



**The World Bank**

Support to Protected Areas Management ( P122419 )

Document of  
**The World Bank**  
**FOR OFFICIAL USE ONLY**

Report No: ICR00004392

**IMPLEMENTATION COMPLETION AND RESULTS REPORT**

(IDA Credit: H6480)

ON A

GRANT FROM THE  
INTERNATIONAL DEVELOPMENT ASSOCIATION

IN THE AMOUNT OF US\$5.0 MILLION

AND A

GRANT FROM THE  
GLOBAL ENVIRONMENT FACILITY

(GEF TF: 99643)

IN THE AMOUNT OF US\$1.9 MILLION

TO THE

REPUBLIC OF BENIN

FOR THE

SUPPORT TO PROTECTED AREAS MANAGEMENT PROJECT (P122419; P115962)

June 28, 2018

Environment & Natural Resources Global Practice  
Africa Region



## CURRENCY EQUIVALENTS

(Exchange Rate Effective June 11, 2018)

Currency Unit = FCFA

556.49 FCFA = US\$1

US\$ = SDR 1

FISCAL YEAR

July 1 - June 30

Regional Vice President: Makhtar Diop

Country Director: Pierre Frank Laporte

Senior Global Practice Director: Karin Erika Kemper

Practice Manager: Benoit Bosquet

Task Team Leader(s): Salimata D. Follea

ICR Main Contributor: Ellen J. Tynan

## ABBREVIATIONS AND ACRONYMS

APN	African Parks Network
AVIGREF	Village Associations for the Management of Wildlife Reserves/ <i>Associations Villageoises de Gestion des Réserves de Faune -</i>
CBO	Community Based Organization
CENAGREF	National Center for Wildlife Management/ <i>Centre National de Gestion des Réserves de Faune -</i>
CENAGREF-DG	CENAGREF General Directorate/ <i>Direction Generale</i>
CGAP	Protected Area Management Committee/ <i>Comité de Gestion de l'Aire Protégée</i>
CTF	Conservation Trust Fund
DPNP	National Directorate of Pendjari Park/ <i>Direction du Parc National de la Pendjari</i>
DPNW	National Directorate of 'W' Park/ <i>Direction du Parc National 'W'</i>
EA	Environmental Assessment
ESMF	Environmental and Social Management Framework
FCFA	West African Franc CFA
FM	Financial Management
FSOA	The West Africa Savannah Foundation/ <i>Fondation des Savannes Ouest Africaines</i>
GEF	Global Environment Facility
GEO	Global Environmental Objective
ICR	Implementation Completion and Results Report
IDA	International Development Association
IGAs	Income-generating activities
KAI	Kilometric Abundance Index
KfW	Reconstruction Credit Institute/ <i>Kreditanstalt für Wiederaufbau</i>
MOU	Memorandum of Understanding
MTR	Mid-Term Review
PAGAP	Support to Protected Area Management Project/ <i>Projet d'Appui à la Gestion des Aires Protégées</i>
PA-METT	Protected Area Management Effectiveness Tracking Tool
PAPE	Support Program for the W-Arly-Pendjari Park Complex/ <i>Programme d'Appui aux Parcs de l'Entente</i>
PDO	Project Development Objective
PGCPN	National Parks Management and Conservation Program
PIU	Project Implementation Unit
PNP	Pendjari National Park
PNW	'W' National Park
TF	Trust Fund
TTL	Task Team Leader
WAP	W-Arly-Pendjari Park Complex

## TABLE OF CONTENTS

<b>DATA SHEET .....</b>	<b>1</b>
<b>I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES.....</b>	<b>5</b>
<b>A. CONTEXT AT APPRAISAL .....</b>	<b>5</b>
<b>B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE) .....</b>	<b>11</b>
<b>II. OUTCOME .....</b>	<b>14</b>
<b>A. RELEVANCE OF PDOs .....</b>	<b>14</b>
<b>B. ACHIEVEMENT OF PDOs (EFFICACY) .....</b>	<b>15</b>
<b>C. EFFICIENCY .....</b>	<b>20</b>
<b>D. JUSTIFICATION OF OVERALL OUTCOME RATING .....</b>	<b>23</b>
<b>E. OTHER OUTCOMES AND IMPACTS (IF ANY).....</b>	<b>23</b>
<b>III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME .....</b>	<b>25</b>
<b>A. KEY FACTORS DURING PREPARATION .....</b>	<b>25</b>
<b>B. KEY FACTORS DURING IMPLEMENTATION .....</b>	<b>26</b>
<b>IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME ..</b>	<b>28</b>
<b>A. QUALITY OF MONITORING AND EVALUATION (M&amp;E) .....</b>	<b>28</b>
<b>B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE .....</b>	<b>30</b>
<b>C. BANK PERFORMANCE .....</b>	<b>31</b>
<b>D. RISK TO DEVELOPMENT OUTCOME .....</b>	<b>31</b>
<b>V. LESSONS AND RECOMMENDATIONS .....</b>	<b>32</b>
<b>ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS.....</b>	<b>34</b>
<b>ANNEX 1A: REVISIONS TO RESULTS FRAMEWORK AT RESTRUCTURING .....</b>	<b>41</b>
<b>ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION.....</b>	<b>46</b>
<b>ANNEX 3. PROJECT COST BY COMPONENT .....</b>	<b>50</b>
<b>ANNEX 4. EFFICIENCY ANALYSIS.....</b>	<b>51</b>
<b>ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS ...</b>	<b>57</b>



**DATA SHEET**

**BASIC INFORMATION**

**Product Information**

Project ID	Project Name
P122419	Support to Protected Areas Management
Country	Financing Instrument
Benin	Investment Project Financing
Original EA Category	Revised EA Category
Partial Assessment (B)	Partial Assessment (B)

**Related Projects**

Relationship	Project	Approval	Product Line
Supplement	P115963-Support to Protected Areas Management	29-Mar-2011	Global Environment Project

**Organizations**

Borrower	Implementing Agency
CENAGREF	CENAGREF

**Project Development Objective (PDO)**

Original PDO

The Project Development Objective (PDO) is to enhance protection of biodiversity in Northern Benin Savannah Ecosystems through conservation measures and by reducing human pressure on parks.

## FINANCING

	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
<b>World Bank Financing</b>			
P122419 IDA-H6480	5,000,000	5,000,000	4,865,955
P115963 TF-99643	1,900,000	1,900,000	1,807,169
<b>Total</b>	<b>6,900,000</b>	<b>6,900,000</b>	<b>6,673,124</b>
<b>Non-World Bank Financing</b>			
Borrower	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Project Cost</b>	<b>6,900,000</b>	<b>6,900,000</b>	<b>6,673,124</b>

## KEY DATES

Project	Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
P122419	29-Mar-2011	04-Oct-2011	17-May-2015	15-Dec-2016	31-Dec-2017
P115963	29-Mar-2011	04-Oct-2011	17-May-2015	15-Dec-2016	31-Dec-2017

## RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US\$M)	Key Revisions
11-Nov-2015	3.83	Change in Results Framework Change in Loan Closing Date(s) Reallocation between Disbursement Categories Change in Implementation Schedule

## KEY RATINGS

Outcome	Bank Performance	M&E Quality
Satisfactory	Satisfactory	Substantial



**RATINGS OF PROJECT PERFORMANCE IN ISRs**

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	25-Sep-2011	Satisfactory	Satisfactory	0
02	18-Dec-2011	Satisfactory	Satisfactory	0
03	02-Jun-2012	Satisfactory	Satisfactory	.40
04	25-Jun-2012	Satisfactory	Satisfactory	.47
05	05-Jan-2013	Satisfactory	Satisfactory	.96
06	07-Sep-2013	Satisfactory	Satisfactory	1.68
07	30-Mar-2014	Satisfactory	Satisfactory	2.25
08	11-Nov-2014	Satisfactory	Satisfactory	2.96
09	19-May-2015	Moderately Satisfactory	Moderately Satisfactory	3.28
10	30-Nov-2015	Moderately Satisfactory	Moderately Satisfactory	3.83
11	10-May-2016	Moderately Satisfactory	Moderately Satisfactory	4.13
12	30-Nov-2016	Moderately Satisfactory	Moderately Satisfactory	4.45
13	04-May-2017	Moderately Satisfactory	Moderately Satisfactory	4.66
14	15-Dec-2017	Moderately Satisfactory	Moderately Satisfactory	4.87

**SECTORS AND THEMES**

**Sectors**

Major Sector/Sector (%)

**Agriculture, Fishing and Forestry 85**

Public Administration - Agriculture, Fishing & Forestry 18

Forestry 67

**Financial Sector 15**

Banking Institutions 11

Other Non-bank Financial Institutions 4



**Themes**

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)
<b>Private Sector Development</b>	<b>100</b>
Jobs	100
<b>Environment and Natural Resource Management</b>	<b>100</b>
Renewable Natural Resources Asset Management	67
Biodiversity	67
Environmental policies and institutions	33

**ADM STAFF**

Role	At Approval	At ICR
Regional Vice President:	Obiageli Katryn Ezekwesili	Makhtar Diop
Country Director:	Madani M. Tall	Pierre Frank Laporte
Senior Global Practice Director:	Jamal Saghir	Karin Erika Kemper
Practice Manager:	Idah Z. Pswarayi-Riddihough	Benoit Bosquet
Task Team Leader(s):	Salimata D. Follea	Salimata D. Follea
ICR Contributing Author:		Ellen J. Tynan





## I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

### A. CONTEXT AT APPRAISAL

#### Context

1. The country of Benin, located in West Africa and bordered by Togo to the west, Nigeria to the east and Burkina Faso and Niger to the north, covers 114,762 square km with an estimated population of over 11 million (2017). Benin's population growth rate (ranging between about 2.76-2.9%) has been consistent and relatively high (among the top 15 fastest growing countries in Africa) over the past 10 years. According to the World Bank, the country has seen moderate growth of GDP (4-5% annually) over the past two decades, but poverty rates remain high. At the time of appraisal, the country had a per capita income of US\$690 (Atlas method, 2008) putting it in the lower income group of countries with over 37% of Beninese living below the poverty line: this rate is currently over 40% (2015).<sup>1</sup> Benin's economy relies heavily on agriculture (25% of GDP) and between 45-55% of the country's population is employed in the sector, particularly in rural areas (the majority) of the country.

2. At appraisal, the country's strategic approach to improving growth and reducing poverty focused on: attracting foreign investment; investing in the development of food and agricultural product processing; further developing information and communications technology; and increasing emphasis on tourism. It is within this context of increasing diversification and enhancing economic growth through tourism, along with conservation concerns for the Northern Benin Savannah, that the project was developed. This emphasis on developing the tourism sector required, *inter alia*, sustained management of protected areas to promote nature-based tourism, such as game viewing, particularly in the existing Savannah National Parks as well as for potential future protected parks and forests.

3. Benin's Savannah National Parks are the Pendjari Biosphere Reserve (commonly known as Pendjari National Park (PNP)) and W National Park (PNW). The two largest national parks in Benin, PNP and PNW, along with three contiguous hunting areas, cover a total surface area of 4,865 sq mi (12,600 km<sup>2</sup>) equal to about 11% of the country's total area. The two national parks and hunting zones cover 40% of a contiguous transboundary Protected Areas network called "W-Arly-Pendjari" (WAP, 13078 sq mi (33,871 km<sup>2</sup>)) shared with Burkina Faso (36%) and Niger (24%). In addition to important bird, plant, invertebrate and small vertebrate species, the area is home to significant populations of large herbivores and their predators. Among the important threatened large mammal species are leopard, korrigum antelope and spotted hyena. The PNP has also recorded observations in recent years of cheetah and African wild dogs. The WAP is the most significant range area for elephant conservation in the entire West African sub-region and the WAP complex is considered to be one of the most important wildlife areas and largest intact and functioning ecosystems left in all of West Africa.

---

<sup>1</sup> Latest available data for poverty rates is 2015.



4. The population in the seven districts surrounding the two National Parks is approximately 450,000 and most communities adjacent to the parks, as in the rest of Benin, rely on agriculture for their livelihoods. Biodiversity conservation in both the PNP and PNW has been threatened by numerous factors, including: (i) a limited technical capacity and weak and poorly organized institutions for park and wildlife management; (ii) widespread antagonism between local communities and forest guards in and around the protected areas; and (iii) poor control of poaching and grazing. To address these issues, the Government of Benin created in 1996 the National Center for Wildlife Management (CENAGREF) under the Ministry of Environment and Nature Protection. In 1998, CENAGREF drafted an Action Plan for the conservation and management of national parks that led to the development of the National Parks Management and Conservation Program (PGCPN) aiming to conserve the biodiversity in PNP and PNW and their adjacent hunting areas and buffer zones. The PGCPN's key achievement was a rapid recovery of wildlife populations in the PNP and PNW. The GEF and World Bank were both actively engaged in the implementation of the PGCPN from 2002 to 2007 along with the European Union, and the Dutch, French and German Governments.

5. Prior to the start of the project, pressure from human activity on both Park "W" and Pendjari National Park was significant, with poaching, agriculture and grazing causing the most significant impacts. CENAGREF, charged with managing both parks, had limited capacity at both the central and decentralized levels. In addition to this lack of management capacity, the Parks also suffered from a funding gap, as despite regular contributions from the public budget, and revenues from tourism and sport hunting, these funds were not sufficient to meet surveillance and other management costs for the parks. This combination of a limited capacity for management of lands and wildlife and inadequate financing, together with widespread antagonism between local communities and forest guards in and around the protected areas was proving to be a devastating combination for the biodiversity in the Parks, and as a consequence for the fragile Northern Benin Ecosystems as a whole. Despite the progress made under PGCPN, additional work was needed in order to deal with the challenges which continued to face the park and to ensure: long-term sustainable financing for park management and proper implementation of management plans; support to the parks' adjacent communities; and safeguarding of the achievements of PGCPN and to continue operational and technical support to CENAGREF until the long-term financing mechanism was established and operational.

6. The Bank's experience under the PGCPN, along with considerable experience in supporting countries to establish Conservation Trust Funds (e.g., Uganda: Protected Area Management and Sustainable Use project, 1997-2010) meant the Bank was well positioned to assist the country in meeting its objectives under the project. In addition, the project aligned well with the country's 'higher level' development objectives, including the Country Assistance Strategy (2009-2012) and later the Country Partnership Strategy (CPS) of 2013-2017.

### **Theory of Change (Results Chain)**

7. The project's theory of change is illustrated in figure 1 (page 8). The project focused on investments in management coordination between the Pendjari and Park 'W'; strengthening fiduciary and management capacity of CENAGREF General Directorate/*Direction Generale* (CENAGREF-DG); strengthening operational management capacity



of the Directorate of Pendjari National Park (DPNP) and the Directorate of 'W' National Park (DPNW); developing and implementing alternative income generating projects for adjacent communities; and creating an enabling environment for the creation of a long-term financing mechanism for biodiversity conservation. With these investments, the project strove to establish (i) the necessary management capacity to “enhance protection of biodiversity in Northern Benin Savannah Ecosystems through conservation measures “ (PDO1); (ii) to improve surveillance and create opportunities for adjacent communities in order to ‘enhance protection of biodiversity through reducing human pressure on parks (PDO 2); and (iii) to allow for the establishment of a long-term financing mechanism to ensure the safeguarding of management of these biodiversity resources over the long term (supporting PDO 1 &2).

