



ADAPTATION FUND

AFB/ PPRC.22/15
20th March 2018

Adaptation Fund Board
Project and Programme Review Committee
Twenty-Second Meeting
Bonn, Germany, 20-21 March 2018

Agenda Item 8 j)

PROPOSAL FOR CAMEROON

Background

1. The Operational Policies and Guidelines (OPG) for Parties to Access Resources from the Adaptation Fund (the Fund), adopted by the Adaptation Fund Board (the Board), state in paragraph 45 that regular adaptation project and programme proposals, i.e. those that request funding exceeding US\$ 1 million, would undergo either a one-step, or a two-step approval process. In case of the one-step process, the proponent would directly submit a fully-developed project proposal. In the two-step process, the proponent would first submit a brief project concept, which would be reviewed by the Project and Programme Review Committee (PPRC) and would have to receive the endorsement of the Board. In the second step, the fully developed project/programme document would be reviewed by the PPRC, and would ultimately require the Board's approval.

2. The Templates approved by the Board (OPG, Annex 4) do not include a separate template for project and programme concepts but provide that these are to be submitted using the project and programme proposal template. The section on Adaptation Fund Project Review Criteria states:

For regular projects using the two-step approval process, only the first four criteria will be applied when reviewing the 1st step for regular project concept. In addition, the information provided in the 1st step approval process with respect to the review criteria for the regular project concept could be less detailed than the information in the request for approval template submitted at the 2nd step approval process. Furthermore, a final project document is required for regular projects for the 2nd step approval, in addition to the approval template.

3. The first four criteria mentioned above are:

1. Country Eligibility,
2. Project Eligibility,
3. Resource Availability, and
4. Eligibility of NIE/MIE.

4. The fifth criterion, applied when reviewing a fully-developed project document, is: 5. Implementation Arrangements.

5. It is worth noting that since the twenty-second Board meeting, the Environmental and Social (E&S) Policy of the Fund was approved and consequently compliance with the Policy has been included in the review criteria both for concept documents and fully-developed project documents. The proposals template was revised as well, to include sections requesting demonstration of compliance of the project/programme with the E&S Policy.

6. In its seventeenth meeting, the Board decided (Decision B.17/7) to approve "Instructions for preparing a request for project or programme funding from the Adaptation Fund", contained in the Annex to document AFB/PPRC.8/4, which further outlines applicable review criteria for both concepts and fully-developed proposals. The latest version of this document was launched in conjunction with the revision of the Operational Policies and Guidelines in November 2013.

7. Based on the Board Decision B.9/2, the first call for project and programme proposals was issued and an invitation letter to eligible Parties to submit project and programme proposals to the Fund was sent out on April 8, 2010.
8. According to the Board Decision B.12/10, a project or programme proposal needs to be received by the secretariat no less than nine weeks before a Board meeting, in order to be considered by the Board in that meeting.
9. The following fully-developed project document titled “Increasing local communities’ resilience to climate change through youth entrepreneurship and integrated natural resources management” was submitted by IFAD, which is a Multilateral Implementing Entity of the Adaptation Fund.
10. This is the first submission of the fully-developed proposal using the one-step process. It was received in time to be considered in the thirty-first Board meeting. The secretariat carried out a technical review of the proposal, with the assigned dairy number CAM/MIE/Rural/2018/1, and completed a review sheet.
11. In accordance with a request to the secretariat made by the Board in the 10th meeting, the secretariat shared this review sheet with IFAD, and offered it the opportunity of providing responses before the review sheet was set to the PPRC.
12. The secretariat is submitting to the PPRC the summary and, pursuant to decision B.17/15, the final technical review of the project, both prepared by the secretariat, along with the final submission of the proposal in the following section. The proposal is submitted with track changes between the initial submission and the revised version highlighted.

Project Summary

Cameroon - Increasing local communities' resilience to climate change through youth entrepreneurship and integrated natural resources management

Implementing Entity: International Fund for Agricultural Development (IFAD)

Project/Programme Execution Cost: US\$ 500,00

Total Project/Programme Cost: US\$ 9,200,000

Implementing Fee: US\$ 782,000

Financing Requested: US\$ 9,982,000

Project Background and Context:

The impact of climate change on Cameroon's agriculture is the result of a combination of changes in agricultural systems (intensification, extension of areas on marginal lands) and the amplitude and frequency of extreme climate events. These are likely to increase pressure on natural resources (increase in water needs, increase in water runoff and erosion, etc.). Cameroon is expected to experience a window of opportunity from 2020 to 2030, during which climate change will have limited adverse effects, before a more intense deterioration from 2030 to 2065.

The adoption of adaptation strategies must therefore be promoted during the 2020 to 2030 period to prepare Cameroonian producers to these new climatic conditions. Climate change is expected to impact soil erosion due to increased rainfall intensity and the extension of cultivated areas on marginal lands because of lowering productivity. Climate change and anthropogenic pressure are also expected to impact Cameroon's national parks by exacerbating the increasing pressure of riparian populations on water, land, pasture and forest resources.

The project area of intervention is vulnerable to climate change, affecting local communities, especially young people, that already suffer from lack of opportunities and basic services, which often leads them to illegal activities. The theory of change of the project is that young men and women in the North West, North, and Far North regions located in the surroundings of protected areas (Kimbis-Fungom, Bénoué and Waza national parks) would increase their resilience to climate change as well as their incomes if they have access to good agricultural practices, integrated natural resources management and advisory services.

Component 1: Mainstream climate change adaptation into institutional and regulatory frameworks plans for improved land and natural resources management at regional and local level
(US\$ 1,400,000)

This component aims at climate proofing institutional frameworks and local development plans at the regional and local level. It would focus on mainstreaming climate change adaptation into the regional and municipal development plans of the three areas of intervention. This mainstreaming process will be participatory and will include relevant stakeholders. In particular, through this component, the project will review the Waza National Park development plan, support the ongoing reformulation process of the Bénoué national park development plan, and support the elaboration

of a development and management plan for the Kimbi-Fungom national park that does not exist yet.

This component will also focus on mainstreaming climate change adaptation and natural resources management in the three national parks and their outskirts, particularly by integrating climate change into the national parks management and development plans, and by creating/updating community forest and game areas at their outskirts (buffer zones). Activities will consist of creating/updating community forests and game areas at the outskirts of the three national parks, including their legal status, management entities and the elaboration of simplified management plans. It would include a participatory approach in the creation and demarcation of community forests and game areas, by involving all relevant stakeholders.

Component 2: Improve knowledge on ecosystems' vulnerability to climate change, ecosystem-based adaptation and climate smart businesses opportunities (US\$ 1,300,000)

This component aims to strengthened resilience to climate change of the different ecosystems through monitoring and better knowledge of their status and vulnerability. It would focus on upgrading the information systems in the three national parks and their outskirts, more specifically gathering up-to-date information on climate change vulnerability to better inform the adaptation process. It would support the introduction of drones, in particular, to monitor the impacts of climate change at the three protected areas (Waza, Bénoué and Kimbi-Fungom) and their surroundings. It could also be used as a supervision and monitoring tool for the project activities. Other related activities will focus on the improvement of meteorological, climatic and sentinel stations, the introduction of resilience measurement tools and the training of eco-guard in these latest information systems.

Additionally, this component would also focus on ecosystem-based adaptation, climate smart businesses opportunities for the most vulnerable groups identified (youth, indigenous people, women, displaced people) and on improving information systems.

Component 3: Adaptation to climate change measures are implemented through incentives instruments leading to increasing the resilience to climate change of targeted communities and areas (US\$ 6,000,000)

This component aims at sustainable management of natural resources and ecosystems leading to climate resilient ecosystems, green jobs creation for youth and resilient livelihoods. The primary output under this component is the establishment of an investment fund that will finance sustainable eco-businesses for youth and other marginalized groups in the areas of intervention. The project will conduct awareness raising activities under this component to raise awareness among young people on existing opportunities for them to develop resilient eco-businesses. It would also strengthen existing training centers so they can provide business training for a number of selected young entrepreneurs. It would aim to develop the NTFP sector and train young entrepreneurs on the specific opportunities that this sector can offer. Activities under this output

would be linked to the management of the community forests and game areas to ensure the sustainable management of natural resources.

A secondary output under this component would be to promote climate change adaptation and natural resources management in agroforestry through the Investment Fund. Through this output, a Farmers Field Schools (FFS) would be set up in the three areas of intervention to train local communities (including young eco-entrepreneurs) and implement sustainable and resilient agroforestry, soil and water conservation measures. To ensure that the FFS training is best suited to the situation of the areas of intervention, a diagnosis would be carried out before hand in each project intervention zone.



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Regular-sized Project

Country/Region: **Cameroon / Africa**
 Project Title: **Increasing local communities' resilience to climate change through youth entrepreneurship and integrated natural resources management**
 AF Project ID: **CAM/MIE/Rural/2018/1**
 IE Project ID: **International Fund for Agricultural Development (IFAD)**
 Requested Financing from Adaptation Fund (US Dollars): **USD 9,982,000**
 Reviewer and contact person: **Alyssa Maria Gomes** Co-reviewer(s): **Jean Marc Sinnassamy**
 IE Contact Person: **Amath Pathe Sene**

Review Criteria	Questions	Comments on 4 February 2018	Comments on 21 February 2018
Country Eligibility	1. Is the country party to the Kyoto Protocol?	Yes.	-
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	<p>- The project document highlights the vulnerabilities of communities living in and around the three protected areas in Cameroon - the areas of intervention of this rural development project.</p> <p>- Climate change is having a multiplier effect on the challenges faced by communities such as low agricultural productivity, poverty and food insecurity in the Far North (Waza National Park), North (Bénoué National Park) and Northwest (Kimbé-Fungom National Park) These challenges are forcing the communities to put high pressure on</p>	-

		natural resources (forests, water, land, biodiversity, etc).	
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	Yes, the designated authority for Cameroon has endorsed the document (8 December 2017) signed by DA.	-
	2. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?	<p>Needs clarification</p> <p>- The Theory of Change (p19) is based on three pillars: 1) Integration of climate changes in planning and institutions, 2) Strengthening of ecosystem resilience by a better knowledge and restoration measures, and 3) Improvement of climate change adaptation capacities and awareness among young people. The Theory of Change misses the problem of financing and access to finance, as it is mentioned earlier in the document. Please provide additional information on the proposed PES to ensure credibility. CR 1</p> <p>- The project aims to achieve this objective by promoting an enabling environment for climate change adaptation at the institutional level and contribute to increasing the resilience of the local ecosystems and natural resources, and local communities (young women and men in particular) (p5)</p> <p>Please provide details on specific interventions under “good agricultural practices” and “integrated natural</p>	<p>CR 1: Addressed</p> <p>- The theory of change has been updated with the Access to finance pillar, which is key to support young entrepreneurs. It is proposed to set up facility of 4 million to this end that only promotes adaptation activities and a PES fund of 2 million to set up a PES schemes.</p> <p>- This PES will work with REDD+ and Forest Carbon Partnership Facility (FCPF) to expand number of REDD+ pilot projects are currently in operation in Cameroon on Ecosystem Services (PES) and forest communities and biodiversity conservation at the regional level through landscape management.</p> <p>CR 2: Addressed</p> <p>Good agricultural practices are listed in table and included in the proposal (p. 20)</p> <p>CR 3: Partially Addressed</p> <p>The breakdown has improved, roughly using half of the budget for on-the-ground activities, a quarter for the fund and a quarter for capacity building. However, the content/nature of some of the activities, and the way to achieve them is not clear</p>

		<p>resources management” (p19) aimed at increasing resilience of local communities (youth, women and men). CR 2</p> <p>-It is acknowledged that the project aims to achieve its objective by promoting an enabling environment at the institutional level, however more than half of the resources are devoted to capacity building, training and planning mechanisms (USD 1,100,000 under component 1, USD 4,100,000 under component 3 and parts of component 2 USD 3,400,00) (p22-23).</p> <p>- Concrete climate change interventions specified in the three target intervention sites on page 20 of the project document seemed to be lost or not clearly mentioned in the breakdown of component financing. Please clarify financing requested for concrete adaptation activities envisaged under component 2 and 3 and demonstrate alignment with Adaptation Fund outcomes. CR 3</p> <p>- Project presents outcomes (p21-23) and demonstrates alignment with three AF outcomes (p25) <u>Project Outcome 1: Institutional frameworks and local development planning processes integrate climate change adaptation and resilient development perspectives.</u> AF outcome</p>	<p>and leads to confusion. Please clarify the following:</p> <ul style="list-style-type: none"> - Under the output 1.2, please clarify “support the new entities in the classification process of the identified areas into community forest and game areas” for \$40,000? - Under the output 3.1, please clarify “partner with a local bank” mean and why \$30,000 are assigned to it? - Why is \$80,000 assigned to monitor if youth projects are under compliance of ESG standards? (under output 3.1). Isn’t an activity included in the M&E? - Please clarify what does “define ecosystem based adaptation and climate smart practices” for \$50,000 (under output 3.1) mean? <p>CR 4: Addressed Project outcomes and outputs have been reviewed and better aligned with the AF results framework (p. 73).</p> <p>CR 5: Addressed The project will develop the Non Timber Forest Products (NTFP) sector in the intervention area and specifically acacia gum, shea butter, wild mango and njansang through the training of young entrepreneurs on the specific opportunities that this sector can offer and investment in eco-businesses. The term “eco-business” is understood as an agro-pastoral business that conducts its</p>
--	--	--	--

		<p>7/output 7 (p26) <i>Project Outcome 2: Ecosystem resilience to climate change is strengthened through a better knowledge of their status and vulnerability, and the implementation of restoration measures. AF outcome 5/output 7 (p28)</i> <i>Project Outcome 3: Climate change adaptation capacities and awareness are improved among young people and local communities and more resilient livelihoods are strengthened. AF outcome 6/output 6 (p30)</i></p> <p>- Only part of project outcome 2 <i>“Restoration measures are implemented to increase ecosystems’ resilience to climate change”</i> under output 2.3 clearly aligns with AF outcome 5/output 5. Similarly, part of project outcome 3 <i>“more resilient livelihoods are strengthened”</i> where “young people from local communities are aware and trained in resilient and ecological agro sylvopastoral opportunities, and supported in the development of Non-Timber Forest Products (NTFP) Eco business” under output 3.1 clearly aligns with outcome 6/output 6.</p> <p>- There is a lack of clarity of the alignment of the remaining output and outcome indicators with AF outcomes 5,6,7. They may more clearly align with other outcomes such as - AF outcome 2 that</p>	<p>activities through an integrated approach to the management of natural resources, and is better equipped to adapt to the effects of climate change. (p.44)</p>
--	--	---	---

		<p>includes capacity building or training components, AF outcome 4 that includes physical assets strengthened or constructed (example: construction of water points) and, AF outcome 3 which is the knowledge management component of the results framework.</p> <p>- A revision of the project outcomes and rearranging outputs and activities under relevant outcome indicators is suggested. Please refer to the AF alignment table on page 5 of the guidance document "Results Framework and Baseline Guidance" for alignment with AF results.</p> <p>CR 4.</p> <p>- It is necessary to better define the Non-Timber Forest Products Sector (NTFP) and what "Eco-businesses" means, to better gauge how the proposed outputs and activities respond to the adaptation needs. Please clarify. CR 5</p>	
	<p>3. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>Social Benefits – possibly but needs clarification</p> <p>- Gender aspects are mentioned and we understand that the beneficiaries will include women. Project mentions that women are excluded from the right to ownership, decision making over land, are not the main beneficiaries from the whole sale markets, poorly represented in legal entities/management bodies and excluded from positions of responsibility (p7).</p>	<p>CR 6: Addressed Further information on the project's gender strategy has been added in the document (pages 33 and 51).</p> <p>CR 7: Addressed Further information on the Gender Action Learning System (GALS) is provided in page 33 under <i>social benefits</i>.</p> <p>CR 8: Addressed The target population was consulted during the project design mission. Specific</p>

		<ul style="list-style-type: none"> - A section is lacking on how the project will play a role to reduce these inequalities (access to land, market, property, finance, knowledge...). Please provide additional information on how the project will reduce the gap of gender inequalities. CR 6 - Please provide further information on specific activities aimed at bridging gender inequalities. It is unclear how IFAD's Gender Action Learning System (GALS), will enable household members to negotiate their needs and interests and find innovative, gender-equitable solutions in livelihoods planning and value chain development. (p33) CR 7 <p>Social benefits - Vulnerable population</p> <ul style="list-style-type: none"> - The project highlights the cultural and ethnic diversity of the target population, including the presence of indigenous peoples, migrants and internally displaced populations in the three intervention sites. (p13, 32). However, it does not mention if they were involved in stakeholder consultations, if they will be consulted in participatory processes for designing interventions, and/ if they will benefit from the proposed interventions. - It is duly acknowledged that it is difficult to assess the relative importance of specific populations mentioned in the target population - migrants, IP and IDP 	<p>activities for each group were identified and the percentage of each target group will be determined at the start of the project.</p>
--	--	---	--

		(especially in the Far North region). However, since they are a cross section of the target population in this region and mentioned in the target group, please provide details such as – percentage of target group, unique challenges faced by these groups and, how they will benefit from the suite of interventions proposed by the project. (Social benefits – p32). CR 8.	
		- Environmental benefits - possibly but contingent upon very careful formulation of activities. The plantation of around 500,000 trees (Activity 2.3.3) is ambitious. Where will the seedlings be produced? With such a high number, we suggest to consider this activity as a value chain from production to transport and replantation. Please clarify how the activity high number, we suggest to consider this activity as a value chain from production to transport and replantation. Please clarify how the activity will be managed. CR 9	CR 9: Partially Addressed - The number of trees was revised. The project will promote restoration on degraded lands within and outside the parks through the plantation of around 15,000 trees from selected species demonstrating strong resilience to climate change and adaptation to the local ecosystems and the livelihood needs of the local communities. It is noted that the first target of 500,000 trees was too ambitious. However, it is mentioned 15,000 trees in the table of responses vs. 50,000 p72. Please confirm.
		- It will be essential to demonstrate the compatibility and synergies between the envisaged climate change adaptation activities and the management and conservation objectives of the protected areas, with a focus on ecosystem processes for the wetlands. CR 10	CR 10: Addressed The use of a Drivers-Pressures-State change-Impact-Response (DPSIR) framework to identify and analyse specific project activities was added as an activity under the first component that is planned at the start of the project.

		-The project should not contribute to a lowering of the conservation objectives of the protected areas. The arrangements should be fail-proof so that even in the event of project failure or abuse of project outcomes there may be no adverse impact on the protected areas. The use of a Drivers-Pressures-State change-Impact-Response (DPSIR) framework in the identification and analysis of specific project activities is recommended to ensure that the promotion of certain activities such as livestock grazing in the immediate vicinity or inside the protected area does not exacerbate one of the current main causes of ecosystem degradation and biodiversity loss.	
	4. Is the project / programme cost effective?	Not sure at this stage - The output 1.4 proposes a Payment for Ecosystem Services (PES), without detailing the beneficiaries, the service providers, and the transaction mechanisms. Without these elements at the concept stage, the experience shows that there is almost no chance to deliver. Please, complete or revise. CR 11	CR 11: Addressed The output was revised and explained in detail, and activities were identified (page 33).
	5. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and	Yes, notably the NDC, the PNACC, the PNIA, and the YNP.	-

	adaptation programs of action and other relevant instruments?		
	6. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund??	Needs clarification - Mentions national standards (p37, 38) but unclear how it will comply with the ESP of the Fund. Please revise. CR 12	CR 12: Partially Addressed The compliance of the project with the 13 principles of AF ESP is explained in page 50.
	7. Is there duplication of project / programme with other funding sources?	Needs further clarification -This AF project will complete existing projects, as the PADFA, PADMIR, and PEA: a table of comparison would be needed to demonstrate the complementarity and the non-duplication of the AF projects with these existing investments. CR 13 - Gender dis-aggregated data are lacking from the proposal, bar for a generic statement that at least 50% of the project beneficiaries will be women. - Please provide gender-disaggregated beneficiary data, as well as the outcome of consultations along gender lines. CR 14	CR 13: Addressed A comparative table of other IFAD investments in the target area was added to demonstrate the complementarity and non-duplication. (p.41 - 42) CR 14: Not Addressed The disaggregated beneficiary data will be determined at the start of the project (women, youth, indigenous people and internally displaced people). Please submit disaggregated data.
	8. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	Yes Included as part of component 3 of the project.	-
	9. Has a consultative process taken place, and has it involved all key stakeholders, and	Needs clarification - Producer organizations and professional organizations are considered at national level for the steering committee.	CR 15: Addressed The role of producer organizations on the ground has been clarified where the project activity intends to conduct and analysis and

	<p>vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>However, their role on the ground is surprisingly not mentioned, while they should be major stakeholders. Please, revise. CR 15</p> <p>- Gender considerations are unclear; please clarify if women (number and/ or percentage of) were participants in the consultative process. CR 16</p>	<p>diagnosis of existing producer organizations and cooperatives in the areas of intervention to receive funds from the investment fund for eco businesses. (p.80). Furthermore, the natural resources management initiatives targeted by the proposed project draw on the achievements of the PADFA project in terms of value chains. PADFA supports rice producers' organizations (rain-fed and lowlands) in the three regions of the Far North, North and North West (p.41).</p> <p>CR 16: Not Addressed Women participated in the consultative process during the design mission. Proponent intends to submit disaggregated beneficiary data at the start of the project (women, youth, indigenous people and internally displaced people). See comment for CR 14.</p>
	<p>10. Is the requested financing justified on the basis of full cost of adaptation reasoning?</p>	<p>- Output 1.3: The benefits for adaptation of the management plans for three National Parks, and especially the Kimbi-Fungom NP where no existing document exist, should be demonstrated. CR 17</p> <p>- Financing monitoring activities is a possible option, but the comparative advantage of drones should be better demonstrated (objective of the monitoring, comparison with other methods and tools, cost-effectiveness). While it sounds innovative, please justify. CR 18</p>	<p>CR 17: Addressed Yes, an adjustment was done to allocate more resources for concrete interventions (60-70%) and 30% on soft activities mainly capacity building and climate information systems</p> <p>CR 18: Addressed This is more related to accessibility and high resolution compared to satellite imagery. This innovation has generated good results in small island developing states.</p>

		<p>- In Component 3, all activities seem to be financed from scratch, without baseline or other investments, while significant projects are implemented on associated topics (outputs 3.1 and 3.2). Please provide baseline data if available.</p> <p>CR 19</p> <p>- Please, explain the connection between poaching activities and adaptation (p40).</p> <p>CR 20</p> <p>- It is proposed to set up platforms for local concertation: don't these platforms already exist under current laws and regulations related to decentralization? Please clarify. CR 21</p>	<p>CR 19: Addressed Baseline data for these outputs will be determined in the baseline survey at the start of the project.</p> <p>CR 20: Addressed The inability of the population to adapt to climate change leads them (youth especially) to illegal activities such as poaching to secure their livelihoods.</p> <p>CR 21: Addressed Justified based on the argument that some concertation platforms exist but are not active while others need to be created to support a good implementation of the project whenever it is needed. Furthermore, knowledge sharing and concertation mechanisms to be put in place by the project will also contribute to the sustainability of the project results. (p.47 - 48)</p>
	11. Is the project / program aligned with AF's results framework?	<p>Yes</p> <p>The project outputs mentions in alignment table on p. 65, demonstrate alignment with the AF results framework. However, ensure that proposed outputs and activities on p. 26-30 are also reflected in the alignment table as they relate to AF outcome indicators.</p>	-
	12. Has the sustainability of the project/programme outcomes been taken into	<p>Needs clarification</p> <p>- Sustainability elements should be reinforced: The proposed reasoning is</p>	<p>CR 22: Addressed Project sustainability section in page 46 have been revised and reinforced.</p>

	account when designing the project?	<p>based on the reinforcement of institutions and consultative processes. Please demonstrate how financing mechanisms would be considered once the project will have closed. CR 22</p> <p>-There is no mention of how assets developed or improved (water points constructed) will be maintained in the longer term. Please include a paragraph on sustainability and maintenance of built assets. CR 23</p>	<p>CR 23: Addressed</p> <ul style="list-style-type: none"> - Sustainability of Component 1 is rooted in the planning processes and budgeting. The project envisions that once adaptation measures are fully integrated into regional and local plans as well as investment plans, the legacy of the project could continue after the closure of the project - Under Component 2, the project seeks commitment from the local authorities (eco-guards, meteorological agencies, local and regional platforms) to develop the capacity of local actors in creating and managing ecosystem-based adaptation and climate smart business opportunities. - The creation of economic opportunities for young people through eco-businesses NTFP will also contribute to the sustainability of the project. - Concretes adaptation micro-projects (production, reforestation, land management, renewable energy, park management, post-harvest and processing, etc.) under component 2 will be funded through the stimulus fund and the PES. - The knowledge sharing and concertation mechanisms to be put in place by the project will also contribute to the sustainability of the project results. (p.47 - 48)
	13. Does the project / programme provide an overview of environmental	<p>Yes, an overview is provided. However, it has major shortcomings.</p>	<p>CAR 1: Partially Addressed</p> <p>Risks have been identified and justifications of the findings have been</p>

	<p>and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<ul style="list-style-type: none"> - Why does this project not trigger particular safeguards? As it will deal in Key Biodiversity Areas (Natural Habitats, Biodiversity), also with Indigenous People? - The presence of local communities and Indigenous People is mentioned around and in the protected areas. - Moreover, given the location of the project activities, inside or in the immediate vicinity of protected areas of global biodiversity importance, specific attention is required for ESP risks related to these areas. -The table on p. 45 states that the project does not carry any risks, for any of the 15 ESP principles. This is not substantiated, and there are numerous arguments to the contrary. It is further contradicted on p. 53 stating that "Mitigation measures will be implemented to address the potential social and environmental negative impacts of the project." - Some of the activities are insufficiently identified to make adequate risks identification possible (e.g. under a 1.4, activities 2.3.3, 2.3.4, 3.1 and 3.2). While this might be justified for some of these activities, the implications towards additional safeguarding arrangements to ensure ESP compliance during project 	<p>added. Relevant statements of intent have been included.</p> <p>But see also CAR2. There is an inconsistency between the statement in the table on p. 51 that there is no risk for natural habitats and the text of the justification of that finding on p. 54 that there may be negative impacts on the biophysical environment, including natural habitats, leading to the development of an ESMF. The expected positive outcomes of the project on biodiversity are provided as justification for the conclusion of the absence of risk to biodiversity.</p> <p>CAR 2: Partially Addressed</p> <p>Between the initial and final review, the project design seems to have been substantially modified (e.g. introduction of an 4 million USD investment fund), to the extent that the findings of the initial review may no longer be pertinent. It is unclear to which project design the Annex 4 refers. The project activities are not specified in the IFAD SECAP review note.</p> <p>CR 24: Addressed albeit that most activities do not seem to have been identified to the stage where effective environmental and social risks identification in line with the ESP is possible. (p.78 - 82)</p> <p>CAR 3: Not Addressed</p> <p>The project was categorised in line with the ESP as a category B project. However, the</p>
--	---	---	---

		<p>implementation are significant and the current management measures are inadequate.</p> <ul style="list-style-type: none"> - Please identify the environmental and social risks of the project in compliance with the ESP, including a justification of all the findings. CAR 1 - Please fully identify all project activities to the level where adequate environmental and social risks identification is possible. CAR 2 - Please justify, the case being, why some project activities may not be identified to that stage. The categorisation according to IFAD's ESMS is irrelevant, and should be done based on ESP criteria. CR 24 - Please categorise the project in line with the ESP. CAR 3 	<p>added Annex 4 does not seem to be aligned with the modified project design. It does not build on the ESP risks that have been identified, and it does not align with the 15 principles of the ESP.</p>
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	Yes	-
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	Yes	-

	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	Yes	-
Eligibility of IE	4. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	Yes, through the MIE, IFAD - an implementing entity of the Fund.	-
Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	<p>Needs clarification</p> <p>The overview of the general organizational roles and institutional arrangements presented in p.47- 50 are duly acknowledged, however please provide information on if aspects relevant to the Gender Policy such as sufficient gender capacity within the project/programme supervision function of the IE has been taken into consideration. CR 25</p> <p>Additional aspects for consideration, relevant to the Gender Policy of the Fund relate to:</p> <ul style="list-style-type: none"> - Presence of gender focal point, necessary skills and expertise within the executing entity to provide gender-mainstreaming inputs. 	<p>CR 25: Addressed</p> <ul style="list-style-type: none"> - Concertation and consultation mechanisms at the national level will be carried out by a project Steering Committee. Given the geographical and thematic scope of the project, there will be direct complementarity with the Ministry of Forests and Wildlife (MINFOF) and the Ministry of Agriculture and Rural Development (MINADER). - A joint inter-ministerial decision will establish the Steering Committee and specify its composition, mandate and functioning. The nomination of Steering Committee will be done in compliance with the AF Gender Policy. - Under the supervision of the PMU, the implementation of the gender and youth strategies will be entrusted to the two implementing partners of the Project, the

		<ul style="list-style-type: none"> - Key stakeholders include individuals or groups with a gender perspective (in Steering Committee, regional advisory committee, national gender equality agencies or commissions, or women's civil society groups or gender rights advocacy organizations and networks). 	<p>ICRAF and IUCN NGOs. By capitalizing on their respective experiences and knowledge, the strategies will be discussed and validated at the start of the project.</p> <ul style="list-style-type: none"> - A gender focal point will be appointed within the PMU to monitor contracts with both partners on targeting, gender and youth issues. These aspects must be incorporated into the terms of reference and be allocated time and resources. The objectives will subsequently be integrated into the performance contracts and the monitoring and results indicators.
	2. Are there measures for financial and project/programme risk management?	<p>Yes</p> <p>The project proposes mitigation measures for financial risks identified (p. 50-52)</p>	-
	3. Are there measures in place for the management of environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?	<p>Not sufficiently addressed</p> <ul style="list-style-type: none"> - Table on p.53 fails to take into consideration risks related to women's participation in project activities. - Women could endure disproportionate burden from domestic chores and childcare, which could preclude their effective participation in project activities. <p>Additionally, women have been excluded to the right to ownership, decision making over land, are not the main beneficiaries from the whole sale markets, poorly represented in legal entities/management</p>	Addressed.

		bodies and excluded from positions of responsibility. CAR 3: Please include an ESMP in line with the ESP and GP risks identified.	
	4. Is a budget on the Implementing Entity Management Fee use included?	No CAR 4: Please include a detailed budget on the Implementing Entity management fee use.	CAR 4: Needs Corrective action - A table with detailed budget on the Implementing Entity management fee use was added in pages 77-81. However, there is an adding up problem with subtotals in the project budget (p78-82) <ul style="list-style-type: none"> ▪ Under Component 1: Sub-totals of output 1.1 and 1.2 returns 1,390,000 vs. 1,400,000. (p.79) ▪ Under the Component 2: The subtotal for output 2.2 = 535,000 instead of 550,000 (1,300,000 vs. 1,285,000) (p.80). ▪ Under Component 3: The subtotal for output 3.2 returns 3,000,000 vs. 3,400,000 (p.81) ▪ Total for all components and execution costs does not return 9,200,000. ▪ Amount of Financing requested is subject to change based on revisions Please revise.
	5. Is an explanation and a breakdown of the	No	CAR 5: Addressed The table with break down of execution costs (cumulative) was added in pages 82

	execution costs included?	CAR 5: Please include a detailed budget with explanation and a breakdown of the execution costs.	however details of breakdown execution cost through the project duration are missing. Please revise.
	6. Is a detailed budget including budget notes included?	No CAR 6: Please include a detailed budget with budget notes	CAR 6: Partially Addressed It is noted that activities have been budgeted for in Table 7 but is missing detailed budget notes and chronologically planned expenditures (p.83 -85). Please revise to include a budget descriptions column providing such activity sub-total details (budgeted operating expenses, sub-contracts, national experts etc.)
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	Needs clarification - Please clarify if gender commitments in the project/programme design are translated by the IE into budgetary commitments in the form of adequate budget allocations. Additionally, is there a mechanism in place for gender-responsive monitoring for the project/programme? CR 26	CR 26: Addressed - Specific activities were identified for women. - A gender focal point will be appointed within the PMU to monitor all aspects related to gender and targeting (contracts with both partners on targeting, gender and youth issues, etc.). These aspects will be incorporated into the terms of reference and be allocated time and resources. The objectives will subsequently be integrated into the monitoring and results indicators.
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	Not sufficiently addressed CAR 7: A table of proposed M&E budget on p. 56-57 but details have not been provided on how implementing fees will be utilised. Please provide corrective action.	CAR 7: Addressed Budget allocation has been provided for each activity. Details on M&E work plan and budget has been provided on p. 65 – 66.
	9. Does the project/programme's results framework align	Yes.	-

	with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?		
	10. Is a disbursement schedule with time-bound milestones included?	CAR 8: The disbursement schedule on p.68 is well noted, but please include a detailed disbursement schedule with time-bound implementation of project components along with a work plan.	CAR 8: Addressed The disbursement schedule with time-bound implementation of project components added in page 82.

Technical Summary	<p>The project titled, "Increasing local communities' resilience to climate change through youth entrepreneurship and integrated natural resources management" implemented by IFAD, aims to increase local communities' resilience to climate change through resilient livelihoods and integrated natural resources management in the outskirts of the Waza, Benoue and Kimbi-Fugom national parks in Cameroon.</p> <p>To achieve this objective, the project intends to create an enabling environment for climate change adaptation at the institutional level, and will contribute to increasing the resilience of both the local ecosystems and natural resources, and local communities (in particular young women and men).</p> <p>It is structured around three components:</p> <ul style="list-style-type: none"> a) Component 1: Strengthening institutional frameworks to mainstream climate change adaptation into national, regional and local planning processes and promote resilient and sustainable livelihoods. b) Component 2: Strengthening knowledge on ecosystems' vulnerability and promoting their restoration to increase their overall resilience to climate change; and c) Component 3: Strengthening local communities and in particular young people's adaptive capacity through awareness raising, climate change adaptation measures, and the development of resilient eco-businesses. <p>The initial technical review found that though the proposal has several merits, and represents an interesting opportunity to explore climate change adaptation interventions in and around national parks, a number of issues needed to be addressed. Furthermore, the project document has not fully identified project activities to the level where adequate environmental and social risks identification is possible at full proposal stage. It would also</p>
-------------------	--

benefit from providing adequate details on a detailed budget on implementing entity fees, breakdown of execution costs and monitoring and evaluation (M&E) plans.

The following corrective action requests (CARs) and clarification requests (CRs) are requested:

- **CAR 1:** Please identify the environmental and social risks of the project in compliance with the ESP, including a justification of all the findings.
- **CAR 2:** Please fully identify all project activities to the level where adequate environmental and social risks identification is possible.
- **CAR 3:** Please categorise the project in line with the Environmental and Social Policy of the Fund.
- **CAR 4:** Please include a detailed budget on the Implementing Entity management fee use.
- **CAR 5:** Please include a detailed budget with explanation and a breakdown of the execution costs.
- **CAR 6:** Please include a detailed budget with budget notes
- **CAR 7:** A table of proposed M&E budget on p. 56-57 but details have not been provided on how implementing fees will be utilised. Please provide corrective action.
- **CAR 8:** The disbursement schedule on p.68 is well noted, but please include a detailed disbursement schedule with time-bound implementation of project components along with a work plan.

Clarifications Requests (CRs)

- **CR 1:** The Theory of Change misses the problem of financing and access to finance, as it is mentioned earlier in the document. Please provide additional information on the proposed PES to ensure credibility.
- **CR 2:** Please provide details on specific interventions under “good agricultural practices” and “integrated natural resources management” (p19) aimed at increasing resilience of local communities (youth, women and men).
- **CR 3:** Concrete climate change interventions specified in the three target intervention sites on page 20 of the project document seemed to be lost or not clearly mentioned in the breakdown of component financing. Please clarify financing requested for concrete adaptation activities envisaged under component 2 and 3 and demonstrate alignment with Adaptation Fund outcomes.
- **CR 4:** A revision of the project outcomes and rearranging outputs and activities under relevant outcome indicators is suggested. Please refer to the AF alignment table on page 5 of the guidance document “Results Framework and Baseline Guidance” for alignment with AF results.
- **CR 5:** It is necessary to better define the Non-Timber Forest Products Sector (NTFP) and what “Eco-businesses” means, to better gauge how the proposed outputs and activities respond to the adaptation needs. Please clarify.

- **CR 6:** A section is lacking on how the project will play a role to reduce these inequalities (access to land, market, property, finance, knowledge...). Please provide additional information on how the project will reduce the gap of gender inequalities.
- **CR 7:** Please provide further information on specific activities aimed at bridging gender inequalities. It is unclear how IFAD's Gender Action Learning System (GALS), will enable household members to negotiate their needs and interests and find innovative, gender-equitable solutions in livelihoods planning and value chain development. (p33)
- **CR 8:** Since vulnerable groups (migrants, indigenous people and internally displaced populations) are mentioned in the target population in this region and mentioned in the target group, please provide details such as – percentage of target group, unique challenges faced by these groups and, how they will benefit from the suite of interventions proposed by the project. (Social benefits – p32).
- **CR 9:** The plantation of around 500,000 trees (Activity 2.3.3) is ambitious. Where will the seedlings be produced? With such a high number, we suggest to consider this activity as a value chain from production to transport and replantation. Please clarify how the activity will be managed.
- **CR 10:** It will be essential to demonstrate the compatibility and synergies between the envisaged climate change adaptation activities and the management and conservation objectives of the protected areas, with a focus on ecosystem processes for the wetlands. Please provide additional information.
- **CR 11:** The output 1.4 proposes a Payment for Ecosystem Services (PES), without detailing the beneficiaries, the service providers, and the transaction mechanisms. Without these elements at the concept stage, the experience shows that there is almost no chance to deliver. Please, complete or revise.
- **CR 12:** Mentions national standards (p37, 38) but unclear how it will comply with the ESP of the Fund. Please revise.
- **CR 13:** This AF project will complete existing projects, as the PADFA, PADMIR, and PEA: a table of comparison would be needed to demonstrate the complementarity and the non-duplication of the AF projects with these existing investments.
- **CR 14:** Please provide gender-disaggregated beneficiary data, as well as the outcome of consultations along gender lines.
- **CR 15:** Producer organizations and professional organizations are considered at national level for the steering committee. However, their role on the ground is surprisingly not mentioned, while they should be major stakeholders. Please, revise.
- **CR 16:** Gender considerations are unclear; please clarify if women (number and/ or percentage of) were participants in the consultative process.
- **CR 17:** Output 1.3: The benefits for adaptation of the management plans for three National Parks, and especially the Kimbi-Fungom NP where no existing document exist, should be demonstrated.

- **CR 18:** Financing monitoring activities is a possible option, but the comparative advantage of drones should be better demonstrated (objective of the monitoring, comparison with other methods and tools, cost-effectiveness). While it sounds innovative, please justify.
- **CR 19:** In Component 3, all activities seem to be financed from scratch, without baseline or other investments, while significant projects are implemented on associated topics (outputs 3.1 and 3.2). Please provide baseline data if available.
- **CR 20:** Please, explain the connection between poaching activities and adaptation (p40).
- **CR 21:** It is proposed to set up platforms for local concertation: don't these platforms already exist under current laws and regulations related to decentralization? Please clarify.
- **CR 22:** Sustainability elements should be reinforced: The proposed reasoning is based on the reinforcement of institutions and consultative processes. Please demonstrate how financing mechanisms would be considered once the project will have closed.
- **CR 23:** There is no mention of how assets developed or improved (water points constructed) will be maintained in the longer term. Please provide further information.
- **CR 24:** Please justify, the case being, why some project activities may not be identified to that stage.
- **CR 25:** The overview of the general organizational roles and institutional arrangements presented in p.47-50 are duly acknowledged, however please provide information on if aspects relevant to the Gender Policy such as sufficient gender capacity within the project/programme supervision function of the IE has been taken into consideration.
- **CR 26:** Please clarify if gender commitments in the project/programme design are translated by the IE into budgetary commitments in the form of adequate budget allocations. Additionally, is there a mechanism in place for gender-responsive monitoring for the project/programme?

The final technical review finds that despite a vast improvement of the proposal in its revised version, a few critical issues remain to be addressed. The following observations are made.

- i. The breakdown has improved, roughly using half of the budget for on-the-ground activities, a quarter for the fund and a quarter for capacity building. However, the content/nature of some of the activities, and the way to achieve them is not clear and leads to confusion. Please clarify the following:
 - Under the output 1.2, please clarify "support the new entities in the classification process of the identified areas into community forest and game areas" for \$40,000?
 - Under the output 3.1, please clarify "partner with a local bank" mean and why \$30,000 are assigned to it?
 - Why is \$80,000 assigned to monitor if youth projects are under compliance of ESG standards? (under output 3.1). Isn't an activity included in the M&E?

	<ul style="list-style-type: none"> ▪ Please clarify what does “define ecosystem based adaptation and climate smart practices” for \$50,000 (under output 3.1) mean? ii. It is noted that the first target of 500,000 trees was too ambitious. However, it is mentioned 15,000 trees in the table of responses vs. 50,000 p72. Please confirm. iii. Please submit disaggregated beneficiary data prior to approval (women, youth, indigenous people and internally displaced people). iv. Risks have been identified and justifications of the findings have been added. Relevant statements of intent have been included but there is an inconsistency between the statement in the table on p. 51 that there is no risk for natural habitats and the text of the justification of that finding on p. 54 that there may be negative impacts on the biophysical environment, including natural habitats, leading to the development of an ESMF. The expected positive outcomes of the project on biodiversity are provided as justification for the conclusion of the absence of risk to biodiversity. v. Between the initial and final review, the project design seems to have been substantially modified (e.g. introduction of a 4 million USD investment fund), to the extent that the findings of the initial review may no longer be pertinent. It is unclear to which project design the Annex 4 refers. The project activities are not specified in the IFAD SECAP review note. Please clarify. vi. The project was categorised in line with the ESP as a category B project. The added Annex 4 does not seem to be aligned with the modified project design. It does not build on the ESP risks that have been identified, and it does not align with the 15 principles of the ESP. Please clarify. vii. A table with detailed budget on the Implementing Entity management fee use was added in pages 77-81. However, there is an adding up problem with subtotals in the project budget (p78-82). Please provide corrective action as per CAR 4. viii. It is noted that activities have been budgeted for in Table 7 but is missing detailed budget notes and chronologically planned expenditures (p.83 -85). Given the adding up totals of activities (p.78-82), please revise and include a budget descriptions column providing such activity sub-total details (budgeted operating expenses, sub-contracts, national experts etc.).
Date:	22 February 2018



ADAPTATION FUND

REQUEST FOR PROJECT FUNDING FROM THE ADAPTATION FUND

The annexed form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility) when the request is submitted. The final project/programme document resulting from the appraisal process should be attached to this request for funding.

Complete documentation should be sent to:

The Adaptation Fund Board Secretariat

1818 H Street NW

MSN P4-400

Washington, D.C., 20433

U.S.A

Fax: +1 (202) 522-3240/5

Email: afbsec@adaptation-fund.org



ADAPTATION FUND

PROJECT PROPOSAL TO THE ADAPTATION FUND

Table of content

<u>PART I: PROJECT INFORMATION</u>	5
<u>1 Project Background and Context</u>	6
<u>1.1 Country overview</u>	6
<u>1.2 Socio-cultural context</u>	6
<u>1.3 Economic Context</u>	7
<u>1.4 Agriculture sector</u>	8
<u>1.5 Natural Resources</u>	9
<u>1.6 Political and Institutional Context</u>	9
<u>1.7 Environmental context</u>	10
<u>1.8 Areas of intervention</u>	11
<u>1.9 Climate and climate change</u>	14
<u>1.10 Description of the problem to be addressed</u>	19
<u>2 Project Objectives:</u>	23
<u>3 Project Components and Financing:</u>	24
<u>PART II: PROJECT JUSTIFICATION</u>	27
<u>1 Project components</u>	27
<u>2 Project benefits</u>	34
<u>3 Cost effectiveness</u>	37
<u>4 Strategic alignment</u>	38
<u>5 Standards</u>	40
<u>6 Duplication</u>	41
<u>7 Learning and knowledge management component</u>	44
<u>8 Consultative process</u>	45
<u>9 Justification for funding</u>	46
<u>10 Project sustainability</u>	47
<u>11 Environmental and social impacts and risk</u>	48
<u>PART III: IMPLEMENTATION ARRANGEMENTS</u>	56

<u>1</u>	<u>Implementation Arrangements</u>	56
<u>2</u>	<u>Financial Risk management</u>	60
<u>3</u>	<u>Environmental and social risk management</u>	65
<u>4</u>	<u>Monitoring and evaluation</u>	66
<u>5</u>	<u>Results Framework</u>	70
<u>6</u>	<u>Alignment with the adaptation fund</u>	78
<u>7</u>	<u>Project Budget</u>	82
<u>8</u>	<u>Disbursement schedule</u>	87
	<u>PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY</u>	91
<u>1</u>	<u>Record of endorsement on behalf of the government</u>	Error! Bookmark not defined.
<u>2</u>	<u>Implementing Entity certification</u>	Error! Bookmark not defined.
	<u>ANNEXES</u>	92
	<u>Annex 1: Letter of Endorsement by the Government</u>	92
	<u>Annex 2: Matrix on stakeholders' role in project implementation (in French)</u>	93
	<u>Annex 3: List of persons met during the design mission</u>	94
	<u>ANNEX 4 (in French): Social, Environmental and Climate Assessment Procedures (SECAP)</u>	
	<u>Review Note (IFAD-Baseline investment ECO-Jeunes)</u>	97

ACCRONYMS

I. Acronym	II. Definition
III. AWPB	IV. Annual Work Plans and Budgets
V. FFS	VI. Farmer Field School
VII. GDP	VIII. Gross Domestic Product
IX. ICRAF	X. International Center for Research in Agro- Forestry
XI. IFAD	XII. International Fund for Agricultural Development
XIII. INDC	XIV. Intended Nationally Determined Contribution
XV. INRM	XVI. Integrated Natural Resources Management
XVII. IUCN	XVIII. International Union for the Conservation of Nature
XIX. GALS	XX. Gender Action Learning System
XXI. M&E	XXII. Monitoring and Evaluation (M&E)
XXIII. MINADER	XXIV. Ministry of agriculture and rural development (<i>Ministère de l'Agriculture et du Développement Rural</i>)
XXV. MINEPAT	XXVI. Ministry of Economy, Planning and Regional Development (<i>Ministère de l'Economie, de la Planification et de l'Aménagement du Territoire</i>)
XXVII. MINEPDED	XXVIII. Ministry of environment, nature protection and sustainable development (<i>Ministère de l'Environnement, de la Protection de la Nature et du Développement Durable</i>)
XXIX. MINEPIA	XXX. Ministry of livestock, fisheries and animal industries (<i>Ministère de l'Élevage, des Pêches et des Industries Animales</i>)
XXXI. MINFOF	XXXII. Ministry of forestry and wildlife (<i>Ministère des Forêts et de la Faune</i>)
XXXIII. MINJEC	XXXIV. Ministry of youth and civic education (<i>Ministère de la Jeunesse et de l'éducation</i>)
XXXV. NBSAP	XXXVI. National Biodiversity Strategy and Action Plan
XXXVII. NTFP	XXXVIII. Non Timber Forest Products
XXXIX. PADFA	XL. Support project for the development of agricultural sector (<i>Project d'appui au développement de filières agricoles</i>)
XLI. PADMIR	XLII. Support project for rural microfinance (<i>Projet d'Appui à la Microfinance Agricole</i>)
XLIII. PEA Jeunes	XLIV. Promotion of youth agropastoral entrepreneurship programme (<i>Programme de Promotion de l'Entrepreneuriat Agropastoral des Jeunes</i>)
XLV. PMU	XLVI. Project Management Unit
XLVII. PNACC	XLVIII. National Climate Change Adaptation Plan (<i>Plan National d'Adaptation au Changement Climatique</i>)
XLIX. PNIA	L. National Agricultural Investment Plan 2014-2020 (Plan National d'Investissement Agricole)
LI. PSFE	LII. Sectoral Programme Forest and Environment (<i>Programme Sectoriel Forêt et Environnement</i>)
LIII. RDPC	LIV. Rassemblement Démocratique du Peuple Camerounais
LV. SHARP	LVI. Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists
LVII. UNCBD	LVIII. United Nations Convention on Biological Diversity
LIX. UNCCD	LX. United National Convention to Combat Desertification

LXI. UNFCCC	LXII. United Nations Framework Convention on Climate Change
--------------------	--

PART I: PROJECT INFORMATION

Project Category:	Regular project
Country/ies:	Cameroon
Title of Project:	Increasing local communities' resilience to climate change through youth entrepreneurship and integrated natural resources management
Type of Implementing Entity:	Multilateral Implementing Entity (MIE)
Implementing Entity:	International Fund for Agricultural Development (IFAD)
Executing Entity:	Ministry of Environment, Protection of Nature and Sustainable Development (MINEPDED)
Amount of Financing Requested:	9,982,000 (in U.S Dollars Equivalent)

Summary

Climate change induced hazards, such as erratic rainfall, droughts, flood, low vegetation coverage, decrease of agricultural productivity and reduced ecosystems services contribute to keeping rural communities in poverty and in particular women and young people.

