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**The World Bank**

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Report No: PAD 2671

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED ADDITIONAL FINANCING LOAN

IN THE AMOUNT OF

US\$9.597 MILLION

FROM

THE STRATEGIC CLIMATE FUND

PILOT PROGRAM FOR CLIMATE RESILIENCE (PPCR)

TO THE

REPUBLIC OF NIGER

FOR THE

COMMUNITY ACTION PROJECT FOR CLIMATE RESILIENCE

November 30, 2017

Environment & Natural Resources Global Practice  
Africa Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective Oct 18, 2017)

Currency Unit =	CFA Franc
CFAF 557.52 =	US\$1
US\$1.40924 =	SDR 1

## FISCAL YEAR

January 1 - December 31

Regional Vice President: Makhtar Diop

Country Director: Soukeyna Kane

Senior Global Practice Director: Karin Kemper

Practice Manager: Benoit Bosquet

Task Team Leader: Dahlia Lotayef

## ABBREVIATIONS AND ACRONYMS

AAP	African Adaptation Program
AfDB	African Development Bank
AIP	Annual Investment Plan
ANFCT	Agency for the Investment of Local Municipalities
BEEEI	Agency for Environmental evaluations and Impact Assessments
CAPCR	Community Action Project for Climate Resilience
CAS	Country Assistance Strategy
CNEDD	National Council of Environment for a Sustainable Development
CNSEE	National Center of Ecologic and Environmental Monitoring
COGES	Infrastructure management committee
CPF	Country Partnership Framework
DGATDC	General Directorate of Territorial Management and Community Development
DGEPD	General Directorate for the Evaluation of the Performance of Development Programs
DGEEF	General Directorate for Environment, Water and Forests
GIZ	German cooperation agency
IFC	International Finance Corporation
INRAN	National Institute for Agronomic Research in Niger
INS	National Institute for Statistics
LDP	Local Development Plan
MAG	Ministry of Agriculture
MEL	Ministry of Livestock
MHE	Ministry of Water and Environment
MPATDC	Ministry of Planning, Territorial Management and Community Development
M&E	Monitoring and Evaluation
NAPA	National Adaptation Program of Action on Climate Change
NCU	National Coordination Unit
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization
ORAF	Operational Risk Assessment Framework
PCU	Project Coordination Unit
PDIPC	Climate Information Development and Forecasting Project
PDC	Local Development Plan
PDO	Project Development Objective
PROMOVARE	Mobilization and Development of Water Resources Project
SCD	Systematic Country Diagnostic
SNP	Safety Nets Project
SDR	Rural Development Strategy
SDRP	Development Strategy for poverty reduction
SPCR	Strategic Program for Climate Resilience
SWLM	Sustainable Water and Land Management
SLM	Sustainable Land Management



**BASIC INFORMATION – PARENT (Niger Community Action Project for Climate Resilience - P125669)**

Country Niger	Product Line Recipient Executed Activities	Team Leader(s) Dahlia Lotayef		
Project ID P125669	Financing Instrument Technical Assistance Loan	Resp CC GEN07 (9268)	Req CC AFCW3 (278)	Practice Area (Lead) Environment & Natural Resources

Implementing Agency: Ministry of Planning - Project Coordination Unit

Is this a regionally tagged project?  No				
<input type="checkbox"/> Situations of Urgent Need or Capacity Constraints <input type="checkbox"/> Financial Intermediaries <input type="checkbox"/> Series of Projects	Bank/IFC Collaboration  No			
Approval Date 19-Jan-2012	Closing Date 31-Dec-2018	Original Environmental Assessment Category Partial Assessment (B)	Current EA Category Partial Assessment (B)	

**Development Objective(s)**

The project development objective (PDO) is to improve the resilience of the populations and of the production systems to climate change and variability in targeted Communes.

**Ratings (from Parent ISR)**

	<b>Implementation</b>	<b>Latest ISR</b>
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	01-Aug-2014	25-Feb-2015	15-Oct-2015	05-May-2016	26-Dec-2016	02-Jun-2017
Progress towards achievement of PDO	MS	MS	MS	MS	MS	MS
Overall Implementation Progress (IP)	MS	MS	MS	S	MS	MS
Overall Safeguards Rating	MS	MS	MS	MS	MS	MS
Overall Risk		M	M	M	M	M

**BASIC INFORMATION – ADDITIONAL FINANCING (Additional Financing for Niger CAPCR - P165397)**

Project ID P165397	Project Name Additional Financing for Niger CAPCR	Additional Financing Type Scale Up	Urgent Need or Capacity Constraints No
Financing instrument Investment Project Financing	Product line Recipient Executed Activities	Approval Date	
Closing Date 31-Dec-2019	Bank/IFC Collaboration No		
Is this a regionally tagged project? No			

Situations of Urgent Need or Capacity Constraints

Financial Intermediaries

Series of Projects

**PROJECT FINANCING DATA – PARENT (Niger Community Action Project for Climate Resilience - P125669)**



### Disbursement Summary (from Parent ISR)

Source of Funds	Net Commitments	Total Disbursed	Remaining Balance	Disbursed
Grants	35.00	47.95	15.05	 76 %
Loans	28.00	-	-	 -

### PROJECT FINANCING DATA – ADDITIONAL FINANCING (Additional Financing for Niger CAPCR - P165397)

#### FINANCING DATA (US\$, Millions)

##### SUMMARY

<b>Total Project Cost</b>	9.597.00
<b>Total Financing</b>	9.597.00
<b>Financing Gap</b>	0.00

##### DETAILS

##### COMPLIANCE

###### Policy

Does the project depart from the CPF in content or in other significant respects?

Yes  No

Does the project require any other Policy waiver(s)?

Yes  No

##### INSTITUTIONAL DATA

###### Practice Area (Lead)

Environment & Natural Resources



**Contributing Practice Areas**

Rural Development and Resilience Global Practices

**Climate Change and Disaster Screening**

This operation has been screened for short and long-term climate change and disaster risks.

**Gender Tag**

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

**PROJECT TEAM**

**Bank Staff**

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Susanne Leloup	Senior Agro-ecological Specialist	Independent	Washington, DC
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NIGER

ADDITIONAL FINANCING FOR NIGER CAPCR

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## I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

