

AFRICAN DEVELOPMENT BANK GROUP



BENIN

COMMUNITY FOREST MANAGEMENT SUPPORT PROJECT – PHASE II (PAGEFCOM-II)

APPRAISAL REPORT

AHAI DEPARTMENT

March 2017

Translated version

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CURRENCY EQUIVALENTS

(August 2016)

| | | |
|---------------|---|-----------------|
| Currency Unit | = | CFAF |
| UA 1 | = | CFAF 822.458565 |
| UA 1 | = | USD 1.39338 |
| UA 1 | = | EUR 1.25383 |

FISCAL YEAR

1 January – 31 December

WEIGHTS AND MEASURES

| | | |
|-------------------|---|--------------|
| 1 metric tonne | = | 2204 pounds |
| 1 kilogramme (kg) | = | 2.200 pounds |
| 1 metre (m) | = | 3.28 feet |
| 1 millimetre (mm) | = | 0.03937 inch |
| 1 kilometre (km) | = | 0.62 mile |
| 1 hectare (ha) | = | 2.471 acres |

ACRONYMS AND ABBREVIATIONS

| | | |
|-----------------|---|--|
| ABE | : | <i>Agence Béninoise pour l'Environnement</i> (Benin Environment Agency) |
| BOAD | | West African Development Bank |
| CAA | : | Autonomous Amortization Fund |
| CDP | : | Community Development Plan |
| CES-DRS | | Water and Soil Conservation – Soil Defence and Restoration |
| CF | | Classified Forest |
| CPP | | Project Steering Committee |
| DGEFC | : | General Directorate of Water, Forestry and Hunting |
| DPCEF | : | Directorate of Forest Exploitation Policy Monitoring and Control |
| DPP | | Directorate of Programming and Forecasts |
| ESMP | | Environmental and Social Management Plan |
| EU | | European Union |
| FAO | | United Nations Food and Agriculture Organization |
| GIS | | Geographic Information System |
| GIZ | | Gesellschaft für International Zusammenarbeit (German Corporation for International Cooperation) |
| IEC | | Information, Education and Communication |
| IGA | : | Income Generating Activity |
| IsDB | | Islamic Development Bank |
| KAI | : | Kilometric Abundance Index |
| KFW | | Kreditanstalt für Wiederaufbau (German Development Bank) |
| LDP | | Local Development Plan |
| MAEP | | Ministry of Agriculture, Livestock and Fisheries |
| MCVDD | | Ministry of Living Environment and Sustainable Development |
| MEPD | | Ministry of State in charge of the Planning and Development |
| PAGEFCOM | : | Community Forest Management Support Project |
| PAMF | : | Agoua Forest and Mounts Kouffé and Wari-Marou Development Project |
| PBF 2 | | Firewood Project, Phase 2 |
| PGRN | : | Natural Resource Management Project |
| PMU | | Project Management Unit |
| PRGS | | Poverty Reduction and Growth Strategy |
| PRSP | : | Poverty Reduction Strategy Paper |
| SIZ | | Synergetic Interest Zone |
| SDAC | | Council Development Master Plan |
| UA | : | Unit of Account |
| UNDP | | United Nations Development Programme |
| WB | | World Bank |

PROJECT BRIEF

Client Information

| | |
|--------------------------|--|
| DONEE: | Republic of Benin |
| EXECUTING AGENCY: | Ministry of Living Environment and Sustainable Development (MCVDD) |

Financing Plan

| SOURCE | AMOUNT | INSTRUMENT |
|-------------------|-----------------|------------|
| ADF Loan | UA 5.00 million | Loan |
| ADF Grant | UA 0.63 million | Grant |
| GEF | UA 1.88 million | Grant |
| Government | UA 0.88 million | - |
| TOTAL COST | UA 8.39 million | |

Key ADF Financing Information

| | |
|-------------------------|------------------------|
| GEF Grant Currency | UA |
| Type of Interest* | Not applicable |
| Interest Rate Margin* | Not applicable |
| Commitment Fee | 0.5% (5 basis points) |
| Other Costs* | 0.75% (service charge) |
| Maturity | 50 years |
| Grace Period | 10 years |
| ERR (baseline scenario) | 20.23% |
| IRR (baseline scenario) | 23.01% |
| NPV | CFAF 25.27 billion |

Time Frame – Key Milestones (expected)

| | |
|-----------------------|-------------------------------|
| Preparation | 26 March – 2 April 2015 |
| Concept Note Approval | 5 June 2016 |
| Project Appraisal | 25 August – 10 September 2016 |
| Project Approval | 14 December 2016 |
| Effectiveness | 15 January 2017 |
| Loan Closing Date | 31 December 2021 |
| Last Disbursement | 15 March 2022 |

Project Summary

1. Project Overview: The Community Forest Management Support Project – Phase II (PAGEFCOM-II) covers the *Atlantique, Zou, Collines, Borgou and Donga Départements* (Districts) on a land area of 59,746 km² (52.06% of the national territory) and has close to 4,709,426 people, corresponding to 45.63% of the country's total population estimated in 2013 at 9,983,884 people. Three (3) of these Districts, namely *Atlantique, Zou* and *Collines*, already benefited from support during Phase I. The two others (*Borgou* and *Donga*) are contiguous to the first three and form Benin's green belt. Since they mark the transition between the country's arid and wet zones, the ecosystems here are fragile. Phase I of the project did not cover the entire green belt because of challenges related to available resources. This second phase will help to consolidate what was achieved in terms of forest cover and management infrastructure as well as complete the mechanism for stabilizing forest ecosystems in Benin. It will promote the value chains of green economy products (smart agriculture, non-timber forest products, eco-tourism products, fishery products, natural resource development, payment of environmental services, etc.). Thus, the outcome will contribute to climate regularization, which will help to improve food and nutritional security, increase the income of vulnerable smallholders, mitigate the incidence of poverty on rural households and build the resilience of the population, especially women and youths. The project's total cost of UA 8.39 million (USD 11.19 million) includes UA 5 million financed by ADF and UA 2.15 million by the Global Environment Facility (GEF). Its implementation will span five years through three components: (i) Support for natural resource management; (ii) Development of green economy value chains; and (iii) Project management. The project will directly benefit over 180,000 people, 50.86% of them women, and indirectly 427,000 people living in the target area. To ensure sustainability of investments, the participatory and inclusive approach adopted during preparation and appraisal will be continued during implementation in order to involve all stakeholders and sustain investments. In the same vein, the public-private partnership (PPP) approach will be followed during payment of environmental services to tackle the main challenges of forest sector financing and natural resource development.

2. Needs Assessment: The financing needed by Benin's forestry sector to achieve the Strategic Plan goals of growth sustainability, poverty reduction, food/nutritional security and climate change adaptation were estimated at close to CFAF 112 billion in 2016. However, mobilizable resources were estimated the same year at approximately CFAF 27 billion, representing a significant shortfall of CFAF 85 billion. ADF and GEF resources amounting to nearly CFAF 6.60 billion will help significantly to close the financing gap, in particular in the five districts. Maintaining forest cover to the required standard and developing natural resources in the project area require substantial resources, the same as building resilience in socio-ecological systems.

3. GEF and Bank Value Added: PAGEFCOM-II is consistent with the Bank's 2013-2022 Ten-Year Strategy and high five priorities (High 5s) as well as GEF's priority focus areas since it supports fragile ecosystems stabilization, green economy value chains and resilience building. In particular, the project will help to bridge the forestry sector financing gap and spur the development of rural production systems by promoting better control of deforestation, strengthening economic infrastructure, and promoting suitable production, processing and marketing technologies. Furthermore, PAGEFCOM-II strengthens the Bank's role in forestry sector financing in Benin, reflecting its previous experience in implementing forestry sector projects (PBF-I & II, PAMF and PAGEFCOM). Lastly, it implements the Climate Change Action Plan and 2014-2019 Strategy for Addressing Fragility and Building Resilience in Africa, by consolidating the role of communities, the private sector and councils in resilience building, local governance and citizen control. The project is also aligned on the Bank's Gender Policy

2014-2018 since it strengthens women's rights to own developed land, economic empowerment through income generation, and managerial and entrepreneurial capacity building.

4. Knowledge Management: PAGEFCOM-II will prepare a baseline situation based on field surveys (including on value chains), which will then be used to build a reliable gender-disaggregated database to measure project output and impact indicators. A geo-referenced map will be prepared to provide information on works and infrastructure sites. Specific (rapid and in-depth) impact assessments will be conducted by competent consulting firms and the results will be fed into the existing database. This information will be made available on the GEF website and shared with all stakeholders. The project will also support the training and knowledge consolidation of local actors, primarily local councils and rural women who actively process and market non-timber forest products and natural resources. Furthermore, good "smart agricultural" practices will be disseminated and expert knowledge on climate resilience developed alongside the publication of innovative actions that showcase local expertise, especially of women, in natural resource development, including non-timber forest products. The following are also part of knowledge building: communication mechanisms for capitalizing on project outcomes; generation of value for the benefit of women and youths through value chain development; and participatory assessments and civil society participation in project implementation.

RESULTS-BASED LOGICAL FRAMEWORK

(*): Indicator data on the baseline situation will be updated after the baseline study

| PROJECT COUNTRY AND NAME | | Benin : Community Forest Management Support Project – Phase II (PAGEFCOM-II) | | | | |
|---------------------------------|---|--|---------------|------------------|--|--|
| PROJECT GOAL: | | The overall objective of PAGEFCOM-II is to contribute to improve food and nutritional security, and reduce poverty among the population, through the development and rational management of natural resources | | | | |
| RESULTS CHAIN | | PERFORMANCE INDICATORS | | | MEANS OF VERIFICATION | RISKS/MITIGATION MEASURES |
| | | Indicators (including CSI) | Baseline Sit. | Target | | |
| IMPACT | Long Term | | 2016 | 2022 and beyond | | |
| | Reduce the trend towards the degradation of natural resources | Annual rate of deforestation in the country (ha/year) | 70,000 | ≤ 35,000(2022) | MCVDD Report | |
| | | Percentage of forest cover at the national level (%) | ≤ 19.00% | ≥ 22% (2020) | Forest sector studies /report | |
| | | Duration of land fertility cycles (number of years of cycles of land exploitation for agriculture) | 5 | 30 (in2022) | MAEP / MCVDD reports | |
| OUTCOMES | Medium Term | | 2017 | 2021 | | |
| | 1. Improve the state of forest cover in the project area | Reduction of the percentage of illegal occupation of classified forests (%) | ≥ 35% | ≤15% | <ul style="list-style-type: none"> Mid-term evaluation report Project completion report Periodic reports of the Directorate of Water, Forestry and Hunting. | Risks: <ul style="list-style-type: none"> Lack of project ownership by the population The land pressure also extends to classified forests and protected areas Mitigation Measures: <ul style="list-style-type: none"> The project design was based on broad consultations with stakeholders to ensure that it meets their expectations on the ground The pressure on forests will be mitigated during the project by implementing a smart agriculture programme that lays emphasis on productivity instead of extensive farming |
| | | Number of hectares of spontaneously created private plantations (ha) | 5,600 ha | ≥ 20,000 ha | | |
| | 2. Improve resource availability | Duration of rainy seasons (month) /average duration of high water levels in watercourses (months) per year | ≤ 2 / ≤ 3 | ≥ 6 months / ≥ 8 | | |
| | | Reduction of the water table depth (metres) | ≥ 25 m | ≤10 m | | |
| | 3. Develop green economy value chains | Number of NTFP value chains organized | 0 | ≥ 3 | | |
| | | Number of operational PSE mechanisms | 0 | ≥ 1 | | |
| | | Number of submissions deemed eligible for carbon credit | 0 | ≥ 1 | | |
| | 3. Strengthen national capacity | Level of knowledge on non-timber forest products (%) | ≤ 20% | ≥ 65% | | |
| | | Share of national expertise in the forestry sector (%) | ≤ 10% | ≥ 55% | | |
| | | Level of operationalization of the Forestry Administration (%) | ≤ 25% | ≥ 75% | | |
| OUTPUTS | Short Term | | 2015 | Before 2020 | | |
| | A. PROMOTION OF GREEN ECONOMY VALUE CHAINS | Number of CVA shea butter clusters strengthened for the benefit of men/women (M/F) | 0/0 | 0/4 | Monitoring/evaluation report | Risks: <ul style="list-style-type: none"> MCVDD's institutional weakness on the ground Slowness in project implementation |
| | | Number of CVA Apiculture cluster /strengthened for men/women (M/F) | 0/0 | 3/1 | | |

| | | | | | |
|---|--|-----|-------------|---|--|
| A.1. NTFPs are promoted | Number of alternative economic activities to forest over-exploitation for the benefit of M/F | 0/0 | 2/1 | Quarterly progress report Reports on the activities of technical services in charge of implementation monitoring Contracts signed with contractors Reports of control firms Activity report Procurement Plan (PP) SAP system Annual external audit reports Supervision mission report | Mitigation Measures : • The programme to strengthen the capacity of MCVDD and PMU in project administration, procurement and financial management will mitigate this risk. • Using the former team and structures of PAGEFCOM-I with required experience to implement the gender project is a means of mitigating slowness and lateness, and a means of guaranteeing success. |
| A.2. The blue forest economy is developed | Number of floating cages to benefit men/women (M/F) | 0/0 | 3/2 | | |
| | Number of ponds dug to benefit men/women | 0/0 | 3/2 | | |
| A.3. Economic alternatives to forest over-exploitation are supported | Number of men/women game breeders established | 0/0 | 4/1 | | |
| | Number of persons (men/women) reached by IEC campaigns | 0 | 350/650 | | |
| B. SUSTAINABLE NATURAL RESOURCES MANAGEMENT | | | | | |
| B1. Institutional support for the management of forests and natural resources is assured | Amount of rehabilitated management infrastructure (CFAF) | 0 | 390,000,000 | | |
| | Number of rehabilitated tracks | 0 | 80 | | |
| | Number of agents (M/F) having benefited from capacity-building | 0 | 225/75 | | |
| | Number of strategic documents prepared | 0 | 5 | | |
| B.2 PAGS & PAPS are updated | Number of PAGS implemented | 0 | 6 | | |
| | Number of PAPS implemented | 0 | 86 | | |
| B.3 Support for biodiversity conservation is guaranteed | Number of ranches developed and leased as concession | 0 | 3 | | |
| | Number of eco-tourism tracks created | 0 | 3 | | |
| C. SUPPORT TO CC ADAPTATION | | | | | |
| C1. Forest cover is improved | Area of classified forests improved (ha) | 0 | 100,000 ha | | |
| | Area of forest plantations implemented (ha) | 0 | 6,120 | | |
| C2. Early warning system for bush fires is established | Number of synoptic tele-transmitted weather stations procured, installed or rehabilitated | 0 | 5 | | |
| | Number of SAP platforms installed | 0 | 2 | | |
| C3. Payment of environmental services and carbon sequestration is effective | Number of environment service windows opened | 0 | 3 | | |
| | Number of plantations subjected to carbon credit | 0 | 25 | | |
| D. PROJECT MANAGEMENT is ensured | Disbursement rate | 0 | | | |
| | Project physical implementation rate | 0 | ≥ 95% | | |
| | Number of supervision missions undertaken by the Bank | 0 | 20 | | |
| | Mid-term report is approved | 0 | 1 | | |

| | | | | | |
|----------------|---|------------------------|---|----------------------------|---------------------------|
| | Completion report is posted on the Bank's website | 0 | 1 | | |
| KEY ACTIVITIES | COMPONENTS | | | INPUTS | |
| | COMPONENT A: PROMOTION OF GREEN ECONOMY VALUE CHAINS: | UA 0.65 million | | Total Project Cost: | UA 8.39 million |
| | <i><u>A1. Promotion of NTFPs</u></i> | <i>UA 0.30 million</i> | | ADF Loan: | UA 5.00 million (59.59%). |
| | <i><u>A.2. Development of the blue forest economy</u></i> | <i>UA 0.25 million</i> | | ADF Grant: | UA 0.63 million (07.53%). |
| | <i><u>A3. Support for economic alternatives to forest over-exploitation</u></i> | <i>UA 0.10 million</i> | | GEF Grant: | UA 1.88 million (22.44%). |
| | COMPONENT B: SUSTAINABLE NATURAL RESOURCES MANAGEMENT : | UA 4.70 million | | Government of Benin: | UA 0.88 million (10.44%) |
| | <i><u>B1. Institutional support for the management of forests and natural resources</u></i> | <i>UA 1.46 million</i> | | | |
| | <i><u>B2. Update of PAGS and PAPS plans</u></i> | <i>UA 1.01 million</i> | | | |
| | <i><u>B3. Support for biodiversity preservation</u></i> | <i>UA 2.23 million</i> | | | |
| | COMPONENT C: SUPPORT FOR CLIMATE CHANGE ADAPTATION: | UA 1.46 million | | | |
| | <i><u>C1. Improvement of forest cover</u></i> | <i>UA 0.97 million</i> | | | |
| | <i><u>C2. Establishment of the bushfire early warning system</u></i> | <i>UA 0.31 million</i> | | | |
| | <i><u>C3. Payment of environmental services and carbon sequestration</u></i> | <i>UA 0.18 million</i> | | | |
| | COMPONENT D: PROJECT MANAGEMENT: | UA 1.58 million | | | |
| | TOTAL PROJECT COST: | UA 8.39 million | | | |