Ecosystems and land use services are predicted to decrease under the future climate change scenarios. Some of the most vulnerable communities living in and around protected areas in Cameroon are the most affected. These communities depend on ecosystems services and lack of alternatives climate resilient livelihoods, especially young people. Vulnerable poor communities living around protected areas face multiple challenges such as: low agricultural productivity, poverty and food insecurity which force them to put high pressure on natural resources (forests, water, land, biodiversity, etc.). Climate Change has exacerbated these challenges through erratic rainfall, drought and diseases. A number of young people from these areas lack opportunities and are forced to migrate or join radical groups.

The Adaptation Fund Project aims at increasing local communities' resilience to climate change through youth entrepreneurship and integrated natural resources management.

To achieve this objective, the project will create an enabling environment for climate change adaptation at the institutional level, and will contribute to increasing the resilience of both the local ecosystems and natural resources, and local communities (in particular young women and men) so that a sustainable development can take place in the long term in these areas in a changing climate context.

The project will directly benefit 8,800 rural households, including 6,200 households supported for the management of community forest, game areas and through pastoral water points; and 2,600 households supported in agroforestry and sub-catchment development.

The project will indirectly benefit the population of the park outskirts through development and restoration initiatives as well as the creation of jobs and resilient livelihoods in the area. In particular, the project will pay a specific attention to young people and will seek to be inclusive and promote gender equity.

TABLEAU 1. PROJECT BACKGROUND AND CONTEXT

a. Country overview

The Republic of Cameroon is a medium-sized country in Central Africa with a surface area of 475 442km². Cameroon is considered as a miniature Africa given its unique diversity in climate, geography, population, and culture. The country has five agro-ecological zones: (i) Sudani – Sahelian zone (Garoua) ; (ii) High Guinea savannah (Ngaoundéré) ; (iii) Western highlands (Bamougoum, Fombot, Baham, Dschang, Mbouda) ; (iv) Humid forest : monomodal rainfall (Melong, Buea) ; and (v) Humid forest: bimodal rainfall (Yaoundé, Okola, Obala, Bafia, Akonolinga). The country is composed of 10 regions divided in 58 departments. The project area of intervention are located in the Far North, North, and North West Regions.

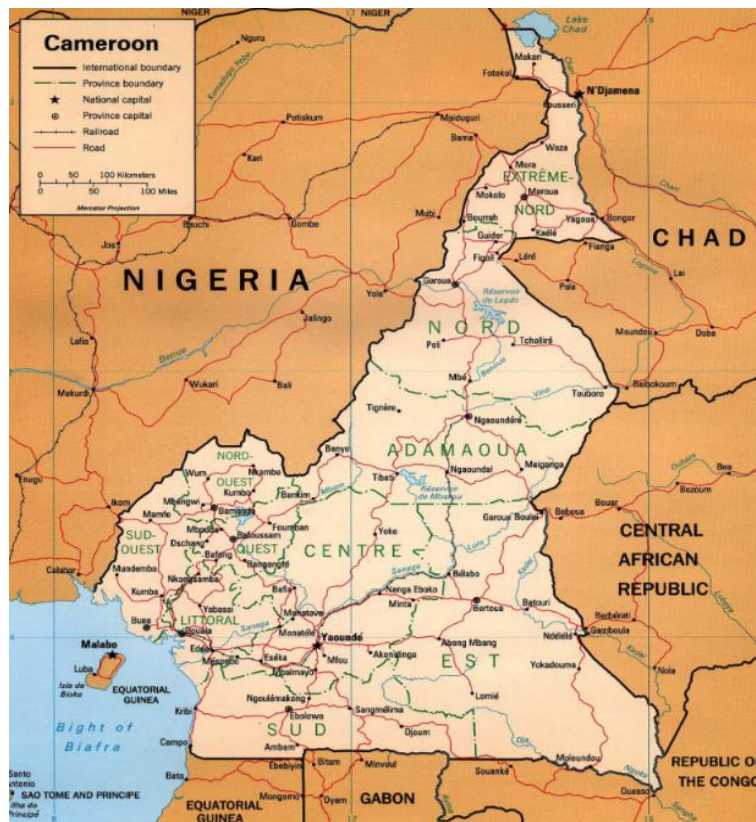


Figure 1: Map of Cameroon

b. Socio-cultural context

Overview. In 2015, Cameroon's population was estimated at 22.8 million people, with a population growth of 2.5% per year over the 2010-2015 period. The population is mainly composed of young people as 62% is below 24 years old. Youth unemployment differentiates by place of residence and gender. In fact, the youth unemployment rate is higher in urban areas (15.5%) than in rural areas (4.3%). It is 8.5% for men and 23.5% for women¹. The demographic dynamics of the country show strong internal and external population migrations. The North, Sahel and Centre regions are particularly affected, with migrants (mostly males) leaving these areas for more favourable conditions in southern regions. This situation creates a growing imbalance between the North (shortage of workforce, uncertain rainfall, chronic cereal deficit, etc.), and the South (high land

¹ Plan d'Action National pour l'Emploi des Jeunes (PANEJ) 2016-2020, (2015)

pressure, sharp increase in land use, anarchic exploitation of natural resources, etc.). Overall, around 60 ethnic groups, speaking almost as many languages, are present in the country.

Gender Inequalities. In rural areas, despite permanent access to natural resources (exploitation, processing, self-consumption and marketing), women are excluded from the right of ownership and decision making over land, which belongs to men. They mainly work in seed production, tree nurseries and planting activities, while men tend to be involved in heavy work (sawmilling, logging, tree loading) and to be employed by forest companies. Hunting is an activity exclusively for men, but the marketing of the game belongs to women. The collection and marketing of Non Timber Forest Products (NTFP) is done by women and children who are major players in the retail trade while men dominate the wholesale market for greater profit.

Women's participation in community forests is not as important as men's. Women are usually poorly represented in legal entities and in the management bodies, in which they rarely have positions of responsibility. Women are not often involved in the management of resources and income, in community micro-projects or other lucrative activities related to community forests. The marketing of firewood and rattan is generally an activity mainly carried out by women and children, even if men are involved to a lesser extent.

Women's participation in biodiversity conservation is less important than men's. This is reflected in their low involvement in (i) the elaboration of development plans and community-based wildlife management plans and their implementation; (ii) the preparation of protected areas and conservation sites management plans and in their implementation; and (iii) in development initiatives such as tourism, ecotourism, etc.

Income from food crops and forest products collected by women is used for the daily management of the household. In the project area, the economic situation of women is not very different from one region to another, apart from the influence of religion on practices in different places (women's confinement, early marriage of girls, etc.).

Youth. Youth in the rural areas of Cameroon are characterized by: (i) a low level of education; (ii) a lack of vocational training and qualification; (iii) inadequate orientation in secondary education towards sectors that are not suitable for the rural economy; and (iv) very limited access to inputs (land, labour, techniques and technology, financial resources, etc.). Young people constitute a large proportion of the poorest categories in rural areas, often low-skilled (4.6% of skilled workers in rural areas compared to 21.6% of urban skilled workers) and generally trained on the job, with low levels of income. Child labour from age 5 to 14 is very significant with a proportion of 41% against an average of 25% in sub-Saharan Africa. About 10% of young people between 15 and 24 have never attended school or been able to get a job. The lack of opportunities for youth could also lead to radicalisation and violent extremism. Boko Haram has managed to gain a foothold in the Far North of Cameroon and to recruit thousands of young people. This is largely due to the vulnerability of this region and the lack of employment opportunities.

c. Economic Context

Cameroon has one of the most diversified economy in Central Africa. Economic activity has recently decelerated due to the global decrease in oil prices and insecurity stemming from the presence of Boko Haram in the Far North region. The poverty level has not significantly changed in the last decades; overall it decreased slightly from 40% to 37.5% from 2001 to 2014 with an urban poverty dropping from 14% to 9% whereas rural poverty rose from 52% to 56.8%.

About 50% of the active population work in rural areas. Agriculture, forestry, fishing and hunting, contributed to 22.5% of the Gross Domestic Product (GDP) in 2014. Agriculture is mainly dominated by smallholder farmers. Most of the agriculture is not mechanized and makes little or no use of inputs, thereby leading to low yields. Farmers and their households are among the

poorest groups, and food insecurity is prevalent in the northern regions (15.4% in the North and 17.9% in the Far North). Around 40.5% of children living in rural areas suffer from chronic malnutrition against 21.9% in urban areas.

d. Agriculture sector

After a period of strong economic recession between 1985 and 1994, the Cameroonian economy has really rebounded since 2010, especially in export-oriented sectors. The annual growth rate of GDP has gradually increased from 3.3% in 2010 to 5.6% in 2013. Cameroon's growth was driven by exports of raw materials, of agricultural or petroleum origin. Export earnings have been one of the essential sources of public and private investment. Rural sector exports account for about 55% of the country's export earnings, compared with 30% of hydrocarbons. The main agricultural products exported are cocoa (beans, dough, butter and preparation), cotton fiber, coffee, bananas, rubber and palm oil. According to the World Bank statistics (2015), agricultural GDP in Cameroon has been evaluated at 22.82%².

Agriculture is dominated by about two million smallholder farmers, who are highly susceptible to weather hazards. These farmers depend heavily on available natural resources, with production systems playing a decisive role in the degradation or preservation of these resources.

Crop systems are varied in the three regions of intervention of the project:

- In the Far North, production systems are mainly based on the cultivation of millet and sorghum. Land pressure leads to intensive clearing and reduced fallow periods. The creation of stone terraces makes it possible to develop crops on steep slopes. Rain-fed crops are grown in the Yaere³ and the cultivation of rice is growing. Agricultural productivity is still low on a regional scale, and the cereal balance is structurally deficient (+/- 100 000 t / year). In terms of livestock, 38% of the national herd is concentrated in this region. There are several types of livestock breeding in the area: (i) a small transhumance that exploits the Yaere in the dry season; (ii) cross-border transhumance between Cameroon-Nigeria-Niger and Cameroon-Chad which exploits the pastoral resources around the Lake Chad; and (iii) sedentary farms still under development.
- In the North, the development of cotton has intensified the cultivation systems and allowed a more rapid evolution towards cultivation with animal traction. Maize remains the main food and cash crop in this region. Rice cultivation and the large-scale cultivation of groundnuts are gradually leaving some room for the emergence of other crops such as onions, yams and cowpeas. In terms of livestock, this region is where transhumant herders go during the dry season. The pastoral areas are threatened by agriculture which tends to encroach on traditional transhumance corridors.
- In the Northwest, climate and soil fertility make it possible to produce maize for two growing seasons, in association with peanuts or beans. Potato is also grown in the second growing season. These annual crops are produced in association with semi-perennial crops such as plantain, cassava and macabo and perennial crops such as avocado, mango and safoutier. The cultivation of cash crops such as coffee is often done in monoculture. The high demographic pressure in the area has led to a constant decrease

² World Bank (2015)

³ The Yaéré is a vast annually flooded flat savanna grassland plain, part of the extensive floodplains around the shallow and variable Lake Chad in Central Africa. When not inundated by floods the Yaéré is an ecoregion of the Tropical and subtropical grasslands, savannas, and shrublands biome, and when flooded it is an African freshwater ecoregion in the flooded grasslands and savannas biome.

in the households' cultivated areas (one hectare per household as an average in 2016). In this region, livestock depends on climatic conditions and available natural resources. The Mbororos Foulanis cattle is limited to the top of the hills in the south of the region. In the northern part of the region, where land pressure is lower, livestock rearing is predominant, with more open, subalpine meadows.

e. Natural Resources

Cameroon has abundant land resources still largely under-exploited. Of a total area of 47 million ha, 9.2 are used for agricultural purposes. The arable land covers about 7.2 million hectares, to which must be added nearly 2 million hectares of pasture. Only 1.8 million hectares are currently cultivated (26% of the cultivable area). The low average density of the population places Cameroon in a favourable situation in terms of land availability⁴.

The potential of irrigable land is estimated at about 240 000 ha. Irrigated areas were in the order of 27 000 ha in the early 1990s. An increase of 20% in the last decade brought the irrigated area to 33 000 ha, leaving space for future expansions (SDSR, 2006).

The added value of the forestry sector was consistently 2.7% of the overall GDP between 2008 and 2010. This contribution is higher than the contribution of the non-oil mining sector (0.18% of GDP in 2010).

Wood contributes more than 80% to the supply of energy in Africa in all countries. Africa, and, is particularly Central Africa the only continent where wood will continue to play a predominant role in the coming decades as a source of domestic energy. Cameroon is no exception to this general situation, it is estimated that 83% of the Cameroonian population depend on woody biomass as a source of energy, and in rural areas it is often the only source of available energy.

The contribution of the wood energy sector to state revenues remains marginal, while sums of up to one billion CFA francs are levied on actors in the sector through the parafiscal networks.

Ecotourism aims above all at the sustainable management of natural heritage, in that it contributes to promoting the conservation and preservation of green spaces and biological diversity, while seeking the well-being of local communities through the promotion of income generating activities. In Cameroon, about 136,182 domestic and foreign tourists visit the ecotourism sites of Cameroon annually. Non-resident aliens represent about 11.6% of visitors in all sites. However, they have a strong preference for natural sites generally far from the cities of Yaoundé and Douala (Campo, Lobeke, Korup, etc.). Ecotourism generates significant revenues for the Cameroonian economy, more than 5,134 billion CFA francs. (CIFOR, 2013)

f. Political and Institutional Context

International Conventions. Cameroon is a signatory to many international conventions, including the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, the United Nations Convention on Biological Diversity (UNCBD), and the United Nations Convention to Combat Desertification (UNCCD). These conventions were translated into strategies to be implemented at the national level.

Policy Framework.

In the framework of the UNFCCC, Cameroon has developed its Intended Nationally Determined Contribution (INDC) in December 2015, which is aligned to its National Climate Change Adaptation Plan (PNACC – *Plan National d'Adaptation au Changement Climatique*). The vision in the PNACC is that "climate change is fully integrated into the country's sustainable

⁴ Strategie de Développement du Secteur Rural (SDSR) (2006)

development, reducing its vulnerability, and even turning climate change into a solution/opportunity for development. Thus Cameroonians - particularly women, children and vulnerable people - and the country's economic sectors have a greater resilience and adaptability to the impacts of climate change". To make this vision come true, the general objective of the PNACC is to adapt to climate change by reducing the vulnerability of Cameroonians to the effects of climate change, increasing their resilience and quality of life; and improving adaptive capacity to create new opportunities to support the country's sustainable development. To do so, the Plan includes the following four strategic objectives: (i) improve knowledge on climate change in Cameroon, (ii) inform, educate and mobilize the Cameroonian population to adapt to climate change, (iii) reduce vulnerability to climate change in the main sectors and agro-ecological zones of the country, (iv) integrate adaptation to climate change into strategies and national sectoral policies.

According to the second National Biodiversity Strategy and Action Plan (NBSAP II) in the framework of the UNCBD, by 2035, Cameroon aims to establish a sustainable relationship with its biodiversity in its use and in sharing its benefits to meet the development needs and the wellbeing of the population, and to preserve the health of its ecosystems through a sectoral and decentralized integration and the effective participation of all stakeholders, including local authorities.

Other key policies with regards to the project include, among others: Cameroon Vision 2035; the National Agricultural Investment Plan 2014-2020 (PNIA – *Plan National d'Investissement Agricole*); the Strategic Document for Growth and Employment; the National Gender Policy 2011-2020, the Strategy of Woman and Family Promotion, and the Youth National Plan, the Sectoral Programme Forest and Environment (PSFE II – *Programme Sectoriel Forêt et Environnement*), etc. These policy documents are described in more details in section II.4 on the strategic alignment of the project.

Key Institutions. The main ministries involved in the implementation of these national policies, plans and projects are the following:

- MINEPDED: the ministry of environment, nature protection and sustainable development;
- MINADER: the ministry of agriculture and rural development;
- MINFOF: the ministry of forestry and wildlife;
- MINEPIA: the ministry of livestock, fisheries and animal industries; and
- MINEPAT: the ministry of economy, planning and regional development.

g. Environmental context

Cameroon's ecosystems make the country one of the most diverse in Africa in terms of variety and quantity of ecosystems and genetic resources, with a high level of endemism. Within the African continent, Cameroon is ranked fourth in terms of floristic diversity and fifth in terms of wildlife diversity, and the country has around 3.6 million hectares of protected areas for the conservation of this biodiversity. Nevertheless, Cameroon faces a negative trend of biodiversity loss with 815 flowering plant species and 44 animal species that are endangered. Cameroon ranks 18th in terms of the number of threatened mammals. This loss of biodiversity is mostly linked to the anthropogenic pressure exerted by communities in vulnerable rural areas that have few economically viable options. This pressure is reflected in land-use change, unsustainable natural resource management and pollution, and is likely to worsen with the effects of climate change.

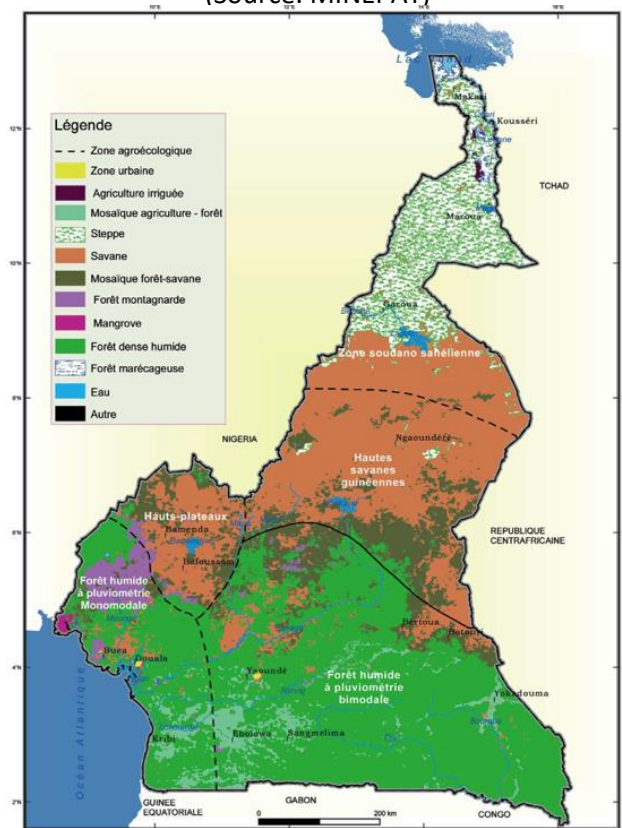
Cameroon has the fourth largest area of dense rainforest in the Congo Basin, covering almost 42% of its territory (about 20 million hectares). However, the country faces an annual net deforestation rate of about 1%⁵ when considering the entire forest cover of the country, which represents a loss of about 220,000 hectares per year. The forestry law of 1994, which is considered to be a pioneer in the Central African sub-region - and which is currently being revised - promotes the conservation of the country natural resources and biodiversity, and promotes community and municipal forests. It also prescribes the classification of 30% of the permanent forested land into protected areas.

The availability of surface water resources at the national level amounts to 268 billion cubic meters. Cameroon has a dense network of rivers spread over four watersheds: (i) Lake Chad basin, (ii) Niger basin, (iii) Congo basin, and (iv) the coastal river basin. Surface water is essential for agro-pastoral activities in the northern regions and in the hydrological functioning of Yaérés. The groundwater resource is directly linked to surface water and its characteristics. Groundwater availability is estimated at 56 billion cubic meters.

Cameroon has 5 main agro-ecological zones, which are as follows from north to south: (i) Sudano Sahelian zone; (ii) high Guinean savannahs; (iii) the high western plateaus, (iv) forest zone with monomodal rainfall; and (v) forest zone with bimodal rainfall. They are represented in the map on the side.

The project intervention sites are located in the Sudano Sahelian zone (Waza and Benoue national parks), and in the high western plateaus (Kimbi-Fungom national park).

Figure 2: Agro-ecological zones in Cameroon
(Source: MINEPAT)



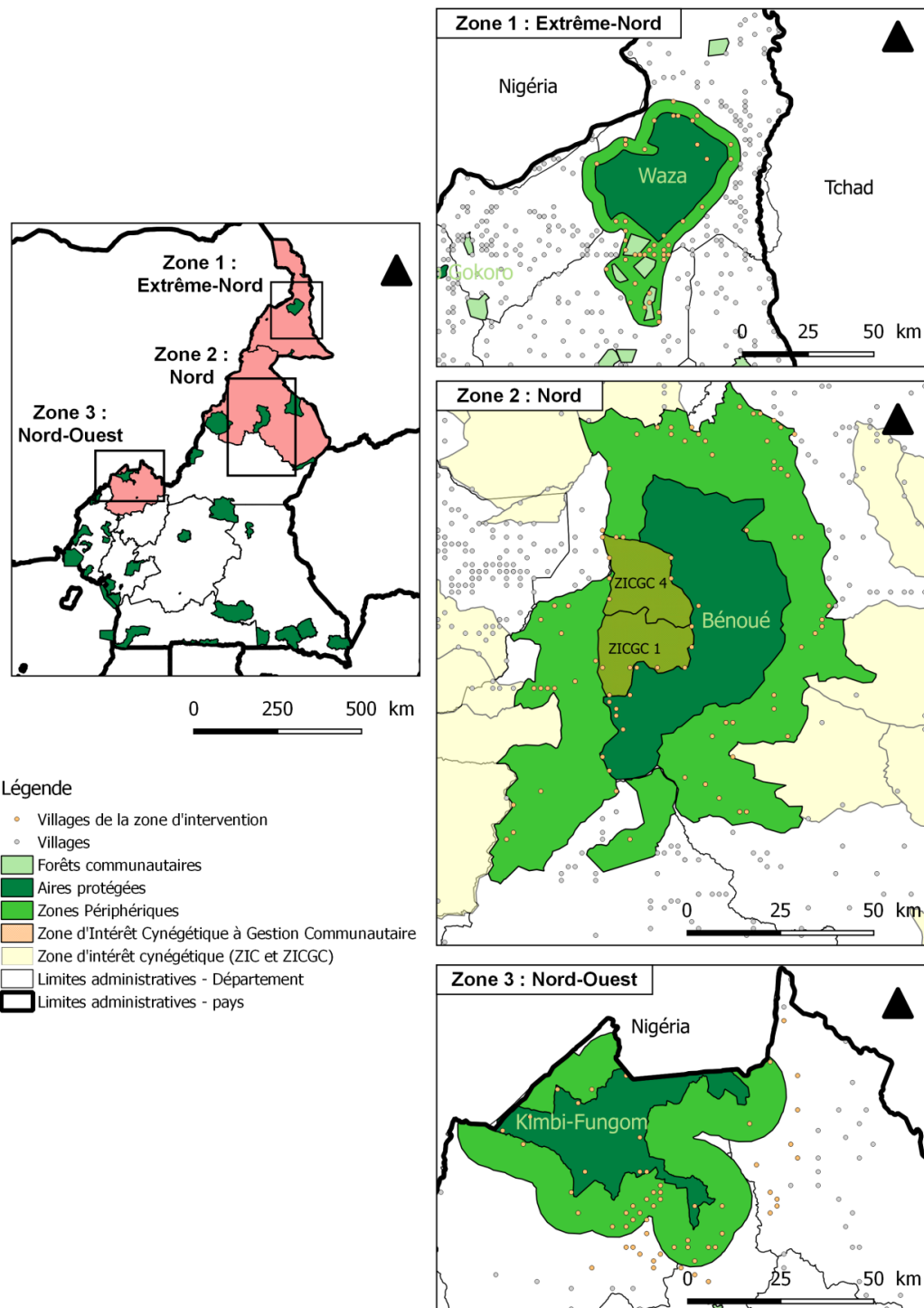
h. Areas of intervention

A total surface area of 104,800 hectares will benefit from project activities, including: (i) 100,800 hectares of community forest land and co-managed game areas (immediate surroundings of the protected areas) and (ii) 4,000 hectares of agro-sylvo-pastoral lands and developed sub-catchments (exploited periphery areas).

The Project intervention sites are located in three regions: the Far North, the North and the North West, in the surroundings of three national parks: the Waza National Park (Far North), the Bénoué National Park (North) and the Kimbi-Fungom National Park (North-West), covering a total of 188 villages.

⁵ Ministry of Environment and Forests (MINEF) et Food and Agriculture Organization (FAO) 2007 évaluation des ressources forestières nationales du Cameroun 2003–2004, Yaoundé, Cameroun.

Figure 3: Project Intervention sites



Intervention sites were selected on the basis of: (i) the intensity of climate change impacts and the level of vulnerability of the population to climate change, especially the rural youths (ii) the biodiversity status of the area and the need for protection; (iii) the economic and agro-ecological

potential in terms of agro-sylvo-pastoral sectors, agroforestry and the exploitation of Non-Timber Forest Products (NTFPs); and (iv) the possibilities of creating synergies with existing projects such as PADMIR, PADFA, PEA-Jeunes which support the socioeconomic integration of youths in the agro-sylvo-pastoral sector.

Far North Region - Periphery of Waza National Park

The project intervention sites spread across a five-kilometre radius around the park, including areas where community forestry initiatives are underway. This area is characterized by: (i) a Sudano-Sahelian agro-ecological system where traditional agro-pastoral practices result in severe soil degradation; (ii) deforestation related to people's fuel-wood needs; (iii) a high prevalence of food insecurity; (iv) low water availability; (v) road infrastructure degradation; (vi) very difficult access to credit, e.g. through microfinance institutions; (vii) severe insecurity due to the terrorist group Boko Haram; (viii) a large and increasing number of displaced people as a result of the armed conflict; (ix) the presence of cross-border refugees in humanitarian camps.

However, Waza National Park remains an essential refuge for biodiversity, and large mammals in particular, in the Northern Savannah ecosystem. The region is considered by the Government as a priority area. The humanitarian community in Cameroon, UN agencies and international NGOs, are very active in the region with various interventions in favour of refugees and displaced populations.

North Region - Periphery of the Bénoué National Park

The project intervention sites spread across a 20-kilometer radius around the park, including community-managed game areas #1 and #4, as represented in the map above. This area is characterized by: (i) strong demographic pressure due to past population movements; (ii) prevalence of food insecurity; (iii) low water availability; (iv) deforestation for charcoal production, exported to urban centers; (v) difficult access to microfinance institutions due to remoteness. This park also makes the connection with the wildlife corridors of the Northern Savanna ecosystem for large mammals.

North-West Region – Periphery of the Kimbi-Fungom National Park

The project intervention zone covers a ten-kilometre radius around the park. This area is characterized by: (i) a low population density; (ii) a mosaic of dense rainforest and grassland savanna for agroforestry activities and the exploitation of highly valued Non Timber Forest Products (NTFP): wild mango, njansang; (iii) entrepreneurial dynamism throughout the region; (iv) cross-border pressures on biodiversity through deforestation; (v) transhumance in the northern part of the region. Although no precise data on fauna and flora are available since Kimbi-Fungom National Park has only recently been established in 2015, it is suspected to be one of the richest in terms of diurnal primates, including chimpanzees and gorillas. The national park still doesn't have a development and management plan.

Target Group

The total population around the three national parks is estimated at about 135,000, of which 40,500 are between the ages of 18 and 35 with almost 50.6% of young women. This ethnic and culturally diverse population is characterized by great social diversity. It is made up of indigenous people, migrants from different migration waves and internally displaced persons. It is difficult to assess exactly the relative importance each group.

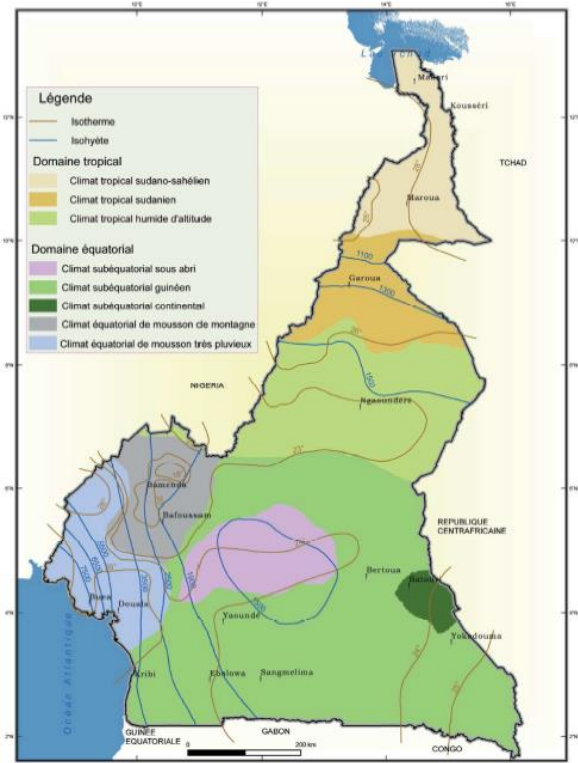
i. Climate and climate change

Climate types

There are three main types of climate in Cameroon depending on the country's topography.

- The equatorial climate in the southern part of the country is characterized by abundant precipitation, high and constant temperatures resulting in low thermal amplitude. Two types of equatorial climate can be distinguished: (i) the Guinean type that covers part of the coast and the South Cameroon plateau; and (ii) the Cameroonian type that covers the vicinity of Mount Cameroon and extends as far as the mouth of the Sanaga River encompassing the high plateaus of the West;
- The tropical climate which can be distinguished in three different types: (i) the tropical Sudano-sahelian type in the Far North of the country, with high temperatures and irregular rains; (ii) the tropical Sudanian type in the North, with high temperatures and little rain; and the tropical humid type, which is a transition between the tropical and the equatorial climates.

Figure 4: Zone climatiques du Cameroun
(Source: MINEPAT)

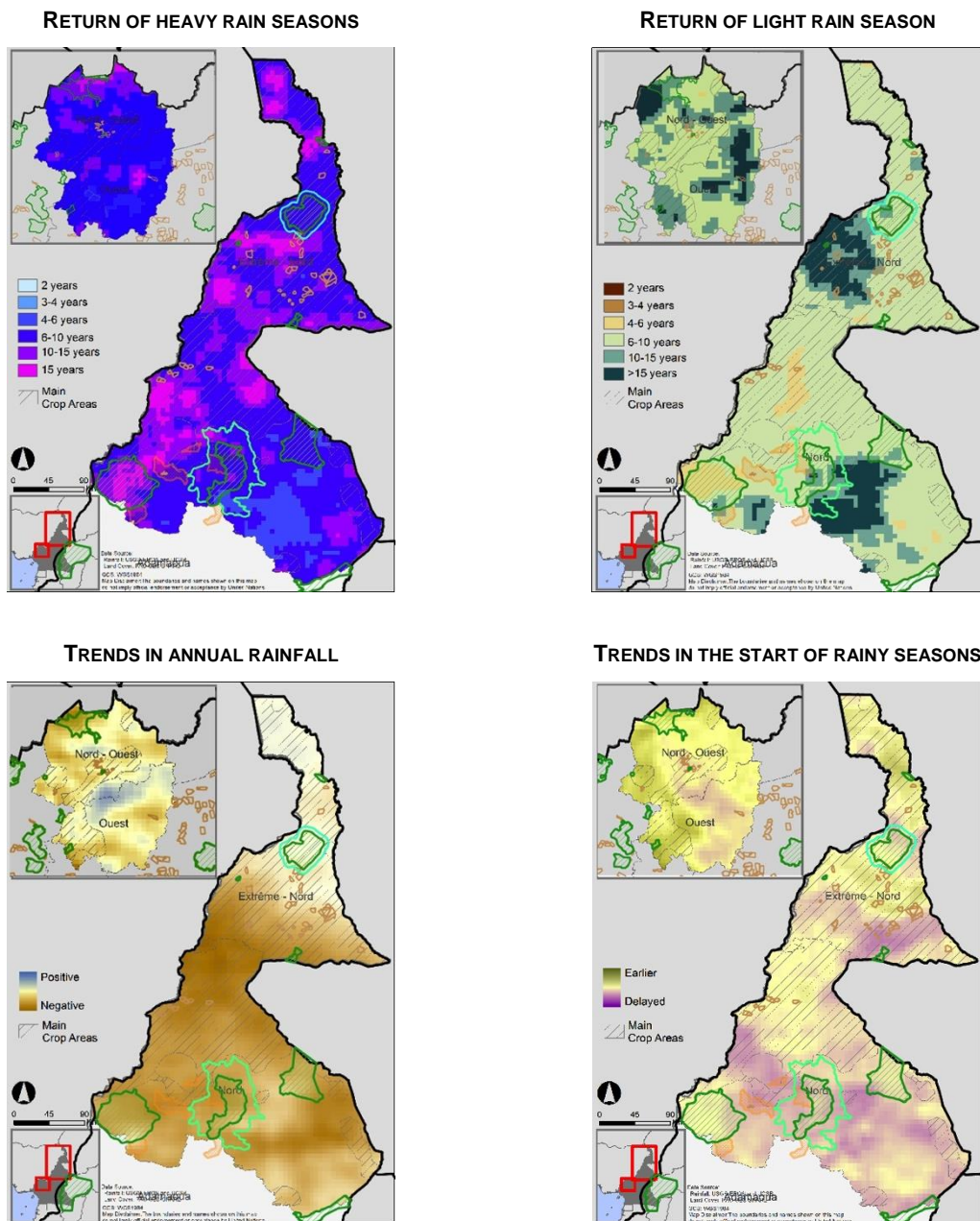


Past Climate trends

Across its entire territory, Cameroon has experienced an average temperature increase of 0.7°C between 1960 and 2007. Over the last decade, this change in climate has led to more extreme climate events such as: (i) the lengthening of dry seasons with more intense droughts; (ii) increased evapotranspiration due to rising temperatures, resulting in more violent storms; and (iii) intensification of flooding events in the Sudano-Sahelian zone. These phenomena directly affect the environmental, social and economic conditions in the different regions of the country (CHIRPS, 2016).

The maps below show trends in periods of rainy seasons throughout Cameroon over the past 20 years.

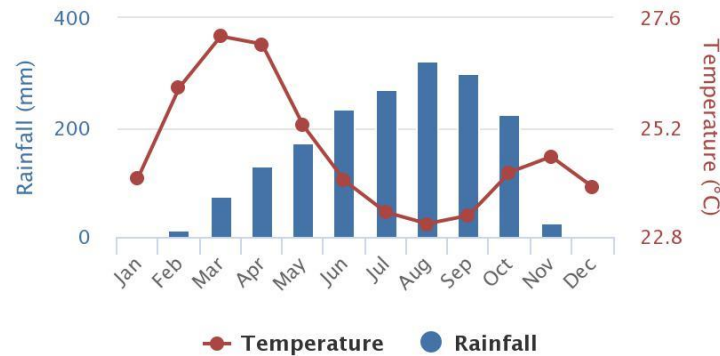
**Figure 5: CAMEROON – Far North, North, North-West et West
(calculated over the past 20 years) (CHIRPS, 2016).**



Climate in the zones of intervention

The high western plateaus, and the periphery of the **Kimbi-Fungom national park** are characterised by annual rainfall of about 1,800 mm, a long rainy season (March to November) and a short dry season. The average monthly temperature remains constant all year long, around 24°C. During the past six decades, rainfall has decreased by 2.5% per decade and droughts have intensified.

Figure 6: Average Monthly Temperature and Rainfall in Kimbi-Fungom National Park from 1991-2015 (World Bank, 2017)



In the **Kimbi-Fungom national park**, heavy rain seasons happen every 15 years instead of 10 years in the surrounding regions, and light rain seasons happen every 10 to 15 years instead of 6 to 10 years in the surrounding regions. The park is therefore not so frequently impacted by extreme rainfall events. It is however located in an area where annual rainfall tend to decrease, therefore limiting surface and ground water availability in the area.

In the Sudano Sahelian zone, where the **Bénoué and Waza National Parks** are located, the rainfall gradient ranges from 500 mm to 1,000mm and annual rainfall is concentrated from July to October. Temperatures are around 28°C with high thermal variations of 7.7°C. These areas have been particularly affected by the decrease in rainfall over the past 6 decades (4.1% per decade).

In the North and in the Far North (where the **Bénoué and Waza national parks** are located), heavy and light rain seasons come back every 6 to 10 years, which means that extreme climate events are quite frequent, which can threaten food security. In addition in the North, annual rainfall is decreasing, which is not the case in the Far North where rainfall is already very low. The start of the rainy season tends to be delayed in Bénoué national park and in the east of Waza national park. In the west of Waza national park, however, the rainy season is starting earlier.

Figure 7: Average Monthly Temperature and Rainfall in Bénoué National Park from 1991-2015 (World Bank, 2017)

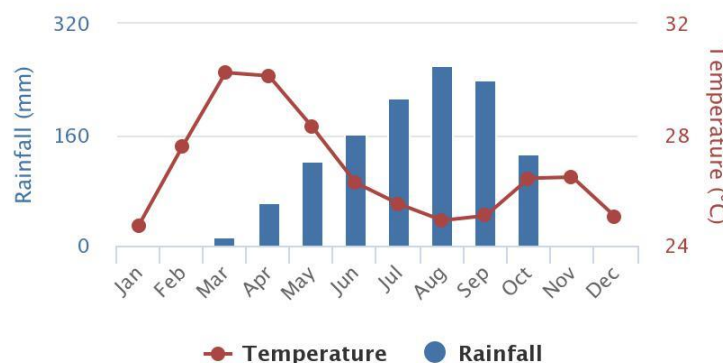
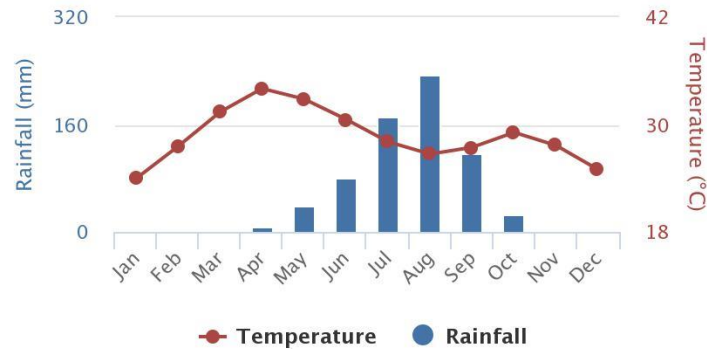


Figure 8: Average Monthly Temperature and Rainfall in Waza National Park from 1991-2015 (World Bank, 2017)



Climate change scenarios

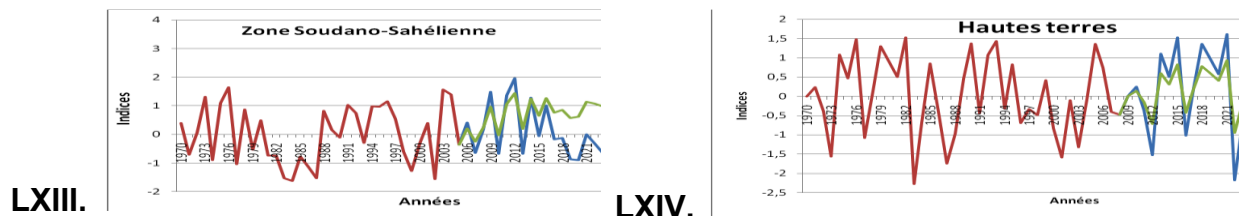
Climate analysis reveals a window of opportunity from 2020 to 2030, during which climate change will have limited adverse effects, before a more intense deterioration from 2030 to 2065. The adoption of adaptation strategies must therefore be promoted during the 2020 to 2030 period in order to prepare Cameroonian producers, and in particular the younger ones, to these new climatic conditions.

According to SRES (Scenario A2)⁶, Cameroon is expected to experience stable rainfall, slightly above current trends until 2030, and then an increasing degradation of its aridity index following a southwest / northeast gradient in the country, until 2065. The Far North and North regions should see their aridity index deteriorate from -1.5 to -2.5 points. The North-West will experience less degradation, in the range of -0.5 to -1.5. The number of five-day periods without rain during the rainy season should, however, decrease slightly with a frequency of poor rainfall distribution every six years in the Far North and North regions and every ten years in the region North West.

The climate projection models available at the University of Cape Town for the town of Garoua and Maroua (respectively in the North and Far North regions) for 2030 confirm trends that will impact the areas of intervention of the project, with in particular an increase in rainfall during humid periods, an increase in temperatures, at night in particular, and an increase in the number of very hot days.

In the Sudano Sahelian zone, it is expected that rainfall will increase by the end of the 2010-2035 period, while south of this zone in the high plateaus, no major changes are foreseen.

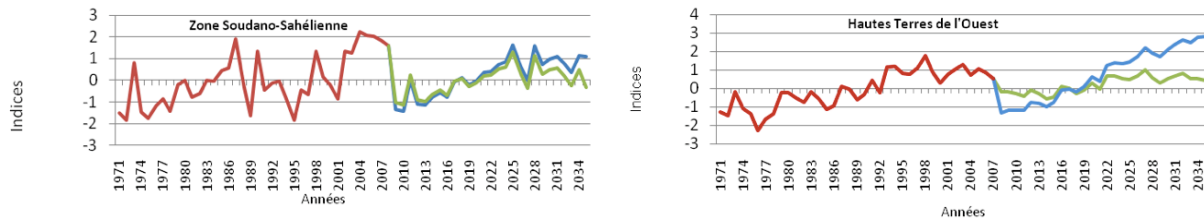
Figure 9: Simulation of the evolution of rainfall from 1970 to 2035



⁶ According to the RegCM scenario A2 model used in the Cameroon National Climate Change Adaptation Plan (PNACC) June 24th 2015

According to the RegCM simulation model, a slight increase in temperature is expected until 2030, followed by a stronger increase of about 1°C (CMIP5) per decade until 2100.

Figure 10: Simulation of the evolution of temperatures from 1970 to 2035



Climate change impacts

The impact of climate change on Cameroon's agriculture is the result of a combination of changes in agricultural systems (intensification, extension of areas on marginal lands) and the amplitude and frequency of extreme climate events. These are likely to increase pressure on natural resources (increase in water needs, increase in water runoff and erosion, etc.).

Climate change might also impact soil erosion due to increased rainfall intensity and the extension of cultivated areas on marginal lands as a result of lowering productivity. Soils cultivated on slopes in the northern part of the North-West region and in the western part of the Far North region will thus be subject to increasing erosion until 2065, by respectively 20 and 50 MJ.mm / ha / year⁷.

The estimated long-term impact on agricultural yields⁸ ranges from + 10%, due to the positive impact of increasing temperatures on crop yields in wet equatorial areas, to - 30% due to the negative impact of reduced rainfall, increasing temperatures, and an increase in the frequency and amplitude of climatic hazards on rain-fed and recession crops in the Sahelo-Sudanian zone.

Climate change also disrupts vegetative cycles, due to a multiplication of extreme events (days and nights with high heat, more intense cold, windy episodes). The phenomenon is already observed empirically by local populations who deplore the unpredictability of harvests of NTFP in forest areas.

Such context pushes producers to change their production systems. Highland producers in the North-West region adapt in particular through the use of more diversified resources (NTFP, labour outside the field) and intensified agro-sylvo-pastoral production: intercropping (maize, bean, groundnut, and plantain), small livestock (poultry farming, pig farming) and forestry. Producers in the Far North and North regions are adopting strategies for the diversification of livestock products through the agricultural use of flood-recessional land and land benefiting from livestock manure.

⁷ Increasing erosion measuring unit: mega joule per millimeter per hectare per year.

⁸ Climate changes impacts on agricultural yields. Christoph Müller, Alberte Bondeau, Alexander Popp, Katharina Waha, and Marianela Fader, Potsdam Institute for Climate Impact Research (PIK), Germany

Figure 11: Economic risk during the 2040-2049 decade on the growth of the agriculture sector under the effect of temperature and precipitation measured as a percentage of growth in the high warming scenario. (World Bank, 2017. Rapport Diagnostic Cameroun)

Agriculture is the most sensitive sector of the economy to temperatures and precipitation, and major risks are foreseen in the Far North, North, Adamaoua and East regions. As indicated in the figure on the side, there is also a high probability of decay/recession in the agricultural sector of up to 130% in the high warming scenario.



