PROJECT COMPLETION REPORT FOR PUBLIC SECTOR OPERATIONS (PCR)

AFRICAN DEVELOPMENT BANK GROUP

I BASIC DATA

A Report data

Report date	Date of report:	October 2019	
	Mission date *(if field mission)*	From: 16 October 2019	To: 23 October 2019

B Responsible Bank staff

Positions	At approval	At completion
Regional Director	K. J. LITSE	M. L. AKIN-OLUGBADE
Country Manager	NA (no office)	N. KANE DIA
Sector Director	A. BEILEH	M. FREGENE
Sector Manager	D. KEITA	M. TARHOUNI
Task Manager	M. TARHOUNI	C. M. ABDALLAHI
Alternate Task Manager	K. LAAJILI	M. A. BABAH
PCR Team Leader		C. M. ABDALLAHI
PCR Team Members		M. A. KANE and X. BOULENGER (consultants)

C Project data

Project name: Water Mobilization Project to Enhance Food Security in the Maradi, Tahoua and Zinder Regions (PMERSA-MTZ)		
Project code: P-NE-AA0-004	**Instrument number(s):** GAFSP Grant No. 2100155007218 ADF Loan No. 2100150025493	
Project type: Investment project	**Sector:** Agriculture	
Country: Republic of Niger	**Environmental categorization (1-3):** 2	
Processing milestones – Bank approved financing only (add/delete rows depending on the number of financing sources)	**Key Events (Bank approved financing only)**	**Disbursement and closing dates (Bank approved financing only)**
Financing source/instrument 1: GAFSP Grant	**Financing source/instrument 1:** GAFSP Grant	**Financing source/instrument 1:** GAFSP Grant
Date approved: 20/9/2011	Cancelled amounts:	Original disbursement deadline: 63 months
Date signed: 29/11/2011	Supplementary financing: 0	Original closing date: 31/12/2016
Date of entry into force: 29/11/2011	Restructuring (*specify date & amount involved*): No	Revised disbursement deadline: 96 months
Date effective for 1st disbursement: 12/7/2012	Extensions (*specify dates*): 1/1/2017 to 30/9/2019	Revised closing date: 30/9/2019
Date of actual 1st disbursement: 1/3/2013		

Financing source/instrument 2: ADF Loan	**Financing source/ instrument 2:** ADF Loan		**Financing source/ instrument 2:** ADF Loan	
Date approved: 20/9/2011	Cancelled amounts:		Original disbursement deadline: 63 months	
Date signed: 29/11/2011	Supplementary financing: 0		Original closing date: 31/12/2016	
Date of entry into force: 22/5/2012	Restructuring (*specify date & amount involved*): No		Revised disbursement deadline: 96 months	
Date effective for 1st disbursement: 12/7/2012	Extensions (specify dates): 1/1/2017 to 30/9/2019		Revised closing date: 30/9/2019	
Date of actual 1st disbursement: 1/8/2012				
Financing source (UA):	**Disbursed amount (amount, UA):**	**Percentage disbursed (%):**	**Undisbursed amount (UA):**	**Percentage undisbursed (%):**
Financing source/instrument 1: GAFSP Grant	20 903 570	86.85%	3 164 170	13.15%
Financing source/instrument 2: ADF Loan	8 185 205	87.64%	1 154 795	12.36%
Government and beneficiaries:	530 000	100%	0	0%
Other (eg. co-financiers): AECID Grant	3 957 000	100%	0	0%
TOTAL	33 575 775	88.6%	4 318 965	11.4%
Financing source (UA):	**Committed amount (UA):**	**Percentage committed (%):**	**Uncommitted amount (UA):**	**Percentage uncommitted (%):**
Financing source/instrument 1: GAFSP Grant	2 150 000	87.9%	2 917 740	12.1%
Financing source/instrument 2: ADF Loan	8 230 000	88.1%	1 110 000	11.9%
Government and beneficiaries:	530 000	100%	0	0%
Other (eg. co-financiers): AECID Grant	3 957 000	100%	0	0%
TOTAL	33 867 000	89.4%	4 027 740	10.6%
Co-financiers and other external partners: Spanish Agency for International Development Cooperation (AECID)				
Executing and implementing agency (ies): General Directorate of Rural Engineering (DGGR) of the Ministry of Agriculture				

D Management review and comments

Report reviewed by	Name	Date reviewed	Comments
Country Manager	N. KANE DIA		
Sector Manager	M. TARHOUNI		
Regional Director (as chair of Country Team)	M. L. AKIN-OLUGBADE		
Sector Director	M. FREGENE		

II Project performance assessment

A Relevance

1. Relevance of project development objective

Rating*	Narrative assessment *(max 250 words)*
4	The objective of the PMERSA-MTZ was to strengthen food security by sustainably increasing agricultural output and productivity through the mobilization of surface and ground water resources. It focused on water resource mobilization and development to increase and consolidate agricultural output as a means of enhancing food security. The project was

	fully consistent with Niger's Accelerated Development and Poverty Reduction Strategy 2008-2012 which considered that the rural sector had to play a key role in the improvement of economic growth. It was therefore in line with Niger's Rural Development Strategy (RDS) through Sub-Programme 4.1 "Irrigation Infrastructure" (increase the contribution of irrigation farming to agricultural GDP) and Sub-Programme 4.2 "Transport Infrastructure" (open up access to agricultural, sylvicultural and pastoral farming areas to boost socio-economic interaction). It was equally related to Priority Programme 11 of the RDS aimed at combating food insecurity by developing irrigation. It also tied in with the objectives of the national irrigation development and surface water collection strategy aimed at consolidating and expanding irrigated areas, while raising the output of irrigation infrastructure. The project was perfectly in keeping with the two strategic pillars of the Country Strategy Paper (CSP) 2010-2012, namely: (i) rural development through water resource mobilization; and (ii) infrastructure development, including social infrastructure. The project was consistent with ADF XII principles and guidelines such as mainstreaming issues that cut across the essential operations of the Bank in an innovative and more rigorous manner (mitigation of climate change, infrastructure, gender, food security and agricultural productivity). It was equally consistent with the Bank's Agricultural Sector Strategy (2008-2012) which focused on infrastructure development and natural resource management. Furthermore, the operations planned under the project were in line with the technical pillars of the Comprehensive Africa Agriculture Development Programme (CAADP), namely: Pillar 1 (Surface area increase and water management), Pillar 2 (Access to markets through rural infrastructure improvement and other trade-related actions), Pillar 3 (Food and nutritional security), and Pillar 4 (Agricultural research and dissemination of technology). The activities to be financed were also consistent with the components of the GAFSP framework document: Component 1 ("Raise agricultural productivity" by extending and rehabilitating irrigated areas, and improving water use in rain-fed farming systems); Component 2 ("Increase farmers' acess to markets" by buidling and rehabilitating farm-to-market roads and "other value-added" by increasing storage capacity); and Component 3, ("Reduce risks and vulnerability" by mitigating risks related to vagaries of climate). The activities implemented also fully addressed the needs expressed by the rural population in this Sahelian zone, who face food insecurity and water shortage. The project's development objective and strategic thrusts were and remained relevant during its implementation and aligned with the country's strategies and the Bank's CSP. The project outcomes effectively contributed to achieving this objective, particularly by increasing agricultural productivity and output and rural jobs.