1. This Project Paper seeks the approval of the Executive Directors to allow an additional concessional loan in an amount of US\$9.597 million to the Republic of Niger for the Community Action Project for Climate Resilience (P125669; CIF/PPCR) (CAPCR).
2. The Additional Financing (AF) would involve a level two restructuring comprising: (i) revision of intermediate level indicators; (ii) reallocation of budget between the disbursement categories; (iii) modification of the institutional arrangements; and (iv) extension of the closing date of the ongoing loan by 12 months. With the extension of the closing date related to the project restructuring approved in June 2017, the cumulative extension would be 30 months.
3. The proposed additional financing will be used to scale up activities and consolidate the project outcomes, while also advancing the objectives of the overall Niger Strategic Program for Climate Resilience (SPCR), endorsed by the sub-committee of the Pilot Program for Climate Resilience (PPCR)<sup>1</sup> on November 10, 2010.
4. A level two restructuring was approved in December 2014 to revise the implementation arrangements, modify the results indicators at the PDO level and reallocate budgets between the disbursement categories.
5. The overall objective of the Niger SPCR is to improve the resilience of the population and of production systems to climate change events in order to increase national food security. The implementation of the SPCR is supported by three multilateral development institutions: the World Bank (WB), the International Finance Corporation (IFC) and the African Development Bank (AfDB). The program includes four interconnected investments projects. The ongoing WB supported CAPCR project for a total amount of US\$63 million, the Climate Information Development and Forecasting Project (PDICP) of US\$13 million and the Project for the Mobilization and Development of Water Resources (PROMOVARE) of US\$22 million, both on-going and implemented with the support of the AfDB; and the IFC project to promote the role of the private sector in strengthening resilience (US\$12 million). The WB, through the CAPCR, has been assigned the overall SPCR program coordination role.
6. Through the US\$2 million grant assigned for enhancing the participation of the private sector, IFC conducted an assessment of the private sector opportunities and barriers in support of each of the other three projects of the program. It was expected that information gathered through the preparatory phase would be used to inform the design and implementation of the Niger private sector initiatives under the Niger SPCR.
7. IFC conducted three in-depth market studies on a range of business opportunities in the sector. and carried out identification missions and discussions with key market players, government, SPCR partners and communities to develop potential program interventions. However, IFC encountered major

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<sup>1</sup> PPCR is one of the funding mechanisms of the Climate Investment Fund (CIF).



obstacles identifying suitable private sector sponsors for projects to be financed by PPCR in Niger. The main reasons included: (i) limited technical capacities (for businesses, farmers, bankers); (ii) limited appropriate infrastructure; (iii) lack of reliable data and information; (iv) novelty of the topic – adaptation – for the private sector; and (v) limited potential private sector clients that could comply with IFC's social, environmental and credit risk requirement standards<sup>2</sup>. Nevertheless, IFC did identify a relative small opportunity to go forward to support the promotion of drip-irrigation and solar powered water pumps in collaboration with NETAFIM and AGRIMEX Niger (US\$2.4 million).

8. Since no other investment opportunities were identified, consensus was reached by the Government, IFC and the World Bank to explore the possibility of transferring the remaining balance of IFC's allocation to the World Bank CAPCR project. Therefore, the Ministry of Planning submitted an official request to the Climate Investment Fund Coordinator on April 20, 2017, requesting the transfer of IFC's US\$9.597 million concessional loan allocation to the World Bank CAPCR project. The request was approved by the PPCR Sub-Committee on June 8, 2017.

### **Country background**

9. Niger remains one of the most vulnerable countries in Sub-Saharan Africa, and its climate is characterized by high variability especially in terms of rainfall. Major vulnerabilities include, among others: recurrent droughts; heavy dependence on rainfed farming and livestock; high vulnerability of production systems to climate-related hazards; rapid population growth (close to an annual growth rate of 3.3%), with ensuing heavy pressure on the environment; under-qualified specialized agencies and institutions; and continuing woodland degradation due the population need for energy.

10. Natural resources degradation, population growth and climate change pose serious challenges to medium and long term food security in the country. The links between soil degradation and climate change represent a particular concern (this combination requires urgent changes in land management technologies and practices). More than 50% of the population suffers from food insecurity, with 22% of it living in chronic food insecurity, and about 84% depends on natural resources that are highly vulnerable to climate factors. Poor households, particularly the ones led by female, are more exposed to shocks and seasonal variations in production, and often resort to unconstructive solutions such as the sale of premature seeds and livestock.

11. The overall Niger SPCR, including PACRC project, provides Niger with an opportunity to implement significant changes in order to scale up its investment efforts in reinforcing and incorporating climate resilience into its overall development strategies and planning.

### **Project description**

12. The project development objective of CAPCR is to improve the resilience of the populations and of production systems to climate change and variability in targeted communes.

13. It aims at enhancing climate resilience both at national and local levels. At the national level,

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<sup>2</sup> More details are provided in Annex 5 on the results of the studies and assessments conducted by IFC.



emphasis was put on integrating climate change and adaptation measures into sectoral strategies (focusing on health, water, transport) which can then be replicated in other sectors. This activity extends to the development of the local Community Development Plans and their annual budgets in order to include appropriate climate sensitive and adaptation measures. At the local level, the resilience of agro-sylvo-pastoral systems is improved through the use of integrated, participatory and gender sensitive approaches to foster more sustainable land and water management of the agro-sylvo-pastoral production systems. On the other hand, accessibility is enhanced by putting in place a food and/or fodder inputs and products purchasing and selling system managed by the communes in an economically and timely manner and also through adaptive social security measures.

14. Furthermore, the protection and rehabilitation activities of local social and economic infrastructures have been undertaken since erratic patterns of water availability, induced by recurring droughts and/or floods, is an overbearing risk to livelihoods nationwide. Large numbers of such activities are carried out in areas considered to be of high or moderate climate risks; targeting eligible municipalities, villages and households. All such activities are accompanied by a myriad of monitoring activities allowing the evaluation of changes in productivity and accessibility of food and fodder resources. These monitoring activities are very valuable since current efforts to tackle development challenges associated with the need for increased agricultural productivity in a changing climate are complicated by the incomplete and uncertain nature of the existing information base.

#### **Rationale for additional financing**

15. The additional funds would allow the CAPCR project to upscale and consolidate its well-performing local and national level activities. Simultaneously, the longer-term sustainability of the achievements of the CAPCR and the Niger SPCR (2010), all together, would be strengthened since the up-scaling activities would focus on supporting the establishment and operationalization of integrated services platforms on commune level, referred to as “Maison du Paysan”. Such platforms seek enhancement of the performance of agro-sylvo-pastoral production systems by making such services available, while also facilitating knowledge dissemination and training within and among the 38 beneficiary communes. As such, the additional funds would simultaneously strengthen the national food security initiative, referred to as “Nigériens Nourish Nigériens Initiative, 3NI (Initiative les Nigériens Nourissent les Nigériens, I3N, 2012)) –which seeks the deployment of the “Maisons du Paysan” at the level of 255 rural communes- as well as the most recent Economic and Social Development Plan, 2017-2021.

16. In brief, and even though many positive results have been achieved by the CAPCR to date and an important number of the initial targets have been met, the project’s main objective during the remaining period and through the additional financing is to be able to meaningfully consolidate its results and to develop the means to replicate and scale-up its activities by other partners and stakeholders beyond the initial 38 beneficiary communes.

#### **Project Performance**

17. Overall, CAPCR’s performance has been moderately satisfactory all over the duration of the project, and became satisfactory during the last semester. Moreover, the decision made in 2014 to shift



toward more integrated initiatives, as opposed to small fragmented micro-projects, remediated to the relatively low start. However, in view of the many challenges that Niger is currently facing (political instability, insecurity, lack of technical capacity, major climate variability) - this performance level may be considered quite commendable, if not exemplary. Efforts continue to be made for an effective and timely implementation of the activities agreed upon in the context of the agreements (in French, Conventions), signed by the project with the villages and communes.