Finally, Climate change and anthropogenic pressure are also expected to impact Cameroon's national parks by exacerbating the increasing pressure of riparian populations on water, land, pasture and forest resources. These pressures are likely to increase the degradation of sensitive and biodiversity rich environments.

j. Description of the problem to be addressed

The project area of intervention is vulnerable to climate change. Increase in temperature, higher occurrence of extreme climate events (droughts, floods, heavy winds, etc.), poor rainfall distribution and changes in season patterns were observed in recent years. These changes affect local communities, especially young people, that already suffer from lack of opportunities and basic services, which often leads them to illegal activities.

The theory of change of the project is that young men and women in the North West, North, and Far North regions located in the surroundings of protected areas (Kimbi-Fungum, Bénoué and Waza national parks) would increase their resilience to climate change as well as their incomes if they have access to good agricultural practices, integrated natural resources management and advisory services.

Commercial banks and financial institutions are still reluctant to finance the agricultural sector (only 2% of the formal financings are granted to agriculture) and they are still shy to finance MFIs which are struggling to find refunding funds. The national average of financial services penetration rate in rural areas is low, only a very limited number of Cameroonian, rural adults had an account within a financial institution. However, the rise of mobile banking operators with mobile transfer operations has led to an increase from 9.8% to 71% between 2004 and 2014.

The paradigm shift envisaged through the project is to sustainably strengthen youth eco-entrepreneurs with financial incentives by establishing an Adaptation Fund Facility at local level and a PES fund to attracting capital, particularly from the private sector, REDD+ markets and Government. This mechanism will allow them access to medium and long term investments to expand number of REDD+ pilot projects that are currently in operation in Cameroon on Ecosystem Services (PES) and forest communities and biodiversity conservation at the regional level through landscape management and to address climate change with potential interventions listed below.

LXV. Change	LXVI. Impact	LXVII. Potential Interventions Examples
LXVIII. Temperature Increase on land and water	LXIX. Heat stress on crops	LXX. Access to heat tolerant crops
	LXXI. Increased crop water demand and or reduced water availability	LXXII. Access to drought tolerant and fast maturing crops and varieties
		LXXIII. Increase organic content
		LXXIV. Water conserving crop management practices (e.g. ridge planting)
		LXXV. Maximize water capture and storage
		LXXVI. Advocacy on securing rights to water supply to small scale farmers
	LXXVII. Heat , stress on livestock	LXXVIII. Tree Planting (shed and fodder)
LXXX. Changed seasonality	LXXXI. Farmers uncertain about when to cultivate , sow and harvest	LXXXII. Appropriate , accessible and reliable seasonal and weather forecasts
		LXXXIII. Crop diversification and crop mixing
		LXXXIV. Livestock diversification
	LXXXV. Crops damaged by dry spells within growing season	LXXXVI. Appropriate , accessible and reliable seasonal and weather forecasts
		LXXXVII. Crop diversification and crop mixing
		LXXXVIII. Sustainable agricultural techniques to improve drainage
		LXXXIX. Social and economic protection measures through financing
	XC. Reduced agricultural seasons	XCI. Livelihood diversification and access to finance through the facility
		XCII. Payment for Ecosystems Services;
		XCIII. Access to fast maturing drought tolerant crops
		XCIV. Appropriate, accessible and reliable seasonal and weather forecasts
		XCVII. Improved drainage

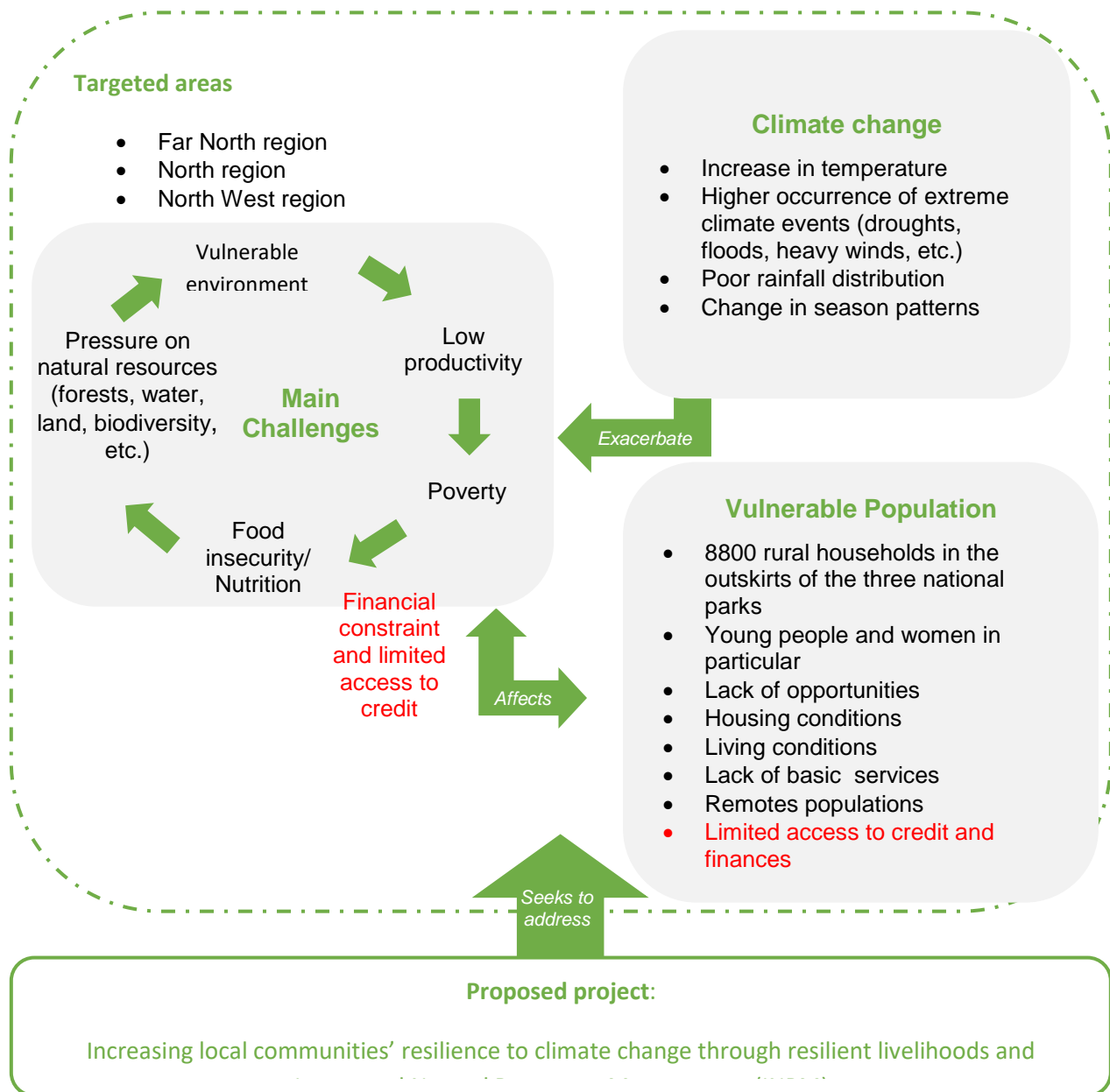
XCV. Increase in intense rainfall or large increase in annual rainfall	XCVI. Increased frequency and severity of floods	XCVIII. Protected/raised food, water and sanitation
XCIX. Decrease in annual rainfall in arid and semi-arid areas	C. Increased frequency and severity of drought	CI. Rainwater harvesting through Increasing water retention capacity of the tanks as an adaptive measure to address rainfall variability
		CII. Community water management committees
		CIII. Access to more drought-tolerant crops

Concretely and operationally, this will be achieved through (i) the integration of climate change adaptation and resilient development perspectives in institutional frameworks and local development planning processes; (ii) the strengthening of ecosystem resilience to climate change through a better knowledge of their status and vulnerability and the implementation of restoration measures; and (iii) the improvement of climate change adaptation capacities and awareness among young people and local communities and the strengthening of more resilient livelihoods.

The three zones of intervention of the project face various challenges that are likely to be exacerbated by climate change.

The figure below illustrates the problems to be addressed by the proposed project.

Figure 12: Illustration of the problems the proposed project seeks to address



To address these challenges in a context of climate change , the project will intervene livelihood diversification as a means of adaptation in the following manner in the three regions of intervention:

- In the Far North (Waza National Park): The project will support (i) the installation of livestock water points; (ii) the promotion of community forestry and reforestation activities; (iii) the rehabilitation of degraded soils and the adoption of sustainable agro-sylvo-pastoral practices; (iv) the development of economic opportunities for young people through eco-businesses; (v) Access to finance through a Facility (initial capital of 4 million) and a payment for ecosystems schemes that will provide finance to young entrepreneurs for sustainable management of natural resources and promotion (vi) the sustainable exploitation of NTFP - especially arabic gum, practiced by women informally.

- In the North (Bénoué National Park): The project will (i) support the improvement of natural resources management in community game areas; (ii) install livestock water points to limit competition on the water resources of the national park; (iii) develop economic opportunities for young people through eco-businesses; iv) Access to finance through the Facility (initial capital of 4 million) that will provide finance to young entrepreneurs as well as a payment for ecosystems schemes (v) and (iv) develop NTFP, especially shea butter, traditionally carried out by women.
- North West (Kimki-Fungom National Park): The Project will focus its work on (i) supporting the development of the National Park management plan, and simplified management plan for surrounding community forests; (ii) increasing knowledge of ecosystems and natural resources in the outskirts of the national park; (iii) developing interventions in community forests and reforestation; (iv) strengthening the entrepreneurial approach of young people; v) Access to finance through the Facility (initial capital of 4 million) that will provide finance to young entrepreneurs (v) valorisation of NTFP – particularly wild mango and njansang.

TABLEAU 2. PROJECT OBJECTIVES:

The overall objective of the project is to increase local communities' resilience to climate change through resilient livelihoods and integrated natural resources management.

The project will deliver this objective through three outcomes:

- Outcome 1: Climate proofed institutional frameworks and local development plans at regional and local level;
- Outcome 2: Ecosystems resilience to climate change is strengthened through monitoring and better knowledge of their status and vulnerability;
- Outcome 3: Sustainable management of natural resources and ecosystems leading to climate resilient ecosystems, green jobs creation for youth and resilient livelihoods.

TABLEAU 3. PROJECT COMPONENTS AND FINANCING:

Project Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
Component 1: Mainstream climate change adaptation into institutional and regulatory frameworks plans for improved land and natural resources management at regional and local level	<ul style="list-style-type: none"> Output 1.1: Institutional and regulatory frameworks and plans at municipal and regional level are strengthened to promote climate change adaptation and the resilient management of natural resources Output 1.2: Land and natural resources management are improved in the Waza, Bénoué and Kimbi-Fungom national parks and their outskirts to increase the resilience to climate change of vulnerable populations contributing to emissions reduction 	Outcome 1: Climate proofed institutional frameworks and local development plans at regional and local level	1,400,000
Component 2: Improve knowledge on ecosystems' vulnerability to climate change, ecosystem-based adaptation and climate smart businesses opportunities	<ul style="list-style-type: none"> Output 2.1: Climate information systems and surveillance mechanisms are strengthened through the development of a unified observation system to respond to climate change Output 2.2: Ecosystem-based adaptation and climate smart businesses opportunities for the most vulnerable groups are identified (youth, indigenous people, women, displaced people) and information systems are improved 	Outcome 2: Ecosystems resilience to climate change is strengthened through monitoring and better knowledge of their status and vulnerability	1,300,000
Component 3: Adaptation to climate change measures are implemented through incentives instruments leading to increasing the resilience to climate change of targeted communities and areas	<ul style="list-style-type: none"> Output 3.1: An Investment Fund is established and managed to invest in sustainable agroforestry and renewable energy enterprises for youth and other marginalized groups Output 3.2: Climate adaptation actions in agroforestry and natural resources management are made through the Investment Fund with a focus 	Outcome 3: Sustainable management of natural resources and ecosystems leading to climate resilient ecosystems, green jobs creation for youth and resilient livelihoods	6,000,000

	<p>on youth and other marginalized groups.</p> <ul style="list-style-type: none"> • Output 3.3: Payments for ecosystem services schemes to support conservation of fragile ecosystems are introduced 		
6. Project Execution cost			500,000
7. Total Project Cost			9,200,000
8. Project Cycle Management Fee charged by the Implementing Entity (8.5%)			782,000
Amount of Financing Requested			9,982,000

Projected Calendar

Milestones	Expected Dates
Start of Project Implementation	2018
Mid-term Review (if planned)	2021
Project Closing	2024
Terminal Evaluation	2024

PART II: PROJECT JUSTIFICATION

1 PROJECT COMPONENTS

The proposed project aims to increase local communities' resilience to climate change through resilient livelihoods and integrated natural resources management in the outskirts of the Waza, Benoué and Kimbi-Fungom national parks. The project's objective is aligned with five outcomes of the Adaptation Fund, namely:

- Adaptation Fund Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level
- Adaptation Fund Outcome 4: Increased adaptive capacity within relevant development and natural resource sectors
- Adaptation Fund Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress
- Adaptation Fund Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas
- Adaptation Fund Outcome 7: Improved policies and regulations that promote and enforce resilience measures.

As outlined in the previous section, local populations in the targeted areas are amongst the poorest and the most vulnerable in Cameroon. They live in a fragile environment which is under increasing anthropogenic pressure due to the unsustainable management of natural resources in a context of a growing population combined with food insecurity and poverty. The situation in the three areas of intervention is likely to worsen with the effects of climate change, with for instance an expected rise in temperatures, higher occurrence of extreme climate events, poor rainfall distribution and changes in season patterns. To cope with this negative trend, the project aims to take advantage of the climate window of opportunity until 2030 to support local communities in their adaptation to climate change so that they are able to cope with its long term effects on their livelihoods. To achieve this objective, the project will therefore create an enabling environment for climate change adaptation at the institutional level, and will contribute to increasing the resilience of both the local ecosystems and natural resources, and local communities (in particular young women and men) so that a sustainable development can take place in the long term in these areas in a changing climate context.

The project is structured around three components:

- Component 1: Mainstream climate change adaptation into institutional and regulatory frameworks plans for improved land and natural resources management at regional and local level;
- Component 2: Improve knowledge on ecosystems' vulnerability to climate change and ecosystem-based adaptation and climate smart businesses opportunities; and
- Component 3: Adaptation to climate change measures are implemented through incentives instruments leading to increasing the resilience to climate change of targeted communities and areas.

Each component is described in more details below.

The project will directly benefit 8,800 rural households, representing almost 52,800 people living in the outskirts of the three national parks (about 40% of the population), including: 6,200 households supported for the management of community forest, game areas and through pastoral water points; and 2,600 households supported in agroforestry and sub-catchment development. Among these 8,800 households, 2,300 young eco-entrepreneurs (of which 50% will be women) will be supported as well. The project will indirectly benefit the population of the park outskirts through development and restoration initiatives as well as the creation of jobs and resilient livelihoods in the area. In particular, the project will pay a specific attention to young people and will seek to be inclusive and promote gender equity.

Component 1: Mainstream climate change adaptation into institutional and regulatory frameworks plans for improved land and natural resources management at regional and local level.

The expected outcome of this component is **climate proofed institutional frameworks and local development plans at regional and local level (Outcome 1)**. This outcome is aligned with the Adaptation Fund Output 7: “Improved integration of climate resilience strategies into country development plans”. This component aims to build an enabling environment so that institutions are aware and able to promote climate change adaptation in the long term at the national, regional and local level. The expected outputs and activities to be implemented under this component are as follows:

Output 1.1: Institutional and regulatory frameworks and plans at municipal and regional level are strengthened to promote climate change adaptation and natural resources management

This output aims to mainstream climate change adaptation into the regional and municipal development plans of the three areas of intervention. This mainstreaming process will be participatory and will include relevant stakeholders. The management and development plans of the three national parks will be reviewed to identify potential gaps in terms of climate change adaptation and potential amendments to these frameworks will be proposed to better integrate the challenges posed by climate change. In particular, the project will review the Waza National Park development plan, support the ongoing reformulation process of the Bénoué national park development plan, and support the elaboration of a development and management plan for the Kimbi-Fungom national park that does not exist yet. The budget of the different plans will also be reviewed to ensure that they are aligned with adaptation needs. In addition, monitoring and evaluation (M&E) systems will be developed for the different plans to monitor their implementation.

The following activities will be implemented to achieve this output:

- Activity 1.1.1: Carry out a socio economic baseline and a community based Climate Vulnerability and Capacity Assessment (CVCA) to update the institutional and regulatory policy frameworks and plans
- Activity 1.1.2: Organise workshops and dialogues to raise awareness on climate change adaptation, generate political will and integrate the vulnerability assessment outcome and stakeholders’ input into the relevant strategic framework and investment plans
- Activity 1.1.3: Develop voluntary codes of practice for forest management activities, including timber harvesting

- Activity 1.1.4: Develop a road for the implementation of the updated frameworks with a resource mobilisation strategy
- Activity 1.1.5: Organize participatory planning sessions to review and update local and regional development plans in the areas of intervention to mainstream climate change adaptation
- Activity 1.1.6: Review of the management and development plans of Waza and Bénoué national parks to identify potential gaps in terms of climate change adaptation, and propose potential amendments to mainstream this dimension
- Activity 1.1.7: Develop simple M&E systems for local and regional development plans, in order to enable local authorities to properly monitor their implementation
- Activity 1.1.8: Provide institutional and capacity building to local authorities to implement natural resources conservation and adaptive frameworks
- Activity 1.1.9: Develop practical guidance for updating regional and local development plans with up-to-date climate change information

Output 1.2: Land and natural resources management are improved in the Waza, Bénoué and Kimbi-Fungom national parks and their outskirts to increase the resilience to climate change of the vulnerable people

This output aims to mainstream climate change adaptation and natural resources management in the three national parks and their outskirts, in particular by integrating climate change into the national parks management and development plans, and by creating/updating community forest and game areas at their outskirts (buffer zones). This output will also consist in creating/updating community forests and game areas at the outskirts of the three national parks, including their legal status, management entities and the elaboration of simplified management plans. This output, and especially the creation and demarcation of community forests and game areas, will be participatory and involve all relevant stakeholders.

The following activities will be implemented to achieve this output:

- Activity 1.2.1: Use of a Drivers-Pressures-State change-Impact-Response (DPSIR) framework to identify and analyse specific project activities areas
- Activity 1.2.2: Nine forest areas to be classified as “community forests” and to be managed sustainably by the communities at the outskirts of Waza (3 community forests of around 3 000 ha each) and Kimbi-Fungom national parks (6 community forests of around 2 000 ha each)
- Activity 1.2.3: Participatory micro-zoning of game areas #1 and #4 in the outskirts of the Bénoué national park to recognize a living space for local communities, identify conflict zones and regulate natural resources use outside of this living space
- Activity 1.2.4: Assess the conservation status of 10 endangered or endemic flora and fauna species and develop climate conservations plans for at least 5 of them
- Activity 1.2.5: Conduct vulnerability assessment to climate change of local ecosystems, and the needs for adaptation on the outskirts of Waza, Bénoué and Kimbi-Fungom national parks
- Activity 1.2.6: Establish of natural (and temporary) physical fencing in the buffer zones

- Activity 1.2.7: Document, revive and promote continued use of traditional and indigenous systems related to conservation and climate resilience
- Activity 1.2.8: Improve water resource management in vulnerable households for food production systems through the water efficient practices such as drip irrigation
- Activity 1.2.9: Forest restoration on degraded lands within and outside the parks through the plantation of around 15,000 trees from selected species demonstrating strong resilience to climate change and adaptation to the local ecosystems and the livelihood needs of the local communities
- Activity 1.2.10: Create a community forest and game areas management entities: identification of relevant stakeholders, consultation with local communities, and development of the legal status of the entities
- Activity 1.2.11: Support the new entities in the classification process of the identified areas into community forest and game areas
- Activity 1.2.12: Elaboration of simplified management plans for the demarcated community forests and game areas defining communities' rights and access modalities to the natural resources of the area (spatial planning of crop land, livestock raising, firewood, NTFP, hunting, etc.) ensuring long-term conservation of ecosystem services in a climate change context

Component 2: Improve knowledge on ecosystems' vulnerability to climate change, ecosystem-based adaptation and climate smart businesses opportunities.

The expected outcome of this component is **a strengthened resilience to climate change of the different ecosystems through monitoring and better knowledge of their status and vulnerability (Outcome 2)**. This Outcome is aligned to the Adaptation Fund Outcome 3: "Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level".

The expected outputs and activities to be implemented under this component are as follows:

Output 2.1: Climate information systems and surveillance mechanisms are strengthened through the development of a unified observation system to respond to climate change.

This output aims to upgrade the information systems in the three national parks and their outskirts, more specifically to gather up-to-date information on climate change vulnerability to better inform the adaptation process. In particular the project will support the introduction of drones, the improvement of meteorological, climatic and sentinel stations, the introduction of resilience measurement tools and the training of eco-guard in these new information systems.

Drones are not currently used in Cameroon for national parks surveillance. This technology will be used to monitor the impacts of climate change at the three protected areas (Waza, Bénoué and Kimbi-Fungum) and their surroundings. It could also be used as a supervision and monitoring tool for the project activities.

The following activities will be implemented to achieve this output:

- Activity 2.1.1: Introduction of drones in the three national parks for ecosystems and natural resources surveillance to better monitor the impact of climate change, forest cover changes and ecological responses within protected areas and buffer zones.

- Activity 2.1.2: Set-up, rehabilitate or upgrade of the network of meteorological stations (automatic rain gauges, lightning detectors, standard equipment, power supply, telecoms for field stations) and of the sentinel sites in the three intervention sites.
 - Activity 2.1.3: Training of Eco-guards and communities on the maintenance of meteorological stations, and of the sentinel sites in the three intervention sites.
 - Activity 2.1.4: Capacity building of Eco-guards on drone technology, climate data collection, monitoring, and treatment for decision making in the three national parks.
 - Activity 2.1.5: Upgrade and introduce data collection and communication equipment and devices, data storage and management systems, computers and software for remote sensing, software and customized tools for GIS, modelling and forecasting.
- 6: Consolidation of hazard and risk maps, analysis and completion of historical data, identification of climate variability indicators for rainfall and temperature and consolidation of all available data. Activity 2.1.7: Application of specific tools (such as the FAO tool SHARP - Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists) to measure the evolution in the level of climate change resilience in local communities.
- Activity 2.1.8: Develop a monitoring system for the conservations plans of the 5 most endangered or endemic flora and fauna species.

Output 2.2: Ecosystem-based adaptation, climate smart businesses opportunities for the most vulnerable groups are identified (youth, indigenous people, women, displaced people) and information systems are improved.

The following activities will be implemented to achieve this output:

- Activity 2.2.1: Assess local alternative employment based on the Climate Vulnerability and Capacity Assessment (CVCA) with a special focus on youth, indigenous people, women and displaced people.
- Activity 2.2.2: Identify ecosystem-based adaptation and climate-smart solutions based on the different group of beneficiaries.
- Activity 2.2.3: Develop and maintain on a regular basis a database of potential eco-business opportunities and climate vulnerable beneficiaries.
- Activity 2.2.4: Establish local concertation platforms on eco-businesses and natural resources management in the villages of the three areas of intervention (gathering the management entities of the community forests and game areas).
- Activity 2.2.5: Increase generation and use of ecosystem-based adaptation and climate smart business opportunities in decision making and local development and investment plans.
- Activity 2.2.6: Develop a rural youth employment local guide with ecosystem-based adaptation and climate-smart practices.
- Activity 2.2.7: Awareness raising on opportunities stemming from NTFP (acacia gum, shea butter, wild mango and njansang) among young people in the three areas of intervention, and selection of interested potential young entrepreneurs.

- Activity 2.2.8: Conduct a feasibility study on market information and business opportunities on NTFP system through cellular and internet technologies

Component 3: Adaptation to climate change measures are implemented through incentives instruments leading to increasing the resilience to climate change of targeted communities

The expected outcome of this component is **sustainable management of natural resources and ecosystems leading to climate resilient ecosystems, green jobs creation for youth and resilient livelihoods (Outcome 3)**. This Outcome is aligned to the Adaptation Fund Outputs 4 and 5: "Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability" and Output 6: "Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability".

The expected outputs and activities to be implemented under this component are as follows:

Output 3.1: An Investment Fund is established and managed to invest in sustainable agroforestry enterprises for youth and other marginalized groups.

This output aims to establish an investment fund that will finance sustainable eco-businesses for youth and other marginalized groups in the areas of intervention. The output will raise awareness among young people on existing opportunities for them to develop resilient eco-businesses. The term "eco-business" is understood as an agro-pastoral business that conducts its activities through an integrated approach to the management of natural resources, and is better equipped to adapt to the effects of climate change. To achieve this output, the project will carry out awareness raising activities and will strengthen existing training centres so they can provide business training for a number of selected young entrepreneurs. It will also aim to develop the NTFP sector and train young entrepreneurs on the specific opportunities that this sector can offer. Under this output, activities will be linked to the management of the community forests and game areas to ensure the sustainable management of natural resources.

The following activities will be implemented to achieve this output:

- Activity 3.1.1: Partner with a local bank or microfinance institution to establish an Investment Fund of 4 Million USD
- Activity 3.1.2: Provide training for selected young people (2,300) on how to build an eco-business (economic aspects, business plans, leadership, entrepreneurship and citizenship, training in the legal status of land occupation and use of natural resources in the areas of intervention, support for professional integration).
- Activity 3.1.3: Call for proposal for at least 400 projects from young eco-entrepreneurs, women, indigenous people and displaced people.
- Activity 3.1.4: Manage and monitor youth projects including compliance with ESG standards.
- Activity 3.1.5: Finance 30% of the Fund to indigenous people, women and displaced people projects for sustainable agroforestry and renewable energy enterprises.
- Activity 3.1.6: Define ecosystem-based adaptation and climate-smart practices criteria to assess all future projects.

- Activity 3.1.7: Community awareness and mobilisation on climate resilient and ecological agro-sylvo-pastoral NTFP eco-business to address women's and youth's needs and priorities.
- Activity 3.1.8: Capacity building for existing business training centres and development of training strategies for young eco-entrepreneurs to tap into this fund.
- Activity 3.1.9: Analysis and diagnosis of existing producer organizations and cooperatives in the areas of intervention to receive fund from the investment fund on eco businesses

Output 3.2: Climate adaptation actions in agroforestry and natural resources management are made through the Investment Fund with a focus on youth and other marginalized groups.

The objective of this output is to promote climate change adaptation and natural resources management in agroforestry through the Investment Fund. Through this output, a Farmers Field Schools (FFS) will be set up in the three areas of intervention to train local communities (including young eco-entrepreneurs) and implement sustainable and resilient agroforestry, soil and water conservation measures so that local communities can better cope with the effects of climate change. To ensure that the FFS training is best suited to the situation of the areas of intervention, a diagnosis will be carried out before hand in each project intervention zone.

The following activities will be implemented to achieve this output:

- Activity 3.2.1: Fund invests in 200 type of sustainable business models of home gardens using techniques to reduce climate risks (such as drip irrigation, soil and water conservation and agro-ecological practices).
- Activity 3.2.2: Fund invests in youth initiatives to promote rural alternative energy (biogas plants, solar) in agroforestry, NTFP and livestock production value chain development.
- Activity 3.2.3: Fund invests in setting up (FFS): develop training tools for master trainers, train and equip master trainers, develop training curricula for farmers.
- Activity 3.2.4: Fund invests in 2000 ha of sustainable land management measures (soil, water, etc.) with a labour-intensive approach through the FFS approach.
- Activity 3.2.5: Fund invests in 2000 ha of agroforestry measures through the FFS approach.
- Activity 3.2.6: Fund supports the construction and improvement of facilities for rainwater storage, permeation and runoff control.
- Activity 3.2.7: Fund supports directly at least 9 indigenous associations to lead the collection of local knowledge and identification of traditional productive practices relevant for climate change via an indigenous service provider.
- Activity 3.2.8: Fund supports the construction of erosion control structures and construction of flood mitigation structures.
- Activity 3.2.9: Fund supports the restoration of land, wildlife habitat based on climate information.
- Activity 3.2.10: Fund supports the promotion ecotourism, sustainable harvesting, local processing of selected commercially viable NTFP, and nature based local enterprises to

enhance community resilience to climate change impacts through alternative income generation.

- Activity 3.2.11: Fund invests in construction of 20 livestock water points in the outskirts of the national parks to prevent conflicts over water points within the parks, and to protect the reforested areas. The location of the water points will be decided through a participatory process.
- Activity 3.2.12: Fund supports initiatives to reduce human and wildlife conflict in and around the parks and protected areas through the promotion of appropriate technologies.
- Activity 3.2.13: Fund supports ecosystem resilience to climate change through targeted restoration investments.
- Activity 3.2.14: Fund support the development of green and climate resilient design and construction principles in and outside the park and protected areas.
- Activity 3.2.15: Fund supports the establishment of nurseries, fields and seedbanks for crop research of local seeds and varieties to their resilience for climate change and their suitability for home gardens.

Output 3.3: Payments for ecosystem services schemes to support conservation of fragile ecosystems are introduced.

This output aims to develop and introduce incentive instruments such as ecosystem services schemes for young farmers to invest in biodiversity conservation and carbon sequestration techniques in order to enhance their livelihoods while producing global environmental benefits.

The following activities will be implemented to achieve this output:

- Activity 3.3.1: Establish a stimulus fund of 2 million USD to introduce Payments for Ecosystem Services schemes (PES) for forest conservation.
- Activity 3.3.2: Sign an agreement with the Centre pour l'Environnement et le Développement (CED), BioClimate Research & Development (BioClimate) and the Rainforest Foundation UK to expand their PES under the REDD+ with their modalities in the targeted regions.
- Activity 3.3.3: Develop a partnership with the Congo Basin Fund (CBFF) and other funds to sustain the PES support to forest protection.
- Activity 3.3.4: Dissemination of project good practices and experiences through various networks at the local, regional and national levels

TABLEAU 4. PROJECT BENEFITS

Social benefits

The riparian population of the three national parks is particularly diverse as it includes for instance indigenous people, migrants from different migration waves, and internally displaced persons. In such context, the project will target around 8,800 rural households to help them adapt to the effects of climate change. The project will be inclusive and will ensure that the different categories of beneficiaries participate, are included and benefit from the project activities. The beneficiaries of the different project activities will be identified at the start of the project. In a context of rapidly changing socio-economic dynamics, beneficiary eligibility criteria for each activity will be defined and validated with communities involving young people, women and the most vulnerable. The

criteria will be discussed objectively (plot size or number of animals, type of housing, level of education, etc.) and associated with assessments of maturity, residence or motivation.

Targeted communities will benefit from an improved management of natural resources in community forest and game areas so that they can sustainably benefit from these resources in the long term for their livelihoods. They will also be trained in sustainable resilient agro-sylvo-pastoral practices through the FFS approach, which will contribute to reduce food insecurity.

The project will target young people in particular, as they are the ones that will be the most impacted by the effects of climate change by 2030. The project will adapt to the heterogeneity of the rural youth in the areas of intervention and will take into account its various needs, interests of capacities. Young women and young men will for instance be supported in the development of resilient eco-businesses in the areas of intervention. They will also benefit from the FFS trainings and the development of the NTFP sector. Young people will also be considered and represented in the project concertation mechanism and decision making processes.

The project will adopt a gender sensitive approach and will ensure that women participate in and benefit as much as men from the project intervention. The main factors of exclusion of women and young women will be taken into account throughout the project implementation, including the weight of customs and traditions, early marriage, and the lower level of education, which weakens their access to socio-economic opportunities. In addition, the project will apply IFAD's Gender Action Learning System (GALS), an innovative community-led methodology that comprises a series of tools enabling household members to negotiate their needs and interests and find innovative, gender-equitable solutions in livelihoods planning and value chain development⁹. The GALS will enable both the most disadvantaged and minorities to be included in the dynamics of the project, while addressing the root causes of gender inequalities and fostering collaboration between the generations. The project will also ensure that women are represented in the project decision making processes.

The purpose of the GALS methodology is to give women more control over their lives and to catalyse and support a sustainable movement for gender justice. GALS promotes equality in rights and opportunities by:

- empowering the most vulnerable women and men to develop, negotiate, implement and monitor their own plans for increasing productivity/quality and incomes, reducing livelihood risks and increasing gender equality within households;
- bringing about significant changes in property rights, gender-based violence and participation in economic decision-making;
- in the context of value chain development, engaging with and gaining commitment of more powerful private-sector actors at the local and national levels to develop win-win strategies for value chain development that address gender issues and promote inclusion of the most vulnerable.

Economic Benefits

The project targets a rural population that is amongst the poorest and the most exposed to food insecurity in Cameroun, and it aims to generate economics benefits for targeted communities at various levels. Economic benefits will mostly be generated by making the livelihoods of local communities more resilient to climate change, and creating economic opportunities through

⁹ <https://www.ifad.org/web/knowledge/publication/asset/39435857>

resilient eco-businesses, resilient agro-sylvo-pastoral practices and the development of the NTFP sector.

Environmental Benefits

The project will generate direct and indirect environmental benefits through different entry points.

The project will create an enabling institutional environment for the sustainable and resilient management of natural resources in the long term through its first component. It will for instance strengthen the institutional framework at the national and local levels, and in the different national parks by making sure that climate change is considered and integrated. This will contribute to ensuring a sustainable protection of natural resources in the long term, even in a context of a changing climate. In addition, the classification in community forests and game areas of some of the areas of intervention will create an opportunity to regulate and promote a sustainable use and management of natural resources within these areas in order to support the healthy functioning of the ecosystems and their services.

The second component of the project aims to generate knowledge on the environment of the different areas of intervention in order to better measure and monitor its health and vulnerability to climate change. This knowledge will be able to inform the preservation of the environment. In addition, the project will contribute to the restoration of different ecosystems by supporting the plantation of around 15,000 trees. The project will also support the construction of livestock water points in the outskirts of the national parks to relieve livestock pressure on water resources within the parks.

The third component of the project aims to create sustainable and resilient livelihood opportunities for local communities. It should generate positive effects on the environment as it will raise awareness and train people on how to sustainably manage local agro-sylvo-pastoral natural resources (forest, soil, water, etc.), and therefore limit anthropogenic pressures on the environment. The development of economic activities in the periphery of the national parks should contribute to their preservation through the creation of income opportunities. Previous IFAD's experiences has shown that agro-forestry and sustainable soil management practices have a long-term and large-scale impact when they are structuring and carried out within the legal and regulatory framework.

The benefits generated by the Project have been taken into account in calculating the economic rate of return. These include environmental benefits. The adjustment of the Ex-Act software parameters to the context of Cameroon in each Region indicates that the Project avoids considerable amounts of carbon emissions. The profit calculation figure is modest but interesting for the amount and impacts of the Project. The carbon benefit is linked to agro-sylvo-pastoral good practices, reforestation and sustainable management plans for community forests and community-based hunting areas.

All Project activities will have a positive global impact on greenhouse gas emissions over a 20-year period:

- In the Far North, the project will reduce emissions by 900 000 tons of CO₂, 195 tons CO₂eq of N₂O and 103 tons CO₂eq of CH₄ ;In the North, the project will reduce emissions by 5,150,000 tons of CO₂, 122 tons CO₂eq of N₂O and 34 tons CO₂eq of CH₄;
- In the North West, the project will reduce emissions by 1,920,000 tons of CO₂, 384 tons CO₂eq of N₂O and 34 tons CO₂eq of CH₄.

TABLEAU 5. COST EFFECTIVENESS

The proposed project is expected to be cost-effective throughout its three components.

The first component of the project aims to create an enabling environment for climate change adaptation at the national, regional, municipal and national parks levels. The approach under this component is cost-effective in the sense that the project will mainstream climate change adaptation into existing strategic and operational frameworks (national strategies, municipal development plans and development and management plans of the Waza and Bénoué national parks etc.) instead of developing new strategic documents from scratch. In that sense, the project will support a cost effective approach while also encouraging national ownership over the project outputs.

The project will also support the elaboration of a development and management plan for the Kimki-Fungom national park, which was created in 2005 and does not have one yet. It will also support the elaboration of simplified management plans for community forests and game areas. While these documents will be developed from scratch as they do not yet exist, this approach is considered cost effective as it will benefit from an overall consultative and participatory approach as well as a mapping process of these different areas, and will enable the sustainable management of these areas and their natural resources in the long term. In addition the project will provide support to local authorities for the implementation of the different plans to ensure that they remain implemented in the long term to maximize results.

Under the second component of the project, surveillance and information systems to be introduced are considered cost effective. For instance, the introduction of drones, even though costly, will allow for a very accurate surveillance of the different protected areas and will enable the monitoring of the protected areas and their outskirts. They will for instance allow the measurement of climate change impacts and anthropogenic pressures, as well as the measurement of project results in the national parks and their outskirts. They will therefore be highly valuable for monitoring project results during its implementation, but also beyond the project, to measure and monitor long term trends and impacts on these important protected areas and their outskirts. The national park authorities will be trained in this type of technology so they can carry out the monitoring work in the long term.

When it comes to meteorological and climatic stations, the project will follow a cost effective approach as it will focus first on rehabilitating and upgrading existing ones, and will only set up new ones where necessary.

Throughout the project's duration, awareness and capacities will be strengthened – mainly in climate change adaptation and resilient agro-sylvo-pastoral practices - in various institutions at the national, provincial and local levels. The staff with strengthened capacity will remain in the country after the end of the project and will therefore be able to upscale awareness on CCA and resilient natural resources management, which will allow for a potential replication of the project results.

The cost effectiveness of the project can also be shown through the support provided to the development of eco-businesses. It has a high potential on return on investment by creating jobs and economic opportunities for young people, while increasing their resilience to climate change and protected the environment.

The restoration measures, and the agro-sylvo-pastoral practices to be promoted by the project are deemed cost effective because they are low-cost no-regret measures. These different measures such as the plantation of trees, creation of water points or the promotion of resilient agro-sylvo-pastoral activities are all cost-effective labour-intensive investments that strengthen

local capacities. Regarding FFS in particular, in the preparation of the FAO/GEF project “Integrating climate resilience into agricultural production for food security in rural areas of Mali”, a comparison of costs for FFS and standard training approaches to extension was undertaken. Although not directly transferable to this project, the findings were that “building upon 400 existing FFS and 233 experienced facilitators (for crops such as rice, cotton and vegetable gardening) will save 251 540 USD in training costs alone and 220 000 USD in FFS operation over the project cycle.” Although not a solid economic analysis, this does strongly indicate the cost-effectiveness of the FFS approach.

The project will also seek synergies and complementarities with on-going initiatives and programs having similar objectives while avoiding overlaps. In that sense, all interventions will be coordinated closely with other relevant on-going initiatives implemented in the country. Cost-effectiveness will also be achieved through knowledge management, synergies and complementarities.

TABLEAU 6. STRATEGIC ALIGNMENT

The project is aligned to the main strategic documents of the country in terms of climate change adaptation and natural resources management, as described here below.

- **Cameroon NDC:** By improving smallholder farmers resilience to climate change while also reducing their greenhouse gas emissions the project is completely aligned with Cameroon’s Nationally Determined Contribution. Agriculture and forestry are among Cameroon’s priorities for both mitigation and adaptation. Cameroon intends through its NDC to reduce the carbon footprint of its development without slowing its growth, by favouring mitigation options with high co-benefits; strengthen the country's resilience to climate change; bring coherence to its sectoral policies and reinforce its mechanism and implementation tools to facilitate the achievement of these objectives; and mobilize for this purpose all relevant means: financing, technology transfer and capacity building. Most of these objectives will be supported by the project.
- **PNACC:** By aiming to increase the resilience to climate change of vulnerable populations the project directly contribute to the visions of the PNACC¹⁰. The project is also supporting all four strategic objectives of the PNACC that are as follows: (i) improving knowledge on climate change in Cameroon (through project output 1.1, and 3.4), (ii) inform, educate and mobilize the Cameroonian population to adapt to climate change (through project component 3), (iii) reduce vulnerability to climate change in the main sectors and agro-ecological zones of the country (through project component 2 and 3); and (iv) integrated adaptation to climate change into strategies and national sectoral policies (through project component 1).
- **NBSAP II:** the project promotes the sustainable management and use of natural resources within and in the outskirts of the three national parks of Waza, Bénoué and Kimki-Fungom and is therefore aligned to the objective of the NBSAP II that aims to establish a sustainable relationship between Cameroon’s populations and the country’s biodiversity to meet the development needs and the wellbeing of the population, and to preserve the health of its ecosystems.

¹⁰ « Climate change is fully integrated into the country's sustainable development, reducing its vulnerability, and even turning climate change into a solution/opportunity for development. Thus Cameroonians - particularly women, children and vulnerable people - and the country's economic sectors have a greater resilience and adaptability to the impacts of climate change »

- **Cameroun Vision 2035** includes “a residual level of poverty, illiteracy and social exclusion, a residual level of unemployment and underemployment, woman with a reinforced and economically autonomous social role, a well-trained youth demonstrating merit and national expertise”. The project is aligned with this vision, in particular through the promotion of eco-businesses and economic opportunities for local communities and in particular young women and men. The gender approach (GALS) undertaken by the project is also well align with the vision.
- **PNIA 2014-2020.** The project contribute to 3 of the 4 priority thematic areas of the PNIA, namely:
 - *Thematic area 1: Development of production chains (crops, livestock, fisheries and forests) and improvement of food and nutritional security* – through its third component of the development of eco-businesses, agro-sylvo-pastoral activities through FFS, and the development of the NTFP sector;
 - *Thematic area 3: Sustainable management and valorisation of natural resources* – through promoting a sustainable management in the institutional and strategic framework (project component 1), restoration measures (project component 2), and the promotion of a sustainable use of natural resources in agro-sylvo-pastoral activities (project component 3); and
 - *Thematic area 4: Capacity building of rural development stakeholders and promotion of concertation mechanisms* – through capacity building and awareness raising at the institutional and at the community levels, and through the establishment of concertation mechanisms.
- **National Gender Policy 2011-2020** promotes an impartial and egalitarian society for women and men in order to ensure a sustainable development. The proposed project is aligned to two objectives of the strategy, namely: “ensure equal rights and opportunities to men and women regarding access and control of resources”, and “create favourable conditions for equal participation of women and men in development activities”.
- **PSFE.** Cameroon has a forest planning tool called "Programme Sectoriel Forêts-Environnement" (PSFE) which is the framework program of action of the Government of Cameroon for the implementation of its forestry and environmental policy. Its implementation since 2005 is part of the momentum of the Paris Declaration on Harmonization of Aid through the leadership of the recipient government. It has five main components divided into the three categories below:
 - A general component whose goal is the control of the environmental situation related to the forest sector in Cameroon - 'Environmental Management of Forestry Activities' ;
 - Three specific components that target productive forest management, wildlife and protected area management, and community-based resource management - "Management of Permanent Forest Estate Production Forests and Enhancement of Forest Products", "Conservation of Biodiversity and enhancement of wildlife resources", 'Community Management of Forest and Wildlife Resources' ;
 - A cross-cutting component for capacity building of sector actors - 'Institutional Capacity Building, Training and Research'.
- **National Action Plan for Youth Employment (2016-2020).** The third component of the project, and its output 3.1 in particular, is aligned to the following strategic orientations of the National Action Plan for Youth Employment: (i) matching employment and training, (iii)

promotion of youth decent employment, and (iv) promotion and development of youth entrepreneurship.

TABLEAU 7. STANDARDS

The project will respect and take into account the legal framework and requirement in effect in Cameroun, and will comply with the Environmental and Social Policy of the Adaptation Fund.

In particular, the project will comply with the following regulation:

- **Framework Law on environmental management** (No. 96/12 from August 5 1996) which establishes in article 9 the fundamental principles of environmental management in Cameroon: (i) the precautionary principle, (ii) the principles of preventive and remedial action, (iii) the polluter-pays principle, (iv) the responsibility principle, (v) the participation principle and (vi) the subsidiarity principle;
- **Decree No. 2013/0171/PM of 14 February 2013** defines the procedures for preliminary or detailed environmental impact assessments, and for environmental impact notices, respectively categorized as A and B. The project will therefore have to produce an Environmental Impact Notice, for validation by the Departmental Head of Decentralized Services of the Ministry of the Environment, prior to the implementation of activities;
- **Law No. 98/005 of 14 April 1998** on the water regime;
- **Law No. 99/017 of 22 December 1999**, governing the quality control of soils, building materials and geotechnical studies;
- **Law No. 94/01 of January 20 1994**, on the Forest, Wildlife and Fisheries Regime and **Decree No 95/466/PM of July 20 1995**, establishing the procedures for the application of Wildlife regime. Currently, harvesting products in forests owned by the State is illegal in Cameroon, only harvesting samples for domestic purposes is allowed within certain limits. Nevertheless, in order to ensure a concerted, equitable and sustainable exploitation of natural resources, and to involve people in the process, the delegation of forest management to communities has been legalized by the Forest Law. This delegation is possible through the establishment of a simplified management plan, which will be an activity under output 1.3 of the proposed project. The commercialization of NTFP coming from community forests, which is an activity supported by the project under output 3.3, is legally regulated. The owners of this forest must sign a management agreement with MINFOF (Article 3 of Decision No.1985/D/MINEF/SG/DF/CFC), specifying the terms for the exploitation of natural resources and the management of natural resources, as part of the implementation of the simple management plan.

All IFAD supported projects are appraised before approval. During appraisal, appropriate experts and stakeholders ensure that the project has been designed with a clear focus on agreed results. The appraisal is conducted through the formal meeting of the Quality Evaluation Committee established by IFAD. The committee members are independent in that they should not have participated in the formulation of the project and should have no vested interest in the approval of the project. Appraisal is based on a detailed quality programming checklist which ensures, amongst other issues, that necessary safeguards have been addressed and incorporated into the project design.

TABLEAU 8. DUPLICATION

The table below summarizes the main projects/ interventions being implemented in the areas of intervention of the proposed project, and the main synergies with the AF project.