* *For all ratings in the PCR use the following scale: 4 (Highly satisfactory), 3 (Satisfactory), 2 (Unsatisfactory), 1 (Highly unsatisfactory)*

2. Relevance of project design

Rating*	Narrative assessment *(max 250 words)*
3	The financing of several irrigation development projects since the early 2000s in various regions of Niger (PMET Tahoua, PADAZ Zinder, PADL Diffa and PVDT Dosso Tillabéri) yielded convincing results in water management and mobilization, and transformed the Bank into a privileged partner in this area. The portfolio review conducted by the Bank in September 2010 highlighted the remarkable progress made in agricultural portfolio performance. Thanks to these results, lessons were learned and guidelines adopted. These were reflected in the formulation and design of PMERSA, namely: (i) prioritize projects that are simple in design and focused on priority poverty reduction and food security activities, and for which the communities can be mobilized; (ii) develop synergy between development programmes and encourage experience-sharing between projects; (iii) target zones with a relatively limited surface area to address problems of isolation and access in Niger, monitoring difficulties and costs, and ensure consistency with the ongoing decentralization process; and (iv) include infrastructure development in project implementation to help beneficiaries to take ownership of various project facilities and to start operating them under the right conditions. The experience gained from previous projects led to the adoption of relevant operating procedures and activities that made it possible to exceed initial forecasts. The earnings derived from the USD/UA exchange rate helped to broaden the project scope to cover new activities. Due to complaints by the local population and regional and national authorities, the Bank agreed during the mid-term review (November 2014) to scale up the project objectives and to include additional complementary activities (weirs, mini dams, mini boreholes, feeder roads, motor pumps, market stalls, shops, etc.) so as to better meet the needs expressed by the grassroots. The initial plan to procure 45 Azawak Zebu seed stock was replaced by the plan to procure 3 600 goats, 124 ewes and 626 ram for fattening. The number of concrete market garden wells (CMWs) was reduced from 1 690 to 1 055 units in favour of mini boreholes whose number was increased from 2 000 to 4 070. All these adjustments, which were validated by the Bank, helped to strengthen the operational headroom and the project

	outcomes and impacts on the ground. The design of the project, based on past experience and some adequate adjustments introduced, was appropriate for achieving project outcomes.

3. Lessons learned related to relevance

Key issues *(max 5, add rows as needed)*	Lessons learned	Target audience
1. Past lessons	1. It is necessary to build on past lessons in defining technical solutions as well as operating procedures. This helps to avoid some errors by promoting best practices.	Government Bank
2. Availability of technical studies	2. The availability of engineering studies and procurement files is essential for projects involving major activities and works. This is not always easy to implement in the case of rural development projects which often involve many and dispersed sites selected through a lengthy inclusive approach. The updating of studies is also time consuming. The update of the study on water mobilization in Maradi Region (TSF financing) lasted 16 months. It is therefore necessary to have at least a series of activities already identified and considered to serve as an anchor for projects and their implementation through their capitalization. It also helps to obtain quick results.	Government Executing Agency
3. Realistic qualitative and quantitative indicators	3. When developing the logical framework, it is necessary to carefully and rationally consider the target indicators and values selected. The data indicated should be consistent with project financial resources and backed by sound analyses, without which they may be subject to revision during project implementation. It is also important to pay special attention to the quality of outcome indicators from the outset to ensure that they are relevant and measurable.	Bank Government
4. Involvement of beneficiaries	4. It is necessary to involve beneficiaries in project design and implementation. This is all the more important for agricultural projects which affect the rural environment and also aim to improve living conditions. Beneficiaries should also be involved in project planning, monitoring and evaluation.	Government Executing Agency
5. Project approach	5. The construction of cascade mini dams/weirs on the same valley allows for integrated water resource management, thus helping to control water flow, ensure better control of water erosion and larger areas affected by floodwaters as well as better water infiltration which enhances yields. The adoption of a watershed or sub-watershed approach helps to achieve better outcomes.	Government Bank Executing Agency
6. Mitigation of impacts of climate change	6. The development of small irrigation areas (SIAs) measuring 1.5 hectares to 4 hectares using solar-powered pumping systems is more economical and more sustainable compared with thermal-powered systems (electric submissible pumping systems powered by generators). This alternative solution also contributes to mitigating the impacts of climate change. It should be preferred in future operations in the Sahel.	Government Bank Executing Agency

B Effectiveness

1. Progress towards the project's development objective (project purpose)

Comments
Provide a brief description of the Project (components) and the context in which it was designed and implemented. State the project development objective (usually the project purpose as set out in the RLF) and assess progress. Unanticipated outcomes should also be accounted for, as well as specific reference of gender equality in the project . The consistency of the assumptions that link the different levels of the results chain in the RLF should also be considered. Indicative max length: 400 words.
The sector objective was to contribute to strengthening food security. The specific objective was to sustainably increase agricultural output and productivity through the mobilization of surface and ground water resources. The project target area covered Maradi, Tahoua

and Zinder regions situated in the country's Centre-South. The three project regions account for close to 56% of the country's total population, representing about 8.9 million people, over 218 000 of whom benefited directly from PMERSA-MTZ and 460 000 indirectly. The project which was designed to be implemented over a 5-year period, but finally lasted 7 years and 9 months, had three main components:

(1) Water-mobilization Infrastructure for Farming: this component helped to develop various facilities (irrigation structures including 47 weirs and 11 mini dams, water and soil conservation techniques covering 3 700 hectares, 273 kilometres of feeder roads, 74 village wells, etc.) to boost and secure agricultural production (on an irrigated and flood-recession area of 18 800 hectares), promote the marketing of products and, more generally, to improve the living conditions of the rural population concerned.

(2) Enhancement of Output and Support Actions: this component provided support to producers to enable them to develop and manage the infrastructure put in place in the best and most sustainable manner. It led notably to (i) the implementation of extension, training and advisory support activities for irrigated and rain-fed crops; (ii) the construction of 124 farm buildings (cereal and animal feed banks, input shops, seed centres, etc.); (iii) the promotion of income-generating activities for women and youths; and (iv) the strengthening of the structuring and capacity of producers.

(3) Project Management: this component covered all activities and expenditure related to project management and technical, financial and environmental monitoring. These coordination and monitoring activities were implemented by a small team based in Maradi within the Maradi Regional Directorate of Rural Engineering.

Accross the board, the project paid special attention to women by including them in a proactive manner among the beneficiaries of the activities implemented. Gender issues were mainstreamed into most of the activities implemented under the project. The project promoted the representation of women in the governing bodies (executives) of farmers' organizations. Specifically, the project supported women and youths by developing numerous income-generating activities for them. To facilitate their empowerment, they were provided with 1 500 carts, 105 facility maintenance kits, 15 150 sheep and goats and 598 pieces of equipment (mills, hulling machines, oil presses and cassava processing units).

2. Outcome reporting

A number of the outcome indicators contained in the initial appraisal report (June 2011) were revised at mid-term. The baseline values determined during project appraisal in 2011 as well as end targets are presented in the table below.