18. As of June 30, 2017, the key results of the project in terms of improving the resilience of the population and the resilience of the production systems to climate change and variability in targeted communes are more tangible and visible to beneficiaries and can be summarized as follows:

- Project interventions led to an increase of approximately 82.6 % of crop yield and 45% of forage yield in the areas of intervention, compared to other sites in similar agro-ecological zones.
- As reported by the project, 35, 216 tons of animal food supplements were produced.
- Integration of climate resilience in the national transport strategy has been completed and 2 validation workshops were organized in March and June 2017. A climate change dimension and adaptation measures have been integrated in the Local Development Plans of all targeted 38 communes.
- The social protection activities included the rehabilitation of an additional 59 facilities, bringing the total number of rehabilitated facilities to 182, exceeding the initial target of 175 infrastructures by the end of the project.
- Forty-six (46) climate resilience knowledge products have been developed and disseminated and the number of people sensitized to climate issues increased to approximately 1.8 million.
- A total of 22,677 hectares of sylvo-pastoral areas benefited from the scaling-up of improved sustainable land and water management practices as adaptation measures

19. In order to further consolidate and scale up its interventions, the CAPCR explored the possibility of contributing to the 3NI through the establishment of eight (8) Maisons du Paysan.

20. In reference to the implementation arrangements, the performance of the Strategic Coordination Unit (SCU) (Cellule de Coordination Stratégique), which was established to ensure efficient strategic coordination of SPCR has however been a matter of concern. It has demonstrated poor performance and a lack of proactivity both at the level of the four projects constituting the SPCR program, and at the national level where it did not succeed in making substantial contributions or properly liaise with other relevant national initiatives and programs to create more synergies. To bridge this gap, the executing agencies of CAPCR (e.g. Ministry of Planning, Ministry of Environment, the Council for Environment and Sustainable Development) initiated a number of strategic activities, including the creation of a multi-disciplinary climate change think tank; the organization of a Niger side event at COP22; identification of joint activities; etc.).

## II. DESCRIPTION OF ADDITIONAL FINANCING



21. The additional financing will be used for two specific purposes: (i) scaling-up and consolidating the outcomes of the project; and (ii) strengthening the national stakeholders' platform for climate resilience and coordination with other national initiatives and plans. The initial CAPCR development objective, which is to improve the resilience of the populations and of production systems to climate change and variability in targeted Communes, would remain unchanged. With the scale-up, a second extension of the project closing date by one year, bringing the new closing date to December 2019, would be needed.

22. The following additional activities by project components would be undertaken, amounting to a total of US\$9.597 million:

**Component 1:** Mainstreaming climate resilience into development strategies at national and local levels (*No additional financing required*).

23. Activities under this component essentially aim at making the socio-economic development policies more responsive to climate change and at defining and implementing a comprehensive communication strategy and a system of effective knowledge management. Targets have been met, and in some cases exceeded. Remaining follow-up activities planned until end of project lifetime will be implemented through the initial funding. No additional activities are planned under the proposed AF. New activities under Component 2 and 3, however, would have a positive impact on supporting and further contributing to the objectives of this component. In particular, this will be achieved through the integrated services platforms (Maisons du Paysan) and include the provision of advisory services, delivery of training activities and the development of new knowledge products.

**Component 2:** Integrating climate resilience practices into agro-sylvo-pastoral systems and local populations' social protection measures (US\$8.297 million AF).

24. This component will continue to support activities to enhance the climate resilience of local communities and their food security by enhancing the productivity of the agro-sylvo-pastoral systems as and putting in place local populations' social protection measures, while consolidating and ensuring the sustainability of the outcomes of the project under the initial funding.

25. The initial budget of this component, amounting to US\$53 million will be supplemented by US\$8.297 million from the AF, bringing the total to US\$61.297 million.

26. In addition to the originally planned activities under the initial funding, the AF will more specifically finance the following activities:

- The establishment of seven additional integrated local services platforms known as "Maison du Paysan"<sup>3</sup>, and provision of the necessary technical and financial resources to make them functional. This will be done using the results of CAPCR to-date: provision of advisory services and training on improved sustainable land and water management practices to increase crop and

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<sup>3</sup> In addition to the first 8 platforms financed through the initial parent project.



forage yields; supporting the production of food supplements; dissemination of knowledge products and raising awareness on climate resilience; as well as the establishment of adapted monitoring and impact evaluation systems. The project will also finance the provision of basic equipment and furniture necessary for the launch of these platforms. These service facilities will be constructed following the overall specifications set by the Government, but CAPCR will enhance the architecture of the place to be ecologically friendly.

- The preparation of a comprehensive implementation manual to be used by all the integrated services platforms in the country (Manuel de la Maison du Paysan), on the basis of the preliminary concept note developed by the Government and the analysis undertaken lately by the CAPCR to guide the establishment and operationalization of the integrated services platform concept. Due consideration will be given to the integration of climate resilience into all services provided. The process will be participatory and consultative, to ensure consensus of all stakeholders and aiming at a high level of satisfaction of the beneficiary communities.
- Designing and implementing specific actions to address gaps between males and females and empower women, in light of the results of the gender analysis conducted in the context of the Niger Systematic Country Diagnostic<sup>4</sup>.
- Promoting the use of meteorological data and providing the necessary equipment to 15 targeted communes, as part of the advisory services provided by the Maisons du Paysan. This will be done in collaboration with the Climate Information Development and Forecasting Project, supported by the African Development Bank, and building on their activities.
- Leveraging the technical assistance/advisory work currently underway under the IFC project of the SPCR promoting the use of drip irrigation and solar powered pumps and increasing access to such equipment for farmers, targeting CAPCR communes. A total of 25 hectares has been identified for the joint implementation of this activity with the private sector operator hired by IFC.

27. Closer collaboration between WB, IFC and AfDB is being sought through developing joint activities in the area of irrigation infrastructure and practices as well in the use and sharing of meteorological data to be used in the forecasting and planning in the event of natural hazards (for example, droughts, flooding and locusts outbreaks).

**Component 3:** Ensuring coordination of all the activities of the project, including monitoring and evaluation activities, and SPCR overall strategic coordination (US\$1.3 million AF).

28. The initial budget of this component, amounting to US\$5 million will be supplemented by US\$1.3 million from the AF, bringing the total to US\$6.3 million. This component supports the project management activities of the CAPCR and the high level strategic coordination of the overall Niger SPCR. It also ensures dissemination and knowledge sharing of CAPCR and of SPCR's approach, results, challenges and impacts at the national level with key stakeholders and at the international level with other countries participating in the Pilot Program for Climate Resilience.