8. The first objective of the project was to “enhance protection of biodiversity in Northern Benin Savannah Ecosystems **through conservation measures.**” The project design includes significant investments in improved capacity of existing government institutions (CENAGREF-DG, DPNP and DPNW) and of community-based organizations (CBOs) (Village Associations for the Management of Wildlife Reserves/Associations Villageoises de Gestion des Réserves de Faune – (AVIGREF)) to improve implementation of management plans and enhance conservation measures, such as improved ecological monitoring, communications strategies, and infrastructure enhancement. The second objective of the project was to “enhance protection of biodiversity in Northern Benin Savannah Ecosystems **through reduced human pressure on parks.**” To achieve this objective, the project design focused on a two-pronged approach of enhanced surveillance to reduce poaching and investments in income generating activities in communities’ adjacent to the parks in order to provide alternatives to unregulated and unsustainable use of parklands and resources. These investments, along with increased capacity of CBOs and enhanced communications programs, also worked to improve relations between communities and park management and decrease conflict. The long-term sustainability of outcomes from these activities would be further ensured through establishing and operationalizing a fully endowed Conservation Trust Fund<sup>2</sup>.

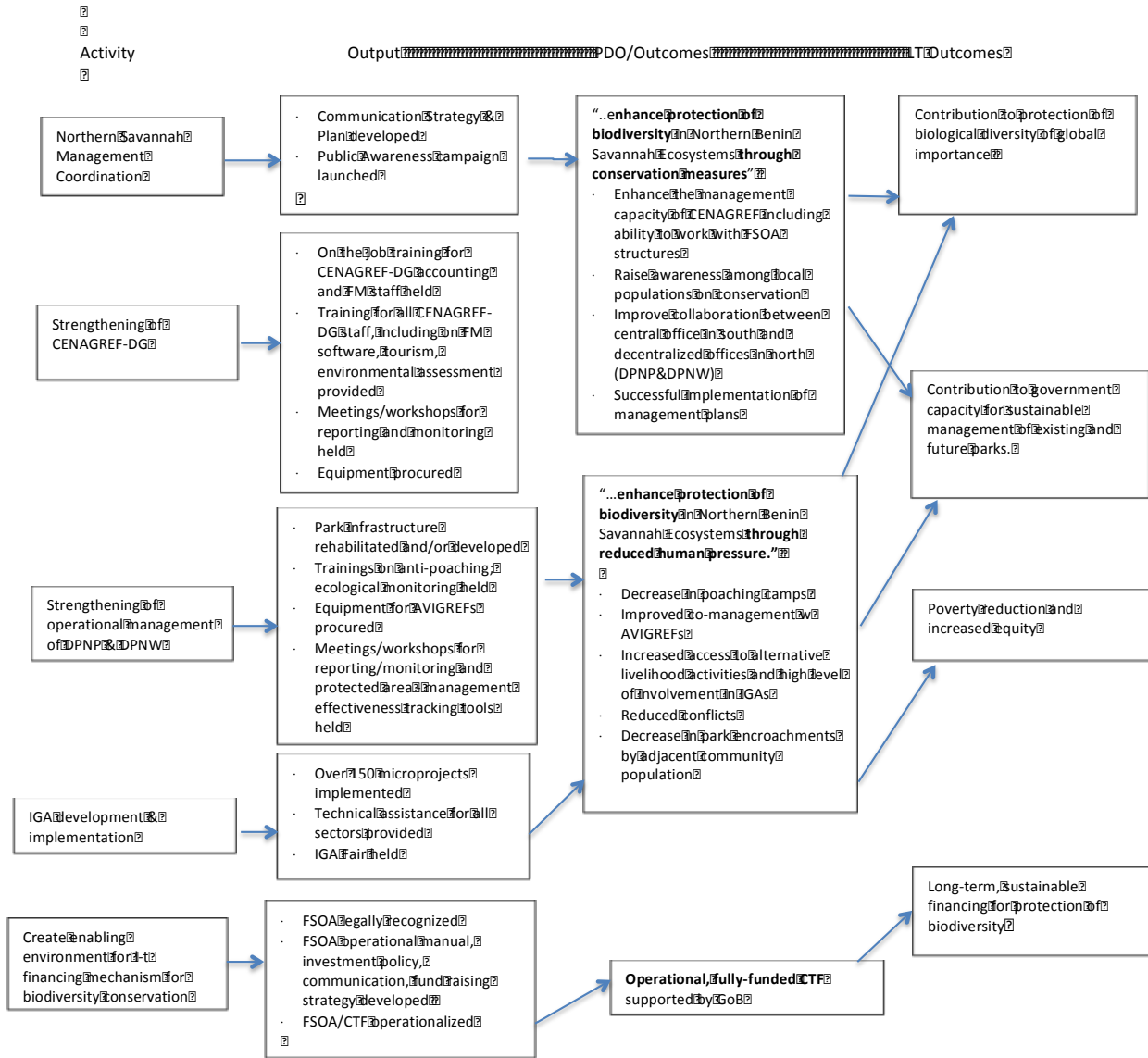
9. The approach required both behavior change as a result of interventions and a high level of commitment from government for creation of the Conservation Trust Fund. Through achievement of the objectives, the project created lasting change through strengthened management capacity, behavior change among communities through awareness raising and income generation, reduced conflict due to a stronger role for AVIGREF, and improved infrastructure and wildlife numbers which in turn improved the parks’ ability to draw higher returns from tourism, ultimately increasing the budget for recurring costs. This, along with the Conservation Trust Fund, ensured adequate budgets for biodiversity conservation, management and sustainable use of the protected areas in the long term.

---

<sup>2</sup> The CTF was established in 2012 as a UK foundation, The West Africa Savannah Foundation/Fondation des Savannes Ouest Africaines (FSOA) supported by the World Bank, GEF, and the German Government through KfW.



**Figure 1: The Results Chain**



## Project Development Objectives (PDOs)

10. The Project Development Objective (PDO)/Global Environmental Objective (GEO) is: to enhance protection of biodiversity in the Recipient’s northern savannah ecosystems through conservation measures and by reducing human pressure on parks.<sup>3</sup>

## Key Expected Outcomes and Outcome Indicators

11. At the appraisal stage, the project had one overall outcome and two associated outcome indicators.

**PDO Outcome: enhance protection of biodiversity in the Recipient’s northern savannah ecosystems through conservation measures and by reducing human pressure on park**

*PDO Outcome Indicator #1: PNP METT score has increased from 85 to 96 points.*

Baseline (2011)	YR 1	YR 2	YR 3	YR 4	YR 5	Frequency
85	85	87	89	91	93	Annual

*PDO Outcome indicator #2: PNW METT score has increased from 68t to 76 points*

Baseline (2011)	YR 1	YR 2	YR 3	YR 4	YR 5	Frequency
68	68	70	72	74	76	Annual

12. Within the overall expected outcome of enhanced protection of biodiversity the project has two additional subsidiary outcomes related to protecting biodiversity “through conservation measures” and “by reducing human pressure on the parks.” Outcome indicators at appraisal, namely the increase in METT scores were linked specifically to the overall objective of enhanced biodiversity protection. These indicators were revised at restructuring to include

<sup>3</sup> This is the official PDO as listed in the Financing Agreement dated June 7, 2011. The wording used throughout the project and included in the Operations Portal is: “to enhance protection of biodiversity in Northern Benin Savannah Ecosystems through conservation measures and by reducing human pressure on parks.” In the remaining portion of the report “the recipient’ will be referred to as Benin.



additional indicators for achievement of outcomes on conservation and reduced pressure on parks. (See paragraph 15 “Revised PDO indicators). Thus improvement of the CENAGREF management capacity, notably in financial matters as well as improvement in the overall management capacity of the two park directorates and resulting improvements in population numbers for key wildlife species were linked to the PDO indicators regarding improved PA-METT scores. In addition, a reduction in the human pressure in the parks through supporting the implementation of IGAs in adjacent territories to the parks and improving management to reduce poaching linked to revised PDO indicators on benefits for targeted beneficiaries (including a specific target for women) and reduction of poachers’ camps in both parks.

## Components

13. The project had three components<sup>4</sup>:

### 1) Support to CENAGREF management capacity

**(Estimated:** US\$ 5.30 m of which GEF US\$1.8 m; IDA US\$3.5 m); **Restructuring:** US\$5.65 m; **Actual:** US\$6.13 m)

Sub-component 1a - strengthened capacity of the CENAGREF-Direction Generale to coordinate and harmonize park management activities in Northern Benin; conduct feasibility studies; and strengthen fiduciary capacity. **(Estimated:** US\$0.59 m of which GEF US\$0.27 and IDA US\$0.32; **Restructuring:** Unchanged; **Actual:** US\$1.07 of which GEF US\$0.46 m and IDA US\$0.61 m)

- Sub-component 1b – strengthened operational management capacity of the CENAGREF decentralized units (Direction du Parc National de la Pendjari (DPNP) and Direction du Parc National W (DPNW) including small-scale rehabilitation of infrastructure (park roads, viewing platforms and park entrances); incremental salaries for contractual staff (non civil servants) responsible for poaching control and ecological monitoring; purchase of equipment for park management activities. **(Estimated:** US\$3.81 m of which GEF US\$1.53 and IDA US\$2.28; **Restructuring:** Unchanged; **Actual:** US\$2.86 m of which GEF US\$1.23 m and IDA US\$1.63 m)
- Sub-component 1c - ensure timely and effective implementation of project activities and effective monitoring and evaluation (i.e., Project Management and M&E) **(Estimated:** US\$0.90 m IDA; **Restructuring:** US\$1.5 m IDA; **Actual:** US\$2.20 m<sup>5</sup> IDA)

<sup>4</sup> Total project costs at Appraisal were US\$6.90 m and US\$7.11 at closing due to fluctuations in the exchange rate.

<sup>5</sup> The increase in costs listed under 1c includes (i) addition of an external PIU not originally envisioned in the PAD; and (ii) payments of CENAGREF and PIU expenditures related to monitoring and evaluation. While the issue of the need for increased costs for M&E was addressed at Restructuring, the increase in Category 2 funding did not fully resolve the issue.



- 2) Development and implementation of Income-Generating Activities (IGAs) for communities adjacent to the Savannah National Parks (**Estimated:** US\$1.5 m IDA; **Restructuring:** US\$1.15 m IDA; **Actual:** US\$0.91 m).

The objective of the component was to support the development and implementation of IGAs for local communities with the aim of reducing human pressure on the parks.

- 3) Creation of an enabling environment for a long-term financing mechanism for biodiversity conservation (**Estimated:** US\$ 0.50 m (of which GEF US\$0.10 (and KfW US\$0.40 m, parallel financing)); **Restructuring:** Unchanged; **Actual:** US\$0.070 m of GEF funds).

The component financed technical assistance to create an enabling environment for the establishment and operationalization of a Foundation that would manage a Conservation Trust Fund to ensure long-term financing of the core recurrent costs of the Northern Benin Savannah ecosystems management plans and ensure that parks integrity is maintained across the existing network after project closure.

**B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)**

**Revised PDOs and Outcome Targets**

- 14. The PDO remained the same throughout the project.

**Revised PDO Indicators**

- 15. The project completed a Level 2 restructuring June 6, 2016 and made the following changes related to the PDO-level indicators:

(i) Slight revision in wording of two existing PDO-level indicators on GEF PA METT for both PNP and PNW for clarity and to remove specific numeric targets from the indicator itself;

PDO Indicator (Original)	Revised PDO indicator
Scores from Protected Area-Management Effectiveness Tracking Tool (PA-METT) have increased from 85 to 93 points for Pendjari National Park	<i>PA-METT score for Pendjari National Park</i>
Scores from PA-METT have increased from 68 to 76 points for 'W' National Park.	<i>PA-METT score for W' National Park</i>

(ii) Addition of the following five PDO-level indicators (for a total of 7), including three ‘mandatory or applicable core sector indicators (see table below);

New PDO Indicators	Rationale for Change
1.Areas brought under enhanced biodiversity protection	Applicable core sector indicator.
2. People in targeted forests and adjacent communities with increased monetary or non-monetary benefits from forests	Applicable core sector indicator.
3. “Poachers” camps in PNP	This is a proxy indicator to capture specifically the aspect of the PDO related to reducing human pressure in Pendjari National Park
4. “Poachers” camps in the PNW	This is a proxy indicator to capture specifically the aspect of the PDO related to reducing human pressure in “W” National Park
5. Direct project beneficiaries, of which female’	Mandatory core indicator

(iii) Revision of intermediate indicators

- a) Four intermediate indicators with weak link to achievement of PDO were dropped; and
- b) Two intermediate-level indicators under Component 1: Support to the National Center for Wildlife Management related to improvement of key wildlife species were revised (creating 3 separate wildlife indicators for each park), including updating of baseline and targets. (See Annex 1a: Revision to the Results Framework.)

## Revised Components

16. The original components were maintained with some adjustments made to Components One and Two, which did not materially impact the achievement of the PDO. Activity 2 under Component 1, “Conduct feasibility studies to determine what conservation measures and other actions that might be taken by the Government to improve the current status of selected classified forest reserves in Central and Southern Benin,” was removed from the project as it was determined that the studies had been previously financed under an African Development Bank project. Under Component 2 a study on the impact of IGAs on beneficiary communities’ livelihoods and subsequent reduction of human pressure on the parks was added. Project costs for Component 1, “Support to the National Center for Wildlife Management (CENAGREF) budget increased from US\$5.3 million to US\$5.65 million in order to provide additional support for project management, including the financing of a newly proposed study on outcomes from IGA





implementation; and Component 2, “Development and Implementation of Income Generating Activities” budget was decreased from US\$1.5 million to US\$1.15 million.

### Other Changes

17. Other changes made during restructuring were:

- (i) an extension of the project closing date by 12 months, from December 15, 2016 to December 31, 2017;
- (ii) a reallocation of funds by category (See table below).

Categories		Allocation in US\$	
Current	Revised	Current	Revised
Category 1: Goods, Consultant Services and Operating costs under Parts A1 & A2 of the project	Category 1: Goods, Consultant Services and Operating costs under Parts A1 & A2 of the project	4,400,000	4,000,000
Category 2: Goods, Consultant Services, Training and Operating costs under Parts A3 & B(i) of the project	Category 2: Goods, Consultant Services, Training and Operating costs under Parts A3 & B(i) of the project	1,100,000	1,650,000
Category 3: Sub-grants for goods, Consultant Services, and Works under part B(ii) of the project	Category 3: Sub-grants for goods, Consultant Services, and Works under part B(ii) of the project	1,300,000	1,150,000
Category 4: Consultant Services under Part C of the project	Category 4: Consultant Services under Part C of the project	100,000	100,000
<b>Total</b>		<b>6,900,000</b>	<b>6,900,000</b>

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

18. The changes to the restructuring were instituted primarily to: (i) ensure better alignment of project result indicators to the PDO; (ii) extend financial support to core recurrent costs of the Northern Benin Savannah ecosystems until the conservation trust fund was established and fully functional; and (iii) to enhance the sustainability potential of income generating activities developed and implemented by adjacent communities in order to reduce human pressure on the Benin Northern Savannah ecosystems, through increased and extended technical assistance to these communities. These changes had no implication on the original Theory of Change, but rather positively enhanced the ability for the project to monitor progress, safeguard that progress and to



improve the functioning of IGAs thus potentially creating a greater reduction of human pressure on the parks.