Outcome indicators (as per RLF; add more rows as needed)	**Baseline value** (Year) (A)	**Most recent value** (B)	**End target** (C) (expected value at project completion)	**Progress towards target** (% realized) [(B-A)/(C-A)]	**Narrative assessment** (indicative max length: 50 words per outcome)	**Core Sector Indicator** (Yes/No)
Outcome 1: Strengthening food security (rate of coverage)	52% (2011)	NA	62% (2016)	NA	The initial indicator was the rate of coverage of food needs by domestic production. This national indicator was not monitored. The project carried out a survey among 144 households for the 2016, 2017 and 2018 crop years. The survey revealed a significant increase in the rate of coverage in months in millet/sorghum (the coverage for a period of more than 7 months increased from 10% to 37% in three years).	No
Outcome 2: Strengthening productivity (yields)	- Sorghum 0.5 t/ha - Onion 19 t/ha - Tomatoes 9 t/ha - Sweet pepper 16 t/ha	0.84 t/ha 34.1 t/ha 22.9 t/ha 16.7 t/ha	1.5 t/ha 28 t/ha 13.7 t/ha 23.5 t/ha	56% 122% 167% 71%	All crop yields increased significantly thanks to increased availability of water, access to quality inputs and advisory support. Only sorghum and sweet pepper did not attain the expected target values. Project appraisal report (PAR) forecasts for these two crops are positive as the average yields nationwide stand at 0.5	

	- Watermelon 9 t/ha	33.1 t/ha	12.7 t/ha	260%	t/ha for flood-recession sorghum and 16 t/ha for sweet pepper.	
Outcome 3: Increase in production	0	- Total: 168 719 tonnes (2014-2018) with: - Cereals 70.669 t for 5 years, of which +21.156 t in 2018 - Market garden crops : 98 050 t for 5 years, of which 28 648 t in 2017/18	- Total: 155 000 tonnes for 5 years broken down as follows: - Cereals +15 000 t/yr, or 75 000 t in total over 5 years - Market garden crops +16 000 t/yr, or 80 000 t in total over 5 years	- Total: 108.8% - Cereals: total 94.2% final annual rate 141% - Market garden crops: total 122.6% final annual rate 179.1%	- Cereals: the expected average rate (15 000 t/year) was achieved and exceeded in 2017 and 2018. - Market garden crops: the expected average rate (16 000 t/year) was largely exceeded in 2017 (122%) and 2018 (179%). Overall, the additional output was achieved as from the third year of effective project implementation with the increased development of infrastructure and provision of support.	
Outcome 4: Creation of additional permanent jobs	0 (2011)	41 805 M/W jobs	1 200 jobs created for women (2016), later revised upwards to 42 000 M/W jobs (temporary and permanent) 99.5%.	99.5%	Many jobs were created. The project built many water mobilization facilities which led to the creation of permanent jobs (irrigators, drillers, pump repairers, staff recruited to manage community infrastructure, etc.) as well as temporary jobs (execution of works). In addition, IGAs were set up (dressmaking, 240 mills, small stockbreeding kits, 40 burners, milling machines, 200 hulling machines, 60 oil presses and three cassava processing units) and transport equipment was provided (1 500 donkey carts) 16 agricultural product marketing stores were built and youths were trained in the technique of sinking mini irrigation boreholes.	

Rating* (see IPR methodology)	**Narrative assessment**
3	Overall, the expected project outcomes in terms of strengthening food security, increasing output and creating jobs were achieved. Cereal production targets were met (94%) and market garden production targets exceeded (123%). The different surveys conducted during project implementation and at project end showed a very significant improvement in the availability of agricultural and livestock products and an increase in the population's income owing to the improvement of yields, the increase in sold agricultural output and the revitalization of production areas.

3. Output reporting

Many output indicators derived from the initial appraisal report (June 2011) were revised at mid-term. The figures presented in the table below represent targets at project completion set during the mid-term evaluation, while the original target values (2011) are shown in brackets.

Output indicators (as specified in the RLF; add more rows as needed)	**Most recent value (A)**	**End target(B)** (expected value at project completion)	**Progress towards target** (% realized) (A/B)	**Narrative assessment** (indicative max length: 50 words per output)	**Core Sector Indicator** (Yes/No)
Component A: Water-mobilization Infrastructure for Farming					
Number of weirs rehabilitated	47	51 (45)	92.2 (104.4)	Efficient structures put in place for flood-recession crops. Some consolidation works should be carried out periodically.	
Number of small dams built or rehabilitated	11	11 (9)	100 (122.2)	Availability of water for many uses. The impacts of recharging the water table in the water impoundment area are positive.	
Number of market garden wells built	1 040	1 055 (1 690)	98.6 (61.5)	The number of concrete market garden wells was reduced at mid-term in favour of mini boreholes which are more economical and long-lasting.	
Mini market garden boreholes	4 036	4 070 (2 000)	98.6 (201.8)	Need to increase water availability. Self-consumption of market garden produce observed.	
Equipment for market garden wells (Mutual benefit production groups - GMPs)	5 076	5 125 (2 500)	99.0 (203.4)	Need to support producers in keeping their operating accounts (costs and depreciation of GMPs)	
Number of additional ponds constructed	9	11 (6)	81.8 (150)	Five additional ponds constructed compared with the initial forecasts.	
Volume of water mobilized (million cubic metres)	69.87	70 (50)	99.8 (139.7)	Additional 19.87 million cubic metres of water mobilized compared with initial forecasts	
Hectarage of irrigation areas developed (hectares)	478	478 (286)	100 (167.1)	Need for irrigation areas to settle rural populations. Need to support the managers of facilities at project start-up. Some 140 hectares of land connected to the NIGELEC electricity network and 36 hectares powered by solar energy.	
Area of farmland developed (hectares)	18 807	20 000 (17 860)	94.0 (105.3)	Area cultivated and initial forecasts exceeded	
Village wells built or rehabilitated	74	74 (74)	100 (100)	The water needs of the 22 000 inhabitants served as well as 41 385 tropical livestock units (TLUs) are met. Need to take into account the static level in the dry season during the execution of construction works.	
Length of feeder roads built (km)	273.4	265 (178)	103 (153.6)	Opening up of production areas. Reduction in transport costs. Signage to be reinforced on certain sections.	
Kantché dyke constructed	1	1 (1)	100 (100)		
Length of banks protected (kilometres)	11.12	11.245 (7.5)	98.9 (148.3)	Rejected cob technique retained	
Gouchi ravine treated	1	1 (1)	100 (100)		

Live hedges planted (kilometres)	600	600 (49.8)	100 (1 205)	Support by NGOs during implementation	
Wind breaks set up (km)	110.4	120 (100.3)	92 (110.1)	Wind breaks installed near farm buildings (cereal banks, farm input shops, animal feed banks, etc.)	
Area regenerated naturally (ha)	1 600	1 600 (1 600)	100 (100)	Support by NGOs during implementation	
Area of degraded land reclaimed (ha)	2 100	2 100 (320)	100 (656.2)	Community works executed through the labour-intensive (LI) approach: 1 780 hectares (185 713 man-days mobilized) through the "cash for work" process financed by an ADF Loan and 320 hectares through the "cash for asset" process for 1 403 vulnerable households, in partnership with the World Food Programme (WFP). The population greatly appreciated this activity which had a positive impact on agricultural production.	
Sub-total Component A			**98.9 (244.6)**		
Component B: Enhancement of Output and Support Actions					
Number of producers supported	18 506	20 000 (5 800)	92.5 (319.1)		
Number of animal feed banks, cereal banks and input shops built	124	124 (81)	100 (153.1)	There were management dysfunctions that jeopardized sustainability. Stock renewal is not effective in all places.	
Number of processing units installed	598	580 (580)	103 (103)	IGAs for women	
Number of marketing stores constructed	16	16 (0)	100	They facilitated the sale of market garden products.	
Number of carts introduced	1500	1 500 (1 500)	100 (100)	Carts are sometimes provided with foals and are, therefore, not operational.	
Number of ewes introduced	120	124 (0)	100	Introduction of the "Habanaye" system which consists in handing over the first 3 foals to another vulnerable woman.	
Number of sheep introduced	626	626 (0)	100	In replacement of Zebu Azaak. Animals intended for fattening.	
Number of red goats introduced	14 400	14 400 (10 800)	100 (133.3)	Introduction of the "Habanaye" system.	
Number of phytosanitary control officers installed	424	424 (305)	100 (139)	Local service providers whose support is very much appreciated by producers	
Number of para-veterinary assistants trained	175	175 (175)	100 (100)	Networking amongst para-veterinary assistants. The capacity of 1 065 agropastoralists, 91 of them women, built.	