29. The AF funding would allow the CAPCR project coordination unit to implement its own exit strategy by multiplying its follow-up activities on the ground, identifying remediation measures for the

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<sup>4</sup> See Paragraph "E. Social" under Section "IV. Appraisal Summary for more details on the Gender gap analysis.



maintenance of existing sub-projects and proposing mechanisms for the sustainability of community driven activities. Activities aimed at enhancing the performance of the strategic coordination of Niger SPCR will also be financed, while moving toward a proper integration of the national SPCR coordination within relevant government structures as well as by establishing concrete linkages with and between existing similar programs, with a climate resilience and food security mandate.

30. Special emphasis will also be put on the coordination mechanisms at local levels and program levels, with the purpose of providing all parties with quality analysis regarding the program's implementation and its performance and facilitating synergies and collaboration among stakeholders. This is expected to help the Government stay abreast of key developments and innovation in climate-resilience and mobilize resources to develop new projects under the PSRC.

31. More specifically, the AF will finance the following activities:

- The development and implementation of a country wide stakeholder engagement plan, at both the national and local levels to foster collaboration and to promote climate resilient planning and action, mainly in conjunction with the 3N Initiative and the new National Development Plan currently under preparation. This will ensure the consolidation and sustainability of the SPCR by anchoring it in national strategic high-level plans as part of its exit strategy.
- The provision of the necessary technical assistance for the gradual transfer of the Strategic SPCR coordination function to an existing department of the Ministry of Planning (Clear terms of reference, job descriptions, work plans, etc.).
- Improvement of the existing monitoring and evaluation system of PACRC, through specialized technical assistance, to better assess in both a qualitative and quantitative manner the anticipated impacts stated in the PDO.
- Improvement of the channeling process of M&E results and outcomes from the project level to the SPCR program level.
- Strengthening the mechanism for the assessment of the overall SPCR results and impacts and how it has progressed against the five indicators. This includes, inter-alia, the development of analytical tools to provide all parties with quality analysis regarding the implementation of the program.
- The organization of knowledge exchange activities to capture and disseminate relevant knowledge on SPCR activities that would increase the effectiveness of the projects and facilitate scale up across the country.
- The strengthening of PIU staff and relevant stakeholders in project management, M&E and leadership capacity to deliver results and sustain the activities of PSRC.
- The expansion of the use of geographic mapping systems (in collaboration with the Ecological Monitoring Center of the Ministry of Environment) to depict and monitor relevant ecological conditions. The system will also be used to map the scope and areas of intervention of governmental as well as donor supported climate resilience programs and activities.

### III. KEY RISKS





### **Summary of proposed changes:**

#### **Changes in Result Framework:**

1. Two additional intermediate level result indicator are introduced to reflect the establishment of integrated services platforms (“Maison du Paysan”) and the establishment of a coordination framework at program scale. In view of the extension of the closing date the implementation of additional activities and the fact that the target value of some indicators has already been met, target values for the respective have been revised upwards. The details of the proposed changes are presented in the table of changes and the revised Results Framework.

2.

#### **Change in Disbursement Estimates (including all sources of financing)**

3. With the AF, a new disbursement schedule will be developed to reflect the additional resources made available through this additional financing and taking into consideration the remaining balance of the initial project budget and the new closing date.

#### **Expected Disbursements (in US\$ million) (including all sources of financing)**

[TO BE ADDED]

#### **Reallocations between Disbursement Categories-Parent CAPCR-P165397.**

4. A reallocation of the remaining balance of both the original loan and the original grant between disbursement categories is proposed to simplify the financial management process. The detailed reallocation is provided in Annex 2.

### **Components**

#### **Changes to Components and Cost**

5. There are no changes in the titles and scope of the project components as originally designed in the parent project. The only changes relate to the new budget allocated to each of the components of the project.

#### **Institutional arrangements**

6. Two new changes are proposed to take into consideration the performance to-date of the different structures of the parent project: (i) anchoring the strategic coordination function within the ministry of planning; and (ii) adding the ministry of land use planning and community development as an executing agency. The first change is introduced at the level of CAPCR project, which is supporting the SCU and providing the necessary funding for its operations.

7. The initial “project level” implementation arrangement, comprising a Project Steering Committee, a Project Coordination Unit and a Technical Committee (comprised of all executing agencies) has proven to be quite functional and successful.



8. However, the SCU, that was established by the Government at the Ministry of Planning to ensure the strategic coordination of the Niger SPCR programme was less successful in fulfilling its role. A rapid assessment conducted by the World Bank team with the participation of the executing agencies of all four projects of the SPCR revealed that, while the strategic coordination function has to be retained at the Ministry of Planning level, this should not be done through a stand-alone independent structure, but rather through an existing department or unit, managed by a high-level decision maker, which has a similar strategic coordination mandate, and. The assessment provided three (3) possible options, along the existing organigramme or the ministry to choose from (a final selection will be made by appraisal of the project).

9. Another change relates to the government agencies executing the project. Following the last government reshuffle, the former Ministry of Planning, Land Use Planning and Community Development was split in two new ministries: The Ministry of Planning, where CAPCR is anchored, and the Ministry of Land Use Planning and Community Development (MLUPCD). The addition of the latest as a new executing agency will have no real implication on the project as the concerned technical services involved in project implementation continued to deliver on their planned activities, but will only formalize the situation.

10. The Department of Community Development of MLUPCD will also lead the process for the development of a comprehensive implementation manual to be used by all the integrated services platforms in the country. The process will be participatory and consultative, to ensure consensus of all stakeholders and aiming at a high level of satisfaction of the beneficiary communities. The Ministry, through its deconcentrated services will also play an important role in following up the performance of these platforms and in providing them with the needed guidance and technical assistance. Other structures, such as the Ministry of Environment, Agriculture and Pastoralism (all part of the implementation arrangement of the parent project) will also play an important role in providing this guidance.

## **IV. APPRAISAL SUMMARY**

### **A. Economic and Financial (if applicable) Analysis**

11. An ex ante economic analysis carried out for the initial CAPCR was made difficult due to the complexity of its expected outcomes. While all benefits could not be accounted for in the economic analysis, the latter, however, proved viable with the net present value (NPV) of approximately US\$5.9 million, an internal rate of return (IRR) of 14.2% and a present value (PV) of the benefit/cost ratio of 1.6. Therefore, the implementation was fully justified by the expected benefits.

12. A new analysis was carried out in the context of the proposed additional financing to gauge the viability of the funding of the Maisons du Paysan. The main quantifiable benefits of these integrated services platforms are in terms of increasing food safety by reducing the cereal and fodder production deficit and therefore increasing the resilience of communities and their adaptation to climate variability. The increase in production will have a ripple effect that will accrue to communities in terms of notably



reducing malnutrition, increasing community income, improving land and livestock productivity and therefore building the resilience of communities targeted by the AF all over Niger. Moreover, better land management practices will increase carbon sequestration. A close monitoring on these communities during project implementation could help derive these aggregate benefits although they are difficult to gauge at the onset. Therefore, monetary benefits that are quantifiable are in terms of the cereal and fodder production value added thanks to additional cultivated land.