## II. OUTCOME

### A. RELEVANCE OF PDOs

**Rating: High**

#### Assessment of Relevance of PDOs and Rating

19. The project's PDO remains highly relevant to Benin's current strategic approach to sustainable growth. A key results area within Benin's Country Partnership Strategy of 2013-2017 (CPS) is "Improved Natural Resources Management" (Results Area 2.6 under Pillar I: Increasing sustainable growth, competitiveness and Employment) which focuses on improving the country's ability to better and more sustainably manage its natural resources as an underlying requirement for sustainable economic growth. The PDO's first objective of "enhancing biodiversity protection through conservation measures" requires a focus on strengthening government capacity (both central and decentralized) for management of natural resources within the Northern Savannah parks (e.g., improved species monitoring, improved management plan implementation, and strengthened fiduciary management), along with building capacity for management of future protected areas elsewhere in the country. This focus on strengthened capacity is directly in line with the CPS' overall Foundation Pillar of "Strengthening Governance and Public Sector Capacity," to directly impact improved natural resource management. This 'conservation' element of the PDO also addresses stated concerns of the country with regard to its deteriorating resources and the growing effects of climate change.<sup>6</sup> The PDO's second objective of "enhancing biodiversity protection through reduced human pressure on parks" is also in line with Pillar I particularly in relation to increasing employment, given the emphasis on promoting alternative employment and livelihoods through support for income-generating activities. Finally, the PDO's overall objective of biodiversity protection supports the potential for growth in the tourism sector and diversification of the economy. Tourism has been identified as a long-term potential source for growth in the country's long-term strategic vision through 2025 and supported by the World Bank through training and other programs.<sup>7</sup> In addition, the country's recently finalized Country Partnership Framework of 2018-2022 looks to support the country in reaching its development objectives through focusing on more effective employment of its human and natural resources, and geographical advantages, in ways that are sustainable and inclusive. These goals are also supported by the PDO, particularly through its emphasis on strengthening of conservation of biodiversity for future growth.

20. In addition to its current relevance, the PDO was originally formulated in line with the Benin National Environmental Action Plan (2001); the National Biodiversity Strategy and Action Plan (2002) both of which identify biodiversity conservation and sustainable use as a national priority. It is consistent as well with the Government Poverty Reduction Strategy Paper and Growth Strategy for Poverty Reduction (2007-2009), which also highlight conservation of biodiversity as a national priority. The project aligns with Pillar 5 of the Country Assistance Strategy (2009-2012) - "promoting balanced and sustainable development" through greater territorial equity, as a means of protecting the environment, and sustainable management of natural resources", including biodiversity conservation. The PDO is also in line with the GEF's Strategic Program for West Africa

<sup>6</sup> FY13-17 Country Partnership Strategy for the Republic of Benin. (March 2013), p. 15

<sup>7</sup> Ibid. pp 11,22.



under the sub-component on biodiversity as well as the global agenda for biodiversity conservation as outlined in Agenda 21. Benin has been a party to the Convention on Biodiversity since 1994 and the PDO supports the country's National Biodiversity Strategic Action Plan/*Strategie et Plan d'Action pour la Biodiversite*, 2011-2020, particularly with regard to the key areas of: communication and awareness-raising of stakeholders to build commitment to action; conservation of ecosystem resources and the strengthening of biodiversity potential; and biodiversity planning, monitoring and evaluation, knowledge management and capacity-building. The objective of biodiversity conservation in the Northern Savannah of Benin thus supports both the local need for the protection of resources to safeguard and improve livelihoods and improve resilience as well as the need to conserve and maintain genes, species, ecosystems and their services as a global good.

21. Given its conservation value, alignment with country and WB strategies, the involvement of other development partners and its alignment with global environmental objectives, the continued relevance of the PDO is rated as high.

## **B. ACHIEVEMENT OF PDOs (EFFICACY)**

### **Rating: Substantial**

#### **Assessment of Achievement of Each Objective/Outcome**

22. The project's two main objectives were to enhance biodiversity in Northern Benin Savannah Ecosystems through (i) conservation measures and (ii) by reducing human pressures on parks. While the project has only one overall expected outcome, "enhanced biodiversity in Pendjari and 'W' national parks," this section will assess the achievement of this outcome in the context of the 'conservation measures' and 'reduction of human pressure' achieved by the project.

23. Prior to the project both Pendjari and 'W' national parks were under considerable threat and as such the biodiversity of the Northern Savannah ecosystem, as well. Despite improvements made under the PGCPN project, human pressures, e.g., due to poaching, agriculture, livestock grazing, as well as limited technical capacity for park and wildlife management, including surveillance and monitoring, conflicts between eco-guards and community members, and lack of conservation awareness continued to threaten biodiversity. The public budget and revenues from tourism (even after some PGCPN-related improvements) were still insufficient to provide adequate, sustainable financing to the parks. The project was designed to effect positive change through activities that would enhance conservation efforts and their effectiveness, address human pressures through creating and implementing alternative income-generating activities for members of adjacent communities and by supporting the creation and operationalizing of a Conservation Trust Fund for sustainable financing in order to meet its overall objective of enhancing biodiversity in the country's Northern Savannah Ecosystem.

24. Looking first at conservation (PDO1), the project undertook a range of activities that resulted in outcomes to directly enhance biodiversity in the two parks. Activities such as enhancing CENAGREF's capacity both in its central unit (DG) and decentralized units (DNP and DPNW), included for the DG acquisition of new staff (communications, accounting), new financial management software, and extensive training, both on-the-job and specialized training in financial management, procurement, monitoring, environmental assessment, and tourism development. In addition, the PIU was established within CENAGREF to ensure additional capacity



building and support throughout project implementation. Capacity at the park level (DPNP and DPNW) was improved through significant investments in park infrastructure including maintenance of secondary tracks essential for successful surveillance. Surveillance was also enhanced through training in PA-METT methodologies and transect (KAI) methods with GIS monitoring support. Park rangers were also supported with increased payments for surveillance missions and expansion of overall days in the field.

25. Resulting changes from these actions with regard to DG capacity allowed for the formulation and implementation of a multi-media communications strategy and increased efficiency and efficacy of staff, particularly in financial management and monitoring and evaluation, as evidenced by improvements in reporting and monitoring as well as increased collaboration between PNP and PNW.<sup>8</sup> At the level of operational management of the parks and capacity of the park directorates, the following actions improved conservation within the parks in: (i) the implementation of infrastructure improvements (undertaken with communities (AVIGREFs)), particularly the expansion of tracks; (ii) establishing the IKA methodology and provision of training and equipment; (iii) support for AVIGREF/community participation in conservation and management; and (iv) support (financial and technical) for increased surveillance both in terms of number of missions and person days. By the last two years of the project, these measures allowed for the two parks to be fully covered by patrols. In 2017, surveillance in both parks had exceeded expected person days in the field (as per the annual work plans) by 270% for PNW and 133% for PNP showing a marked increase from the previous year. Meetings and contracting work with AVIGREF had reduced conflict despite the increase in patrols. Resulting improvements in biodiversity as a result of these enhanced measures were shown in the increased numbers of all key wildlife species to numbers greater than expected at the start of the project:

- a) Kilometer abundance index of wildlife in Pendjari National Park, Buffon Kob. Achieved. 500 kob/100 km, from 416 in 2011.
- b) Kilometer abundance index of wildlife in Pendjari National Park, Buffalo. Achieved. 208 buffalo/ 100 km, from 142 in 2011.
- c) Kilometer abundance index of wildlife in Pendjari National Park, Roan Antelopes. Achieved. 42 roan antelope/ 100 km, from 37 in 2011.
- d) Kilometer abundance index of wildlife in Park W, Buffon Kob. Achieved. 14 kob/100 km.
- e) Kilometer abundance index of wildlife in Park W, Buffalos. Achieved. 54 buffalo/100 km.
- f) Kilometer abundance index of wildlife in Park W, Roan Antelopes. Achieved. 74 roan antelope/100 km.

26. Data on the wildlife and conservation indicators were collected under the context of the METT through established methodologies (and vetted during project development) implemented by CENAGREF through its decentralized units of the Directorate of Pendjari National Park (DPNP) and the Directorate of 'W' National Park (DPNW). Data was collected by park ecoguards and reported on regularly through surveillance reports.<sup>9</sup>

---

<sup>8</sup> "Rapport Annuel d'Avancement et Rapport Final du Projet," Ministère du Cadre de Vie et Développement Durable. République du Bénin,, February 2018.

<sup>9</sup> The Kilometric Abundance Index (IKA) collection method consists of a series of transects determined per park, once a month during a six-month period from January to June, always at the same times (from sunrise until 2.5 hours later) and at the same constant speed (3 hours). km / h). Each transect must be traveled by a team of at least 2 people for observation. In case indirect cues are found a third person is needed. To collect more information and ensure greater precision, along the same routes (transects) used for the calculation of the IKA, teams can simultaneously identify Indirect Kilometer Indices (IKi), by identifying traces, vocalizations and scat. Counts are made along the path of the transect. Observations made upon return are not taken into account. However, inclusion of flagship or rare species is recommended, even on return trips. After each two-week collection mission, the data is integrated into an Excel workbook. Sorting is done by target species. By species and type of



27. In addition to improvements in wildlife numbers, 1,020 km<sup>2</sup> was brought under enhanced biodiversity protection exceeding its target (Target - 1017 km<sup>2</sup>). Finally, the parks' PA-METT scores increased over the life of the project (exceeding their targets) showing an improved capacity for conservation management and a concomitant protection of biodiversity. The PA-METT was first developed under the WWF-World Bank Alliance for Forest Conservation in order to simply and effectively measure management effectiveness within protected areas. It was designed primarily to track progress over time at a single site and to identify actions to address any management weaknesses; rather than to compare management between different sites. The highest score possible is 99. A range of categories considered necessary for effective protected area management are graded from 1 to 3 depending on the level of effectiveness and then tracked and assessed for progress in each year of project implementation. Typically the PA-METT covers 30 questions on topics ranging from a protected area's legal status to demarcation of park boundaries to staff training and work with local communities.

28. In the case of Pendjari and Park 'W,' the particular PA-METT scores reflected progress and improvements specifically in the following categories (out of 30) from the start of the project to closing<sup>10</sup>: protected area regulation; law enforcement; research; staff training on PA management; management of budget; education and awareness raising; indigenous peoples issues addressed; local communities involved in co-management; economic benefits shared with local communities; visitor facilities; and commercial tourism operators. As an example, progress with regard to visitor facilities (category 24 under the PA-METT) was significant in the last year of the project due to finalizing reconstruction of game viewing platforms in both parks, repair and reconstruction of hotel facilities under the aegis of the Ministry of Tourism in Pendjari National Park, and successful partnerships in Park 'W' between tourism operators (notably the promoter of the Koudou Falls ecotourism site supported by the project) and park management. The overall increases in PA-METT scores (PDO indicators i and ii) in both parks (from 85 to 95 in PNP and from 68 to 77 in PNW) reflect on-the-ground improvements in management capacity and ability to maintain and improve conservation within the parks (Objective 1).

29. With regard to working to reduce human pressure on the parks (PDO2), the project focused on both improving surveillance (as shown above) and improving livelihoods in communities through the creation and implementation of income generating activities. Project design looked to this two-pronged approach to enforce park boundaries and resource use while at the same time providing alternatives to poaching, agriculture and livestock grazing which negatively affected biodiversity within the protected areas. (Conservation actions and reductions in human pressure go hand in hand and thus the improved capacity of the DPNP and DPNW and AVIGREF are reflected in the achievements with regard to reduction of human pressure, as well.) While it can be challenging to assess the effectiveness of IGAs in creating behavior change among participating populations, Interviews with participants in Component 2 of the project, "Development and Implementation of Income-Generating Activities indicate that the IGAs did indeed lessen pressure on the parks along with enhancing livelihoods. (See a sample of participant responses in Box 1.)

---

contact, the calculation of the index number over 100 kilometers is made.

The formula is as follows:  $ik = (dy / dx) \times 100$ ; with:  $dy$  = Number of index and  $dx$  = Total distance traveled.

<sup>10</sup> Improvements include any increase in score for a category throughout the life of the project as shown in the final PA-METT synthesis reports (2017).



Box 1: Behavior Change Among IGA participants

*“Before the project, I was a poacher, but after the project and its awareness raising missions, I abandoned poaching activities.” Yarou Adamou*

*“Before I started my enterprise, I would go looking for wood in the park, but now with the pigs I’m raising, I don’t go into the park anymore.” Banni B. Bignon Doumoré*

*“Before I would go into the park to take Baobab leaves, but now I don’t have time to do that any longer. I’m too busy with the arachide (groundnut) IGA.” Abdoulaye Abibath*

Tchale Gado used to sell charcoal from the park, but now is a beekeeper and no longer sells charcoal. He is convinced that many more people will want to begin beekeeping like him. *“I want to teach other people, those who are interested in unregulated activities in the park to do something else, like beekeeping.”*

(Source: Lopez Villar, J. 2018. Evaluation Report of IGAs First & Second Generations: Support for Protected Areas Management Project)

30. The project also responded to higher than expected demand for IGAs and funded a second generation of IGAs, ultimately exceeding its target for projects in communities adjacent to both parks. Diversification of livelihoods away from agriculture and larger scale livestock raising/grazing was achieved through support to a range of alternative microenterprises from food processing (e.g., garri production) (also supported by the country’s CPF) to bee keeping and raising of small livestock such as rabbits and chickens. Efforts to provide sustained training and technical assistance throughout the project, as well as working with CBOs in identifying sectors and participants, and success in increasing incomes (see Efficiency section) contributed to the component’s effectiveness and is expected to improve long-term viability of the enterprises. In addition the significant impart from directly benefitting adjacent communities in this way, the project also significantly reduced the number of poaching camps in the park through increased improved infrastructure, training and staff and patrol numbers. The following results targets (related to Objective 2) were met or exceeded under the project:

- a) People in targeted forest and adjacent communities with increased monetary and non-monetary benefits from forests: 81 families have increased monetary and non-monetary benefits; Target – 50 families.
- b) Direct project beneficiaries, including % women: 2,926 direct beneficiaries; Target – 2,840 expected in 2017. The percentage of women is 23% (Target - 18%).
- c) Poacher camps in PNP: Today there are estimated 12 poachers’ camps, down from 47 in 2011 (Target - 15).



d) Poacher camps in PNW: Today there are 20 poachers' camps, down from 45 in 2011 (Target - 15).<sup>11</sup>

31. The positive of Component 3 of the project “to create an enabling environment for establishing a long-term mechanism for biodiversity conservation” was also a major achievement of the project. The project was instrumental in ensuring that the Conservation Trust Fund for management of the two parks under the West Africa Savannah Association/Fondation des Savannes Ouest Africaines (FSOA) became fully operational. The earlier National Parks Management and Conservation Program (PGCPN) project had been unable to achieve this, but under the present project, the government was fully supported throughout implementation in order to develop not only specific legal, regulatory and operational outputs, but to assist in increasing government confidence in the CTF model and supporting the government’s ability to commit to the full process of creating and operationalizing the CTF. The project provided key technical support to the GoB to inter alia: (i) develop by-laws, draft and review articles of association; (ii) facilitate the process of obtaining legal recognition of the FSOA as a public entity in Benin; and (iii) develop all necessary operating manuals, investment policy, communication and fund raising strategies. This work under the project, along with support from the German government through KfW which provided a capital endowment of approximately Euro 22 m, and contributions from the GEF<sup>12</sup> and the GoB, succeeded in achieving a fully operational CTF by project completion. FSOA is now fully operational and funding operations in Pendjari National Park for enhancement of biodiversity with funding for operations in Park ‘W’ expected in 2018. The CTF has also achieved higher than expected interest rate on its endowment capital (8% rather than 5%), which allows for expanded support for recurring costs with the parks.

