ANFICT) as part of PAC's 'exit strategy'. The creation of the ANFICT was in fact one of the two triggers from phase 2 to phase 3 of the CAP APL The idea at appraisal was that the project would strengthen ANFICT and then ANFICT would begin to take over the financing of local government investment programs. The project was to finance a procedures manual, training, study tours, equipment etc. However, prior to the 2017 restructuring an assessment of ANFICT's legal, administrative, financial and operational capacities was not encouraging and the continued support of ANFICT as part of the exit strategy was therefore dropped.

83. Acceleration of the 3N Initiative. As discussed above, in 2017, towards the end of the implementation period of the original project, GoN wished to give more impetus to its struggle to achieve food security and improved nutrition in line with its action plan for accelerating the 3N Initiative. This resulted in an effort by the officials of the Ministry of Agriculture and Livestock and of the High Commission for 3Ni to encourage communes to prioritize micro-projects focused on agriculture. This resulted in a reduced number of micro-projects supporting health centers and schools. Six months before the original closing date of the project, GoN then agreed with the Bank to restructure the project and to add additional financing exclusively for agricultural projects. The CDD approach was retained but with a strictly agricultural menu of eligible investments.

84. Changes in commune administration. Despite the fact that there were no local elections during the period of project implementation, the central government replaced more than 70 percent of municipal councils. The new appointees required significant capacity building to get up to speed with the project approach. Although this placed an added burden on the project, in the end it had only a minor effect on the speed of implementation.

85. A thinly spread project. Project design provided for adequate implementation capacity for most core activities, even taking account of the ultimately nationwide coverage. By closure, the team was following more than 1,200 sub-projects in 125 new communes and conducting capacity building for the nearly three quarters of councilors nationwide who were newly appointed. This core business the team took in its stride, but staff were also stretched by the complexity of other demands. For example, capacity building activities were to be carried out for ten agencies and ministry departments. By mid-term, the project had already spent 78 percent of its coordination budget. Towards the end of the project, the team was given responsibility for preparing another project, while following up with the completion of the carbon credit certification and with winding up PAC-3 and preparing an orderly exit strategy.

Factors subject to World Bank control

86. Delays in the Japanese PHRD grant. The US$ 2.5 million financing from the Japanese PHRD grant effectiveness took longer than anticipated. Though the PHRD grant was processed at the same time as the IDA additional financing, the grant agreement was only signed in late September 2018 due to internal clearance and approval processes with the donor. Implementation began only in April 2019. This delay resulted in a late start of nutrition sensitive activities[23] which in turn resulted in the need for a six months project extension. At the closing of the project, the training in horticulture production and the consolidation of women producer groups were only just being completed.

87. Delays in the carbon credits from the Biocarbon Fund. Payment of the first installment of the carbon credits from the Biocarbon Fund was finalized late in the project implementation.

Factors beyond government/project entity control

88. The 2014 drought. A severe drought in July 2014 impacted the livestock sector. Although the CERC component was not triggered, affected communities were able to mitigate impacts by reallocating funds from their Annual Investment Plans.[24]

[23] PHRD grant activities started in April 2019

[24] Though the government did not trigger the CERC component, the project supported the purchase of 1,394 tons of animal feeds through micro-projects to 29 Communes in the regions of Agadez, Diffa, Maradi and Zinder, using a Climate-related hazards and

89. Increasing insecurity. The security situation, which was deteriorating at appraisal, worsened and Niger was classified as a country affected by the development challenge of FCV (Fragility, Conflict, and Violence) in the 2020 World Bank FCV strategy. There was relatively little direct impact on implementation, but counterpart funds dwindled as GoN had to increasingly transfer finance to security. Access to several project areas was constrained and some of the training roll out which was to be financed by government could not be carried out.

90. COVID -19. With the project closing in June 2020 and virtually all activities complete before then, the COVID-19 pandemic had no measurable impact on implementation or results. However, the essential precautions prevented the collection of primary data and field visits. As a result, the final report of the project – and consequently this ICRR – have had to rely considerably on phone interviews and virtual meetings.

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF MONITORING AND EVALUATION (M&E)

M&E Design

91. As this was a third phase project, M&E design was straightforward. Overall, the results framework was well designed and comprehensive and was appropriately adjusted at the 2017 restructuring.

92. There were however some shortcomings. The Original PDO indicators did not to capture adequately the project development objectives as there was no indicator to directly measure the objective "improve the access of targeted population to socio-economic services, only the proxy indicator measuring the ability of communes to operate and maintain investments. The methodology for computing some indicators could have been clearer. For example, the methodology for indicators measuring increased institutional capacity, adoption of messages, and improved services was not explicit in the M&E manual.

93. The revised results framework at the 2017 project restructuring was somewhat limited in its coverage. For example, by limiting the PDO measure of increases in agricultural productivity to input-intensive cash crop products, productivity increases could appear much larger than average. The results framework also did not capture well the nutrition improvement. The targets for some indicators were not very ambitious. or, in the case of yield increases, were perhaps too high.

contingency windows of the micro-projects which was introduced in the project to allow communes to rapidly and efficiently re-affect to community-based emergency initiatives a portion or the totality of the funds that have already been allocated by the Communes to their respective 'Annual Investment Plans' (AIPs).

M&E Implementation

94. The quality of M&E implementation was adequate. The Project Implementation Manual detailed the M&E arrangements, including definitions and data collection modalities for most indicators. The project was well equipped with appropriate hardware and software and benefitted from specialized training. There was an electronic M&E system using DELTA Monitoring and Evaluation software. Project staff and partners were trained on GIS and remote sensing and on use of the EX-ACT tool. The project team was also designated by the World Bank as a champion for using KOBO TOOLBOX, an application recommended for the production of geo-localized data and information.

95. The M&E system allowed regular monitoring and reporting of progress in project activities and of results and indicators. The factual basis of reporting was strengthened by regular beneficiary surveys - five surveys were conducted during the implementation period, with the last one in 2018.

96. The project conducted a performance evaluation at project closure. This was not a formal impact evaluation but consisted of sample surveys about project results and beneficiary satisfaction and of compilation and evaluation of data from project reports.

M&E Utilization

97. The project had a good communication strategy used to report on the progress of project implementation. The strategy employed various communication media including a newsletter and briefs and documents on project activities (for example, sustainable land management, nutrition etc.). The project also made some documentary films on bio-carbon sites, COGES, SLM activities and nutrition. A prime communication tool was the use of community radio in local languages, especially on nutrition messaging for the PHRD-financed program.

98. The information generated by the Project's M&E system was key to reporting on project implementation, especially for World Bank missions. Project data on sustainable land management were used by the GoN to report on progress in the context of the Sahel Great Green Wall initiative. The use of GIS localization and KOBO TOOLBOX made it possible to monitor progress of implementation closely, especially of the sustainable land and water management activities.

Justification of Overall Rating of Quality of M&E

99. The overall M&E quality is rated **Substantial** The M&E system was generally adequate to assess the achievement of the PDO and to document links in the results chain. The communications program was excellent. There were, however, some weaknesses in the methodology and practice of data collection for some indicators.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

100. **Environmental and social safeguards compliance:** The project was classified as Category B at appraisal. The following safeguards were triggered: Environmental Assessment OP/BP 4.01; Natural Habitats (OP/BP 4.04), Pest Management OP/BP 4.09; Physical Cultural Resources OP/BP 4.11; Involuntary Resettlement OP/BP 4.12, and

Forests (OP/BP 4.36). An Environmental and Social Management Framework (ESMF), Pest Management Plan (PMP), and Resettlement Policy Framework (RPF) were prepared, as subproject sites were unknown at project start. Supervision missions regularly reviewed project environmental and social safeguards and noted environmental and social (E&S) issues related to the implementation of micro-projects. The key concerns were (i) delays and inconsistencies in recording and reporting complaints; and (ii) the haphazard and incomplete documentation and filing of land gift and tenure cases. These issues, especially the documentation issue, created a limited risk and resulted in the decision to downgrade the project social safeguard rating from Satisfactory to Moderately Satisfactory for lack of compliance with the policy requirements, following the last Implementation Support Mission.[25]

101. **Financial management:** Supervision missions regularly reviewed project financial management arrangements and procedures to ensure compliance with fiduciary requirements. A Financial Management Manual was prepared, and a simplified manual was prepared for communes to guide implementation of micro-projects. Although the Bank missions initially noted some financial management weaknesses, in the first years of implementation such as lack of key staff in the regions and delays in financial reporting remedial actions were taken to resolve the problems. Bank supervision missions' FM ISR rating were generally satisfactory with timely submission of IFR reports and acceptable annual financial audit reports with mostly unqualified opinions. Issues raised by the auditors were satisfactorily resolved. At the end of the project, financial management performance of the project was rated Satisfactory. By the disbursement deadline date of October 20, 2020, the project had properly closed out all aspects of the grants including full accounting of the designated account. The project closed with US$ 849,596.29 undisbursed[26].