13. The economic analysis was performed by using a 6% social discount rate over 5 years based on the opportunity cost of capital and country risk. It is expected that benefits will accrue beyond the duration of the project but are not considered in this case. A sensitivity analysis was performed under a pessimistic scenario (a 10% increase in economic costs and a 10% decrease in benefits over the base case, and an 8% discount rate) and an optimistic scenario (a 10% increase in benefits and a 10% decrease in cost over the base case, and a 4% discount rate). In addition, project viability switch-off points for equal cost increment and benefit decrement, cost increment and benefit decrement were computed.

14. Table 1 summarizes the results of the economic analysis. The Maisons du Paysan under all three scenarios is viable, with positive net present value (NPVs) of US\$13.4 million as well as a significant economic rate of return (ERRs) of 111% and positive Present Value benefit-cost ratios of 1.6 for the base case scenario. This could be explained by both the fact that the right-of-way is not accounted for in the economic analysis and recent hike in international prices of cereal (US\$150 per ton) and fodder (US\$100 per ton). The sensitivity and scenario analyses show that the Maisons du Paysan AF is viable under all three scenarios, and is more sensitive to a decrease in benefits than an increase in costs. In all cases, the switch-off points require either significant increases in costs or significant decreases in benefits.

Table 1: Maisons du Paysan Cost/Benefit, Sensitivity and Scenario Analysis Summary

Key Economic Indicator	Project		
	30 years discounted at:		
Scenario	4% <i>Optimistic</i>	6% Base Case	8% <i>Pessimistic</i>
<b>Cost/Benefit Analysis</b>			
NPV (US\$ million)	14.7	13.4	12.3
ERR (%)	111%	111%	111%
PV benefit/cost ratio	2.7	2.6	2.5
Viability	Yes	Yes	Yes
<b>Sensitivity and Scenario Analyses</b>			
NPV (US\$ million)	17.9	13.4	9.5
ERR (%)	146%	111%	82%
PV benefit/cost ratio	3.3	2.6	2.1
<b>Switch-off point</b>			
>cost = <benefit (±%)	±53%	±44%	±35%
>cost (±%)	+225%	+160%	+108%
<benefit (±%)	-69%	-61%	-52%

**Note:** *Optimistic Scenario with a 10% increase in benefits and a 10% decrease in cost over the base case, and a 4% discount rate; Pessimistic scenario with a 10% increase in economic costs and a 10% decrease in benefits over the base case, and an 8% discount rate.*

## B. Technical



15. The AF activities focus on the up-scaling and enhancement of the establishment and functioning of the “Maisons du Paysan” to consolidate the projects’ and SCPR’s overall achievements - on communal, regional and national levels - in making populations and their agro-sylvo-pastoral production systems more resilient to natural hazards. All the project’s technical achievements were building on the experiences of the completed PAC1 and PAC2 and similar programs while refining already-established technologies, mechanisms to deliver infrastructure investments and services to generate and disseminate technologies. Besides building capacity on all levels, the establishment and functioning of the “Maisons du Paysan” would amplify local owner and stewardship and significantly enhance the quality, availability and accessibility of such services and knowledge.

16. Furthermore, the climate risk screening tool was run for the project, and highlights the risk of high temperature, change in precipitation patterns including decline in overall precipitation and extreme events as droughts, floods and pest infestations that would have negative to severe negative impacts on agricultural productivity. The original CAPCR project to which the current project will append to responds to the identified risks. The project specifically finances adaptive measures to the climate change risks in agriculture and the current project will ensure that such resilient measures will continue to be implemented in the target areas.

#### C. Financial Management

17. No changes will be made to the financial management system developed for the initial project, which is fully functional and performing in a satisfactory manner.

#### D. Procurement

18. No changes will be made to the procurement system developed for the initial project, which is also fully functional and performing in a satisfactory manner.

#### E. Social (including Safeguards)

19. **Gender.** The project is aligned with the World Bank Group’s gender strategy, which proposes a stronger focus on the frontier areas of more and better jobs as well as ownership and control over key financial and physical assets, and recognizes that closing the remaining gender gaps in endowments, enhancing voice and agency, and engaging men and boys are all critical to reducing poverty and boosting shared prosperity. The Bank’s gender strategy also identifies climate change as a cross cutting area that requires a gender lens. Women are often disproportionately affected by the impacts of climate change. At the same time, research has also identified women’s empowerment as an important approach to building broader community resilience. Understanding the different needs and capacities of women and men is critical to effective risk management and resilience strengthening.

20. According to the Niger SCD, there are three areas where gender gaps were identified; agricultural productivity, inadequate human capital and governance. In terms of agricultural productivity, the SCD refers to research that shows how plots managed by women in Niger produce 19 percent less per hectare



than plots managed by men. The primary factors that contribute to the gender productivity gap are (a) farm labor, with women facing significant challenges in accessing, using, and supervising male farm labor; (b) the quantity and quality of fertilizer use, with men using more inorganic fertilizer per hectare than women; and (c) land ownership and characteristics, with men owning more land and enjoying higher returns to ownership than women. For example, the identification of new agricultural technologies/techniques should take into account their likely impact on women's time. Some types of climate-smart agriculture have been shown to increase the burden of labor on women. For example, in Zambia, conservation agriculture may have added to women's relative time burden as it involves more weeding, which is traditionally a woman's role.<sup>5</sup> Another example of the importance of designing interventions to be gender sensitive is with extension services, which should take into account cultural norms that may prevent women from benefitting, for example, by training a sufficient number of female agents or by focusing on gender training for male agents.

21. Whereas inadequate human capital and interventions on health and education or fertility are outside the scope of this project, governance issues are relevant. For instance, efforts to improve the enabling business environment are likely to be particularly important for women, who tend to have less access to the resources (money, time, literacy, social networks) that are needed to overcome complex and financially costly/time-consuming regulations.<sup>6</sup> Efforts to enable the informal sector will also benefit women who are even more likely than men to operate informally. Furthermore, the project's activities improving access to collateral and incentives to make productivity-enhancing investments in land can be beneficial to women, if they are done in a gender-sensitive manner.

22. The activity of supporting the "Maison du Paysan", which offer farmers a platform that can provide advice, training, new equipment and technology and materials for increased productivity, is a critical factor in contributing to the resilience of the communities. Better productivity will also contribute to improved food security and overall well-being of the family unit. The platform is also a venue for farmers to exchange ideas and best practices and to bring them together as a community. The platforms will be inclusive in terms of access; both men and women may use these. As part of these platforms, community radios will be created to encourage social mobilization and to ensure everyone has access to information. The platforms will, among other tasks, conduct trainings and rent out and repair agricultural equipment, which in turn can offer an opportunity for the youth to learn a profession through apprenticeship/learning on the job.