32. Finally, results achieved through the project, particularly with regard to infrastructure development (e.g., roads, culverts, park entrances), increases in key wildlife numbers, and the operational CTF were all key to the recent agreement by the African Parks Network (APN) an international NGO with experience in rehabilitation and management of parks in partnership with governments and local communities in nine African countries, for the long-term management of Pendjari National Park. Results of the feasibility study on PNP were considered positive by APN in part due to progress made under the project.<sup>13</sup> A new feasibility study on Park ‘W’ is being planned for 2018 and PNW is likely also to move under long-term management of APN. AVIGREF and CENAGREF will continue to partner with APN. This combination of strong long-term management through APN (and AVIGREF), including further increases in the number of ecoguards, along with sustainable financing under FSOA creates a strong likelihood for the continuation of enhanced biodiversity protection and sustainable use in the future for the Northern Savannah Ecosystem.

---

<sup>11</sup> Monitoring in Park W is more challenging, as it is significantly larger with denser forest cover and is also more remote than Pendjari National Park.

<sup>12</sup> The GEF funds, provided through the Forests and Adjacent Lands Management Project – Additional Financing, were sited by FSOA management as key for diversification of funds and allowing for full funding of the CTF.

<sup>13</sup> Interview with Jean Marc Froment, Director, Conservation Development, APN, November 2017.



### Justification of Overall Efficacy Rating:

33. The following elements were key in determining the overall outcome rating: (i) Project targets were met or exceeded for all but two indicators (which still achieved high success rates); (ii) the project was instrumental in establishing and operationalizing the FSOA and Conservation Trust Fund which ensures long-term sustainability of funding of the parks' management plans; (iii) the improvements to infrastructure and park management made under the project provided a positive impetus for African Parks Network (APN) to take over management of Pendjari National Park which significantly enhances long-term sustainability for the park; (iv) the capacity of CENAGREF improved enhancing its management capacity and making it a more able partner of APN; and (v) income generating activities have had positive impacts on both reducing pressure on the protected areas and on enhancing livelihoods of local communities. The project has made a significant contribution to the on-going protection of the Northern Benin Savannah Ecosystems. Overall project efficacy is therefore rated substantial.

### C. EFFICIENCY

**Rating: Substantial**

#### Assessment of Efficiency and Rating

34. The PAD provided formal economic analysis based on a cost-benefit approach, brief financial and with/without project scenario assessment, with the reference to project components and in the absence of a baseline scenario. In addition, a GEF incremental cost analysis was conducted in qualitative terms, estimating the value of the addition of GEF funds to achieve global environmental benefits of the project interventions and outcomes.

35. Project design assumed environmental and economic benefits arising through the improved tourism and conservation activities and agriculture value chain outputs. Since it was difficult to undertake economic valuation, the assessment at the design stage focused on the most measurable economic benefits. It was noted that the country specifics of data collection are a major challenge to standard economic analysis. Although various benefits are identified from the project investment<sup>14</sup>, the analysis assessed increase in household revenues, increase in municipalities' tariffs, increase in direct job creation, and increase in community revenue (AVIGREF).

36. A cost-benefit analysis was performed to determine the economic and financial viability of the project investment, based on the estimated amounts for the components 1a, 1b, and 2, as well as the contribution of the CTF at year 5. This analysis showed that the project was viable: the economic analysis yields a NPV of US\$28.141 million at 12% discount rate, and an ERR above 50% over a period of 20 years.

#### *Cost-Benefit Analysis*

---

<sup>14</sup> Including effect on tourism, job creation and effect on household revenue, land ownership and resolution of conflict, impact on municipalities revenues and improvement of biodiversity conservation



37. Ex-post cost-benefit analysis attempted to evaluate the project economic viability for the whole project and economic analysis of selected components. A sensitivity test is applied for the main parameters. A 20-year period is assumed in assessing the economic feasibility of the project. The project generated various economic benefits, including: (i) direct measurable benefits from the income-generating subprojects (activities, or IGAs); (ii) an operational conservation trust fund<sup>15</sup>; (iii) tourism and its related taxes and fees; and (iv) indirect, intangible benefits. Tourism growth was affected by the security situation in Mali and Niger during 2013-2016, therefore the expected growth and revenue did not materialize. Hence, the economic analysis was conducted with and without revenue and taxes accounted for tourism development.

38. Indirect benefits of the projects are: (i) the improvement in the public administration; (ii) benefits to the biodiversity of the Northern Benin ecosystem as a result of improved management of the protected areas of Pendjari and “W” national parks; (iii) and carbon sequestration. Deforestation in the protected areas (and the associated official hunting zones) in Benin have the lowest deforestation rates of forested areas from 2007 through 2016, 0.04% compared to an overall rate of 2.66% for the country overall.<sup>16</sup>

39. Given the challenges in measuring monetary value of the benefits to the whole range of the benefits generated by the project, only specific benefits were included in the ex-post economic assessment.

Table 2: Economic Analysis - Summary of Results

	Medium income level, 210,000 FCFA/year		High income level, 400,000 FCFA/year		High performers, average income level 700,000 FCFA/year	
	ERR%	BC ratio	ERR, %	BC ratio	ERR, %	BC ratio
Discount rate 5%						
Component 2 IGAs	n/a	0.84	3.5%	1.61	16.9%	2.01
Components 2 and 3, IGAs and CTF	19.9%	4.19	25.3%	4.59	high	high
Project, benefits IGAs, CTF and tourism revenue	7.7%	2.16	9.4%	2.26	11.9%	2.4

40. The ex-post economic efficiency analysis conducted for the project confirms the assumption made assumed at the design stage of positive economic impact: at the medium income level ERR is 7.7%, benefit/cost ratio is 2.16, and NPV at US\$25.7 million. Analysis emphasized that benefit assumptions benefit assumptions at appraisal remained and were reassessed at closure, and were done using lower-bound values of associated benefits attributed to the project, justified by the absence of specific data on income and operational costs for individual income generating activities<sup>17</sup>, and tourism revenues affected by the security situation in the neighboring countries. (Details of cost-benefit analysis are provided in the Annex 4).

<sup>15</sup> US\$800,000 interest income generated by the contributions from GEF (US\$0.9 million) and KfW (US\$31.8 million) between 2015-2016

<sup>16</sup> Analyses des tendances de la dynamique forestière au Bénin entre 2007 et 2016,” Deffry, I. 2018. Unpublished note on Benin Forestry Sector

<sup>17</sup> Assumptions of IGAs revenue and income are based on reported data on revenues to date collected during interviews for the socio-economic assessment report conducted at the project closure.



*Cost-Effectiveness.*

41. Based on the results reported in the ISRs, on discussion with project staff, evaluation reports<sup>18</sup> conducted under the project, and research provided by the project team, ICR analysis finds that the project completed the majority of its objectives with insignificant delay and within budget.
42. Comparison to the other projects in the Sahel region with similar components demonstrates that the cost of the improved protected area management per ha is compatible with other investments (and at the low end of cost/ha) (see below).

Table 3. Comparative analysis of cost-effectiveness

Project name	Consolidated table	Area under PAM, ha	Relevant component cost, US\$ million	Cost per ha, \$/ha under the project
Benin, Support to the PAM project	Total area under Parks Pendjari and W, ha under improved PAM, ha	1,260,000	5.3	4.2
Gabon: Strengthening Capacity for Managing National Parks and Biodiversity	Area 3 national parks with improved PAM, ha	700,000	8.56	12.2
Burkina Faso: Partnership For Natural Ecosystem Management Project	Protected areas have legal status and size, ha	220,000	7.5	3.4
Mali, Gourma Biodiversity Conservation Project	Area under conservation	275,200	4.3	11.5

**Implementation Efficiency**

43. The project was implemented in 6.5 years, which is average for the GEF/IDA projects in the region approved after FY2009. The project was extended by a year as a result of delays in implementation caused primarily by changes in the CENAGREF-DG management and parks, as well as delays in implementing Component 2 - Financing of the Income Generating Activities. Despite a Level 2 restructuring, the project was implemented within the original budget. Budgetary support was increased for Component 1 – “Support to the National Center for Wildlife Management” - under the restructuring and reduced for Component 2 on Development of IGAs. Project management cost at appraisal (Component 1c) was higher than similar sized projects - almost 13 percent of the project cost (US\$0.9 million). This was adjusted upwards at restructuring in order to take into account payment of “operating costs related to joint CENAGREF and PIU supervision and monitoring and evaluation missions.”<sup>19</sup> The financial report of the PIU of April 2018 shows an increase from this restructured amount for a total of US\$2.2 m for sub-component 1c. The increased costs were due in part to (i) unexpected cost for a generator due to electricity outages; (ii) additional costs for CENAGREF-DG training due to turnover in staffing; (iii) operating costs not covered by government budget; and (iv) costs of operating the PIU for an additional year due to project extension.

<sup>18</sup> For example, Lopez Villar, J. 2018. Evaluation Report of IGAs First & Second Generations: Support for Protected Areas Management Project.

<sup>19</sup> Restructuring Paper. Support for Protected Areas Management Project, June 7, 2011, p.9.



44. Despite the changed allocations at restructuring (including a reduction in budget for Component 2), the project *expanded* the number of microenterprises by including a second wave of IGAs under Component 2. However, this second wave was not fully funded under the project budget due to confusion in the budget allocation by funding source. In retrospect, the reallocation of funds may have negatively impacted implementation efficiency. (The project has come to an agreement with FSOA and the Ministry of Environment to cover the final tranche of funding for these IGAs.) One of the objectives of the capacity building efforts was to improve capacity of the participants and local government in selecting and implementing income generating activities, which would contribute to reduction of pressure on national parks. As a result of comprehensive selection process involving thorough screening by the environmental and social protection experts, 66 activities out of over 590 proposals were selected for financing under the first wave of grant program. Information and communication activities on the promotion of IGAs organized by project staff, parks management, and reserves in all riparian communities resulted in establishment of over 30 Village General Associations in both parks, which in future might result in greater efficiency in implementation of similar initiatives. The one-year project extension was granted, but many of the indicator targets had already been met, also demonstrating greater efficiency.

45. In summary, it is concluded that the project resulted in significant positive development impacts at an acceptable ERR and with cost effectiveness rates comparable (on the favorable end) to similar projects in the region, and confirming benefits anticipated during the design stage. While sub-component 1c had a lower than average rate of efficiency, overall project efficiency was satisfactory. Taking into account ERR, cost effectiveness and project-level implementation efficiency, the Efficiency rating is Substantial.

#### D. JUSTIFICATION OF OVERALL OUTCOME RATING

**Rating: Satisfactory<sup>20</sup>**

46. Given that: (i) the project's PDO is highly relevant to the current CPS; (ii) project efficacy was rated substantial, as intended development outcomes were achieved, and (iii) project efficiency was rated substantial due to a combination of positive NPV, ERR above 7% and acceptable cost-benefit ratio despite higher than average project management costs, the overall outcome rating is satisfactory. The project has made a significant contribution to the on-going protection of the Northern Benin Savannah Ecosystems.

#### E. OTHER OUTCOMES AND IMPACTS (IF ANY)

##### Gender

47. Consideration of gender inclusion was a key concern for the project, including ensuring the inclusion of targets for women beneficiaries in the PDO-level indicators during restructuring when it became clear that the initial indicators had not taken this into account. By the end of the project implementation period in December 2017 the project had provided direct benefit to 2,926 individuals in the project zone with close to a quarter being women. (23% of total beneficiaries were women, exceeding the initial 18% expected at Project start.) Women's participation in IGAs was

---

<sup>20</sup> The 'split rating method' was not utilized as the PDO did not change and the dropping or adding of new indicators does not trigger a split rating according to "Bank Guidance: Implementation Completion and Results Report for Investment Project Financing Operations," July 2017.



significant, including a number of women's cooperatives being established or expanded. In addition, women, *inter alia*, designed and monitored upgraded infrastructures and facilities for processing activities, led livestock initiatives, and participated significantly in market gardening. Of significant interest with regard to behavior change of both males and females due to women's growing empowerment, local male AVIGREF, members spoke of the growing independence of women in the project area, including the ability of women to inform abusive spouses that if the abusive behavior did not change the women now had the ability to part from abusive spouses and support themselves and their children. Local men said that male behavior was also changing as a result.<sup>21</sup> Women represented more than half (57%) of the total beneficiaries of the project's IGA component (1,238).

### Institutional Strengthening

48. CENAGREF's capacity, which had previously shown some weakness in the area of financial management, was improved under the project through *inter alia*: provision of financial management software; on-the-job and external trainings in financial management, ecological monitoring, monitoring & evaluation of projects, procurement, including in STEP (Systemic Tracking of Exchanges in Procurement), environmental and social safeguards; and increases in staffing. In the Directorates of the National Parks the most significant enhancement of capacity was with regard to ecological monitoring, including the development and training in KAI methodologies, methods of data collection, and provision of monitoring equipment. In addition, the AVIGREF CBOs for both parks were supported with training and provision of equipment for effective participation in the surveillance of the parks. Results of these capacity building efforts were seen in improved functioning of fiduciary, strategic and operational management in the Directorate General of CENAGREF and the Directorates of the National Parks; enhanced capacity for monitoring and co-management with CBOs of both PNP and PNW, as shown by significant decreases in poachers' camps; and improved ecological monitoring of PNP and PNW, as illustrated by ability to track increases in target species by kilometer presence.

49. Support to GoB and FSOA allowed for significant Institutional strengthening that ultimately assisted the CTF to become fully operational, with total capital today of more than €24.2 Million (US\$ 31.8 Million), mainly financed by the German Financial Cooperation (KfW) with additional support from the GEF and the GoB.

---

<sup>21</sup> As reported to ICR author in meetings with AVIGREF, Tanguieta, Benin on February 28, 2018.