102. **Procurement**: Supervision missions regularly reviewed project procurement management arrangements and procedures to ensure compliance with fiduciary requirements. An Implementation Manual including procurement procedures together with a simplified manual for communes were prepared and approved to guide implementation of micro-projects. Early in the project, Bank missions noted some procurement management weaknesses, such as non-adherence to prior review requirements, non-publication of the procurement plan and contracts awards, lack of proper filing of procurement files, and weakness in using the PROCYS system and later on of the STEP. The bulk of these issues were satisfactorily resolved. However, the problem of the lack of a procurement specialist in the final months affected the uploading of procurement documents in STEP and resulted in downgrading the project Procurement Management rating to Moderately Satisfactory at the last ISM mission.[27]

C. BANK PERFORMANCE

Quality at Entry

103. Project design was well aligned with Government and Bank priorities and thoroughly informed by lessons learned from the previous CAP phases. The Project was an integral part of the national decentralization, food security and natural resources management program. The institutional arrangements were clear. The fiduciary systems were

[25] It is also important to note the inconsistency between project-related documents, where the last ISR maintained an Satisfactory rating whereas the aide-memoire had downgraded the social safeguards to Moderately Satisfactory
[26] Client Connection data of November 15, 2020
[27] The ICRR noted a discrepancy of the rating between the aide memoire and the ISR, which did not capture this downgrading of rating.

adequately designed with clear identification and risk and effective mitigating measures. Project risks were largely well identified and clearly understood.

104. Areas where, with hindsight, more might have been done at the design stage to foresee and mitigate risks were:

- The inter-communal component, which was an excellent idea, but the design was incomplete when the project started and the likely demand for the facility had not been fully assessed. It was, it is true, planned as a pilot but the modalities and demand could have been more fully thought through at appraisal.
- The large number of agencies that the project was called on to work with.
- Readiness and risk assessment for ANFICT

105. At the 2017 restructuring a very thorough reappraisal was carried out and the correct decisions were made to drop the inter-communal and ANFICT activities. More could, however, have been done to think through measures to ensure financing and support to communes and local development investments in preparation for the exit strategy.

106. Overall, quality at entry is rated **Moderately Satisfactory**.

Quality of Supervision

107. Bank supervision had several shortcomings. Supervision missions were irregular and relatively infrequent. The project had three TTLs, only one (at appraisal) based in the country office, and with each change of TTL came a hiatus in missions and a break in the follow up on issues. On average, there was only one mission a year, and there were sometimes lengthy intervals between missions. There was a 15-month gap between effectiveness and the first mission, a time when Bank implementation support would have been most valuable. Bank support was also patchy towards the end of the project. There was no mission between August 2018 and February 2020, a period when there were vital issues of sustainability and exit strategy in the final phase of a 16 years APL to be worked on. There were two missions in the last six months of the project. These, however, came too late to influence implementation with more than 99 % of funds disbursed, and they focused on the mechanics of closing the project.

108. Missions were, on the whole, adequately staffed. The missions adequately assessed the fiduciary and the safeguards aspects of the project. During the period where there were no missions, ISRs were filed but they did not cover aspects related to safeguards (land tenure documentation) and procurement (STEP update and procurement staffing), which remained uncorrected until the end of the project. The team composition also could have benefited from specific expertise, particularly on decentralization, nutrition and M&E. There was also delay in processing the last restructuring (to extend the closing date by six months). This was completed less than two weeks before the project original closing date. Overall, the quality of supervision is rated **Moderately Satisfactory**.

Justification of Overall Rating of Bank Performance

109. Bank performance is rated **Moderately Satisfactory**. Overall, the design was robust, well aligned with government and Bank priorities, and though the supervision was not as effective, the Project outcomes were satisfactory.

D. RISK TO DEVELOPMENT OUTCOME

Institutional sustainability of decentralized development in Niger

110. Throughout the life of the APL, the Bank posed the question of sustainability of the project achievements and benefits. The PAD for PAC-3 focusses on elements important for institutional sustainability: (i) ownership of the decentralized development process at all levels; (ii) partnerships with permanent national institutions to continue support to local development; and (iii) empowerment and capacity building of stakeholders at the local level.

111. This outline 'exit strategy' is at least partially in place now that PAC has drawn to a close.

- Ownership of decentralized development approaches have become integral to policy and practice in Niger.

- Partnerships between central and local government and links between line ministries and local communities are embedded in policy, strategy and practice. ARENI, the agency that was supported under PAC-3 to provide specific training support at the local level, is operational. Its proper functioning however will require external funding, but at closing this had not been identified. The notion at appraisal that financial support to communes and local development could be provided through a national agency, ANFICT, turned out to be not viable, with the result that with the end of the APL financial flows to local development initiatives will be more difficult because there is no ready vehicle or source of finance. This represents a risk to continuation of further local development initiatives (but not to the investments already made).

- After sixteen years of empowerment and capacity building, the communes and local committees (COGES) have built up capacity and can be considered viable but further support may be required to maintain and build on this capacity. There is also a risk that communes and committees that came into the program in its last months and years have not yet built up the needed capacity. Here the services of ARENI will be essential. In addition, the start of carbon credit payments is providing income for communities in the 26 carbon sites, as well as resources for maintenance of the sites.

Economic sustainability of local development investments

112. Economic and financial sustainability would depend on the viability of socio-economic investments made at local level, on the profitability of the income-generating investments, and on links to continued sources of guidance and seed capital. Here the prospects of sustainability are good, as the profitability of most investments appears relatively high (see Section II C and Annex 4) and there is good access to complementary sources of advice and finance, including from the follow-on Bank-supported agriculture and livestock project.

Specific questions of sustainability related to PAC-3

113. Within this overall picture of moderate risk to sustainability of the overall program, there are queries on the sustainability of some of the specifics of PAC-3. Areas of concern include (i) the horticulture sites for women groups,

where tenure is short term and uncertain, and (ii) mechanisms for further monitoring of sites which have not been consolidated.[28]

114. On Biocarbon sites sustainability, as already stated above, The World bank facilitated a deal worth US$ 3.5 million for the purchase of carbon credits from the community plantations established by PAC up to the year 2035. This includes US$ 350,000 that should be paid for by early next year. The deal is between ASI (the private company who aggregates the Arabic gum and the carbon credits from the plantations) and Eco-Act (a French company who advises and sources credits for companies such as Carrefour, Chanel, Coca-Cola, L'Oréal and others). This is 8 times the value of the previous deal administered by the World Bank's BioCarbon Fund (valued at $450,000), and the deal is also at an above-average price for the carbon market. The majority of these funds will flow directly to beneficiary communities. These funds will help support the sustainability (and even expansion) of the plantations established by PAC, and also a variety of local development initiatives (in health, education, agriculture, water).

115. More generally, there is a risk that insecurity and violence in parts of the country will affect the continuity of community development, especially as government resources will continue to be directed towards security instead of local development.

V. LESSONS AND RECOMMENDATIONS

116. A considerable achievement but with questions over sustainability. After sixteen years of continuous GoN and Bank commitment, a considerable dynamic of decentralized development has emerged in Niger. However, the achievement is inevitably subject to particular risks in the world's poorest country, including the risk that a very weak fiscal position will not be able to underwrite continuation of local development at even the most modest of levels, once project support ends.

> ***Recommendation:*** *A thoroughgoing institutional, financial and economic review of the entire PAC program would contribute to: (1) an assessment of the sustainability of the decentralized development process and identification of any follow up required; and (2) a comparison of Niger's achievement in relation to parallel programs (including Morocco).*

117. There are strongly positive returns to a focus on gender but support to women needs to be assessed carefully. In the project, the strong provision for gender inclusion proved to have positive economic consequences. Women were in fact more successful at specific types of micro-projects - more energetic and responsible in their commitments for financial and in-kind contributions, and better at making their micro-projects profitable than men, mixed groups, or commune administration. However, proper study and assessment in designing opportunities for women are essential – PAC-3 fell short, for example, in promoting irrigation by women where their access to irrigable land was constrained. Also the project seems to have not invested in capacity building for women in areas of financial management and budgeting, areas which have shown great impacts in other countries such as India, Mali and Rwanda where adequate skills building assisted in creation of women-run enterprises which can become significant players in the rural economy.

[28] Key documents for the sites including land titles and contracts with the private intermediary (ASI) were still not properly filed at the project closure and a meeting between the project team and the ministry of environment was the only form of handover of the activity.

***Recommendation*:** Build on these finding in future policy advice and investments in Niger and apply them *mutatis mutandis* in other situations.