				More than 2.8 million head of cattle vaccinated.	
Number of farmer field schools set up	35	101 (92)	91.1 (262.9)	The activities implemented by the 3 regional directorates of agriculture cover irrigated and rain-fed crops.	
Number of women in water management and land distribution committees	4 480	6 000 (580)	74.7 (772.4)	Establishment and training of 779 school management committees (COGES).	
Number of facility maintenance advisory support committees established	779	779 (130)	100 (599)	Establishment and training of committees by 3 NGO service providers. Increase due to the rise in the number of facilities built and water and soil conservation/soil preservation and restoration (WSC/SPR) sites created.	
Number of rural land management committees installed	75	75 (54)	100 (138.9)	21 additional rural land management committees (COFOBs) installed and 128 land ownership certificates issued.	
Number of seed centres rehabilitated	3	3 (3)	100 (100)	Involvement of the Niger National Institute of Agricultural Research (INRAN) and production of millet, sorghum and groundnut seeds.	
Sub-total Component B			**97.6 (243)**		

Rating* (see IPR methodology)	**Narrative assessment**
4	In spite of start-up delays (effective start-up of works as from 2014), PMERSA achieved, at its closure, more than 98% of the objectives that were scaled up at the end of the mid-term review. The implementation rate was well above 240% with respect to the initial indicators set out in the appraisal report. The project performance is therefore very satisfactory. The capacity of 779 school management committees (COGES) was built to ensure the routine maintenance of the structures and infrastructure built. However, special attention should always be paid to the sustainability of the infrastructure built and the implementation of the needed support measures.

4. Development Objective (DO) rating

DO rating (derived from updated IPR)*	**Narrative assessment** (indicative max length: 250 words
3	The sector objective was to contribute to enhancing food security. The specific objective was to sustainably increase agricultural output and productivity through the mobilization of surface and ground water resources. All the activities implemented contributed to achieving these objectives. Food security was improved thanks particularly to increased production due to better water control. Most PMERSA outcomes have been evaluated. The testimonies collected at the end of the project clearly indicate a significant improvement in living conditions, notably reflected in increased availability of agricultural and livestock products, increased supply and sale of products, easing the work of women and producers, better organization of women, reduction of rural-urban migration, and an increase in the income of target households (392%). The project achieved its development objectives satisfactorily.

5. Beneficiaries (add rows as needed)

Actual (A)	**Planned** (B)	**Progress towards target** (% realized) (A/B)	**% of women**	**Category** (eg. farmers, students)

218 000 (direct) 475 000 (indirect)	213 000 (direct) 460 000 (indirect)	102.3% 103.3%	51%	Rural population

6. Unanticipated or additional outcomes (add rows as needed)

Description	Type (eg. gender, climate change, social, other)	Positive or negative	Impact on project (High, Medium, Low)
- Development of agricultural entrepreneurship under the impetus of the project with the support of the local actors (drilling officers, motor pump repairers, peri-urban poultry farmers, etc.).	Entrepreneurship	Positive	Medium
- Major revival of economic activities along the Rididi-Adouna-Tamaské road section.	Economic	Positive	High
- Development of fishing by stocking mini-dams.	Diversification	Positive	Low
- Improvement of social protection for vulnerable groups (cash for asset with the WFP and the Habanaye system).	Social	Positive	Medium
- Suspension of disbursements resulting in the extension of the project implementation period.	Economic	Negative	Medium

7. Lessons learned related to effectiveness (add rows as needed)

Key issues (max 5, add rows as needed)	Lessons learned	Target audience
1. Technical reliability	1. Use of tested techniques adapted to local conditions. Construction of simple facilities at low cost. The conduct of preliminary engineering studies is essential. Importance of ensuring the quality of execution through works control. Need for follow-up after commissioning.	Bank Government Executing Agency
2. Planning and monitoring of activities	2. Importance of adopting a monitoring and evaluation system and ensuring compliance with the procurement plan (PP). Need to involve all stakeholders. Close monitoring on the ground is essential.	Executing Agency
3. Local demands	3. Listening and dialogue skills are necessary. There is a need to ensure flexibility to better address the needs expressed. Availability of budget headings to respond to certain initiatives emerging during project implementation. Possibility of revising the LBS, especially during mid-term review.	Executing Agency Bank
4. Infrastructure management	4. Support for the management of new infrastructure is essential. The involvement of technical services and beneficiaries at all stages is necessary. Open an account to ensure infrastructure maintenance.	Government Producers' Associations
5. Strengthening the resilience of vulnerable groups	6. Recourse to low-cost actions with a high impact on vulnerable groups, sustainable land management and natural resource restoration (Labour-intensive activities through the "cash for work" and "cash for asset" models and the provision of small stockbreeding kits).	Government Bank

C Efficiency

1. Timeliness

Planned project duration – years (A) (as per PAR)	Actual implementation time – years (B) (from effectiveness for 1st disb.)	Ratio of planned and actual implementation time (A/B)	Rating *
5 years	7 years and 9 months	0.645	2
Narrative assessment (indicative max length: 250 words)			

The project experienced start-up delays due especially to the lengthy procurement process and the time taken to prepare bidding documents. Specifically, the conduct of final design studies on irrigation structures suffered major delays. Some works were delayed due to the weak organizational and financial capacity of contractors. Irrigation structures construction sites were also subject to scheduling constraints with the rainy season obliging work to be suspended for several months. The project also experienced a major setback when disbursements were suspended for 20 months due to internal financial management problems.

2. Resource use efficiency

Median % physical implementation of RLF outputs financed by all financiers (A) (see II.B.3)	Commitment rate (%) (B) (See table 1.C – Total commitment rate of all financiers)	Ratio of the median percentage physical implementation and commitment rate (A/B)	Rating *
93%	89.4%	1.04	4

Narrative assessment(indicative max length: 250 words)

Overall, the project achieved all the objectives revised at mid-term within the limit of the resources available. The savings realized in terms of resources were used to implement additional activities (more than 140% of activities planned at appraisal) that were relevant during implementation. Resource use efficiency was very satisfactory.

3. Cost benefit analysis

Economic Rate of Return (at appraisal)	Updated Economic Rate of Return (at completion)	Rating *
15%	22%	4

Narrative assessment(indicative max length: 250 words)

The economic analysis was carried out using the reference price method and by comparing the "without project" and the "with project" situations. Economic performance was assessed on the basis of a 20-year investment life cycle. The project costs comprise the investments made, maintenance and servicing costs and production costs. The analysis was conducted based on six operating models. The economic rate of return (ERR) obtained at project end is estimated at 22%. The additional (cumulative) production of cereals is estimated at 70 000 tonnes and that of market garden products at 98 000 tonnes. The average farm income increased significantly from CFAF 118 000 to CFAF 463 000, that is 3.92 times. Nearly 218 000 people benefitted directly from the project.