## Mobilizing Private Sector Financing

50. The African Parks Network, a private non-profit, which has recently taken over management of Pendjari National Park in partnership with the government and local communities while utilizing funds provided through the Conservation Trust Fund for recurring costs of park management has also leveraged additional funding for enhancing PNP's management through US\$20 million in additional grants from the National Geographic Society. These funds will be used over several years to *inter alia*: restore and rehabilitate degraded park landscapes; undertake new scientific research; further improve on monitoring technology; develop a large-scale conservation plan; and potentially introduce new species, such as rhinos and wild dogs.

## Poverty Reduction and Shared Prosperity

51. Income Generating Activities (IGAs) under the project have contributed to poverty reduction through bringing increased revenue and additional liquidity to beneficiaries.<sup>22</sup> In addition, the project expanded opportunities for expanded market access through development and implementation of the IGA fair<sup>23</sup> organized by the project in Cotonou in November 2017. This provided IGAs with direct access to buyers in the capital at the event itself as well as providing producers (for *garri* (cassava) and honey producers and for two rabbit-raising enterprises) with future contracts and sales with Cotonou-based traders and supermarkets. In addition, the sharing of benefits from park revenues with adjacent communities through the AVIGREF contributes to shared prosperity in the region.

## Other Unintended Outcomes and Impacts

52. Although more research would be needed to confirm the hypothesis, given the statements of several IGA participants that without the additional income from the microprojects they would not have been able to pay school fees, it is possible that there has been an increase in school attendance in the project zone among children of parents working with new or expanded enterprises.<sup>24</sup>

## III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

### A. KEY FACTORS DURING PREPARATION

53. A range of factors during preparation helped to influence the largely positive results during implementation, namely:

---

<sup>22</sup> The full evaluation report on IGAs is electronically filed with the project documents. Lopez Villar, J. 2018. Evaluation Report of IGAs First & Second Generations: Support for Protected Areas Management Project.

<sup>23</sup> 4,500 visitors attended the fair and participants sold all stock creating over US\$40,000 in sales in a three-day period.

<sup>24</sup> Lopez Villar, J. 2018. Evaluation Report of IGAs First & Second Generations: Support for Protected Areas Management Project.



- *Realistic objectives.* The objectives set up in the project were realistic and clear leading to attainable actions and a high-level of achievement of the PDO.
- *Simple design.* Components were clear and the design straightforward. Implementation was facilitated by this design approach as it allowed for all actors, including CENAGREF, PIU, communities and beneficiaries to understand and implement activities well, as illustrated by the high level of success of results indicators.
- *Well-designed results framework.* The results frameworks included adequate indicators aligned with operational objectives and appropriate targets. The framework was further improved during the project restructuring allowing for clearer monitoring of achievement of the PDO.
- *Appropriate Monitoring Plan.* The project monitoring and evaluation system was well-designed and established fairly easily allowing it to fully functional since 2012.
- *Appropriate selection of stakeholders to engage and beneficiary groups and collaboration with Community-based organizations.* Stakeholders were identified early and included in project design and development. In order to adequately perform activities under component 1 and 2, stakeholder engagement was needed at the grassroots levels. The project engaged in solid cooperation with the Village Associations (AVIGREF), to help identify stakeholders, helping to contribute to low conflict during implementation. Project design included involvement of NGOs, private sector associations, and CBOs (AVIGREF) in the technical support committee for the project. In addition, revitalizing or creating Inter-Communal Committees was included to ensure improved co-management of the parks. The project supported capacity building within the Village Associations (AVIGREFs) for both parks with regard to early training on projects, workshops, provision of equipment and technical training to ensure their active participation in park management and project implementation. The Protected Area Management Committee/*Comité de Gestion de l'Aire Protégée* (CGAP) included representation of mayors, presidents of the AVIGREFs, specialized NGOs, and the private sector along with park management to assure stakeholder involvement and improved management of the park and its resources.
- *Adequacy of risk and mitigation measures identification.* The project identified weak capacity in CENAGREF with regard to financial management as a risk up front and worked to mitigate this by establishing the PIU within CENAGREF-DG and also in providing up-front training and additional staffing. While the approach was somewhat successful in mitigating the issue some problems and delays would continue throughout the project, as described below.
- *Readiness for implementation.* The team prepared the environmental and social management framework; environmental assessment documents and resettlement action plan over six months prior to project approval. The team was able to build on the successful implementation of the PGCPN project to help hone design of components, which improved outcomes during implementation. Preparation of the manual for the IGAs took some time to prepare, but proved useful in improving the quality of implementation of Component 2.

## B. KEY FACTORS DURING IMPLEMENTATION

54. The following factors were identified with regard to implementation effectiveness.

- (i) Factors subject to government and/or implementing entities control, included:



- Although interim leadership of CENAGREF and Park Directors was provided during changes, numerous turnovers of Director positions for CENAGREF and the parks' created some difficulties and delays during Project implementation.
- The government transferred management of PNP to APN which will now work together with CENAGREF and communities to ensure sustainable management of Pendjari National Park (and potentially 'W' National Park). This positive step by government directly supports the Government Action Plan's emphasis on moving towards 'sustainable parks.' The likelihood of sustainability is enhanced by bringing on board a seasoned NGO to help ensure high quality, long-term management.
- The government budget for recurring costs in both parks was not extended after project restructuring and the extension of the closing date to December 2017 leading to challenges in meeting the payments for increased surveillance by park rangers<sup>25</sup>. It was determined that meeting these costs was key to safeguarding progress in surveillance coverage made thus far under the project until the CTF could become operational. Unfortunately, due to confusion on the part of the PIU with regard to the percentage requirements on disbursement of funds from the IDA and GEF grants, meeting these costs resulted in the project leaving a remaining commitment of approximately US\$244,000 relating to a financing gap for payment of the second tranche for the second generation of IGAs. Financing for the second tranche will be provided from existing government and CTF funds under a Memorandum with the Ministry (Trustee Authority) and the FSOA.

(ii) Factors subject to World Bank Control, included:

- The Bank TTL remained the same throughout the project implementation period and provided consistent, quality supervision. Continuity of Bank staffing supported a high level of cooperation with the PIU and other partners. Supervision was enhanced by the fact that the TTL had multiple projects in the region so assistance could be provided beyond twice yearly missions. Video conferencing (supported by the CMU) was utilized regularly to follow up on action plans and resolve issues. The Bank was generally proactive in addressing issues with the project team and involved key stakeholders in missions.
- The mid-term review was held in May/June 2015 and identified key issues with regard to implementation, including: additional indicators needed to enhance M&E and tracking of progress towards outcome of the PDO; refining of the IKA counting methodology to ensure accurate reporting on PDO outcomes re: conservation; and commissioning a study on the IGAs to improve new phase of IGA development. The Bank and project team completed a project restructuring to address issues identified at the mid-term review.
- Reporting was consistent and supervision missions proved sufficient for the most part to identify issues and to develop action plans for addressing issues with the PIU and other partners. Compliance with safeguards was assessed regularly and small issues addressed promptly between specialists of the Bank and project team. The supervision missions included all necessary specialists. Financial management, review and audits were completed on a regular

---

<sup>25</sup> A similar delay in counterpart funding for regular patrolling of both parks also occurred prior to the Level 2 restructuring, but was up to date prior to the restructuring.



basis, but some difficulties of the PIU in disbursement based on fund source and category were not identified until late in the final year of the project indicating that perhaps additional or more frequent review may have been necessary during the project's final year of implementation.

(iii) Factors outside the control of government and/or implementing entities, included:

Past terrorist activity in Burkina Faso (and Mali) and in the far North of Benin and activities of *Boko Haram* in Nigeria and the region, created security concerns for the North of the country which negatively impacted tourism numbers during project implementation. Concerns for Pendjari National Park and surrounding areas have dropped somewhat, but areas in Park "W," particularly those close to the Burkina and Niger border are still considered high risk which has negatively impacted certain IGAs, including an eco-tourism site located at *Les Chutes des Koudou* in Park "W."

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

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

Rating: Substantial

#### M&E Design

55. The PDO and results indicators were sufficient to track progress towards the PDO of protecting biodiversity through conservation and the reduction of human pressure on the two parks. While the initial design included only two PA-METT linked PDO indicators the inclusion of the additional indicators at restructuring which focused more clearly on reduction of human pressure made the indicators sufficiently robust. The project monitoring and evaluation system was established and fully functioning from 2012 and the PIU brought in specialized staff to work on M&E. The M&E Specialist was highly qualified and closely monitored both PDO-level and intermediary indicators and regularly updated the M&E system throughout the life of the project.

56. The design of the Monitoring and Evaluation system focused initially on increasing CENAGREF's overall capacity for M&E. As CENAGREF had no Annual Planning process or Logic Framework prior to the project, CENAGREF undertook its Annual Planning Process and Logic Framework development within the context of the development of the project's M&E system. Thus institutional capacity was improved and implementation of these planning tools was initiated for CENAGREF in 2012. In 2013, an M&E Handbook of M&E and at continuing to guide CENAGREF in its support to three projects, namely: Support to Protected Areas Management; *Le Programme d'Appui aux Parcs de l'Entente* (PAPE); and the National Parks project supporting the W, Arly and Pendjari (WAP) joint protected area. The M&E Handbook was validated in December 2013 and helped to support high quality planning, evaluation, management and decision-making throughout the life of the project.

57. The M&E system established monitoring protocols for weekly, monthly, quarterly and yearly reporting. Weekly





monitoring reports were well executed and timely, although other reports under the responsibility of CENAGREF experienced delays. The PIU's workload was at times adversely affected by these reporting delays. Despite the difficulties, the PIU was able to produce effective reports, although at times their submission was delayed. Training and support for surveillance and field work were included in project design.

### **M&E Implementation**

58. Surveillance and overall project M&E was fully supported during implementation through provision of training in the PA-METT, transect (IKA) methodologies, and GIS methodologies as well as supported with funding for additional field surveillance in both PNP and PNW. The surveillance was particularly effective in PNP where coverage areas are smaller and tree cover is less dense; PNW has dense low forest cover making surveillance missions more challenging, but these too improved after infrastructure investments in the park enhanced secondary roads. Improvements in visitor experiences, including increased number of sightings of key species was reported as a result of increased and improved surveillance during the project period.

59. The PIU was responsible for implementing the M&E system, including data collection, e.g., for the ecologic monitoring table and the abundance index. Under the project a data collection system was established (the use of targeted data sheets) for the monitoring of the protected areas, IGAs, and other environmental monitoring. Due to difficulties with motivation of staff at CENAGREF based primarily on the difference between government versus contractor salaries, the PIU took responsibility for overseeing data collection. The PIU also led the work on monitoring of the intermediary indicators on a twice yearly basis. PDO Indicators were assessed on a yearly basis with all actors (AVIGREF, CENAGREF-DG, DPNP, DPNW and PIU) contributing.

60. While difficulties with the contributions of CENAGREF added to the challenges of implementing the M&E system, overall, the project team was able to execute the system well and the M&E system itself, including that for ecological monitoring was well designed and well executed. The PIU's M&E team functioned well despite a number of challenges.

### **M&E Utilization**

61. Results from quarterly reports were fed back into work with stakeholders, particularly AVIGREFs which were implementing various elements of the annual work plan of the parks. In addition, monitoring of wildlife numbers were key to assessing on-going effectiveness of activities on reducing human pressure and activities of park rangers were adapted in line with results, e.g., increased surveillance in particular areas. Utilization of the M&E system also provided data for the APN feasibility assessment, which led to the successful transfer of management of PNP. The M&E and surveillance were seen as highly effective as key indicator species increased well beyond targets and cheetahs and other rare species, not seen in the park for over a decade, have now been sighted and are being tracked through the ecological



monitoring system established under the project.

### **Justification of Overall Rating of Quality of M&E**

62. Despite challenges with reporting from CENAGREF, the project results framework (including the project M&E database) was generally updated in a timely manner and were able to track progress on key PDO and intermediate indicators allowing for improved supervision of both park-level activities and those related to the IGAs. The performance ratings on M&E were satisfactory throughout the project. The overall rating of quality of the M&E system is Substantial.

## **B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE**

### **Environmental and Social**

63. The project was a Category B project, with no major negative impacts expected. The following safeguard policies were triggered: environmental assessment (OP 4.01), natural habitats (OP 4.04), Forests (OP 4.36), and involuntary resettlement (OP 4.12). The necessary safeguards instruments were prepared and disclosed prior to Appraisal. An Environmental and Social Management Framework (ESMF) and the Procedures Framework were validated and published in January 2011 in Benin and in the World Bank Infoshop. In 2012, two specialists in Environmental and Social Safeguards were recruited as part of the PIU staff. The project team sited the role of the Safeguards specialists during implementation in not only ensuring compliance with Safeguard policies, but also in improving the quality of the work undertaken. This was illustrated, for example, by improvements made to screening procedures and data gathering for each IGA microproject, which in turn improved selection and implementation.

64. Project activities, including infrastructure constructed in the parks and for a range of IGAs were conducted in close compliance with ESMF guidance, including development of EAs. A Resettlement Action Plan was developed prior to Project Approval although there was no resettlement under the project. The project established a grievance mechanism, which uses a three-tier system for dealing with grievances. Grievances are logged through the appropriate AVIGREF (with accommodations for non-literate community members for verbal complaints and comments to be lodged) and then managed through committees at the Village Level (including the village chief and AVIGREF president and others); at the commune level (with District Chief and AVIGREF president and others); and finally at the National Park level (with *inter alia* representative of District level council, AVIGREF representative, social and environmental experts, project representative, and director of the concerned national park). All grievances, comments and recommendations are logged, forwarded to the PIU and archived.

### **Fiduciary**

65. Financial management of the project was satisfactory to moderately satisfactory (as reported in ISRs and FM assessments). Some difficulties with disbursement categories were identified in the mid-term review and then issues with disbursements by funding source and additional expenditures under particular categories towards the end of project implementation. At mid-term review it was noted that expenditures for Category 2 were 13% above the allocated amount and while this was addressed in the subsequent project restructuring,



given further expenditures under this category after restructuring it appears additional focus on this was needed for the remainder of the project. All FM ratings since project inception were satisfactory with MS ratings during 2014, which returned to S in following assessments. The final supervision mission for the project (November 2017) prior to Project closure affirmed that the project accounts were adequately managed and interim financial reports were produced regularly and that the audit of the accounts for the last year of implementation (2017) was on track.

66. While there were issues with regard to funding categories, overall disbursements were on track with the Disbursement Plan throughout the project and in November 2017 just prior to Project closure the aggregate cumulative disbursement rate was reported at 98.18% overall (99.78% for the IDA Grant and 94.27% for the GEF Grant).

67. Due to confusion on the part of the PIU with regard to the percentage requirements on disbursement of funds from the IDA and GEF grants, the project had a remaining commitment of approximately US\$244,000 relating to a financing gap for payment of the second tranche for the second generation of IGAs. Financing for the second tranche will be provided from existing government and CTF funds under a Memorandum with the Ministry (Trustee Authority) and the FSOA.