(**) M/F: Men /Women

Indicative Project Implementation Schedule

| N° | ACTIVITIES | 2016 | | 2017 | | | | 2018 | | | | 2019 | | | | 2020 | | | | 2021 | | | | 2022 | |
|----|---|------|----|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|----|------|----|
| | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| 1 | Negotiations of GEF grant and ADF loan | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Signature of grant agreement | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Fulfilment of conditions precedent to first disbursement | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Publication of the general procurement notice | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Recruitment of PMU staff | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | PAGEFCOM-II start-up workshop | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Procurement of goods of PMU and agencies (vehicles, IT equipment, etc.) | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Update of the project baseline situation | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Signing of agreements with partner structures | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Design of Annual Work Programme (AWP) | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Establishment of PAPS arrangement of community forests | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Recruitment of service providers - Parakou & Abomey PAGs | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Rehabilitation of acclimatization boundaries and fences: BD | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Installation of internal infrastructure (lodges, tracks, rooms, forestry posts, watering areas, salinization): BD | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Lease of ranches (PPP) | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Recruitment of an international expert specialized in wildlife | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | Eco-tourism tracks and site development: BD | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Demarcation of the central core | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Wildlife and flora inventory at the level of the central core and ranches: BD | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | Re-introduction of wild animals | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | Establishment of combined protection squads | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | Enrichment of hectares of gallery forest with pentadesma (shea) | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Establishment of the early warning mapping arrangement | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | Recruitment of experts for carbon sequestration and PSE studies | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | Procedure for subjecting councils to carbon credit | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | CGES monitoring and implementation | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Annual external audit | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | Completion report | | | | | | | | | | | | | | | | | | | | | | | | |

BENIN

COMMUNITY FOREST MANAGEMENT SUPPORT PROJECT – PHASE II (PAGEFCOM-II)

Management hereby submits this report and recommendations concerning a proposal to extend an ADF loan and grant of UA 5 million, and UA 631 927.47, respectively, as well as a GEF grant of USD 2.627 million to the Republic of Benin, to finance the Community Forest Management Support Project – Phase II (PAFECOM-II).

I. Strategic Thrust and Rationale

1.1 Project Linkages with Country Strategy and Objectives

1.1.1. Priorities of Government Action Plan (PAG 2016-2021), Benin-2025 Vision, CSP, and Major Development Challenges Addressed: The long-term vision and prospects entitled “Benin 2025” targets robust inclusive growth that can induce a significant improvement in people’s living conditions, based on measures taken to protect natural resources and prevent all forms of disasters. It is reinforced by the Government’s Action Plan that underscores the crucial issue of balanced and sustainable development of the national landscape, as a major strategic orientation (axe A7) under Pillar 3 on “improvement of populations livelihood”, which states action A2 as the improvement of everyone’s welfare, and the environment. The efficient management of forests and natural resources, on one hand, and the management of climate risks, on the other hand, are at the heart of this action. Taking into account of these key development areas in the strategy, as part of Government pursued effort to move from a non-forest country to one with forest cover in line with international standards and requirement of at least 20%, is essential.

1.1.2. Benin’s forest resources as evaluated by FAO in 1980 comprised mainly dense gallery forests and sparse savannah forests occupying 63,100 ha and 1,274,000 ha, respectively, both of which accounted for under 12% of the national territory. These meagre forest resources available in 1980 resulted from several decades of forest degradation due to human pressure. The average deforestation rate was 150,000 ha/year from 1960 to 1980. To reverse this trend, the Government adopted a Forestry Code and undertook several development operations whose ultimate goal was the joint protection and management of forests. As part of this measure, the Bank supported four forest sector operations from 1984 to date, including PAGEFCOM-I. Their impact lowered the annual deforestation rate to 70,000 and 50,000 ha in 2005 and 2014, respectively. This result enabled Benin to achieve a forest cover rate of 19% of the territory on completion of PAGEFCOM, in an effort to preserve livelihoods.

1.1.3. Benin 2025 Vision and the PAG 2016-2021 are also consistent with the Bank’s Ten-Year Strategy, Objective 2 (green growth) of which incorporates the issue of growth sustainability through the protection of livelihoods and the promotion of the use of natural resources as a source of innovation and job creation, especially green jobs. The Bank opted to support Benin under Benin 2025 Vision and the PAG 2016-2021, making the promotion of good governance Pillar II of its Country Strategy Paper (CSP-2012-2016). This pillar’s third specific objective is to “strengthen capacity to adequately implement climate change adaptation policies”. The preservation and increase of forest cover directly contributes thereto through better carbon sequestration and ecological balance that regulates rainfall and climate. The project is consistent with the Bank’s high five operational priorities (High 5s) under strategic focus areas 2 and 5, namely: “Feed Africa” and “Improve the quality of life for the people of Africa” by ushering in conditions for an efficient and sustainable agriculture capable of

reducing global warming. The project is also consistent with Pillar I of the CSP, Outcome 2 of which concerns the strengthening of infrastructure for greater competitiveness by continuing to build infrastructure for sustainable management of forests, which constitute the first capital of agricultural production and productivity since they regulate the climate, thanks to which land fertility is improved.

1.1.4. PAGEFCOM-II is included in the Bank's CSP (2011-2016). It plans to restore, protect and conserve natural resources. Its particularity is that it proposes a long-term solution – that of securing land regimes by incorporating land matters in the related laws and instruments in Benin. The status of community forest confers security of land ownership and security of investment during the restoration and conservation of forest resources. Lastly, it confers on communities the right to control and exploit resources. Another solution developed by this project is the promotion of alternative economic activities to take people's interest away from forest resources in order to remedy forest degradation, preserve the forest heritage from excessive use and reduce poverty. All of these will help to develop the green economy and foster the people's well-being.

1.2. Rationale for the Bank's and GEF's Intervention

1.2.1. The first phase of PAGEFCOM was financed by the Bank from 2007 to 2014, and resulted in the following physical achievements: (i) physical development at the local (communal) and inter-communal level; (ii) communal plantations; (iii) the preservation of sacred forests; (iv) the revitalization of private forest plantations; (v) the construction of communal wildlife ranches; and (vi) the implementation of socio-community investments. These enabled PAGEFCOM to produce other direct or indirect outputs: reduction of deforestation from 100,000 ha/year to 70,000 ha/year and creation of local jobs. Nevertheless, these outputs are still too fragile and might be lost if sustainable support is not given to help consolidate them.

1.2.2. These encouraging results led to pressing demands from grassroots communities and local councils to maintain the necessary support to produce the expected project impacts on a long-term basis. The Bank's interventions under PAGEFCOM-II are consistent with the goal of transition to green growth and its 2013-2022 Ten-Year Strategy. This proposal takes into consideration the climate change aspirations of Benin 2025 Vision and the Bank's 2014-2019 Strategy for Addressing Fragility and Building Resilience in Africa by consolidating the role of local communities in building resilience through rural councils.

1.2.3. The gains of PAGEFCOM-I include: 5,325.7 ha of communal plantations established and transferred (106.52%); 63 sacred forests enriched and transferred (126%); 1,769 ha of private plantations established (177%); 10,642 ha of natural forests enriched and transferred (106.42%); 23 SDACs and 9 STADs available and handed over (100%); 85 forest development plans prepared (100%); three wildlife ranches created (90.33%) at Dome (Zogbodomey): 1,438ha; Gbadagba (Djidja): 3,370ha; Djalloukou (Savalou): 3,800 ha, making a total of 8,608 ha; Savalou and Zogbodomey ranches accepted by an inter-ministerial commission; peripheral works and acclimatization enclosures undertaken at 71% in Djidja (24 green spaces created (104%); 20,109 persons taught literacy (100%); 23 CDP prepared and handed over (100%); 275 FDL-financed very small projects started and 258 accepted (129%); 11 PGIFS designed (25%), etc.

1.2.4. What was achieved during PAGEFCOM-I can only be sustainable if participatory development plans (PAPs) designed for a period of 15 years are effectively implemented and supervised for a period of 10 years by a technical support structure like PAGEFCOM. Since PAPs are only plans for the sustainable management of forests (communal and private plantations, sacred and natural forests), what is more important is that they should be

implemented by the rulebook. Currently, the structures of the institutional framework established by PAGEFCOM are not yet fully functional and experienced to implement PAPs. They will need to be strengthened through training and organization to enhance their operations. Additionally, communes do not yet have the capacity and skills to properly manage plantations transferred to them because they lack the necessary experience and organization to manage them effectively. The considerable efforts and investments that went into reforestation works and the creation of ranches risk being jeopardized if the Bank's intervention is not maintained.

1.2.5. Linkages with other Projects: The Bank financed several rural sector projects in Benin, most of which were closed in the past three years. The two agricultural sector projects, namely the Milk and Meat Sector Support Project (PAFILAV) and the Cotton Sub-Sector Support Project (PAFICOT), are being implemented as planned, while the Ouémé Valley Agricultural Infrastructure Support Project (PAIA-VO) started only recently. These projects contributed overall to the improvement of people's living conditions even though various reviews revealed the following difficulties: (i) lengthy ratification and procurement timeframes; (ii) weak mobilization of counterpart funds; (iii) lateness in the establishment of CCPs; and (iv) poor quality at entry and absorption difficulties. These concerns will be reflected in the project design. Interventions under PAGEFCOM-II will help to reduce poverty, bridge regional and social disparities, promote youth employment and build resilience to climate change. They will be coordinated with activities undertaken by other projects in the area, especially PAPVI-ABC. The PAGEFCOM-II interventions are consistent with the operational priorities of the Bank's 2013-2022 Strategy targeting robust, inclusive and green economic growth.

1.3. Aid Coordination

1.3.1 The interventions of development partners are coordinated by the General Directorate of Investments and Development Financing (DGIFD) of the Ministry of the Planning and Development, which is tasked with economic development. Dialogue between these partners and Government is established as part of the PRGS institutional monitoring/evaluation framework articulated around two thematic groups: (i) PRGS monitoring/evaluation and aid effectiveness; and (ii) Macro-economy and public finance management. This arrangement is deployed on the ground through 12 sector groups, which are frameworks for sharing to ensure complementarity and synergy in cooperation. A joint Government-TFP annual review will be held at mid-point each year. The Bank is also expected to take part in the coordination framework through the presence of its Resident Economist in Benin. The lead institution of the Environment Thematic Group is UNDP. The Bank, the World Bank, IFAD, BOAD, GIZ, CTB, the Netherlands, the EU and FAO are the main technical and financial partners of the forestry sector. At sector level, aid is coordinated by the Ministry of Living Environment and Sustainable Development (MCVDD). It is in this context that the assistance of ADF and GEF were requested and obtained to finance PAGEFCOM-II. The other members of the Environment Thematic Group are involved in this project as advisers and are systematically consulted during study of the dossier related to this proposal. The presence of a Country Economist in Benin will strengthen the Bank's involvement in the sector and facilitate dialogue with the Government. The following table presents the main amounts by source of financing committed today in the forestry and agricultural sector in Benin.

Table 1.1
Main Amounts Committed in the Sector Since 2007

| Sector or Sub-Sector* | Scope | | |
|--|------------|------------------------|-----------|
| | GDP | Exports | Labour |
| Agricultural Sector agricole | 33% (2013) | 80% | 70% |
| Stakeholders – Public Expenditure (Ongoing Programmes or Projects) | | | |
| Government | Donors | Amounts (CFAF billion) | Period |
| CFAF 87.9 billion per year (average 2008-2012) or 9.7% of the State budget | World Bank | 42.7 | 2007-2013 |
| | BANK | 27.9 | 2013-2015 |
| | CTB | 21.8 | 2003-2012 |
| | GIZ | 20.2 | 2010-2016 |
| | IFAD | 18.1 | 2010-2016 |
| | BOAD | 11.9 | 2011-2016 |
| | IsDB | 8.7 | 2007-2012 |
| | FAO | 7.6 | 2010-2015 |
| | JICA | 4.7 | 2009-2013 |
| | BADEA | 3.9 | 2011-2016 |
| | GEF/UNDP | 11.2 | 2013-2017 |
| Level of Aid Coordination | | | |
| Existence of thematic working groups | | | Yes |
| Existence of a global sector programme | | | No |

1.3.2 Benin and its partners made progress in aid effectiveness, especially in its predictability and budgeting. However, much remains to be done to mainstream gender equality in development plans and use national public finance management and procurement systems whose indicators are still far from the 2015 target. The Bank will continue to support national systems to increase their rate of use during implementation of development projects. In this regard, the signing of the letter of agreement between AfDB and the Government in 2015 on the use of national procedures for national competitive bidding will help to raise the rate of use of national systems in operations financed by the Bank.