Comparative table and synergies with other IFAD projects in the target area

CIV. Other projects/ interventions	CV. Components	CVI. Overlap with the proposed project area of intervention	CVII. Synergies with the proposed project
CVIII. PEA-Jeunes	CIX. Development of agro pastoral enterprises. CX. Access to financial services. CXI. Improving the entrepreneurial environment.	CXII. North West Region	CXIII. Knowledge sharing between young entrepreneurs, peer training, collaboration with project partners on the agro-sylvo-pastoral sector
CXIV. PAD MIR	CXV. Improving the microfinance environment CXVI. Access to rural financial services	CXVII. Far North, North, and North West Regions	CXVIII. Bringing young eco-businesses entrepreneurs in contact with microfinance institutions supported by PADMIR
CXIX. PAD FA	CXX. Support to production CXXI. Support to the marketing and structuring of the sectors	CXXII. Far North, North, and North West Regions	CXXIII. The natural resources management initiatives targeted by the proposed project draw on the achievements of the PADFA in terms of value chains. PADFA supports rice producers' organizations (rain-fed and lowlands) in the three regions of the Far North, North and North West. Knowledge

			and skills transfers as well as synergies between the implementation teams and the beneficiaries will be possible.
--	--	--	--

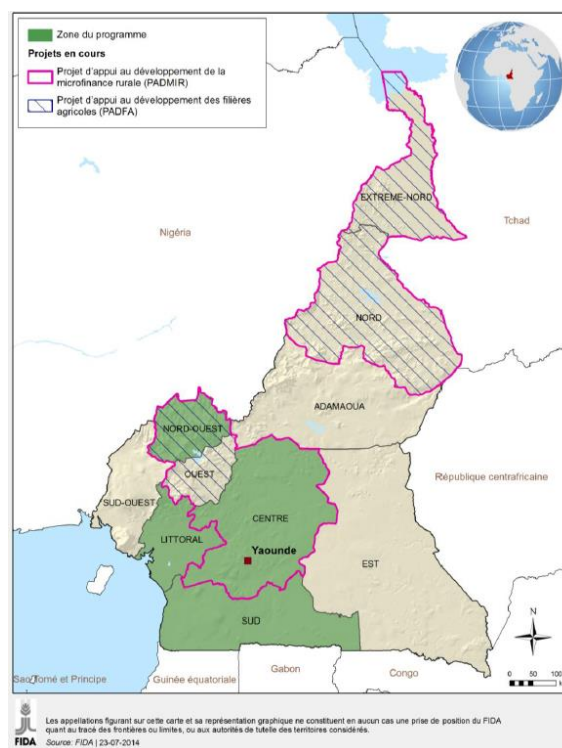
IFAD is currently implementing 2 projects in Cameroun in the same regions of interventions of the proposed project, as represented in the map below:

- The promotion of youth agropastoral entrepreneurship programme (**PEA-Jeunes** – *Programme de Promotion de l'Entrepreneuriat Agropastoral des Jeunes*), in the Regions North West, Littoral, Center and South (in green in the map below); and
- The support project for the development of agricultural sector (**PADFA** – *Project d'appui au développement de filières agricoles*) in the Far North, North, North West and West (hatched area in the map below).

IFAD have recently completed the implementation of the Support Project for Rural Microfinance (**PADMIR** – *Projet d'Appui à la Microfinance Agricole*) in the Far North, North, North West and West Regions (in purple in the map below), and a second phase of the project (PADMIR II) was initiated by the Government.

Figure 13: Areas of intervention of ongoing IFAD projects

(Source: PEA Jeune Project document)



All three projects target rural communities and producers, and focus on complementary aspects of the rural sector: youth entrepreneurship for PEA-Jeune, microfinance access for PADMIR, and agricultural production for the PADFA. The proposed project will have strong synergies with these projects, in particular under its third component that aim to strengthen capacities of local communities (and young people) on eco-businesses (synergies with PEA-Jeune, and PADMIR), agro-sylvo-pastoral production through FFS, and NTFP development (synergies with PADFA). Nevertheless, the proposed project does not duplicate these three former IFAD projects, and is rather complementary as it focuses on the adaptation and resilient to climate change of rural communities in the three, an aspect not covered by the other projects.

In fact, the evaluation of IFAD's Country Program has identified the need for better consideration of adaptation to climate change with improved environmental sustainability in IFAD's operations in Cameroon, which is where the complementarity of the proposed project stems from.

Even though IFAD has not yet focused its intervention in Cameroun on climate change adaptation, the Fund's experience in the country has generated a number of lessons related to key themes of the proposed project which were fully considered in the development of this proposal:

Management of natural resources at the periphery of protected areas

- Strengthening the capacities of traditional leaders in conflict prevention and conflict management increases their awareness of the key role they play as a leader in order to maintain dialogue and consensus among different resource users within the community. Their effective involvement makes it possible to reinforce the respect of the limits and the management rules of transhumance corridors and grazing areas, leading to better cohabitation between herders and farmers and a concerted management of available resources.
- The development of economic activities in the periphery of protected areas contributes to their preservation through the creation of income opportunities.

Integration of conservation and development

- Agroforestry and sustainable land management practices allow for a long-term and large-scale results when they are structured and carried out within the framework of sub-watershed management.
- The promotion of the "landscape approach" or multi-resource management planning requires a good understanding of social, economic and environmental forces, including traditional land tenure systems.
- Populations are active or passive poaching actors for several reasons, including: poverty (resource dependency), low involvement in conservation strategies, and lack of awareness of conservation issues and legislative frameworks. It is necessary in any conservation action to develop strategies for the effective involvement of local populations by combating poverty, improving their knowledge of the issues at stake in the sustainable management of natural resources, and strengthening their capacities for the valorization and sustainable use of resources.

Participatory approach

- Women, young people and indigenous peoples are the most vulnerable groups, particularly in the northern savanna areas of Cameroon, yet they are most dependent on natural resources. It is important in any sustainable management initiative to develop strategies to ensure their effective involvement, by fighting poverty, supporting their organization and structuring, the development of appropriate sectors, activities that promote the resilience of these groups to climate change, and the sustainable exploitation of natural resources.
- The establishment of consultation platforms that allow stakeholders to express their concerns and expectations is of critical importance. Consultation techniques should also be adapted to the most vulnerable groups, such as indigenous peoples, to avoid marginalization in the process.
- The organization and structuring of stakeholders (herders, farmers, fishermen, agropastoralists) is a key process in order to create a community dynamic that is better suited to facilitate the involvement of rural actors in local natural and pastoral resource management initiatives.

Promoting Youth Entrepreneurship

- The promotion of green enterprises, in order to obtain the support of the beneficiaries and to facilitate the sustainability of the project, should be based on local realities and achievements in the communities, in particular agro-sylvo-pastoral practices with an environmental, social and economic added value. This approach allows the ownership

and cultural involvement of the different stakeholders because they consider that the project will strengthen their attitudes and practices with a view to increasing productivity and profitability.

- The mobilization of stakeholders' own resources draws their attention and interest in the implementation of activities. Otherwise, it might be harder for stakeholders to build ownership over the approach as they might consider that it is an initiative for the benefit of others. Stakeholder contributions require that the process is particularly participatory and inclusive.

Management of climate impacts and environmental factors

In order to adapt to the impacts of climate change, different strategies have been implemented by farmers, either individually or collectively, endogenously or exogenously:

- Migration is the most visible strategy to provide for the needs of the household through formal or informal work of one or more members of the household;
- The diversification of production systems has been adopted in particular by pastoralists who have "settled" in rural areas (highlands in the West, Adamaoua and the North regions). This settlement took place near pre-existing sedentary villages. These herders cultivate some plots with rain-fed and sometimes recessional crops. Farmers also diversified their activities, with livestock (Far North and North) and with the relatively recent development of gardening. These strategies have increased pressure on agricultural and grazing land without fully benefiting from the potential for integration and complementarity of agricultural and livestock activities;
- Intensification of cereal cropping systems in the western highlands is the result of increased land pressure. This intensification implies a diversification of crops (cereal-legume associations, annual crops-perennial crops) and reduces risks linked to climatic impacts. However, the use of inputs to maintain or increase soil fertility is limited.

Non-Timber Forest Products (NTFP)

- The rural populations in Cameroon that commercially exploit NTFPs are looking to generate additional income from this resource. This can be achieved by shifting the scale of NTFP activities and ensuring better availability of market information, including: pricing, seasonal market requirements, quality requirements, logistics and procedures market access.
- Generations of Cameroonians have developed invaluable knowledge of forestry and forest products. However, knowledge on the sustainable use of resources, the principles of forest regeneration and their implementation are less well known and understood. Raising awareness and training on these aspects would improve productivity and income while supporting the adaptation to climate change.

TABLEAU 9. LEARNING AND KNOWLEDGE MANAGEMENT COMPONENT

The knowledge management and communication activities will be under the responsibility of IUCN and ICRAF and they will be detailed in the partnership agreements. The knowledge management strategy will be developed at the beginning of the project with IUCN and ICRAF to identify communication channels and formats. The activities will cover the documentation of project lessons and best practices and their dissemination through reports, multimedia and sharing events.

Sharing best practices and knowledge amongst project stakeholders will be ensured through the village-level platforms and advisory committees at the regional level. Special attention will be given to the valorization of endogenous knowledge which will be shared internally to support continuous improvement of project activities. Knowledge exchanges with other projects in Cameroon and in the countries of the Central African sub-region will also be promoted. The project team, partners and beneficiaries will also participate in workshops organized at the national and sub-regional levels, including IFAD project sharing workshops.

The generated knowledge will be used by the different partners to improve and adjust the implementation of the project, for political dialogue and for the design of future projects. Based on the knowledge management system, the project will systematically include in project progress reports an appendix on good practices. Capitalization master sheets to collect the experiences of project facilitators and other actors will be developed in partnership with IUCN and ICRAF.

TABLEAU 10. CONSULTATIVE PROCESS

From 05 to 18 November 2016, a joint mission of the Government of Cameroon and the International Fund for Agricultural Development (IFAD) stayed in Cameroon to design the Project for the Promotion of Youth Ecological Entrepreneurship. The mission was received by the Secretary General of the Ministry of Forests and Wildlife, and had working sessions with representatives of other relevant ministries, technical and financial partners, projects and programmes, farmers' organizations, civil society organizations and NGOs. The mission visited the regions of the Far North and North from 06 to 13 November 2016, where it was received by the Governor of the North region, as well as by the conservators of the Bénoué and Waza Parks. In January 2017, another mission was organised in the same regions to collect additional information.

In each of these regions, the mission organized an information and consultation meeting for all regional actors including technical services, NGOs, producer organizations, youth organizations, microfinance institutions and processors of products. In the targeted villages meetings were organised with local populations in order to exchange with them on the project activities, their needs and their solutions. The list of persons met during the mission is presented in Annex 2.

Concerns raised by the populations during the public consultations

CXXIV.	Sectors	CXXV.	Main concerns raised	CXXVI.	Solutions proposed
CXXVII.	Agriculture	CXXVIII.	Decline of soil fertility and soil erosion	CXXIX.	Activities under Output 3.2: Actions to improve the fertility of the soil and land management
		CXXX.	Deficit Weather Forecast Information and Lack of Its Access	CXXXI.	Activities under Output 2.1: Climate information systems
		CXXXII.	Lack of access to climate resilient inputs (seeds, fertilizers, bio pesticides) quality	CXXXIV.	Activities under Output 3.2: Sustainable agriculture and use of modern renewables energy
		CXXXV. CXXXVI.	Crops diseases	CXXXVII.	Adoption of climate resilient crops and seeds and adoption of sustainable agriculture

	CXXXVIII. Lack of equipment's	CXXXIX. Activities under Output 3.1 and 3.2 Promote sustainable and attractive eco-businesses with youth
CXL. Forestry	CXLI. Destruction of forests and plantations by slash and burn, bush fires	CXLII. Activities under Output 1.1 and Output 1.2: Strengthen institutional and regulatory frameworks and promote forest management.
CXLIII. Conflict human- elephant	CXLIV. Poaching and conflict	CXLV. Activities under Output 2.1: Implement smart patrolling in and outside national parks.
CXLVI. Youth Unemployment	CXLVII. Lack of job and migration or enrolment in violent groups (Boko Haram) and displaced	CXLVIII. Activities under Output 3.1 and 3.2 Provide incentives for job creation for youth and marginalised groups
CXLIX. Social exclusion	CL. No inclusion of youth women and indigenous people	CLI. Activities under Output 3.1 and 3.2 Provide incentives for marginalised groups

All the needs and concerns raised during the public consultations were taken into account in the logical framework of the proposal and planning of the project. Monitoring and evaluation actions will help to measure the level of impact with beneficiaries.

TABLEAU 11. JUSTIFICATION FOR FUNDING

The overall objective of the project is to increase local communities' resilience to climate change through resilient livelihoods and integrated natural resources management. The paradigm shift is to move from a "business as usual" characterised by unsustainable management of natural resources and agriculture practices to climate resilient agriculture and sustainable management of natural resources. The table below shows the baseline scenario (business as usual) and the alternative adaptation option under this proposal.

CLII. Baseline Scenario	CLIII. Alternative adaptation option
CLIV. Vicious cycle of poverty plunges poor people including the most vulnerable to climate change (youth, migrants and indigenous people) that depend on natural resources for their livelihood (food security, nutrition and income)	CLV. The project intends to break the vicious cycle of food insecurity, malnutrition and climate change nexus by combining institutional and regulatory frameworks, land and natural resources management in and on the outskirts of the parks, improving climate information systems and ecosystem-based adaptation, and creating climate smart business opportunities for the most vulnerable groups including youth with a stimulus fund and payment for ecosystems services.

CLVI. Current coping and agricultural practices (rain fed agriculture, deforestation, logging, hunting) in a context of climatic stresses are clearly inadequate and exacerbate food insecurity, malnutrition and conflicts over resources.	CLVII. The project will promote sustainable agroforestry and renewable energy enterprises for youth, climate change adaptation actions in agroforestry and natural resources (soil and water) management.
CLVIII. Climate variability and change put heavy burdens on farmers and local communities which exceed their coping capacities to adapt to climate change and rely on illegal practices to improve the household income.	CLIX. The project will strengthen climate information systems and surveillance mechanisms through the development of a unified observation system to respond to climate change.
CLX. High unemployment rate, migration and enrolment of youth in violent extremist groups (Boko Haram) in the absence of job opportunities and the inability to adapt to climate change.	CLXI. Investment in sustainable agroforestry and renewable energy enterprises for youth and other marginalized groups to respond to climate impacts and the lack of opportunities.

Funding from the Adaptation Fund is crucial to eliminate the barriers to development linked to climate risks and guarantee the continuity of agroforestry activities and other alternative income generating activities when risks appear.

TABLEAU 12. PROJECT SUSTAINABILITY

The sustainability of the project will stem from the fundamentally participatory approach promoted throughout all project activities, which will allow local communities and authorities to build ownership over the project results.

The sustainability of the project outcomes relates to the combination of mainstreaming climate adaptation into institutional and regulatory frameworks plans at regional and local level and the implementation of concrete adaptation measures using climate information systems and knowledge.

The project intends to influence practice and policy beyond project implementation time and the areas of intervention. The outcome sustainability of **Component 1** is rooted on the planning processes and budgeting. Once adaptation measures are fully integrated into regional and local plans as well as investment plans, the legacy of the project could continue after the closure of the project. The project could inspire other projects in other localities both in terms of ownership and strategic planning on climate adaptation in agriculture.

Under **Component 2**, the project seeks commitment from the local authorities (eco-guards, meteorological agencies, local and regional platforms) and will develop the capacity of local actors in creating and managing ecosystem-based adaptation and climate smart business opportunities for the most vulnerable groups (youth, indigenous people, women, displaced people) with climate information systems and infrastructure. The creation of economic opportunities for young people through eco-businesses in resilient and sustainable sectors such as NTFP will also contribute to the sustainability of the project. The project will help young entrepreneurs understand how to build a business model that can be sustained in the long term because based on sustainable natural resources management in a changing climate context.

Moreover, the project will undertake the FFS approach to showcase and train local communities in various adaptation practices, namely agroforestry and soil and water conservation. The FFS approach is based on a learning-by-doing process and the recipients of the training are well placed to immediately apply the contents of the training to their work. By addressing the immediate needs of farmers and local communities, there is a strong reason to believe that the promoted practices will be used after the project has ended. FFS are “grass-root labs” that, through using participatory monitoring, will increase local leadership and strengthen long-term farmers’ capacities in the adaptive management of their land. The FFS approach will test, validate and promote local knowledge-based practices to increase sustainability and diversify production. Measures and practices will be introduced based on participatory requests from FFS or communities and will only include sustainable and resilient agroforestry, soil and water conservation measures that also meet social acceptance and are environmentally sound. The practices and measures introduced will be tailored for men and women and will be in line with their needs and traditions, in order for them to be willing to replicate them in the future. In addition, the FFS approach to extension support is low-cost and relatively easy to maintain, with early gains.

Concrete adaptation micro-projects (production, reforestation, land management, renewable energy, park management, post-harvest and processing, etc.) under component 2 will be funded through the stimulus fund and the PES. These funds will have economic and social impacts on youth and other beneficiaries while promoting adaptation to climate change beyond the lifecycle of the project. By working with local banks, microfinance institution and REDD+, these funds will help leverage additional resources in order to sustain the project outcomes. Additional partnerships (NGOs, development partners) will be also be identified during the project implementation.

The knowledge sharing and concertation mechanisms to be put in place by the project will also contribute to the sustainability of the project results in the sense that it will allow experiences to be shared within and across the three project intervention areas, and lessons learned and good practices to be disseminated to broader audiences.

TABLEAU 13. ENVIRONMENTAL AND SOCIAL IMPACTS AND RISK

The main activities of the project include:

- Carry out socio-economic baseline, community based Climate Vulnerability and Capacity Assessment (CVCA) to update the institutional, regulatory and policy frameworks and plans.
- Organise workshops and dialogues to raise awareness on climate change adaptation, generate political will and integrate the vulnerability assessment outcome and stakeholders’ input into the relevant strategic framework and investment plans.
- Develop voluntary codes of practice for forest management activities, including timber harvesting.
- Develop a road for the implementation of the update frameworks with a resource mobilisation strategy.
- Organize participatory planning sessions to review and update local and regional development plans in the zones of intervention to mainstream climate change adaptation
- Review the management and development plans of the Waza and the Bénoué national parks to identify potential gaps in terms of climate change adaptation, and propose potential amendments to mainstream this dimension.
- Develop simple M&E systems for local and regional development plans in order to enable local authorities to properly monitor their implementation

- Provide institutional and capacity building to local authorities to implement the natural resources conservation and adaptive frameworks.
- Develop practical guides for updating regional and local development plans with up-to-date climate change information.
- Use of a Drivers-Pressures-State change-Impact-Response (DPSIR) framework to identify and analyse specific project activities areas.
- Nine forest areas to be classified as “community forests” to be managed sustainably by the communities at the outskirts of the Waza (3 community forests of around 3 000 ha each) and Kimbi-Fungom national parks (6 community forests of around 2 000 ha each)
- Participatory micro-zoning of game areas #1 and #4 in the outskirts of the Bénoué national park to recognize a living space for local communities and identify conflict zones and regulate natural resources use outside of this living space.
- Assess the conservation status of 10 endangered or endemic flora and fauna species and develop climate conservation plans for at least 5 of them.
- Conduct vulnerability assessment to climate change of local ecosystems, and the needs for adaptation in the outskirts of Waza, Bénoué and Kimbi-Fungom national parks.
- Establish natural (and temporary) physical fencing in the buffer zones.
- Document, revive and promote continued use of traditional and indigenous systems related to conservation and climate resilience.
- Improve water resource management in vulnerable households for food production systems through the water efficient practices such as drip irrigation.
- Forest is restored on degraded lands within and outside parks through the plantation of around 15,000 trees from selected species demonstrating strong resilience to climate change and adaptation to the local ecosystems and the livelihood needs of the local communities
- Create community forests and game areas management entities: identification of relevant stakeholders, consultation with local communities, and development of the legal status of the entities.
- Support the new entities in the classification process of the identified areas into community forests and game areas.
- Elaboration of simplified management plans for the demarcated community forests and game areas defining communities' rights and access modalities to the natural resources of the area (spatial planning of crop land, livestock raising, firewood, NFTP, hunting, etc.) ensuring long-term conservation of ecosystem services in a climate change context.
- Set-up, rehabilitate or upgrade the network of meteorological stations (automatic and rain gauges, lightning detectors, standard equipment, power supply, telecoms for field stations), and of the sentinel sites in the three intervention sites.
- Upgrade and introduce data collection and communication equipment and devices, data storage and management systems, computers and software for remote sensing, software and customized tools for GIS, modelling and forecasting.
- Consolidate hazard and risk maps, analyse historical data, identify climate variability indicators for rainfall and temperature and consolidate all available data.
- Introduction of drones in the three national parks for ecosystems and natural resources surveillance to better monitor the impact of climate change, forest cover changes and ecological responses within protected areas and buffer zones.
- Training of eco-guards and communities on the maintenance of meteorological stations, and the sentinel sites in the three intervention sites.
- Implement smart patrolling in and outside national parks to prevent poaching and illegal wildlife trade.

- Capacity building of eco-guards on drone technology, climate data collection, monitoring, and treatment for decision making in the three national parks.
- Application of specific tools (such as the FAO tool SHARP - Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists) to measure the evolution in the level of climate change resilience in local communities.
- Develop a monitoring system for the conservations plans of the 5 most endangered or endemic flora and fauna species.
- Increase generation and use of ecosystem-based adaptation and climate smart business opportunities in decision making and local development and investments plans.
- Develop a rural youth employment local guide with ecosystem-based adaptation and climate- smart practices.
- Awareness raising on opportunities stemming from NTFP (acacia gum, shea butter, wild mango and njansang) among young people in the three areas of intervention, and selection of interested potential young entrepreneurs.
- Conduct a feasibility study on market information, business opportunities on NTFP system through cellular and internet technologies.
- Partner with a local bank or microfinance institutions to establish the Investment Fund of 4 million USD.
- Manage and monitor youth projects including compliance with ESG standards.
- Define ecosystem-based adaptation and climate-smart practices criteria to assess all future projects.
- Community awareness and mobilisation on climate resilient and ecological agro-sylvo-pastoral NTFP eco-business to address women's and youth needs and priorities.
- Capacity building for existing business training centres and development of training strategies for young eco-entrepreneurs to tap into this fund.
- Provide training for selected young people (2,300) on how to build an eco-business (economic aspects, business plans, leadership, entrepreneurship and citizenship, training in the legal status of land occupation and use of natural resources in the areas of intervention, support for professional integration).
- Call for proposal for at least 400 projects from young eco-entrepreneurs, women, indigenous and displaced people.
- Capacity building for existing business training centres and development of training strategies for young eco-entrepreneurs.
- Analysis and diagnosis of existing producer organizations and cooperatives in the areas of intervention to receive fund from the investment fund on eco businesses.
- Invest in 200 types of sustainable business models of home gardens using techniques to reduce climate risks (such as drip irrigation, soil and water conservation and agro-ecological practices)
- Invest in youth initiatives to promote rural alternative energy (biogas plants, solar) in agro-forestry, NTFP and livestock value chain development.
- Invest in setting up FFS: develop training tools for master trainers, train and equip master trainers, develop training curricula for farmers.
- Invest in 2000 ha of sustainable land management measures (soil, water, etc.) with a labour-intensive approach through the FFS approach.
- Invest in 2000 ha of agroforestry measures through the FFS approach.
- Support facilities for rainwater storage, permeation and runoff control.
- Support directly at least 9 indigenous associations to lead the collection of local knowledge and identification of traditional productive practices relevant for climate change via an indigenous service provider.

- Support the construction of erosion control structures and construction of flood mitigation structures.
- Support the restoration of land, wildlife habitat based on climate information.
- Invest in construction of 20 livestock water points in the outskirts of the national parks to prevent conflicts over water points within the parks, and to protect the reforested areas.
- Support initiatives to reduce human and wildlife conflict in and around the park and protected areas through the promotion of appropriate technologies
- Support ecosystem resilience to climate change through targeted restoration investments and build capacities on sustainable forest management practices in communities in and outside the parks and protected areas.

Overall, the project will have a medium to long-term impact that is mostly positive given the different actions whose ultimate goal is to promote ecological sustainability and resilience to climate change. Institutional and administrative strengthening activities, sensitization and professional environmental training, agroforestry and sub-watershed management, reforestation and sustainable forest management will enable rural populations and especially young people to develop a viable agricultural or rural activity and to have alternatives to exodus and engagement in illegal activities.

Capacity-building activities of technical services including meteorological authorities, local communities, eco-guards, youth and indigenous people will have positive impacts on the management of climate resilient farming practices and the environmental management of the project. All concrete adaptation activities planned under this project including the eco-businesses will neither cause the relocation of population nor affect any natural habitat in or outside the parks.

The environmental and social impact assessment of a such project will also examine the positive and negative effects that the project could have on the environment and populations, and recommend any measures needed to prevent, minimize, mitigate or compensate for adverse effects and improve environmental performance.

Because the sites of the intervention areas of the subprojects are not completely retained, an environment and social management framework (ESMF) is prepared for the project in compliance to the 15 ESP principles of the Adaptation Fund. This ESMF built on the IFAD Social Environmental and Social Safeguards which has classified this project under category B (Moderate risk).

Prior to implementing any micro-project under component 3 and other subprojects under component 1, an Environmental and Social Impact Assessment (ESIA) will be prepared for each subproject on the basis of the 15 ESP principles of the Adaptation Fund. The project will use the SECAP review note of IFAD and the proposed ESMP to address the potential risks and negatives impacts. (see IFAD SECAP annex).

The Adaptation Fund presents a set of principles by which it enacts environmental and social safeguards applicable to the projects it finances through accredited agencies.

Checklist of environmental and social principles

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
<i>Compliance with the Law</i>	X	

<i>Access and Equity</i>	X	
<i>Marginalized and Vulnerable Groups</i>		X (see IFAD SECAP annex and ESMP)
<i>Human Rights</i>	X	
<i>Gender Equity and Women's Empowerment</i>		X (see IFAD SECAP annex and ESMP)
<i>Core Labour Rights</i>	X	
<i>Indigenous Peoples</i>		X (see IFAD SECAP annex and ESMP)
<i>Involuntary Resettlement</i>	X	
<i>Protection of Natural Habitats</i>	X	
<i>Conservation of Biological Diversity</i>	X	
<i>Climate Change</i>	X	
<i>Pollution Prevention and Resource Efficiency</i>	X	
<i>Public Health</i>	X	
<i>Physical and Cultural Heritage</i>	X	
<i>Lands and Soil Conservation</i>	X	

Access and Equity: The total population around the three national parks is estimated at about 135,000, of which 40,500 are between the ages of 18 and 35 with almost 50.6% of young women. This ethnic and culturally diverse population is characterized by great social diversity. The population of the three national parks is particularly diverse as it includes for instance indigenous people, migrants from different migration waves, and internally displaced persons. In such context, the project will target around 8,800 rural households to help them adapt to the effects of climate change. The project will be inclusive and will ensure that the different categories of beneficiaries are included, participate, and benefit from the project activities. The beneficiaries of the different project activities will be identified at the start of the project. In a context of rapidly changing socio-economic dynamics, beneficiary eligibility criteria for each activity will be defined and validated with communities involving young people, women, indigenous people and marginalized and vulnerable groups to ensure equal access to training, equipment, infrastructure and services.

Marginalized and Vulnerable Groups: The project will impact the most vulnerable groups (women, young people and indigenous people), which are the main targets of the project, that live in the outskirts of the three national parks (Kimbungum, Waza and Benoué). The project will assess the socio-economic and cultural profile, including key issues relating to disadvantaged and vulnerable groups, conflict, migration, employment and livelihoods. It is planned to carry out socio economic baseline, community based Climate Vulnerability and Capacity Assessment (CVCA) to update the institutional, regulatory and policy frameworks and plans. The project will develop strategies to ensure the effective involvement of these groups, supporting their organization and structuring, the development of appropriate sectors and activities that promote their resilience to climate change, and the sustainable exploitation of natural resources. The project will also establish and maintain consultation platforms with communities and stakeholders throughout the project lifecycle, that will allow them to express their concerns and expectations. These consultation techniques will be adapted to these groups to avoid marginalization in the process. A percentage of the budget of the investment fund will be dedicated to indigenous people projects, women, youth, displaced and migrants people.

Human Rights: The risk of the project negatively impacting on the human rights of the target groups is very low. The project is designed to respect and adhere to the requirements of all relevant conventions on human rights. The project will respect all land rights and will avoid disposing anyone of their land.

Gender Equity and Women's Empowerment: Women and youth are given a central role in the project. The project has developed a very proactive strategy for the participation of women in project activities. Gender considerations have largely been integrated into IFAD's business processes related to project cycle. Attention to gender mainstreaming in project design and implementation is supported by IFAD's policy on gender equality and women's empowerment and related approaches and tools, in particular the gender and poverty targeting checklists.

The gender equality strategy will invest primarily in equity measures to ensure equal participation and benefits for men and women, young men and women in green initiatives and businesses. The main factors of exclusion of women and young women will be taken into account throughout the project implementation, including the weight of customs and traditions, early marriage, and the lower level of education, which weakens their access to socio-economic opportunities. In addition, the project will apply IFAD's Gender Action Learning System (GALS), an innovative community-led methodology that comprises a series of tools enabling household members to negotiate their needs and interests and find innovative, gender-equitable solutions in livelihoods planning and value chain development¹¹. The GALS will enable both the most disadvantaged and minorities to be included in the dynamics of the project, while addressing the root causes of gender inequalities and fostering collaboration between the generations. The project will also ensure that women are represented in the project decision making processes.

The baseline study will include a specific analysis of social and economic inequalities (related to age, gender, education, status, access to resources, access to information, etc.). In terms of monitoring strategies, the multidimensional poverty analysis of MPAT planned during the project cycle can be complemented by the five areas of women's empowerment in agriculture namely: production and economic activities; (ii) access and control of resources; (iii) access and control of income; (iv) leadership; (v) time: agricultural and domestic workloads.

The project will have specific gender disaggregated targets and budget allocations and integrate gender aspects in all reports. Each of the components will have an approach to encourage the inclusion of women and specific targets have been identified for them. The identification of assets, skills training and enterprise development would be designed to address opportunities of relevance for women. The investment fund and PES will support all innovative initiatives from youth and women.

Core Labour Rights: The project will create employment enabling marginalized and vulnerable groups, especially youth and women to raise and secure their income.

The Government of Cameroon has ratified all eight (8) ILO Fundamental Conventions, two (2) Governance Conventions and thirty nine (39) Technical Conventions. The project will respect, promote the ILO core labour standards and ensure that they are respected and realized in good faith by the executing ministries (MINEPDED and MINADER) and the other partners and contractors. The relevant national labour laws will also be followed and monitoring will be undertaken throughout project implementation. No further assessment is required for compliance.

Indigenous Peoples: The targeted population is ethnic and culturally diverse and characterized by great social diversity. It includes indigenous people, migrants from different migration waves

and internally displaced persons. It is difficult at this stage to assess exactly the relative importance each group. According to IFAD's Social Environment and Climate Assessment Procedures (SECAP), when impacting indigenous peoples, an FPIC (Free, Prior and Informed Consent) from the concerned communities, stakeholder engagement and consultation process and an indigenous people plan (IPP) are required, which is aligned with the Adaptation Fund Environmental and Social Policy (ESP). Once the beneficiaries of the different project activities (including indigenous people) are identified at the start of the project, an FPIC and an Indigenous Peoples Plan (IPP) will be developed. The Indigenous Peoples Plan will ensure that the implementation of the project fosters full respect for indigenous peoples' identity, dignity, human rights, livelihood systems and cultural uniqueness, as defined by the indigenous peoples themselves. It will also ensure that the affected groups receive culturally appropriate social and economic benefits, are not harmed by the project, and can participate actively in the activities that affect them.

Adapted consultation platforms to indigenous people that will allow them to express their concerns and expectations will be organized to insure their inclusion and avoid marginalization.

Involuntary Resettlement: There will be no involuntary resettlement due to project activities during project implementation. This aspect does not seem to be of relevance in terms of further assessment for ESP compliance. All activities related to natural resource restoration and management within and outside parks will not lead to resettlement.

Protection of Natural Habitats: The project aims at promoting good practices which protect national parks, buffer zones and surrounding areas including all natural habitats for animals, plants, and other organisms. All activities proposed such as: reforestation, tree planting, conservation status of 10 endangered or endemic flora and fauna species, micro zoning and patrolling, establishment of natural (and temporary) physical fencing in the buffer zones among others will contribute to protecting natural habitats. Additionally, shifting from sustainable practices including traditional slash-and-burn agriculture practices, and deforestation will contribute to conservation and protection of natural habitats. Furthermore, the project will work with water-saving irrigation techniques to limit runoff and soil erosion in the project area. Nevertheless, the project may cause negative impacts on the biophysical environment, including natural habitats, if project activities are not monitored consequently. For this reason the ESMF is prepared and M&E framework will focus on assessing potential risks and impacts on natural habitats.

Conservation of Biological Diversity: In the targeted areas, biodiversity resources are the drivers of agriculture, forestry, fisheries, livestock and tourism. Direct drivers of biodiversity loss are identified as ecosystem degradation, unsustainable resource exploitation (e.g. itinerant slash-and-burn agriculture, poaching). An economic system that is reliant on natural resources, land use changes (forest conversion), among others. Drivers of change at the ecosystem level differ according to biodiversity products and sometimes also according to ecological conditions. Indirect drivers are linked to economic, social and cultural factors (e.g. increasing demographic pressures and urbanization, poverty) and to weak institutional responses resulting from a lack of financial resources to enable progress on issues, including the establishment of indicators for sustainably managing biodiversity and mechanisms to mitigate or combat biodiversity loss. Through its three components the projects supports mechanisms for national implementation of the biodiversity convention. All activities under the component 1 (Institutional and legislation, capacity-building), monitoring and surveillance under component 2 and financing under component 3 play a key role on the conservation of the biological diversity. Therefore, it does not seem to be necessary for further assessment for ESP compliance.

Climate Change: A climate change risk analysis was undertaken as required by IFAD SECAP. Based on this analysis, the climate risk in Cameroon is considered Moderate. The project will

support the implementation of priority adaptation measures and will help integrate climate change in development strategies at both national and local levels. The project will also promote adaptation measures with mitigation co-benefits that reduce greenhouse gas emissions, such as agroforestry, soil and water conservation and natural resources management. Reductions in greenhouse gas emissions will be measured where technically and financially feasible with the FAO EX-ACT tool which is already being used in some IFAD projects.

Pollution Prevention and Resource Efficiency: The project is promoting adaptation measures such as natural resources efficient use, soil and water conservation as well as other green activities. Therefore, no major negative effects are expected from the project implementation in regards to pollution and misuse of natural resources. However, incentives for investment in agriculture can lead to increased use of pesticides. These products are accessible throughout the project's intervention zones. The quality of these products is however variable and their use is poorly controlled by the producers. Mitigation measures are planned in the Environmental and Social Risk Management (section 3) to address this issue.

Public Health: The use of pesticides and other chemicals can have an impact on human health. Specific mitigation measures are planned and will be adopted

Physical and Cultural Heritage: The project will have no adverse impacts on physical and cultural heritage of the people in the intervention areas. The chances of damage to physical assets are extremely low.

Lands and Soil Conservation: The project will have positive impacts on land and soil conservation. The project will develop restoration and conservation plans according to the needs of local communities and the different ecosystems, plant resilient tree species in the outskirts of the national parks, and implement sustainable and resilient agroforestry and soil and water conservation measures so that local communities can better cope with the effects of climate change. In the Far North, the project will reduce emissions by 900 000 tons of CO₂, 195 tons CO₂eq of N₂O and 103 tons CO₂eq of CH₄, and in the North, the project will reduce emissions by 5,150,000 tons of CO₂, 122 tons CO₂eq of N₂O and 34 tons CO₂eq of CH₄; In the North West, the project will reduce emissions by 1,920,000 tons of CO₂, 384 tons CO₂eq of N₂O and 34 tons CO₂eq of CH₄.

Description of the environmental and social negative impacts and risk and specific measures proposed under IFAD SECAP review note – ESMP linked to the baseline investment (See – Annex SECAP IFAD).

PART III: IMPLEMENTATION ARRANGEMENTS

2 IMPLEMENTATION ARRANGEMENTS

Approach

The project's approaches, actions, modes of organization and implementation will apply a general principle of subsidiarity promoting decision-making processes as close as possible to the action at different levels: (i) geographical, the project targets primarily the most "local" geographical scales (village, commune, province) and their link with the regional and national scales; (ii) institutional; (iii) project management (delegate project implementation to direct users when possible); (iv) knowledge management, by strengthening local capacities and knowledge sharing, and cross-sectoral transfers.

The project promotes partnerships between key stakeholders contributing to the project general objectives, according to the following principles: (i) identification of clear and specific role for each stakeholder involved; (ii) the knowledge and respect of the specificities of each stakeholder; (iii) the identification of common interests; and (iv) the mobilisation of resources. The project is designed to strengthen the networks of local stakeholders.

General Organisation

The Ministry of Economy, Planning and Regional Development (**MINEPAT**) will represent the borrower under the financing agreement to be signed between the Government of Cameroon and IFAD for the implementation of this project. The proposed project will be managed by the Ministry of the Environment, Nature Protection and Sustainable Development (**MINEPDED**).

Concertation and consultations mechanisms at the national level will be carried out by a project **Steering Committee**. Given the geographical and thematic scope of the project, there will be direct complementarity with the Ministry of Forests and Wildlife (**MINFOF**) and the Ministry of Agriculture and Rural Development (**MINADER**). A joint inter-ministerial decision will establish the Steering Committee and specify its composition, mandate and functioning. The nomination of Steering Committee will be done in compliance with the AF Gender Policy. In order to ensure the scaling-up of the achievements of the project within farmers and **producers organizations** in Cameroon, PLANOPAC (the national consultation platform for rural producers) and CNOP CAM (farmers and producers umbrella organization) will both be associated with the project steering committee.

A **regional advisory committee** will be established at the regional level under the chairmanship of the Governor in each Region. This committee will bring together the various stakeholders involved in the implementation of the project (technical services, representatives of regional organizations - producers, young people, protected areas, implementing partners, traditional authorities, etc.).

The overall management of the project will be under the responsibility of a financially and administratively autonomous **Project Management Unit (PMU)** hosted at MINEPDED in Yaoundé. The PMU will be composed of a National Coordinator, an Administrative and Financial Officer, an Accounting Assistant, a Procurement Assistant, and an M&E Officer. The PMU will be responsible and accountable to the Government and IFAD for the efficient use of project resources in compliance with the funding. The PMU staff will be recruited competitively at national level, in compliance with IFAD's procurement procedures, and in accordance with the AF Gender

Policy. Women candidates will be encouraged. The establishment and operationalization of the PME at MINEPDED will be facilitated by the presence of the IFAD Country Office, which will be able to provide or call upon expertise in institutional development if necessary.

Under the supervision of the PMU, the implementation of the gender and youth strategies will be entrusted to the two implementing partners of the Project, the ICRAF and IUCN NGOs. By capitalizing on their respective experiences and knowledge, the strategies will be discussed and validated at the start of the project. A gender focal point will be appointed within the PMU to monitor contracts with both partners on targeting, gender and youth issues. These aspects must be incorporated into the terms of reference and be allocated time and resources. The objectives will subsequently be integrated into the performance contracts and the monitoring and results indicators.

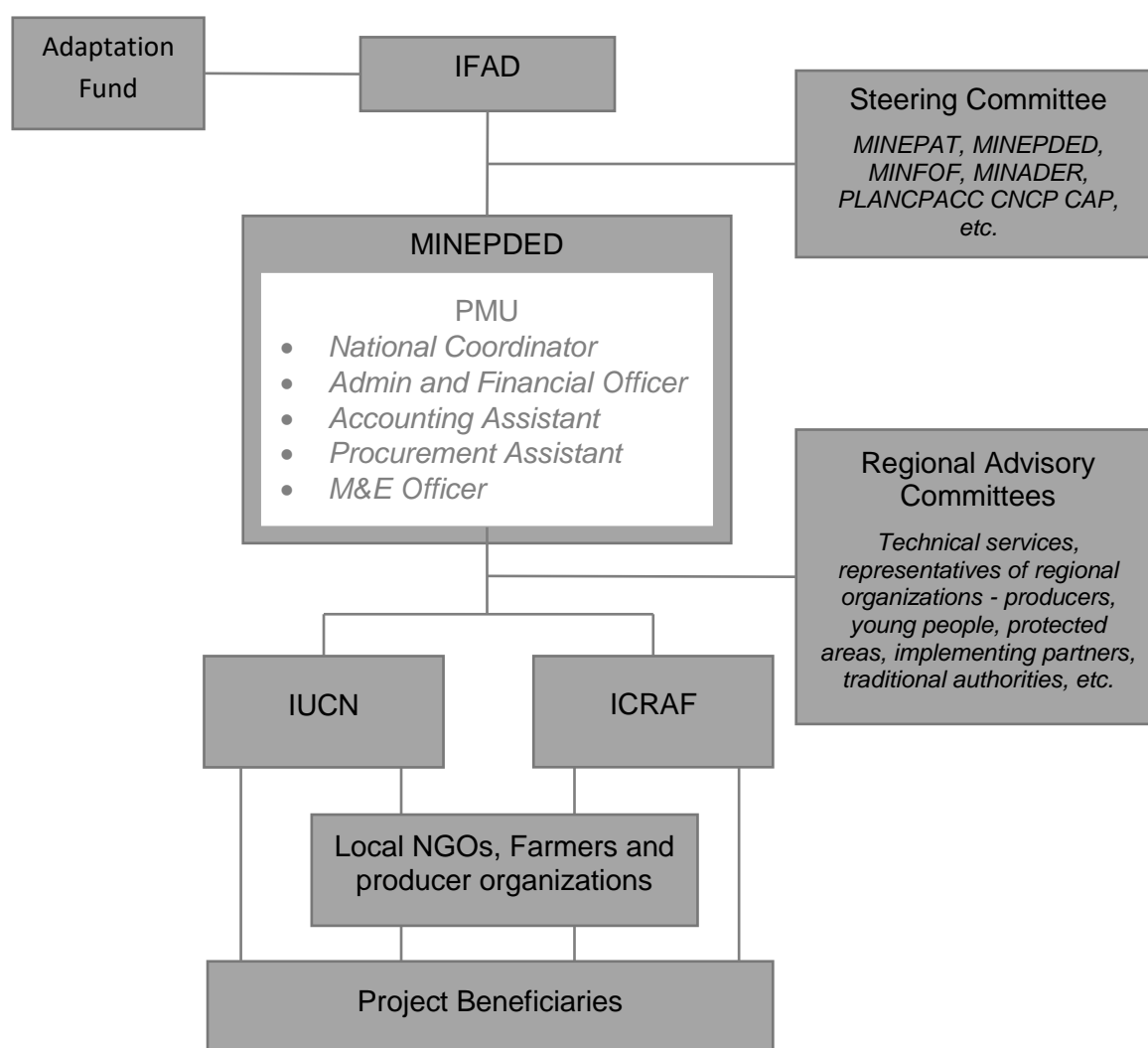
The PMU will be in charge of the administrative and financial procedures as well as of the monitoring and evaluation (M&E) of the project. The PMU will: (i) define the Annual Work Plans and Budgets (AWPB) and partnership contracts, (ii) ensure the coherence of project activities, and (iii) be IFAD's contact point for the project. Regarding partnerships, the PMU must in particular: (i) ensure that the strategies, methods of intervention, and approaches undertaken by implementing partners are defined in accordance with the overall project framework and the components for which they will be responsible; (ii) review their AWPBs on the basis of the budget framework; (iii) manage current expenditures in accordance with the payment schedule and; (iv) negotiate and prepare letter of agreements/ contracts for their respective components.

Quarterly coordination meetings of implementing partners will be organized by the PMU to monitor the progress of activities and share lessons learned from one region to another.

With regard to the implementation of field activities, the project will rely on the implementation partners identified during the project design mission. These include the International Center for Research in Agroforestry (**ICRAF**) for the implementation of activities in the Northwest Region, and the International Union for the Conservation of Nature (**IUCN**) in the Far North and North Regions. ICRAF has established a network of 12 centers for rural resources managed by local organizations in Cameroon that promote agroforestry practices. IUCN has a proven experience in the management of protected areas in Cameroon, and in the development of income generating activities in the outskirts of protected areas. IUCN and ICRAF could sub-contract some activities to competent and recognized local NGOs and farmers' organization while ensuring a quality control of their services. The household-based methodology (GALS) will be overseen by IUCN and ICRAF with facilitation at the village level by local facilitators.

The institutional arrangements of the project are presented in the figure below.

Figure 14: Project Institutional Arrangements



The table below shows the responsibilities of the different project implementing partners for the different project outputs.

Table: Responsibilities of project implementing partners per project output

CLXII. Project Components and Outputs	CLXIII. Responsibility
CLXIV. Component 1: Mainstream climate change adaptation into institutional and regulatory frameworks plans for improved land and natural resources management at regional and local level	
CLXV. Output 1.1: Institutional and regulatory frameworks and plans at municipal and regional level are strengthened to promote climate change adaptation and the resilient management of natural resources at municipal and regional level	CLXVI. MINEPDED CLXVII. MINFOF
CLXVIII. Output 1.2: Land and natural resources management are improved in the Waza, Bénoué and Kimi-Fungom national parks and their	CLXIX. MINFOF

outskirts to increase the resilience to climate change of vulnerable populations contributing to emissions reduction	
CLXX. Component 2: Improve knowledge on ecosystems' vulnerability to climate change, ecosystem-based adaptation and climate smart businesses opportunities.	
CLXXI. Output 2.1: Climate information systems and surveillance mechanisms are strengthened through the development of a unified observation system to respond to climate change.	CLXXII. MINFOF
CLXXIII. Output 2.2: Ecosystem-based adaptation and climate smart businesses opportunities for the most vulnerable groups are identified (youth, indigenous people, women, displaced people) and information systems are improved.	CLXXIV. MINFOF
CLXXV. Component 3: Implement adaptation to climate change measures through incentive instruments leading to increasing climate change resilience of targeted communities.	
CLXXVI. Output 3.1: An Investment Fund is established and managed to invest in sustainable agroforestry for youth and other marginalized groups.	CLXXVII. IUCN, ICRAF, ONG, OP
CLXXVIII. Output 3.2: Climate adaptation actions in agroforestry and natural management are made through the Investment Fund with a focus on youth and other marginalized groups.	CLXXIX. MINADER, IUCN, ICRAF, ONG, OP
CLXXX. Output 3.3: Payments for ecosystem services schemes to support conservation of fragile ecosystems are introduced	CLXXXI. MINEPDED CLXXXII. CED CLXXXIII. BioClimate

A matrix describing the implication of all stakeholders in the implementation of the project is provided in Annex 1.