68. Procurement was satisfactory throughout the project and final reporting on the project's Procurement Plan (PPM) for the year 2017, showed a 100% implementation rate, for all contracts in all categories. All contracts were awarded in accordance with Bank guidelines.

## **C. BANK PERFORMANCE**

**Rating: Satisfactory**

## **D. RISK TO DEVELOPMENT OUTCOME**

69. Risk to development outcome related to on-going funding to sustain project achievements is low given that it is fully mitigated by the now operational Conservation Trust Fund, which allows for sustainable financing for park management, implementation of annual plans and development of new initiatives. In addition, the recent transition of the management of Pendjari National Park to the African Parks Network also lowers risk given the organization's good track record in park management and enhanced returns on tourism revenues in other countries of Africa. APN is currently conducting a feasibility study for Park "W" as well and, APN and CENAGREF have stated the likelihood of transfer of management of Park 'W' in the coming year.

70. However, the following risks remain with regard to development outcomes:

(i) Security risks in bordering countries continue and potentially affect visitor numbers in the parks, particularly Park 'W.' The increasing consistency of funding and quality of management and surveillance in the parks due to the now operational CTF and the management of APN mitigates these negative impacts in the parks to some degree.

(ii) Risk of community conflict due to rapid changes in the management of PNP and uncertainty in the role of the village associations/AVIGREF. As of early 2018, APN had made a commitment to continuing work



with AVIGREF, which, along with renewed recognition of the importance of community partners by APN, mitigates the potential for future conflict.

(iii) Risk related to the possible negative impact on the second set of IGAs should participants not receive the final installment of funding. While most participants responded that they felt confident that they could successfully continue their enterprises with or without the last payments, not fully disbursing funds would increase distrust among community members and possibly impact the economic viability of some enterprises. The MOU with FSOA and disbursement of funds will mitigate this risk.

## V. LESSONS AND RECOMMENDATIONS

71. **Ensuring government commitment through technical support was instrumental in establishing the CTF.** Establishing a CTF goes well beyond securing endowment capital. The project focused significant resources and technical support to the government in establishing the FSOA and Conservation Trust Fund, which proved to be essential for its success. As the government lacked confidence in the CTF model, the project activities providing technical support and sharing of experience from other countries were key to moving the CTF from theory to reality. The Bank/GEF role was catalytic in ensuring the success of this component and seeing its success, the governments of both Niger and Burkina Faso have now expressed interest in joining. The CTF is an essential component for ensuring sustainability of the protected areas, especially when budgets can be uncertain and tourism markets may fluctuate due to exogenous factors. These instruments are an essential element to safeguarding development outcomes, such as enhanced biodiversity and similar instruments could potentially have a positive role in other sectors, as well. **Recommendation:** Ensure sufficient, dedicated technical support that allows governments to feel confident in moving forward with new instruments. All operational and legal elements should be supported under the activity. Other sectors beyond Protected Area Management, should potentially explore similar instruments for support of recurring costs when budgets and returns on rents may be unstable/vary.

72. **Development and implementation of IGAs is a successful way to decrease pressure on protected areas, empower women and enhance livelihoods of both direct beneficiaries and others in their communities.** The project illustrated that the IGA component was highly effective with regard to both intended and unintended benefits. The ERR was also seen to be positive in the preliminary analysis. The project prepared, utilized and updated as necessary an IGA manual focused on selection, organization, financial, and technical aspects to reduce the risk of failure. **Recommendation:** Promote and increase IGA activities within Benin and in the region to diversify income sources; reduce gender inequality; support the alleviation of poverty; and reduce pressure on protected areas, allowing for increased biodiversity and maintenance of natural habitat. Spend sufficient time on development of a high-quality IGA manual and ensure careful planning of the component.

73. **Complex payment arrangements, although perhaps intended to be equitable, can create confusion within disbursement plans and during implementation.** The PIU experienced some difficulty when working with payment on activities split by percentage by grant source, which eventually created a funding gap in Component 2 (to be addressed under an MOU with FSOA). **Recommendation:** Disbursement plans should avoid percentage splits by funding source where feasible. Whenever possible 100% of financing for an activity should come from one funding source.

74. **Given their uncertainty, government co-financing should be allocated for activities that will not**



**adversely affect outcomes related to achieving the project development objective.** The government co-financing for support to increased park surveillance was late or unpaid twice during the project implementation period endangering outcomes. **Recommendation:** Allocate government co-financing support carefully in project budgets to ensure recurring costs and other essential activities are covered by guaranteed funding streams.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: To enhance protection of biodiversity in Northern Benin Savannah Ecosystem through conservation measures (PDO1)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
PA-METT score for the Pendjari Park	Number	85.00 29-Mar-2011	93.00 07-Feb-2011	93.00 31-Dec-2017	95.00 31-Dec-2017

Comments (achievements against targets): Target 102% achieved. Indicator is related to PDO outcome (i) and is an original PDO-level indicator. The Protected Area-Management Effectiveness Tracking Tool (PA-METT) score reflects progress made on 30 categories ranging from legal and regulatory measures to work with local communities and surveillance and development of visitor facilities which illustrate how PA management impacts conservation. Use of the METT is required for GEF-financed projects related to Protected Areas. Data source/methodology: METT survey. Data collected by: DPNP.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
PA-METT score for the W National Park	Number	68.00 29-Mar-2011	76.00 07-Feb-2011	76.00 31-Dec-2017	77.00 31-Dec-2017



**Comments (achievements against targets):** Target 101% achieved. Indicator is related to PDO outcome (i) and is an original PDO-level indicator. The Protected Area-Management Effectiveness Tracking Tool (PA-METT) score reflects progress made on 30 categories ranging from legal and regulatory measures to work with local communities and surveillance and development of visitor facilities which illustrate how PA management impacts conservation. Use of the METT is required for GEF-financed projects related to Protected Areas. Data source/methodology: METT survey. Data collected by: DPNW.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Areas brought under enhanced biodiversity protection (ha)	Hectare(Ha)	469.00 10-Oct-2011	1017.00 07-Feb-2011	1017.00 31-Dec-2017	1020.00 31-Dec-2017

**Comments (achievements against targets):** Target 100% achieved. This an applicable core sector indicator related to the number of additional hectares brought under enhanced biodiversity protection through increased access of patrols due to conservation measures, e.g., upgrade or addition of surveillance track, increased ecoguard staff and patrols, person days in the field. 471 ha around 6 watering holes/ponds were covered at PNP and 549.5 ha around 7 watering holes/ponds were covered at PNW. PNP watering holes - Bali, Yangouali, Sacrée, Tiabiga, Diouni, Fogou; PNW watering holes - Sapiengou, barabon, 25, mare aux Eléph. Bagountché, Koudou, Torom. Data source/methodology: Ecological Monitoring Report. Data collected by DPNP and DPNW.

**Objective/Outcome:** To enhance protection of biodiversity in Northern Benin Savannah Ecosystem by reducing human pressure on parks (PDO2)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
People in targeted forest and adjacent communities with increased monetary and non-monetary benefits from forests.	Number	0.00 10-Oct-2011	50.00 07-Feb-2011	50.00 31-Dec-2017	160.00 31-Dec-2017



**Comments (achievements against targets):** Target 312% achieved. This indicator utilized the number of people benefitting from IGAs as a proxy for increased monetary and non-monetary benefits from forests. Data source/methodology: IGA evaluation report. Responsible entity for data collection: CENAGREF-DG

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	1950.00	2840.00	2840.00	2926.00
		10-Oct-2011	07-Feb-2011	31-Dec-2017	31-Dec-2017
Female beneficiaries	Percentage	0.30	18.00	18.00	23.00
		10-Oct-2011	07-Feb-2011	31-Dec-2017	31-Dec-2017

**Comments (achievements against targets):** Target 103% achieved. Direct beneficiaries are those individuals benefitting from project activities such as co-management contracts, training, fee sharing, IGAs, e.g., community well established under IGA directly benefitting entire community. The target for women as a percentage of beneficiaries was 133% achieved. Data source/methodology: Project activity reports. Data collected by DPNP and DPNW.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Poachers camps in the PNP	Number	47.00	15.00	15.00	12.00
		10-Oct-2011	07-Feb-2011	31-Dec-2017	31-Dec-2017

**Comments (achievements against targets):** Target was 125% achieved. The indicator for reduction in the number of poacher camps was designed as a proxy for reduced human pressure and linked to achievement of PDO2. Data source/methodology: Ecoguard surveillance reports. Responsible entity for data: DPNP.

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





	Measure			Target	Completion
Poachers camps in the PNW	Number	45.00	15.00	15.00	20.00
		10-Oct-2011	07-Feb-2011	31-Dec-2017	31-Dec-2017

**Comments (achievements against targets):** Target was 75% achieved. The indicator for reduction in the number of poacher camps was designed as a proxy for reduced human pressure and linked to achievement of PDO2. The target was not achieved due to the more difficult surveillance environment in Park 'W' which is larger, more remote and more densely forested. Data source/methodology: Ecoguard surveillance reports. Responsible entity for data: DPNW.

**Unlinked Indicators**

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
GEO indicators are the same as the PDO indicators	Number	85.00	93.00	93.00	95.00
		29-Mar-2011	07-Feb-2011	31-Dec-2017	31-Dec-2017

**Comments (achievements against targets):**

**A.2 Intermediate Results Indicators**

**Component:** Component 1: Support to the National Center for Wildlife Management

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Kilometer abundance index of	Number	0.00	0.00	0.00	0.00



wildlife in Penjari National Park		10-Oct-2011	07-Feb-2011	31-Dec-2017	31-Dec-2017
1) Buffon kobs	Number	416.00	496.00	496.00	500.00
		10-Oct-2011	07-Feb-2011	31-Dec-2017	31-Dec-2017
3 ) Roan antelopes	Number	37.00	39.00	39.00	42.00
		10-Oct-2011	07-Feb-2011	31-Dec-2017	31-Dec-2017
2) Buffalos	Number	142.00	150.00	150.00	208.00
		10-Oct-2011	07-Feb-2011	31-Dec-2017	31-Dec-2017

**Comments (achievements against targets):** Specific targets listed by species so initial amounts under indicator are listed as zero since targets are species-specific. Growth in KAI for roan antelope in 2015 and 2016 is particularly noteworthy. Buffon Kobs: Target 100% achieved. Roan antelope: Target 100% achieved. ( In 2015 and 2016 target was 230% achieved, so the 2017 year appears to be anomalous with regard to data collection.). Buffalo: Target 138% achieved. Data source/methodology: Ecological monitoring report. Data collection: DPNP. Data collected through ecological monitoring during the dry season over a period of 6 months (January-June). Animal encounters are aggregated on an annual basis per 100 km of observation.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
CENAGREF consolidated analytical and financial reports are published within three months of each calendar year.	Text	Yes/No 29-Mar-2011	Yes 07-Feb-2011	Yes 31-Dec-2017	yes 31-Dec-2017



**Comments (achievements against targets):** The target was achieved. This indicator was aimed at tracking the increased capacity of CENAGREF particularly with regard to their financial management capacity. Data source/methodology: CENAGREF financial monitoring report. Responsible entity: CENAGREF-DG

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Kilometer abundance index of wildlife at PNW	Number	0.00 29-May-2011	0.00 07-Feb-2011	0.00 31-Dec-2017	0.00 31-Dec-2017
2) Buffalos	Number	48.00 10-Oct-2011	52.00 07-Feb-2011	52.00 31-Dec-2017	54.00 31-Dec-2017
1) Buffon kobs	Number	10.00 10-Oct-2011	14.00 07-Feb-2011	14.00 31-Dec-2017	14.00 31-Dec-2017
3) Roan antelopes	Number	70.00 29-Mar-2011	74.00 07-Feb-2011	74.00 31-Dec-2017	75.00 31-Dec-2017

**Comments (achievements against targets):** Specific targets listed by species so initial amounts under indicator are listed as zero since targets are species-specific. Buffon Kobs: Target 100% achieved. Roan antelope: Target 100% achieved. Buffalo: Target 100% achieved. Data source/methodology: Ecological monitoring report. Data collection: DPNW

**Component:** Component 2: Development and implementation of IGAs for community adjacent to the Savannah national parks

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



				Target	
Number of micro-enterprises created and functional at the community level (of which % of micro-enterprises created by women)	Number	0.00	50.00	50.00	66.00
		10-Oct-2011	07-Feb-2011	31-Dec-2017	31-Dec-2017
Percentage of women beneficiaries of microprojects	Percentage	0.00	50.00	50.00	49.00
		10-Oct-2011			31-Dec-2017
<p><b>Comments (achievements against targets):</b> Target 130% achieved with the target for percentage women beneficiaries 98% achieved. Data source: Evaluation Report(s). Entities responsible for data collection: AVIGREF, DPNP, DPNW.</p>					

**Component:** Component 3: Creation of an enabling environment for a LT financing mechanism for biodiversity

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
The FSOA#s Articles of Association, By-laws, Operating Manual, Investment Policy, communication and funds raising strategies are developed	Text	Yes/No 10-Oct-2011	Yes 07-Feb-2011	Yes 31-Dec-2017	Yes 31-Dec-2017
<p><b>Comments (achievements against targets):</b> Target 100% achieved. Establishment of articles, records, manual, investment policy, fundraising, headquarters agreement and communication. Data source/methodology: Completion report. Data collection: CENAGREF-DG, DE/FSOA</p>					



Annex 1a: Revisions to Results Framework at Restructuring

PDO, PDO indicators and Intermediate indicators	Proposed changes	Rationale for change
PDO: to enhance protection of biodiversity in Northern Benin Savannah Ecosystems through conservation measures and by reducing human pressures on the parks		
PDO indicators:		
Protected Areas Management Effectiveness Tracking Tool (PA-METT) score has increased from 85 to 93 points for Pendjari National Park	Revised – <i>‘PA-METT score for the Pendjari Park’</i>	The indicator has been reworded for clarity and to remove targets.
Protected Areas Management Effectiveness Tracking Tool (PA-METT) score has increased from 68 to 76 points for W National Park	Revised – <i>‘PA-METT score for the W National Park’</i>	The indicator has been reworded for clarity and to remove targets.
	New – <i>‘Areas brought under enhanced biodiversity protection’</i>	Applicable core sector indicator.
	New – <i>‘People in targeted forest and adjacent communities with increased monetary and non-monetary benefits from forests’</i>	Applicable core sector indicator.
	New – <i>‘Poachers’ camps in the PNP’</i>	This proxy indicator to capture specifically the PDO aspect related to human pressure in Pendjari Park
	New – <i>‘Poachers’ camps in the PNW’</i>	This proxy indicator to capture specifically the PDO