II. Project Description

2.1 Project Objective

2.1.1 The global objective of PAGEFCOM-II is to help improve food and nutritional security, and reduce poverty through the development and rational management of natural resources. The project's specific objective is to put in place tools and mechanisms for the rational management of natural resources. To that end, the project is designed for a period of five (5) years and comprises four (4) components: (i) Promotion of green economy value chains; (ii) Sustainable natural resources management; (iii) Support for climate change adaptation; and (iv) Project management. Activities are summarized in Table 2.1 below:

2.2 Project Components

| No. | COMPONENT | COST | DESCRIPTION OF COMPONENT |
|-----|--|---|--|
| A. | PROMOTION OF GREEN ECONOMY VALUE CHAINS | UA 653,417.80 7.80% | <u>A1. Promotion of NFTP</u> (i) Processing of shea butter (ii) Promotion of beekeeping (iii) Support for additional value chains development <u>A.2. Development of the blue economy in forests</u> (i) Fish farming in floating cages and fish ponds (ii) Traditional fishing <u>A3. Support for economic alternatives to over-exploitation of forests</u> (i) Game breeding; |

| No. | COMPONENT | COST | DESCRIPTION OF COMPONENT |
|-----|---|------------------------------|--|
| | | | (ii) Support to traditional stockbreeding (IEC directed towards over-exploitation of forests – fodder park-straying of farm animals into the forest and economic evaluation of measures). |
| B. | SUSTAINABLE NATURAL RESOURCES MANAGEMENT | UA 4,698,386.85 56.00% | <p>B1. Institutional support for the management of forests and natural resources</p> <p>(i) Generation of knowledge on NTFPs, the green economy and blue economy in forests</p> <p>(ii) Improvement of national capacity through: the design of core documents (forestry policy, forestry code, update of the forestry code to include ranches and community forests), forest audit procedures manual, code of professional ethics, code of conduct for good forest sector governance, document on sector performance indicators; and support to the General Directorate of Forestry through capacity-building</p> <p>(iii) Strengthening of water and forest management infrastructure (rehabilitation of the uncompleted installations of PAMFI) at the level of three branches (Wari-Moro, Gbassa, Manigri) and at the socio-economic level including one module of three classes (Manigri), one module of three classes and a health centre in Igbèrè village and the Banon health centre</p> <p>Update and implementation of PAGS and PAPS</p> <p>(i) Implementation of the PAPS of community plantations</p> <p>(ii) Design and implementation of PAGS of the Parakou and Abomey reforestation areas (enclosure of the areas, a few internal tourist developments)</p> <p>B3. Support for biodiversity preservation</p> <p>(i) Development and lease of three (3) wildlife ranches (Zogbodomey, Djidja and Savalou)</p> <p>(ii) Development of biodiversity in the central belt of Mount Kouffé-Wari-Marô forests (fauna/flora inventory, study, deferred grazing area).</p> <p>(iii) Eco-tourism (guide, laying out of eco-tourism tracks in Carno town, old Agbassa village, Mount Soubakpéro, eco-tourism tracks (Kouffé-Wari-Marô Mountains)</p> <p>(iv) Creation of village hunting zones in the central belt (50ha) ;</p> |
| C | SUPPORT TO CLIMATE CHANGE ADAPTATION | UA 1,462,091.79 17.40% | <p>C1. Improvement of forest cover</p> <p>(i) opening of 600 ha of <i>teck</i> and <i>gmelia</i> forest plantations in communes (Allada, Bassila, Tchaourou) and 20ha of cashew nut trees in the Abomey area;</p> <p>(ii) reforestation in 10 schools in Donga (20 ha)</p> <p>(iii) IEC on the protection of forests in its schools</p> <p>(iv) organization of communities to monitor plantations;</p> <p>(iii) Enrichment of 100,000 ha of the central belt of Mounts Kouffé and Wari-Marô;</p> <p>(iv) Establishment of joint protection squads</p> <p>(v) Enrichment of hectares of gallery forests with pentadesma (shea butter tree)</p> <p>C2. Establishment of a bushfire early warning system</p> <p>(i) Installation of bushfire SAP reflecting forecasts of climate-related risks, fire risks, early warning and intervention</p> <p>C3. Payment of environmental services and carbon sequestration</p> <p>(i) Carbon sequestration study in the project area</p> <p>(ii) EMP study in Benin</p> <p>(iii) Opening of windows for the payment of environmental services</p> <p>(iv) Submission of community plantations being developed to carbon credit</p> |
| D | PROJECT MANAGEMENT AND COORDINATION | UA 1,576,425.58 18.80% | <p>(i) Organization of the project's strategic and operational planning</p> <p>(ii) Coordination of project activities</p> <p>(iii) Administrative, account and financial management</p> <p>(iv) Procurement of goods, works and services</p> <p>(v) Implementation of a training and communication plan</p> <p>(vi) Monitoring/evaluation of project implementation</p> |
| | TOTAL | | UA 8.39 billion |

2.3. Technical Solutions Adopted and Alternatives Explored

2.3.1 The technical solutions adopted are based on lessons drawn from implementing similar operations on the ground, in particular the project's first phase. Thus, the uncompleted management infrastructure of the Agoua Forest and Mounts Kouffé and Wari-Marô

Development Project (PAMF) were rehabilitated to capitalize on the outputs of previous interventions and have the best choice of sites. The use of the first project's PMU structures and staff was preferred over the forestry administration in order to benefit from this team's experience and skills. Ranches will be managed through private lease under a public-private partnership (PPP) instead of by public agencies or State structures. Lastly, the option of "green periphery + partial enclosure" was preferred to the "full enclosure" option to foster the natural exhaustion of wildlife through free movement.

Table 2.2
Alternatives Explored and Reasons for Rejection

| Alternative Solution | Brief Description | Reason for Rejection |
|---|---|---|
| Construct new infrastructure for managing forest resources | Construct forest management infrastructure on new sites, excluding the sites of uncompleted structures of the former PAMF operation, to avoid handling possible contract-related disputes | This alternative will lead to choosing a new but not necessarily suitable site, and result in supplementary costs for the State. |
| Recruit a new project management team, to coordinate and administer PAGEFCOM-II | Implement PAGEFCOM-II, relying on this new project's coordination and management team to select the best skills in MCVDD | This is a risky option because poor mastery of procedures and dossiers can delay the establishment of the project team and implementation. |
| Set up an integral peripheral enclosure of wildlife ranches with wire netting | Build a complete enclosure of the three (3) ranches (about 68 km) with Bonnox-type wildlife wire netting | This option will not ensure economic sustainability of the three ranches, due to high investment costs and continuous maintenance. It might also come with the risk of the local population "disowning" the ranches due to the overly artificial and conflictual nature of the demarcation. |

2.4. Project Type

This is an investment project financed by GEF and AfDB. It was designed to contribute to the emergence of community forestry through the preservation of forest ecosystems and their biodiversity, with the financial support of other donors. It aims to reduce poverty by improving the performance and viability of the forestry sector in Benin.

2.5. Project Cost and Financing Arrangements

2.5.1 Project Cost: The project's total cost is estimated at UA 8.39 million (CFAF 6.90 billion), net of taxes and customs duties. This cost comprises UA 4.07 million (CFAF 3.35 billion) in foreign exchange and UA 4.32 million (CFAF 3.55 billion) in local currency. It also includes provisions for physical contingencies and price escalation, estimated to average 3% and 2%, respectively. The provision for price escalation was estimated based on current and projected inflation rates for local currency and foreign exchange costs of 3.2% and 2%, on yearly average. For its part, the provision for physical contingencies is estimated between 0 and 10%. A summary of the project cost estimates by component and expenditure category is presented in Tables 2.3, 2.4 and 2.5 below. Details are given in the technical annex attached to this appraisal report.

Table 2.3
Summary of Cost Estimates by Component

| COMPONENTS | (CFAF Million) | | | (UA '000) | | | % F. Ex | % C.B |
|---|-----------------|------------------|-----------------|-----------------|------------------|-----------------|-----------|------------|
| | Local Currency | Foreign Exchange | Total | Local Currency | Foreign Exchange | Total | | |
| A. PROMO. GREEN ECO. VAL. CHAINS | 226.84 | 316.28 | 543.12 | 275.81 | 384.55 | 660.37 | 58 | 8 |
| Promotion of NTFPs | 91.50 | 158.50 | 250.00 | 111.25 | 192.71 | 303.97 | 63 | 4 |
| Dev. of Blue Economy in Forests | 104.09 | 114.03 | 218.12 | 126.56 | 138.65 | 265.21 | 52 | 3 |
| Alternatives to over-exploitation of Forests | 31.25 | 43.75 | 75.00 | 38.00 | 53.19 | 91.19 | 58 | 1 |
| B. SUSTAINABLE NAT. RESOURCES MANAGEMENT | 1,702.63 | 1,959.24 | 3,661.88 | 2,070.17 | 2,382.18 | 4,452.35 | 54 | 56 |
| Institutional support to NR management | 629.63 | 500.24 | 1 129.88 | 765.55 | 608.23 | 1,373.78 | 44 | 17 |
| Update and implementation of PAGF & PAPS | 360.00 | 440.00 | 800.00 | 437.71 | 534.98 | 972.69 | 55 | 12 |
| Support for biodiversity preservation | 713.00 | 1 019.00 | 1 732.00 | 866.91 | 1 238.97 | 2 105.88 | 59 | 26 |
| C. SUPPORT FOR CC ADAPTATION | 651.58 | 474.82 | 1 126.40 | 792.23 | 577.32 | 1 369.55 | 42 | 17 |
| Forest cover improvement | 419.58 | 329.82 | 749.40 | 510.15 | 401.02 | 911,17 | 44 | 11 |
| Implementation of the early warning system | 120.00 | 117.00 | 237.00 | 145.90 | 142.26 | 288,16 | 49 | 4 |
| EMP and carbon sequestration | 112.00 | 28.00 | 140.00 | 136.18 | 34.04 | 170,22 | 20 | 2 |
| D. PROJECT MANAGEMENT | 812.43 | 430.23 | 1 242.66 | 987.81 | 523.10 | 1 510.91 | 35 | 19 |
| TOTAL BASE COST | 3,393.48 | 3,180.57 | 6,574.06 | 4,126.03 | 3,867.15 | 7,993.18 | 48 | 100 |
| Physical contingencies | 86.67 | 111.99 | 198.66 | 105.38 | 136.16 | 241,54 | 56 | 3 |
| Price escalation | 70.06 | 57.92 | 127.98 | 85.18 | 70.42 | 155,60 | 45 | 2 |
| TOTAL PROJECT COST | 3,550.21 | 3,350.48 | 6,900.69 | 4,316.59 | 4,073.73 | 8,390.32 | 49 | 105 |

Table 2.4
Summary of Project Cost by Expenditure Category

| EXPENDITURE CATEGORIES | (CFAF Million) | | | (UA '000) | | | % For. Exc. | % C.B |
|-------------------------------------|-----------------|------------------|-----------------|-----------------|------------------|-----------------|-------------|------------|
| | Local Currency | Foreign Exchange | Total | Local Currency | Foreign Exchange | Total | | |
| I. Investment Cost | 2,285.28 | 2,940.25 | 5,225.52 | 2,778.59 | 3,574.95 | 6,353.54 | 56 | 79 |
| A. WORKS | 1,486.35 | 2,049.54 | 3,535.90 | 1,807.21 | 2,491.97 | 4,299.18 | 58 | 54 |
| 1. CONSTRUCTION & REHABILITATION | 164.40 | 246.60 | 411.00 | 199.89 | 299.83 | 499,72 | 60 | 6 |
| 2. INFRASTRUCTURE | 674.00 | 1 011.00 | 1 685.00 | 819.49 | 1,229,24 | 2,048,74 | 60 | 26 |
| 3. LAND WORKS | 647.95 | 791.94 | 1 439.90 | 787.83 | 962,90 | 1,750,73 | 55 | 22 |
| B. GOODS | 168.38 | 494.53 | 662.92 | 204.73 | 601.29 | 806,02 | 75 | 10 |
| 1. VEHICLES | 26.32 | 149.13 | 175.45 | 32.00 | 181,33 | 213,32 | 85 | 3 |
| 2. EQUIPMENT | 142.06 | 345.40 | 487.47 | 172.73 | 419,96 | 592,69 | 71 | 7 |
| C. SERVICES | 630.54 | 396.17 | 1,026.71 | 766.65 | 481.69 | 1,248,34 | 39 | 16 |
| 1. TRAINING, WORKSHOP & SEMINARS | 42.11 | 38.09 | 80.21 | 51.21 | 46,32 | 97,52 | 47 | 1 |
| 2. TECHNICAL ASSISTANCE | 101.75 | 52.25 | 154.00 | 123.71 | 63,53 | 187,24 | 34 | 2 |
| 3. STUDIES | 88.40 | 158.60 | 247.00 | 107.48 | 192,84 | 300,32 | 64 | 4 |
| 4. CONTRACTUAL SERVICES | 372.03 | 98.48 | 470.50 | 452.33 | 119,73 | 572,07 | 21 | 7 |
| 5. AUDIT | 26.25 | 48.75 | 75.00 | 31.92 | 59,27 | 91,19 | 65 | 1 |
| II. Operating Costs | 1,108.21 | 240.33 | 1,348.54 | 1,347.44 | 292.20 | 1,639.64 | 18 | 21 |
| A. STAFF | 735.60 | - | 735.60 | 894.39 | - | 894,39 | - | 11 |
| B. TRAVEL ALLOWANCES | 240.00 | - | 240.00 | 291.81 | - | 291,81 | - | 4 |
| C. OPERATION. MAINTENANCE & REPAIRS | 63.86 | 184.08 | 247.94 | 77.64 | 223.81 | 301,46 | 74 | 4 |
| D. GENERAL OPERATING CHARGES | 68.75 | 56.25 | 125.00 | 83.59 | 68.39 | 151,98 | 45 | 2 |
| TOTAL BASE COSTS | 3,393.48 | 3,180.57 | 6,574.06 | 4,126.03 | 3,867.15 | 7,993.18 | 48 | 100 |
| Physical contingencies | 86.67 | 111.99 | 198.66 | 105.38 | 136.16 | 241,54 | 56 | 3 |
| Price escalation | 70.06 | 57.92 | 127.98 | 85.18 | 70.42 | 155,60 | 45 | 2 |
| TOTAL PROJECT COST | 3,550.21 | 3,350.48 | 6,900.69 | 4,316.59 | 4,073.73 | 8,390.32 | 49 | 105 |

Table 2.5
Expenditure Schedule by Component (in USD Thousand)

| COMPONENTS | PROJECT YEARS | | | | | Total |
|--|-----------------|-----------------|-----------------|---------------|---------------|-----------------|
| | 2017 | 2018 | 2019 | 2020 | 2021 | |
| A. PROMOTION OF GREEN ECONOMY VALUE CHAINS | 326.82 | 260.43 | 64.81 | 19.21 | 7.05 | 678.33 |
| Promotion of non-timber forest products (NTFPs) | 314.36 | - | - | - | - | 314,36 |
| Development of the blue economy in forests | 12.46 | 195.41 | 31.37 | 19.21 | 7.05 | 265,51 |
| Support for alternatives to over-exploitation of forests | - | 65.02 | 33.44 | - | - | 98,46 |
| B. SUSTAINABLE NATURAL RESOURCES MANAGEMENT | 4,055.77 | 152.15 | 153.65 | 155.18 | 156.73 | 4,673.47 |
| Institutional support for natural resources management | 860.59 | 141.80 | 143.25 | 144.74 | 146.24 | 1,436,63 |
| Update and implementation of PAGF & PAPS | 1,011.34 | - | - | - | - | 1,011,34 |
| Support for biodiversity preservation | 2,183.84 | 10.35 | 10.39 | 10.44 | 10.49 | 2,225,51 |
| C. SUPPORT FOR CLIMATE CHANGE ADAPTATION | 110.95 | 601.34 | 566.85 | 89.16 | 93.79 | 1,462.09 |
| Improvement of forest cover | 36.48 | 310.83 | 531.83 | 53.61 | 40.86 | 973,60 |
| Implementation of early warning system | 10.30 | 266.36 | 10.39 | 10.44 | 10.49 | 307,99 |
| EMP & carbon sequestration | 64.17 | 24.15 | 24.63 | 25.12 | 42.44 | 180,51 |
| D. PROJECT MANAGEMENT | 533.25 | 280.61 | 293.04 | 233.49 | 236.03 | 1,576.43 |
| TOTAL PROJECT COST | 5,026.78 | 1,294.54 | 1,078.35 | 497.05 | 493.60 | 8,390.32 |

2.5.2 Financing Arrangements: The project will be financed by ADF and GEF for UA 5.63 million and UA 1.88 million, respectively (89.56% of the project cost), and the Government for UA 0.88 million (10.44%). The distribution of expenditure by source of financing and based on the list of goods and services is shown in Tables 2.6 and 2.7 below.