TABLEAU 14. FINANCIAL RISK MANAGEMENT

CLXXXIV. Risk	CLXXXV. Initial risk assessment (H = high, M = moderate, L = low)	CLXXXVI. Proposed mitigation measure	CLXXXVII. Final risk assessment
CLXXXVIII. Insufficient capacities to appropriately manage the day-to-day implementation of the project	CLXXXIX. M	<p>CXC. - Creation of a Project Management Unit (PMU) based in Yaoundé for the administrative, financial and accounting management of the project.</p> <p>CXCI. - PMU with administrative and financial management autonomy that assumes the fiduciary management functions of the project.</p> <p>CXCII. - Recruitment of experts with specific experiences in development project management and financial management procedures of the lessors and mastery of an accounting software.</p> <p>CXCIII. - IFAD country office will participate as an observer in all stages of the recruitment process.</p> <p>CXCIV. - The staff of the PMU will be linked to the project by renewable annual contracts based on a performance evaluation,</p> <p>CXCV. - Start-up support takes into account training in financial management.</p>	CXCVI. L

CLXXXIV. Risk	CLXXXV. Initial risk assessment (H = high, M = moderate, L = low)	CLXXXVI. Proposed mitigation measure	CLXXXVII. Final risk assessment
<p>CXCVII. The project budgeting process doesn't respect procedures and doesn't allow for a good implementation of project activities</p>	<p>CXCVIII. M</p>	<p>CXCIX. - The budget preparation process will be carried out by the PMU staff and the AWPB will then be submitted to the steering committee for approval. The AWPB will provide details of activities, their unit and overall costs, expected results and monitoring indicators, and their implementation modalities including procurement procedures.</p> <p>CC. - The budgeting process will be defined in the project procedures manual, and should be harmonized with the budgeting process of other IFAD projects (ECO-Jeunes, PEA-J, PADMIR, PADFA etc.).</p> <p>CCI. - The approved AWPB must be entered into the accounting and financial management software to monitor its implementation.</p> <p>CCII. - Quarterly financial reports including information on budget monitoring should be submitted to the ministries of guardianship, steering committee and IFAD.</p>	<p>CCIII. L</p>

CLXXXIV. Risk	CLXXXV. Initial risk assessment (H = high, M = moderate, L = low)	CLXXXVI. Proposed mitigation measure	CLXXXVII. Final risk assessment
<p>CCIV. Project financial flows and disbursement processes are not timely and jeopardize the implementation of activities on the ground</p>	<p>CCV. M</p>	<p>CCVI. - Reforms are underway at the government level to improve the payment of counterpart funds</p> <p>CCVII. - Availability of funds will be made through the standard circuit planned and already tested by other IFAD projects including replenishment of the designated account, direct payment and reimbursement.</p> <p>CCVIII. - The use of Certified Statement of Expenditures in support of expenses incurred by the Project is also planned</p> <p>CCIX. - As regards the implementing partners and public services, the resources will be transferred in accordance with the signed agreements and service contracts, which will have to provide mechanisms for the provision of funds based on the work plan and budget of the convention/contract, and disbursements based on a quarterly / semi-annual report of the activities carried out by the beneficiary/provider/partner.</p>	<p>CCX. M</p>
<p>CCXI. Project implementation and financial management procedures do not guarantee sufficient transparency and accountability</p>	<p>CCXII. H</p>	<p>CCXIII. - Three (3) levels of security ensure transparency and control of operations and also mitigate the risk of distortion and dysfunction related to management:</p> <p>CCXIV. (i) The fact that only one person cannot conduct an operation in its entirety (from beginning to end, from execution to final control);</p> <p>CCXV. (ii) the implementation of accounting self-audits;</p> <p>CCXVI. (iii) Implementation of the IFAD Representation's proximity monitoring in Cameroon and joint Government/IFAD support and supervision missions and an annual audit of the accounts.</p>	<p>CCXVII. L</p>

CLXXXIV. Risk	CLXXXV. Initial risk assessment (H = high, M = moderate, L = low)	CLXXXVI. Proposed mitigation measure	CLXXXVII. Final risk assessment
<p>CCXVIII. The project accounting system and financial procedures are not sufficiently formalized</p>	<p>CCXIX. H</p>	<p>CCXX. - The Project will be equipped with management software covering all financial aspects: accounting, commitment, financial statements, budget monitoring, contracts, etc. The staff will have to master the software in order to be able to correctly parameterize it to meet the needs of management.</p> <p>CCXXI. - The monitoring of financial commitments and financial achievements will be based on the use of accounting and financial management software as well as the production of financial dashboards for use by the PMU, SC and IFAD.</p> <p>CCXXII. -The financial statements of the Project will be drafted according to the principles in force (SYSCOHADA, which provide an accounting based on the commitment of the expenses) and by respecting the minimum information required by the lessor</p> <p>CCXXIII. -The annual financial statements of the Project for the year N will be established no later than the end of February of the year N + 1. The unaudited annual financial statements will be submitted to the SC and IFAD for review.</p> <p>CCXXIV. -The Procedures Manual will provide a detailed phasing of all the stages leading to the closing of the accounts (monthly / quarterly / annual) and the preparation of the financial statements</p> <p>CCXXV. - The accounting system used in the framework of the Project should allow the registration of tax exemptions obtained from the government</p>	<p>CCXXVI. L</p>

CLXXXIV. Risk	CLXXXV. Initial risk assessment (H = high, M = moderate, L = low)	CLXXXVI. Proposed mitigation measure	CLXXXVII. Final risk assessment
<p>CCXXVII. The project financial procedures do not allow for proper and regular monitoring</p>	<p>CCXXVIII. M</p>	<p>CCXXIX. Financial monitoring based on: CCXXX. a) regular preparation of withdrawal requests, based on rolling quarterly cash plans, and bank monitoring of the designated account and the account of operations; (b) budget monitoring; c) accounting monitoring; d) technical and economic monitoring provided by the administrative and financial officer CCXXXI. b) The administrative and financial officer will prepare quarterly financial and accounting reports (interim financial reports) which he will submit to the Coordinator for signature and send for review to the Steering Committee and IFAD.</p>	<p>CCXXXII. L</p>

TABLEAU 15. ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT

The Project will target the rural poor, but primarily youth, with often low levels of training, limited access to productive capital, improved technologies, markets and technical or financial support services. It will pay particular attention to women and improve their access to knowledge and productive assets in order to facilitate their economic activities and increase their income.

The project will be implemented in areas where natural resources are already severely degraded, and where the degradation process will continue. It is therefore extremely important for the Project to strengthen the management of resources that will be the basis of the supported sectors.

Mitigation measures will be implemented to address the potential social and environmental negative impacts of the project.

Table: Summary of potential negative social and environmental impacts and mitigation measures

Activity	Type of impact	Potential negative Impacts	Mitigation measures	Social and Environmental Risk
Development plan of Kimbi-Fungom	Env.	Reversal of co-management due to a lack of common strategic vision with neighboring communities. Deterioration of environment and biodiversity.	Establishment of a strategic vision in collaboration with the communities bordering the park. Ensure that sustainable resource management brings sufficient economic benefits to communities	Low
Community forests	Env	No materialization of external limits, non-compliance with limits	Community sensitization to limits and use of plants as territorial markers	Low
	Soc.	Problems of lack of professionalism of the actors, lack of transparency of the community incomes management.	Support by local NGOs of actors and managers of the forest.	Moderate
Training	Soc.	Conflicts for access to the Projects' technical and financial support	Transparent targeting criteria and participatory targeting process	Moderate
Assisted Natural Regeneration	Env. – Soc.	Decreased flows in the downstream surface hydrographic system and strengthening of water use conflicts	The decrease in surface runoff will also have positive effects in terms of erosion control and the maintenance of soil fertility. The effect is offset by the economic, social and environmental gain provided by the ANR	Low
Reforestation	Env	Lowering soil moisture and groundwater in semi-arid regions	Choose varieties with low water demand Implement water harvesting and conservation techniques that mitigate runoff and evaporative losses and maximize infiltration	Low (North West) Moderate (Far North and North)

Activity	Type of impact	Potential negative Impacts	Mitigation measures	Social and Environmental Risk
	Soc.	Issues related to (i) land tenure, (ii) natural resources and land use rights, (iii) ignorance of traditional land use rights	Definition of land use and consideration of traditional rights to determine managers. Enhancement of the eco-systemic benefits of forests (NTFPs) and their economic value for their preservation. Establishment of a community forest management plan	Low
	Soc.	Property rights over land and trees are poorly known and cause social conflict	Take into account the legal context and customary rights of communities to ensure the nature of the beneficiaries	Moderate
	Soc.	Poor management of community forests	Forestry officials and local communities are trained to have the skills required for economic and technical management of forests	Moderate
	Soc.	Lack of commitment of rural people and overexploitation of forests	Involve communities by clearly outlining the benefits and costs of these community forests. Establishment of a community forest management plan	Low
Non-timber forest products	Soc.	Non-organization of the sector and its low visibility are risks compared to the expected results of the Project	Support to the organization of the sector and promotion of the use of these NTFP	Low
	Soc.	Expropriation of the disadvantaged / marginalized social categories in the activity for the benefit of less vulnerable categories	Monitoring, training and valorisation of disadvantaged social categories during activities	Moderate
Agroforestry	Env.	Competition for light, water and nutrients with other plantations and for soils with non-timber crops,	Good management techniques (size of branches, periodic cutting of roots), choice of species	Low
Pastoral Water Infrastructure	Env.	Displacement of wildlife outside protected areas	Localization of structures near villages to avoid approaching wildlife	Low

TABLEAU 16. MONITORING AND EVALUATION

Project Monitoring and Evaluation (M&E) will be under the oversight of the PMU, and led by the M&E officer who will work closely with the implementing partners (IUCN, ICRAF, MINEPDED and MINFOF). The M&E system should: (i) produce, organize and disseminate the information needed for the strategic management of the Project, (ii) document the results and lessons learned for internal use and for public dissemination on the achievements and (iii) respond to the information needs of Adaptation Fund, IFAD and the Government on the activities, immediate outcomes and

impact of the Project. A monitoring and evaluation manual that will describe a simple and effective system for collecting, processing, analysing and disseminating data will be prepared in the first year of the Project.

A computerized database will be developed that will enable the generation of dashboards used in IFAD projects. The system will be regularly fed from data collected in the field by the implementing partners and the various studies carried out as part of the projects' implementation. The monitoring and evaluation system will be coupled with a geo-localized information system (GIS) that will allow mapping and spatio-temporal analyses. Trainings will be organized to strengthen the capacities of the various stakeholders involved in the monitoring and evaluation system.

Project M&E activities will be guided by the following key considerations:

- a) Data will be disaggregated by poverty, livelihood group and gender;
- b) Each implementing or partner agency will have clear M&E responsibilities with specific reporting deadlines and a forum for presenting and discussing the findings of the monitoring exercise; and
- c) M&E will be linked to the project rationale, log frame, and annual work plans and budgets. M&E findings will be used to take corrective or enhancing measures at the level of project management.

The project key M&E activities will include the following:

Project Inception Workshop

A Project Inception Workshop will be conducted within two months of project start up with the full project team, relevant government counterparts and IFAD. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan. A fundamental objective of the Inception Workshop will be to present the modalities of project implementation and execution, and assist the project team to understand and take ownership of the project's goals and objectives. An Inception Workshop Report will be prepared and shared with participants.

Reporting

In the first and sixth year of the Project, a *MPAT/SYGRI+* survey that also incorporates the information needs of the project logical framework will be conducted. MPAT, a multidimensional poverty assessment tool, is a recently developed IFAD tool that assesses poverty in ten dimensions that are at the heart of rural livelihoods.

Semi-annual and Annual Project Reports will be prepared by the PMU and verified by the PSC to monitor progress made since project start and in particular for the previous reporting period.

These reports include, but are not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative);
- Project outputs delivered per project outcome (annual);
- Lessons learned/good practices;
- Annual expenditure reports; and
- Reporting on project risk management.

Quarterly Progress Reports will also be prepared by project implementing partners in the field, and submitted to the PMU to ensure continuous monitoring of project activities and identify challenges to adopt necessary corrective measures in due time.

Technical reports – such as a best practices and lessons learned report - will also be completed, as determined during the project inception report/

A *Terminal project report* will also be completed at least two months before project closure.

Financial Reporting

In terms of financial monitoring, the project team will provide IFAD with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of funds according to the established procedures.

External Evaluations

The project will undergo an independent external *Mid-Term Evaluation* at the mid-point of project implementation, which will determine progress being made toward the achievement of outcomes and identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project term.

A *Final Evaluation* will be conducted 3 months before project closure.

Field visits

Government authorities, members of PSC and IFAD staff will conduct regular field visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress.

The proposed M&E budget is as follows:

CCXXXIII. Type of M&E Activity	CCXXXIV. Responsible Parties	CCXXXV. Time-frame	CCXXXVI. Estimate of costs
CCXXXVII. Inception Workshop (IW)	CCXXXVIII. PMU	CCXXXIX. With in two months of project start up	CCXL. USD 15,000
CCXLI. Baseline survey/MPAT/SYGRI+ survey	CCXLII. PMU	CCXLIII. First Year CCXLIV. Sixth Year	CCXLV. USD 40,000
CCXLVI. Project Inception Report	CCXLVII. PMU	CCXLVIII. After the inception workshop.	CCXLIX. USD 0 (as completed by PMU)
CCLI. Supervision visits	CCLI. PMU, Government, IFAD, PSC members depending on the needs.	CCLII. Annual or as required	CCLIII. USD 30,000
CCLIV. Annual Work plans and Budget	CCLV. PMU	CCLVI. Annual	CCLVII. USD 0 (as completed by PMU)
CCLVIII. Semi-Annual project report	CCLIX. PMU	CCLX. Semi-annual	CCLXI. USD 0 (as completed by PMU)

CCLXII. Annual project report	CCLXIII. PMU	CCLXIV. Annual	CCLXV. USD 0 (as completed by PMU)
CCLXVI. Technical reports	CCLXVII. PMU, implementing partners	CCLXVIII. As appropriate	CCLXIX. USD 10,000 (Report on best practices and lessons learned)
CCLXX. Mid-term Evaluation (MTE)/Review (MTR)	CCLXXI. External consultant	CCLXXII. At mid-point of project implementation	CCLXXIII. USD 35,000
CCLXXIV. Final evaluation	CCLXXV. External consultant	CCLXXVI. At the end of project implementation	CCLXXVII. USD 35,000
CCLXXVIII. Terminal Report	CCLXXIX. PMU	CCLXXX. At least two months before the end date of the project	CCLXXXI. USD 8,000
CCLXXXII. Audits	CCLXXXIII. External auditor	CCLXXXIV. Last year of project implementation	CCLXXXV. USD 9,000
CCLXXXVI. TOTAL BUDGET	CCLXXXVII.	CCLXXXVIII.	CCLXXXIX. USD 182,000

TABLEAU 17. RESULTS FRAMEWORK

CCXC. Project Objective Outcome/Output	CCXCI. Indicator	CCXCII. Baseline	CCXCIII. Target	CCXCIV. Means of verification	CCXCV. Responsibility	CCXCVI. Hypothesis
CCXCVII. Project Objective: Increase local communities' resilience to climate change through resilient livelihoods and integrated natural resources management	CCXCVIII. Number of beneficiaries who have received support from the project as a proxy for increasing adaptive capacity to respond to the impact of climate change	CCXCIX. 0	CCC. 8,800 households CCCI. (at least 50% women)	CCCII. Project Progress report	CCCIII. PM	CCCIV. A stable macro-economic environment, an acceptable security level, and absence of disaster
CCCV. Component 1: Mainstream climate change adaptation into institutional and regulatory frameworks plans for improved land and natural resources management at regional and local level						
CCCVI. Outcome 1: Climate proofed institutional frameworks and local development plans at regional and local level	CCCVII. Number of policies and development strategies adjusted to address climate change risks (by type and level – regional, local)	CCCVIII. 0	CCCIX. At least 5 (local, municipal and regional)	CCCX. Project progress reports	CCCXI. PM	CCCXII. The strategic and legal frameworks remain similar and are implemented throughout project implementation CCCXIII.

CCXC. Project Objective Outcome/Output	CCXCI. Indicator	CCXCII. Baseline	CCXCIII. Target	CCXCIV. Means of verification	CCXCV. Responsibility	CCXCVI. Hypothesis
CCCXV. Output 1.1: Institutional and regulatory frameworks and plans at municipal and regional level are strengthened to promote climate change adaptation and the resilient management of natural resources at municipal and regional level	CCCXVI. Evidence of a strategy proposing amendment to key strategic documents	CCCXVII. Not existing strategy	CCCXVIII. 1 strategy available and agreed upon	CCCXIX. Strategy document	CCCXX. PM U	CCCXIV. Good participation and collaboration between institutions
	CCCXXI. % of regions and communes that have a development plans that integrate CCA	CCCXXII. To be defined at project inception	CCCXXIII. 1 00% of the regions (Far North, North, and North West) CCCXXIV. 1 00% of the communes	CCCXXV. Municipal and regional development plans covering the project areas of interventions	CCCXXVI. PM U	
	CCCXXVII. Number of the national parks management plans that integrates CCA	CCCXXVIII. 0	CCCXXIX. 3 (Management Plan of the Waza, Benoué and of the Kimki Fungom national parks)	CCCXXX. Management plans	CCCXXXI. PM U	
CCCXXXII. Output 1.2: Land and natural resources management are improved in the Waza, Bénoué and Kimi-	CCCXXXIII. Number of community forests and corresponding surface areas that have been: (i) delimited by the	CCCXXXIV. 0	CCCXXXV. In the Waza NP periphery: 3 community forests of around 3 000 ha each CCCXXXVI. In the Kimki-	CCCXXXVII. Project progress report CCCXXXVIII. Official classification status document	CCCXXXIX. PM U	

CCXC. Project Objective Outcome/Output	CCXCI. Indicator	CCXCII. Baseline	CCXCIII. Target	CCXCIV. Means of verification	CCXCV. Responsibility	CCXCVI. Hypothesis
Fungom national parks and their outskirts to increase the resilience to climate change of vulnerable populations contributing to emissions reduction	project, and (ii) classified		Fungom NP periphery: 6 community forests of around 2 000 ha each			
	CCCXL. Number of simplified management plans for community forest and game areas developed by the project	CCCXLI. 0	CCCXLII. 9 simplified management plan for community forest (3 around Waza NP, and 6 around Kimki Fungom) CCCXLIII. 2 for game areas (around Bénoué NP)	CCCXLIV. Simplified management plans	CCCXLV. PMU	
CCCXLVI. Component 2: Improve knowledge on ecosystems’ vulnerability to climate change and ecosystem-based adaptation and climate smart businesses opportunities						
CCCXLVII. Outcome 2: Ecosystems resilience to climate change is strengthened through monitoring and better	CCCXLVIII. Surface area of ecosystems mapped out and covered by surveillance mechanisms CCCXLIX.	CCCLI. 0	CCCLII. 1 00,000 ha mapped out CCCLIII. 2 000 km² covered by surveillance drone and climatic stations	CCCLIV. Project progress reports CCCLV. Mapping study CCCLVI. Participatory maps	CCCLVII. PMU	CCCLVIII. Good participation and involvement of local communities CCCLIX. CCCLX. Good collaboration

CCXC. Project Objective Outcome/Output	CCXCI. Indicator	CCXCII. Baseline	CCXCIII. Target	CCXCIV. Means of verification	CCXCV. Responsibility	CCXCVI. Hypothesis
knowledge of their status and vulnerability	CCCL. Strengthened awareness of adaptation and climate risk reduction measures					with national parks services CCCLXI. CCCLXII. Good survival rate of tree seedlings
CCCLXIII. Output 2.1: Climate information systems and surveillance mechanisms are strengthened through the development of a unified observation system to respond to climate change	CCCLXIV. Number and type of surveillance mechanisms introduced	CCCLXV. 0	CCCLXVI. 6 drones for surveillance in protected areas	CCCLXVII. Project progress reports CCCLXVIII. In voice	CCCLXIX. PMU	
	CCCLXX. Number of climatic stations and sentinel sites upgraded, set up or rehabilitated	CCCLXXI. 50	CCCLXXII. 250	CCCLXXIII. Project progress report CCCLXXIV. In voice	CCCLXXV. PMU	
CCCLXXVI. Output 2.2: Ecosystem-based adaptation and climate smart businesses opportunities for the most	CCCLXXVII. Evidence of a feasibility study on NTFP business opportunities	CCCLXXVIII. 0	CCCLXXIX. 1 study	CCCLXXX. -	CCCLXXXI. PMU	
	CCCLXXXII. Evidence of a database of potential eco-	CCCLXXXIII. 0	CCCLXXXIV. database per area (3 databases)	CCCLXXXV. -	CCCLXXXVI. MU	

CCXC. Project Objective Outcome/Output	CCXCI. Indicator	CCXCII. Baseline	CCXCIII. Target	CCXCIV. Means of verification	CCXCV. Responsibility	CCXCVI. Hypothesis
vulnerable groups are identified (youth, indigenous people, women, displaced people) and information systems are improved	business opportunities					
	CCCLXXXVII. Number of knowledge sharing products	CCCLXXXVIII. 0	CCCLXXXIX. 0	CCCXC. Knowledge products produced	CCCXCI. PMU	
	CCCXCII. Number of events organized	CCCXCIII. 0	CCCXCIV. 25	CCCXCV. Events invitation and agendas	CCCXCVI. PMU	
CCCXCVII. Component 3: Implement adaptation to climate change measures through incentive instruments leading to increasing climate change resilience of targeted communities.						
CCCXCVIII. Outcome 3: Sustainable management of natural resources and ecosystems leading to climate resilient ecosystems, green jobs creation for youth and resilient livelihoods.	CCCXCIX. % of project beneficiaries considering having improved their adaptive capacities	CD. 0	CDI. 70%	CDII. Survey	CDIII. PMU ICRAF, IUCN	CDIV. The interest of young people remain high throughout project implementation CDV. CDVI. Interest and availability of the communities to participate in FFS CDVII.
	CDXIII. Surface area under improved management in the project intervention sites	CDXIV. 0	CDXV. 4000 ha	CDXVI. Project progress report	CDXVII. PMU ICRAF, IUCN	
	CDXVIII. % of people with increase income	CDXIX. 0	CDXX. 0%	CDXXI. Survey	CDXXII. PMU ICRAF, IUCN	

CCXC. Project Objective Outcome/Output	CCXCI. Indicator	CCXCII. Baseline	CCXCIII. Target	CCXCIV. Means of verification	CCXCV. Responsibility	CCXCVI. Hypothesis
CDXXIII. Output 3.1: An Investment Fund is established and managed to invest in sustainable agroforestry and renewable energy enterprises for youth and other marginalized groups	CDXXIV. Number of young people trained in resilient and ecological agro-sylvo-pastoral opportunities	CDXXV. 0	CDXXVI. 2 300 young people CDXXVII. (50% women)	CDXXVIII. Project Progress report	CDXXIX. PM U, ICRAF, IUCN	CDVIII. Ability of the beneficiaries to see the added value of the promoted measures CDIX. CDX. The NTFP sector continues to offers economic opportunities throughout project implementation CDXI. CDXII.
	CDXXX. Number of training strategies developed for young eco-entrepreneurs	CDXXXI. 0	CDXXXII. 3	CDXXXIII. Project Progress report	CDXXXIV. PM U, ICRAF, IUCN	
	CDXXXV. Number of commercial strategies developed per type of NTFP	CDXXXVI. 0	CDXXXVII. 4 commercial strategy (1 for acacia gum, 1 for shea, 1 for wild mango and 1 for njansan)	CDXXXVIII. Strategy document	CDXXXIX. PM U, ICRAF, IUCN	
CDXL. Output 3.2: Climate adaptation actions in agroforestry and natural resources management are	CDXLI. Number of ha where agroforestry and soil and water conservation measures are implemented	CDXLII. BC on baseline study	CDXLIII. 2 000 ha agroforestry CDXLIV. 2 000 soil and water conservation measures	CDXLV. Project Progress report	CDXLVI. PM U, ICRAF, IUCN	

CCXC. Project Objective Outcome/Output	CCXCI. Indicator	CCXCII. Baseline	CCXCIII. Target	CCXCIV. Means of verification	CCXCV. Responsibility	CCXCVI. Hypothesis
made through the Investment Fund with a focus on youth and other marginalized groups.	CDXLVII. Number of FFS participants	CDXLVIII. 0	CDXLIX. 500	CDL. Project Progress report CDLI. FFS attendance sheets	CDLII. PMU, ICRAF, IUCN	
	CDLIII. Number of eco-businesses supported	CDLIV. 0	CDLV. 400	CDLVI. Project Progress report	CDLVII. PMU, ICRAF, IUCN	
	CDLVIII. Number of young people trained in NTFP	CDLIX. 0	CDLX. 400 young people	CDLXI. Training attendance sheets	CDLXII. PMU, ICRAF, IUCN	
	CDLXIII. Number of tree planted and surface area reforested	CDLXIV. BC on baseline study	CDLXV. 50 000 trees 2000 ha reforested in community forests	CDLXVI. Project progress report CDLXVII. Drone monitoring	CDLXVIII. PMU ICRAF, IUCN	
	CDLXIX. Surface where sustainable natural resources management was implemented through the FFS approach	CDLXX. 0	CDLXXI. 2000 ha	CDLXXII. Project progress report CDLXXIII.	CDLXXIV. PMU ICRAF, IUCN	
	CDLXXV. Number of livestock	CDLXXVI. BC on baseline study	CDLXXVII. 20	CDLXXVIII. Project progress report	CDLXXX. PMU ICRAF, IUCN	

CCXC. Project Objective Outcome/Output	CCXCI. Indicator	CCXCII. Baseline	CCXCIII. Target	CCXCIV. Means of verification	CCXCV. Responsibility	CCXCVI. Hypothesis
	water point constructed			CDLXXIX. Drone monitoring		
CDLXXXI. Output 3.3: Payments for ecosystem services schemes to support conservation of fragile ecosystems are introduced	CDLXXXII. Number of households or youth organisations or eco-entrepreneurs receiving payments or incentives to better manage ecosystems	CDLXXXIII. 0	CDLXXXIV. 3 000 households, 200 eco entrepreneurs	CDLXXXV. Project progress report CDLXXXVI.	CDLXXXVII. PM U/ PES unit	

TABLEAU 18. ALIGNMENT WITH THE ADAPTATION FUND

The table below demonstrates how the project aligns with the Results Framework of the Adaptation Fund.

Table: Project alignment with the result framework of the adaptation fund

Project Objective	Project Outcome Indicator	Adaptation Fund Outcomes	Fund Outcome Indicators	Grant Amount (USD)
Outcome 1: Climate proofed institutional frameworks and local development plans at regional and local level	Number of policies and development strategies adjusted to address climate change risks (by type and level – national, regional, local)	Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	8,700,000
Outcome 2: Ecosystems resilience to climate change is strengthened through monitoring and better knowledge of their status and vulnerability	Surface area of ecosystems mapped out, covered by surveillance mechanisms, and restored Strengthened awareness of adaptation and climate risk reduction processes at local level	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	
Outcome 3: Sustainable management of natural resources and ecosystems leading to climate resilient ecosystems, green jobs creation for youth and resilient livelihoods	% of project beneficiaries considering having improved their adaptive capacities Surface area under improved management in the project intervention sites Number of people with increased income	Outcome 4: Increased adaptive capacity within relevant development and natural resource sectors	4.2. Physical infrastructure improved to withstand climate change and variability-induced stress	
		Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress	
		Outcome 6: Diversified and strengthened livelihoods and sources of income for	6.2. Percentage of targeted population with sustained climate-resilient	

		vulnerable people in targeted areas	alternative livelihoods	
Project Outcomes	Project Outcome Indicators	Adaptation Fund Outputs	Fund Output Indicators	Grant Amount (USD)
Component 1: Mainstream climate change adaptation into institutional and regulatory frameworks plans for improved land and natural resources management at regional and local level				
Output 1.1: Institutional and regulatory frameworks and plans at municipal and regional level are strengthened to promote climate change adaptation and the resilient management of natural resources	Evidence of a strategy proposing amendment to key strategic documents % of regions and communes that have a development plans that integrate CCA Number of the national parks management plans that integrates CCA	Output 7: improved integration of climate-resilience strategies into country development plans	7.1. No. of policies introduced or adjusted to address climate change risks (by sector) 7.2. No. of targeted development strategies with incorporated climate change priorities enforced	1,400,000
Output 1.2: Land and natural resources management are improved in the Waza, Bénoué and Kimbi-Fungom national parks and their outskirts to increase the resilience to climate change	Number of community forests and corresponding surface areas that have been: (i) delimited by the project, and (ii) classified Number of simplified management plans for community forest and game areas developed by the project			
Component 2: Improve knowledge on ecosystems' vulnerability to climate change, ecosystem-based adaptation and climate smart businesses opportunities				
Output 2.1: Climate information systems and surveillance mechanisms are strengthened through the development of a unified observation system to respond to climate change	Number and type of surveillance mechanisms introduced Number of climatic stations and sentinel sites upgraded, set up or rehabilitated	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1.1 No. and type of risk reduction actions or strategies introduced at local level	1,300,000
Output 2.2: Ecosystem-based adaptation and climate smart businesses opportunities for the most vulnerable	Evidence of a feasibility study on NTFP business opportunities Evidence of a database of potential eco-business opportunities			

groups are identified (youth, indigenous people, women, displaced people) and information systems are improved	Number of knowledge sharing products Number of events organized			
Component 3: Adaptation to climate change measures are implemented through incentives instruments leading to increasing the resilience to climate change of targeted communities				
Output 3.1: An Investment Fund is established and managed to invest in sustainable agroforestry and renewable energy enterprises for youth and other marginalized groups	Number of young people trained in resilient and ecological agro-sylvo-pastoral opportunities Number of training strategies developed for young eco-entrepreneurs Number of commercial strategies developed per type of NTFP	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies	6,000,000
Output 3.2: Climate adaptation actions in agroforestry and natural resources management are made through the Investment Fund with a focus on youth and other marginalized groups.	Number of ha where agroforestry and soil and water conservation measures are implemented Number of FFS participants Number of eco-businesses supported Number of young people trained in NTFP Number of tree planted and surface area reforested Surface where sustainable natural resources management was implemented through the FFS approach Number of livestock water point constructed	Output 4 and 5: Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types) 5.1. No. and type of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type of assets)	
Output 3.3: Payments for ecosystem services schemes to support conservation of fragile	Number of households or youth organisations or eco- entrepreneurs receiving payments or	Output 6: Targeted individual and community livelihood strategies	6.1.2. Type of income sources for households generated under climate change scenario	

ecosystems are introduced	incentives to better manage ecosystems	strengthened in relation to climate change impacts, including variability		
---------------------------	--	---	--	--

TABLEAU 19. PROJECT BUDGET

The table below presents the detailed budget of the project per activity.

CDLXXXVIII. Item/activity	CDLXXXIX. Amount (USD)
CDXC. Component 1: Mainstream climate change adaptation into institutional and regulatory frameworks plans for improved land and natural resources management at regional and local level	
CDXCI. Output 1.1: Institutional and regulatory frameworks and plans at municipal and regional level are strengthened to promote climate change adaptation and the resilient management of natural resources	
CDXCII. Carry out socio economic baseline, community based Climate Vulnerability and Capacity Assessment (CVCA) to update the institutional, regulatory , policy frameworks and plans	CDXCIII. 100,000
CDXCIV. Organise workshops and dialogues to raise awareness on climate change adaptation, generate political will and integrate the vulnerability assessment outcome and stakeholders' input into the relevant strategic framework and investment plans	CDXCV. 30,000
CDXCVI. Develop a voluntary codes of practice for forest management activities, including timber harvesting	CDXCVII. 50,000
CDXCVIII. Develop a road for the implementation of the update frameworks with a resource mobilisation strategy	CDXCIX. 15,000
D. Organize participatory planning sessions to review and update local and regional development plans in the zones of intervention to mainstream climate change adaptation	DI. 20,000
DII. Review of the management and development plans of the Waza and the Bénoué national parks to identify potential gaps in terms of climate change adaptation, and propose potential amendments to mainstream this dimension	DIII. 75,000
DIV. Develop simple M&E systems for local and regional development plans, in order to enable local authorities to properly monitor their implementation	DV. 25,000
DVI. Provide institutional and capacity building to local authorities implement the natural resources conservation and adaptive frameworks	DVII. 45,000
DVIII. Develop practical guides for updating regional and local development plans with up-to-date climate change information	DIX. 30,000
DX. Sub-Total	DXI. 390,000
DXII. Output 1.2: Land and natural resources management are improved in the Waza, Bénoué and Kimbi-Fungom national parks and their outskirts to increase the resilience to climate change of vulnerable populations contributing to emissions reduction	
DXIII. Use of a Drivers-Pressures-State change-Impact-Response (DPSIR) framework to identify and analyse specific project activities areas	DXIV. 30,000
DXV. Nine forest areas to be classified as “community forests” and to be managed sustainably by the communities at the outskirts of the Waza (3 community forests of around 3 000 ha each) and Kimki-Fungom national parks (6 community forests of around 2 000 ha each)	DXVI. 90,000
DXVII. Participatory micro-zoning of game areas #1 and #4 in the outskirts of the Bénoué national park to recognize a living space for local communities on the one hand, identify conflict zones and regulate natural resources use outside of this living space on the other hand	DXVIII. 50,000

DXIX. Assess the conservation status of 10 endangered or endemic flora and fauna species and develop and develop climate conservations plans for at least 5 of them	DXX. 40,000
DXXI. Conduct vulnerability assessment to climate change of local ecosystems, and the needs for adaptation outside the outskirts of Waza, Bénoué and Kimbi-Fungom national parks	DXXII. 80,000
DXXIII. Establish of natural (and temporary) physical fencing in the buffer zones	DXXIV. 180,000
DXXV. Document, revive and promote continued use of traditional and indigenous systems related to conservation and climate resilience	DXXVI. 30,000
DXXVII. Improve water resource management in vulnerable households for food production systems through the water efficient practices such as drip water irrigation	DXXVIII. 120,000
DXXIX. Forest is restored on degraded lands within and outside parks through the plantation of around 15,000 trees from selected species demonstrating strong resilience to climate change and adaptation to the local ecosystems and the livelihood needs of the local communities	DXXX. 190,000
DXXXI. Create a community forest and game areas management entities: identification of relevant stakeholders, consultation with local communities, and development of the legal status of the entities	DXXXII. 80,000
DXXXIII. Support the new entities in the classification process of the identified areas into community forest and game areas	DXXXIV. 40,000
DXXXV. Elaboration of simplified management plans for the demarcated community forests and game areas defining communities' rights and access modalities to the natural resources of the area (spatial planning of crop land, livestock raising, firewood, NFTP, hunting, etc.) ensuring long-term conservation of ecosystem services in a climate change context	DXXXVI. 70,000
DXXXVII. Sub-total	DXXXVIII. 1,000,000
DXXXIX. Cost for Component 1	DXL. 1,400,000
DXLI. Component 2: Strengthening knowledge on ecosystems' vulnerability and promoting their restoration to increase their overall resilience to climate change	
DXLII. Output 2.1: Surveillance mechanisms and climate information systems are strengthened	
DXLIII. Set-up, rehabilitate or upgrade of the network of meteorological stations (automatic and rain gauges ,lightning detectors, standard equipment, power supply, telecoms for field stations), and of the sentinel sites in the three intervention sites	DXLIV. 220,000
DXLV. Upgrade and introduce data collection and communication equipment and devices , data storage and management systems, computers and software for remote sensing ; software and customized tools for GIS and modelling and forecasting	DXLVI. 80,000
DXLVII. consolidation of hazard and risk maps, the analysis and completion of historical data, identification of climate variability indicators for rainfall and temperature and consolidation of all available data	DXLVIII. 60,000
DXLIX. Introduction of drones in the three national parks for ecosystems and natural resources surveillance to better monitor the impact of climate change, forest cover changes and ecological responses within protections areas and buffer zones.	DL. 80,000
DLI. Training of Eco- guards and communities on the maintenance of meteorological stations, and of the sentinel sites in the three intervention sites	DLII. 50,000

DLIII. Capacity building of Eco-guards on drone technology, climate data collection, monitoring, and treatment for decision making in the three national parks, and training on smart patrolling	DLIV. 80,000
DLV. Application of specific tools (such as the FAO tool SHARP - Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists) to measure the evolution in the level of climate change resilience in local communities	DLVI. 100,000
DLVII. Develop a monitoring system for the conservations plans of the 5 most endangered or endemic flora and fauna species	DLVIII. 80,000
DLIX. Sub-total	DLX. 750,000
DLXI. Output 2.2: The status and vulnerability of the ecosystem and natural resources within and in the outskirts of the three national parks are assessed and disseminated.	
DLXII. Assess local alternative employment based on the Climate Vulnerability and Capacity Assessment (CVCA) with a special focus on youth, indigenous people, women, displaced people	DLXIII. 75,000
DLXIV. Identify ecosystem-based adaptation and climate- smart solutions based for the different group of beneficiaries	DLXV. 60,000
DLXVI. Develop and maintain on a regular basis a database of potential eco-business opportunities and climate vulnerable beneficiaries	DLXVII. 70,000
DLXVIII. Establish of local concertation platforms on eco-businesses and natural resources management in the villages of the three areas of intervention (gathering the management entities of the community forests and game areas)	DLXIX. 75,000
DLXX. Increase generation and use of ecosystem-based adaptation and climate smart business opportunities in decision making and local development and investments plans	DLXXI. 60,000
DLXXII. Develop a rural youth employment local guide with ecosystem-based adaptation and climate-smart practices	DLXXIII. 60,000
DLXXIV. Awareness raising on opportunities stemming from NFTP (acacia gum, shea butter, wild mango and njansang) among young people in the three areas of intervention, and selection of interested potential young entrepreneurs	DLXXV. 70,000
DLXXVI. Conduct a feasibility study on market information, business opportunities on NFTP system through cellular and internet technologies	DLXXVII. 65,000
DLXXVIII. Sub-total	DLXXIX. 550,000
DLXXX. Cost for Component 2	DLXXXI. 1,300,000
DLXXXII. Component 3: Strengthening local communities and in particular young people's adaptive capacity through awareness raising, climate change adaptation measures, and the development of resilient eco-businesses.	
DLXXXIII. Output 3.1: An Investment Fund is established and managed to invest in sustainable agroforestry and renewable energy enterprises for youth and other marginalized groups.	
DLXXXIV. Partner with a local bank or microfinance institutions to establish the Investment Fund of 4 million USD	DLXXXV. 30,000
DLXXXVI. 30% of the Fund will be reserved for financing sustainable agroforestry and renewable energy enterprises of indigenous people, women and displaced people (USD 1.2 Million)	DLXXXVII. -
DLXXXVIII. Manage and monitor youth projects including compliance with ESG standards	DLXXXIX. 80,000
DXC. Define ecosystem-based adaptation and climate- smart practices criteria's to assess all future projects	DXCI. 50,000

DXCII. Community awareness and mobilisation on climate resilient and ecological agro-sylvo-pastoral NTFP eco-business to address women's and youth needs and priorities	DXCIII. 75,000
DXCIV. Capacity building for existing business training centres and development of training strategies for young eco-entrepreneurs to tap into this fund	DXCV. 175,000
DXCVI. Provide training for selected young people (2,300) on how to build an eco-business (economic aspects, business plans, leadership, entrepreneurship and citizenship, training in the legal status of land occupation and use of natural resources in the areas of intervention, support for professional integration).	DXCVII. 70,000
DXCVIII. Call for proposal for at least 400 projects from young eco-entrepreneurs, women and indigenous people, displaced people	DXCIX. 10,000
DC. Capacity building for existing business training centres and development of training strategies for young eco-entrepreneurs	DCI. 50,000
DCII. Analysis and diagnosis of existing producer organizations and cooperatives in the areas of intervention to receive fund from the investment fund on eco businesses	DCIII. 60,000
DCIV. Sub-total	DCV. 600,000
DCVI. Output 3.2: Climate adaptation actions in agroforestry and natural resources management are made through the Investment Fund with a focus on youth and other marginalized groups.	
DCVII. Fund invests in 200 types of sustainable business model of home gardens using techniques to reduce climate risks (such as drip irrigation, soil and water conservation and agro-ecological practices)	DCVIII. 1,350,000
DCIX. Fund invests in youth initiative to promote rural alternative energy (biogas plants, solar) in agro- forestry, NTFP and livestock production value chain development	DCX. 300,000
DCXI. Funds invests in setting up FFS: develop training tools for master trainers, train and equip master trainers, develop training curricula for farmers, establishment of FFS	DCXII. 70,000
DCXIII. Fund invests in 2000 ha of sustainable land management measures (soil, water, etc.) with a labour-intensive approach through the FFS approach	DCXIV. 280,000
DCXV. Fund invests in 2000 ha of agroforestry measures through the FFS approach	DCXVI. 100,000
DCXVII. Fund supports support the construction and improvement of facilities for rainwater storage, permeation and runoff control	DCXVIII. 150,000
DCXIX. Fund supports directly at least 9 indigenous associations to lead the collection of local knowledge and identification of traditional productive practices relevant for climate change via an indigenous service provider	DCXX. 70,000
DCXXI. Fund supports the construction of erosion control structures and Construction of flood mitigation structures	DCXXII. 100,000
DCXXIII. Fund supports the restoration of land, wildlife habitat based on climate information	DCXXIV. 70,000
DCXXV. Fund supports the promotion of ecotourism, sustainable harvesting, local processing of select commercially viable NTFP, and nature based local enterprises to enhance community resilience to climate change impacts through alternative income generation	DCXXVI. 100,000
DCXXVII. Fund invests in construction of 20 livestock water points in the outskirts of the national parks to prevent conflicts over water points within the parks, and to protect the reforested areas. The location of the water points will be decided through a participatory process	DCXXVIII. 140,000

DCXXIX. Fund supports initiatives to reduce human and wildlife conflict in and around the park and protected areas through the promotion of appropriate technologies	DCXXX. 70,000
DCXXXI. Fund supports ecosystem resilience to climate change through targeted restoration investments and build capacities on sustainable forest management practices in communities in and outside the Parks and protected areas	DCXXXII. 50,000
DCXXXIII. Fund support the development of green and climate resilient design and construction principles in and outside the park and protected areas	DCXXXIV. 70,000
DCXXXV. Fund supports the establishment of nurseries, fields and seedbanks for crop research of local seeds and varieties to their resilience for climate change and their suitability for home gardens	DCXXXVI. 80,000
DCXXXVII. Sub-total	DCXXXVIII. 3,400,000
DCXXXIX. Output 3.3: Knowledge sharing and concertation mechanisms are in place and project results and lessons learned are disseminated	
DCXL. Establish a stimulus fund of 2 million USD to introduce Payments for ecosystem services schemes	DCXLI. 2,000,000
DCXLII. Sign an agreement with the Centre pour l'Environnement et le Développement (CED), BioClimate Research & Development (BioClimate) and the Rainforest Foundation UK to expand their PES under the REDD+ with their modalities in the targeted regions	DCXLIII. -
DCXLIV. Develop partnership with the Congo Basin Fund (CBFF) and other funds to sustain the PES support forest protection	DCXLV. -
DCXLVI. Sub-total	DCXLVII. 2,000,000
DCXLVIII. Cost for Component 3	DCXLIX. 6,000,000
DCL. Project execution costs	
DCLI. Recruitment of local staff	DCLII. 150,000
DCLIII. Running costs	DCLIV. 150,000
DCLV. Purchase of equipment	DCLVI. 200,000
DCLVII. Total project execution costs	DCLVIII. 500,000
DCLIX. Total Project Costs	DCLX. 9,200,000
DCLXI. Project cycle management fee (8.5%)	
DCLXII. Financial management	DCLXIII. 100,000
DCLXIV. Information, Reporting, Knowledge Management	DCLXV. 200,000
DCLXVI. Performance Management – progress monitoring, field monitoring	DCLXVII. 182,000
DCLXVIII. Programme support	DCLXIX. 300,000
DCLXX. Total project cycle management fee	DCLXXI. 782,000
DCLXXII. Amount of Financing requested	DCLXXIII. 9,982,000

TABLEAU 20. DISBURSEMENT SCHEDULE

Table: Disbursement Schedule

DCLXXIV. Outputs	DCLXXV. ar 1 Ye				DCLXXVI. ar 2 Ye				DCLXXVII. ar 3 Ye				DCLXXVIII. ar 4 Ye				DCLXXIX. ar 5 Ye				DCLXXX. ar 6 Ye			
	DC1	DC2	DC3	DC4	DC1	DC2	DC3	DC4	DC1	DC2	DC3	DC4	DC1	DC2	DC3	DC4	DC1	DC2	DC3	DC4	DC1	DC2	DC3	DC4
DCCV. Component 1: Mainstream climate change adaptation into institutional and regulatory frameworks plans for improved land and natural resources management at regional and local level																								
DCCVI. Output 1.1: Institutional and regulatory frameworks and plans at municipal and regional level are strengthened to promote climate change adaptation and the resilient management of natural resources	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀₀	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC
DCCXXI. Output 1.2: Land and natural resources management are improved in the Waza, Bénoué and Kimbi-Fungom national parks and their outskirts to increase the resilience to climate change of vulnerable populations contributing to emissions reduction	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀₀	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC
DCCLVI. Component 2: Improve knowledge on ecosystems' vulnerability to climate change, ecosystem-based adaptation and climate smart businesses opportunities																								

DCCLVII. Output 2.1: Climate information systems and surveillance mechanisms are strengthened through the development of a unified observation system to respond to climate change	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀₀	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC
DCCLXXXII. Output 2.2: Ecosystem-based adaptation and climate smart businesses opportunities for the most vulnerable groups are identified (youth, indigenous people, women, displaced people) and information systems are improved	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀₀	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC
DCCCVII. Component 3: Adaptation to climate change measures are implemented through incentives instruments leading to increasing the resilience to climate change of targeted communities																								
DCCCVIII. Output 3.1: An Investment Fund is established and managed to invest in sustainable agroforestry and renewable energy enterprises for youth and other marginalized groups	DC	DC	DC	DC	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀₀
DCCCXXXIII. Output 3.2: Climate adaptation actions in	DC	DC	DC	DC	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀₀

agroforestry and natural resources management are made through the Investment Fund with a focus on youth and other marginalized groups.																									
DCCCLVIII. Output 3.3: Payments for ecosystem services schemes to support conservation of fragile ecosystems are introduced	DC	DC	DC	DC	DC	DC	DC	DC ₀	DC	DC	DC	DC	DC	DC	DC	DC ₀	DC	DC	DC	DC	DC ₀	DC	DC	DC	DC ₀₀
DCCCLXXXIII.																									
DCCCLXXXIV. project execution costs	DC	DC	DC	DC ₇	DC	DC	DC	DC ₃	DC	DC	DC	DC ₀	DC	DC	DC	CM ₇	CM	CM	CM	CM ₃	CM	CM	CM	CM ₀₀	
CMIX. Project Cycle Management Fee (8.5%)	CM	CM	CM	CM ₀	CM	CM	CM	CM ₈	CM	CM	CM	CM ₂	CM	CM	CM	CM ₆	CM	CM	CM	CM ₀	CM	CM	CM	CM ₀₀	

Table: Disbursement Matrix

CMXXXIV.	CMXXXV. ear 1	CMXXXVI. ear 2	CMXXXVII. ear 3	CMXXXVIII. ear 4	CMXXXIX. ear 5	CMXL. ear 6	CMXLI. otal
CMXLII. S cheduled Date	CMXLIII. January 2019	CMXLIV. January 2020	CMXLV. January 2021	CMXLVI. January 2022	CMXLVII. January 2023	CMXLVIII. January 2024	CMXLIX.
CML. Project Funds	CMLI. 970,000	CMLII. 2,600,000	CMLIII. 780,000	CMLIV. 300,000	CMLV. 300,000	CMLVI. 250,000	CMLVII. 200,000
CMLVIII. I mplementing Entity Fee	CMLIX. 2,450	CMLX. 21,000	CMLXI. 51,300	CMLXII. 10,500	CMLXIII. 10,500	CMLXIV. 06,250	CMLXV. 82,000

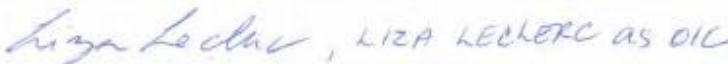
CMLXVI. otal	T	CMLXVII. ,052,450	CMLXVIII. ,821,000	CMLXIX. ,931,300	CMLXX. ,410,500	CMLXXI. ,410,500	CMLXXII. ,356,250	CMLXXIII. ,982,000	
------------------------	----------	-----------------------------	------------------------------	----------------------------	---------------------------	----------------------------	-----------------------------	------------------------------	--

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

1 RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT¹

Dr. Haman Unusa National Designated Authority for the Adaptation Fund, Ministry of Environment Protection of Nature and Sustainable Development (MINEPDED)	Date: December 8 th 2017
--	-------------------------------------

2 IMPLEMENTING ENTITY CERTIFICATION

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project in compliance with the Environmental, Social Policy and the Gender Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project.	
 Margarita Astralaga, Director Environment and Climate Division, IFAD Implementing Entity Coordinator	
Date: 22/12/2017	Tel. and email: +393358176237 m.astralaga@ifad.org
Project Contact Person: Amath Pathe SENE, Lead Technical Specialist Environment and Climate for West and Central Africa, IFAD	
Tel. And Email: +393371143704 ; amath.sene@ifad.org	

¹ Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

ANNEXES

ANNEX 1: LETTER OF ENDORSEMENT BY THE GOVERNMENT

<p>REPUBLIQUE DU CAMEROUN Paix-Travail-Patrie</p> <p>MINISTRE DE L'ENVIRONNEMENT, DE LA PROTECTION DE LA NATURE ET DU DEVELOPPEMENT DURABLE</p> <p>SECRETARIAT GENERAL</p> <p>DIVISION DES ETUDES, DES PROJETS ET DE LA COOPERATION</p> <p>CELLULE DES ETUDES ET DE LA PROSPECTIVE</p> <p>POINT FOCAL OPERATIONNEL DU FEM</p>	 <p>ADAPTATION FUND</p>	<p>REPUBLIC OF CAMEROON Peace-Work-Fatherland</p> <p>MINISTRY OF ENVIRONMENT, PROTECTION OF NATURE AND SUSTAINABLE DEVELOPMENT</p> <p>SECRETARIAT GENERAL</p> <p>DEPARTMENT OF STUDIES, PROJECTS AND COOPERATION</p> <p>STUDIES AND PROSPECTIVE UNIT</p> <p>GEF OPERATIONAL FOCAL POINT</p>
N° <u>001</u> /L/MINEPDED/SG/DEPC/CEP/PF-FA		Yaoundé, le <u>08 DEC 2017</u>

Letter of Endorsement by Government

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for "Increasing local communities' resilience to climate change through youth entrepreneurship and integrated natural resources management".