118. Payments for ecosystem services (in this case carbon) can foster environmental conservation. The PAC-program made a significant contribution to the regreening of Niger through the CDD model. Even though communities generally preferred investments that brought immediate benefits such as income generating projects, agricultural and livestock investments and health and education, the project was able to create incentives for environmental investments where the returns were less palpable or took longer to emerge through the cash for work program and the Biocarbon Initiative.

Recommendation: *Promote environmental investments within CDD programs with specific incentives tailored to the local situation and, if necessary, open a dedicated funding window. To improve efficiency, public sector environmental staff may also need incentives, such as transport, training, and allowances.*

119. The APL may be a very appropriate instrument for long term engagement. GoN and the Bank showed great foresight in engaging on a three phase, fifteen-year APL. In the event, this time frame turned out to be the right one, allowing completion of nationwide coverage, the capitalization of lessons, and the extension of the CDD model to a wider menu of agricultural and natural resource management activities.

Recommendation: *For long-haul investments in capacity and local development, consider whether the case exists for a flexible but firm longer-term commitment under a phased vehicle such as an APL.*

ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: Strengthen local development capacities and improve agriculture productivity

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Farmers adopting improved agricultural technology	Number	0 21-Apr-2017	109,800 20-Dec-2019		202,060 20-Jun-2020
Farmers adopting improved agricultural technology - Female	Number	0	76,900		104,099

Comments (achievements against targets):
Project exceeded target by 84%.

Improved technologies promoted by the project include sustainable land management technologies, improved seeds and fertilizers, organic phytosanitary products and irrigation. These were promoted through targeted extension services to different group of farmers.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	0 24-May-2013	3,000,000 22-Dec-2017	3,110,142 20-Dec-2019	3,194,961 20-Jun-2020
Female beneficiaries	Percentage	0	50	52	56

Comments (achievements against targets):

Project achieved 106% of original target and 102 % of revised target (3,110,142).

Beneficiaries are estimated at 456,423 households of smallholder rural producers, with an emphasis on the poorest and vulnerable, who were mostly reached through micro-projects under component B, and beneficiaries of training and capacity building activities under component A.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Farmers reached with agricultural assets or services	Number	0 21-Apr-2017	109,800 20-Dec-2019	109,800 20-Dec-2019	201,974 20-Jun-2020
Farmers reached with	Number	0	76,900		96,902

agricultural assets or services - Female					

Comments (achievements against targets):
Project achieved 184% of target.

These include farmers reached by natural regeneration activities, improved seed distribution, animal stocking activities, irrigation, and also the PHRD grant

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Area provided with new/improved irrigation or drainage services	Hectare(Ha)	100 21-Apr-2017	1,350 20-Dec-2019	1,350 20-Dec-2020	1,351 20-Jun-2020

Comments (achievements against targets):
Project achieved target

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increase in agricultural productivity of major crops - (tomato, cassava, onions, pepper)	Metric ton	0 21-Apr-2017	0 20-Jun-2020		0 20-Jun-2020

Increase in agricultural productivity of major crops - tomatoes	Metric ton	30 21-Apr-2017	60 20-Dec-2019	60 20-Dec-2020	61 20-Jun-2020
Increase in agricultural productivity of major crops - onions	Metric ton	30 21-Apr-2017	50 20-Dec-2019	50 20-Dec-2020	53 20-Jun-2020
Increase in agricultural productivity of major crops - peppers	Metric ton	15 21-Apr-2017	35 20-Dec-2019	35 20-Dec-2020	35 20-Jun-2020
Increase in agricultural productivity of major crops - cassava	Metric ton	15 21-Apr-2017	30 20-Dec-2019	30 20-Dec-2020	34 20-Jun-2020

Comments (achievements against targets):
Project reached target for all crops

A.2 Intermediate Results Indicators

Component: +COMPONENT A: Capacity Building

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion

Targeted communes that are enabled to sustain proper operation and maintenance of local development investments	Percentage	9 24-May-2013	100 22-Dec-2017		100 20-Jun-2020

Comments (achievements against targets):
The project supported capacity of communes through training of more than 15,00 local government officials in good practices for project planning and management, annual budgeting, financial reporting, and grievance mechanisms.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Targeted Communes that have defined and implemented good governance practices (participation, accountability, and equity)	Percentage	0 24-May-2013	85 22-Dec-2017	98 20-Dec-2019	98 20-Jun-2020

Comments (achievements against targets):
Project exceeded original target by 15 % and reached the revised target of 98% .

The project supported the preparation/ updates of communal and regional development plans, annual plans, and encouraged communities participation by supporting NGOs and consultation meetings.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Targeted communes that timely prepare annual financial reports (with legal delays)	Percentage	6 24-May-2013	75 22-Dec-2017	76 20-Dec-2019	98 17-Jun-2020

Comments (achievements against targets):
Project exceeded original target by 30% and by 28 % the revised target of 76%.

This was supported by targeted capacity building for financial reporting to communes

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Commune whose approved micro-projects integrate gender equity	Percentage	0 24-May-2013	90 22-Dec-2017	98 20-Dec-2020	98 20-Jun-2020

Comments (achievements against targets):
Project exceed original target by 8% and reached revised target of 98%.

This was achieved through guidance to micro-project preparation which included gender integration

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Targeted communes whose planning and AIP sessions are public	Percentage	0 24-May-2013	60 22-Dec-2017	 20-Dec-2020	100 21-Apr-2017

Comments (achievements against targets):
Project reached 60 % of target. The indicator was discontinued with the restructuring and additional financing.

Project supported the public consultation on the AIP

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Communes whose grievance mechanisms have been created and are operational	Percentage	8 24-May-2013	65 22-Dec-2017	85 20-Jun-2020	100 20-Jun-2020

Comments (achievements against targets):
Project exceeded original target by 53% and by 17% the revised target of 85%.

The project supported the establishment of the grievance mechanism project as part of compliance to social safeguards.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion

Targeted communes effectively practice intercommunalite	Percentage	0 24-May-2013	60 22-Dec-2017		34 01-Sep-2017

Comments (achievements against targets):
Project reached 57% of original target. Indicator was discontinued with the restructuring and additional financing

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Representatives of key Regional agencies whose planning capacities have been strengthened	Percentage	0 24-May-2013	60 22-Dec-2017	85 20-Jun-2020	87 20-Jun-2020

Comments (achievements against targets):
Project exceed by 45% the original target and by 2% the revised target of 85%

This was achieved through training, equipment, technical assistance to prepare and update regional development plans and support preparation of regulations and decrees

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Representatives of	Percentage	0	99		99

deconcentrated line departments whose local development-related capacities have been strengthened		24-May-2013	17-Jun-2020		20-Jun-2020

Comments (achievements against targets):
Project reached its target. This was reached through targeted training to local officials

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Populations (disaggregated by gender) of newly targeted communes whose access to nutrition services improved	Percentage	0 24-May-2013	50 20-Jun-2020		50 20-Jun-2020

Comments (achievements against targets):
Project reached its target.

This was achieved through activities aimed at increasing capacities in food processing, cooking demonstration, nutrition training for health officials and communication campaigns on good nutrition practices..

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion

Targeted communes that are enabled to sustain proper operation and maintenance of local development investment	Percentage	9 24-May-2013	100 20-Jun-2020		100 20-Jun-2020

Comments (achievements against targets):
Project reached its target. Results were achieved through the establishment and training of local management committees (COGES) and training of local officials

Component: COMPONENT B: Local Investment Fund

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Beneficiaries whose income increased by 30% because of farm and off-farm jobs created by approved micro-projects	Percentage	0 24-May-2013	80 22-Dec-2017	90 20-Jun-2020	91 20-Jun-2020

Comments (achievements against targets):
Project exceeded its original target by 14% and by 1% its revised target of 90%

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Targeted communes utilizing at	Percentage	0	80	86	100

least 80% of their investment allocations		24-May-2013	22-Dec-2017	20-Jun-2020	20-Jun-2020

Comments (achievements against targets):
Project has exceeded its original target by 25% and by 16% its revised target of 86%

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Storage and processing facilities built	Number	0 21-Apr-2017	65 20-Jun-2020	65 20-Jun-2020	67 20-Jun-2020

Comments (achievements against targets):
Project exceeded its target by 3%

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Targeted communes which have protected and/or restored at least 200 hectares of land	Percentage	0 24-May-2013	70 22-Dec-2017	90 20-Jun-2020	90 20-Jun-2020

Comments (achievements against targets):

Project exceed its original target by 29% and reached its revised target of 90%

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Targeted inter-communal initiatives which have been implemented	Percentage	0 24-May-2013	50 22-Dec-2017		38 01-Sep-2017

Comments (achievements against targets):
Project reached 76% of its target. Indicator was discontinued at restructuring and additional financing

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Populations of newly targeted communes whose access to education improved	Percentage	0 24-May-2013	90 22-Dec-2017		28 01-Sep-2017

Comments (achievements against targets):
Project reached 31% of target. Results were achieved through the construction of 109 schools rooms. The indicator was discontinued at restructuring and additional financing.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Beneficiaries that have increased consumption of fruits and vegetables	Number	0 21-Apr-2017	240,000 20-Jun-2020		183,040 20-Jun-2020

Comments (achievements against targets):
Project reached 76% of target. The results were achieved through support to horticulture production and nutrition communication and messaging.