Table 2.6
Project Financing Plan

| SOURCES OF FINANCING | (CFAF Million) | | | (UA '000) | | | % |
|----------------------|-----------------|------------------|-----------------|-----------------|------------------|-----------------|--------------|
| | Local Currency | Foreign Exchange | Total | Local Currency | Foreign Exchange | Total | |
| ADF Loan | 2,273.95 | 1,838.34 | 4,112.29 | 2,764.82 | 2,235.18 | 5,000.00 | 59.59 |
| ADF Grant | 205.94 | 313.79 | 519.73 | 250.40 | 381.53 | 631.93 | 7.53 |
| GEF | 721.81 | 826.64 | 1,548.45 | 877.62 | 1,005.08 | 1,882.70 | 22.44 |
| Government of Benin | 554.46 | 685.50 | 1,239.95 | 674.14 | 833.47 | 1,507.62 | 10.44 |
| Total | 3,550.21 | 3,350.48 | 6,900.69 | 4,316.59 | 4,073.73 | 8,390.32 | 100.0 |

Table 2.7
Project Resource Allocation by Source of Financing (in UA Thousands)

| LIST OF GOODS AND SERVICES | ADF Loan | | | ADF Grant | | | GEF | | | BENIN GOVERNMENT | | | TOTAL | | |
|----------------------------|----------------|-----------------|-----------------|--------------|---------------|---------------|---------------|----------------|-----------------|------------------|---------------|---------------|-----------------|-----------------|-----------------|
| | Loc. Cur. | For. Ex. | Total | Loc. Cur. | For. Ex. | Total | Loc. Cur. | For. Ex. | Total | Loc. Cur. | For. Ex. | Total | Loc. Cur. | For. Ex. | Total |
| A. WORKS | 883.07 | 1,107.67 | 1,990.74 | - | 104.23 | 104.23 | 558.89 | 836.43 | 1,395.33 | 365.25 | 443.64 | 808.88 | 1,807.21 | 2,491.97 | 4,299.18 |
| B. GOODS | 105.48 | 444.36 | 549.84 | 92.38 | 146.12 | 238.51 | - | - | - | 6.87 | 10.80 | 17.67 | 204.73 | 601.29 | 806.02 |
| 1. VEHICLES | 30.09 | 170.53 | 200.62 | - | - | - | - | - | - | 1.91 | 10.80 | 12.71 | 32.00 | 181.33 | 213.32 |
| 2. EQUIPMENT | 105.48 | 444.36 | 549.84 | 92.38 | 146.12 | 238.51 | - | - | - | 4.96 | -0.00 | 4.96 | 204.73 | 601.29 | 806.02 |
| C. SERVICES | 508.98 | 305.35 | 814.32 | 76.99 | 62.99 | 139.98 | 180.68 | 113.35 | 294.04 | | | | 766.65 | 481.69 | 1,248.34 |
| 1. TRAINING | 51.21 | 46.32 | 97.52 | | | | - | - | - | | | | 51.21 | 46.32 | 97.52 |
| 2. TECHN. ASSIST. | 123.71 | 63.53 | 187.24 | | | | - | - | - | | | | 123.71 | 63.53 | 187.24 |
| 3. STUDIES | 56.42 | 98.00 | 154.42 | | | | 51.07 | 94.84 | 145.90 | | | | 107.48 | 192.84 | 300.32 |
| 4. SCES CONTRACT. | 245.72 | 38.23 | 283.95 | 76.99 | 62.99 | 139.98 | 129.62 | 18.51 | 148.13 | 0.00 | - | 0.00 | 452.33 | 119.73 | 572.07 |
| 5. AUDIT | 31.92 | 59.27 | 91.19 | | | | - | - | - | | | | 31.92 | 59.27 | 91.19 |
| D. PERSONEL | 814.14 | - | 814.14 | - | - | - | 80.25 | - | 80.25 | - | - | - | 894.39 | - | 894.39 |
| E. OPERATING COST | 347.65 | 273.01 | 620.66 | 65.26 | 46.20 | 111.47 | 13.20 | - | 13.20 | -0.00 | -0.00 | -0.00 | 453.04 | 292.20 | 745.25 |
| Unallocated | 105.50 | 104.79 | 210.29 | 15.76 | 21.99 | 37.74 | 44.60 | 55.30 | 99.90 | 22.45 | 26.69 | 49.14 | 190.56 | 206.58 | 397.14 |
| Total | 2,764.8 | 2,235.1 | 5,000.0 | 250.4 | 381.5 | 631.9 | 877.6 | 1,005.0 | 1,882.7 | 394.5 | 481.1 | 875.6 | 4,316.5 | 4,073.7 | 8,390.3 |

2.6. Project Target Area and Beneficiaries

2.6.1 Project Area: PAGEFCOM-II area of intervention covers twenty-five (25) Communes in five *Départements* (Districts), namely: (i) *Collines*, comprising *Bantè*, *Dassa-Zoumè*, *Glazoué*, *Ouessè*, *Savalou* and *Savè* Communes; (ii) *Zou* whose Communes are *Abomey*, *Agbangnizoun*, *Bohicon*, *Covè*, *Djidja*, *Ouinhi*, *Za-Kpota*, *Zagnanado* and *Zogbodome*; (iii) *Atlantique* whose Communes are *Abomey-Calavi*, *Allada*, *Kpomassè*, *Ouidah*, *Sô-Ava*, *Toffo*, *Tori-Bossito* and *Zè*; (iv) *Borgou* where the beneficiary Commune is *Tchaourou*; and (v) *Donga* involving *Bassila* Commune. This area was chosen because the project's aim is to consolidate the achievements of the first phase, which affected 23 communes in the first three districts. The project was extended to two other districts (Borgou and Donga) following a request from them in light of the good results obtained during the first phase. The project area comprises land classified for total protection as well as the protected forestland of communes that are subject to rapid occupation for agricultural purposes – a situation that destroys the land and seriously disturbs the eco-system, thus having a very negative impact on climate change and agricultural production.

2.6.2 The project area also covers 59,746 km² (52.06 % of the national territory) between the Atlantic Ocean to the South and Latitude 8°20' to the North where it borders *Alibori* and *Atacora* Districts. The dominant climate is the Sudano-Guinean type with four seasons (two rainy season and two dry seasons) and annual rainfall ranging from 1,000 mm to 1,400 mm in the South-West, and 1,200 mm in the North.

2.6.3 Beneficiaries: The project area has a population of about 4,709,426 people, or 45.63% of the country's total estimated in 2013 at 9,983,884. Among them are various user groups of forests in surrounding villages involved in forest development activities: (i) farmers whose main challenges are linked to the use of very little capital and rudimentary equipment; (ii) stockbreeders who have preserved the traditionally extensive character of their activity; (iii) fishermen with very artisanal practices on water courses; (iv) women whose challenges include the weight of tradition, daily domestic chores, illiteracy, the lack of credit, information and training on development practices and low income levels; (v) hunters whose difficulties are linked to the management of wildlife and compliance with management rules; and (vi) forest exploiters whose activities that very developed in the area in the past, have virtually disappeared, and who have converted to illegal non-sustainable forest exploitation.

2.6.4 Project Design and Structure: The project's five Districts constitute the country's green belt and form part of the Central Belt. It is from here that forest ecosystems need to be stabilized to preserve livelihoods in Benin. PAGEFCOM-II will guarantee the productivity capital, i.e. the forest ecosystem. The specific objective is to sustainably restore the forest ecosystems in *Atlantique, Zou, Collines, Borgou* and *Donga* Districts and develop value chains to promote the green economy. Some of these Districts (*Atlantique, Zou* and *Collines*) already benefited from support during the first phase, due to the advanced level of degradation of forests in these localities. The two others (*Borgou* and *Donga*) adjoining the first three form Benin's green belt that will be the target of protection and development, with a view to the conservation and sustainable development of the country's biodiversity. Improving conservation within this belt will help to guarantee forest cover stability and regulate the climate, which in turn will ensure production capital and agricultural productivity, as well as the people's well-being.

2.7. Participatory Approach in Project Identification, Design and Implementation

2.7.1 The participatory approach served as basis for project design. It was adopted during discussions and consultations with officials of ministries concerned, Government departments, local authorities, farmers' organizations, civil society, the private sector and TFPs. It helped to establish the current status, factor in lessons learned from previous experiences, consider the views of beneficiaries and partners and define potential synergy to be developed. The consultative meetings that were organized to identify challenges and needs with beneficiaries (women and youths especially), representatives of various socio-professional groups, communities and decentralized technical services (at regional and local level) allowed for better understanding of major underlying issues and identification of appropriate measures for effective implementation. The choice of communes, sites and activities were discussed in-depth with beneficiaries on the ground and during a stakeholder consultative workshop held in Cotonou on 6 October 2016.

2.7.2 A strong commitment to the project and wide consensus on its design and implementation conditions emerged from this participatory process. Visits to different sites helped to assess the state of existing works and infrastructure, and to propose technological options suited for their construction/rehabilitation. The solid communication that developed around PAGEFCOM-II and the continued participatory approach led to project ownership by local actors, which is a guarantee of its success. Thus, it was agreed to design and implement a communication plan to lend greater visibility to achievements and ensure a wide dissemination of outcomes.

2.8. Bank Group Experience and Lessons Reflected in Project Design

2.8.1 The main weaknesses identified during the implementation of Bank-financed projects concern: (i) insufficient preparation of projects; (ii) long ratification timeframes; (iii) weak mobilization of counterpart contributions; (iv) lateness in assigning key project staff; (v)

inadequacies in financial management; and (vi) overall slowness of the procurement process. These constraints often translate into late execution and many extensions that affect portfolio quality and project efficiency.

2.8.2 The current design of PAGEFCOM-II largely reflects lessons drawn from Bank-financed projects in Benin and in the sub-region. At the same time, the design strives to remedy some of the weaknesses noted during portfolio reviews and in completion reports, as indicated below:

Table 2.8
Bank Group Experience and Lessons Learned

| Key Lessons and Experiences | Actions taken in the Design of PAGEFCOM-II |
|--|--|
| Late mobilization and limited capacity of key staff assigned to projects | PAGEFCOM's former PMU will be given a new mandate and strengthened as necessary, especially at the level of the Project Administrative and Financial Officer (deceased), and Coordinator, to ensure that the project benefits from the best national forest sector expertise. |
| Lateness and cumbersome procedures encountered during the procurement process | The project will use national competitive bidding procedures and the Borrower's standard bidding documents. A procurement specialist will be recruited to strengthen the PMU. His close monitoring of the PP will be a key performance indicator. Lastly, communes will not undertake procurements under this project, because there is no Local Development Fund (FDL). |
| Project impacts and outcomes still not monitored, visible and assessed | The project will set up participatory monitoring with the participation of Communes, in line with the accountability principle. There are also plans to have a communication plan at project level to share project experiences and outcomes with all stakeholders. |
| Problems encountered in financial and accounting management | MCVDD will be supported by the Bank to update the already existing administrative, financial and accounting procedures manual before the first disbursement. Further, the General Inspectorate of MCVDD will conduct the project's internal audit. Lastly, the administrative/financial officer and accountant will be recruited on a competitive basis. |
| Weak capacity of implementation units and partner institutions | A budget was allocated to build the capacity of PMU staff and partner institutions in project management, procurement, financial management and monitoring/evaluation. |
| Difficulties of mobilizing counterpart contributions | The counterpart budget will be implemented and monitored through the Integrated Public Finance Management System (SIGFIP) to facilitate its disbursement. |
| Weak coordination with the other interventions of the Bank and TFPs | The project will develop synergy between Bank operations (PAFILAV, PAIA-VO, PAPVIRE-ABC) and those of other TFPs including AFD, the WB, GEF/UNDP and FAO to improve biodiversity, promote NTFPs, install the early warning system and update PAPS. |
| Poor quality-at-entry and weak integration of gender indicators in the logical framework | The project preparation and appraisal process was participatory and the logical framework mainstreamed the key gender indicators. |

2.8.3 To ensure good quality-at-entry and anticipate essential services at start-up of activities, the following measures were taken: (i) strengthening of quality-at-entry of projects, with first disbursements effected as quickly as possible; (ii) recourse to national procurement procedures for some goods and works; (iii) PMU based in Cotonou, supported by the administration to ensure close monitoring of activities; (iv) involvement of communes and regional devolved services to sustain project achievements; (v) operationalization of PMU anticipated; (vi) consideration of other partners' interventions to ensure coherence, complementarity and synergy in selected activities; (vii) in-depth examination of procurement process and methods to be prioritized, with due regard to delays often encountered; and (viii) installation of accounting software and monitoring/evaluation procedures at project start-up. The project design will also lay special emphasis on some themes: (a) value chains approach;

(b) employment of youths and women; and (c) resilience to climate change (protection, conservation and development of forests and biodiversity).