4. Implementation Progress (IP)

IP Rating (derived from updated IPR) *	Narrative comments (commenting specifically on those IP items that were rated Unsatisfactory or Highly Unsatisfactory, as per last IPR). (indicative max length: 500 words)
3	Project implementation progress is considered satisfactory. The project was implemented in accordance with the rules of procedures of the Bank and the State of Niger. The implementation progress was assessed in each of the following 3 main categories: **(i) Compliance with commitments** - Project conditions: The project was effective within a reasonable time frame (2 months for the GAFSP Grant and 8 months for the ADF Loan). The same applied to the fulfilment of conditions precedent to first disbursement (10 months for both sources of financing). - Environmental safeguards: The project was subject to an environmental and social impact assessment (ESIA) and an environmental and social management plan (ESMP) most of whose planned measures were implemented at an average rate of 87%. The measures for mitigating negative impacts during the construction phase were included in contractors' contracts. In addition, the project carried out environmental protection works (land reclamation, live hedges, windbreaks and natural regeneration), in conjunction with the three NGOs recruited for this purpose. The environmental monitoring carried out by the Environmental and Impact Assessment Bureau (BEEEI) suffered major delays and shortcomings which were highlighted during the mid-term review. - Auditing: All audit reports (2012 to 2018) were validated by the Bank. The external audits of project accounts were conducted and audit reports submitted on time. On the whole, the various audit recommendations were implemented by the project, sometimes with some delays. The contract for the closing audit of the 2019 financial year was signed in July 2019 and the report was expected to be submitted to the Bank by end-December 2019 at the latest.

(ii) Project systems and procedures

- Procurement: Goods, works and services were procured in accordance with Bank rules of procedure. All procurements, including works worth UA 50 000 or less and consultancy services worth UA 20 000 or less and subject to an ex-post review, were reviewed ex ante by the Bank. The procurement plan (PP) was updated in October 2018 and a final version prepared in April 2019. The procurement process experienced delays related to (i) delays in approval by regional and central authorities, especially during project start-up; (ii) contract signature time frames of 40 days on average; and (iii) lengthy contract registration and exemption procedures of up to 45 days.
- Financial management: A manual of administrative, accounting and financial procedures was prepared and a multi-station accounting system installed. The financial management of the project upon its closure shows a significant improvement following the serious dysfunctions noted during the investigations carried out in 2013 and 2014, which led to the suspension of disbursements for 20 months. It was discovered that the Chief Accounting Officer had embezzled about CFAF 209 million (including CFAF 104 103 186 from ADF resources). The Government has already reimbursed the amount of ADF resources embezzled. An outstanding amount of CFAF 46 951.99 of WFP and AECID resources is still to be reimbursed. The matter is still pending before the competent courts. It should be noted that there are slight payment discrepancies concerning some service providers with GAFSP Grant resources allocated in USD. The improvements noted are the result of the introduction of an efficient internal control system by the project and close monitoring by the Bank.
- Monitoring and evaluation: The monitoring and evaluation system was established since 2014 and a baseline scenario developed. Project outputs and outcomes were monitored in 2015 and 2016. Reports on the periodic monitoring of project outcomes are submitted on time and are of acceptable quality. Many impact-related surveys have been conducted, giving indications on impacts and outcomes.

(iii) Project implementation and financing

- Disbursement: The overall disbursement rate is 88.6%, which is more than 10 percentage points less than initial projections, but which, nonetheless, helped to implement almost all planned activities. The specific issue of payment in USD should be underscored. Time and again, the amounts requested in CFAF are reduced because of the exchange rate. In some cases, the problem is aggravated by the USD difficulties faced by correspondent banks.
- Budget commitment:The commitment rate is 89.4%, reflecting some residual activities pending payment.
- Counterpart financing: The counterpart contribution of the State and beneficiaries (UA 530 000) was fully mobilized.
- Co-financing: The first and second tranches of AECID co-financing totalling EUR 4.5 million, which focused on rural credit, were fully disbursed in 2018. Despite their positive appraisal of the project, the Spanish Agency for International Development Cooperation finally limited its participation to an amount equivalent to CFAF 2 951 806 500 (UA 3 957 000), against CFAF 7 129 200 000 (UA 9 558 000) projected in the project appraisal report which it considered as an intention and not a firm commitment to provide financing. The reduction in the budget amount is a result of the refocusing of the activities of the AECID which informed the project that the Spanish Agency for International Development Cooperation would continue to support the project through its direct financing of the GAFSP. The WFP's contribution stood at CFAF 182 012 584 for the execution of community works for the reclamation of degraded land (labour-intensive activities based on the "cash for work" and "cash for asset" models).

5. Lessons learned related to efficiency

Key issues (max 5, add rows as needed)	**Lessons learned**	**Target audience**
1. Executing agency	1. The financial problems identified at the end of the 2013 audit and relating to embezzlement by the Accounting Officer adversely affected project implementation. Adequate measures should be taken to appoint/recruit experienced, honest and qualified personnel and to establish an efficient internal control system.	Government
2. Duration of the procurement process	2. Procurement delays are the main causes of project implementation delays. Besides ensuring the availability of bidding documents, it is necessary to reduce the time taken to complete procurement procedures at the national level	Government Bank

	(evaluation of bids, signature and registration of contracts, etc.) and at the level of the Bank (issuance of 'no objection' opinions). Delays can be reduced through better anticipation, greater decentralization of processes and adequate targeting of levels of responsibility and delegation of authority.	
3. Exchange rate variation	3. Financing currency exchange rate fluctuations can create positive impacts or impose constraints during project implementation by causing a reduction in resources and/or payments. During project appraisal, the Bank should pay special attention to this issue, which is not specific to PMERSA, and budget headings should be provided to fill the gaps identified.	Government Bank and TFPs
4. Monitoring and evaluation systems	4. Monitoring and evaluation systems should be rapidly operationalized and should help to monitor all activities and provide timely warnings of operational weaknesses.	Executing Agency
5. Supervision of activities	5. The Bank and the Government should ensure the regular monitoring and periodic supervision of activities in order to rapidly address the difficulties encountered. Adjustments and strong recommendations should also be made, where necessary, and implemented at key stages (annual review by the Steering Committee, supervision, mid-term review and external monitoring missions).	Bank Government
6. Coordination of project activities	6. The decentralization of project coordination units at the regional level helps to optimize functioning, ensure closer proximity to beneficiaries and closer supervision of activities. It is necessary to encourage the installation of rural development operations in regions and impact areas located very far from the capital.	Bank Government

D Sustainability

1. Financial sustainability

Rating*	Narrative assessment (indicative max length: 250 words)
3	Financial sustainability at the end of PMERSA-MTZ hinges notably on income derived from farms and the capacity to recover costs, particularly those related to the maintenance of the infrastructure and facilities built. Output and productivity levels were increased through water mobilization. The average income of farmers is CFAF 463 000. The irrigation structures built (especially mini dams and weirs) require regular follow-up and may, depending on the season and gravity of floods, require the execution of reinforcement works. The management committees set up have been sensitized on these aspects. Some market gardeners experience constraints pertaining to the renewal of mutual benefit production groups. Continued sensitization by technical services is therefore necessary. Many small-scale facilities are easier to manage and do not require substantial financial resources. Regarding sustainability, the surveys conducted show that about 80% of the communities think that the actions implemented are viable thanks to the management committees set up and the ownership induced. However, it has been noted that the capacity of producers, and beneficiaries in general, to organize themselves to benefit from collective facilities (water points, input banks, mills, etc.) is still weak. The involvement of women in the management of COGES, cereal banks, animal feed banks and farm input shops has contributed to improving the local governance of these facilities. To revitalize the entities set up, the relevant technical services and communal authorities should conduct regular monitoring and continue capacity-building activities.