23. **Safeguards:** Under the AF, the applicable safeguards policies remain the same and no new policies will be triggered. OP 4.12 on Involuntary Resettlement remains applicable to the AF project. Some small-scale land acquisition may be necessary for the construction of new buildings for the "Maisons du Paysan" but the impacts will be limited and localized. No physical resettlement is anticipated; the impacts would mainly be losses of assets such as crops or trees. To manage such impacts, the Borrower prepared a Resettlement Policy Framework (RPF) for the parent project, which will be applicable to this AF project as well since the AF is simply scaling up the on-going activities and the provisions of the RPF hence cover the

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<sup>5</sup> Kaczan, D., A. Arslan, and L. Lipper. 2013. "Climate-Smart Agriculture: A Review of Current Practice of Agroforestry and Conservation Agriculture in Malawi and Zambia." United Nations Food and Agriculture Organization, Rome. <http://www.fao.org/docrep/019/ar715e/ar715e.pdf>.

<sup>6</sup> Simavi, S., C. Manuel, and M. Blackden. 2010. *Gender Dimensions of Investment Climate Reform: A Guide for Policy Makers and Practitioners*. Washington, DC: World Bank and IFC.



activities proposed under the AF. The RPF was disclosed on October 3, 2011 in Niger and via the Bank's Infoshop on September 29, 2011. The RPF will guide the preparation of Resettlement Action Plans (RAPs) if and when necessary.

24. **The implementation arrangements for safeguards** will remain the same: the PIU has acquired good knowledge of the World Bank's safeguards policies and the PIU has a dedicated environmental specialist to follow-up on the implementation of the safeguards instruments, and ensure compliance of all project activities with the measures specified in these instruments. The directorate of environmental impact assessments and studies of the Ministry of Environment plays an important role, through a special arrangement with the project, in monitoring the implementation of the ESMF and RPF. Communities participating in the project are also responsible for monitoring progress in implementation of their sub-projects and their compliance with the safeguards requirements at the local level, including the organization of community consultations. The different technical departments (services techniques) are responsible for awareness raising and informing communities, and participating in the monitoring process.

#### **F. Environment (including Safeguards)**

25. The proposed AF would will not lead to new or changes in safeguard related issues and/or trigger any new safeguards policies. In addition, it will be implemented in the geographical areas of the parent project therefore it will not lead to the expansion of the project intervention areas. The AF like the parent project, is category B.

26. Overall, the AF will have a great positive impact on sustainable development in Niger. It will bring a real added value to existing initiatives, and puts a strong emphasis on disseminating value-added SWLM technologies and techniques through the development of the "Maison du Paysan". Finally, the integrated services platform will reinforce the sustainability at the local level by directly benefitting the communities and promoting their resilience to climate change and improving the productivity of their agricultural, forestry and livestock activities. Therefore, by adequate measures aimed at building the capacities of local stakeholders (including local authorities, rural organizations, and the private sector), the AF will support the sustainability of the project.

27. The overall environmental impact of the project will remain positive and the adopted ESMF prepared during the parent project will remain valid and will provide enough information for making decisions on safeguards aspects during the AF implementation phase.

#### **V. WORLD BANK GRIEVANCE REDRESS**

28. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit



their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).



**Note to Task Teams:** The following sections are system generated and can only be edited online in the Portal.  
*Please delete this note when finalizing the document.*

## VI. SUMMARY TABLE OF CHANGES

	Changed	Not Changed
Change in Systematic Operations Risk-Rating Tool (SORT)		✓
Change in Implementing Agency		✓
Change in Project's Development Objectives		✓
Change in Results Framework	✓	
Change in Components and Cost		
Change in Loan Closing Date(s)	✓	
Cancellations Proposed		✓
Reallocation between Disbursement Categories	✓	
Change in Disbursements Arrangements		✓
Change in Safeguard Policies Triggered		✓
Change of EA category		✓
Change in Legal Covenants		✓
Change in Institutional Arrangements	✓	
Change in Financial Management		✓
Change in Procurement		✓
Change in Implementation Schedule		
Other Change(s)		✓

## VII. DETAILED CHANGE(S)

### Project Development Objective Indicators

### Intermediate Indicators





**SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)**

Risk Category	Latest ISR Rating	Current Rating
Political and Governance	● Moderate	
Macroeconomic	● Moderate	
Sector Strategies and Policies	● Moderate	
Technical Design of Project or Program	● Low	
Institutional Capacity for Implementation and Sustainability	● Moderate	
Fiduciary	● Moderate	
Environment and Social	● Moderate	
Stakeholders	● Low	
Other		
Overall	● Moderate	

**LEGAL COVENANTS – Additional Financing Power Project (P165397)**

Sections and Description
No information available





### VIII. RESULTS FRAMEWORK AND MONITORING

Project Development Objective: Improve the resilience of production systems and populations to climate change and variability in targeted communities									
Result indicators (objective)	Core	Unity of Measurement	Baseline	Target Value		Frequency	Source of data/ Methodology	Responsibility data collection	Description (indicator definition etc.)
				Initial (as per the 2014 restructuring)	Revised				
<b>Indicator One:</b>  <b>Crop yield increase in the project's areas of intervention</b>	<input type="checkbox"/>	%	0	30	40	Annually Mid-term End of project	Statistics and surveys	National Institute of Statistics (NIS) in collaboration with the Agricultural Statistics Directorate and the project regional coordination units	Evaluation of relative change in agricultural productivity of intervention sites as compared to adjacent non treated sites in the same year.
<b>Indicator Two:</b>  <b>Forage yield increase in the project's areas of intervention</b>	<input type="checkbox"/>	%	0	20	30	Annually Mid-term End of project	Statistics and surveys	National Institute of Statistics (NIS) in collaboration with the Agricultural Statistics Directorate and	Evaluation of relative change in fodder PMU productivity as compared to adjacent non treated site in the same year.



								the project regional coordination units	
<b>Indicator Three:</b> <b>Direct project beneficiaries<sup>7</sup></b>	<input checked="" type="checkbox"/>	Number	0	140 000	280 000	Annually Mid-term End of project	Project administrative records and M&E reports of regional coordination units	M&E specialists of PCU and of regional coordination units	Evaluation of number of households benefitting from the project activities.
<b>Indicator Four:</b> <b>Female beneficiaries<sup>8</sup></b>	<input checked="" type="checkbox"/>	%	0	50	52	Annually Mid-term End of project	Project administrative records and M&E reports of regional coordination units	M&E specialists of PCU and of regional coordination units	Evaluation of percentage of women among total of beneficiaries benefitting from project activities.
INTERMEDIATE OUTCOMES									
<b>Component 1: Mainstreaming climate resilience into sectoral policies</b>									
<b>Sub-component 1.1: Mainstreaming climate variability and change into sectoral policies</b>									
Result Indicators	Core	Unit of Measurement	Situation reference	Target Value		Frequency	Source of data/ Methodology	Responsibility data collection	Description (indicator definition etc.)
				Initial	Revised				
<b>Number of sector policies which fully incorporate climate resilience<sup>9</sup></b>	<input type="checkbox"/>	Number	1 (Health policy doc	3	3	Annually Mid-term	Validation reports of workshops by the technical	CNEDD	Integration of climate change in the sectoral strategies