2.8. Key Performance Indicators

The indicators used to measure programme performance are listed below:

| LIST OF INDICATORS | |
|--|--|
| Impact Indicator | |
| Annual rate of deforestation in the country (inh./year) | |
| Percentage of forest cover at national level (%) | |
| Outcome Indicators | |
| Reduction of the percentage of illegal occupation of classified forests (%) | |
| Number of NTFP value chains organized | |
| Number of operational PSE mechanisms | |
| Number of submissions deemed eligible for carbon credit | |
| Level of knowledge of non-timber forest products (%) | |
| Share of national expertise in the forestry sector (%) | |
| Output Indicators | |
| Number of reinforced CVA shea groups for the benefit of men/women (M/F) | |
| Number of reinforced CVA apiculture groups for M/F | |
| Number of alternative economic activities to the over-exploitation of forests to benefit M/F | |
| Number of floating cages installed for men/women (M/F) | |
| Number of ponds installed for men/women | |
| Number of game breeders established by men/women | |
| Number of km of roads rehabilitated | |
| Number of agents (M/F) having benefited from capacity-building | |
| Number of strategy papers prepared | |
| Number of PAGS implemented | |
| Number of ranches developed and leased | |
| Number of eco-tourist tracks created | |
| Area of enriched classified forests (ha) | |
| Land area of forest plantations (ha) | |
| Number of synoptic tele-transmitted weather stations procured, installed or rehabilitated | |
| Number of SAP platforms installed | |
| Number of environmental service windows opened | |
| Number of plantations subjected to carbon credit | |
| Disbursement rate | |
| Project physical implementation rate | |
| Number of supervision missions undertaken by the Bank | |
| Mid-term report is approved | |

III. Project Feasibility

3.1 Economic and Financial Performance

3.1.1 The project's financial and economic analysis was based on the cost-benefit analysis of the expected project spin-offs. The "with-project" and "without-project" situations were compared over the life duration of investments made to promote the green economy or the project life, estimated at 25 years. The project's expected spin-offs from improvement of the plant cover and promotion of green economy include: (i) the sustainable promotion of NTFP value chains such as shea nuts, honey (apiculture), *nééré* cloves, *zaban*, baobab fruits, detarium fruits (sweet dattock), acacia cloves as well as leaves and barks used in traditional pharmacopeia; (ii) the promotion of the blue economy (fish-farming in ponds, cages and raised tanks); (iii) additional agricultural production through smart agriculture, for products serving to regulate climate through plant cover created such as maize, cassava, *niébé* (beans), rice, onion, tomatoes, etc.; (iv) better ecological balance and preservation of a conducive habitat for wildlife development, which also offer environment-related opportunities; (v) improved well-being of the population by preventing drought and famine, improving food security, reducing the medical gap alongside regulating climatic conditions, reducing the burden of domestic chores, particularly for women and vulnerable groups, improving life expectancy, better income with

greater access to healthcare and education, etc. (vi) the improvement of animal and livestock production thanks to the quality and abundance of pasture and water; (vii) the spinoffs of carbon sequestration (carbon credit); and (viii) the creation of temporary and permanent jobs, resulting from project achievements. The detailed scenarios for economic and financial analysis, production tables and operating models (“with-project” and “without-project” scenarios) and financial/economic flows are treated in detail in the technical annexes (Annex B8).

Table 3.1
Main Economic and Financial Data

| | |
|---|----------------------------|
| <i>NPV (baseline scenario)</i> | CFAF 48.002 billion |
| <i>IRR (baseline scenario)</i> | 20.16 % |
| <i>Economic NPV (baseline scenario)</i> | CFAF 52.71 billion |
| <i>ERR (baseline scenario)</i> | 22.67% |

3.1.2 Financial Performance: The additional income accruing from various production models are the following: (i) collection and processing of shea nuts: CFAF 137,000/year per woman beneficiary; (ii) apiculture: CFAF 226,000/year per male beekeeper and CFAF 178,000/year per female beekeeper; (iii) smart agriculture, dry maize mainly: CFAF 96,000/ha, or CFAF 145,000 per male beneficiary and CFAF 96,000 per supported woman. In light of the foregoing, the internal rate of return (IRR) is estimated at 20.16% for NPV of CFAF 48.002 billion. Sensitivity tests established using simulations of successive decreases of agricultural prices and outputs from 2.5% to 35%, show that the IRR falls more slowly than prices and outputs with a profitability threshold established even with prices reduced drastically by above 27.5%. Consequently, the IRR is stable, with a lower incidence of poverty in the PA as the knock-on effect.

3.1.3 Economic Performance: The basic economic rate of return stands at 22.67% for a net present value (NPV) of CFAF 52.71 billion. The results of the financial and economic analysis show that PAGEFCOM-II is financially and economically viable.

3.1.4 Sensitivity Analysis: The sensitivity analysis conducted based on the analysis of scenarios allowed for simulating financial performance indicators (NPV, IRR and C/B Ratio) based on the most sensitive endogenous variables of the analysis model used, namely prices and production output. The simulations show that financial performance falls, albeit much more slowly, as the prices of products fall. On that basis, the financial performance of PAGEFCOM-II may be deemed stable although the project’s financial results are sensitive to price decreases. Moreover, the switching values linked to price falls is over -27.5%. Therefore, prices need to fall drastically by over 27.5% for the internal rate of financial return (IRR) to be equal to the opportunity cost of capital estimated at 12%. The successive drop in output also translates into lower values of financial performance indicators (TRI, NPV, C/B Ratio), as in the previous situation with falling prices. Similarly, the switching value linked to output corresponds to -27.88% of the drop in output. As earlier stated, the summary of scenarios is presented in Annex B8.

3.2. Environmental and Social Impact

3.2.1. Environment: Worsening climatic conditions, coupled with bad practices in spatial and natural resources management have contributed significantly to degrade ecosystems and impoverish the population, engendering conflicts and litigations in the project impact area. Against this backdrop, the Community Forest Management Support Project (PAGEFCOM-II) through its three components: ((i) Promotion of green economy value chains; (ii) Sustainable natural resources management; and (iii) Support for climate change adaptation) will help to

reduce the deforestation rate, improve forest cover in the country, and consequently improve the people's living conditions.

3.2.2 In this regard, a major programme of activities will be implemented in the area of natural resources management. Reforestation activities (forest plantations and enrichment); information, sensitization and capacity building; value chains promotion, etc., will be carried out. These will have significant positive outcomes and impact on the natural and human environments, and help to strengthen the climate resilience of eco-systems in the project target area.

3.2.3 These major positive outcomes and impacts on the natural environment will be seen in the reconstitution of the forest cover; the recreation of natural habitats; better biodiversity conservation; soil conservation and regeneration; lower greenhouse gas emissions and stronger carbon sequestration capacity, and tougher fight against desertification, to name but a few.

3.2.4 Overall, project activities will help to improve natural resources management and build the climate resilience of eco-systems and communities. In contrast, some activities could also produce negative outcomes and impacts on the environment (risks of pollution and nuisance during certain works such as the rehabilitation of tracks and roads; the felling of trees to clear sites and rights-of-way, etc.). The project's implementation also come with risks of social conflicts and land litigation (restricted access to protected areas and tracks, advance of the "agricultural front", etc.).

3.2.5 Furthermore, discrimination against some categories (women and youths in particular) and the non-involvement of the grassroots population and local elected officials could compromise the attainment of project objectives. However, the bulk of these impacts will be minor-to-moderate. Project activities will not cause involuntary population displacements, relocation or any significant loss of assets.

3.2.6 The project is classified in Environmental Category 2. The few minor-to-moderate negative outcomes and impacts will be mitigated through the measures outlined in the ESMP, and other measures and activities envisaged by the project (application of best practice; IEC programme and capacity-building; improvement of value chains; promotion of NTFPs; installation of an Early Warning System and a mechanism for paying for environmental services).

3.2.7 ***Impacts and Outcomes on Climate Change:*** The "Support for climate change adaptation" project component will contribute to the preservation and improved management of natural resources. Meanwhile, all project activities contribute overall to the rational and sustainable management of natural resources, and therefore to mitigating the effects of climate change. Planting/enrichment, information/sensitization and capacity-building programmes on the environment and natural resources management will have major positive outcomes and impacts on the natural environment, biodiversity, adaptation and reduction of vulnerability. They will also contribute to efforts to mitigate the effects of climate change.

3.2.8 **Gender:** Women make up 51.2% of Benin's population. In 2014, the country's Human Development Index (HDI) stood at 0.480, the standard being 0.5 (UNDP, 2015) and the adjusted Human Development Index (HDIA) for inequalities of 0.300. Thus, 37.4% of the potential human development level in Benin is lost to inequalities. The loss observed is higher than for Sub-Saharan Africa (33.3%). High inequalities persist in education (44.8%), life expectancy at birth (37.0%) and the income level (29.4%).

3.2.9 The Gender Inequality Index (GII) is estimated at 0.614, which is higher than the average in Sub-Saharan Africa (0.575). Despite the progress recorded this past few years thanks

to programmes initiated (maternal and infant health, higher girls' enrolment), maternal mortality rates (340 in 2014 against 410 in 2011) and the fertility rate among teenagers aged 15 to 19 (90.2 in 2014 against 111.7 in 2011) are still too high (Source: UNDP, 2015). This situation is detrimental to the health of girls and limits their future opportunities since early pregnancies prevent them from going to school and furthering their education, as a result of which they are confined to sectors of activity where unskilled labour predominates.

3.2.10 Before the 2000 decade, Benin did not have specific laws on gender and women's empowerment. The majority Dahomeyan custom in force asserted the supremacy of the man over the woman. Thereafter, significant progress was noted on the legal and institutional framework on gender. The trend of the legal framework has resulted, among others, in the enforcement of: (i) Law 2003-03 of 3 March 2003 to repress the practice of Female Genital Mutilation in the Republic of Benin, which not only protects women and girls from all forms of gender-based violence but also punishes the perpetrators and accomplices of such acts; the application of this law coupled with sensitization campaigns made it possible to reduce the rate of FGM victims from 17% in 2001 (EDS) to 13% in 2006 (EDS) and approximately 8% in 2012; (ii) the Personal and Family Code of 2004 which, among other things, authorizes the woman to keep her own name while married, sets the legal age of marriage at 18 for women and men, and allows the woman/girl to enjoy succession on a par with the man and boy etc.; and (iii) Law No. 2007-03 of 16 October 2007 instituting the rural land regime in the Republic of Benin, which specifies the principle of legal access of all Beninese to natural resources in general and agricultural land in particular, without discrimination as to gender or social origin. Similarly, it explicitly guarantees the right of women to succeed their ascendants or spouses on rural land.

3.2.11 At the institutional level, Government commitment to prioritize women's empowerment is reflected in the adoption of the National Policy on Gender Promotion (PNPG) in 2009.

3.2.12 Despite this progress, challenges persist in terms of equal and equitable justice for women and men. These include the non-enforcement of laws; difficulties for women to have access to justice; and lengthy, costly and complex judicial procedures that constitute a real uphill battle for women most of whom are illiterate and poor. Despite Law No. 2013-01 of 22 April 2013 establishing the Land and State Property Code, women continue to be the victims of inequality in terms of accessing resources.

3.2.13 Field visits confirmed that women in the target area play a major role in the use and management of natural resources, whose degradation has negative effects on the entire society. Due to the still dominant patriarchal organization of society, environmental constraints have different consequences on men and women. Rural women are involved at different levels in all agricultural production sub-sectors (agricultural, livestock and fisheries production as well as natural resources management) and at the same time discharge vital duties in food/nutrition, hygiene and family health. They are responsible for all domestic chores and care for their families. Women assume many economic and social responsibilities, and are deeply involved in community activities, natural resources management, income-generating activities (market gardening, rice cultivation, stockbreeding, gathering, handicraft, produce processing, etc.) in a context strongly marked by environmental and natural resources degradation. Additionally, their technical and economic capacity is weak, their economic power low and representation in decision-making bodies poor, etc.

3.2.14 **Regarding natural resource management**, women are involved in setting up nurseries, reforestation works, collection of non-timber forest products (NTFP) and the search for firewood. PAGEFCOM-I had initiated many natural resource management, product processing support and capacity-building projects that Phase II should consolidate. However,

despite various types of constraints, consultations clearly revealed that increasingly more women hope to become real development actors. They are organizing themselves more and more into better-structured economic and financial groups and organizations.

3.2.15 Women household heads in the project area represent 15% of the population in the three districts. The social climate among landholders and exploiters has improved with the emergence of long-term land contracts for women and women's groups. The project will continue to prioritize rural activities usually undertaken by women, for which they have recognized expertise (market gardening, rice cultivation, processing activities, marketing, etc.) and from which they can earn income. A "market gardening scheme" component will be implemented specifically for women, including securing the land of sites developed for them. Generally, the project will work to promote gender mainstreaming in all components, especially through equitable access to resources and capacity-building activities. It will ensure that women have access to factors of production (35% of developed land and 60% of processing and marketing facilities and materials), technical, vocational and organizational training (50%), and equitable access (50%) to financial services planned under the project. It will help to organize women in cooperatives and establish young women entrepreneurs in the agricultural sector (50%). The project will ensure that women occupy at least 30% of decision-making positions in steering committees set up.

3.2.16 The MCVDD Directorate of Planning and Forecasts will ensure that gender is fairly mainstreamed in project management and benefits. A monitoring/evaluation system will be set up using gender-disaggregated data and gender-related indicators based on a gender analysis in districts. The project management structures and gender stakeholders will be supported through capacity building, with working equipment allocated to them. The gender component will be implemented with the decentralized structures of the Ministry in charge of Gender. The budget allocated for gender-related activities is UA 3.27 million, corresponding to 39% of the budget amount.

3.2.17 **Positive Project Impacts:** Project activities will contribute largely to improve natural resources management and build the resilience of ecosystems and communities in the project target areas to climate change. The project will have major positive outcomes and impacts on plant cover reconstitution; the protection, conservation and sustainable management of natural resources and biodiversity; the improved resilience of ecosystems to climate change and variability; soil conservation and regeneration; lower greenhouse gas emissions; the increase in carbon sequestration capacity, the strengthening of the fight against desertification, etc.

3.2.18 Interventions under PAGEFCOM-II will help to improve the productivity of agricultural, silvicultural, pastoral and fisheries production systems, thus enhancing production and food security of households, reducing poverty and promoting youth and women's employment. The project will also contribute to reduce potential sources of conflicts between communities for access to land and use of space (particularly for transhumance).

3.2.19 The project envisages a major programme to support the population and strengthen the people's capacity to manage natural resources. This will also help to prevent recurrent conflicts and litigation emanating from the use of natural resources and spatial management in the project's impact area.

3.2.20 **Impact on Gender:** Field visits and the series of interviews held confirmed that women are fully involved in natural resources management and that these resources provide them with a significant share of income (gathering of NTFPs, firewood collection, produce processing and marketing, etc.). Natural resource degradation has a significant impact on

women's living conditions. The consultations also revealed the need to strengthen women's involvement in project implementation, consolidate Phase I achievements, while increasing and diversifying NTFP processing units and strengthening their management capacity, etc.

3.2.21 Women's specific needs, views and concerns must be properly formulated and taken into consideration during project implementation, particularly as concerns capacity building programmes and value chain improvement. Therefore, during implementation, the project will ensure that women are represented in all decision-making bodies.

3.2.22 **Project's Potential Negative Impacts:** Since virtually all project activities are small in scope, barely or not mechanized, and concern natural resources management and building the resilience of ecosystems and communities to climate change, they will not engender involuntary displacement or relocation of the population, or any loss of significant assets. Furthermore, the bulk of negative impacts will be minor-to-moderate. Nonetheless, special attention must be paid to the implementation of certain works or developments – for instance the establishment of processing units; fish farming; rehabilitation of equipment; development and lease of wildlife ranches; eco-tourism – that by their very nature could engender risks of conflicts and disputes during execution (claims over land, hunting areas, tracks; fishing zones; restrictions of access to forest resources; etc.). The ESMP envisages improvement and mitigation measures for each project impact and potential risk.

3.2.23 **Forceful Resettlement:** PAGEFCOM-II activities will not induce any population displacement or relocation. Rather, they will contribute to maintain the population in their respective areas and build their resilience.

IV. Implementation

4.1. Implementation Arrangements

4.1.1 **Implementation Methods:** The project will be managed by the PAGEFCOM II Project Management Unit (PMU) attached to the General Directorate of Water, Forestry and Hunting (DGEFC), placed under the supervision of the Ministry of Living Environment and Sustainable Development (MCVDD) with headquarters in Cotonou. The PMU will mainly coordinate, monitor and control project activities. It will comprise: (i) a project coordinator; (ii) an internal monitoring/evaluation specialist; (iii) a forestry specialist; (iv) a procurement specialist; (V) a wildlife specialist; (VI) an infrastructure specialist; (v) an administrative and financial officer; and (v) an accountant. All vacant key positions will be filled through calls for candidatures, especially those of project coordinator and the administrative and financial officer.