Component: COMPONENT C: Project Coordination, Management, Monitoring and Evaluation and Communication

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Targeted knowledge & communication products prepared and disseminated	Percentage	0 24-May-2013	80 22-Dec-2017	90 20-Jun-2020	93 20-Jun-2020

Comments (achievements against targets):
Project exceed the original target by 16% and by 3% the revised target of 90%.

The project used different tools of communication including a newsletters, preparation of briefs documents related to project activities (SLM and nutrition), and some documentaries (bio-carbon sites, COGES, SLM activities and nutrition). The key communication tool was the use of communities' radio in local language especially on nutrition messaging through the PHRD

Component: COMPONENT D: Contingent Emergency Response

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
IRM established and ready to provide access to financial resources to Niger in case of an eligible emergency	Number	0 24-May-2013	1 20-Jun-2020		1 20-Jun-2020

Comments (achievements against targets):
Project reached its target

B. KEY OUTPUTS BY COMPONENT

Objective/Outcome 1 Increased planning and implementation capacities of local administration	
Outcome Indicators	1. Communes with good governance practices (%)
Intermediate Results Indicators	1. Communes delivering timely financial reports (%) 2. Communes with working grievance mechanisms 3. Deconcentrated line departments strengthened 4. Regional agencies planning capacities strengthened
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	1. Equipment to 20 directorates/ departments 2. 15,171 local government officials trained 3. Preparation of 38 CDP 4. Preparation off 750 AI 5. Support preparation of regulations and decrees.
Objective/Outcome 2: Increased access to socio-economic services	
Outcome Indicators	1. Communes able to operate and maintain investments sustainably (%)
Intermediate Results Indicators	1. Communes using at least 80% of their investment allocations (%) 2. Population of newly targeted communes whose access to education improved 3. Percentage of populations in targeted communes whose access to health and nutrition services improved (replaced with the AF in 2017) 4. Populations (disaggregated by gender) of targeted communes whose access to nutrition services improved (introduced in 2017)
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	1. socio-economic infrastructures micro projects (9 food and feed storages facilities, 39 warehouses, 9 administration offices, 109 schools, 18 health posts and communities' radios

	2. income-generating activities such as animals (sheep, goats, and cattle) for sheep and bovine fattening and livestock replenishment, small scale irrigation, grain mills, fishponds, animal feed banks for livestock and cereal banks, and small agro-processing units 3. sustainable Land and Water Management micro projects. 4. nutrition awareness campaigns and training
Objective/Outcome 3: Increased agricultural productivity	
Outcome Indicators	1. Number of farmers adopting improved agricultural technologies 2. Increase in agricultural productivity of major crops – tomato (tons/ha), 3. Increase in agricultural productivity of major crops - onions (tons/ha 4. Increase in agricultural productivity of major crops - pepper (tons/ha) 5. Increase in agricultural productivity of major crops -, cassava (tons/ha),
Intermediate Results Indicators	1. Area provided with new/improved irrigation or drainage services 2. Targeted communes which have protected and/or restored at least 200 hectares of land 3. Storage and processing facilities built 4. Beneficiaries whose income increased by 30% because of farm and off-farm jobs created by approved micro-projects
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	1.Distribution of agriculture inputs (seeds, fertilizers and pesticides) 2.Small scale irrigation (1378.7 ha) 3.Provision of 1708 irrigation motor pumps 4.Provision of drip irrigation kits 5. Support agroforestry (9055 ha).

C. ACHIEVEMENT AGAINST INDICATORS -PARENT PROJECT

At the PDO level, targets on management capacity, governance practices at the Commune level, and access to socio-economic services provided by the project have been fully achieved. As examples, to date:

PDO indicator	End of project target (December 31st, 2017)	Actual at April 21, 2017	Level of achievement
Newly targeted communes that have defined and implemented good governance practices (participation, accountability, and equity)	85%	87%	Fully achieved
Targeted communes that are enabled to sustain proper operation and maintenance of local development investments	100%	99%	Fully achieved
Newly targeted farming households who adopted sustainable agro-sylvo-pastoral practices and technology promoted by the project	90%	92%	Fully achieved
Direct project beneficiaries	3,000,000	3,000,342	Fully achieved
▪ Of whom female	50%	52%	Fully achieved
Time taken to make funds available as requested by Government for an eligible crisis or emergency (Weeks)	4	1	
GEO Indicator			
Additional land area under sustainable land and water management (SLWM) and Sustainable Forest Management (SFM) practices (Hectare(Ha))	60,000	85,788	Fully achieved
Intermediate outcome indicator			
Component A Capacity-building			
Targeted communes whose planning and AIP sessions are public	60%	100%	More than fully achieved
Targeted communes that timely prepare annual financial reports	75%	76%	Fully achieved
Percentage of Communes whose approved microprojects integrate gender equity	90%	95%	More than fully achieved
Percentage of Communes whose grievance mechanisms have been created and are operational	65%	75%	More than fully achieved
Percentage of targeted Communes effectively interested in Intercommunalité.	60%	39%	Not achieved
Percentage of representatives of key Regional agencies whose planning capacities have been strengthened	60%	85%	More than fully achieved

Percentage of representatives of deconcentrated line departments whose local development-related capacities have been strengthened.	90%	90%	Fully achieved
Component B Local Investment Fund			
Targeted communes utilizing at least 80 percent of their investment allocations	80%	86%	Fully achieved
Targeted communes which have protected and/or restored at least 200 hectares of land	70%	79%	Fully achieved
Beneficiaries whose income increased by 30 percent because of farm and off-farm jobs created by approved micro-projects	80%	85%	Fully achieved
Percentage of populations (disaggregated by gender) of newly targeted Communes whose access to health and nutrition services improved	90%	23%	Not achieved
Percentage of populations of newly targeted Communes whose access to education improved	90%	20%	Not achieved
Percentage of targeted inter-governmental initiatives which have been implemented	50%	35%	Partially achieved
Component C Project Coordination, Management, Monitoring and Evaluation and Communication.			
Percentage of targeted knowledge & communication products prepared and disseminated	80%	85%	More than fully achieved
Component D Contingent Emergency Response			
IRM established and ready to provide access to financial resources to Niger in case of an eligible emergency	1	1	Fully achieved

ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Amadou Alassane	Task Team Leader(s)
El Hadj Adama Toure	Team member (agriculture)
Dahlia Lotayef	Team member (environment)
Abdoulaye Toure	Team member (agriculture)
Soulemane Fofana	Team membe (agriculture)
Juvenal Nzambimana	Team member (operations)
Mohamed Khatouri	Monitoring and Evaluation
Laurent Valiergue	Carbon Finance
Adrien de Bassompierre	Carbon Finance
Gayatri Kanugo	Environment specialist
Paul Jonathan Martin	Social Specialist
Yacouba Konate	Social Specialist
Medou Lo	Social Specialist
Supervision	
Soulemane Fofana	Task Team Leader (From 2014 -October 2019)
Elisee Ouedraogo	Task Team Leader(From October 2019)
Mahamadou Bambo Sissoko,	Procurement Specialist (ADM at project closing)
Maman Hassane Gabari	Procurement Specialist
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Harouna Djibrilla Djimba	Procurement Specialist
Boubacar Diallo	Procurement Specialist
Sylvain Auguste Rambeloson	Procurement Specialist
Andre Zombre,	Procurement Specialist
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Josue Akre	Financial Management Specialist
Celestin Adjalou Niamien	Financial Management Specialist
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Brahim Sall	Team member
Demba Balde	Social Safeguard Specialist (ADM at closing)
Yacouba Konate	Social Safeguard Specialist
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B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US$ (including travel and consultant costs)
Preparation		
FY13	15.972	190,398.03
FY14	13.897	52,020.72
FY15	17.199	78,611.42
FY16	2.875	13,399.99
Total	**49.94**	**334,430.16**
Supervision/ICR		
FY14	.926	13,880.63
FY15	7.395	63,570.12
FY16	20.244	115,475.02
FY17	15.097	79,155.80
FY18	15.722	121,801.22
FY19	6.942	86,574.12
FY20	16.766	66,345.59
Total	**83.09**	**546,802.50**

ANNEX 3. PROJECT COST BY COMPONENT

Components	Amount at Approval (US$M)*	Actual at Project Closing (US$M)**	Percentage of Approval (US$M)
COMPONENT A: Capacity Building	8.35	11.3	135 %
COMPONENT B: Local Investment Fund	29.39	45.0	153%
COMPONENT C: Project Coordination, Management, Monitoring and Evaluation and Communication	6.75	14.1	208%0
COMPONENT D: Contingent Emergency Response	0	0	0
Total	**44.52**	**70.4**	**158 %**

*Parent project (IDA and GEF grant)
**Actual disbursed (including AF and PHRD grant)
The actual project costs include beneficiaries and government contribution, and exchange rate gain

ANNEX 4. EFFICIENCY ANALYSIS

This annex presents the ex-post economic and financial analysis (EFA) of the Third Community Action Program Support Project (CAP III).