In my capacity as National Designated Authority for the Adaptation Fund in Cameroon, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Cameroon.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the International Fund for Agricultural Development (IFAD) and executed by the Ministry of Environment, Protection of Nature and Sustainable Development (MINEPDED).

Sincerely,

Adaptation Fund Focal Point for Cameroon


Hammou Unusa (Ph.D)
Géographe-Aménageur-Environnementaliste

ANNEX 2: MATRIX ON STAKEHOLDERS' ROLE IN PROJECT IMPLEMENTATION (in French)

NIVEAU	ACTEUR	FONCTION
National	Secteur Public	
	MINEPDED	Maîtrise d'ouvrage du Projet
	MINFOF	Maîtrise d'ouvrage associée du Projet
	Comité de Pilotage	Guide et supervise la mise en œuvre globale du Projet
National	Cellule de Gestion du Projet	Maîtrise d'œuvre du Projet
	Organisation de la société civile et secteur privé	
	ICRAF	Partenaire principal de mise en œuvre
	IUCN	Partenaire principal de mise en œuvre
National	Organisations paysannes	
	CNOP-CAM	Coordination nationale des organisations paysannes
Régional	Autorités régionales	Sécurisation foncière et des plantations
	Services Techniques déconcentrés	Supervision des activités techniques
	Directions du Parc National	Coordonne la mise en œuvre du plan d'aménagement
	Autres Projets FIDA Antennes régionales	Facilite les synergies
Régional	Organisation de la société civile et secteur privé	
	ICRAF Antenne R	Coordonne et supervise la mise en œuvre en région N-O
	IUCN Antenne R	Coordonne et supervise la mise en œuvre en régions EN et N
	Centre de Formation	Formation des jeunes en entrepreneuriat agro-écologie
Régional	IMF	Reçoit l'épargne et accorde les prêts aux jeunes agro-éco-entrepreneurs
	Organisations paysannes	
	CNOP-CAM Régional	Centre de formation des jeunes paysans
	Réseau des opérateurs Filière PNFL	Echanges d'informations
Régional	Réseau des pépiniéristes	Echanges d'informations
	Coopératives -filiales de produits agro-sylvo-pastoraux, PFNL	Insertion dans les filières
Local	Autorités locales et coutumières	Assure l'intégration locale des activités (enregistrement, foncier, règlement locaux)
	ONG	Animation et accompagnement des acteurs locaux
	Comité de gestion des forêts communautaires	Utilisation durable des forêts communautaires
	Organisations paysannes	
	Pépiniéristes arbres fruitiers bois / PFNL	Produit / vend des plants de qualité
	Comités de gestion des aménagements du sous bassin versant	Coordonne les aménagements
	Jeunes agro-Eco-entrepreneur	Tire ses revenus d'une production durable et participe à la gestion des territoires

ANNEX 3: LIST OF PERSONS MET DURING THE DESIGN MISSION

Institutions gouvernementales rencontrées	Titre	Nom et prénoms des personnes rencontrées	Fonction
Gouverneur de la Région Nord	M.	EDIHI Jean Abate	Gouverneur
MINEPAT - Ministère de l'Economie de la Planification et de l'Aménagement du Territoire	M.	Macky Sam Georges Gabriel	Point focal
MINEPAT - Ministère de l'Economie de la Planification et de l'Aménagement du Territoire	M.	MAIRAMOU Laby	R/ Délégué Régional MINEPAT NORD
MINEPDED - Ministère de l'Environnement, de la Protection de la Nature et du Développement Durable	Mme	BANDOLO Charline	Représentante du DRI MINEPDED Nord
MINEPDED - Ministère de l'Environnement, de la Protection de la Nature et du Développement Durable	M.	Marcel Zemengue	CEA2 CPCOOP
MINFOF - Ministère des Forêts et de la Faune	M.	EKONG AKONO Josué	Représentant DEFOF Nord
MINJEC - Ministère de la Jeunesse et de la Culture	M.	MEKOBÉ AMBA Jean Daniel	Représentant Nord
MINPMEESA – Ministère des Petites et Moyennes Entreprises de l'Economie Sociale et de l'Artisanat	M.	KAFTARA Alioum	
Arrondissement de Waza	M.	OUMAROU Michel	Sous-préfet et Secrétaire d'administration
Bailleurs rencontrés	Titre	Prénom et nom des personnes rencontrées	Fonction
FAO - Food Agriculture Organization	Mme	ATANGA Felicitas	Chef de file sectoriel Sécurité Alimentaire
IOM - Organisation Internationale pour les Migrations	Mme	Tatiana Fouda Lobe	Chargée de projet Labour Migration
PAM - Programme Alimentaire mondial	M.	IBRAIMA HAMADOU AMINOU Elhaj	National Programme & Policy Officer
PAM - Programme Alimentaire mondial	M.	PEACOCKE Barnaby	Consultant indépendant
PAM - Programme Alimentaire mondial	Mme	PRUSCINI Elvira	Directrice Adjointe
UNHCR - Agence des Nations Unies pour les réfugiés	Mr	Mamady Fatta Kourouma	Chef de sous-délégation
Projets, ONGs et organisations rencontrés	Titre	Prénom et nom des personnes rencontrées	Fonction
ANOCO African Natural Oils company	M.	DIOMANDE Jacques	Directeur
APESS - Association pour la promotion de l'élevage au Sahel et en Savane	Mme	KOERANGA Idrissa Youssoufa	Coordinateur régional APESS CRIPA Garoua
APESS Garoua - Association pour la promotion de l'élevage au Sahel et en Savane	M.	FAISAL Mamoudou	
CADPEN	Dr.	DJIMDOHO Aboubakali	
CARDEN	Mr	Poudikiri Gilbert	
CB Waza	M.	Moukang Houraou Moise	
CELDIE ONG	M.	BOTNA Boniface	
CENNOPCAM	M.	ABDOU Garga	Président
Chambre d'agriculture de Charente Maritime	M.	MAUCOURT Jean-Pierre	Assistant technique ponctuel à la PLANOPAC
Chef de Village MBARE	M.	Djidiwa Joseph	Chef de Village et Producteur de Mais arachide et igname
CNOP-CAM - Concertation Nationale des organisations Paysannes au Cameroun	M.	YOUSOUFA Mohamadou	Responsable des Jeunes
Conseil National de la Jeunesse du Nord	M.	ALHADJI MAL BABBA Djibrilla	Président
Coopérative Transformation du lait, Union des Eleveurs et Producteurs de lait	Mme	Didjatou Yaya Dahirou	Membre CA
DRADERINO	Mme	MADI Ibrahima	
GIC ADJAGAMA	M.	MAHAMATISSEINI	Membre
GIC AGRO ELEVEUR de VOLONT.S.C.	M.	MOUSSA ELHADJI Ali	Membre
GIC ALZIABA	M.	ABAKAR MASSAOU	Délégué
GIC ALZIABA	M.	ALHADJI OUMAR ABAKACHI	Secrétaire
GIC ANDESSAMATICO	M.	GOUDJA Issa	Membre
GIC ANDESSAMATICO	M.	GOUDJA Yaya	Délégué
GIC ANDESSAMATICO	M.	MAHAMAI Ousmane	Délégué
GIC ATAPADAI	Mme	ASSOUALAGE Ndjidda	Membre
GIC ATAPADAI	M.	SERVICE Achnuga	Délégué
GIC BANAIYO	M.	ADAM Boukar	Délégué

Projets, ONGs et organisations rencontrés	Titre	Prénom et nom des personnes rencontrées	Fonction
GIC BARKA AKARAM	M.	DAIBOU NDJIDDA	Délégué
GIC BIFAWA	M.	FALTA Abounard	Membre
GIC BONOUE DE BILE	M.	ALIMA Adraman	Membre
GIC BONOUE DE BILE	M.	AMINA Ibrahim	Membre
GIC BONOUE DE BILE	M.	ZIBRI Aissatan	Membre
GIC ECONOMIE	M.	AMINA Modou	Membre
GIC ECONOMIE	M.	BINTOU ABDALLA	Membre
GIC FANTOUYOO	M.	HASSAN Babba Ganarou	Secrétaire
GIC Femme Dynamique	Mme	AMSAMI Gatchi	Membre
GIC Femme Dynamique	Mme	BOUKAR Halaka	Délégué
GIC Femme Dynamique	M.	DOUBDJE Nassourou	Membre
GIC ISTIFAK	M.	MOUKTAR Younouss	Délégué
GIC JEFEDE (Jeune femme pour le Développement)	M.	ASSAME Malloum	Membre
GIC JEFEDE (Jeune femme pour le Développement)	Mme	NGONO Ebe	Membre
GIC KAKOUGUEDJI	M.	BANA Ali	Membre
GIC KIDJIRUATARI	M.	GANAMA Ali	Commissaire au compte
GIC KIDJIRUATARI	M.	HADIDJA Malloum	Secrétaire
GIC Mai AZAKOU	Mme	HAROU DJIDDA	Membre
GIC Mai AZAKOU	Mme	MARIAABELE	Délégué
GIC NARRAL des Agroéleveurs	M.	ABDOULAYE Mahounde	Membre
GIC NARRAL des Agroéleveurs	M.	BOUKAR Ganarou	Membre
GIC Ngamme WAZA	M.	ALI KAO Dowlow	Délégué
GIC NGOUROU KOUROU	M.	MARA Djangoudoum	Secrétaire
GIC RDC de WAZA	M.	SOUMAI Evele	Délégué
GIC SATITYENNE	M.	FALMATA Modou	Trésorier
Projets, ONGs et organisations rencontrés	Titre	Prénom et nom des personnes rencontrées	Fonction
GIC SATITYENNE	Mme	HAWA Malaba	Délégué
GIC SECSEBNO	M.	MAHAMAT Daldaba	Membre
GIC Solidarité Guide Touristique PNW	Mme	BOUKAR Bana	Membre
GIC Solidarité touristique PNW	Mme	AWERSIN ASSIMINGA Ismaila	Membre
GIC Solidarité touristique PNW	Mme	BOUKAR Ousmane	Membre
GIC VICHITKOU WAZA	M.	AMSSA Abba Charia	Délégué
GIC VICHITKOU WAZA	M.	Dougdje Sali	Membre
GIC YANA SAPIA	M.	ZAKARIA	Secrétaire
Groupe IYAGAMI	M.	DAWAI Todou	
Groupe IYAGAMI	Mme	GAOU MAOUKA	
Man&Nature	M.	Tournebize Theo	Assistant technique des projets en économie verte
Observatoire National sur les Changements climatiques - ONACC	Prof.	AMOUGOU Joseph	Directeur Général
Observatoire National sur les Changements climatiques - ONACC	M.	FORGHAB Patrick Mbomba	Directeur Adjoint
PADFA - Maroua	M.	ABBA Boukar	Chef d'antenne
PADFA - Maroua	M.	BITTY Charles	SGR/ Mra
Parc National de la Bénoué	M.	MBAMBA MBAMBA Jean Paul Kevin	Conservateur
Parc National de la Bénoué	Mme	MDEMANGANG MARIE	Assistant Projet
Parc National de la Bénoué	M.	NARKE Jean Cyrille	Coordonnateur du projet de sécurisation et cogestion des corridors de passage de la faune
Parc National de la Bénoué	M.	REPHEAL Ngandinde	Eco garde
Parc National de la Bénoué	M.	YINYANG Mbezandi	Eco garde
Parc National de Waza	M.	MAKTOUSSIDI	Eco garde
Parc national de Waza	M.	NDJIDDA Andre	Conservateur
People Finance - EMF	M.	BAKANI Musa	PEFI People Finance EMF
PI de Waza	M.	ABAMET Galadima	Commissaire spécial

Projets, ONGs et organisations rencontrés	Titre	Prénom et nom des personnes rencontrées	Fonction
PLANOPAC - Plate-forme nationale des organisations professionnelles agro-sylvo-pastorales du Cameroun	Mme	KAKAMBI Gaëlle	Chargée de programme
PLANOPAC - Plate-forme nationale des organisations professionnelles agro-sylvo-pastorales du Cameroun	M.	TCHUISSEU Miguel	Responsable technique
PLANOPAC Nord - Plate-forme nationale des organisations professionnelles agro-sylvo-pastorales du Cameroun	M.	PAKAH Samuel	
Programme ACEFA	M.	MAGRON	Représentant de l'antenne EN
Projet d'investissement des marchés agricoles - PIDMA	M.	KENGNE	Assistant technique en financement rural
SAILD Maroua - Service d'appui aux initiatives Locales de Développement	M.	BOUBA	Chef d'antenne
SAILD Service d'appui aux initiatives Locales de Développement		HOZIER Nana	Secrétaire Général
SAILD Yaounde - Service d'appui aux initiatives Locales de Développement	M.	NANA CHIMI Hozier	Secrétaire général
UICN - Union International pour la conservation de la Nature	Mr	Atangana Alain	Consultant, Docteur en Agroforesterie
UICN - Union International pour la conservation de la Nature	Mme	Mbenda Rosette	Consultante sociologue formatrice
UICN - Union International pour la conservation de la Nature	Mme	Aicha Moussa	Cheffe de Projet
UICN - Union International pour la conservation de la Nature	M.	Jiagho Rémi	Chargé de programme
Union de comités villageois F1	M.	ABBO Hamadou	Président
ZICGC - n°4 périphérie Parc Bénoué	M.	ASSABE Bello	Producteur d'Igname de DEMSA
ZICGC - n°4 périphérie Parc Bénoué	M.	DJAOUYANG Jean	Producteur de coton mais
ZICGC - n°4 périphérie Parc Bénoué		Emmanuel	CMC
ZICGC - n°4 périphérie Parc Bénoué	M.	LAASSOUM Amos	Producteur de maïs et d'arachide
ZICGC - n°4 périphérie Parc Bénoué	M.	MOISGIMENA Souley	Producteur d'Igname de DEMSA
ZICGC - n°4 périphérie Parc Bénoué	Mme	NENE Boubba	Présidente
ZICGC - n°4 périphérie Parc Bénoué	M.	NJOBIDI	Producteur de CMI
ZICGC - n°4 périphérie Parc Bénoué	M.	NONSYBRA Marc	Producteur de Igname
ZICGC - n°4 périphérie Parc Bénoué	M.	OUMARRE Badi	Producteur de maïs arachide oignon coton soja
ZICGC - n°4 périphérie Parc Bénoué	M.	PHENWORE Delphine	Producteur d'arachide
Projets, ONGs et organisations rencontrés	Titre	Prénom et nom des personnes rencontrées	Fonction
ZICGC - n°4 périphérie Parc Bénoué	M.	SADOU Taghé	CVF
ZICGC - n°4 périphérie Parc Bénoué	M.	SALI BELLO Mboukma	Producteur de maïs
ZICGC - n°4 périphérie Parc Bénoué	M.	SINHEBA Sandawa	Producteur d'Igname de DEMSA
ZICGC - n°4 périphérie Parc Bénoué	M.	TOURMBA Messingeu	Producteur de maïs arachide oignon coton soja
ZICGC - n°4 périphérie Parc Bénoué	M.	VONDON Labai	Comesan Paller
ZICGC - n°4 périphérie Parc Bénoué	M.	YAMPILI Moussa	Producteur d'Igname de DEMSA
ZICGC - n°4 périphérie Parc Bénoué	M.	Manga Mika	Consultant Spécialiste Infrastructure

ANNEX 4 (IN FRENCH): SOCIAL, ENVIRONMENTAL AND CLIMATE ASSESSMENT PROCEDURES (SECAP) REVIEW NOTE (IFAD-BASELINE INVESTMENT ECO-JEUNES)

INTRODUCTION

1. Le Projet ECO-Jeunes vise à promouvoir l'entrepreneuriat et les initiatives agro-écologiques durables et résilients au changement climatique pour les jeunes ruraux à la périphérie d'aires de conservation. Il adopte une approche en trois volets visant (i) à promouvoir des opportunités économiques viables pour les jeunes ruraux dans le secteur de l'éco-entrepreneuriat afin de (ii) gérer durablement les terres et les ressources végétales autour des aires protégées, permettant de (iii) développer des synergies durables de conservation entre les zones périphériques et des aires protégées.

2. La zone d'intervention du Projet ECO-Jeunes est localisée dans les trois provinces de l'Extrême-Nord, du Nord et du Nord-Ouest. Le Projet cible les zones périphériques aux points chauds de la biodiversité, qui sont respectivement le parc national de Waza, le parc national de la Bénoué et le parc national de Fongom-Kimbi.

A. Caractéristiques du paysage et questions principales (sociales, environnementales et climatiques)

Contexte socio-culturel

3. La population du Cameroun est caractérisée par une extrême jeunesse avec la moitié de la population ayant moins de 17 ans. Entre 2001 et 2007, la pauvreté en milieu rural s'est accentuée atteignant 55% de la population et le taux du sous-emploi chez les jeunes s'est élevé à 85%.

4. Les zones d'intervention du Projet sont parmi celles les plus touchées par l'insécurité alimentaire avec une estimation de 19% de la population en insécurité alimentaire et 15 % en état de malnutrition aigüe globale dans les régions de l'Extrême-Nord et du Nord. La population ayant besoins d'une assistance est estimée à respectivement 37, 11 et 3 %¹² pour les régions de l'Extrême-Nord, du Nord et du Nord-ouest. L'ensemble de ces facteurs force les jeunes ruraux à rechercher des alternatives économiques. Les violences liées au conflit avec Boko-Haram ont provoqué le déplacement en interne de 93 000 Camerounais et l'accueil dans ces mêmes régions de 65 000 réfugiés nigériens.

5. L'antagonisme entre le droit foncier moderne et le droit foncier coutumier reste un facteur limitant au développement agricole. Dans la région du Nord, le périmètre du Lac de Lagdo met en évidence des problématiques foncières complémentaires (i) sur la compétition entre les migrants, (ii) sur l'aménagement des zones irriguées par ces mêmes acteurs et (iii) sur l'attribution de ces zones via des fiches d'attribution, n'ayant ni de valeur foncière ni de valeur auprès du pouvoir traditionnel.¹³ Dans la région du Nord-Ouest, les conflits fonciers sont essentiellement liés à l'accès à la terre, opposant les habitants ou ethnies différentes au niveau des frontières communes de leur village¹⁴. Un Document de Travail a été réalisé spécialement dans le but d'approfondir ces aspects. Le Projet s'efforcera de prendre en considération l'ensemble des parties prenantes et de faire que les autorités traditionnelles et administratives soient les garantes de l'accès au foncier pour les jeunes du Projet.

¹² Office for the Coordination of the Humanitarian Affairs (OCHA) – 2016 – Aperçu des humanitaires 2016 Cameroun

¹³ CNRS, Abdoulay Mfouwou – 2013 - Migrations, dynamiques agricoles et problèmes fonciers en Afrique subsaharienne : Le périmètre irrigué de Lagdo (Nord-Cameroun)

¹⁴ Irenees – DOMOU Bergeline – 2013 – Conflit foncier et frontalier entre les Bali-Nyonga et les Bahouoc dans le Nord-Ouest Cameroun.

6. Le Projet sera mis en œuvre dans trois zones aux caractéristiques socio-environnementales spécifiques :

dans la région de l'Extrême-Nord et dans la périphérie du parc national de Waza : (i) une zone agro-écologique soudano-sahélienne où les pratiques traditionnelles d'agriculture entraînent une forte dégradation des sols en terres hardées ; (ii) une déforestation liée aux besoins en bois énergie des populations ; (iii) une forte prévalence de l'insécurité alimentaire qui atteint 18%¹⁵ ; (iv) à une faible disponibilité en eau ; (v) une dégradation des infrastructures routières ; (vi) un accès très difficile aux institutions de microfinances ; (vii) une forte insécurité et un embrigadement de certains jeunes par les terroristes de Boko Haram bien que cette situation évolue positivement ces derniers mois ; (viii) une population de déplacés importante et en constante augmentation en raison du conflit armé évoqué au point précédent ; (ix) une présence de réfugiés transfrontaliers regroupés dans des camps humanitaires. ;

Dans la région du Nord et dans la périphérie du parc national de la Bénoué : (i) une forte pression démographique en raison des périodes antérieures de migration de population ; (ii) une forte prévalence de l'insécurité alimentaire qui atteint 15% ; (iii) une faible disponibilité en eau ; (iv) une déforestation et une production de charbon de bois à destination des centres urbains ; (v) un accès très difficile aux établissements de microfinances en raison de l'éloignement

dans la région du Nord-Ouest et dans la périphérie du parc national de Kimbi-Fungom. (i) une faible densité démographique de la population riveraine ; (ii) une mosaïque de forêt dense humide et de savane herbeuse d'altitude permettant des activités d'agroforesterie et l'exploitation de produits forestiers non ligneux très appréciés : mangue sauvage, njansang ; (iii) un dynamisme entrepreneurial dans l'ensemble de la région ; (iv) des pressions transfrontalières sur la biodiversité par la déforestation ; (v) la transhumance dans la partie septentrional de la région.

Ressources naturelles et leur gestion

7. Le relief du Cameroun se caractérise par :

(a) les hautes terres de l'Ouest qui forment une chaîne de massifs montagneux, disposés du sud-ouest au nord en un arc de cercle appelé la dorsale camerounaise et allant des volcans encore en activité du Mont Cameroun (4 095 m) au Sud-Ouest, d'Okou (3 008 m) dans le Nord-Ouest jusqu'aux monts Mandara (2 050 m) dans l'Extrême Nord ;

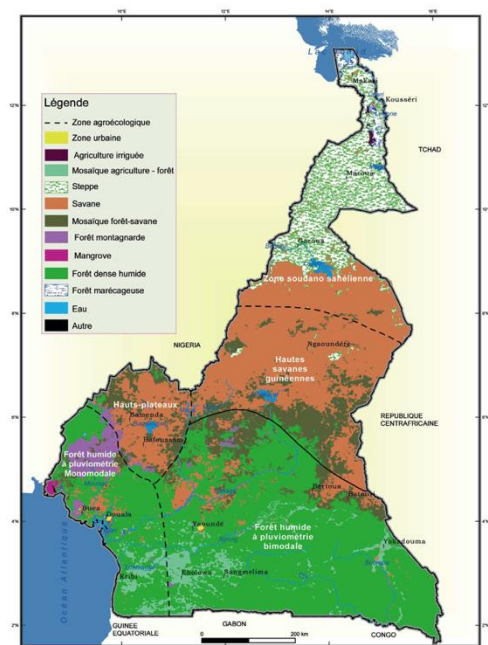
les basses terres du Centre et de l'Est : la cuvette de Mamfé (Sud-Ouest), la cuvette de la Bénoué et la plaine du Nord ;

les plateaux : le Sud camerounais, avec une altitude moyenne de 650 m et l'Adamaoua - le château d'eau du Cameroun - dont l'altitude moyenne est de 1 000 m et monte jusqu'à 2 650 m.

8. La position géographique du Cameroun fait que le pays est l'un des plus diversifiés en Afrique sub-saharienne sur le plan agro-écologique. On distingue du nord au sud : (i) la zone soudano-sahélienne (provinces du Nord et de l'Extrême-Nord) ; (ii) la zone des hautes savanes guinéennes (province de l'Adamaoua et départements du Mbam, du Lom et Djerem dans le Centre et l'Est respectivement) ; (iii) la zone des hauts plateaux de l'Ouest (provinces de l'ouest et du Nord-Ouest) ; (iv) la zone forestière humide à pluviométrie monomodale (provinces du Littoral et du Sud-Ouest) ; (v) la zone forestière à pluviométrie bimodale (provinces du Centre, du Sud et de l'Est). Plus de 40% de la superficie du pays reçoit plus de 3 900 mm de pluie par année.

¹⁵ Plan National d'Investissement Agricole du Cameroun 2014 -2020

FIGURE 1. ZONES ECOLOGIQUE DU CAMEROUN
(SOURCE: MINEPAT: ATLAS NATIONAL DE DEVELOPPEMENT PHYSIQUE DU CAMEROUN)



9. Au sein de la zone soudano-sahélienne :

- (b) le parc de Waza est localisé dans des formations végétales : (i) de steppes à épineux dans la zone de plaine Diamaré, ancienne zone d'accueil de migrants, aujourd'hui zone de départ de migrants ; (ii) de vastes prairies périodiquement inondées ou « Yaérés » en bordure Est du parc, marquées par une richesse de la biodiversité et représentant une zone agro-pastorale essentielle de la région ;

le parc de la Bénoué est localisé dans des formations végétales de savanes soudaniennes boisées et de forêts claires sèches soudaniennes.

10. Au sein de la zone des Hauts Plateaux de l'Ouest, le nouveau parc national de Fungom-Kimbi est localisé au niveau des « Grassfields » dont la strate herbacée est dominée par *Pennisetum purpureum* et *Imperata cylindrica* et le couvert ligneux est fortement anthropisé.

Ressources en eau de surface

11. Les disponibilités des ressources en eau de surface à l'échelle nationale sont de 268 milliards de m³. Le Cameroun possède un réseau dense de fleuves réparties sur cinq bassins hydrologiques : (i) bassin du lac Tchad, (ii) bassin du Niger, (iii) bassin du Congo, (iv) bassin des fleuves côtiers.

12. Régions de l'Extrême Nord et du Nord. Elles sont soumises à un régime de type tropical sahélien, avec des crues annuelles brutales et des étiages très prolongés. Ce phénomène est localement très important pour les cultures de décrues et pour les activités agro-pastorales. La périphérie du parc national de la Bénoué est parcourue par des cours d'eau à l'Ouest, le Mayo Salo et le Mayo Farda, et la Rivière Bénoué à l'est. Celle du parc national de Waza est traversée à l'ouest par le Mayo Rando et le Mayo Motorsolo et à l'est par ses plaines inondées ou *Yaérés*. Les installations de retenue d'eau comme celle de Maga et de la digue le long du fleuve Logone, à l'Extrême-Nord, ont permis la mise en place d'une irrigation

gravitaire de casiers rizicoles à l'aval sur près de 5 600 hectares.¹⁶ Mais elles ont contribué également au dysfonctionnement hydro-écologique et socio-économique des yaérés en aval, en diminuant les apports en saison des pluies. Les baisses de la pluviométrie et des apports en limons fertiles accentuent ce phénomène avec les conséquences suivantes : (i) la réduction des surfaces inondées de 60% ; (ii) le déplacement de la population ; (iii) une forte baisse de la productivité des pâturages, de l'agriculture de décrue et des activités de pêche et ; (iv) la diminution de la capacité d'accueil de la faune sauvage et l'augmentation des conflits.¹⁷

13. Région du Nord-Ouest. Elle est considérée comme le « deuxième château d'eau » du Cameroun, grâce aux écosystèmes et au système hydrographique local. Mais la mauvaise gestion des ressources, la déforestation des bassins versants et le défrichement des forêts galeries et forêts de raphia au niveau des bas-fonds ont fortement contribué à diminuer la capacité de rétention en eau des sols, entraînant des problèmes de disponibilité en eau. Le parc national de Kimbi-Fungom se situe sur la partie plus en amont du bassin du Niger, et est de ce fait d'une importance fondamentale dans le fonctionnement hydrographique du bassin.

14. L'eau de surface est prioritairement mobilisée pour les activités pastorales et d'irrigation. Dans les régions où l'eau est rare, la ressource souterraine est également exploitée. Malgré les structures d'analyse existantes, la qualité de la ressource est très peu suivie depuis plusieurs décennies et ne permet pas sa bonne gestion.

15. Une préoccupation majeure en matière d'écosystèmes hydrologiques consiste à procéder à la canalisation d'un minimum d'eaux de ruissellement, en préservant et restaurant l'approvisionnement en eau. Ces écosystèmes aquatiques sont très riches en termes de biodiversité et nécessitent d'être protégés. De nombreuses activités agropastorales dépendent du bon rétablissement de ces écosystèmes, comme pour les « Yaérés » de l'Extrême-Nord.

Ressource en eau souterraine

16. Cette ressource est liée directement à celle des eaux de surface et à ses caractéristiques. Les disponibilités de ces eaux sont évaluées à 56 milliards de m³ et représente 21% des ressources en eau de surface. L'essentiel des ressources en eau souterraine du Cameroun est contenu dans trois bassins sédimentaires et une zone de socle.

17. Le bassin sédimentaire du lac Tchad couvre une superficie de 19 800 km² au Cameroun. Les formations hydrogéologiques du bassin sont : (i) la nappe des terrains quaternaires constituée d'alluvions - la nappe phréatique est d'une très grande importance dans la cuvette tchadienne pour les activités locales ; (ii) la nappe des sables du pliocène supérieure d'une profondeur variant de 80 à 300 mètres, jaillissante dans la partie nord ; (iii) et la nappe du continental terminal sableux d'une profondeur entre 300 et 500 m de profondeur, présentant un artésianisme dans l'Extrême-Nord. La mise en place d'infrastructures d'hydraulique pastorale dans la périphérie du Parc de Waza sera effectuée en lien avec la nappe des sables du pliocène supérieure.

18. Aucun travail n'a été effectué pour quantifier les réserves en eau souterraine de chaque formation aquifère. Les aménagements hydrauliques et les conditions bioclimatiques diminuent le volume des inondations dans la plaine du Logone et ont un impact certain sur la recharge de la nappe quaternaire, qui

¹⁶ Banque Mondiale – 2012 - Evaluation de l'état du barrage, des digues, du réservoir et des structures hydrauliques du système de Maga-Logone-Vrick - des digues et du barrage

¹⁷ Gouvernement du Cameroun – 2006 - Annexe 5 – Plan d'action National de Lutte Contre la Désertification (PAN/LCD)

World Meteorological Organization, Global Water Partnership - 2003 - Cameroun : gestion intégrée des eaux de crues – cas de la plaine d'inondation du fleuve Logone

constitue la principale source d'approvisionnement en eaux des populations et des cheptels de la plaine en saison sèche.

19. La saturation des ressources en quartz et en calcite et la forte teneur en nitrates (1,5 à 29 mg/l) et en chlorures (29 à 182 mg/l), témoignent en partie d'une pollution anthropique.¹⁸

20. Le bassin sédimentaire de la Bénoué couvre une superficie de 800 km². Il est composé d'un aquifère dans les dépôts crétacés et d'aquifères dans les alluvions quaternaires. Les nappes en surface sont de faible quantité, mais sont essentielles pour les usages domestiques ruraux. L'alimentation de ces sources s'effectue par infiltration directe et par les écoulements de surface, elle est favorisée par la couverture des sols et sa préservation. Les eaux sont caractérisées par leur alcalinité avec un pH acide à neutre (6,4 à 7,3) et de forte teneur en calcium (de 122 à 149 mg/l).

21. La zone de Socle occupe près de 90% de la surface du territoire, avec un volume d'eau d'environ 15,4 milliards de m³. Elle est composée de deux types d'aquifères superposés : (i) un aquifère d'altérites sus-jacents continus et ; (ii) un aquifère de fractures et fissures discontinues. La recharge de la nappe s'effectue soit par alimentation verticale directe par infiltration des eaux de précipitation et de ruissellement, soit de manière latérale depuis les berges des cours d'eau à travers les fissures et diaclase.

22. Les différents parcs nationaux du Projet et leur zone périphérique sont localisés directement à l'aplomb de ces bassins. Ils jouent ainsi un rôle essentiel dans la recharge des aquifères par alimentation verticale.

FIGURE 2 : BASSINS HYDROLOGIQUES DU CAMEROUN
(SOURCE : OLIVRY 1986)

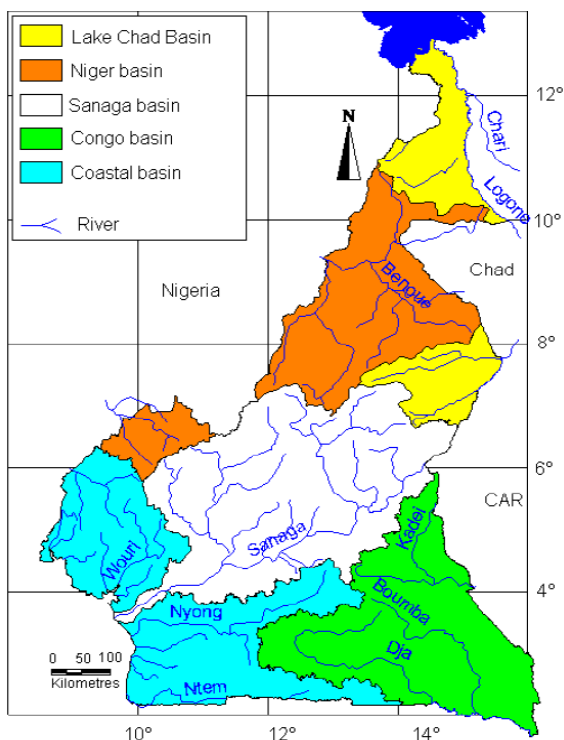
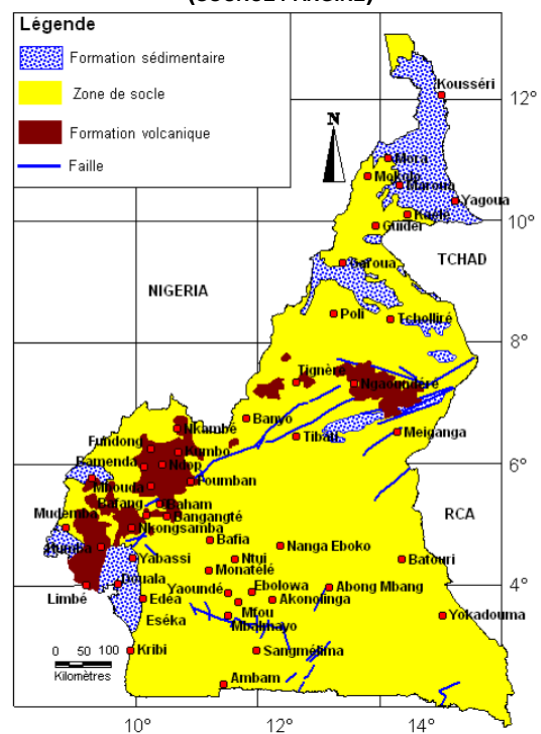


FIGURE 3 : PRINCIPALES FORMATIONS HYDROGEOLOGIQUES DU CAMEROUN
(SOURCE PANGIRE)



Ressources Forestières

¹⁸ Gouvernement du Cameroun – 2009 - Plan d'action national de gestion intégrée des ressources en eau (PANGIRE)

23. Les forêts couvrent 21,2 millions d'ha, soit 45% du territoire national. Le domaine forestier national représente 37% de la superficie du Cameroun. En 2011, 46% du domaine forestier était affecté aux forêts de production, 42% aux aires protégées, 6% aux forêts communautaires, 5% aux forêts communales et 1% à la vente de coupe.

24. Cette ressource représente un important levier économique pour le développement du Cameroun, avec 327 milliards de Francs CFA de chiffre d'affaire pour la seule filière bois. Elle représente également l'une des plus importantes réserves en biodiversité, et propose de nombreux services éco-systémiques dont l'exploitation de produits forestiers non ligneux qui est encore peu développée. Cette ressource est sujette à la déforestation d'un taux net annuel d'environ 1%¹⁹, en considérant l'ensemble des formations arborées du territoire, soit environ 220 000 hectares par an. Le taux de déforestation annuel net des forêts denses au Cameroun est estimé à 0,14%²⁰, qui est le deuxième plus important de ceux du bassin du Congo, après la République Démocratique du Congo avec 0,2%, mais reste faible.²¹ À côté de la déforestation, la dégradation des forêts apparaît comme le phénomène le plus répandu au Cameroun. Les statistiques 2003-2004 évaluent à 25% les forêts camerounaises non perturbées.²²

25. Région de l'Extrême-Nord : zone soudano-sahélienne. Les espèces herbacées et ligneuses de la savane ont de multiples usages mais la production du bois de feu et de charbon, stimulée par une forte demande urbaine, constitue la plus importante forme d'exploitation. La surexploitation de ces ressources a induit (i) une forte dégradation du couvert végétal (perte de 18 880 ha pour la seule région Nord sur la période 2001-2014), (ii) une raréfaction des ressources, (iii) la modification des écosystèmes et (iv) une importante perte en biodiversité. La coupe de bois constitue, sous sa forme actuelle, l'un des facteurs les plus perturbateurs pour le milieu et une réelle menace pour les écosystèmes de savane au Nord-Cameroun. Elle n'offre pas d'opportunité économique durable pour les populations. Le pâturage aérien est également un facteur de stress du couvert végétal, surtout quand il est pratiqué par émondage (pour les bovins/ovins).

26. Région du Nord. Le phénomène de déforestation au sein des zones périphériques au parc national de la Bénoué est omniprésent. Il impacte négativement la préservation de la zone protégée avoisinante. La pression foncière et la dégradation de la fertilité des sols poussent la population à défricher de nouvelles terres et est une cause majeure de la déforestation. La région du Nord est un front pionnier où des migrants des régions de l'Extrême-Nord s'installent à un rythme important, jusque dans les parcs. La gestion des forêts communautaires dans ces zones permettrait de favoriser : (i) la gestion durable des ressources de la zone périphérique ; (ii) la conservation et la reconstitution de l'équilibre écologique de la zone périphérique et de la zone protégée et ; (iii) le soutien économique des populations par la valorisation des services éco-systémiques.

27. Région du Nord-Ouest. Il ne reste que très peu de forêt dans son état naturel à l'exception des zones inaccessibles et des forêts sacrées. De nombreuses plantations à dominance d'eucalyptus, de pins ou de cyprès, couvrent près de 30 % à 40 % des besoins en bois de chauffage dans la région, mais appauvrissent les sols, assèchent les sources de captage d'eau et diminuent la biodiversité. Des pratiques d'agroforesterie à base d'essences endogènes se mettent en place pour tenter de rétablir un équilibre plus durable. Le parc de Kimbi-Fungom est encore un espace préservé de cette région, même s'il fait face à

¹⁹ Ministry of Environment and Forests (MINEF) et Food and Agriculture Organization (FAO) 2007 évaluation des ressources forestières nationales du Cameroun 2003–2004, Yaoundé, Cameroun.

²⁰ Duveiller et al. - 2008

²¹ Observatoire des Forêts de l'Afrique Centrale OFAC – 2008 - Les Forêts du Bassin du Congo – Etat des forêts 2008

²² Center for International Forest Research (CIFOR) – 2011 - Le contexte de la REDD+ au Cameroun

des pressions anthropiques transfrontalières, comme la déforestation, qui mettent en péril la conservation des écosystèmes de bordure.

28. **Les produits forestiers non ligneux.** En dehors du bois, les ressources forestières fournissent d'autres produits essentiels pour la satisfaction des besoins des communautés locales. Dans ce contexte la cueillette des feuilles, fruits, exsudats, écorces de certaines espèces, contribue à la sécurité alimentaire et à la génération de revenus monétaires pour les ménages les plus pauvres, tout en sensibilisant les populations à la gestion durable et à la préservation de ces ressources.

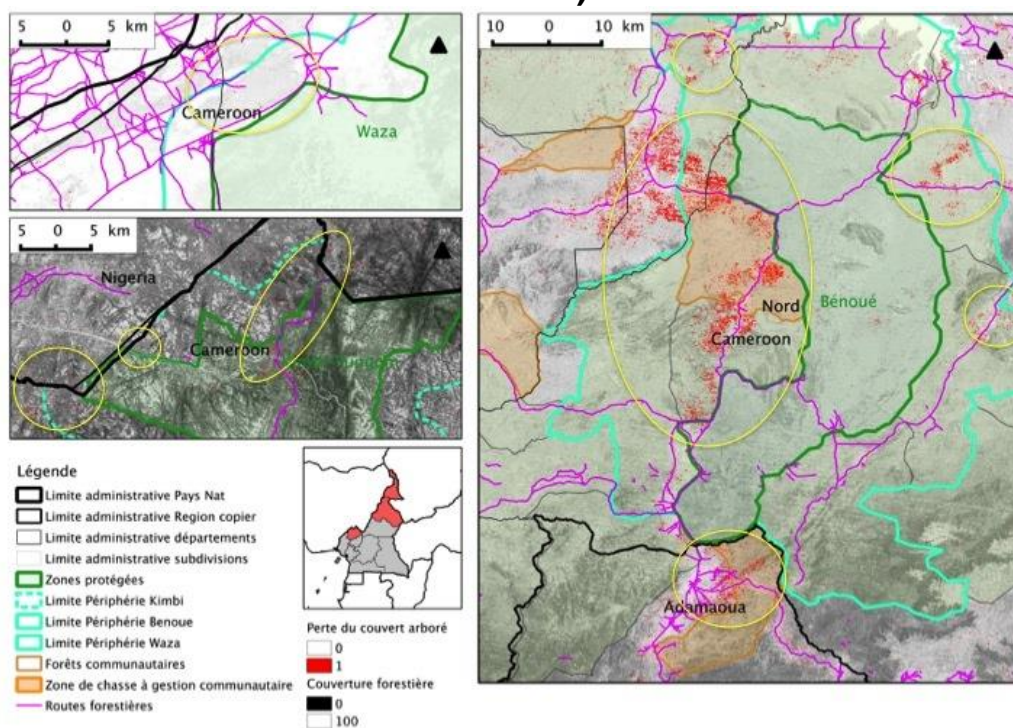
29. Plusieurs produits sont déjà valorisés dans ce domaine :

(c) à l'Extrême-Nord avec la gomme arabique (*Acacia seyal*, *Acacia senegalensis*), les feuilles de baobab (*Adonsonia digitata*) et les fruits et feuilles de balanites (*Balanites aegyptiaca*) ;

au Nord, le karité (*Butyrospermum paradoxum*), les fruits et feuilles de balanites (*Balanites aegyptiaca*) et les fruits des anacardiens (*Anacardium occidentale*) ;

au Nord-Ouest avec la mangue sauvage (*Irvingia gabonensis*, *Irvingia wombulu*), le Njangsang (*Riciodendrum heudelotti*) et l'écorce du prunier d'Afrique (*Prunus africana*).