4.1.2 The support staff will comprise an IT technician, a cashier, a supplies officer, a storekeeper, two secretaries, a messenger and seven drivers. The PMU will rely on the Inspectorates and Units ("*cantonnements*") of Forestry Administration to implement activities on the ground. It will be supported by one-time technical assistance (international and national consultants).

4.1.3 A Guidance and Steering Committee (COP) and a Steering and Monitoring Committee (COS) will be established to monitor and guide project activities. COP/COS will comprise representatives of the Ministry of State in charge of Planning and Development, the Ministry of Living Environment and Sustainable Development (MCVDD), the Ministry of Economy and Finance (MEF), the Ministry of Agriculture, Livestock and Fisheries (MAEP), and the Ministry in charge of Decentralization and Local Governance. Other members will include representatives of Ministries in charge of Water, Public Works, Women's Empowerment, Youth Employment as well as women's agricultural organizations. COP will be chaired by the

Minister of Living Environment and Sustainable Development (MCVDD) or his/her designated representative. The secretariat will be managed by the project coordinator.

4.1.4 **Procurements.** All procurements of goods, works and services under this project will be done pursuant to the new Bank Policy on Procurement approved by the Boards of Directors of the AfDB Group on 14 October 2015. The new policy allows a wider use of the national procurement system.

4.1.5 Furthermore, the reviews conducted by the Bank from 2010 to 2013 on the national public procurement system showed that the system complies overall with international standards and that the country has made significant progress. It now has an appropriate regulatory and institutional framework to award part of the contracts envisaged during this project. Thus, the standard national bidding documents (SNBD) adopted are inspired by the standard documents of multilateral development banks and international financial institutions, and respond to the fundamental principles of public procurement. However, a few differences and weaknesses were identified in relation to the Bank's procurement policy and international standards. These points of divergence will be the subject of an action plan to be agreed between the country and the Bank to preserve the fundamental principles governing procurements.

4.1.6 In this context, the procurements envisaged under this project will be undertaken partly in line with national rules and procedures, using the country's standard procurement documents for national tenders. The procurements will be made pursuant to Law No. 2009-02 of 7 August 2009 establishing the public procurement code and public service delegations, including its different implementation instruments. In this regard, the administrative, accounting and financial procedures manual under PAGEFCOM-I will be updated to align it with the requirements of PAGEFCOM-II. This manual shall be approved by the PMU and the Bank. Therefore, it was agreed that the executing agency will inform the Bank of any subsequent modification made to the national procurement regulation.

4.1.7 With regard to the specific points that were equally discussed by the Bank delegation and the Beninese party, it was agreed as follows:

- (i) For advanced contracting (AC), services for the baseline survey, project works studies and the recruitment and installation of the PMU will be procured by advanced contracting to shorten the procurement time for this critical activity after the approval of financing agreements. In this regard, the PMU shall forward to the Bank a request accompanied by the procurement plan for this activity;
- (ii) Regarding the Project Management Unit, it was agreed to renew the mandate of some members of the PAGEFCOM-I implementation team, to capitalize on experience acquired during the project's first phase. However, considering the importance of the positions of coordinator and monitoring/evaluation officer, and the absence of the administrative and financial officer, the principle of calls for candidature will be used to fill these positions;
- (iii) With regard to works to rehabilitate infrastructure that could not be completed during the project's first phase, the mission requested the Beninese party to settle all disputes linked to contracts related thereto prior to commencement of procurements to be financed by the Bank. The mission also agreed to set aside a provision for said rehabilitation works, subject to the forwarding of a special report on the status of uncompleted infrastructure contracts to the Bank for consideration and opinion;

- (iv) Lastly, most procurement-related weaknesses and risks were identified. These weaknesses were the subject of an improvement plan and corrective measures outlined in this appraisal report. The procurement methods and assessment of the PMU's capacity are detailed in the technical annexes (Volume II) attached to this report.
- (v) Arrangements concerning various expenditure categories and methods for procuring the related contracts, especially the use of PPs as well as procurements to be made according to Bank rules and procedures, are specified in this appraisal report. Further details are given in the project's financing agreement.
- (vi) Thus, the different methods for conducting procurements or selecting consultants, the cost estimates, requirements related to preliminary screening and implementation schedules agreed by the Borrower and the Bank are presented in the procurement plan and incorporated in this report.

4.1.8 Disbursement: Disbursements will be made using the following three (3) methods: (i) the special account method; (ii) the direct payment method; and (iii) the reimbursement method (RF – revolving fund). Under the special account method, three special accounts (ADF Loan and Grant, and GEF) will be opened at the Central Bank of West African States (BCEAO). These special accounts will have two signatories, namely the Director General of the Autonomous Amortization Fund (CAA) and the Receiver of Debt Finance ("*Receveur des Finances de la Dette*") (RFD), and will be dedicated to financing three special sub-accounts opened in banks acceptable by the Bank and placed under the double signature of the Project Coordinator and the Administrative and Financial Officer. The special account method will be used to settle the project's recurrent expenses (staff allowances, small purchases and light works and services, etc.). The direct payment method will concern works and control expenditure as well as other services provided by suppliers and consultants, including the accounts auditing. The reimbursement method will serve to reimburse expenses borne by the Bank and pre-financed by the counterpart funds after pre-authorization by the Bank. Disbursement of counterpart funds will be done in line with national procedures in force.

4.1.9 Financial Management: The Project Management Unit (PMU), hosted within the General Directorate of Water, Forestry and Hunting (DGEFC) and whose services were used during the implementation of PAGEFCOM-I, will be responsible for the financial implementation of PAGEFCOM-II. Apart from civil servants involved in MCVDD's public expenditure chain, its financial management staff will comprise a coordinator, an administrative and financial officer, an accountant and a cashier. The coordinator and the administrative and financial officer will be recruited on a competitive basis under the Bank's supervision. Internal control will be based on the existing administrative, financial and accounting procedures manual that needs to be updated to suit the PAGEFCOM-II context. The integrated accounting system inherited from PAGEFCOM-I shall be reconfigured based on PAGEFCOM-II specificities, to keep budgetary, cost and general accounting, and prepare quarterly financial progress reports and annual financial statements.

4.1.10 Audits: Project accounts will be audited yearly by an independent private external auditor to be recruited on the basis of terms of reference approved by the Bank for a period not exceeding three fiscal years. The audit report of each fiscal year will be submitted to the Bank latest six months following closure of the year audited.

4.2. Monitoring

4.2.1 Monitoring Mechanisms: The PAGEFCOM-II Steering and Monitoring Committee (COS) is chaired by MCVDD (the supervisory Ministry) or its representative, and comprises one representative each from the Ministry of Economy and Finance (MFE/CAA), the DGEFC, the DPP (for MCVDD), and the DCRE (for the Ministry of the Planning). The COS will meet at least two times yearly in ordinary session. The DP will manage the COS secretariat. The COS will have the following responsibilities: (i) ensure the monitoring of project activities; (ii) consider external evaluation reports; and (iii) give guidelines to PMU to redirect the project, if necessary.

4.2.2 Monitoring/Evaluation: Internal monitoring/evaluation will be undertaken by the Project Monitoring/Evaluation Unit while external monitoring/evaluation will be handled by the DGEFC, the DPP (for MCVDD), the CAA (for the Ministry of Finance) and the DCRE (for the Ministry of the Planning).

Environmental Monitoring: Environmental monitoring will be undertaken by the Benin Agency for the Environment (ABE) or whichever body/expert capable of doing so by the rulebook. It will ensure that effective application of measures produces the expected outcomes based on monitoring indicators defined beforehand. This monitoring will strive to verify and measure environmental impacts attributable to project implementation. At the practical and operational level, terms of reference will be designed assigning separate specific tasks to ABE and the independent consulting firm.

4.2.3 Two supervision missions are planned yearly during the implementation phase, in the course of which the project status will be assessed against the annual work plan, and the procurement and financial management plan reviewed.

Table 9: Project Schedule

| <i>Activities</i> | <i>Date / Period</i> | <i>Responsibility</i> |
|--|------------------------------|------------------------|
| Preparation | Mar/April 2015 | ADF |
| Design ESMP | Sept 2016 | ADF |
| Appraisal | Sept 2016 | ADF |
| Negotiation of Grant and Loan | Dec. 2016 | GVT/ADF |
| Preparation of Priority BDs | March 2017 | PMU/GVT |
| Board Presentation | March 2017 | ADF |
| Signature of Grant and Loan Agreement | April 2017 | ADF/GVT |
| Recruitment of the PMU | April 2017 | CF/GVT/ADF (PPF) |
| Effectiveness of First Disbursement | April 2017 | ADF |
| Start-up of PAGEFCOM-II | April 2017 | ADF/GVT/PMU |
| Signing of Agreements with Partners | Apr.-June 2017 | PMU/Technical Services |
| Preparation of remaining DP and BDs | May 2017 | PMU/MAEP |
| Implementation of Works and Services | 2017– 2021 | Contractors/Firms/PMU |
| Implementation of Operational Activities | 2017- 2022 | PMU/GVT/ |
| Mid-Term Review | July 2019 | ADF/GVT/PMU |
| Project Closing Date | 31 December 2021 | PMU/GVT/ADF |
| Completion Report | 2 nd quarter 2021 | ADF/GVT |

4.3. Governance

4.3.1 The risks of economic and financial governance associated with PAGEFCOM-II are relatively well under control. The capacity of DGEFC (PAGEFCOM-I management unit) to manage projects is deemed highly satisfactory. Annual financial statements are produced regularly by the management unit and have always been certified by auditors, albeit with

recommendations to improve procedures. The involvement of the Autonomous Amortization Fund ensures that Government monitors the use of project resources. At the operational level, the monitoring system used by DGEFC, the supervisory Ministry, and the Ministry in charge of Planning (Prime Minister's Office) provides a good overview of the Directorate's performance and governance on an ongoing basis. With the experience garnered by DGEFC in managing projects financed by the World Bank, UNDP, the EU, the Benin Government and the Directorate itself, there is good hope that the project leadership and management will be sound.

4.3.2 Regarding land, the combination of modern and customary law is a major handicap for the promotion of agricultural investments in Benin and local peace. The notion of "Rural Land Plan" (PFR) was introduced under the rural land tenure system instituted by Law No. 2007-03 of 16 October 2007. An evaluation of the system has pointed to a reduction in land conflicts following the issuance of Rural Land Certificates (CFR) that back the PFR process in villages. The social climate between landholders and exploiters has improved with the lifting of restrictions, the emergence of long-term land contracts for the benefit of women, the rapid resolution of land disputes by local authorities and investment in development (reforestation, storage and other dams, firms). The new Land Tenure and State Property Code adopted in 2013 instituted the compulsory development of rural land as a means to fight land speculation in collaboration with communes, to extend the achievements of the *Millennium Challenge Account* (MCA) and build the capacity of communes to manage such outcomes. Tripartite agreements will be signed between landholders, communes and professional organizations, and collective agreements will mitigate transhumance-related conflicts.

4.4. Sustainability

4.4.1 PAGEFCOM-II addresses the key priorities of national development. This is clearly explained in the PRGS, the Agricultural and Rural Development Master Plan and its Strategic Action Plan for Reviving the Agricultural Sector (PSRSA), Government's Second Action Programme (PAG2) and the country's ongoing decentralization process. The project is supported financially by the Government, beneficiary communes and donors such as the AfDB, for the implementation of actions at the local level. Public partner or governmental structures will seat on the project's steering and monitoring organs. Their field structures will also be part of the Communal Coordination Committee, which is the local organ tasked with project implementation. These structures were largely strengthened by PAGEFCOM-I through partnership and other agreements, and are currently highly committed to implement project activities in their respective sectors and mainstream outputs in grassroots decision-making. Project interventions at the local level address the needs and priorities expressed by the communities.

4.4.2 Capacity building is a key point of the project. On project completion, these government and local institutions will be strengthened, and will be able to address development challenges in the forestry sector.

4.4.3 At village level, natural resource conservation, protection and enrichment activities associated with agricultural practices (agriculture, stockbreeding and fishing) will be developed and could be transformed or adapted into new sustainable income-generating and job-creating activities. These activities contribute not only to individual and community well-being but also to the enhancement of an individual's social standing. They also help to develop the local economy.

4.5. Risk Management

The project's main risks are the following:

Table 10
Risks and Mitigation Measures

| N° | POTENTIAL RISKS | MITIGATION MEASURES |
|----|---|---|
| 01 | Risk of clandestine forest exploitation, lack of ownership by the population and stakeholders | The project will set up a permanent control system comprising the population and forestry workers |
| 02 | Poaching and chronic bush and transhumance fires in the project area can jeopardize achievements | The project is designed to set up monitoring committees among beneficiaries and stockbreeders to ensure sensitization and monitoring. |
| 03 | The late adherence of some stakeholders can delay the implementation of forest management plans | The project's design is based on sensitization and systematic consultation, to ensure gradual ownership by all stakeholders. |
| 05 | Lack of commitment by supervisory authorities to support the coordination team and lateness in project implementation | The project is in line with Government priorities and its design is based on systematic consultation of stakeholders, including representatives of Government departments and the communes concerned. |

4.6. Knowledge Building

A number of studies conducted under PAGEFCOM-I will be updated during the finalization of the core documents. PAGEFCOM-II will help to generate knowledge on: (i) ranches, in terms of design and management in partnership with the private sector; (ii) forestry and the early warning system (EWS); and (iii) biodiversity. Therefore, the project will contribute to develop local expertise in local forest eco-systems management, biodiversity, non-timber forest products, the development of the green/blue economy, resilience and adaptation capacity of local communities to the recurrent effects of climate change, and the mastery of natural resource management by grassroots communities.

V. Legal Framework

5.1. Legal Instrument

The project's legal framework will be an ADF loan agreement and a GEF grant agreement signed between the Republic of Benin and the Bank.

5.2. Conditions Associated with the Bank's and GEF's Intervention

5.2.1 Conditions Precedent to Effectiveness: Effectiveness of the ADF loan agreement and the GEF grant agreement shall be subject to their signature by the parties.

5.2.2 Conditions Precedent to First Disbursement of the Loan and Grant: The obligation for the Bank and GEF to effect the first disbursement of the loan and the grants shall be subject to the effectiveness of the ADF loan agreement, the ADF grant agreement and the GEF grant agreement, pursuant to the provisions set out in paragraph 5.2.1 above, and evidence of fulfilment by the Borrower/Donor in form and substance of the following conditions to the Bank's satisfaction:

- (i) Provide to the Bank, evidence of opening three special accounts in BCEAO in the name of the project meant to receive project funds denominated in foreign exchange, and of opening by the PMU of a CFAF account in a bank deemed

acceptable by the Bank in the name of the project and meant to receive grant resources (see 4.1.8);

- (ii) Provide to the Bank, evidence of recruitment of the coordinator, the administrative and financial officer, and the monitoring/evaluation specialist through call for candidature, whose qualifications will have been submitted beforehand to the Bank for approval (see 4.1.1);

5.2.3 Other Conditions: In addition, the Borrower/Donor shall furnish to the Bank within six (6) months following the first disbursement of grant resources:

- (i) Evidence of recruitment of the procurement specialist, the monitoring/evaluation specialist and the accountant, whose qualifications and experience will have been submitted beforehand to the Bank for approval (see 4.1.1);
- (ii) Agreements with the structures of the Forestry Administration, Communes, INRAB and MAEP (Directorate of Fisheries), ABE, etc. (see 4.1.3).