General Efficiency Considerations

Introduction

This annex analyses the efficiency of the Third Community Action Program Support Project (CAP III) (P132306) in Niger, financed by the World Bank in the context of its Implementation Completion and Results Report (ICRR). Project efficiency was assessed by i) the actual project costs and duration for realising project objectives versus the plan; ii) the actual costs per beneficiary and per unit of output iii) the project economic rate of return as computed through an economic and financial analysis (EFA), and how it compares to ex ante estimates.

This project has four components. 1) The first component (A), **Capacity Building,** aims at building Capacity Building through targeted training and agricultural advisory services for smallholder farmers for the implementation of their micro-projects. The second component (B), **Local Investment Fund,** supports local investment for agriculture-related micro-projects in 125 communes and has three sub-components: (a) Micro-projects to improve land and water management, including strengthening climate-resilience, funded entirely by IDA; (b) Microprojects for income-generating activities, and (c) Micro-projects (MPs) to invest in socio-economic infrastructures including (i) development of small-scale irrigation on one thousand hectares and (ii) investment in small-scale irrigation micro-projects in five selected communes. 3) Component (C), **Project Coordination, Management, Monitoring and Evaluation,** covers project coordination. The fourth Component (D), **Contingent Emergency Response**, provides an immediate response mechanism to an Eligible Crisis or Emergency.

Overall, the project succeeded in meeting most of its targets without a cost overrun. While the project was extended by six months, with the initial closing date of 20 December 2019 being postponed to 20 June 2020, the extension merely aimed to allow more time for project implementation to compensate for a delay in the approval of the Japanese grant and did not result in a cost-overrun. The project was also initially extended from December 2017 to December 2019 together with the additional financing.

Cost Efficiency

Costs by Financing Entity. The project disbursed from all its sources of financing, with disbursement rates at 96% on average. Beneficiaries contributed to 4% of project costs, and the Government contributed to 2% of total project costs. While beneficiaries contributed more than initially planned, Government counterpart financing was lower than planned.

Table 1. Planned and actual costs by financing entity

Project costs by financing entity		Original amount	Revised amount	Actual	% disbursed	% of total
IDA Loan, design	million US$	40.0	40.0	37.9	95%	55%
IDA Loan, AF	million US$	20.8	20.8	20.5	99%	30%
GEF	million US$	4.5	4.1	4.1	91%	6%
PHRD	million US$	2.3	2.3	2.3	100%	3%
Total	***million US$***	***67.6***	***67.1***	***64.8***	***96%***	***94%***
Beneficiaries	million US$	1.7	2.9	2.9		4%
Government	million US$	2.6	1.5	1.5		2%
Total project costs	**million US$**	**71.9**	**71.5**	**69.1**	**96%**	**100%**

Management Costs. The project had significant management costs and overspent on Component C. Component C expenditures amounted to about 20% of total project expenditures[29]. While these management costs are high, they are not particularly high considering i) that the project followed a Community-Driven Development (CDD) approach, which tend to have higher management costs; ii) the relatively higher costs of management in the region. The six months extension probably contributed to higher management costs as well.

The Central Programme Coordination Unit (PCU) spent 67% of Component Costs, while the regional PCUs spent the remaining 33%. Salaries only accounted for 22% of the Central PCU costs but they accounted for more than 56% of regional PCUs costs. For the Central PCU, the main expenditure categories were recurrent costs (33% of costs), followed by salaries (22% of costs) and consultants (20% of costs).

Costs per beneficiary. Costs per beneficiary was very low, US$ 18.3 per beneficiary, because the project reached a high number of beneficiaries. In some cases, the number of beneficiaries reported per activity seems unexpectedly high and results in a low additional revenue per individual beneficiary. It seems that the number of beneficiaries per activity alternatively refers to the number of household beneficiaries or of total beneficiaries, including all members of beneficiary households. Despite the project having provided a definition of the indicator, there might be discrepancies on how the indicator was reported on.

Table 2. Planned and actual cost per beneficiary

		Planned	Actual	%
Number of beneficiaries	people	3,110,142	3,194,961	103%
Cost per beneficiary, IDA only	US$	19.5	18.3	94%
Cost per beneficiary, total costs	US$	23.1	21.6	94%

Costs per output. Where data was available to compare project cost per output with norms, evidence shozs that the project was reasonably aligned with national norms and expected costs. For instance, according to the *Cadre stratégique de la gestion durable des terres au Niger et son plan d'investissement*

[29] Based on project data from 20/05/2020

2015-2029, the cost per hectare for zai and demies lunes are respectively FCFA 52,000 and FCFA 90,000-120,000. The average cost per hectare for land and soil management micro-project was FCFA 103,000, so in line with these norms. For sheep fattening, the model estimates that project costs per micro-project beneficiary[30] would amount to FCFA 67,000, and actual expenditure per beneficiary amounted to FCFA 113,026. For goat breeding, the model estimates a cost per beneficiary of FCFA 90,000[31] compared to an expenditure of FCFA 109,409. Micro-project costs also include provisions for the micro-project committees and potentially other costs, so it is also expected that they would be somewhat higher.

Economic and Financial Analysis Results

The Economic and Financial Analysis at completion finds an economic Net Present Value (NPV) of US$ 108 million, and an Economic Internal Rate of Return (EIRR) of 52%, showing very positive and substantial returns to investment. If CAP III's carbon sink benefits are taken into consideration, the project benefits are even more substantial, with the NPV reaching US$ 119 million with the higher carbon social price. This shows that the project was very profitable, especially considering that some project benefits could not be quantified, for instance the nutritional benefits of the Japanese grant, the longer-term impact of capacity building activities and the project's contribution to improving gender equality.

Project efficiency was higher than what was projected at design. The EFA conducted for the project Additional Financing (AF) projected an NPV of US$ 23.4 million and an EIRR of 19.4%. While the AF only estimated the benefits associated with AF investments, US$ 22.59 million out of US$ 68.3 million (33% of project costs), the return on investment on the full budget can be estimated by extrapolating a similar return for all project costs. Assuming that all project sources of financing have similar returns as the modelled AF activities, the expected NPV for the full project as projected during the AF would reach US$ 70.7 million, lower than the estimates of this analysis. Generally, the EFA done for the AF does not fully reflect the activities eventually undertaken by the beneficiaries, which is not surprising given the demand-nature of the project. For instance, there is no model for goat herds, and the horticulture model focuses on the production of onion, cassava and sweet potatoes.

The analysis finds significant disparities in the return of individual activities, mostly in line with the project's own assessments of the efficiency of specific investments. For instance, while irrigated horticulture plots are extremely profitable, the livestock feed warehouses were not profitable and the sheep fattening was only profitable if the entrepreneur sold the sheep during the Tabaski holiday, when sheep prices peeked. Some project assessments document the lack of profitability of the livestock feed warehouses and the importance of the timing of sales for sheep fattening, and the project should be commended for having conducted its own efficiency analyses. The efficiency analyses conducted by the project however sometimes excluded investment costs borne by the project, and therefore over-estimated the efficiency of some activities, for instance transformation activities.

Overall, and in light of the evidence above, the project efficiency is deemed to have been **substantial**.

[30] one sheep per household, a shelter and part of the feed costs
[31] This cost corresponds to the purchase of three goats

Economic and Financial Analysis

Overview of the Methodology and Activities Modelled

This section presents the hypothesis and methodology used to construct the Economic and Financial Analysis (EFA) of the CAP III in the context of the ICRR. The objective of the analysis is to estimate the costs and benefits of the project from the perspective of project beneficiaries (financial analysis) and from the perspective of society and the economy (economic analysis). It will first introduce the methodology of the analysis, including the activity models used to represent project investments and the main assumptions behind these models. The section will then present the specific parameters and results of the financial analysis, followed by the specific parameters and results of the economic analysis.

The methodology is a cost-benefit analysis that estimates the costs and benefits of the project and the activities supported by the project. The data used for the analysis primarily come from the following sources: i) data on outputs and costs per output from the project Completion Report and Impact Evaluation Report; ii) data on specific activities collected from various project reports and former project staff members; iii) business plans prepared as part of the project and presented in various reports; iv) secondary sources found online.