PDO, PDO indicators and Intermediate indicators	Proposed changes	Rationale for change
		aspect related to human pressure in Park 'W'
	New –‘ Direct project beneficiaries, of which female’	Mandatory core indicator.
<b>Component 1: Support to the National Center for Wildlife Management</b>		
A communication strategy is developed & implemented	Dropped	This is an activity indicator with no link to PDO achievement
Feasibility studies to inform potential upgrade of the status of Central & Southern Forest Reserves are submitted to Government	Dropped	These studies have already been financed under a project financed by the African Development Bank, hence removed from the project.
CENAGREF consolidated analytical and financial reports are published within three month of each calendar year.	Continued	
Improvement of key wildlife-based direct and indirect indicators in PNP (through sightings and/or habitat). 1) Western buffon kobs 2) Buffalos 3) Roan antelopes	Revised –wording of indicator kilometer abundance index for each of the three wildlife species’ and revision of baseline and targets	The indicator has been revised to wording as an indicator. Baseline collected during preparation in 2010 was not accurate as it combined both direct and indirect sighting of each species over a period of 6 years. The average was used as the baseline.  The new baseline collected is a yearly baseline on direct sight only and is more more accurate.
Improvement of key wildlife-based direct & indirect indicators in PNW (through sightings and/or habitat). 1) Roan antelopes 2) Western buffon kobs 3) Buffalos	Revised –wording of indicator kilometer abundance index for each of the three wildlife species’ and revision of baseline and targets  Baseline and targets revised	Indicator was stated as an outcome.  Baseline collected during preparation in 2010 was not accurate as it combined both direct and indirect sighting of each species over a period of 6 years. The average was used as the baseline.  The new baseline collected is a yearly baseline on



PDO, PDO indicators and Intermediate indicators	Proposed changes	Rationale for change
		direct sight only and is more accurate.
Technical and financial management progress reports are prepared & timely submitted	Continued	
The ESMF and Process Framework are implemented	Dropped	The indicator has been dropped as it is related to compliance and activities with link to PDO achievement
<b>Component 2: Development and implementation of IGAs for community adjacent to the Savannah national parks</b>		
Number of micro-enterprises created and functional at the community level (of which % of micro-enterprises created by women	Continued	
<b>Component 3: Creation of an enabling environment for a LT financing mechanism for biodiversity</b>		
The FSOA's Articles of Association, By-laws, Operating Manual, Investment Policy, communication and funds raising strategies are developed	Continued	



**B. KEY OUTPUTS BY COMPONENT**

<b>Objective/Outcome 1: Enhance protection of biodiversity in Northern Benin Savannah Ecosystems through <u>conservation measures</u></b>	
Outcome Indicators	<ol style="list-style-type: none"> <li>1. PNP METT score has increased from 85 to 93</li> <li>2. PNW METT score has increased from 68 to 76 points</li> <li>3. Areas brought under enhanced biodiversity protection</li> </ol>
Intermediate Results Indicators	<ol style="list-style-type: none"> <li>1. Improvement of key wildlife based direct and indirect indicators in PNP and PNW (Kilometer abundance index of wildlife for each park, following the evolution of the populations of buffon kobs, roan antelopes, and buffalos;</li> <li>2. The FSOA articles of Association, by-laws, operating manual, investment policy, communication and funds raising strategies are developed.</li> </ol>
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	<ol style="list-style-type: none"> <li>1. 39 trainings provided to CENAGREF, AVIGREF (Component 1a &amp; b)</li> <li>2. 3500 pd/mo surveillance in both parks (Component 1b)</li> <li>3. Vehicles and monitoring equipment purchased (Component 1b)</li> <li>4. Park infrastructure developed/rehabilitated – 4 observation platforms for each park; 2 entry gates; 2 culverts; 1 bridge (Component 1b)</li> <li>5. FSOA CTF fully operational with annual income of approximately US\$800,000/year (Component 3)</li> <li>6. METT scores increased: PNP – from 85 to 95; PNW – from 68 to 77 (Component 1)</li> </ol>
<b>Objective/Outcome 2: Enhance protection of biodiversity in Northern Benin Savannah Ecosystems by reducing human pressure on parks</b>	
Outcome Indicators	<ol style="list-style-type: none"> <li>1. PNP METT score has increased from 85 to 93 points</li> </ol>





	<ul style="list-style-type: none"><li>2. PNW METT score has increased from 68 to 76 points</li><li>3. People in targeted forests and adjacent communities with increased monetary or non-monetary benefits from forests;</li><li>4. Poachers' camps in PNP;</li><li>5. Poachers' camps in the PNW (as a proxy indicator to capture the aspect of the PDO related to human pressure on Park 'W')</li><li>6. Direct project beneficiaries, of which female</li></ul>
Intermediate Results Indicators	<ul style="list-style-type: none"><li>1. Number of micro-enterprises created and functional at the community level (of which % of micro-enterprises created by woman)</li></ul>
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	<ul style="list-style-type: none"><li>1. 66 IGAs (of which 49% women) (Target: 50) (Component 2)</li><li>2. 850 km of secondary track improved (Component 1b)</li><li>3. 22 km of primary track constructed (Component 1b)</li><li>4. Communication strategy; website developed (Component 1a)</li><li>5. 160 people in targeted forests and adjacent communities with increased monetary or non-monetary benefits from forests (Components 1 &amp;2)</li><li>6. Poachers camps in PNP reduced to 12 (from 47) (Component 1b)</li><li>7. Poachers camps in PNW reduced to 20 (from 45) (Component 1b)</li><li>8. METT scores increased: PNP – from 85 to 95; PNW – from 68 to 77 (Component 1)</li></ul>

## ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

### A. TASK TEAM MEMBERS

Name	Role
<b>Preparation</b>	
Salimata D. Follea	Task Team Leader(s)
Africa Eshogba Olojoba	Sr. Environmental Specialist
Cheikh Sagna	Sr. Social Scientist
Abdoul-Wahab Seyni	Sr. Social Development Specialist
Alain Hinkaki	Financial Management Specialist
Itchi Gnon Ayindo	Sr. Procurement Specialist
Mathias Gogohounga	Procurement Specialist
Anthony Molle	Counsel
Wolfgang Chadab	Senior Finance Officer
Daniel Sellen	Sector Leader
Kathy Mikitin	CTF Consultant
Dr. Ide Tahirou	CDD Consultant
Bizou Ahoumenou	Economist
Simon A. P. Rietbergen	Sr. Forestry Specialist
Serge Menan	Forestry Specialist
Claudia Sobrevilla	Senior Biodiversity Specialist
Andrew Osei	M&E Specialist
Marie Bernadette Darang	Program Assistant
<b>Supervision/ICR</b>	
Salimata D. Follea	Task Team Leader(s)
Mathias Gogohounga	Procurement Specialist(s)
Alain Hinkati	Financial Management Specialist
Marie Bernadette Darang	Program Assistant
Abdoul Wahabi Seini	Social Safeguards Specialist
Isabella Micali Drossos	Counsel
Abdoulaye Gadiere	Environmental Safeguards Specialist



Ellen J. Tynan

ICR Author

1. STAFF TIME AND COST<sup>26</sup>

	Sum of Staff Weeks	Sum of Labor	Sum of Travel	Sum of Other	Sum of Total
<b>LEN</b>	<b>6</b>	<b>17,107</b>	<b>36,236</b>	<b>28,721</b>	<b>82,064</b>
2011	6	17,107	36,236	28,721	82,064
<b>SPN</b>	<b>60</b>	<b>206,850</b>	<b>196,817</b>	<b>171,775</b>	<b>575,443</b>
2012	8	13,724	28,566	25,394	67,684
2013	9	29,879	59,713	2,555	92,148
2014	9	29,584	39,712	18,104	87,400
2015	15	55,522	13,261	32,896	101,679
2016	4	15,637	3,712	22,155	41,504
2017	6	23,665	24,383	47,334	95,382
2018	8	38,838	27,471	23,337	89,645
<b>Grand Total</b>	<b>66</b>	<b>223,957</b>	<b>233,054</b>	<b>200,496</b>	<b>657,507</b>

<sup>26</sup> This table is included to ensure information is provided on staff time and costs while a systems error preventing updating of this information in the portal is resolved.



**B. STAFF TIME AND COST**

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
<b>Preparation</b>		
FY11	6.475	82,063.93
<b>Total</b>	<b>6.48</b>	<b>82,063.93</b>
<b>Supervision/ICR</b>		
FY12	8.277	67,684.19
FY13	9.306	92,148.10
FY14	8.901	87,399.85
FY15	15.450	101,679.35
FY16	4.175	41,504.47
FY17	5.542	95,381.51
FY18	7.063	97,695.65
<b>Total</b>	<b>58.71</b>	<b>583,493.12</b>





**ANNEX 3. PROJECT COST BY COMPONENT**

Components	Disbursement per Component and per funding source (million USD)									% of approval
	IDA			GEF			Total			
	Approval	Restruct'g	Closing	Approval	Restruct'g	Closing	Approval	Restruct'g	Closing	
<b>Component 1</b>	<b>3.50</b>	<b>3.85</b>	<b>4.32</b>	<b>1.80</b>	<b>1.80</b>	<b>1.81</b>	<b>5.30</b>	<b>5.65</b>	<b>6.13</b>	<b>116</b>
Sub-component 1a	0.32		0.61	0.27		0.46	0.59		1.07	181
Sub-component 1b	2.28		1.64	1.53		1.23	3.81		2.86	75
Sub-component 1c	0.9	1.5	2.2	0	0	0	0.90	0	2.20	244
<b>Component 2</b>	<b>1.5</b>	<b>1.15</b>	<b>0.91</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>1.5</b>	<b>1.15</b>	<b>0.91</b>	<b>61</b>
<b>Component 3</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1000</b>	<b>0.1000</b>	<b>0.0696</b>	<b>0.1000</b>	<b>0.1000</b>	<b>0.0696</b>	<b>70</b>
<b>TOTAL</b>	<b>5.00</b>	<b>5.00</b>	<b>5.23</b>	<b>1.90</b>	<b>1.90</b>	<b>1.88</b>	<b>6.90</b>	<b>6.90</b>	<b>7.11</b>	<b>103</b>

Data Sources : comptabilité de PAGAP au 30 Avril 2018

**A**

Currency fluctuations from 2011 to 2018:.

Evolution of USD	XOF/2011	XOF/2015	XOF/2018
1 USD=	450	601	556



## ANNEX 4. EFFICIENCY ANALYSIS

### Support for Protected Area Management Project: Efficiency Analysis

#### At Appraisal

1. The PAD provided formal economic analysis based on a cost-benefit approach, brief financial and with/without project scenario assessment, with the reference to project components and in the absence of a baseline scenario. In addition, a GEF incremental cost analysis was conducted in qualitative terms, estimating the value of the addition of GEF funds to achieve global environmental benefits of the project interventions and outcomes.
2. Project design assumed environmental and economic benefits arising through the improved tourism and conservation activities and agriculture value chain outputs. Since it was difficult to undertake economic valuation, the assessment at the design stage focused on the most measurable economic benefits. It was noted that the country specifics of data collection are a major challenge to standard economic analysis. Although various benefits are identified from the project investment<sup>27</sup>, the analysis assessed increase in household revenues, increase in municipalities tariffs, increase in direct job creation, and increase in community revenue (AVIGREF).
3. A cost-benefit analysis was performed to determine the economic and financial viability of the project investment, based on the estimated amounts for the components 1a, 1b, and 2, as well as the contribution of the CTF at year 5. This analysis showed that the project was viable: the economic analysis yields a NPV of US\$28.141 million at 12% discount rate, and an ERR above 50% over a period of 20 years.

#### ICR Cost-Benefit Analysis

4. Ex-post cost-benefit analysis attempted to evaluate the project economic viability for the whole project and economic analysis of selected components. A sensitivity test is applied for the main parameters. To test the robustness of the results, an analysis was conducted for medium and high income levels, as well as income levels of high-performing subprojects. A 20-year period is assumed in assessing the economic feasibility of the project. While project costs are incurred only during the 5-year implementation period, benefits are assumed to be generated beyond the lifetime of the project. However, no incremental changes in benefits were assumed beyond the project implementation period, however, the multicriteria analysis conducted in the evaluation of income generating activities demonstrates: (i) income improvement; (ii) enhancement of the technical skills of beneficiaries; (iii) sustainability of the activities; and (iv) existing market demand for products.
5. The project generated various economic benefits, including: (i) direct measurable benefits from the income-generating subprojects (activities, or IGAs); (ii) an operational conservation trust fund<sup>28</sup>; (iii)

---

<sup>27</sup> Including effects on tourism, job creation and effect on household revenue, land ownership and conflict resolution, impact on municipalities revenues and improvement of biodiversity conservation

<sup>28</sup> US\$800,000 interest income generated by the contributions from GEF (US\$0.9 million) and KfW (US\$31.8 million) between



tourism and its related taxes and fees; and (iv) indirect, intangible benefits. Tourism growth was affected by the security situation in Mali and Niger during 2013-2016, therefore the expected growth and revenue did not materialize. Hence, the economic analysis was conducted with and without revenue and taxes accounted for tourism development.

6. Indirect benefits of the projects are: (i) the improvement in the public administration; (ii) benefits to the biodiversity of the Northern Benin ecosystem as a result of improved management of the protected areas of Pendjari and “W” national parks; (iii) and carbon sequestration. Deforestation in the protected areas (and the associated official hunting zones) in Benin have the lowest deforestation rates of forested areas from 2007 through 2016, 0.04% compared to an overall rate of 2.66% for the country overall.<sup>29</sup>
7. Given the challenges in measuring monetary value of the benefits to the whole range of the benefits generated by the project, only specific benefits were included in the ex-post economic assessment.
8. The ICR cost-benefit analysis focuses primarily on the results of Component 2: Development and Implementation of Income-Generating Activities (IGAs) in the areas adjacent to the Savannah National Parks. The objective of Component 2 was to support communities living adjacent to the parks with the development and implementation of Income-Generating Activities (IGAs) in order to reduce human pressure on wild flora and fauna. Under this component, the project selected and provided funding to 153 income generating activities implemented in two batches covering communities related to both parks: the first of 66 activities from 2013-2015 and the second of 87 activities from 2016-2018. Grants to IGAs were provided following several criteria, including: (i) a preliminary biodiversity conservation filter (the project should either be related to biodiversity conservation or not impede biodiversity conservation efforts); (ii) ranking above threshold, according to expected positive impacts on biodiversity conservation; (iii) socio-economic impacts and likelihood of the sustainability; and (iv) co-financing from the participants (an average 5 percent of the individual IGA amount). Baseline data on income and operational costs for the IGAs component were not collected, and the economic analysis relies on the results of the independent evaluations<sup>30</sup> conducted for each batch of IGAs, covering mainly social aspects, interviews with participants, assessment of the environmental impact, sustainability, and presenting a partial economic assessment of the sample of IGAs covered by the evaluation.<sup>31</sup>
9. The types of IGAs funded under this component included: agricultural processing and non-timber forest products, animal husbandry, seasonal crops (soybeans, sesame), gardening, apiculture, and rice cultivation. Income reported by the interviewers-participants of the IGAs varies between low range (typically supplemental income) (US\$200/year (110,000 FCFA/year)) to very high (above

---

2015-2016

<sup>29</sup> “Analyses des tendances de la dynamique forestière au Bénin entre 2007 et 2016,” Deffry, I. 2018. Unpublished note on Benin Forestry Sector

<sup>30</sup> 2017. Juan López Villar. Evaluation De 66 Microprojets D’activités Generatrices De Revenus, Finances Par Le Projet D’appui A La Gestion Des Aires Protegees Autour Des Reserves De Faune Du Benin. Ministere Du Cadre De Vie Et Du Developpement Durable. Centre National De Gestion Des Reserves De Faune. 2018. Juan López Villar. Analyse De L’agr Par Domaine D’activité Dans Le Projet Pagap

<sup>31</sup> Evaluations covered about 30 percent of the IGAs (both generations).