• **FIGURE 4 : PERTE DE COUVERT ARBORE DANS LES ZONES D'ETUDES ET POTENTIELLES ZONES DE DEFORESTATION (SOURCE : GLOBAL FOREST CHANGE)**



Biodiversité

30. **Richesse des aires protégées.** Les aires protégées sont les zones de concentration majeures de la biodiversité. Elles abritent environ 90% des espèces animales du pays, 95% des espèces végétales, près de 65% des habitats et 80% des écosystèmes du pays. Elles sont réparties en parcs nationaux (60%), réserves fauniques (14%), sanctuaires (10%), jardins zoologiques (10%) et réserves écologiques (10%). Elles couvrent environs 3,7 millions d'hectares. Les aires de production protégée ou zones de chasse sont au nombre de 72 (47 zones de chasse et 25 zones de chasse communautaire) et couvrent 5,7 millions

d'hectares, soit 12% du territoire national. Les forêts communautaires ont subi un très grand essor, atteignant 301 sites en 2011 et un cumul de près d'un million d'hectares.

31. La politique du Cameroun a renforcé la présence d'aires protégées en doublant leur nombre entre 2000 et 2011 et en continuant à soutenir leur création. La mise en place du parc de Kimbi-Fungom en 2015 en est la preuve. Le gouvernement a également mis en place des mesures de sécurisation des animaux suite aux braconnages des éléphants à Bouda Ndjida en 2012, par l'adoption d'un Plan d'Extrême Urgence de Lutte Anti-braconnage le 23 mars 2013 (PEXULAB).

32. **Ecosystèmes.** La zone septentrionale d'intervention du Projet est dominée par l'écosystème de Savane Nord (i) interconnecté avec les pays frontaliers et leurs aires protégées, (ii) présentant un réseau hydrographique essentiel aux populations et à la faune locale, (iii) caractérisé par une diversité de faune, flore et d'écosystèmes de zone humide, (iv) et symbole de refuge des grands mammifères. La région Nord-Ouest est localisée au sein d'un écosystème de montagnes, représentatif d'un fort taux d'endémisme.

33. **Pressions sur les aires protégées et la biodiversité.** Malgré les efforts réalisés, les aires protégées se sont détériorées : (i) 137 espèces sont considérées en danger critique, 242 en danger, 397 vulnérables, 142 quasiment menacées et 2017 moins menacées. Ces espèces menacées sont majoritairement présentes dans les zones forestières, les savanes et les zones humides.²³ Les raisons sont principalement (i) La modification et dégradation des habitats, (ii) La dégradation des formations forestières, (iii) la dégradation des ressources en eau et des zones humides, (iv) La désertification, (v) et l'impact du changement climatique.

Parc national de Waza et sa zone périphérique

34. Le Parc National de Waza a été créé par l'arrêté n°71 du 24 Mars 1934, sous le nom de réserve de chasse "Zina-Waza" puis a été érigé en Parc National de Waza par arrêté n°120 / SEDR du 05 Décembre 1968. Cette zone a également été inscrite en tant que réserve de biosphère en 1982, et est soumise au classement au Patrimoine mondial de l'UNESCO le 18 avril 2006. Enfin la plaine inondable de l'Est du Parc a été classée comme site RAMSAR en 2006.

35. Le parc est un refuge (i) pour les grands mammifères de l'écosystème de Savane Nord et (ii) pour les espèces d'oiseaux d'eau avec la plaine inondable à l'Est du parc et (iii) est un lieu essentiel du développement des espèces piscicoles.

36. Outre les pressions anthropiques sur la flore et l'importante déforestation, le parc fait face aux (i) pressions anthropiques sur la faune sous forme de braconnage, de conflits entre la faune et les riverains pour le pâturage et les ressources en eau et des conflits d'usage avec les pêcheurs et les éleveurs en raison de la création de canaux, (ii) à la diminution de l'écotourisme, et donc de ses moyens de fonctionnement, en raison de la situation sécuritaire et (iii) les pressions climatiques.

Parc national de la Bénoué et sa zone périphérique

37. La réserve de faune de la Bénoué a été créée le 11 novembre 1932 pour devenir ensuite Parc National avec le Décret N°120 du 5 décembre 1968. Elle a ensuite été classée en Réserve de biosphère de l'UNESCO en 1981. Les limites des huit zones d'intérêt cynégétiques (ZIC) attenantes au parc national ont été définies dans l'Arrêté N°0580 du 27 Août 1998.

38. La végétation du parc national de la Bénoué et de ses environs est de type soudano-guinéen caractérisée par des savanes arborées/boisées et des savanes herbeuses²⁴. Plus de 26 espèces de grands et moyens mammifères ont été recensés, dont les plus représentés sont les cobes de Buffon, les

²³ Site internet de la liste rouge de l'Union Internationale pour la Conservation de la Nature : <http://discover.iucnredlist.org/discover>

²⁴ Start et Witt (1977) et DONFACK et al. (1999)

cynocéphales, les bubales, les ourébis, les hippotragues. Ce parc est essentiel au déplacement des grands mammifères au sein du réseau de aires protégées et de l'écosystème de savane nord. L'avifaune comprend plus de 306 espèces. L'important réseau hydrographique axé sur le fleuve Bénoué comprend une gamme variée d'espèces halieutiques.

39. Outre les pressions anthropiques sur la flore et l'importante déforestation, le parc fait face (i) à de fortes pressions sur les corridors fauniques qui ont quasiment tous disparu aujourd'hui, (ii) à l'orpaillage, (iii) au braconnage et la vente de viande de brousse, (iv) aux pressions engendrées par la multitude des conflits entre les migrants, la population riveraine, les éleveurs transhumants, la faune sauvage et les conservateurs du parc.

Parc national de Kimbi-Fungom et sa zone périphérique

40. La réserve de faune de Kimbi a été créée en 1964, et représentait 5 625 ha²⁵. Le décret n°2015/0024 / PM du 3 février 2015 délimite et officialise la création du Parc National de Kimbi-Fungom de 95 380 ha, catégorie UICN II, unissant à la fois l'ancienne réserve de faune de Kimbi et toute une zone de hauts plateaux à l'Ouest, nommée Fungom.

41. Le parc national de Kimbi-Fungom est très important en termes de représentation d'espèces endémiques à la région Nord-Ouest ainsi qu'en terme de diversité de primates diurnes. En effet, au sein du parc national de Kimbi-Fungom, sept espèces de singes ont été vu et entendu (*Cercopithecus nictitans*, *Cercopithecus mona*, *Cercopithecus preussi*, *Cercopithecus erythrotis*, *Papio Anubis*, *Chlorocebus Tantalé*, *patas Erythrocebus*). Un autre singe, dont on dit se reproduire dans la partie sud de la région, aurait les caractéristiques physiques de *Mandrillus leucophaeus*. De ces espèces, quatre sont dénombrées sur la liste rouge de l'UICN : une espèce vulnérable (*Cercopithecus erythrotis*), deux espèces menacées d'extinction (*Cercopithecus preussi* et *Pan troglodytes*) et une espèce en danger critique (*Gorilla diehli*).

42. Dans la zone d'étude, la faible démographie entraîne de faibles pressions anthropiques sur la biodiversité. Néanmoins, on observe des pressions liées (i) aux activités transfrontalières de déforestation réalisée par les communautés provenant du Nigéria et (ii) les pressions liées à l'introduction des troupeaux des éleveurs à l'Est du parc, entraînant des conflits d'utilisation entre la faune sauvage et les animaux des troupeaux.

43. Le braconnage s'y fait encore à une échelle embryonnaire. Il est nécessaire d'envisager une intervention immédiate avant que la criminalité faunique n'y règne, contribuant ainsi à une décimation de ce potentiel faunique.

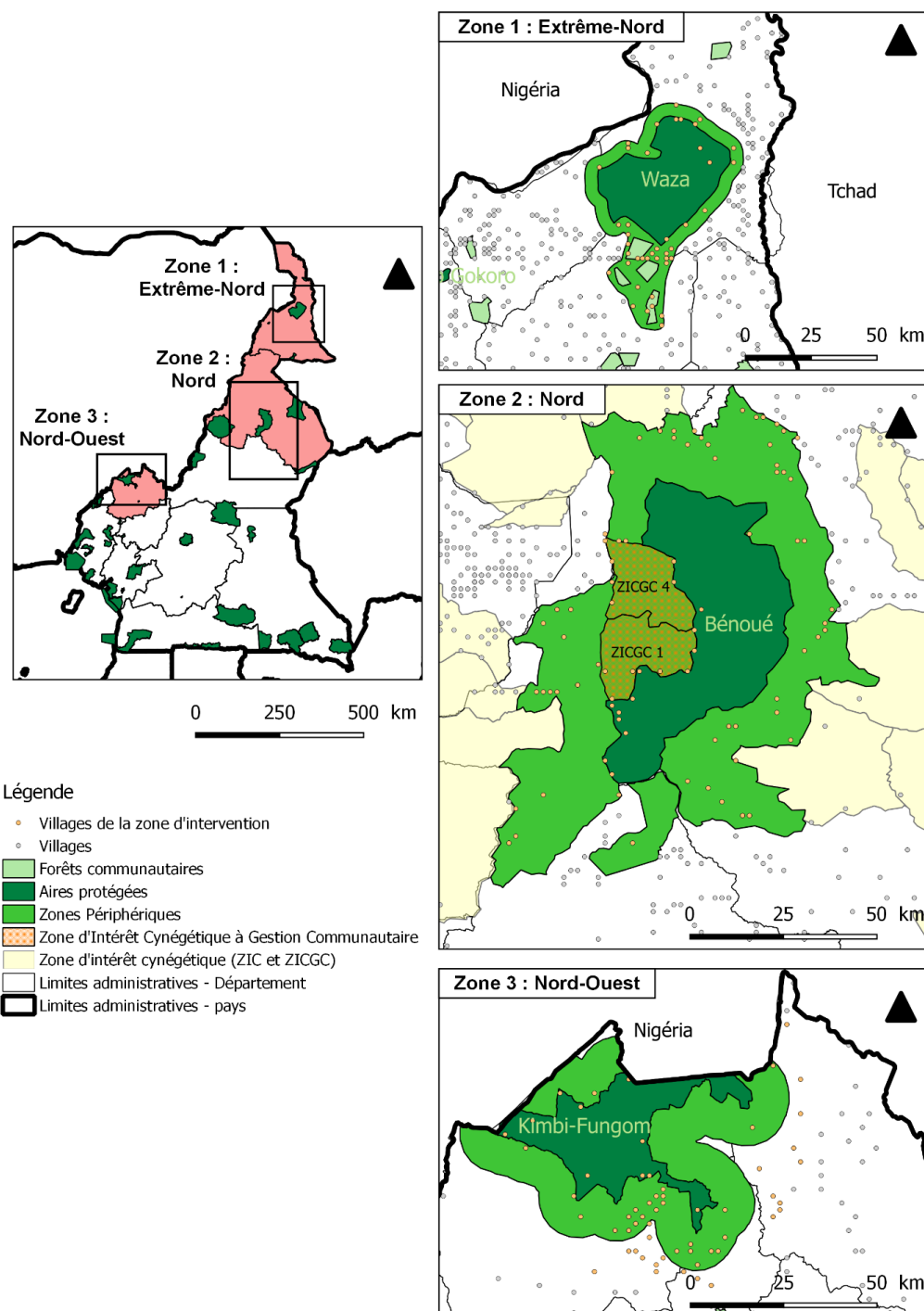
44. La délimitation de la zone d'intervention a été définie selon les critères suivants :

- (d) **Parc national de Waza.** La zone d'intervention s'étend sur une couronne de 5 km autour du parc national de Waza en incluant les zones où les initiatives de foresterie communautaire sont en cours. Elle intègre ainsi la définition de la zone d'utilisation partielle (assimilée zone périphérique, par Saleh en 2011) pour le parc de Waza, ainsi que les forêts communautaires en cours de création localisées au sud du Parc ;
- (e) **Parc de la Bénoué.** La zone d'intervention du Projet s'étend sur une couronne de 20 km autour du parc qui inclut les zones d'intérêt cynégétique à gestion communautaire (ZIC/GC) n°1 et n°4 et les zones d'intérêt cynégétique périphérique (ZIC) définies comme aire protégée par arrêté ;
- (f) **Parc de Kimbi-Fungom.** Aucun zonage n'est défini pour la zone périphérique du Parc. Il a été considéré une couronne de 10 km autour du parc national comme zone d'intervention.

²⁵ Aire protégée et faune sauvage – MINFOF Cameroun

45. En complément de la présente synthèse descriptive des différents parcs nationaux de la zone d'intervention (i) un Document de Travail spécifique au contexte de Biodiversité est disponible et (ii) une analyse SWOT de chacun de ces parcs est disponible en appendice 5 de la présente Note SECAP.

- **FIGURE 5 : LOCALISATION DES AIRES PROTEGEES, DES FORETS COMMUNAUTAIRES ET DES ZONES DE CHASSE DU PROJET ECO-JEUNES (SOURCE : ATLAS FORESTIER CAMEROUN)**



Systèmes de production

46. L'agriculture est dominée par environ deux millions de petites exploitations agricoles familiales, très sensibles aux aléas et accidents climatiques. Ces exploitations dépendent étroitement des ressources naturelles disponibles, avec des systèmes de production jouant un rôle déterminant dans la dégradation ou la préservation de ces dernières.

47. Région Extrême Nord : zone soudano-sahélienne. La zone est caractérisée par une mosaïque de sols et de formations édaphiques variés, très sensibles à l'érosion hydrique et éolienne, elle a été de ce fait définie comme zone d'action prioritaire I dans le cadre de lutte contre la désertification.

48. **Agriculture.** En dehors des monts Mandara, les systèmes de production sont essentiellement basés sur la culture du mil et du sorgho. La pression foncière conduit à un défrichement intensif et à une réduction des temps de jachère. Ces phénomènes conjugués à des conditions de stress climatique, favorisent la dégradation des terres et leur transformation en sol hardés stériles. Dans les monts Mandara, la création de terrasses en pierre permet de développer la culture sur forte pente. Mais l'exode rural et le manque d'entretien de ces terrasses, exposent les sols à une forte érosion hydrique.

*Sol hardé*²⁶ : ce type de sol est constitué d'une fine couche d'humus en surface recouvrant une couche compacte imperméable à l'eau, inhibant la croissance des racines. Sur une superficie totale de 10 millions d'hectares, dont plus de la moitié est une pénéplaine consacrée à l'agriculture, 15 à 20% des sols sont « hardés », 35 à 45 % sont détériorés et en voie d'hardéisation.

49. En sus des cultures pluviales, le muskuwaari (dans le yaéré de la plaine du Logone et dans les zones de décrue du lac Tchad) joue un rôle important dans le système agraire. Le riz se développe depuis peu sur les mêmes terrains inondés en saison des pluies. La productivité de cet agro-système provient essentiellement des inondations saisonnières annuelles qui renouvellent la fertilité.

*Yaéré*²⁷ : plaine d'inondation temporaire alimentée par le fleuve Logone. Ses pâturages sont exploités en saison sèche et les terres sont mises en cultures pour le Muskuwaari.

*Muskuwaari*²⁸ : Sorghos de saison sèche, repiqués sur les terres argileuses inondables. Cette culture se développant uniquement avec l'eau de la réserve utile des vertisols, elle est peu risquée du point de vue climatique.

50. La productivité agricole est cependant faible à l'échelle régionale, le bilan céréalier²⁹ est structurellement déficitaire (+/-100 000 t/an) dans l'Extrême Nord compte-tenu de la démographie de la zone (plus de 100 habitant au km²) et légèrement excédentaire dans le Nord (+/- 50 000 t/an)

51. Le maraîchage (notamment la culture de l'oignon) se développe autour des cours d'eau permanents (mare et fleuve Logone). Il s'agit de cultures à forte valeur ajoutée qui sont complémentaires aux activités vivrières car réalisées en saison sèche.

52. **Elevage.** Il joue un rôle important : la région concentre 38 % du cheptel national. On distingue plusieurs types d'élevage dans la zone : (i) une petite transhumance majoritaire qui exploite le yaéré en

²⁶ Institut de Recherche pour le Développement (IRD) – 1993 - Régénération des sols dégradés "hardé" au Nord-Cameroun - Caractérisation multidisciplinaire du phénomène de dégradation et analyse critique des méthodes de revégétalisation utilisés - Régis Peltier.

²⁷ Daniel Sighomnou. Luc Sigha Nkamdjou. Gaston Liéno - La plaine du Yaéré dans le Nord-Cameroun Une expérience de restauration des inondations.

²⁸ Food and Agriculture Organization (FAO) et International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) – 2002 - Le sorgho repiqué au Nord-Cameroun : valoriser le savoir-faire des paysans et organiser la filière. Mathieu Bertrand.

²⁹ MINADER, FAO et PAM – 2015 - Mission conjointe d'évaluation des récoltes, des disponibilités alimentaires dans les régions de l'Adamaoua, de l'Est, de l'Extrême Nord et du Nord du Cameroun.

saison sèche ; (ii) une transhumance transfrontalière Cameroun-Nigeria-Niger et Cameroun-Tchad qui exploite les ressources pastorales autour du lac et ; (iii) un élevage sédentaire en développement.

53. L'espace pastoral est en diminution constante au profit des zones cultivées (pluvial/décrue/maraichage). Les mauvaises pratiques de pâturage (liées à une charge faible mais continue) contribuent à la dégradation des pâturages.

54. **L'élevage et l'agriculture sont peu intégrés**, en dehors de la vaine pâture. Le développement d'un élevage sédentaire et la fixation des pasteurs mobiles entraînent des concurrences pour l'accès aux ressources : pâturage de saison sèche, résidus de cultures, terre de décrue (pour le pâturage vert de saison sèche ou bien pour l'agriculture de décrue).

55. **Les ressources forestières** tiennent une place importante dans l'économie des ménages ruraux : vente de bois de chauffe, de produits forestiers non ligneux (gommes arabiques), ces activités conduites durant la saison sèche procurent de faibles revenus toutefois nécessaires à l'achat de vivres durant la période de soudure. Elles sont réalisées principalement par les femmes, les jeunes et les transhumants, les hommes migrant vers les villes qui y trouvent tous une activité rémunératrice.

56. Région du Nord : zone de transition soudano-sahélienne - hautes savanes guinéennes.

57. **Agriculture**. Le développement de la culture de coton a intensifié les systèmes de culture et permis une évolution plus rapide vers la culture attelée. La pratique de la jachère a progressivement disparu, et le renouvellement insuffisant de la fertilité des sols a conduit à une dégradation du capital productif. La riziculture et la culture à grande échelle de l'arachide laissent peu à peu place à l'émergence d'autres filières comme l'oignon, l'igname et le niébé et le développement du maraichage.

58. L'accroissement démographique, conjugué aux migrations interrégionales de population venant de l'extrême Nord, et la fixation dans ces zones de Peulhs, a augmenté considérablement la pression foncière. Les fronts pionniers ont été ouverts à la faveur des investissements routiers dans la proximité des aires protégées et sur les corridors de passage des animaux sauvages (éléphant, buffle, élan de derby, hyppotrague, etc.) dans les Zones d'Intérêt Cynégétique à Gestion Communautaire limitrophes au parc de Bénoué (ZIC/GC).

59. **Elevage**. La région est une zone de replis des transhumants en saison sèche. Un développement important de l'élevage sédentaire a été permis par la maîtrise de la glossine et l'introduction de la culture attelée (90 000 têtes³⁰). L'espace pastoral est ici aussi menacé par la fermeture des paysages par l'agriculture qui empiète sur les couloirs traditionnels de transhumance.

Glossine : mouche vectrice de parasites du genre Trypanosoma cause de la trypanosomose animale. La maladie chez les animaux domestiques, en particulier chez les bovins, est un obstacle majeur au développement économique des régions rurales affectées³¹.

60. **L'élevage et l'agriculture sont en voie d'intégration**, Le développement de l'élevage sédentaire et la fixation des pasteurs mobiles entraînent une intégration progressive des deux activités. Les agriculteurs développent un élevage de trait et de capitalisation, tandis que les éleveurs cultivent sur les terres qu'ils fertilisent avec leurs troupeaux. Cependant cette intégration ne profite pas pleinement des

³⁰ Centre de coopération International en Recherche Agronomique pour le Développement (CIRAD) et le programme d'Appui à la Sécurisation et à la Gestion Intégrée des Ressources AgroPastorales au Nord Cameroun (ASGIRAP) – 2013 - Etude de faisabilité d'un programme d'appui à la sécurisation et à la gestion intégrée des ressources agropastorales au Nord Cameroun

³¹ Programme de lutte contre la trypanosomose africaine (PLTA) – 2010 - Bulletin d'information sur les glossines et les trypanosomoses.

interactions possibles et des savoirs faire, développés par les agriculteurs et les éleveurs. Aussi ce type d'intégration présente une vulnérabilité importante par rapport aux risques climatiques.

61. **Les ressources forestières** tiennent une place moins importante dans l'économie des ménages ruraux même si elle reste essentielle : vente de bois de chauffe, de charbon, de produits forestiers non ligneux (karité, anacarde, feuille de balanites), les faibles revenus procurés et le manque de structuration commerciale n'incitent pas à une exploitation généralisée de ces ressources. Ces activités sont réalisées principalement par les femmes, et une grande partie est autoconsommée, à l'exception du charbon qui est en majorité exporté vers Garoua.



Pépinière de culture d'oignon - Nord



Champ de Sorgho de contre saison /
acacia seyal - Nord

Région Nord-Ouest : zone des hauts plateaux de l'Ouest.

62. **Agriculture.** Le climat et la fertilité des sols permettent de réaliser deux cultures de maïs en association avec des légumineuses (arachide, haricot). La pomme de terre est cultivée en seconde saison de culture. Ces cultures annuelles sont menées en association avec des cultures semi-pérennes telles que le plantain, le manioc et le macabo et des cultures pérennes comme l'avocatier, le manguier et le safoutier. La culture de rente (café arabica) est souvent en culture pure.

63. Dans les zones les plus densément peuplées, au sud de la région, certains agriculteurs sont contraints d'arracher les caféiers³² pour dégager suffisamment d'espace pour les cultures vivrières. La fertilité des sols volcaniques, les associations légumineuses, l'Ankara et l'usage à faible échelle d'engrais minéraux maintiennent la productivité du système. La très forte pression démographique conduit à une constante diminution des surfaces cultivées par ménage (environ un hectare en 2016). L'ensemble des terres arables, étant exploités à des fins agricoles, les sols cultivés en pente est menacé par l'érosion hydrique.

*Ankara*³³ : ou écobuage est la pratique du brulis des résidus de cultures enfouis sous la terre en forme de billons. Cette pratique libère très rapidement les éléments minéraux dans le sol, mais provoque la destruction de l'humus, des microorganismes et contribue à la dégradation du sol.

64. Dans le Nord de la région, le plus faible peuplement réduit la pression foncière et l'intensité des cultures est moindre. La fertilité des sols est moins liée au sol, mais est renouvelée par la pratique de la jachère.

65. **Élevage.** L'élevage bovin mené par les Mbororos Foulanis est limité au sommet des collines dans le sud de la région. Dans le nord de la région, où la pression foncière est moindre, l'élevage est majoritaire

³² Atger Julie, Torbay Marie - Supagro – 2014 - Mémoire « Diversité des stratégies d'intensification agricole dans un contexte de forte densité de population Diagnostic agraire du Mezam, Nord-Ouest Cameroun »

³³ Roland Portèressem - Journal d'agriculture tropicale et de botanique appliqué – 1972 - De l'écobuage comme un système mixte de culture et de production.

et profite de parcours plus ouverts, de prairie subalpine. Il s'agit là principalement de transhumance transfrontalière avec le Nigeria.

66. **L'élevage et l'agriculture sont peu intégrés**, dans les zones les plus peuplées, les notables détiennent une partie du cheptel des éleveurs (investissement). Des échanges de fumure sont opérés lors de la descente des troupeaux dans les vallées durant la saison sèche.

67. Dans le nord de la région, l'abondance d'espaces pastoraux et de terres cultivables ne créent pas de besoin d'intégration entre les activités agricoles et d'élevage, la fertilité des sols étant entretenue par la jachère.

68. **Les ressources forestières.** Dans le sud de la région, les forêts ont été défrichées avec quelques reliquats qui subsistent : forêts sacrées, forêts communautaires, fortes pentes non cultivables, usages culturels comme le Rafia.

69. Dans le nord de la région, les forêts ont été peu défrichées. Elles sont présentes majoritairement au fond des vallées, les hauteurs étant occupées par des pâturages. Elles sont très utilisées pour les besoins nutritionnels des populations et sont la source de nombreux produits forestiers non ligneux commercialisés pour la pharmacopée.

Climat

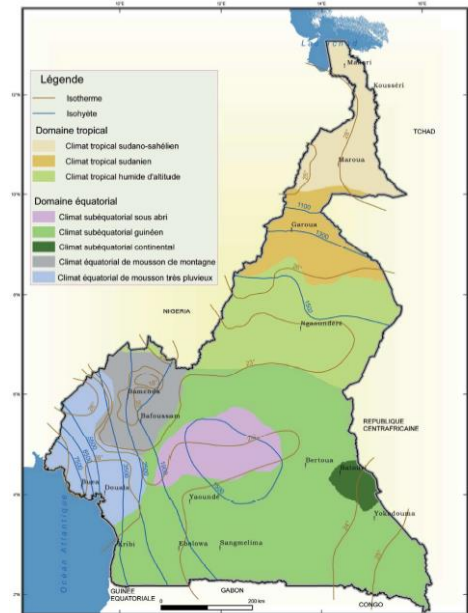
70. **Zones climatiques du Cameroun.** Il existe trois principaux types de climat liés aux types de relief :

(g) **le climat équatorial**, dans la partie sud du pays est caractérisé par des précipitations abondantes, des températures élevées et constantes entraînant une amplitude thermique faible et une végétation se dégradant au fur et à mesure que l'on s'éloigne de l'équateur avec deux nuances : (i) le type guinéen qui règne sur une partie de la côte et sur le plateau sud-camerounais et il compte quatre saisons bien marquées : saison de pluie (de mars à juin), petite saison sèche (juillet et août), saison de pluie (de septembre à novembre), grande saison sèche (décembre à février) ; (ii) le type camerounien au voisinage du Mont Cameroun et s'étend jusqu'à l'embouchure de la Sanaga englobant les hauts plateaux de l'Ouest. Sa particularité est la surabondance des pluies qui tombent en une seule saison annuelle de neuf mois de mars à novembre. Quelques périodes anormalement sèches ont été constatées, elles sont distantes de quatre à cinq ans, selon les stations, voire onze ans aux environs d'Eséka et de Kribi ;

le climat tropical soudano-sahélien comportant deux nuances : (i) le type tropical soudanien dans le nord du pays : les températures sont élevées, les pluies sont peu abondantes ; il compte deux saisons : la saison pluvieuse de sept mois environ (très torride de mai à juin et entre juillet à octobre, très fraîche et humide) et la saison sèche de 5 mois (fraîche de novembre à janvier) ; (ii) le type tropical sahélien dans l'Extrême- Nord du pays : les températures sont élevées mais avec une irrégularité des pluies et deux saisons : une saison sèche de décembre à janvier et une saison pluvieuse. Les périodes anormalement sèches ont des durées comprises entre cinq et onze ans avec cependant des interruptions pluvieuses d'un à deux ans. Ces périodes sont séparés de trois à quatre ans dans les monts Mandara, de dix à onze ans le long du cordon dunaire Yagoua-Limani et de cinq à six ans dans le reste de la zone ;

le climat tropical humide, dans la zone comprise entre 7° et environ 10° N, représente une transition entre les deux types précédents. Le nombre moyen des jours pluvieux varie entre 40 et 70 jours. Des périodes anormalement sèches ont été enregistrées sur les Hautes terres et au sud du plateau de l'Adamaoua. La durée de ces périodes atteint huit à douze ans au centre et à l'est dans la zone de contact forêt-savane, cinq à six ans à l'ouest du plateau de l'Adamaoua et trois à quatre ans dans les hautes terres de l'Ouest.

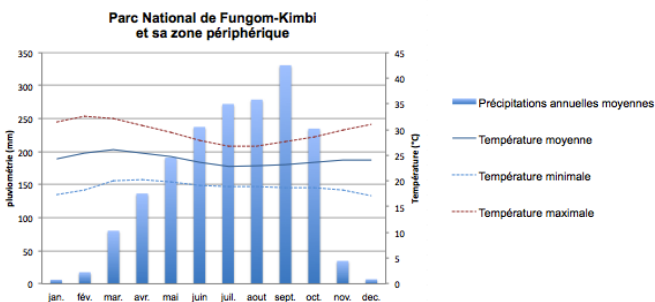
FIGURE 1 : ZONES CLIMATIQUES DU CAMEROUN
(SOURCE: MINEPAT: ATLAS NATIONAL DE DEVELOPPEMENT PHYSIQUE DU CAMEROUN)



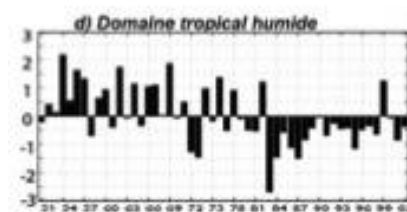
Particularités des climats des zones d'intervention du projet

71. Les hautes terres de l'Ouest et la périphérie du parc national de Fungom-Kimbi sont caractérisées par des précipitations annuelles de 1 800 mm, une longue saison des pluies (de mars à novembre) et une courte saison sèche. La température moyenne mensuelle reste constante au cours de l'année, autour des 24°C. L'écart thermique mensuel ne dépasse pas 5°C mais au-delà de 1 800 mètres d'altitude, les températures nocturnes peuvent descendre jusqu'à 0°C. Au cours des six dernières décades, la pluviométrie a diminué de l'ordre de 2,5% par décade et les périodes de sécheresse se sont intensifiées.

**MOYENNES PLUVIOMETRIES ET TEMPERATURES
(ZONE FUNGOM KIMBI)
SOURCE (DONNEES BIOCLIM 1960-1990)**

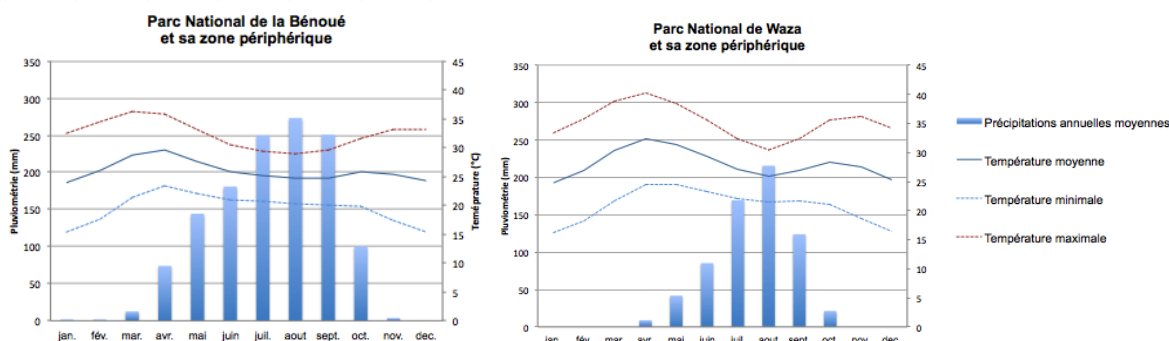


**INDICE PLUVIOMETRIQUE DE 1951 A 2002
(ZONE FUNGOM-KIMBI)**

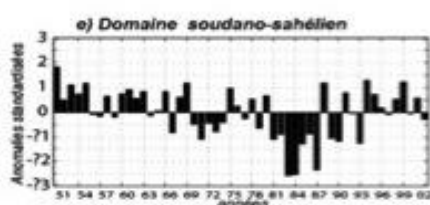


72. Dans les périphéries des parcs nationaux de Waza et de la Bénoué, respectivement dans les régions de l'Extrême-Nord et du Nord, le gradient de pluviosité du Nord au Sud s'échelonne de 500mm à 1 000mm et les précipitations annuelles sont concentrées de juillet à octobre. Les températures sont voisines de 28°C avec des écarts thermiques très important de l'ordre de 7,7°C. Ces zones ont été très affectées par la diminution des précipitations au cours des six dernières décades, avec 4,1% par décade.

**MOYENNES PLUVIOMETRIES ET TEMPERATURES (ZONE DES PARCS DE LA BENOUE ET DE WAZA)
SOURCE (DONNEES BIOCLIM 1960-1990)**



INDICE PLUVIOMETRIQUE DE 1951 A 2002 (ZONE DES PARCS DE LA BENOUE ET DE WAZA)



73. Le pays a subi, sur l'ensemble de son territoire, une augmentation moyenne des températures de 0,7°C entre 1960 et 2007.

74. L'ensemble de ces modifications a favorisé, lors de la dernière décennie, les événements extrêmes tel que : (i) l'allongement de la durée des saisons sèches avec des sécheresses plus intenses ; (ii) l'augmentation de l'évapotranspiration à cause de l'élévation de la température, entraînant des tempêtes plus violentes ; (iii) l'accentuation des inondations extrêmes comme en 2011 entraînant 103 décès dans la zone soudano-sahélienne et ; (iv) les mouvements de masses. Ce sont autant de phénomènes qui impactent directement les conditions environnementales, sociales et économiques des différentes régions.

Tendances et caractéristiques des saisons des pluies.

75. Pour la zone des hauts plateaux de l'Ouest et pour le parc national de Fungom-Kimbi, le retour de la saison de fortes pluies s'effectue tous les quinze ans alors qu'il est de dix ans dans les zones avoisinantes. De même, le retour des saisons de faibles pluies est tous les dix à quinze ans au lieu des six à dix ans dans les zones avoisinantes. Le parc n'est donc pas impacté fréquemment par des événements pluviaux extrêmes. Il se situe dans une enclave où les pluies annuelles ont tendance à diminuer, réduisant ainsi les apports en eaux de surface et en eau souterraine. La gestion de ces ressources doit être optimisée par le renforcement des phénomènes de rétention et d'infiltration de l'eau. Enfin la légère anticipation des périodes de pluie provoque un décalage dans les cultures et de probables impacts sur les rendements.

76. Pour le Nord et le parc national de la Bénoué, le retour des saisons de fortes et de faibles pluies est tous les six à dix ans, mettant en évidence un retour assez fréquent des événements extrêmes qui renforce le problème de sécurité alimentaire. Des actions d'adaptation doivent être mises en place afin de diminuer les problématiques d'érosion, de dégradation des sols et de perte de rendement dû à la sécheresse. De plus, une tendance négative est observée pour les pluies annuelles, renforçant le phénomène de sécheresse et les problématiques d'insécurité alimentaire. Enfin, le début de saison des pluies est retardé, entraînant une déstabilisation des cycles de culture et des pertes probables de rendement.

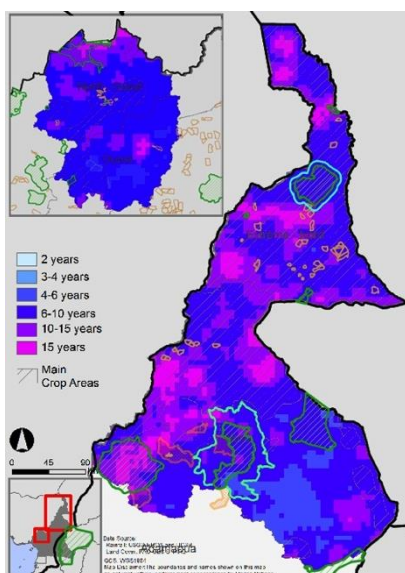
77. Pour l'Extrême-Nord et le parc de Waza, le retour des saisons de fortes et de faibles pluies est tous les six à dix ans, mettant en évidence un retour assez fréquent des événements extrêmes, qui renforce le

problème de sécurité alimentaire et a des conséquences sur l'érosion, la dégradation des sols et la sécheresse. En comparaison avec la zone Nord, il n'y a pas de tendance à la diminution des pluies annuelles, la pluviométrie y est déjà très faible. Enfin, le début de saison des pluies est anticipé à l'ouest et retardé à l'est du parc, provoquant un décalage spatial des cycles de cultures et des impacts sur les rendements.

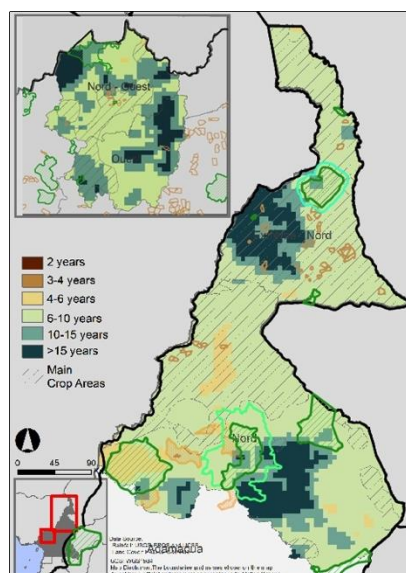
78. L'analyse des données bioclimatiques définit les zones de l'Extrême-Nord et du Nord comme prioritairement impactées par les tendances actuelles aux changements climatiques par rapport à l'insécurité alimentaire et à la gestion durable des ressources naturelles.

CAMEROUN – REGIONS EXTREME-NORD, NORD, NORD-OUEST ET OUEST (CALCULE SUR LES 20 DERNIERES ANNEES)

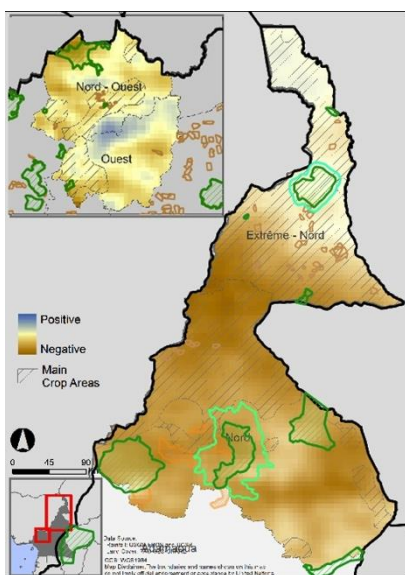
PERIODE DE RETOUR DES SAISONS DE FORTE PLUIE



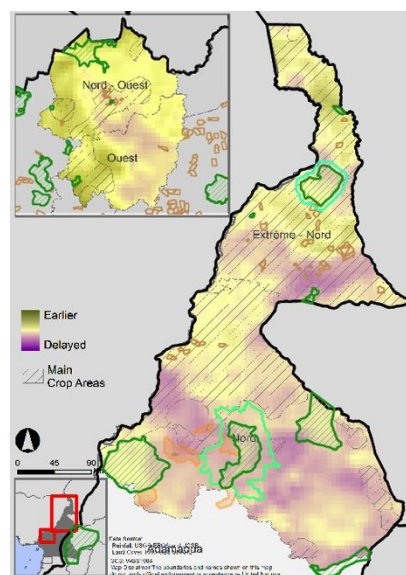
PERIODE DE RETOUR DES SAISONS DE FAIBLE PLUIE



TENDANCES DE PLUIES ANNUELLES



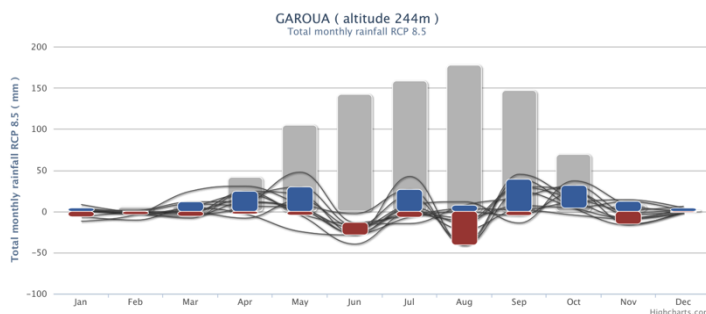
TENDANCES DU DEBUT DES SAISONS DE PLUIES



Projections climatiques.

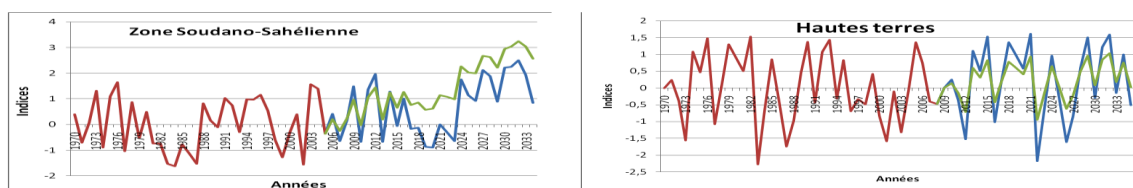
79. Les projections multi modèles disponibles auprès de l'Université du Cap pour les villes de Garoua et de Maroua aux horizon 2030 (2020-2040) confirment les tendances qui auront un impact sur les activités cibles du projet : hausse des pluies en période humide, hausse des températures notamment nocturnes et croissance du nombre de journées très chaudes.

● **FIGURE 2. EXEMPLE : HAUSSE DES PRECIPITATIONS A GAROUA A L'HORIZON 2030**



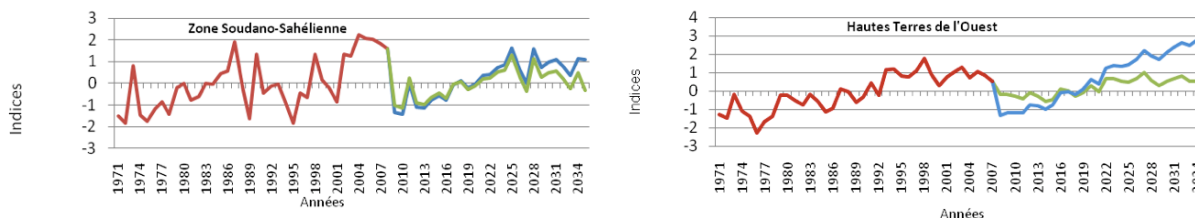
80. Pluviométrie. Dans la zone soudano-sahélienne, il faut s'attendre à une augmentation des précipitations vers la fin de la période 2010-2035. Au sud de cette zone, on ne constate pas de bouleversement majeur si l'on considère la position de l'isohyète 1 200mm qui est néanmoins située un peu plus au nord par rapport à sa position de 1995. A contrario on remarque une extension vers le nord de la zone couverte par l'isohyète 1 000mm, ce qui témoigne d'une hausse des précipitations.

FIGURE 2. SIMULATION DE L'EVOLUTION DE LA PLUVIOMETRIE DE 1970 A 2035



81. Température. Selon le modèle de simulation RegCM, on devrait s'attendre à de très faibles hausses de température jusqu'à 2030, suivie d'une croissance plus forte d'environ 1°C (CMIP5) par décennie jusqu'à 2100. En zone soudano-sahélienne, les températures globalement en hausse depuis le début de la période de référence vont continuer à augmenter. Les augmentations seront plus fortes en valeur absolue sur les régions septentrionales, allant de 0,7°C en 2025 à 4,6°C en 2100. Dans les hautes terres de l'Ouest, la tendance des températures restera à la hausse jusqu'en 2035 tandis qu'une baisse sera observée à partir de 2022 selon un scénario moins alarmiste.

FIGURE 3. SIMULATION DE L'EVOLUTION DES TEMPERATURES DE 1970 A 2035



82. Les risques liés aux changements climatiques (mauvaise répartition des pluies, sécheresse, ou inondations, vents violents, etc.), combinés aux effets de la croissance du secteur agricole (le DSCE vise à augmenter, d'ici 2020, les superficies cultivées à 30%), vont accroître dans les années à venir la pression sur les ressources naturelles (besoins en eau accrus, hausse des ruissellements et du risque érosif, etc.). De ce fait, il est urgent de mettre en œuvre des mesures qui permettent à tous les acteurs du secteur rural de prendre la mesure de ces risques et de renforcer la dimension environnementale et climatique d'introduire dans les projets d'investissement agricoles des pratiques permettant de réduire l'empreinte environnementale du développement agricole.

Enjeux clés

83. Les questions clés sont les suivantes :

(h) renforcement des connaissances : faible connaissance des milieux et des services écosystémiques ne permettant pas leur gestion durable et leur préservation optimale ;

maîtrise de la pression sur les ressources naturelles (terres et forêts) : systèmes d'exploitation insuffisamment adaptés aux conditions agro-écologiques et à la pression accrue sur les ressources naturelles ;

changements climatiques : manque de connaissances et/ou d'anticipation des changements climatiques dans les activités agricoles et rurales et d'actions d'adaptation coordonnées, viables et inscrites dans le temps, besoin de diffusion de pratiques, intrants et matériels mieux adaptés aux évolutions du climat ;

prise de conscience des enjeux environnementaux et climatiques par les populations rurales : sensibilité et connaissances insuffisantes des risques environnementaux et climatiques et les bonnes pratiques pour minimiser les risques et l'utilisation abusive des ressources du milieu ;

identifier et promouvoir des activités économiques viable et écologique pour donner des perspectives d'avenir aux jeunes ruraux : mise en place de formation professionnelle, d'opportunités d'emplois et d'incitations pour investir dans les activités et métiers agro-pastoraux, agro-forestiers et ruraux.

B. Impacts et risques potentiels du Projet liés au social, à l'environnement et aux changements climatiques

1. Impacts potentiels clés

Les impacts sociaux possibles

84. Le Projet va cibler de manière générale les ruraux pauvres, mais en priorité les jeunes, ayant un niveau de formation souvent faible, un accès limité à du capital productif, aux technologies améliorées, aux marchés et à des services d'appui technique ou financiers. Il accordera une attention particulière aux femmes et à l'amélioration de leur accès à des connaissances et des actifs productifs afin de faciliter leurs activités économiques et augmenter leurs revenus.

85. **Forêts communautaires.** La création de neuf forêts communautaires sera répartie sur les deux sites d'interventions de l'Extrême-Nord et du Nord-Ouest pour un total de 21 000 hectares. Le manque d'expérience des gérants et le manque de transparence dans la gestion des revenus communautaires peuvent entraîner des conflits importants. Un accompagnement des ONG locales est nécessaire.

86. Les impacts socio-économiques seront essentiellement positifs : (i) apprentissage par l'action et développement des métiers forestiers ; (ii) création d'emploi et diminution de l'exode rural des jeunes ; (iii) redistribution directe des revenus aux communautés et ; (iv) exploitation des produits forestiers non ligneux et diminution de l'insécurité alimentaire notamment en période sèche.

87. **Zones d'intérêt cynégétiques à gestion communautaires (ZICGC).** Le renforcement des capacités de gestion des deux ZICGC n°1 et n°4 à l'ouest du parc national de la Bénoué pour un total de 80 000 hectares a pour but de diminuer les pressions anthropiques sur les ressources naturelles et en mettant en place une gestion durable de ces ressources. Les impacts socio-environnementaux sont majoritairement positifs, mais la prise en considération des conditions économiques et sociales existantes des populations est essentielle afin d'éviter le déplacement des pressions anthropiques sur des zones avoisinantes (zones d'intérêts cynégétiques et parc national lui-même).