The modelled investments come from activities in Component B, the Local Investment Fund. This Component accounts for 67% of project expenditures. Nonetheless, the other components contributed to the success of the investments undertaken as part of Component B. In particular, Component A contributed the necessary capacity building for communes and communities and different local institutions, thereby providing institutional support at the local level to ensure the success of Component B investments. As noted above, the project also had benefits that were not quantified through the production models.

The modelled investments represent the three main types of investments that came from the Local Investment Funds: micro-projects to improve land and water management (LSM, 40% of the Fund), micro-projects for income-generating activities (IGA, 35% of the Fund) and micro-projects to invest in socio-economic infrastructures (ISE, 25% of the Fund). The models are based on the most popular investment choices by beneficiaries, obtained from monitoring and evaluation data on micro-projects. The activities represent 45% of LSM expenditures and 82% of IGA expenditures[32]. The expenditures on socio-economic infrastructures include establishing micro-irrigation for horticulture plots, and were therefore added to the expenditures on horticulture micro-projects in the IGA activities. The models are summarised in

[32] There is no break-down of ISE expenditures. The ISE expenditures were all considered to correspond to irrigation for horticulture plots. The costs per production unit for horticulture therefore include the ISE costs.

Table 4 below.

Each model is then summarised at the level of a production unit, based on available data. For some activities, there was information on output per type of investment activity, for instance hectares for SML activities and animals distributed for livestock activities[33]. In this case, the production unit is based on the output unit (one hectare, one sheep etc…). In the case of the warehouse and transformation activities, each MP corresponds respectively to a warehouse and a transformation unit.
To triangulate the information, the estimated costs per model was compared with data on expenditure per production unit. M&E data on outputs and total expenditure per activity was used to compute an average expenditure per output/production unit. This was used to ensure that the scale of the models was on par with the scale and investment per production unit. The results of this exercise, summarised in Table 3, shows that the scales and costs of the models are on par with project expenditures. Cost per production models are almost always a bit lower than expenditures (except for the biocarbon sites), but this was expected as micro-project expenditures would include the costs for the management committees and other associated costs not included in the models.

Table 3. Costs per Production Unit, Project Data vs Models

Model	Model production unit (A)	Expenditure per prod. unit, project data, FCFA (B)	Cost per production unit, model, FCFA (C)	% difference (D)
Horticulture	Hectare	6,695,622	5,806,391	87%
Sheep fattening	Sheep	94,641	67,400	71%
Goat breeding	3 goats herd package	109,927	90,000	82%
Livestock feed warehouse	Warehouse	16,060,249	14,442,499	90%
Cassava processing	Transformation unit	11,638,050	10,200,000	88%
Zai	Hectare	103,097	101,000	98%
Half moon	Hectare	49,745		203%
Biocarbon sites	Hectare	49,745	53,892	108%

The M&E data also allowed for the computation of beneficiaries per production unit. While for some models the production unit corresponds to one household (e.g. for the livestock models), in most cases, more than one household would benefit from a production unit. It is important to note however that the data on the number of beneficiaries for some production units are unexpectedly high. For goat breeding, conversations with the project team revealed that the number of beneficiaries in the impact evaluation table corresponded to total beneficiaries, including all household beneficiary members, so the number was modified to reflect household beneficiaries. For transformation units, it seems surprising that more

[33] Categories were not always clearly defined so assumptions had to be made in some cases

than 1000 direct beneficiaries would benefit from one transformation unit on average. For the LSM models as well, 11 direct beneficiaries per hectare would result in a very small surface per household.

Table 4. Summary of Models

Fund	Model	Unit of production	Beneficiaries per model
IGA	Horticulture	Hectare	12
IGA	Sheep fattening	Sheep	1
IGA	Goat breeding	3 goats herd package	1
IGA	Livestock feed warehouse	Warehouse	4,779
IGA	Cassava processing	Transformation unit	1,533
LSM	Zai	Hectare	11
LSM	Half moon	Hectare	11
LSM	Biocarbon sites	Hectare	2

For all models, a situation without project (WOP) is compared to a situation with project (WP), to understand the additional benefits generated by project investments. A specificity of PAC III is its focus on soil and land management, which included the rehabilitation of previously un-used plots of land. Whenever the activities take place on previously uncultivated land (degraded or fallow) or when the activity did not require land, it was considered that there was no WOP situation. This is for instance the case for the half moon or bio-carbon site models. The opportunity cost of labour is however included in all models, to account for additional labour requirements. In the case of horticulture, project investments allow for an increase in the surface cultivated and an increase in yields. The increase in yields in the horticulture and zai models (see Table 6), are respectively based on the data from the project Results Framework and the Rapport d'achèvement du projet FEM/PAC3.

Table 5. Without Project and With Project Situations

Model	WOP	WP
Horticulture	0.5 hectares, lower inputs and lower yields, 1 cycle on average	1hectare, micro-irrigation, more inputs and higher yields, 1.5 cycles on average
Sheep fattening	No WOP	fattening of one sheep
Goat breeding	No WOP	Raising of goat herd
Livestock feed warehouse	No WOP	One livestock feed warehouse
Cassava processing	No WOP	Cassava processing
Zai	Sorghum production	Sorghum production with zai
Half moon	No WOP	Sorghum production with half moons
Biocarbon sites	No WOP	Biocarbon sites

Table 6. WOP and WP Yields, kilo per hectare per cycle

	WOP	WP
Onion	30,000	50,000
Tomatoes	30,000	60,000
Pepper	15,000	35,000
Sorgho, with a nd without zai	400	800

Financial Analysis

For the financial analysis, costs and benefits are analysed from the point of view of project beneficiaries. All costs are included, whether these costs are incurred by project beneficiaries or not, with the exception of capacity building and training costs and the costs of micro-project committees. As noted above, salaried and family labour costs are included to reflect the additional work necessary to implement certain activities. A discount rate of 10% is used to discount results. All models are analysed over a ten-year period, with the exception of goat breeding which is analysed over a five-year period, as evidence from the field suggests that beneficiaries would eventually transition into cattle breeding. For the goat herd model, the demography of the herd and the model were computed using the Livestock Sector Investment and Policy Toolkit[34].

Financial Results

The financial analyses show that most activity models were profitable and viable, but with strong discrepancies across activities and some unprofitable activities. On a per model basis, the most profitable model was by far horticulture, with a Net Present Value (NPV) of US$ 46,302 over ten years. The high profitability of the model stems from i) the very significant increases in yields reported by the project, ii) the increase in cropped areas iii) the fact that some plots could produce two cycles per year. The goat herd model is also very profitable, because it is assumed that beneficiaries do not need to purchase feed for the goats and because of the demographic growth of the herd.

One model has negative results, livestock feed warehouse. The project acknowledges that these investments were not sustainable as these warehouses often discounted heavily the sales prices, without considering long-term financial sustainability. The cassava processing model is also only profitable if labour costs are set at FCFA 550 per day or lower, which implies that the model has a very low return to labour. Considering that the investment on which the model was based was designed to provide employment opportunities for handicapped women who might otherwise not find sources of income, the activity can still be considered as financially attractive. Sheep fattening and zai are rather easy to implement activities with fairly low investment costs and positive returns, but not extremely profitable.

[34] The Food and Agriculture Organization of the United Nations (FAO), together with the World Bank, the International Livestock Research Institute (ILRI) and the French Agricultural Research Centre for International Development (CIRAD), have developed the Livestock Sector Investment and Policy Toolkit (LSIPT) toolkit to support teams and decision-makers to increase and improve policies and livestock investments that contribute to achieving the Sustainable Development Goals. The toolkit enables a shift from the traditional approach centred on livestock production to one that focuses on households and human well-being with the goal of poverty reduction.

For sheep fattening, the model is only profitable if the beneficiary sales the sheep at a sales price of FCFA 90,000 or more. These sales prices are common around the time of the Tabaski, when there is a high demand for sheep, but more difficult to obtain at other times of the year.

Table7. Financial Results

Results of the Financial Analysis	Margin, year 3, US$	NPV,' 000 FCFA	NPV, US$	NPV per beneficiary, US$	IRR
Horticulture	10,786	24,311	43,779	3,660	94%
Sheep fattening	20	52	93	93	NA
Goat breeding	347	694	1,249	1,249	345%
Livestock feed warehouse	-5,284	-26,914	-48,467	-10	NA
Cassava processing	2,804	294	530	0	11%
Zai	17	9	17	2	22%
Half moon	101	86	156	14	27%
Biocarbon sites	130	97	174	93	22%

The NPV per household can provide a more useful metric of the return on investment per beneficiary, since the model's production unit does not always correspond to one beneficiary. In this case as well, the highest return on investment per beneficiary are for the horticulture model (US$ 3,660 per beneficiary) and for the goat breeding model (US$ 1,249 per beneficiary). Cassava processing has a very low return per beneficiary because, as noted above, the number of beneficiaries per transformation activity is very high.