2. Institutional sustainability and strengthening of capacities

Rating*	Narrative assessment (indicative max length: 250 words)
3	The "delegation of functions" strategy adopted by the project is fully in line with the Government's policy of refocusing public services on their sovereign functions of ensuring quality control and promoting the private and associative sectors. In this respect, Government technical services, through various protocols and agreements, were closely involved in the implementation of the project and also benefited from capacity-building. The project supported, at various levels, local and national capacity-building actions, grassroots communities and producers. Capacity-building actions focused particularly

	on: (i) advisory support to grassroots community organizations; (ii) the development of the facilities built; (iii) the supervision and provision of advisory support to producers; (iv) the provision of specific training for officials of producers' organizations, women and youths; and (v) the organization of seminars and study tours for officials of producers' organizations and local employees. The review of the capacity-building programme shows that the actions carried out by the project are sustained. It should be noted that local service providers (phytosanitary officers, stockbreeding assistants, drillers and supervisors working closely with the labour-intensive WSC/SPR works, women trainers in oil extraction techniques, soap making, moringa processing, etc.) play a key role in the provision of support to producers. The project properly built the capacity of these local service providers. The contribution of local service providers is highly appreciated by the populations. The project has contributed significantly to building institutional capacity to guarantee project-related benefits over time. The surveys carried out by the project showed that the beneficiaries have assumed ownership of the tools provided, which guarantees the sustainability of the institutions put in place.

3. Ownership and sustainability of partnerships

Rating*	Narrative assessment (indicative max length: 250 words)
2	The project strove to develop a participatory approach involving primarily beneficiaries and local actors. Building the technical capacity of producers and professionalizing their organizations through a "value chain" approach contribute to ensuring the sustainability of the outcomes of PMERSA-MTZ. The political, administrative and traditional authorities of the three regions concerned were closely involved in PMERSA's implementation and contributed to informing and sensitizing beneficiaries. The partnership with INRAN yielded positive results (training of producers for the dissemination of best practices, adapted irrigation techniques and systems and dissemination of technical data sheets, etc.). The associative and private sectors were also involved in many activities. Many national NGOs were involved in the implementation of activities. All these measures should contribute to promoting ownership by beneficiaries and by national services, thus ensuring the preservation and proper management of project outputs. This will require constant attention by the Government and the relevant regional technical services, which constitutes a future challenge to ensure the sustainability of outcomes without specific external resources earmarked for that purpose. There is no guarantee that these partnerships will continue beyond the end of the project.

4. Environmental and social sustainability

Rating*	Narrative assessment (indicative max length: 250 words)
3	The project was classified under Environmental Category 2. The potential direct and indirect impacts that could be generated by the facilities envisaged under the project were considered controllable. Measures to mitigate the negative impacts of construction works were included in contractors' contracts. An ESMP was developed, but its implementation was hampered particularly by the suspension of disbursements for 20 months and inadequate environmental monitoring entrusted to the BEEEI through an agreement, in accordance with the regulations tasking it with the conduct of environmental monitoring. However, 87% of ESMP measures and actions were implemented. The project implemented many environmental protection and restoration actions. These include the construction of 489 kilometres of live hedges, 110 kilometres of windbreaks, the natural regeneration of 1 600 hectares of land and the reclamation of 2 100 hectares of degraded land. On the whole, it can be concluded that the project is environmentally and socially sustainable, despite monitoring gaps, thanks to the types of actions implemented and the inclusive approach adopted.

5. Lessons learned related to sustainability

Key issues (max 5, add rows as needed)	Lessons learned	Target audience
1. Coverage of the operating costs of the infrastructure built	1. Prioritize the adoption of simple and proven techniques. Promote the material or financial contribution of beneficiaries prior to the implementation of any operation to encourage ownership and foster the setting up of maintenance funds. Envisage project withdrawal mechanisms and provide for adequate budget allocations to the technical services in charge of the infrastructure and areas concerned. Promote the use of renewable energy, particularly solar energy, in future operations to reduce maintenance costs.	Government Executing Agency

2. Participatory management of collective production and processing facilities	2. Envisage methods for managing the collective facilities that have been built, involve the private sector and civil society in the management of production and processing facilities, and continue to support COGES and local service providers through administrative service delivery.	Government Executing Agency Producers Private Sector
3. Implementation and monitoring of environmental conservation measures	3. Ensure the implementation and monitoring of the environmental and social impact mitigation measures contained in the Environmental Action Plan. This should be an integral part of project management activities.	Executing Agency

II Performance of stakeholders

A Relevance

1. Bank performance

Rating *	Narrative assessment by the Borrower on the Bank's performance, as well as any other aspects of the project (both quantitative and qualitative). See guidance note on issues to cover.(indicative max length: 250 words)
3	The Borrower assessed and considered the Bank's performance to be satisfactory based on the following criteria: *(i) Prevention and resolution of project-related problems:* During the conduct of supervision and portfolio review missions, the Bank discussed the identified problems with Government authorities and project officials and made recommendations to remove the constraints noted. Specifically, it proposed the required readjustments during the mid-term review and paid special attention to the results of the 2013 audit. *(ii) Lessons learned from other projects:* The project design largely reflected the lessons learned from previous ADF-financed projects in the sector (PMET, PADAZ, PADL Diffa, etc.) from the technical and operational standpoints. *(iii) Stakeholder participation:* The participatory approach was adopted for project implementation at all stages (diagnosis and planning) and was focused particularly on the empowerment and participation of village communities in various project actions and activities. *(iv) Fiduciary and safeguard arrangements:* The loan agreement clearly indicated the fiduciary arrangements to be complied with by introducing efficient management tools such as the use of accounting management software and the preparation of an administrative, financial and accounting management procedure manual. The Bank ensured the introduction and functionality of the tools. It paid special attention to the implementation of the recommendations made by auditors. Regarding environmental conservation, the Bank recommended that the operator selected should comply with environmental monitoring clauses. The supervision missions fielded by the Bank monitored the implementation of this component. *(v) Project monitoring and evaluation system:* This system, which was progressively operationalized, helped to ensure the proper monitoring of physical and financial outcomes, though it is difficult to measure outcomes. *(vi) Bank supervision:* The Bank regularly fielded supervision missions (16 in all, that is an average of 2 missions per year) with a more or less large team. The Bank's supervision always led to the formulation of constructive recommendations in order to improve the effectiveness of project actions. *(vii) Response to requests by the project:* The Bank responded to various requests made by the project within the required time frame, though there were some delays in the processing of requests for disbursement.

Comments to be inserted by the Bank on its own performance (both quantitative and qualitative). See guidance note on issues to cover. (indicative max length: 250 words)

The Bank participated in project design, drawing on its previous experiences in the country and the sub-region. It made sure that local authorities and beneficiaries were involved in the definition of activities and infrastructure. The Bank supported the Government as a supervisory entity in preparing the request to the GASFP. The Bank monitored the project regularly through periodic supervision missions. The mid-term review helped, in a concerted and realistic manner, to fine-tune certain indicators and add supplementary activities. The Bank also promoted the development of agricultural entrepreneurship activities to better mainstream the impetus provided by the project. It monitored fiduciary arrangements within the framework of financial audits and paid special attention to the

issue of misappropriation of funds. The Bank effectively played its role as a supervisory entity in mobilizing the resources and implementing the strategic orientations of the GAFSP. It effectively discharged its duty in managing GAFSP resources by regularly reporting on the use of the resources provided. The WFP was also mobilized and helped to effectively implement land reclamation actions which contributed to strengthening the resilience of vulnerable groups. The Bank's performance is considered satisfactory.

Key issues (related to Bank performance, max 5, add rows as needed)	**Lessons learned**
1. Bank supervision	1. Ensure periodic supervision by multidisciplinary teams and rigorous monitoring of the implementation of recommendations. The recent presence of the Task Manager (TM) in Niamey helped to strengthen project monitoring.
2. Change of Task Managers	2. Reduce to the barest minimum the change of task managers and provide for a genuine handover between them to ensure smooth continuity.
3. Processing of files	3. Reduce the time taken by the Bank to process the files submitted to it for consideration.
4. Environmental conservation	4. The Bank should ensure the rigorous monitoring of this activity, particularly during supervision missions.