<sup>7</sup> PPCR Core Indicator 5

<sup>8</sup> PPCR Core Indicator 5

<sup>9</sup> PPCR Core Indicator 1



			already includes general references to climate change)				climate change commission		and specific references to climate resilience measures
Number of LDPs and AIPs incorporating climate resilience	<input type="checkbox"/>	Number	0	38	38	Annually, and Mid-term .	Reports of validation workshops by the technical climate change commission	CNEDD	Climate Resilience measured against a set of key measures / parameters
<b>Sub-Component 1.2 : Communication strategy and knowledge management</b>									
Number of climate resilience knowledge products disseminated <sup>10</sup>	<input type="checkbox"/>	Number	0	60	75	Annually	Project administrative Reports	Communication Dept of CNEDD	Products include newsletters, brochures, publication, etc.
Population informed on climate issues	<input type="checkbox"/>	Number	0	800 000	2 000 000	Semi-annually	Annual targeted surveys	Communication Dept of CNEDD	Targeted population includes local authorities, producer groups, associations, and other groups living in targeted Communes
<b>COMPONENT 2: Improving resilience of agro-sylvo-pastoral systems and local populations to climate variability and change</b>									
<b>Component 2.1 : Improving the resilience of agro-sylvo-pastoral systems</b>									

<sup>10</sup> PPCR Core Indicator 3



<p>Percentage of producers adopting SLM practices introduced by the project<sup>11</sup>.</p>	<input type="checkbox"/>	<p>%</p>	<p>0</p>	<p>50</p>	<p>65</p>	<p>Annually</p>	<p>Annual targeted surveys and M&amp;E reports of regional coordination units</p>	<p>CNSEE in collaboration with the regional technical services of the ministries of environment and agriculture and local municipalities</p>	
<p>Additional agricultural areas with improved SLM.</p>	<input checked="" type="checkbox"/>	<p>ha</p>	<p>0</p>	<p>4 000</p>	<p>5 000</p>	<p>Annually</p>	<p>Annual targeted spatial surveys and M&amp;E reports of regional coordination units</p>	<p>CNSEE in collaboration with the regional technical services of the ministries of environment and agriculture and local municipalities</p>	
<p>Additional sylvo pastoral areas with improved SLM</p>	<input type="checkbox"/>	<p>Ha</p>	<p>0</p>	<p>26 800</p>	<p>38 000</p>	<p>Annually</p>	<p>Annual targeted spatial surveys and M&amp;E reports of regional coordination units</p>	<p>CNSEE in collaboration with the regional technical services of the ministries of environment and agriculture and local municipalities</p>	<p>Total area of communal sylvo pastoral areas undergoing GDT practices supported by the project</p>

11 PPCR core indicator 4



Quantity of animal food supplements produced by the project	<input type="checkbox"/>	Tones/year	0	40 000	40 000	Annually	Project administrative records and M&E reports of regional coordination units	PCU and regional project coordination units	Total quantity of animal fodder made available to the communes by the project
Number of operational integrated services platforms known as "Maisons du paysan" (New proposed indicator) <sup>12</sup>	<input type="checkbox"/>	Number	0	0	15	Annually	Targeted surveys and project administrative records	PCU and regional project coordination units	The criteria for considering a platform operational is that it is constructed according to agreed specifications and construction plans; furnished and equipped; staff trained on providing basic advisory services; and operating on the basis of a comprehensive operation's manual
<b>Component 2.2 : Integrating innovative measures for protecting the most poor and vulnerable households: Adaptive Social Protection</b>									
Number of targeted community facilities that have been protected, restored or rehabilitated <sup>13</sup>	<input type="checkbox"/>	Number of facilities	0	175	210	Annually	Project administrative records	PCU and regional project coordination units	Number of facilities for which rehabilitation activities have been completed.
Number of households benefiting from accumulated ASP activities	<input type="checkbox"/>	Number of	0	35 000	40 000	Annually	Targeted surveys and project	INS (DSEDS and DER), in collaboration	Number of households which have benefitted from

<sup>12</sup> PPCR Core Indicator 2

<sup>13</sup> PPCR Core Indicator 3



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(desegregated) <sup>14</sup>		households				administrative records	with DGATDC and regional project coordination units	cash for work, exclusive of those benefiting from cash of work activities in support of sub-component 2.1.
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<sup>14</sup> PPCR Core Indicator 5





## Annex 1 Detailed Economic Analysis

### Background

1. Financial analysis (i.e., commercial profitability analysis) and economic analysis (i.e., national profitability analysis) differ in several ways. The objective of commercial profitability analysis is to assess the net financial results of a project from the investor point of view, while the national profitability analysis aims to identify and measure the net economic benefits of the project from the society point of view. Moreover, commercial profitability analysis is based on prevailing market prices, while national profitability analysis is determined with the help of adjusted prices (i.e., shadow prices) that are deemed to be an approximation of true economic prices (reflecting the social opportunity cost). Similarly, for commercial profitability analysis, the time value of money is tackled by application of the private discount rate based on the prevailing interest rate of the capital market, while in the case of national profitability analysis, the social discount rate is applied, i.e., the rate at which the country covered by the project can borrow money taking into consideration the country risk.
2. In the analysis, at least these three indicators are considered for the financial and economic analysis:
  - The Net Present Value (NPV) which is the difference between the discounted total benefits and cost;
  - The Internal Rate of Return (IRR), which is the discount rate that zeroes out the NPV or, the interest rate that makes the net present value of all cash flows equal to zero; and
  - The Benefit-Cost Ratio, which is the ratio of the present value (PV) of benefits over the PV of costs over the lifetime of the project.

### Financial Analysis

3. There is no financial analysis to be done in this context.

### Economic Analysis

4. The major difference between the financial and economic analysis is that the economic analysis consists in eliminating all the distortions of prices on the inputs used for the drainage system. There is therefore a need to identify and quantify price distortions that affect the operating expenditures as well as the investments. The evaluation of these distortions makes it possible to rectify the financial prices and to obtain the economic prices. From the corrected structure of the economic prices, the revaluation coefficients were estimated.
5. Determination of Price Distortions. The conversion of the financial costs into economic costs is essential to reflect the value of the output for the community. The objective of this calculation is to determine the opportunity costs of both the inputs and outputs. As taxes, duties and subsidies such as for electricity constitute internal flows in the national economy, those were not taken into account in the calculation of the economic costs.
6. Labor. The wages applied for unqualified skills is the minimum wage without the social contribution. For the skilled job salaries, the conversion factor is taken equal to 1 but the social contributions are also not considered. Moreover, most labor needed for the whole project and other activities are assumed to be locally hired.