5.3. Compliance with Bank Policies

This project complies with all applicable Bank policies. It is requested that the Boards of Directors approve the ADF loan and the GEF grant. The project will be implemented as part of the Bank's intervention strategy in Benin as set out in the CSP 2012-2016.

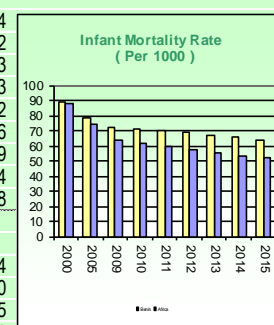
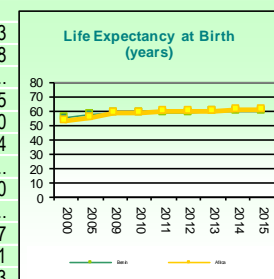
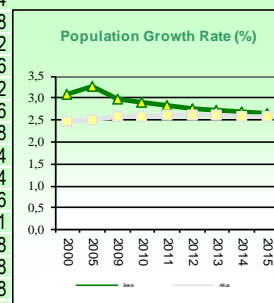
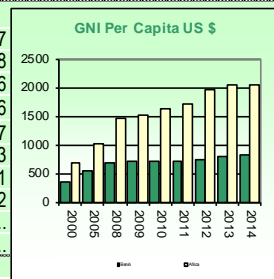
VI. Recommendation

Management hereby recommends that the Boards of Directors approve the proposal to extend to the Republic of Benin: (i) a loan and a grant not exceeding UA 5 million and UA 631,927.47 from ADF 13 resources; and (ii) a grant not exceeding USD 2.627 million from GEF resources, for the purpose and under the conditions set out in this report.

Annex I: Benin's Comparative Socio-economic Indicators (August 2015)

Benin COMPARATIVE SOCIO-ECONOMIC INDICATORS

| | Year | Benin | Africa | Developing Countries | Developed Countries |
|---|-----------|-------|---------|----------------------|---------------------|
| Basic Indicators | | | | | |
| Area ('000 Km²) | 2016 | 115 | 30 067 | 94 638 | 36 907 |
| Total Population (millions) | 2016 | 11,2 | 1 214,4 | 3 010,9 | 1 407,8 |
| Urban Population (% of Total) | 2016 | 44,4 | 40,1 | 41,6 | 80,6 |
| Population Density (per Km²) | 2016 | 99,0 | 41,3 | 67,7 | 25,6 |
| GNI per Capita (US \$) | 2014 | 810 | 2 045 | 4 226 | 38 317 |
| Labor Force Participation *- Total (%) | 2016 | 71,7 | 65,6 | 63,9 | 60,3 |
| Labor Force Participation **- Female (%) | 2016 | 70,0 | 55,6 | 49,9 | 52,1 |
| Gender -Related Development Index Value | 2007-2013 | 0,822 | 0,801 | 0,506 | 0,792 |
| Human Develop. Index (Rank among 187 countries) | 2014 | 166 | ... | ... | ... |
| Popul. Living Below \$ 1.90 a Day (% of Population) | 2008-2013 | 53,1 | 42,7 | 14,9 | ... |
| Demographic Indicators | | | | | |
| Population Growth Rate - Total (%) | 2016 | 2,6 | 2,5 | 1,9 | 0,4 |
| Population Growth Rate - Urban (%) | 2016 | 3,7 | 3,6 | 2,9 | 0,8 |
| Population < 15 years (%) | 2016 | 41,9 | 40,9 | 28,0 | 17,2 |
| Population >= 65 years (%) | 2016 | 2,9 | 3,5 | 6,6 | 16,6 |
| Dependency Ratio (%) | 2016 | 81,2 | 79,9 | 52,9 | 51,2 |
| Sex Ratio (per 100 female) | 2016 | 99,6 | 100,2 | 103,0 | 97,6 |
| Female Population 15-49 years (% of total population) | 2016 | 24,1 | 24,0 | 25,7 | 22,8 |
| Life Expectancy at Birth - Total (years) | 2016 | 60,0 | 61,5 | 66,2 | 79,4 |
| Life Expectancy at Birth - Female (years) | 2016 | 61,4 | 63,0 | 68,0 | 82,4 |
| Crude Birth Rate (per 1,000) | 2016 | 35,2 | 34,4 | 27,0 | 11,6 |
| Crude Death Rate (per 1,000) | 2016 | 9,1 | 9,1 | 7,9 | 9,1 |
| Infant Mortality Rate (per 1,000) | 2015 | 64,2 | 52,2 | 35,2 | 5,8 |
| Child Mortality Rate (per 1,000) | 2015 | 99,5 | 75,5 | 47,3 | 6,8 |
| Total Fertility Rate (per woman) | 2016 | 4,6 | 4,5 | 3,5 | 1,8 |
| Maternal Mortality Rate (per 100,000) | 2015 | 405,0 | 495,0 | 238,0 | 10,0 |
| Women Using Contraception (%) | 2016 | 17,6 | 31,0 | ... | ... |
| Health & Nutrition Indicators | | | | | |
| Physicians (per 100,000 people) | 2004-2013 | 5,9 | 47,9 | 123,8 | 292,3 |
| Nurses and midwives (per 100,000 people) | 2004-2013 | 77,1 | 135,4 | 220,0 | 859,8 |
| Births attended by Trained Health Personnel (%) | 2010-2015 | 77,2 | 53,2 | 68,5 | ... |
| Access to Safe Water (% of Population) | 2015 | 77,9 | 71,6 | 89,3 | 99,5 |
| Healthy life expectancy at birth (years) | 2013 | 52,5 | 54,0 | 57 | 68,0 |
| Access to Sanitation (% of Population) | 2015 | 19,7 | 39,4 | 61,2 | 99,4 |
| Percent. of Adults (aged 15-49) Living with HIV/AIDS | 2014 | 1,1 | 3,8 | ... | ... |
| Incidence of Tuberculosis (per 100,000) | 2014 | 61,0 | 245,9 | 160,0 | 21,0 |
| Child Immunization Against Tuberculosis (%) | 2014 | 88,0 | 84,1 | 90,0 | ... |
| Child Immunization Against Measles (%) | 2014 | 63,0 | 76,0 | 83,5 | 93,7 |
| Underweight Children (% of children under 5 years) | 2010-2014 | 18,0 | 18,1 | 16,2 | 1,1 |
| Daily Calorie Supply per Capita | 2011 | 2 594 | 2 621 | 2 335 | 3 503 |
| Public Expenditure on Health (as % of GDP) | 2013 | 2,3 | 2,6 | 3,0 | 7,7 |
| Education Indicators | | | | | |
| Gross Enrolment Ratio (%) | | | | | |
| Primary School - Total | 2010-2015 | 125,6 | 100,5 | 104,7 | 102,4 |
| Primary School - Female | 2010-2015 | 119,9 | 97,1 | 102,9 | 102,2 |
| Secondary School - Total | 2010-2015 | 54,4 | 50,9 | 57,8 | 105,3 |
| Secondary School - Female | 2010-2015 | 43,9 | 48,5 | 55,7 | 105,3 |
| Primary School Female Teaching Staff (% of Total) | 2010-2015 | 22,5 | 47,6 | 50,6 | 82,2 |
| Adult literacy Rate - Total (%) | 2010-2015 | 38,4 | 66,8 | 70,5 | 98,6 |
| Adult literacy Rate - Male (%) | 2010-2015 | 49,9 | 74,3 | 77,3 | 98,9 |
| Adult literacy Rate - Female (%) | 2010-2015 | 27,3 | 59,4 | 64,0 | 98,4 |
| Percentage of GDP Spent on Education | 2010-2014 | 4,4 | 5,0 | 4,2 | 4,8 |
| Environmental Indicators | | | | | |
| Land Use (Arable Land as % of Total Land Area) | 2013 | 23,9 | 8,6 | 11,9 | 9,4 |
| Agricultural Land (as % of land area) | 2013 | 33,3 | 43,2 | 43,4 | 30,0 |
| Forest (As % of Land Area) | 2013 | 39,1 | 23,3 | 28,0 | 34,5 |
| Per Capita CO2 Emissions (metric tons) | 2012 | 0,5 | 1,1 | 3,0 | 11,6 |



Sources : AfDB Statistics Department Databases; World Bank: World Development Indicators;

last update : August 2016

UNAIDS; UNSD; WHO, UNICEF, UNDP; Country Reports.

Note : n.a. : Not Applicable ; ... : Data Not Available. * Labor force participation rate, total (% of total population ages 15+)

** Labor force participation rate, female (% of female population ages 15+)

Annex II: Table of AfDB Portfolio in Benin (in UA): September 2016

| Sector | Project Name | Status | Window | Approval Date | Disbursement Deadline | Amount Disbursed | Amount Approved | Disbursement Rate (%) | Status |
|--------------------|--|--------|--------|---------------|-----------------------|-------------------|--------------------|-----------------------|----------|
| Water & Sanitation | Project to Support the Decentralization of Drinking Water, Hygiene and Sanitation Services | OnGo | AWF | 29/10/2012 | 31/12/2016 | 310,959 | 812,324 | 38 | NPP/NPPP |
| | Better Management of the Gande-Nokoue Oil Sludge | OnGo | AWF | 04/01/2013 | 31/03/2017 | 125,668 | 865,569 | 15 | NPP/NPPP |
| | <i>Sub-total Water and Sanitation</i> | | | | | <i>436,628</i> | <i>1,677,893</i> | | |
| Transport | Ndali-Nikki-Chcandou Road Asphaltting Project | OnGo | ADF | 07/04/2010 | 30/06/2016 | 4984441 | 11500000 | 43 | NPP/NPPP |
| | Ndali-Nikki-Chcandou Road Asphaltting Project | OnGo | ADF | 07/04/2010 | 30/06/2016 | 16486386 | 22180000 | 74 | NPP/NPPP |
| | Parakou Urban Transport Project | OnGo | ADF | 19/09/2014 | 31/12/2020 | 0 | 23800000 | 0 | NPP/NPPP |
| | Parakou Urban Transport Project | OnGo | GEF | 19/09/2014 | 31/12/2020 | 0 | 1341018 | 0 | NPP/NPPP |
| | <i>Sub-total Transport</i> | | | | | <i>21,470,827</i> | <i>58,821,018</i> | | |
| Agriculture | Ouémé Valley Rural Infrastructure Support Project | OnGo | ADF | 30/09/2013 | 30/06/2015 | 7,880 | 444,000 | 2 | NPP/NPPP |
| | Ouémé Valley Rural Infrastructure Support Project | OnGo | ADF | 23/10/2013 | 31/12/2020 | 248,045 | 39,500,000 | 1 | NPP/NPPP |
| | Ouémé Valley Rural Infrastructure Support Project | OnGo | ADF | 23/10/2013 | 31/12/2020 | 0 | 530,000 | 0 | NPP/NPPP |
| | Ouémé Valley Rural Infrastructure Support Project | OnGo | GEF | 23/10/2013 | 31/12/2020 | 0 | 5,186,647 | 0 | NPP/NPPP |
| | Programme of Emergency Assistance to Malanville and Karimama Councils Affected by Floods | OnGo | SRF | 19/03/2014 | 31/12/2014 | 576,294 | 576,294 | 100 | NPP/NPPP |
| | Milk and Meat Sub-Sectors Support Project (PAFILAV) | OnGo | ADF | 27/11/2008 | 31/12/2015 | 8,784,416 | 25,000,000 | 35 | PPP |
| | <i>Sub-total Agriculture</i> | | | | | <i>9,616,635</i> | <i>71,236,941</i> | | |
| Governance | Public Finance Management and Business Climate Improvement Support Project (PAGFPACAF) | OnGo | ADF | 24/11/2010 | 31/12/2015 | 3,020,531 | 5,000,000 | 60 | NPP/NPPP |
| | <i>Sub-total Governance</i> | | | | | <i>3,020,531</i> | <i>5,000,000</i> | <i>60</i> | |
| | Total National | | | | | 34,544,621 | 136,735,852 | | |
| Multinational | Benin/Togo: Project to Rehabilitate the Lomé-Cotonou Road and Facilitate Transport on the Abidjan-Lagos Corridor Phase 1 | OnGo | ADF | 05/10/2011 | 31/12/2016 | 16,849,681 | 38,870,000 | 43 | NPP/NPPP |
| | Benin/Togo: Project to Rehabilitate the Lomé-Cotonou Road and Facilitate Transport on the Abidjan-Lagos Corridor Phase | OnGo | ADF | 05/10/2011 | 31/12/2016 | 13,215,581 | 34,270,000 | 39 | NPP/NPPP |
| | BENIN - TOGO - GHANA Electricity Interconnection | OnGo | ADF | 04/04/2007 | 31/12/2015 | 4,474,028 | 17,390,000 | 26 | NPP/NPPP |
| | BENIN – Cotton-Textiles Sub-Sector Support Project | OnGo | ADF | 29/11/2006 | 30/09/2015 | 6,958,080 | 8,000,000 | 87 | NPP/NPPP |
| | Total Multinational | | | | | 41,497,370 | 98,530,000 | 42 | |
| | TOTAL | | | | | 76,041,991 | 235,265,852 | 32 | |