2. Borrower performance

Rating*	**Narrative assessment on the Borrower performance to be inserted by the Bank (both quantitative and qualitative, depending on available information). See guidance note.**(indicative max length: 250 words)
3	The Borrower's performance was deemed satisfactory based on the following criteria: *(i) Guarantee for quality project preparation and implementation:* The Borrower carried out preliminary studies in the Maradi Region for project preparation. However, there were delays in updating these studies. The Borrower set up a team of experts to manage the project and instituted regular external monitoring. *(ii) Compliance with commitments, agreements and safeguards:* The project was launched and conditions fulfilled within a reasonable time frame. Corrective measures were taken for environmental monitoring entrusted to the BEEEI. Following the embezzlements detected during the 2013 audit, the Government reimbursed the amount misappropriated from ADF resources (CFAF 104 103 186) and, as a result, the suspension of disbursement was lifted. *(iii) Provision of counterpart contributions:* The State has allocated counterpart resources to the project since its launching, albeit with some delays, but completing the full amount in due course. *(iv) Implementation of the monitoring and evaluation system:* The project adopted a monitoring and evaluation system which was progressively operationalized. The Ministry of Planning and the supervisory authority carried out external monitoring. *(v) Responsiveness to recommendations made by supervision missions:* The Borrower closely monitored the implementation of recommendations made by supervision missions. Their implementation status was systematically recorded in various reports and aide-memoires. *(vi) Participation of project stakeholders:* A broad-based partnership was developed under the project, enabling various actors (local authorities, Government services, producers, civil society, NGOs, etc.) to work in synergy. *(vii) Coordination of donor assistance:* The Borrower succeeded in persuading the Spanish Agency for International Development Cooperation to cover some of the credit-related aspects, complementing Bank and GAFSP involvement. It also succeeded in persuading the WFP to support labour-intensive (cash for work) works as part of its environmental protection activities.

Key issues (related to Borrower performance, max 5, add rows as needed)	**Lessons learned**
1. Competence and commitment of the staff of executing agencies	1. Smooth project implementation depends largely on the competence, experience, integrity and commitment of the staff of executing agencies. As such, the appointment or recruitment of staff should be carried out in a rigorous and objective manner.
2. Effective mobilization of counterpart contributions	2. The effective mobilization of counterpart contributions greatly facilitates project implementation and demonstrates the

	Borrower's commitment to achieving project objectives. The contribution of beneficiaries, particularly material contributions, should also be closely monitored.
3. External monitoring	3. Efficient external monitoring is important in project management. The external monitoring mechanism, particularly the technical supervisory ministry and the Department of Investment Monitoring of the Ministry of Planning, should be strengthened with human resources. Specific resources should be provided for this purpose under future operations.

3. Performance of other stakeholders

Rating *	Narrative assessment on the performance of other stakeholders, including co-financiers, contractors and service providers. See guidance note on issues to cover (indicative max length: 250 words)
2	Various services participated in project implementation particularly through agreements and protocols concluded with public entities, contracts with consultants for the conduct of studies and supervision of works, NGOs for social engineering and contractors for the execution of works: (i) Performance of co-financiers: AECID co-financing, which focused on rural credit, was fully disbursed, although the amounts indicated in the project appraisal report were not completely disbursed. This situation did not affect the achievement of project objectives as AfDB resources were supplemented by other resources derived from the favourable exchange rate. The WFP's contribution was earmarked for the implementation of community-based works (labour-intensive activities based on the "cash for work" and "cash for asset" models) for the restoration of degraded land. The performance of the two co-financiers was considered satisfactory by the project. (ii) Performance of Government partners: in keeping with the project design and the proposed institutional framework, the project entrusted the implementation of some specific activities to government services (the Directorate of Agriculture, the Directorate of Stockbreeding, the Directorate of Rural Engineering, INRAN, BEEEI, ONAHA, etc.). The partnership between the project and these bodies was established on a contractual basis. It helped to promote ownership at the regional level. Some shortcomings in project implementation, particularly regarding the BEEEI in charge of environmental monitoring, were noted. The activities carried out by the Directorate of Rural Engineering helped to closely monitor the execution of works. (iii) Performance of consultants: Consultants for implementation of PMERSA-MTZ were recruited in accordance with AfDB rules of procedure for the procurement of services. The project suffered major delays (18 months) in the delivery of APDs and BDs for irrigation works. (iv) Performance of NGOs: The NGOs recruited to carry out social engineering works played an important role during the second phase of project implementation by providing outreach support and implementing structuring activities. Coordination and communication between technical services was poor. (v) Performance of contractors: Some contractors honoured their commitments correctly and the work was carried out in accordance with established standards. Overall, there were major delays due to the poor organization of contracting firms, coupled with their low technical, material and financial capacity.

Key issues (related to performance of other stakeholders, max 5, add rows as needed)	Lessons learned(max 5)	Target audience (for lessons learned)
1. Weak capacity of some contractors	1. Ensure appropriate allotments for irrigation works in order not to undermine the capacity of the contractors interested in this type of fragmented contracts. Ensure that control firms closely monitor construction works.	Executing Agency Government Bank Private sector
2. Inadequate capacity and organization of some partner technical services	2. The use of some public facilities (advisory support and delegated contracting authority) should be encouraged to promote ownership and sustainability of the activities implemented. However, this necessitates the conduct of periodic evaluation to assess their performance and ensure compliance with the agreements concluded.	Executing Agency Government Bank

IV Summary of key lessons learned and recommendations

1. Key lessons learned

Key issues (max 5, add rows as needed)	**Key lessons learned**	**Target audience**
1. Consideration of lessons from previous projects	1. The reflection of lessons learned from similar past projects in project design is a guarantee for success. This aspect concerns the technical solutions adopted and the proposed operating procedures. The Bank and Governments should build on and disseminate best experiences.	Bank Partners Government
2. Start-up of project activities	2. Delays in rural sector project start-up is a recurrent problem. Experience has shown that some factors help to limit this risk, namely: simplifying and ensuring the realism of conditions precedent to first disbursement, using existing experienced executing agencies, and relying on available studies and key bidding documents.	Bank Government
3. Coordination of project activities	3. The decentralization of project coordination units to the regional level helps to optimize operations and ensure closer proximity to beneficiaries and close supervision of activities. It is necessary to encourage the establishment of the coordination units of rural development operations in impact regions and areas.	Bank Government
4. Project approach	4. The construction of cascade mini dams/weirs on the same valley allows for integrated water resource management, helping to control water run-off, ensure better control of water erosion and larger areas affected by floodwaters as well as better water infiltration which enhances yields. The adoption of a watershed or sub-watershed approach helps to achieve better outcomes and ensure optimum water resource management.	Government Executing Agency Bank
5. Promotion of renewable energy	5. The development of small irrigation areas (SIAs) measuring 1.5 hectares to 4 hectares through solar-powered pumping systems is, in the long run, more economical and more sustainable than thermal-powered systems. This alternative solution also contributes to mitigating the impacts of climate change. It should be preferred in future operations in the Sahel.	Bank Government
6. Inadequate capacity of contractors in charge of irrigation works	6. The weak capacity of local and national contractors in charge of works, coupled with the low attractiveness of irrigation sector contracts (dispersion of sites and modest works) constitutes a serious constraint on the implementation of agricultural infrastructure projects. It is necessary to obtain appropriate allotments, carefully select contractors, closely monitor construction sites and impose penalties, where necessary. It would also be advisable for the Government and development partners to consider ways of promoting the private sector, particularly by building the capacity of contractors and facilitating access to equipment credit.	Government Private sector
7. Sustainability of the facilities built and actions implemented	7. Measures to support the structuring of FOs, the involvement of beneficiaries and the setting up of management committees are essential in ensuring the sustainability of irrigation facilities, but they are often not adequate. It is also necessary for all decentralized government technical services and local authorities that are fully involved in project implementation to continue to monitor actions on the ground while building on the outcomes achieved.	Government Executing Agency Producers' associations
8. Strengthening the resilience of vulnerable groups	8. It is necessary to include in rural sector operations affordable actions with a high impact on vulnerable groups, sustainable land management and natural resource restoration (HIMO based on the "cash for work" and "cash for asset" models and the provision of small stockbreeding kits).	Government Bank