The Internal Rates of Return (IRR) are also very high for the horticulture and goat breeding models. For horticulture, this is simply because the model is very profitable, even if the year of the investment is assumed to bring no revenues as planting only starts in year 2 and if full yields are only achieved in year 4. For the goat herd, the investment is assumed to start immediately, once the goats are purchased. The sheep fattening model has no IRR because the incremental benefits are positive for each year of the model, as the production cycle lasts less than a year. There is also no IRR for the livestock feed warehouse because the model incremental benefits are consistently negative.

Economic Analysis

For the economic analysis, the analysis takes the perspective of the society, rather than individual beneficiaries. The financial models are turned into economic models using conversion factors, the models' additional economic benefits are aggregated as per project M&E data on the phasing of activities, and the greenhouse gas (GHG) accounting is added to the final results, to account for the economic costs of project GHG.

To transform the financial models into economic models, prices were adjusted to remove the values of transfers within the economy in the form of taxes or subsidies. Conversion factors were computed for categories of goods and services, defined on the basis of different categories of taxes (Value added tax (VAT) and import tariffs) and applied to all prices in that specific category. Table 8 presents the different conversion factors used.

Table 8. Conversion Factors

	Financial price/index	Economic price/index	Conversion factor
Exchange rate	555	585	1.05
Import substitute, food items	100	103	1.03
Imports, agricultural inputs other than fertilizer	100	98	0.98
Imports, fertilizer	100	103	1.03
Imports, others	100	79	0.79
Non-tradable, with VAT	100	84	0.84
Non-tradable, without VAT	100	100	1.00
Taxes	100	0	0.00
Labour	100	70	0.70

The economic models were subsequently aggregated. The activities modelled account for 71% of the expenditures for micro-projects, but 100% of the micro-project expenditures were accounted for by allocating the remaining 29% of expenditures to the modelled activities (see Table 9).

Table 9. Aggregation of Models, Total Expenditure Allocated per Model

Allocation across MPs	Project expenditure for the activity, FCFA (A)	% micro-project expenditure (B)	% reallocated (C)	Expenditure allocated to the model, FCFA (D)
Total MP costs	**23,766,059,320**		-	-
Horticulture	9,045,785,551	38%	54%	12,809,582,092
Sheep fattening	1,039,162,082	4%	6%	1,471,539,638
Goat breeding	1,244,304,409	5%	7%	1,762,038,176
Livestock feed warehouse	722,711,191	3%	4%	1,023,418,948
Cassava processing	372,417,598	2%	2%	527,374,186
Zai	1,999,584,290	8%	12%	2,831,577,088
Half moon	1,999,584,290	8%	12%	2,831,577,088
Biocarbon sites	359,408,414	2%	2%	508,952,103

The aggregation of models was phased based on data on the yearly expenditures of the Local Investment Fund. These expenditures were allocated across activity models on the basis of the percentages above (Table 9, Columns C and D[35]) and the average expenditure per activity (Table 3, Column B).

The resulting total for the aggregation per model is presented in Table 10, Column C. As the table shows, project output (Column A) is similar to the total production units aggregated (Column B), although the total aggregated is systematically higher than the output because of the reallocation of non-modelled activities expenditures. Finally, to account for the fact that not all activities would become financially viable and be sustained by beneficiaries, a success rate of 80% was applied to the total (Column C). The resulting phasing of models for the aggregation is presented in Table 11.

Table 10. Total models vs project outputs

	Unit	Total, project output (A)	Total, based on expenditure allocation (B)	Total, budget allocation with 80% success rate (C)
Horticulture	Hectare	1,351	1,913	1,531
Sheep fattening	Sheep	10,980	15,549	12,439
Goat breeding	3 goats herd package	11,319	16,029	12,823
Livestock feed warehouse	Warehouse	45	64	51
Cassava processing	Transformation unit	32	45	36
Zai	Hectare	19,395	27,465	21,972
Half moon	Hectare	19,395	56,922	45,537
Biocarbon sites	Hectare	7,225	10,231	8,185

[35] Expenditures per production unit were used, because they were higher than the investment cost per model.

Table 11. Phasing of Models

Phasing, with success rates	Production Unit	2 014	2 015	2 016	2 017	2 018	2 019	2 020	TOTAL
Horticulture	Hectare	98	256	407	200	186	377	6	**1,531**
Sheep fattening	Sheep	798	2,079	3,310	1,624	1,509	3,068	51	**12,439**
Goat breeding	3 goats herd package	823	2,143	3,413	1,674	1,555	3,163	52	**12,823**
Livestock feed warehouse	Warehouse	3	9	14	7	6	13	0	**51**
Cassava processing	Transformation unit	2	6	10	5	4	9	0	**36**
Zai	Hectare	1,409	3,673	5,847	2,869	2,665	5,419	89	**21,972**
Half moon	Hectare	2,921	7,612	12,119	5,946	5,523	11,231	185	**45,537**
Biocarbon sites	Hectare	525	1,368	2,178	1,069	993	2,019	33	**8,185**

The additional economic benefits per model were aggregated according to this phasing, to compute the total additional economic benefits for the project. The economic analysis covers the years 2013 (project start) to 2029 (when activities that started in 2020 reach their 10-year duration). Project costs not included in the activity models were added as additional costs; these corresponds to all project costs other than Component B costs. A discount rate of 6%, in line with the average GDP growth rate of 5.7% over the period of the project duration, was used to estimate economic results.

Finally, given the project's strong focus on soil and land management, the project greenhouse gas balance was estimated. The World Bank uses the Ex-Ante Carbon-Balance Tool (EX-ACT) to estimate the impact of agricultural investment lending on greenhouse gas (GHG) emissions and carbon sequestration. EX-ACT is a land-based appraisal system for assessing a project's net carbon balance—the net balance of tons of CO_2 equivalent (tCO_2eq) of GHGs that were emitted, or carbon sequestered as a result of project interventions—compared to a "without project" scenario. While the tool is designed for ex-ante estimates, it was used in this case to estimate GHG emissions where project data was not available.

For the EX-ACT activities, project data on land use change were input in the EX-ACT. The biocarbon sites were not considered, because the carbon capture resulting from these sites was already included in the financial analysis.

The main hypotheses behind the EX-ACT were:

- **Description:** an implementation phase of 7 years and a capitalisation phase of 8 years, for a total duration of accounting of 15 years;
- **Land use changes:** 19,395 hectares from degraded land to annual crop (half the surface reported, as some surfaces were already annual crop-land): 7,252 hectares of degraded land to grass land; 1,389 hectares from degraded land to *other* for the fixation of dunes.

- **Cropland:** 19,395 hectares from degraded land to annual cropland of grains, with improved management options (half-moons for instance); 676 hectares of horticulture (WOP) becoming 1,351 hectares of horticulture (WP) with improved management options; 19,395 hectares of cropland remaining cropland with improved management options.
- **Grassland:** 7,252 hectares of moderately degraded land to improved pasture without nutrient management; an additional 1,276 cattle, 25,737 sheep and 171,601 goats with a few technical mitigation options[36].
- **Inputs:** the inputs used for the horticulture, biocarbon, zai and half-moon models were included (see EFA Excel file for detailed computations); 1351 hectares or IRRS for the horticulture, 21,839 houses in concrete and 62,266 garages based on project M&E data.

Based on these assumptions, the project has a total balance of -194,887 tons of CO_2 equivalent ($TCo_2eq.$). There is an important carbon sink from the land use change (-1,056,802 $TCo_2eq.$), but there are also important emissions resulting from the livestock activities (914,554 $TCo_2eq.$). The GHG emissions are overall negative, which means that the project has resulted in a net carbon sink. The carbon sink amount to -4.1 $TCo_2eq.$ per hectare on average and -12,992 $TCo_2eq.$ per year. The results of the EX-ACT analysis are summarised in Table 12.

[36] For fattening models, the number corresponds to animals distributed by the project. For the herd models, the numbers are adjusted for herd growth: for sheep and cattle, the animals distributed are multiplied by 3 while the herd growth is based on the LSIPT demographic modelling for goats.