SUMMARY TABLE OF ACTIVE FORESTRY SUB-SECTOR PROJECTS IN SEPTEMBER 2016

| PROJECTS | OBJECTIVE | COST | | ACTUALS BEFORE 2015 | ACTUALS 2015 | EXPECTED 2016 | CLOSING DATE | LOCATION | REMARK |
|---|--|--------------|----------------|---------------------------|------------------|------------------|-----------------------------|--|--------------------|
| | | Sources | Amount | | | | | | |
| Programme to Manage Forests and Surrounding Regions – Supplementary Financing (PGFTR-FA) | Assist Benin in its efforts to lay the foundations for a collective and integrated management of its forest ecosystems and surrounding regions | BN | 4,500 | 1,100.118 | 365.882 | 700 | 2014-2018 | Seventeen (17) forests (Ouémé-Boukou, Dan-Atchéribé, Mékrou, Kouandé, Sota-Goungoun, Goroubi, Ouémé Supérieur, N'Dali, Logozohè, Alibori Supérieur, Ouénou-Bénou, Dogo-Kétou, <i>Trois Rivières</i> , Tchaourou-Toui-Kilibo, Agoua, <i>Mounts-Kouffé</i> and <i>Wari-Marô</i>) Two (2) surrounding regions (Djidja and Ouémé Okpara Confluent), spread in 4 districts (Atacora-Donga ; Borgou-Alibori; Ouémé-Plateau and Zou-Collines) | Ends on 31/01/2018 |
| | | IDA | 1,000 | 0 | 467 | 500 | | | |
| | | GEF | 2,780 | 501 | 1,310 | 1,341 | | | |
| | | Total | 8,280 | 1,601.118 | 2,142.882 | 2,541 | | | |
| Mono Delta Cross-Border Biosphere Reserve Project (PRBTDM) | Contribute to the sustainable development of Benin and Togo, in general, and local communities, in particular, through the protection and | BN | 100 | 0 | 10 | 40 | November 2013-December 2019 | Mono and Couffo districts (in Benin) | |
| | | GIZ | 4,912.5 | 32.75 | 1,014.634 | 1,179 | | | |
| | | Total | 5,012.5 | 32.75 | 1,024.634 | 1219 | | | |

| PROJECTS | OBJECTIVE | COST | | ACTUALS BEFORE 2015 | ACTUALS 2015 | EXPECTED 2016 | CLOSING DATE | LOCATION | REMARK |
|---|--|--------------|-------------------|---------------------------|------------------|------------------|-----------------|--|---|
| | | Sources | Amount | | | | | | |
| | sustainable use of biodiversity and ecosystem services in Mono Delta | | | | | | | | |
| Ten Million Souls, Ten Million Trees Project (P10MAA) | Contribute to the improvement of the living environment of urban and rural dwellers through the planting and upkeep of at least ten millions plants every year in all communes, with a view to mitigating the negative effects of climate change and ensuring the conservation of biodiversity | BN | 29,576.918 | 450 | 1,089.433 | 429 | 2013-2017 | Nationwide | Exits the portfolio at end-2016; its actions will be implemented by other projects in terms of intensive reforestation |
| Project to Support the Preservation and Development of Gallery Forests and Production of | Combat the effects of climate change and support the Poverty Reduction and Growth Strategy | BN | 414 | 0 | 15.929 | 10 | 2012-2017 | All districts (“Départements”) except Littoral | The project design document does not specify the amount of Benin’s counterpart contribution. This does not facilitate the programming |
| | | UNDP | 305 | 1,650 | 11.05 | 25 | | | |
| | | EU | 5,000 | 50 | 672.05 | 689.931 | | | |
| | | Total | 5,719 | 1,700 | 699.029 | 724.931 | | | |

| PROJECTS | OBJECTIVE | COST | | ACTUALS BEFORE 2015 | ACTUALS 2015 | EXPECTED 2016 | CLOSING DATE | LOCATION | REMARK |
|--|---|-------------|-----------|---------------------------|-----------------|------------------|-------------------------------|--|--|
| | | Sources | Amount | | | | | | |
| Basic Digital Mapping | | | | | | | | | of resources at the level of the national budget and therefore justifies the small amounts allocated |
| Forest Sector Capacity-Building Support Project (PARCSF) | Strengthen the intervention capacity of the forestry administration for sustainable natural resources management | BN | 4,040 | | 169,453 | 483 | 2012-2016 | Nationwide | |
| Project to Support <i>Parcs de l'Entente</i> (PAPE) | Sustainably strengthen the conservation of ecosystems of the WAP complex (W, Arly, Pendjari) with a regional perspective and with the optimization of benefits for the surrounding population | BN | 536.71063 | 404.951 | 36.173 | 10 | September 2011-September 2016 | Biosphere Reserves of Pendjari and W-Benin as well as the Communes of Banikoara, Kandi, Malanville, Kérou, Tanguiéta, Matéri and Karimama, Kouandé, and Toucountouna | The BN amount is in kind |
| | | EU | 866.94749 | 491.83868 | 104.268 | 247 | | | |
| | | UNDP | 71.904 | 18.027172 | | | | | |
| | | Total | 1,475.56 | 914.82 | 140.44 | 257.00 | | | |
| Project to Support the Management of Protected | Strengthen the protection of biodiversity in the savannah | BN | 1,000 | 158.739 | 39.455 | 30 | 2011-2017 | Pendjari National Park (PNP, 2,761 km²) "W" National Park (PNW, 5,772 km²) | Expected to end in 2016, but extended until 2017 to finish |
| | | IDA (Grant) | 2,500 | 1,532 | 471.436 | 390 | | | |
| | | GEF | 900 | 466 | 0 | 135 | | | |

| PROJECTS | OBJECTIVE | COST | | ACTUALS BEFORE 2015 | ACTUALS 2015 | EXPECTED 2016 | CLOSING DATE | LOCATION | REMARK |
|--|---|--------------|------------------|---------------------------|-----------------|------------------|-----------------|---|--------------------------------------|
| | | Sources | Amount | | | | | | |
| Areas (ex-PAGAP) | ecosystems of Northern Benin through conservation measures and by reducing anthropic pressure on parks | KFW | 200 | 0 | 0 | 0 | | | some interventions that were delayed |
| | | Total | 4,600 | 2,156.739 | 510.891 | 555 | | | |
| Community Forest Management Support Project Phase 2 | Contribute sustainably to the emergence of community forestry by preserving forest ecosystems and their biodiversity, and by reducing poverty | BN | 642.84 | 0 | 0 | 5 | 2017-2022 | All communes of <i>Atlantique</i> , <i>Zou</i> and <i>Collines</i> in addition to Tchaourou and Bassila | Effective start-up 2017 |
| | | ADF | 4,591.699 | 0 | 0 | 0 | | | |
| | | GEF6 | 1,967.86 | 0 | 0 | 0 | | | |
| | | Total | 7,202.399 | 0 | 0 | 5 | | | |

Annex IV: PAGEFCOM-II: Consideration of Risks Linked to Fragility Factors

The **Republic of Benin** is a West African country with a land area of 112,622 km². The country had a population of 9,983,884 in 2013. It belongs to several African organizations including ECOWAS, CEN SAD and the African Union (UA). Its neighbours are Burkina Faso and Niger to the North, Nigeria to the East and Togo to the West. The Atlantic Ocean is the natural border to the South. The official capital is Porto-Novo, while Cotonou is the economic capital. The country is fragile at the political, economic, social and environmental levels.

Political Fragility: Benin gained independence, under the name **Republic of Dahomey**, on 1 August 1960, with Hubert MAGA as president. Since independence, the country has had a chequered political history. Despite the apparent political stability since the new democratic environment in 1990, governance still remains a challenge in Benin, and the improvement of the political governance should be pursued, especially in the area of institutional delivery.

Social Fragility: Regarding meeting the Millennium Development Goals (MDGs), Benin is well on track to achieve the MDGs related to access to drinking water in rural areas and the reduction of the prevalence of HIV/AIDS. Nevertheless, much remains to be achieved with respect to maternal and infant mortality. Besides, unemployment and under-employment due to the mismatch between the educational system and the job market stands as a major challenge for the country. This could weaken the social front and compromise the vision of making Benin an emerging country by 2025.

Economic Fragility: Benin does not have significant mining resources and lives mainly off its port and agriculture. With the strategic Cotonou Port Authority (PAC), Benin serves as a seaport for its three landlocked neighbours: Niger, Burkina Faso and Mali. PAC also opens up access to the Nigerian market, which represents over 200 million consumers. Furthermore, 95% of Benin's economy is informal and State tax receipts are meagre even though formal sector enterprises are heavily taxed. However, economic growth driven by agricultural production and trading is estimated at 5.5% in 2014, against 5.6% in 2013. The constant improvements made to the Cotonou Port have helped to increase goods traffic and obtain significant efficiency gains while favourable meteorological conditions have strengthened agricultural production. Specifically, cotton production rose from 240,000 tonnes in 2012-13 to 307,000 tonnes in 2013-14 and, based on estimates, will be up to 350,000 tonnes for the 2014-15 season.

Environmental Fragility: In Benin, about 72% of villages/neighbourhoods have had to deal with some form of shock within the past 12 months. The most frequent shocks are floods (37% of villages), stray animals (17%), drought (15%) and price hikes (11%). The project area mainly faces two kinds of shock due to climate change, namely floods and drought, both of which have become more acute and frequent, whereas the population depends to a large extent on highly climate-sensitive resources such as water resources and agricultural production systems. These past years, 50% of people in *Borgou* and 40% in *Collines* (40%) have experienced recurrent floods leading to destruction of harvests and a 5 to 20% reduction in agricultural yields (depending on the crop), due to climate change.

At the sector level in the area considered, PAGEFCOM-II will respond to the main factors of fragility identified. The principal measures taken by the State and the project to mitigate these factors are detailed below.

At the economic and governance level: To avoid weakening its economy and build resilience, the project will help to strengthen agricultural productivity, promote smart agriculture and set

up processing units for non-timber forest products (shea nuts, honey, etc.). The additional income accruing from various exploitation models are the following: CFAF 330,000/ha per exploiter, or CFAF 178,000 per male exploiter and CFAF 125,000 per female beneficiary.

The project will contribute overall to reduce rural exodus, especially among youth, thanks to the works. The rehabilitation of tracks, construction of storage facilities, rehabilitation of markets and support to processing units will help to reduce post-harvest losses, facilitate the evacuation of produce and consequently increase agricultural production and household income. By fostering beneficiary participation in decision-making processes and the close involvement of communes (choice of sites, securing and allocating land, managing community infrastructure, managing farmer/transhumance conflicts, maintaining tracks, etc.), the project will also help to consolidate the local development process and good governance in natural resource management.

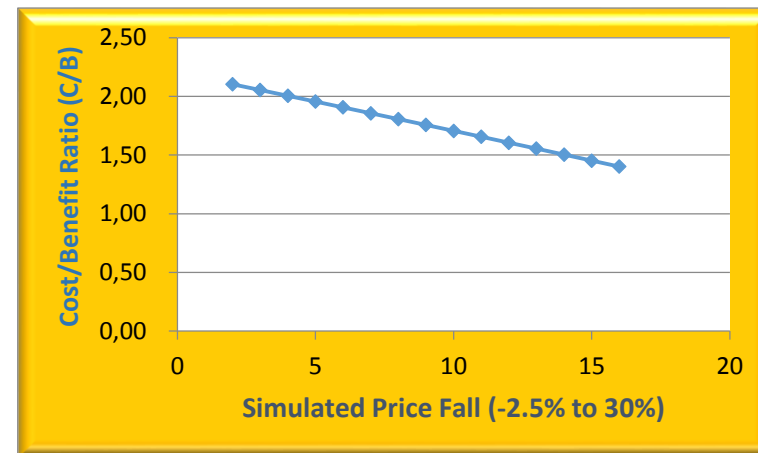
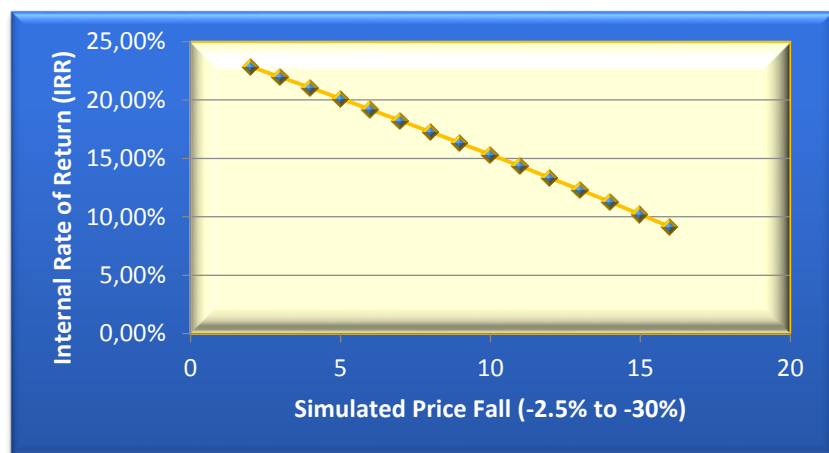
At the environmental level: PAGEFCOM-II activities will generally have major positive impacts on ecosystems, biodiversity, adaptation and lowering of vulnerability to climate change. The project will also contribute to global efforts to mitigate the effects of climate change. The population's adaptation capacity will be strengthened through the development of climate change management tools, the collection of agricultural, hydrological and meteorological information, and support for farmers to factor in climate-related information in managing agricultural activities, especially based on the early warning system. Lastly, the information generated will be incorporated into local development plans.

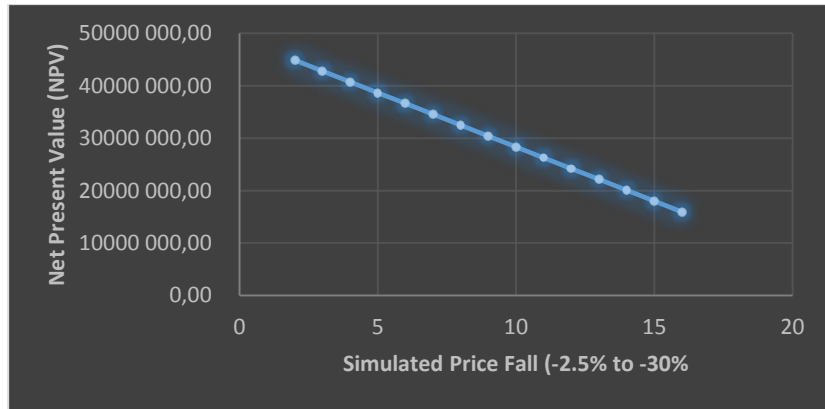
At the level of gender integration: The project will prioritize the rural activities habitually undertaken by women and for which they have recognized expertise (market gardening, rice cultivation, processing activities, marketing, etc.) and from which they can derive income. Women will be supported in terms of land security and access to project support especially for shea processing and apiculture, and for specially tailored technical vocational and social training programmes. The project will contribute to organize women into cooperatives (shea, apiculture). In addition, it will train leaders of such cooperatives in cooperative management, citizen participation and administrative/financial management.

Annexe V: Economic and Financial Analysis: Summary Table of Financial Analysis

| Summary of Scenarios | | | | | | | | | | | | | | | |
|----------------------|------------------|-------------------|------------------|-------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|
| Scenario Values | Current Values: | Price Fall - 2.5% | Price Fall - 5% | Price Fall - 7.5% | Price Fall - 10% | Price Fall - 12.5% | Price Fall - 15% | Price Fall - 17.5% | Price Fall - 20% | Price Fall - 22.5% | Price Fall - 25% | Price Fall - 27.5% | Price Fall - 30% | Price Fall - 32.5% | Price Fall - 35% |
| Variable Cells : | | | | | | | | | | | | | | | |
| Price Fall | 0.00% | 2.50% | 5.00% | 7.50% | 10.00% | 12.50% | 15.00% | 17.50% | 20.00% | 22.50% | 25.00% | 27.50% | 30.00% | 32.50% | 35.00% |
| Resulting Cells: | | | | | | | | | | | | | | | |
| NPV | 44 901 657.01 | 42 833 155.96 | 40 764 654.91 | 38 696 153.86 | 36 627 652.82 | 34 559 151.77 | 32 490 650.72 | 30 422 149.67 | 28 353 648.63 | 26 285 147.58 | 24 216 646.53 | 22 148 145.49 | 20 079 644.44 | 18 011 143.39 | 15 942 642.34 |
| IRR | 22.86% | 21.95% | 21.04% | 20.12% | 19.19% | 18.24% | 17.28% | 16.31% | 15.33% | 14.33% | 13.32% | 12.30% | 11.26% | 10.20% | 9.12% |
| C/B Ratio | 2.10 | 2.05 | 2.00 | 1.96 | 1.91 | 1.86 | 1.81 | 1.76 | 1.71 | 1.66 | 1.61 | 1.55 | 1.50 | 1.45 | 1.40 |

*The Current Values column shows values from the variable cells at the time this summary report was being generated. The variable cells of each scenario are in the grey columns and the rate of change of values based on simulations is represented graphically as follows





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Annex VI. Map of the Project Area