2. Key recommendations (with particular emphasis on ensuring sustainability of project benefits)

Key issue (max 10, add rows as needed)	**Key recommendation**	**Responsible**	Deadline
1. Sustainable management of irrigation facilities by farmers' organizations	Selection of simple techniques that can be used at the local level - Need to involve beneficiaries at all stages for effective ownership. - Training and capacity building actions for the beneficiaries of facilities (advisory support, management, maintenance, etc.). - Setting up of funds managed by FOs during project implementation. - Retrocession of facilities to FOs and securement of land on project sites. - Involvement of technical services to ensure the periodic monitoring of facilities and close supervision.	Government Technical services Executing Agency Local Authorities	Permanent
2. Technical supervision after project withdrawal	- Budgeting for adequate allocations to decentralized technical services. - Reflection on advisory support services entrusted to the private sector and managed by FOs. - Operationalization of farmers' houses.	Government Private sector	Yearly
3. Sustainability of entrepreneurial actions	- Rigorous initial selection of contractors backed by the project. - Support for the design of business plans and market research. - Equipment, training and support during implementation. - Integration of activity in a viable value chain process, together with various actors.	Executing Agency Private sector	During and after the project
4. Project design	- Adoption of a basin and sub-basin approach for optimum water resource management. - Promotion of the use of solar-powered pump systems for small-scale irrigation to reduce operating costs. - Mainstreaming of aspects related to the vulnerability of target households.	Bank Government	Permanent
5. Consolidation of project outcomes	- Continued support provided to the Government in preparing and implementing a second phase of the project in order to consolidate key project outcomes.	Bank Government	2020/2021

V Overall PCR rating

Dimensions and criteria	**Rating***
DIMENSION A: RELEVANCE	***3.5***
Relevance of project development objective (II.A.1)	4
Relevance of project design (II.A.2)	3
DIMENSION B: EFFECTIVENESS	**3**
Development Objective (DO) (II.B.4)	3
DIMENSION C: EFFICIENCY	***3.25***
Timeliness (II.C.1)	2
Resource use efficiency (II.C.2)	4
Cost-benefit analysis (II.C.3)	4

Implementation Progress (IP) (II.C.4)	3
DIMENSION D: SUSTAINABILITY	***2.75***
Financial sustainability (II.D.1)	3
Institutional sustainability and strengthening of capacities (II.D.2)	3
Ownership and sustainability of partnerships (II.D.3)	2
Environmental and social sustainability (II.D.4)	3
AVERAGE OF THE DIMENSION RATINGS	***3.4***
OVERALL PROJECT COMPLETION RATING	**3 Satisfactory**

VI Acronyms and abbreviations

Acronym	Description
AECID	Spanish Agency for International Development Cooperation
BEEEI	Environmental and Impact Assessment Bureau
FO	Farmers' Organizations
GAFSP	Global Agriculture and Food Security Programme
IGA	Income-Generating Activity
PMERSA-MTZ	Water Mobilization Project to Enhance Food Security in Maradi, Tahoua and Zinder Regions
WFP	World Food Programme

Annex 1: ECONOMIC ANALYSIS

The economic analysis was carried out to determine and compare the project costs and benefits in order to assess its profitability. The cost-benefit analysis method, which consists in estimating project costs and benefits in monetary terms, was used. The project economic analysis was conducted on the basis of the cost/benefits of the additional cash flows of selected production models. Based on the assumptions made, the rate of return of PMERSA was estimated at 22%, which is more than the opportunity cost of capital estimated at 12%. The overall profitability of the project is considered satisfactory. It should be noted that the project has generated non-quantifiable benefits, notably: (i) the creation of 41 805 jobs; (ii) the reduction of transport costs through the construction of feeder roads; and (iii) the reduction of farmer-grazier conflicts through the creation of transhumance corridors. The tables below present the operating accounts of the farming model used in project sites and the results of the calculation of the economic rate of return.

Crop Income Statement

Item	Amount (* CFAF 1 000)
I. VALUES OF MAIN RECESSION CROPS (WITH PROJECT)	
Tomatoes	25 004 067.12
Watermelon	4 586 005.44
Cowpea	6 373 374.80
Melon	8 313 657.60
Sorghum	5 091 802.08
Maize	1 245 786.08
Catjang cowpea	1 313 334.00
Value of total production of cereals and legumes	**51 928 027.12**
II. COST OF RECESSION CROPS (WITH PROJECT)	
Tomato Seeds	1158.0
Watermelon Seeds	451.85
Cowpea Seeds	14 841.90
Melon Seeds	1 264.87
Eggplant Seeds	38.53

Lettuce Seeds	55.71
Sweet Pepper Seeds	199.28
Sorghum Seeds	39 657.14
Maize Seeds	10 752.00
Catjang Cowpea Seeds	25 210.26
Groundnut Seeds	-
Pesticides	21 242.13
Organic Manure	42 484.25
Depreciation of Digging Equipment	84 968.50
Paid Labour: Cleaning, Ploughing, Sowing, Maintenance	1 699 370.00
TOTAL COST	**1 941 694.40**
ADDITIONAL INCOME	49 986 332.72
ADDITIONAL INCOME PER HECTARE OF RECESSION CROPS	2 941.46

Calculation of the Economic Rate of Return (ERR)

Year	Value of Additional Output (CFAF Thousand)	Cost (CFAF Thousand)			Baseline Cash Flow (CFAF Thousand)
		Investment Renewal	Operating and Maintenance Costs	Total	
1	0	3 013 975	0	3 013 975	-3 013 975
2	1 512 511	4 018 633	323 615	4 342 248	-2 829 737
3	2 167 500	5 023 292	411 650	5 434 942	-3 267 442
4	2 978 622	4 018 633	350 871	4 369 504	-1 390 882
5	3 843 560	2 009 317	220 681	2 229 998	1 613 562
6	3 978 560	1 004 658	331 675	1 336 333	2 642 227
7	4 877 650	1 004 658	345 980	1 350 638	3 527 012
8	4 877 650		556 161	556 161	4 321 489
9	4 877 650		495 930	495 930	4 381 720
10	4 877 650		236 851	236 851	4 640 799
11	4 877 650		669 936	669 936	4 207 714
12	4 877 650		457 900	457 900	4 419 750
13	4 877 650		134 110	134 110	4 743 540
14	4 877 650		316 525	316 525	4 561 125
15	4 877 650		435 266	435 266	4 442 384
16	4 877 650		215 667	215 667	4 661 983
17	4 877 650		216 177	216 177	4 661 473
18	4 877 650		220 579	220 579	4 657 071
19	4 877 650		220 579	220 579	4 657 071
20	4 877 650		220 579	220 579	4 657 071
				NPV	**21 293 955**
				ERR	**22%**