Table 12. Project GHG accounting results

Continent	Africa	Dominant Regional Soil Type	Total area (ha)	48106.5		
Components of the project	Gross fluxes Without	With	Balance	Result per year Without	With	Balance
Land use changes	All GHG in tCO2eq Positive = source / negative = sink					
Deforestation	0	0	**0**	0	0	**0**
Afforestation	0	0	**0**	0	0	**0**
Other LUC	0	-1,056,802	**-1,056,802**	0	-70,453	**-70,453**
Agriculture						
Annual	-463,629	-540,274	**-76,645**	-30,909	-36,018	**-5,110**
Perennial	0	0	**0**	0	0	**0**
Rice	0	0	**0**	0	0	**0**
Grassland & Livestocks						
Grassland	0	-94,796	**-94,796**	0	-6,320	**-6,320**
Livestocks	0	914,554	**914,554**	0	60,970	**60,970**
Degradation & Management						
Forest degradation	0	0	**0**	0	0	**0**
Peat extraction	0	0	**0**	0	0	**0**
Drainage organic soil	0	0	**0**	0	0	**0**
Rewetting organic soil	0	0	**0**	0	0	**0**
Fire organic soil	0	0	**0**	0	0	**0**
Coastal wetlands	0	0	**0**	0	0	**0**
Inputs & Investments	4,685	123,487	**118,802**	312	8,232	**7,920**
Fishery & Aquaculture	0	0	**0**	0	0	**0**
Total	-458,944	-653,831	**-194,887**	-30,596	-43,589	**-12,992**
Per hectare	-9.5	-13.6	**-4.1**			
Per hectare per year	-0.6	-0.9	**-0.3**	-0.6	-0.9	**-0.3**

Economic Results

Based on these assumptions, the project has an economic NET Present Value of US$ 108 million, and an IRR of 52%. The project is more profitable when project climate mitigation effects are added to the results; the NPV reaches US$ 119 million and the IRR 65% with the lower carbon social prices and the NPV reaches US$ 113 million and the IRR 57% with the higher carbon social prices.

Table 13. Economic Results

Economic Results, Without GHG Emissions	
NPV, @6%, million FCFA	60,211
NPV, @6%, US$	108,427,886
EIRR	52%
Economic Results, With GHG Emissions, Lower Carbon Social Price	
NPV, @6%, million FCFA	63,003
NPV, @6%, US$	113,455,641
EIRR	57%
Economic Results, With GHG Emissions, Higher Carbon Social Price	
NPV, @6%, million FCFA	65,820
NPV, @6%, US$	118,528,989
EIRR	65%

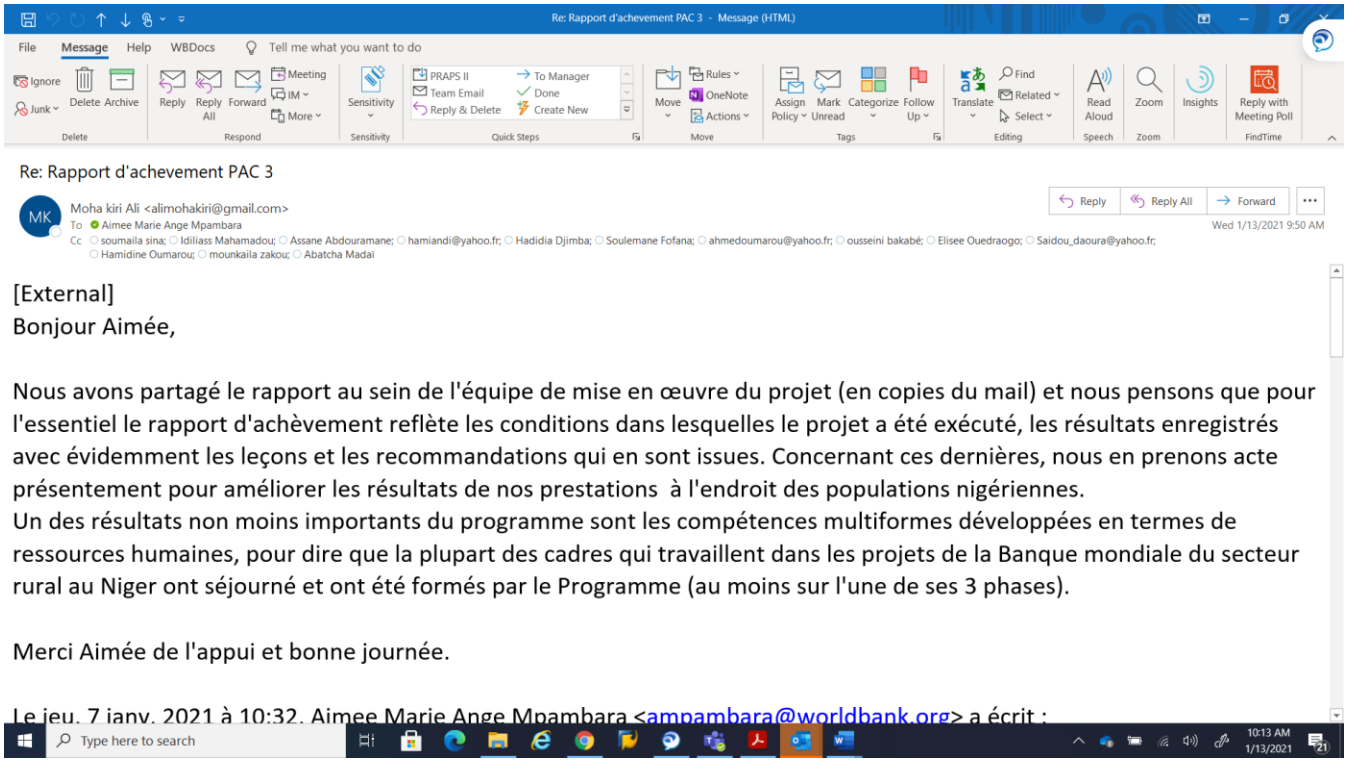
Most project benefits come from the horticulture model, as shows Table 14. This is somewhat expected given that horticulture also accounts for about half of the modelled expenditures. Nonetheless, it also reflects the fact that some models were not profitable, and that horticulture was by far the most profitable model.

Table 14. Weight of models in costs and benefits

Allocation across MPs	**% of modelled expenditures**	**% of economic benefits**
Horticulture	54%	63%
Sheep fattening	6%	1%
Goat breeding	7%	13%
Livestock feed warehouse	4%	-2%
Cassava processing	2%	0%
Zai	12%	4%
Half moon	12%	20%
Biocarbon sites	2%	7%

To test the robustness of the results, the economic analysis was re-computed assuming lower yields for the horticulture model, a decrease of 10 tons per hectare per commodity. The economic results are robust to this decrease in productivity, and the resulting project NPV without GHG social costs reached US$ 82 million.

ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS



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Re: Rapport d'achevement PAC 3

MK Moha kiri Ali <alimohakiri@gmail.com>
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[External]
Bonjour Aimée,

Nous avons partagé le rapport au sein de l'équipe de mise en œuvre du projet (en copies du mail) et nous pensons que pour l'essentiel le rapport d'achèvement reflète les conditions dans lesquelles le projet a été exécuté, les résultats enregistrés avec évidemment les leçons et les recommandations qui en sont issues. Concernant ces dernières, nous en prenons acte présentement pour améliorer les résultats de nos prestations à l'endroit des populations nigériennes.
Un des résultats non moins importants du programme sont les compétences multiformes développées en termes de ressources humaines, pour dire que la plupart des cadres qui travaillent dans les projets de la Banque mondiale du secteur rural au Niger ont séjourné et ont été formés par le Programme (au moins sur l'une de ses 3 phases).

Merci Aimée de l'appui et bonne journée.

Le jeu. 7 janv. 2021 à 10:32, Aimee Marie Ange Mpambara <ampambara@worldbank.org> a écrit :

Type here to search 10:13 AM 1/13/2021

ANNEX 6. SUPPORTING DOCUMENTS

1. Country Partnership Strategy for the Republic of Niger for the Period FY13-FY16, IDA, IFC, MIGA, April, 30, 2013.
2. Republic of Niger, Systematic Country Diagnostic, November 28, 2017.
3. Country Partnership Framework for the Republic of Niger for the Period FY8-FY22, IDA, IFC, MIGA, March, 3, 2018.
4. Evaluation de l'Impact du Programme d'actions Communautaires Phase III, Rapport définitif, Juin 2020
5. Document Cadre de politique nationale de la Décentralisation, République du Niger, Juin 2011
6. Initiative 3N pour la sécurité alimentaire et nutritionnel et le développement agricole durables « Les Nigériens Nourrissent les Nigériens », Avril 2012.
7. Stratégie de Développement Durable et de Croissance Inclusive (SDDCI), Niger 2035.
8. Plan de Développement Economique et Social 2017-2021, « Un Niger renaissant pour un peuple prospère », Septembre 2017.
9. Plan d'action 2016-2020 de l'Initiative 3 N (Les Nigériens Nourrissent les Nigériens).
10. Rapport d'audit technique des activités du PAC 3 par l'Inspection Général des Services du MAGEL, Juillet 2019.
11. Rapports de suivi évaluation des résultats du PAC 3 : enquête numéro 1 (Août 2015), enquête numéro 2 (Août 2016), enquête numéro 3 (Décembre 2016), enquête numéro 4 (Juillet 2017), enquête numéro 5 (Avril 2019).
12. World Bank Local Government Census, 2019.