7. Equipment, Goods and Infrastructure. A conversion factor of 0.8 (import and other taxes) has been applied to calculate the economic costs of equipment, goods and infrastructure in order to deduct from them the included taxes (construction).
8. The analysis covers the recurrent annual flooding during the rainy season: on average flooding represents a disruption of 40 days per year.
9. A number of key assumptions have been considered for the cost/benefit analysis:
  - The cost/benefit analysis is carried out over a period of 6 years with the assumption that no investment in new asset is needed over the periods.
  - A real discount rate of 6% per annum is used.
  - The overall standard conversion factor for adjusting market prices to shadow prices is set at 0.9. The shadow exchange rate is 1. The shadow wage is 1 as most labor needed for the project will be locally hired.
  - Priority investments are disbursed over 5 years of the implementation of the project. The right-of-way including the price of land and any structures upon it is zero as it is owned by the government although it should be usually accounted for.
  - One harvest per year for cereal and fodder is expected
  - OMEX cost is on average set at 3% during project implementation Minor infrastructure, mechanical and equipment investments are covered by OMEX over the lifetime of the investments.
  - The agricultural yields and value added are derived from World Bank’s 2017 Mali Economic and Environmental Rehabilitation of the Niger River project. The cereal and fodder value added reaches US\$ 140 and US\$ 43 per ton respectively.

The value added derived from the cereal and fodder yield due to additional utilized land is illustrated in Table A1.1

Table A1.1 Additional Value Added Generated from Incremental Yield

Category	Unit	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Incremental Cereal yield</b>	<b>Ton</b>	10319	19000	20000	10000	10000
<b>Incremental fodder yield</b>	<b>Ton</b>	217046	300000	300000	200000	200000
<b>Incremental Cereal Value Added</b>	<b>US\$ million</b>	1.5	2.7	2.8	1.4	1.4
<b>Incremental Fodder Value Added</b>	<b>US\$ million</b>	3.1	4.3	4.3	2.9	2.9

Source: Project progress reports.

**Cost/benefit, Sensitivity and Scenario Analysis Results**

Table A1.2 summarizes the results of the economic analysis. The “Maisons du Paysan” under all three scenarios is viable, with positive net present value (NPVs) of US\$13.4 million as well as a significant economic rate of return (ERRs) of 111% and positive Present Value benefit-cost ratios of 1.6 for the base case scenario. This could be explained by the fact that the right-of-way is not accounted for in the cost



benefit analysis and the recent hike in international prices of cereal (US\$ 150 per ton) and fodder (US\$ 100 per ton). The sensitivity and scenario analyses show that the “Maisons du Paysan” AF is viable under all three scenarios, and is more sensitive to a decrease in benefits than an increase in costs. In all cases, the switch-off points require either significant increases in costs or significant decreases in benefits.

Table A1.2: *Maison du Paysan Cost/Benefit, Sensitivity and Scenario Analysis Summary*

Key Economic Indicator	Project		
	30 years discounted at:		
Scenario	4% <i>Optimistic</i>	6% Base Case	8% <i>Pessimistic</i>
<b>Cost/Benefit Analysis</b>			
NPV (US\$ million)	14.7	13.4	12.3
ERR (%)	111%	111%	111%
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Viability	Yes	Yes	Yes
<b>Sensitivity and Scenario Analyses</b>			
NPV (US\$ million)	17.9	13.4	9.5
ERR (%)	146%	111%	82%
PV benefit/cost ratio	3.3	2.6	2.1
<b>Switch-off point</b>			
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Note: *Optimistic Scenario with a 10% increase in benefits and a 10% decrease in cost over the base case, and a 4% discount rate; Pessimistic scenario with a 10% increase in economic costs and a 10% decrease in benefits over the base case, and an 8% discount rate.*

## References

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## Annex 2: Status of the implementation of Private Sector Component of the Niger SPCR

1. A project preparation grant was assigned to fund the initiation phase of the private sector component of the Niger SPCR including, inter-alia, an assessment of private sector opportunities and barriers within each of the three other projects of Niger SPCR. It was expected that information gathered through the preparatory phase would be used to inform the design and implementation of the Niger private sector initiatives under the SPCR.

2. IFC conducted three in-depth market studies on a range of business opportunities in the sector. The studies comprised comprehensive literature reviews and interviews with over 700 farmers in several different districts in Niger. Numerous interviews were also conducted with the private sector, farmer organizations, government and NGOs. IFC also carried out identification missions and discussions with key market players, government, PPCR partners and communities to develop potential program interventions.

- *For PDIPC*, an in-depth market study was carried out on the opportunities for developing a commercially viable mobile phone platform. This study was undertaken with a private consulting firm and comprised interviews with over 400 farmers across six regions of Niger, as well as many interviews in the private sector, NGOs and government.
- *For CAPCR*, IFC carried out market and feasibility studies on weather index-based insurance. Based on the findings of the report, IFC had discussions with key market players to assess some suggested investment opportunities.
- *For PROMOVARE*, IFC undertook an in-depth market study on irrigation systems and drought-resilient seeds that suggested some concepts of possible investment opportunities. This work was conducted with a private consulting firm and comprised a comprehensive literature review and interviews with 180 farmers in seven different districts in Niger. Based on the findings in the program preparation phase, IFC had developed an advisory project to promote the use of drip irrigation and solar powered pumps, increase access to finance for farmers, and develop sustainable private sector supply of irrigation equipment. Work on the advisory component of the project has progressed well, with a private sector client identified and introduced to the market. The IFC project team has hired consultants to provide advice to the client company on project management, market knowledge and to conduct M&E activities. The IFC project team has also helped the private sector partners in clearing regulatory hurdles.

3. However, the project faced many challenges to identify suitable private sector sponsors. The main program wide barriers faced are: (i) limited technical capacities (for businesses, farmers, bankers); (ii) limited appropriate infrastructure; (iii) lack of reliable data and information; (iv) novelty of the topic – adaptation – for the private sector; and (v) limited potential private sector clients that could comply with IFC's social, environmental and credit risk requirement standards. The specific barriers for each of the 3 projects are as follows:

- *For PDIPC*: Even though a market need was identified, challenges to its viability remained due to lack of disposable income amongst the target beneficiaries, i.e. small-holder farmers. The study also determined that the supply and use of the platform upstream or downstream the agribusiness value chain would be limited. The study also confirmed the lack of infrastructure in place on which to develop a climate information platform. To address this, IFC held discussions with a lead mobile communication company in Niger



who could potentially develop this platform and provide weather information to subscribers.

- *For CAPCR:* Several barriers for the development of this market were identified, including: (i) scarcity of financial skill sets required to develop a weather index-based insurance product; (ii) an under-developed insurance industry in general; (iii) insufficient disposable income for farmers to purchase insurance products; and (iv) insufficient long-term weather data for designing the weather index-based insurance product. Furthermore, in almost all countries in the world (including most developed countries), weather based crop insurance is usually subsidized (directly and indirectly) by the public sector, which entails significant government subsidies.
- *For PROMOVARE:* While the technical assistance/advisory work is underway and making good progress, bankable investment projects that meet both PPCR objectives and IFC's investment, and social and environmental criteria will likely not develop.

4. Since no appropriate investment opportunities were identified, consensus was reached by the Government, IFC and the World Bank to explore the possibility of transferring the remaining balance of IFC's allocation to the World Bank CAPCR project. Therefore, the Ministry of Planning submitted an official request to the Climate Investment Fund Coordinator on April 20, 2017, requesting the transfer of IFC's USD 9.597 million concessional loan allocation to the World Bank CAPCR project.