US\$735 (400,000 FCFA/year) with incomes for apiculture and rice cultivation reported at approximately US\$7, 320/year (4,000,000 FCCA/year) and approximately US\$14,650/year (8,000,000 FCFA/year), respectively. Therefore, ERR and NPV were measured for the various income ranges, from very low, average and very high.

**Table 1. Type of impact of the IGAs net income in improving the standard of living of the promoter**

Type of impact	Net income generated by IGA	Types of IGAs
1- Very low	No income from IGA	Agricultural processing, Animal husbandry, Gardening
2- Low	0-110000 FCFA /year	Agricultural processing, Gardening, Seasonal crops
3- Medium	110000-210000 FCFA/year	Apiculture, Seasonal crops
4- High	210000-400000 FCFA/year	Apiculture, Animal husbandry
5- Very high	> 400000 FCFA /year	Apiculture (700,000- 4,125,000 FCFA/year), Rice cultivation (500,000-8,260,000 FCFA/year), Animal husbandry (over 500,000 FCFA/year)

Source: 2018. Juan López Villar. Analyse De L’agr Par Domaine D’activité Dans Le Projet PAGAP

- To estimate project viability, ERR, cost benefit and NPV were calculated at the average income level 3.8, based on the reported income of the interviewed IGAs, with the assumption that the rest of the subprojects would operate at the same level. Overall, results demonstrate positive economic impact by the projects if average income level of US\$735/year (400,000 FCFA/year), with the benefic/cost ratio above 1, positive NPV, and ERR 3.5%. Animal husbandry, apiculture, and rice production performed better than other types of activities, and if we assume that all IGAs perform at the level of these IGA types with income of above US\$915/year (500,000 FCFA/year) the cost-benefit ratio of IGAs component reaches 1.9, ERR 13.9% and NPV of US\$2,017,610.
- The objective of Component 3 was to create an enabling environment for a long-term financing mechanism for biodiversity conservation, by establishing a Foundation – *Fondation de Savanes Ouest-Africaines* (FSOA) to manage a conservation trust fund (CTF) as a long-term financing instrument of the core recurring costs of the Pendjari and W national parks’ management plans. The CTF was successfully created under this component, and received additional contributions from the GEF through the Forests and Adjacent Lands Management Project-Additional Financing (\$0.9 million) and Germany (KfW, equivalent US\$31.8 million). Interest generated by these contributions amounted to \$800,000 in 2015-2016, and the decision was made to continue re-investing the capital to ensure sustainability of the fund, under condition that interest generated would be utilized for the biodiversity conservation effort in both national parks. The fund is now covering the costs of the management plans and supplemented in the case of Pendjari National Park by the African Parks



Network.

12. ERR and benefits/costs ratio were calculated separately for Component 2, and Components 2 and 3 together, and for the whole project, with benefits including tourism revenue, in order to estimate the viability of IGAs and the whole project. It was assumed that tourism revenue after project closure would remain the same, as reported for 2017<sup>32</sup>.

Table 2 : Economic analysis - Summary of Results

Discount rate 5%	Medium income level, 210,000 FCFA/year			High income level, 400,000 FCFA/year		High performers, average income level 700,000 FCFA/year		
	ERR%	ratio	BC	ERR, %	ratio	BC	ERR, %	BC ratio
Component 2 IGAs	n/a		0.84	3.5%		1.61	16.9%	2.01
Components 2 and 3, IGAs and CTF	19.9%		4.19	25.3%		4.59	high	high
Project, benefits IGAs, CTF and tourism revenue	7.7%		2.16	9.4%		2.26	11.9%	2.4

Cost-Effectiveness.

13. Based on the results reported in the ISRs, on discussion with project staff, evaluation reports provided by PIU, and research provided by the project team during preparation of the future operations in Benin, the ICR analysis finds the following evidence of the project to use resources efficiently:

- As a result of improved ecological monitoring and conservation effort number of the poachers' camps was reduced significantly, from the baseline of 47 in Pendjari to 17, and from 45 in WNP to 27.
- The project covered all targeted areas under enhanced biodiversity projection, exceeding the original target. (See Results Framework Results re: key endangered species).
- Both parks achieved their Management Effectiveness Tracking Tool (METT) scores<sup>33</sup>, used globally to assess protected areas management effectiveness. *METT score reported by the project were achieved or above the target value.*

<sup>32</sup> This is a conservative estimate at tourism numbers are expected to rise with additional investments and management of the African Parks Network.

<sup>33</sup> The methodology is a rapid assessment based on a scorecard questionnaire. The scorecard includes all six elements of management identified in the IUCN-WCPA. Framework (context, planning, inputs, process, outputs and outcomes), but has an emphasis on context, planning, inputs and processes. It is basic and simple to use, and provides a mechanism for monitoring progress towards more effective management over time. It is used to enable park managers and donors to identify needs, constraints and priority actions to improve the effectiveness of protected area management. Both Parks developed METT targets for reporting to the GEF on the funding provided to contribute to the achievement of the global environmental benefits



- Key park infrastructures were rehabilitated under the project, including: Main park roads<sup>34</sup> -; secondary surveillance roads maintained<sup>35</sup>; 4 viewing platforms (watchtowers) were built in each park; PNP entrances<sup>i</sup> were rehabilitated, and other supporting infrastructure were constructed to ensure park operations
- Over 150 subprojects financing Income generating activities in areas adjacent to national park areas were selected, 66 of which were implemented by the end of 2017<sup>36</sup>. Evaluation for the first set of activities demonstrated that most types of IGAs generated an average or higher income level for beneficiaries.
- The Conservation Endowment Fund (Conservation Trust Fund) was established under the project and has been operational for three years, with a capital of more than €24.2 Million (US\$ 31.8 Million) provided by the German Financial Cooperation (KfW) and GEF contribution from the FALMP of approximately \$0.9 million.
- Negotiations are underway between the CTF and African Parks Network (APN) with a view to finalizing a partnership protocol for the implementation of conservation in both the Pendjari National Park (now managed by APN), and the “W” National Park.

14. Comparison to the other projects in the Sahel region with similar components demonstrates that the cost of the improved protected area management per ha is compatible (and at the low end of cost/ha) with other investments (see below).

Table 3. Comparative analysis of cost-effectiveness

Project name	Consolidated table	Area under PAM, ha	Relevant component cost, US\$ million	Cost per ha, \$/ha under the project
Benin, Support to the PAM project	Total area under Parks Pendjari and W, ha under improved PAM, ha	1,260,000	5.3	4.2
Gabon: Strengthening Capacity for Managing National Parks and Biodiversity	area 3 national parks with improved PAM, ha	700,000	8.56	12.2
Burkina Faso: Partnership For Natural Ecosystem Management Project	Protected areas have legal status and size, ha	220,000	7.5	3.4
Mali, Gourma Biodiversity Conservation Project	Area under conservation	275,200	4.3	11.5

15. The project achieved the majority of its objectives which were completed with insignificant delay

accrued due to project interventions.

<sup>34</sup> 92km in Pendjari; 60km in WNP

<sup>35</sup> More than 800 km on average per year in WNP<sup>35</sup> during 4 years.

<sup>36</sup> This total exceeded the Target (see Results Framework)



and within budget.

### **Conclusion**

16. The ex-post economic efficiency analysis conducted for the project confirms assumed at the design stage positive economic impact: at the medium income level ERR is 7.7%, benefit/cost ratio is 2.16, and NPV at US\$25.7 million. Analysis emphasized that benefit assumptions were done using lower-bound values of associated benefits attributed to the project, justified by the absence of specific data on income and operational costs for individual income generating activities, and tourism revenues affected by the security situation in the neighboring countries. The quantitative analysis is strictly limited to values that can be clearly attributed to the project. In addition, benefits associated with the improved protected areas management measured by the high METT score, biodiversity conservation, GHG sequestration and avoiding additional GHG emissions were not quantified. There are also economic benefits arising from better public service delivery resulting from the capacity building efforts. ***In summary, based on this economic evaluation, it is concluded that the project resulted in significant positive development impacts, confirming benefits anticipated during design stage.***



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

Following is a short summary of the Borrower’s Final ICR (Introduction and Conclusions and Principal Recommendations). The full Borrower ICR is be filed with the ICR. The final recommendations included in the Borrower’s ICR for the World Bank are to:

- Advocate with government institutions for stability in park management and the need to implement management on results;
- Find ways to consolidate the IGA management with a view to implementing the initial micro-enterprise promotion strategy to reduce anthropogenic pressures on parks; and
- Advocate with government institutions to facilitate disbursement of state grants to CENAGREF

The Borrower commented on both an early and near final version of the World Bank’s ICR. Their comments have been incorporated where possible into the final version.

\*\*\*\*\*

REPUBLICQUE DU BENIN  
\*\*\*\*\*  
MINISTERE DU CADRE DE VIE ET DU DEVELOPPEMENT DURABLE  
  
\*\*\*\*\*  
CENTRE NATIONAL DE GESTION DES RESERVES DE FAUNE  
\*\*\*\*\*  
  
PROJET D’APPUI A LA GESTION DES AIRES PROTEGEES  
  
DON IDA N° H648-BJ & DON GEF N° TF 99643 –BEN  
  
**RAPPORT ANNUEL D’AVANCEMENT ET  
RAPPORT FINAL DU PROJET**  
  
FEBRUARY 2018

**Introduction**

Avec le soutien financier de la Banque mondiale, du Fonds Mondial pour l’Environnement (GEF) et de la Coopération Financière Allemande (KfW), le Projet d’Appui à la Gestion des Aires Protégées (**PAGAP**) est initié pour une durée de cinq (05) ans et couvre la période d’octobre 2011 à décembre 2016. Il est mis en œuvre par le Centre National de Gestion des Réserves de Faune (**CENAGREF**) et a pour objectif global de



« renforcer la protection de la biodiversité dans les écosystèmes des savanes au Nord-Bénin, via des mesures de conservation et la réduction de la pression anthropique sur les ressources des Parcs Nationaux du Bénin à savoir le Parc National de la Pendjari (PNP) et le Parc National du W (PNW).

A la suite de la Revue à mi-Parcours (RMP) intervenue au cours des mois de mai et juin 2015, le Projet d'Appui à la Gestion des Aires Protégées et a été prorogé d'un an et s'achève à fin 2017. Il est structuré comme ci-après :

- Composante 1 : Renforcement des capacités de gestion du Centre National de Gestion des Réserves de Faune
- Composante 2 : Développement et mise en œuvre d'Activités Génératrices de Revenu (AGR) au profit des communautés riveraines des parcs nationaux
- Composante 3: Création d'un environnement favorable à la mise en place d'un mécanisme de financement à long terme pour la conservation de la biodiversité.

Les principaux résultats portent sur : (i) la finalisation des documents de planification notamment le Plan de Travail et de Budgétisation Annuel (PTBA) 2017, le Plan de Passation des Marchés (PPM) devant servir de support de référence pour l'exécution efficace des activités, (ii) la mise en place des ressources pour le financement des AGRs de la deuxième génération, (iii) l'appui au financement de la surveillance en vue de la lutte anti-braconnage dans les deux réserves de faune, (iv) la cogestion, (v) la collecte des données portant sur les IKA et IKI, (vi) le suivi des bénéficiaires des AGR de la première génération, (vii) la finalisation de la construction des infrastructures de miradors et des deux entrées dans le parc Pendjari, (viii) le suivi du processus de passation de marché sur les diverses réalisations.

Ce rapport annuel au 31 décembre 2017, rend compte de la mise en œuvre du Plan de Travail et de Budgétisation Annuel (PTBA) 2017 du projet. Il renseigne d'une part sur l'exécution physique à travers les principales réalisations, le point financier, la passation des marchés et d'autre part sur les activités de clôture de janvier à fin avril 2018.

Ce rapport fait le point technique et financier sur les activités réalisées au cours de la période. Il est structuré ainsi qu'il suit :

- rappel des grandes lignes des prévisions de l'année,
- niveau d'exécution physique du PTBA 2017 du projet à fin décembre,
- niveau d'atteinte des indicateurs du projet,
- point sur le niveau de consommation financière et de passation des marchés du projet à fin décembre 2017,
- Analyse des performances globales et leçons apprises,
- Difficultés rencontrées et solutions envisagées,
- Conclusions et principales recommandations
- Annexes pour les détails

## **Conclusion et Principales Recommandations**

En conclusion, les résultats et leçons apprises ci-dessus ont été présentés et validés par la dernière



session du Comité National de Pilotage des Projets/programmes (CNPP) du CENAGREF, sous réserve de prise en compte de quelques observations. Clôture du Projet au cours de la dernière session du CNPP, le Président assisté du Conseiller Technique du Ministre en charge du Tourisme, a remercié l'Unité de Gestion du Projet et les membres du CNPP pour les succès enregistrés dans l'exécution du PTBA 2017 d'une part et du Projet depuis son démarrage en général. Il a rassuré l'équipe du projet de la disponibilité du Ministère et des autres acteurs pour tous appuis et surtout, pour l'accompagnement dans la formulation d'une requête du Gouvernement autour de la note conceptuelle proposée par l'équipe du projet ; en vue de la poursuite des activités et la consolidation des acquis.

Sur cette base et tenant compte des activités résiduelles sus-citées, les recommandations suivantes sont formulées :

A l'endroit du CENAGREF :

- **Remettre le Centre au cœur de la gestion des AP** dans le cadre des réformes (de gestion déléguée) engagées;
- **Améliorer les performances de gestion fiduciaire et technique** des parcs dans la continuité de la dynamique imprimée toujours perfectible ;
- Assurer la mise en œuvre d'un système comptable uniforme et intégré au niveau de toutes les structures permanentes du Centre ;
- Assurer une coordination et une synergie plus active des interventions des différents projets, y compris la gestion déléguée.

Pour l'UGP

- Assurer la **prise en compte des actions résiduelles** par la FSOA, l'APN et par les autres PTF, à travers un memorandum à élaborer et à signer
- Convaincre la mission d'achèvement de la **nécessité d'une requête à introduire par le Gouvernement en vue de la consolidation des acquis** du Projet.

La Banque devra :

- Plaider auprès des institutions gouvernementales pour la stabilité dans la gestion des parcs et de l'exigence de la mise en œuvre de la gestion axée sur les résultats,
- Trouver le moyen de consolider les acquis de la gestion des AGR en vue de mettre en œuvre la stratégie initiale de promotion de micro-entreprises économiques destinées à réduire les pressions anthropiques sur les parcs,
- Plaider auprès des institutions gouvernementales pour faciliter le décaissement des subventions de l'Etat au CENAGRE.