88. **Formation et entrepreneuriat.** La formation des jeunes en éco-entrepreneur impactera les jeunes dans leur mode de pensée et les amènera à devenir des *leader* des pratiques de préservation et de conservation des milieux pour en tirer des opportunités économiques.

89. En augmentant les opportunités économiques des jeunes et en leur proposant des solutions économiques viables, le Projet s'aligne sur les objectifs du gouvernement en s'opposant aux dynamiques d'exode rural et de recrutement des jeunes dans des activités liées au banditisme ou au terrorisme, notamment à l'Extrême-Nord comme l'a rappelé le Ministre de l'Environnement lors de la restitution de l'Aide-Mémoire.

90. **Foncier.** La problématique foncière est considérée de manière spécifique à chaque région dans la réalisation de ce Projet en raison de : (i) la diminution de la surface disponible due à la démographie croissante dans la région du Nord-Ouest, avec moins d'un hectare par exploitant, toutefois la pression foncière est nettement inférieure dans la périphérie du parc national en raison de sa difficulté d'accès) et ; (ii) l'augmentation des superficies des terres « hardés », la faible sécurité foncière accordée par le système traditionnel de répartition des terres dans l'Extrême-Nord et le Nord, et l'augmentation démographique en raison des déplacés actuels dans l'Extrême-Nord et des migrants des générations précédentes dans le Nord.³⁴

91. **Conflits d'usage de l'eau.** L'accès à l'eau de surface est actuellement libre pour l'ensemble des usages. En favorisant la négociation foncière et en donnant de quoi investir au éco-entrepreneurs, il est attendu un développement de la petite irrigation qui induise une augmentation des prélèvements pour l'agriculture. Des conflits pour l'accès à l'eau entre le cheptel transhumant, sédentaire et la faune sauvage apparaissent lors de la période sèche, même s'il existe des règles de gestion traditionnelles pour l'accès aux points d'eau à vocation pastoral. De nouveaux conflits apparaissent entre les pêcheurs et les éleveurs dans la zone inondable du Parc de Waza, en raison des pratiques de création de canaux.

92. La formation des éco-entrepreneurs insistera sur : (i) la gestion communautaire de l'eau et ses multiples usages et ; (ii) les techniques d'économie en eau. Le jury de validation des projets prendra soins d'examiner la pertinence des projets d'irrigation et d'élevage sur ces deux points également.

93. **Les produits forestiers non ligneux** offrent de grandes opportunités : (i) lutte contre l'insécurité alimentaire des régions septentrionales du Cameroun ; (ii) sécurisation de revenus minimum lors de sécheresse. Ils favorisent également la cohésion sociale et le renforcement économique de minorités (Mbororo) et mettent en valeur l'utilisation de savoir-faire traditionnels. Le Projet doit considérer l'organisation actuelle du secteur et sa faible visibilité comme un risque quant à l'ampleur des résultats de Projet attendus. Une étude coût-bénéfice sur le renforcement de l'organisation des filières pourra être mis en place.³⁵

³⁴ Centre de coopération International en Recherche Agronomique pour le Développement (CIRAD) et le programme d'Appui à la Sécurisation et à la Gestion Intégrée des Ressources AgroPastorales au Nord Cameroun (ASGIRAP) – 2013 - Etude de faisabilité d'un programme d'appui à la sécurisation et à la gestion intégrée des ressources agropastorales au Nord Cameroun

³⁵ Ministère de la Forêt et de la Faune (MINFOF) – juillet 2012 - Plan National de développement des Produits Forestiers Non Ligneux (PND PFNL) au Cameroun

94. La valorisation de ces filières exploitées par les catégories sociales défavorisées / marginalisées pourrait induire une expropriation de cette opportunité au profit de catégories sociales moins vulnérables³⁶. La forte participation des femmes aux filières des produits forestiers non ligneux est un argument supplémentaire pour la priorisation de cet impact potentiel.

95. Des conflits au sein des communautés peuvent apparaître dès lors que le reboisement n'a pas pris en considération : (i) les droits traditionnels et ceux d'utilisation des terres ; (ii) le dimensionnement des services éco-systémiques, qui peut pousser les communautés à retourner à une exploitation traditionnelle de la forêt ; (iii) la gestion technique des forêts et le devoir de transparence de la gestion des revenus communautaires et ; (iv) la nécessité d'implication des populations rurales.

96. Que cela soit par des aménagements de régénération naturelle assistée, par des reboisements ou dans un contexte agroforestier, la valorisation des produits forestiers a un impact non négligeable. Il s'agit : (i) de la valorisation des services éco-systémiques des arbres, permettant une diminution de l'insécurité alimentaire et l'augmentation de revenu et (ii) de la valorisation du bois, même si cette activité est considérée comme une dérive, car il ne permet qu'un apport monétaire unique. Pour éviter cette dérive, il est nécessaire que les avantages tirés des services éco-systémiques soient financièrement suffisants afin de préserver cette ressource. De plus, l'agroforesterie permet d'améliorer les rendements et ainsi d'impacter directement les revenus des bénéficiaires et de diminuer l'insécurité alimentaire.

97. **Aménagements.** Les investissements prévus sur les trois régions totaliseront 1 000 hectares de reforestation, 2 000 hectares d'aménagements agroforestiers soit 2 000 hectares d'aménagements de gestion durable des terres, selon l'approche de travaux à haute intensité en main d'œuvre (HIMO), permettant de fournir temporairement une source de revenu aux jeunes éco-entrepreneurs ciblés. Il s'agit d'investissements à très faible échelle, avec des techniques éprouvées, ne nécessitant pas de plan de gestion des risques.

98. **Infrastructures d'hydraulique pastorale.** Les investissements totalisent 20 infrastructures situées à proximité des habitations des zones périphériques des parcs nationaux de Waza et de la Bénoué. Ces aménagements permettront (i) une diminution des conflits entre les éleveurs et la faune sauvage³⁷, (ii) un plus dans la gestion durable de la ressource en eau et (iii) une amélioration des conditions de vie pour les communautés riveraines au parc.

Les impacts environnementaux possibles

99. Le projet sera mis en œuvre dans des zones où les ressources naturelles sont déjà fortement dégradées, et où le processus de dégradation se poursuivra. Il est donc extrêmement important que le Projet renforce la gestion des ressources qui seront à la base des filières appuyées.

100. **Conservation et valorisation des services écosystémiques.** Le Projet impactera la conservation comme part entière de l'économie des jeunes, en promouvant les services éco-systémiques afin que les aires périphériques soient le théâtre d'actions protectrices de ces zones. La fonction des zones périphériques aux parcs sera réaffirmée, en renforçant leurs potentialités éco-systémiques et leur préservation et donc, en transformant ces zones en de véritables barrières socio-environnementales de protection des aires protégées.

101. La mise en place d'un plan d'aménagement du nouveau parc de Kimbi-Fungom, permettra de s'assurer d'une gestion durable des ressources naturelles et de la préservation de la biodiversité ayant ainsi des impacts positifs sur l'ensemble des compartiments des milieux biophysiques. La prise en

³⁶ par exemple la culture d'oignon au Sénégal, de la récolte de gomme au Tchad, du lait de buffle en Indonésie etc. où les hommes ont évincé les femmes de l'accès à la ressource, mais aussi de la pêche continentale en Mauritanie où les allochtones ont été évincés.

³⁷ Les forages seront situés à proximité des habitations pour éviter d'attirer la faune sauvage hors des parcs

considération d'un plan de cogestion avec les communautés limitrophes dans cette gestion est à la fois nécessaire et doit être maîtrisée avec précaution. Les revers des cogestions des dernières décennies, pour les parcs de la Bénoué et de Waza, ont eu des impacts très négatifs sur l'état des ressources et de la faune : (i) braconnage ; (ii) surexploitation anarchique des ressources ; (iii) conflit entre les acteurs dont certains ont entraîné des morts d'homme et ; (iv) effondrement des institutions d'accompagnement.

102. Des recommandations sont faites sur le partage d'une vision stratégique par l'ensemble des acteurs et sur l'assurance que la gestion des ressources revête des bénéfices économiques pour les communautés³⁸. La création de forêt communautaire et la mise en place de Plan de Gestion Simplifié, ont des effets complémentaires positifs : (i) légalisation des activités d'exploitation des ressources par la communauté ; (ii) mise en place de quotas pour une gestion durable et amélioration de l'habitat ; (iii) éloignement des acteurs illégaux de ce territoire par l'intervention de la communauté. L'obligation d'exploiter artisanalement les ressources, renforce leur gestion durable³⁹.

103. Les activités de prélèvement des produits forestiers non ligneux n'ont que peu d'impact sur les ressources forestières, même s'ils dépendent de la nature des produits valorisés. Dans l'Extrême-Nord, l'augmentation des prélèvements de gomme arabique peut être induite par une pratique accrue des saignées sur les *Acacia seyal* et *Acacia senegal*. L'augmentation de l'intensité et de la fréquence des saignées fragilise l'arbre. La collecte des feuilles de baobab est également potentiellement problématique. Dans le Nord, les prélèvements en noix de cajou de l'*Anacardium occidentale* et en Karité de *Vitellaria paradoxa* n'ont pas d'incidences néfastes. Dans le Nord-Ouest, les prélèvements extrêmes d'écorce de *Prunus Africana* peuvent entraîner la mort de l'arbre, alors que les prélèvements de mangues sauvages, *Irvingia spp.*, n'ont aucune incidence sur l'arbre.

104. Ces activités seront soutenues par les associations de gestion locale des ressources naturelles et selon les plans de gestion des forêts communautaires et des zones d'intérêts cynégétiques à gestion communautaire, ce qui réduira les risques de mauvaise gestion des ressources. La valorisation du couvert forestier par les produits forestiers non ligneux présente un impact positif essentiel : l'attrait des bénéfices lié au prélèvement du capital bois diminue lorsque l'opportunité économique des produits forestiers non ligneux augmente.⁴⁰

105. Les activités de reboisement peuvent contribuer dans les zones semi-arides (Extrême-Nord) : (i) à un abaissement de l'humidité du sol et un rabattement de la nappe phréatique, impactant temporairement les tensions hydriques déjà existantes ; (ii) à la diminution des nutriments du sol dans le cas d'utilisation d'essences à croissance rapide. Le choix de l'essence devra prendre en compte ces deux paramètres.

106. Mais le reboisement a surtout de multiples impacts positifs : (i) en rétablissant le couvert végétal ; (ii) en réhabilitant les sols ; (iii) en apportant des possibilités de pâturage aérien et en diminuant les pressions sur le milieu ; (iv) en améliorant la qualité de l'eau par la diminution de la teneur en sédiment ; (v) en offrant des services éco-systémiques ; (vi) en créant un microclimat et ; (v) en agissant comme un puits de carbone. Il s'oppose surtout à la déforestation en cours dans l'Extrême-Nord et le Nord pour la vente de charbon et de bois de chauffe.

107. Dans un contexte d'érosion et de surexploitation des sols, les aménagements de type agroforesterie et régénération naturelle assistée sont des atouts essentiels, ils permettent de : (i) lutter contre la désertification et réhabiliter les sols « hardés » ou fortement dégradés ; (ii) améliorer la couverture du sol

³⁸ Adam Saleh – 2013 - Un Modèle et son revers : la cogestion des réserves de biosphère de Waza et de la Bénoué dans le Nord-Cameroun

³⁹ World Rainforest Movement - Foresterie communautaire et réduction de la pauvreté rurale au Cameroun : bilan et tendances de la première décennie – Patrice Bigombe Logo

⁴⁰ Rencontre avec les ONG environnementales locales du Mont Oku, juillet 2016

et la biodiversité associée ; (iii) entraîner des modifications microclimatiques permettant une meilleure adaptation aux événements extrêmes.

108. L'introduction d'essence ligneuse en agroforesterie, peut initialement provoquer des compétitions entre les arbres et les cultures agricoles, qui sont compensés par l'ensemble des effets positifs associés à cette technique.

109. La réalisation d'infrastructures hydrauliques à proximité des zones habitées aura pour premier effet, une diminution de la pression anthropique sur les ressources naturelles situées à l'intérieur des parcs nationaux et ainsi une diminution des conflits avec la faune sauvage. Pour diminuer l'impact négatif de la sortie possible de la faune sauvage du parc attirée par l'eau de ces infrastructures, elles devront être construites à proximité des zones habitées qui ont un effet repoussoir sur la faune sauvage.

110. **Pollution phytosanitaire.** L'incitation à l'investissement dans l'agriculture peut conduire à un usage accru de produits phytosanitaires. Ces produits sont accessibles dans l'ensemble des zones d'intervention du Projet (pour l'oignon dans l'Extrême-Nord, le coton dans le Nord et le maïs dans le Nord-Ouest). La qualité de ces produits est toutefois variable et leur usage est mal maîtrisé par les producteurs. Afin de limiter les risques liés à l'usage des produits phytosanitaires, deux stratégies seront employées durant la formation :

- (i) D'une part en travaillant sur les produits de synthèse : (i) par la reconnaissance des produits de qualité dans ce qui est disponible sur le marché ; (ii) par l'apprentissage de l'usage raisonné de ces produits et ; (iii) par l'apprentissage des techniques de protection de utilisateurs et des consommateurs ;

D'autre part et afin de limiter l'usage de ces intrants coûteux, l'utilisation d'insectifuges de fabrication locale (neem, piment, etc) sera enseignée et promue en tant qu'éco-activité.

111. L'ensemble des activités du Projet aura un impact global positif sur les émissions de Gaz à Effet de Serre sur une période de 20 ans⁴¹.

- (j) dans l'Extrême-Nord, le projet diminuera les émissions de 900 000 tonnes de CO₂, de 195 tonnes CO₂eq de N₂O et de 103 tonnes CO₂eq de CH₄ ;

dans le Nord, le projet diminuera les émissions de 5 150 000 tonnes de CO₂, de 122 tonnes CO₂eq de N₂O et de 34 tonnes CO₂eq de CH₄ ;

dans le Nord-Ouest, le projet diminuera les émissions de 1 920 000 tonnes de CO₂, de 384 tonnes CO₂eq de N₂O et de 34 tonnes CO₂eq de CH₄.

Risques climatiques

112. Le projet ECO-Jeunes appuiera la protection d'aires forestières et la restauration d'écosystèmes. Ces activités présentent des risques liés au climat, principalement du fait des stratégies des producteurs qui peuvent augmenter les prélèvements illégaux (bois, gibier, PFNL,...) pour faire face à une baisse de revenus agro-pastoraux.

113. Les éco-entreprises seront principalement de type « production ». La responsabilité est laissée à chaque jeune de définir son éco-entreprise pour qu'elle soit viable. Celles-ci seront plus ou moins impactées par le climat en fonction de leur dépendance à la pluviométrie. Ainsi les éco-entreprises de production céréalière seront moins résilientes que les éco-entreprises de production maraîchère irriguée. Afin de limiter l'impact du changement climatique dans les systèmes pluviaux, les investissements seront

⁴¹ Le détail des bilans carbone par composante est présenté en appendice 3. L'ensemble des hypothèses prises et leur source pour la réalisation des bilans carbone sont résumés en appendice 4.

réalisés : (i) pour la gestion durable des eaux et du sol et ; (ii) en agroforesterie dans les parcelles des éco-entrepreneurs et celles des populations vulnérables.

114. Les produits forestiers non ligneux sont issus d'écosystèmes robustes, qui sont peu sensibles aux variations climatiques. Cependant la pression anthropique sur les ressources forestières est directement liée aux impacts des aléas climatiques sur les systèmes agraires. Les années de faible production agro-pastorale, les populations rurales prélèvent plus intensément les ressources en fourrages (aériens et herbacés), bois et PFNL. Ces prélèvements peuvent mettre en péril la ressource naturelle qui fonde ces filières.

Tableau 1 : synthèse des risques liés aux changements climatiques

Activité	Impacts du changement climatique	Mesures d'adaptation proposées
Foresterie communautaire	Mortalité des plants Stress des plants Prélèvements illégaux non soutenable	Diversité spécifique et diversité génétique des plants Gestion communautaire de la forêt
Eco-entreprises	Stress hydrique des cultures pluviales Érosion des sols	Agroforesterie Gestion durable des eaux et du sol

Tableau 2 : synthèse des impacts socio-environnementaux négatifs potentiels et mesures d'atténuation

Activité de ECO-Jeunes	Type impact	Impacts négatifs potentiels	Mesures d'atténuation	Risque socio-environnemental
Plan d'aménagement de Kimbi-Fungom	Env.	Revers de cogestion dû à une absence de vision stratégique commune avec les communautés limitrophes. Détérioration des milieux et de la Biodiversité.	Mise en place d'une vision stratégique en collaboration avec les communautés limitrophes au parc. S'assurer que la gestion durable des ressources apporte suffisamment de bénéfices économiques aux communautés	Faible
Forêts communautaires	Env	Pas de matérialisation des limites externes, non-respect des limites	Sensibilisation de la communauté aux limites et utilisation des plantes comme marqueurs territoriaux	Faible
	Soc.	Problèmes de manque de professionnalisme des acteurs, manque de transparence de la gestion des revenus communautaires	Accompagnement par les ONG locales des acteurs et gérants de la forêt.	Modéré
Plan de gestion des zones d'intérêt cynégétiques à gestion communautaire	Env. – Soc.	Délocalisation des pressions anthropiques sur les ressources naturelles et dégradation des conditions économiques des habitants	Accompagner la mise en place du plan de gestion en prenant tout d'abord en compte les besoins socio-économiques des habitants des ZICGC	Modéré
Formation et Incubation	Soc.	Conflits pour l'accès aux appuis techniques et financiers du Projet	Critères de ciblage transparents, processus de ciblage des bénéficiaires participatif	Modéré
Régénération Naturelle Assistée	Env. – Soc.	Baisse des écoulements dans le système hydrographique de surface en aval et renforcement des conflits d'usage en eau	La baisse des ruissellements de surface aura également des effets positifs en terme de lutte contre l'érosion et de maintien de la fertilité des parcelles L'effet est compensé par le gain économique, social et environnemental procuré par la RNA	Faible
Reboisement	Env	Abaissement de l'humidité contenue dans le sol et de la nappe phréatique présente dans les régions semi-arides	Choisir des essences dont la demande en eau est faible Mettre en place des techniques de captage et de conservation des eaux qui atténuent le ruissellement et les pertes par évaporation et qui maximisent l'infiltration	Faible (Nord-Ouest) Modéré (Extrême-Nord et Nord)
	Soc.	Problèmes liés (i) à l'occupation des terres, (ii) aux droits d'utilisation des ressources et des terres, (iii) à l'ignorance des droits traditionnels d'utilisation des terres ou de passage	Définition de l'occupation des terre et prise en compte des droits traditionnels pour déterminer les gestionnaires. Mise en valeur des avantages écosystémiques des forêts (PFNL) et de leur valorisation économique pour leur préservation. Mise en place d'un plan de gestion de forêt communautaire	Faible
	Soc.	Les droits de propriété sur les terres et les arbres sont mal connus et entraînent des conflits sociaux	Prise en compte du contexte légal et des droits coutumiers des communautés afin de s'assurer de la nature des bénéficiaires	Modéré

	Soc.	Mauvaise gestion des forêts communautaires	Les fonctionnaires chargés des questions forestières et les communautés locales sont formés pour avoir les aptitudes requises pour les gestions économique et technique des forêts	Modéré
	Soc.	Absence d'engagement des populations rurales et surexploitation des forêts	Impliquer les communautés en exposant clairement les avantages et les coûts de ces forêts communautaires. Mise en place d'un plan de gestion de forêt communautaire	Faible
Produits forestiers non ligneux	Soc.	inorganisation du secteur et sa faible visibilité sont des risques par rapport aux résultats attendus du Projet	Soutien à l'organisation de la filière et promotion de l'utilisation de ces PFNL	Faible
	Soc.	Expropriation des catégories sociales défavorisées/ marginalisées dans l'activité au profit des catégories moins vulnérables	Suivi et formation et favorisation des catégories sociales défavorisées lors des activités	Modéré
Agroforesterie	Env.	compétition pour la lumière l'eau et les nutriments avec les autres plantations et pour les sols avec les cultures non ligneuses,	Bonnes techniques de gestion (taille des branches, coupe périodique des racines), choix des essences	Faible
Infrastructure d'hydraulique pastorale	Env.	Déplacement de la faune sauvage à l'extérieur des zones protégées	Localisation des structures à proximité de villages pour éviter l'approche de la faune sauvage	Faible

Adaptation aux changements climatiques

115. Le Projet prendra en compte les problèmes liés aux changements climatiques en proposant diverses mesures d'adaptation en fonction de la problématique des sites d'intervention. Ces mesures sont détaillées dans le DT «systèmes agraires et adaptation au changement climatique». Les principales activités d'adaptation seront :

- (k) le maintien des écosystèmes (27 000 hectares) et leur restauration (1 000 hectares) permet de conserver les services éco systémiques (cycle de l'eau) bénéfiques à la résilience climatique des agrosystèmes exploités dans leurs proximité ;

les mesures de gestion durable des eaux et du sol et des techniques agro-forestières permettent un meilleur captage et une meilleure infiltration des eaux pluviales, la réduction des phénomènes d'érosion ;

la régénération du couvert végétal avec essences multi-usages va améliorer la productivité et la résilience au changement climatique des terres de cultures pluviales ;

la diffusion des connaissances concernant les variétés plus résistantes à la sécheresse, leur protection et leur fertilisation, va permettre de limiter le risque de pertes de récolte lors de mauvaises années pluviométriques ;

la diffusion de connaissance concernant l'irrigation va permettre d'améliorer un meilleur contrôle de l'eau pour les cultures et sécuriser la production ;

la diversification des activités rurales par la fondation d'éco-entreprises va permettre d'améliorer la productivité et augmenter la valeur ajoutée.

C. Catégorie environnementale et sociale

116. De manière générale, le Projet aura un impact à moyen et long terme majoritairement positif compte tenu des différentes actions dont le but final est de promouvoir la durabilité écologique et la résilience aux changements climatiques. Des activités de renforcement institutionnel et administratif, de sensibilisation et de formations environnementales professionnalisantes, l'agroforesterie et des aménagements des sous-bassins versants permettant de réduire l'érosion et de mieux maîtriser les eaux superficielles et les eaux souterraines peu profondes, des activités de reboisement et de gestion durable de forêts permettront aux populations rurales et surtout aux jeunes de développer une activité agricole ou rurale viable et afin d'avoir des alternatives à l'exode et à l'engagements dans des activités illégales.

117. Les impacts négatifs potentiels sont surtout sociaux et liés (i) à l'encadrement des communautés lors de l'ensemble des activités du Projet, (ii) au partage d'une vision stratégique commune pour les actions qui mêleront à la fois la valorisation économique et la préservation des ressources naturelles.

118. Le Projet ne devrait donc pas entraîner d'impacts négatifs significatifs en matière environnementale et sociale et, a été classé dans la **catégorie B**.

D. Catégorie de risques climatiques

119. Les éléments clés suivants sont pris en compte pour le classement climatique :

- (I) les projections climatiques prévoient des changements limités en termes d'intensité, de distribution spatiale et temporelle de la pluviométrie à l'horizon 2030 : les perturbations de la pluviométrie, avec des périodes de sécheresse plus longues et des températures en augmentations dans la région septentrionale devraient avoir des effets sur la production agropastorale, et partant sur tous les maillons des filières agricoles ;

le Projet prévoit de mener des activités d'agroforesterie et d'aménagement de sous-bassins versants permettant la réhabilitation des sols, de lutter contre la dégradation des ressources naturelles et de mieux gérer leur utilisation en réduisant les risques liés à la perturbation des régimes pluviométriques ;

la faiblesse des informations sur les risques climatiques et la manière de les gérer, le manque de formation du monde agricole et l'absence d'incitations pour favoriser des pratiques viables sur le plan environnemental et climatique freinent l'émergence de systèmes de production plus adaptés et l'adoption de pratiques et de systèmes d'exploitation plus responsables et appropriés aux changements du contexte climato-écologique ;

la quasi inexistence de données et d'analyses météorologiques locales ne permet pas de faire des évaluations et des projections très consistantes pour le Projet.

120. Les points ci-dessus montre que les objectifs et composantes du Projet prennent en compte le traitement des effets des changements climatiques. Le nombre limité d'expériences et d'acquis sur le terrain en matière de réduction des risques climatiques amène à proposer un classement de **risque climatique MODERE**.

Tableau 3 : matrice d'interactions potentielles (Réf. Leduc et Raymond 1999)

Type de Gestion de l'activité			Cogestion		Gestion communautaire			Gestion individuelle		
			Forêt communautaire et ZICGC	Plan d'aménagement	Reboisement	Produits forestiers non ligneux (PFNL)	Infrastructures hydrauliques	Agroforesterie (Nord-Ouest, Nord)	Agriculture-élevage (Extrême-Nord, Nord)	Aménagement des sous-bassins versants RNA
Milieu bio-physique	Hydrologie	Eaux souterraines	B+	B+ *	C-	B+	C-	C-	N/A	N/A
		Qualité de l'eau	B+	B+ *	C+	C+	C-	B+	N/A	N/A
		Régime hydrodynamique	A+	A+ *	C+	C+	N/A	N/A	N/A	C-
		Ruissellement / infiltration	A+	A+ *	C+	B+	N/A	C+	N/A	C+
	Géologie / dépôt de surface	Forme et relief	N/A	N/A	N/A	C+	N/A	A+	B-	B+
		Structure et texture des sols	B+	B+ *	A+	C+	N/A	A+	C-	N/A
	Biologie	Fertilité des sols	B+	B+ *	A+	C+	N/A	B+	B+	B+
		Couvert végétal	A+	A+ *	B+	B+	N/A	A+	B-	N/A
		Faune et habitat	B+	B+ *	B+	B+	C-	N/A	B-	B+
		Biodiversité	C+	C+ *	B+	C+	N/A	B+	N/A	B+
		Ecosystèmes fragiles	C+	C+ *	N/A	C+	N/A	N/A	N/A	N/A
Milieu humain et social	Population	Démographie / déplacements	B+	B+ *	N/A	C+	A+	N/A	C+	N/A
		Activité économique	B+	B+ *	C+	A+	C+	A+	A+	B+
		Qualité de vie / hygiène	C+	C+ *	C+	A+	A+	A+	B+	C+
	Utilisation des ressources	Eau libre	B+	B+ *	N/A	N/A	N/A	A+	A-	N/A
		Espace agricole	B+	B+ *	B+	N/A	N/A	C-	C+	N/A
		Espace pastoral	A+	A+ *	N/A	N/A	C+	N/A	N/A	N/A
		Espace forestier	A+	A+ *	A+	N/A	N/A	B+	N/A	N/A
		Sites protégés	N/A	A+ *	N/A	N/A	A+	N/A	A-	N/A

* sous condition de la participation essentielle des communautés dans le processus de cogestion de ces zones protégées et des zones périphériques.

E. Recommandations pour la conception et la mise en œuvre du Projet

Mesures d'atténuation

121. Lors de sa conception, le Projet accordera une attention particulière aux activités concernant :

- (m) l'amélioration du cadre administratif et institutionnel de la gestion des aires protégées et de la conservation de la biodiversité ;
- l'amélioration de la connaissance scientifique des aires protégées et de leur zone périphériques ;
- l'amélioration de la connaissance des communautés rurales et des participants au Projet sur les défis écologiques et la manière d'y répondre ;
- l'amélioration du cadre institutionnel et de soutien de la promotion des initiatives écologiques et de lutte contre les effets néfastes des changements climatiques ;
- l'amélioration de l'offre de formation dans le domaine écologique et la formation de jeunes dans des éco-entreprises ;
- l'appui à la mise en œuvre de projets et éco-entreprises à dimension écologique et/ou d'adaptation aux changements climatiques portés par des jeunes ;
- l'accompagnement et le suivi technique et organisationnel de jeunes entrepreneurs et des activités écologiques.

Approches à bénéfices multiples

122. La gestion locale collective des ressources naturelles par l'intermédiaire d'une structure de forêt communautaire permet d'avoir des impacts multiples :

- (n) la responsabilité des communautés dans la gestion durable de leurs ressources ;
- la responsabilité des communautés dans la conservation de l'aire protégée limitrophe ;
- une indépendance fiscale partielle par rapport aux produits forestiers ;
- l'apport de ressources financières aux communautés par la réalisation de prélèvement de produits forestiers non ligneux et produits forestiers ;
- le renforcement des capacités locales de mise en œuvre ;
- la sécurisation des revenus des ménages vulnérables liés à l'exploitation de ces ressources naturelles.

123. Les activités de promotion d'une sensibilité écologique, d'informations et d'appui au développement d'initiatives/entreprises écologiques, en particulier vers les jeunes ruraux vont avoir des effets environnementaux multiples :

- (o) la gestion durable des terres combinant des mesures de conservations des eaux et des techniques d'agroforesterie permettront de réduire les pertes de terre à la parcelle, d'améliorer la fertilité et le bilan hydrique des sols, d'augmenter la disponibilité de fourrage, d'améliorer la séquestration de carbone à la parcelle et de favoriser la biodiversité en créant de nouveaux habitats pour la faune et la flore ;
- les interventions de régénération naturelle assistée permettront d'éviter l'érosion par ruissellement, d'améliorer le bilan hydrique des sols et de favoriser la recharge des nappes phréatiques ;
- le développement de petites entreprises à caractère écologique (pépinières, transformation de produits forestiers non ligneux, production de compost, etc.) permettra non seulement de créer des revenus et des emplois pour les jeunes, mais également de servir de vecteur pour de nouvelles approches en matière de respect et de valorisation citoyenne des ressources naturelles.

124. La mise en avant d'une vision stratégique commune entre les acteurs de la conservation de la biodiversité et les populations limitrophes permet de soutenir l'ensemble des démarches mise en place et présentées précédemment.

Incitations pour de bonnes pratiques

125. Le Projet fournira des facilités et des incitations pour la formation des jeunes en éco-entreprises ainsi que pour la mise en place d'initiatives écologiques liées aux aménagements du territoire.

126. A l'issue de la formation, le Projet participera sous forme de « prime verte » au développement, au démarrage et à la croissance des éco-entreprises.

127. Le Projet veillera à l'évaluation en particulier de la viabilité technique et économique des initiatives présentées par les jeunes avant de s'engager ou non dans leur soutien.

Processus participatif

128. Les activités de ciblage des bénéficiaires s'appuieront sur l'élaboration de critères objectifs et une démarche de ciblage transparente et participative afin de favoriser l'appropriation des activités par les communautés ciblées et éviter l'accaparement de certains appuis par des personnes non motivées ou par des élites.

129. Des commissions de sélection et de validation des micro-projets seront mises en place, relativement proches des zones d'intervention et qui opèreront sur la base de directives et procédures consignées dans un manuel d'opérations.

130. Des échanges réguliers d'information avec d'autres intervenants au niveau local comme au niveau national seront assurés (Comité multipartenaires – CMP), afin de favoriser l'harmonisation dans les approches et les appuis, promouvoir les complémentarités et les synergies et éviter des doublons.

F. Analyse des alternatives

131. L'intensification des systèmes de production tout en veillant au respect de l'environnement et la réduction des risques climatiques est nécessaire pour garantir des moyens d'existence viables aux ménages ruraux pauvres et aux jeunes désireux de rester dans leur communauté et de trouver une situation stable.

132. Les écosystèmes du Cameroun, malgré les menaces qui pèsent sur eux, sont relativement riches et variés pour permettre la mise en place de nouvelles activités. Par ailleurs, la demande soutenue en produits agricoles et le niveau de prix sont des facteurs positifs pour le développement de nouvelles entreprises tournées vers le marché.

133. La combinaison d'activités dans la production végétale, le petit élevage, l'aquaculture ou la foresterie peut être une approche intéressante pour mieux valoriser les ressources naturelles, l'utilisation de co-produits, la main d'œuvre disponible sur l'exploitation, voire sur le marché local et ainsi d'accroître les bénéfices d'une entreprise tout en limitant les investissements fonciers ou les charges financières. Ces alternatives devraient être étudiées de près dans le montage de micro-projets ou d'entreprises par les jeunes.

G. Analyse institutionnelle

Cadre institutionnel

134. **Cadre légal national.** La loi cadre relative à la gestion de l'environnement n° 96/12 du 05 août 1996 et son article 9 fixe les principes fondamentaux de la gestion de l'environnement au Cameroun : (i) le principe de précaution, (ii) le principe d'action préventive et de correction, (iii) le principe du pollueur-payeur, (iv) le principe de responsabilité, (v) le principe de participation et (vi) le principe de subsidiarité. Le décret n° 2013/0171/PM du 14 février 2013 définit les procédures des Etudes d'Impacts Environnementales sommaires ou détaillées et des Notices d'Impacts Environnementales, respectivement catégorisé A et B.

135. Le Projet devra ainsi réaliser une Notice d'Impact, environnementale, pour validation auprès du responsable départemental des services déconcentrés du Ministère de l'Environnement, avant la mise en œuvre de ces activités.

136. Le Projet veillera également à suivre les cadres des lois complémentaires suivantes :

(p) loi n° 98/005 du 14 avril 1998 portant sur le régime de l'eau ;

loi n° 99/017 du 22 décembre 1999, régissant le contrôle de qualité des sols, des matériaux de construction et des études géotechniques ;

loi n° 94/01 du 20 janvier 1994, portant le régime des forêts, de la faune et de la pêche ainsi que le décret n° 95/466/PM du 20 juillet 1995, fixant les modalités d'application du régime de la faune.

137. Dans le cas de forêt communautaire, la commercialisation des Produits Forestiers Non Ligneux qui en sont issus, et qui constitue une des activités appuyées par le Projet, est légalement encadrée. Les propriétaires de cette forêt doivent signer avec le MINFOF une convention de gestion (art. 3 de la décision n°1985 /D /MINEF /SG /DF /CFC), fixant les modalités d'exploitation en régie et de préservation des ressources naturelles, dans le cadre de la mise en œuvre du plan simple de gestion.

138. **Engagements internationaux.** Le pays est signataire de nombreuses conventions internationales, soulignant notamment son investissement dans la préservation des écosystèmes et de la biodiversité :

(q) convention sur la Diversité Biologique, Rio de Janeiro, de 1992 et ratifiée le 29/08/1994 ;

convention-cadre des Nations Unies sur les Changements Climatiques et son Protocole de Kyoto, Rio de Janeiro, de 1992 et ratifiée le 19/10/1994 ;

convention des Nations Unies sur la Lutte contre la Désertification, de 1994 et ratifiée le 29/08/1994 ;

convention sur le Commerce International des espèces de plantes et d'animaux sauvages menacées (CITES) de 1973 et ratifiée le 05/06/1981 ;

convention de Portée internationale sur les Zones humides, notamment en ce qui concerne l'Habitat de la Sauvagine (Ramsar) de 1971 et ratifiée le 11/01/2006 ;

convention de Bonn sur les Espèces Migratoires d'Animaux sauvages (CMS de 1979 et ratifiée le 01/11/1983.

139. Le pays a également ratifié de nombreuses conventions régionales et sous-régionales pour la gestion durable des ressources comme pour le Traité de la Commission des Ministres des Forêts de l'Afrique Centrale pour la Conservation et la Gestion durable des Ecosystèmes forestiers (COMIFAC) en 2000.

140. **Alignement avec les Plan Stratégiques Nationaux.** La signature des ces conventions a ensuite été traduit par la mise en place d'infrastructures et de plans nationaux stratégiques sur la biodiversité, l'adaptation au changement climatique et la lutte contre la désertification.

141. La Stratégie et Plan d'Action National pour la Biodiversité II (SPANB II) a traduit le Plan stratégique de la CDB pour la biodiversité 2011-2020 et ses objectifs d'Aichi, en réalité nationale appropriée pour une réponse efficace à la perte grandissante de la biodiversité. Le Projet s'aligne sur la « préservation des milieux » avec l'objectif 9 de l'Axe B ; sur la « valorisation économique des milieux » avec l'objectif 12 de l'axe B et l'objectif 14 de l'axe C ; sur le « soutien aux approches communautaires » avec l'objectif 13 de l'axe B ; sur la « sensibilisation et les inventaires » avec les objectifs 1 et 2 de l'axe A ; et sur « l'adaptation aux changements climatiques » avec l'objectif 10 de l'axe B.

142. Le Plan d'Action National pour la Lutte Contre la Désertification (PAN LCD) a traduit les engagements de 1994. Le Projet s'aligne également sur de nombreux objectifs notamment sur la « conservation et protection des écosystèmes fragile, des zones et de la biodiversité » avec l'action 1.3 de l'axe 1 et l'action 3 de l'axe 2.

143. Le Plan National d'Adaptation aux Changements Climatique, traduit les engagements de 1994. Le Projet s'aligne notamment sur l'objectif de « limitation de la vulnérabilité des acteurs et des milieux », avec l'axe 3.

144. Enfin, le Projet s'aligne (i) pour l'entrepreneuriat rural pour la lutte contre la pauvreté, sur le Plan National d'Investissement Agricole et le programme PAIJR de la Stratégie de Développement du Secteur Rural SDSR ; et (ii) pour la politique de finance rurale, sur le programme PAFSR de la SDSR.

145. **Alignement avec la Contribution prévue déterminée au plan national (INDC).** Le Projet est par ailleurs aligné avec les orientations stratégiques de l'INDC du Cameroun, présentées lors de la Conférences des Parties à Paris. Le Projet met en avant la promotion d'activités génératrices de revenus limitant les actions néfastes sur l'environnement tel que la déforestation, liée à l'orientation d'atténuation n°2 sur « l'intensification d'une production respectueuse de l'environnement et permettant de limiter la déforestation/ dégradation ». Le Projet s'attache aux problématiques d'adaptation aux changements climatiques en sensibilisant et formant les jeunes aux pratiques agro-éco-entrepreneuriales préservant les milieux naturels, il s'aligne avec les orientations d'adaptation, programme 16 du secteur agricole, programme 19 de la forêt et programme 6 du renforcement des capacités :

- i. points d'alignement du Programme 16 – agriculture : « Développement d'une agriculture intégrée et résiliente face aux effet des changements climatiques » ; « Gestion des besoins en eau » ; et « développement de l'agriculture durable/ conservatoire » ;
- ii. points d'alignement du programme 19 – forêt : « Réduction de la vulnérabilité des forêts au changement climatique au Cameroun : inventaires, gestion et conservations des blocs forestiers, reconstitution du couvert forestier » ; « agroforesterie villageoise », « conservation de la biodiversité ; gestion des trafics et du braconnage ; gestion des feux de brousse » ;
- iii. points d'alignement du programme 6 – renforcement des capacités : « Education, formation professionnelle et renforcement des capacités sur le changement climatique : curricula et outils pédagogiques, formations spécialisées ; formation continue ; bourses d'études ; appui à la recherche ».

146. **Cadre institutionnel.** Le Projet s'appuiera sur des partenaires, notamment des centres de formation, des prestataires de services privés et des organisations non-gouvernementales pour capitaliser sur leur expertise, leur savoir-faire et leurs capacités d'intervention dans les régions cibles. Le Projet sera dans une dynamique d'appui aux interventions déjà existantes, en particulier celles du FIDA, pour développer la prise en compte des questions environnementales et de changements climatiques, mais également pour élargir les opportunités d'activités dans le secteur de l'écologie pour les projets en cours, tel que le PEA-Jeunes, le PADFA ou le PADMIR. Enfin, le Projet informera l'ensemble des parties du Comité Multi Partenaires Environnement⁴² afin d'assurer une très forte coordination avec les projets existants et de créer des synergies et des complémentarités durables.

Renforcement des capacités

147. Des activités de renforcement des capacités sont prévues aux niveaux suivants :

- i. Amélioration du cadre administratif et institutionnel de la gestion des aires protégées et de la conservation de la biodiversité ;
- ii. Amélioration des connaissances des communautés rurales et des parties prenantes au Projet sur les défis écologiques et la manière d'y répondre (activités d'information, éducation et communication - IEC) ;

⁴² La mission de conception n'a pu rencontrer ce comité qui ne siège que tous les trois mois mais elle a présenté le Projet au comité multi-partenaires Agriculture lors de sa session de juillet 2016.

- iii. Elaboration et mise à disposition des personnes intéressées de référentiels technico-économiques sur les activités et/ou des techniques vertes adaptées ;
- iv. Formation et incubation de jeunes dans des métiers liés à l'agro-écologie ;
- v. Appui-conseil technique et organisationnel à de jeunes promoteurs d'initiatives ou d'entreprises à dimension écologique et/ou d'adaptation aux changements climatiques.

Financement complémentaire

148. Les activités du Projet feront l'objet d'un financement par le Fonds D'adaptation ainsi que d'un cofinancement direct tant par le gouvernement du Cameroun que par les partenaires de mise en œuvre (ICRAF, UICN).

H. Suivi et évaluation

149. De manière intrinsèque au Projet ECO-Jeunes, des études de caractérisation des zones d'intervention seront réalisées dans les zones périphériques aux parcs nationaux ciblés, permettant après traitement de déterminer une situation de référence de ces zones sur les thématiques socio-environnementales. Le système de suivi environnemental devra être développé par les partenaires chargés de la mise en œuvre de la gestion des ressources naturelles. Ce système sera intégré au système de suivi-évaluation du Projet.

150. L'Observatoire National sur les Changements Climatiques a été créé en 2009, et l'AFD participe au renforcement des capacités de cette structure. L'observatoire développe trois activités d'intervention : (i) actions d'information des agriculteurs et des éleveurs sur les conditions climatiques et météorologiques ; (ii) suivi des indicateurs de biodiversité et environnementales (stockage de la biomasse / bilan carbone) ; et (iii) suivi des indicateurs sociaux. Cette logique d'intervention n'est pas encore opérationnelle mais devrait l'être lors de la mise en œuvre du Projet qui en bénéficiera pour le suivi des opérations.

151. L'ensemble des indicateurs en lien avec les différentes activités de conservation de la biodiversité, de la préservation de l'environnement et d'adaptation aux changements climatiques est identifié dans le cadre logique du Projet, présenté dans la note de conception.

I. Informations complémentaires pour affiner le ciblage

152. La note de conception détaille et approfondie les possibilités de partenariat ainsi que le montage institutionnel du Projet qui s'appuiera sur les acquis et les structures déjà fonctionnelles des autres projets en cours cofinancés par le FIDA dans la zone d'intervention, le PEA-J PADFA et le PADMIR. Elle approfondie l'impact d'activités similaires déjà réalisées dans les zones d'intervention du Projet et étaye la présente Note des leçons complémentaires apprises.

J. Compte rendu des consultations avec les bénéficiaires, la société civile, le grand public, etc.

153. La liste des acteurs rencontrés par la mission se trouve en annexe au document de conception.

154. Les concertations avec les bénéficiaires directs n'ont pas encore pu être organisées pour des raisons logistiques. Lors d'échanges avec des profils similaires (jeunes, groupements paysans, centre de formation, ONG locales impliquées dans la protection de l'environnement) rencontrés dans la région du Nord-Ouest, la mission a noté (i) l'importance de maintenir une synergie au sein du Projet entre les aspects économiques de l'éco-entrepreneuriat et la gestion durable des milieux naturels et (ii) deux besoins complémentaires aux formations telles qu'elles sont organisées actuellement : l'apprentissage de la gestion financière et une facilitation de l'accès à la microfinance. Afin de s'assurer des impacts positifs du Projet sur ces deux aspects, la formation et l'incubation des bénéficiaires prendront en considération des modules spécifiques. Des concertations seront à mettre en place avec les bénéficiaires de chaque région, afin de s'assurer de leur soutien et d'être en adéquation avec les caractéristiques locales.

155. Les organisations de la société civile des différents secteurs de l'économie verte que la mission a rencontrées démontrent que les acteurs sont dynamiques et organisés en réseaux d'associations locales, mais manquent souvent de moyens. Ces organisations comprennent le concept « d'activités vertes » comme celles traitant de l'agro-écologie et de l'agro-industrie qui y est liée.

156. Le grand public n'a pas été consulté car le Projet ne prévoit pas d'interventions ayant un impact majeur.

Annexe 1 : Questions servant à guider les choix dans l'examen critique du risque climatique

Question	Oui	Non	Complément d'explication à la réponse "Oui"
Est-ce que le groupe cible du Projet dépend de ressources naturelles sensibles au climat (cultures sensibles à la sécheresse, cultures pluviales, espèces halieutiques migratrices, etc.) ?	X		Agriculture de subsistance, non-irriguée en majorité Faible diversification des activités ou des sources de revenus
Est-ce que la zone du Projet a fait l'objet de phénomènes météorologiques extrêmes dans le passé (tels que inondations, sécheresse, tempêtes tropicales, vagues de chaleur) ?	X		Sécheresses dans l'Extrême-Nord et le Nord Inondations beaucoup moins fréquentes
Les changements de température, les précipitations ou les conditions météorologiques extrêmes pourraient-elles affecter l'impact du Projet, sa durabilité ou son coût pendant son cycle de vie ?	X		Perte partielle/totale de récolte par sécheresse ou inondation Perte des jeunes plants reboisés par sécheresse
Est-ce que la variabilité du climat pourrait affecter la productivité agricole dans le cadre du Projet (cultures/élevage/pêche) ou l'incidence des ravageurs et des maladies ?	X		La variabilité climatique va demander l'utilisation de variétés moins sensibles au stress hydrique. L'évolution de la pression parasitaire est difficile à prévoir, mais des techniques d'agroforesterie et de diversification de la production devrait la réduire
Est-ce que les aléas climatiques pourraient avoir un impact négatif sur des étapes clé des chaînes de valeur identifiées dans le Projet (de la production à la mise en marché) ?	X		Rupture de flux suite à de mauvaises récoltes
Est-ce que le Projet a un potentiel pour intégrer des mesures de résilience climatique sans des coûts supplémentaires importants (Exemple : application de normes de construction améliorées, extension des programmes de renforcement de capacités, intégration politique des enjeux liés aux risques climatiques) ?	X		Techniques d'agroforesterie, sinon les mesures antiérosives ou de reforestation entraînent toutes des coûts additionnels, mais créent en même temps de l'emploi et des revenus pour la population locale
Le Projet pourrait-il bénéficier d'une analyse des risques climatiques et de la vulnérabilité plus détaillée pour mieux identifier les populations rurales les plus vulnérables, améliorer le ciblage et identifier des mesures complémentaires d'investissement pour gérer les risques climatiques ?		X	Les populations les plus vulnérables socio-économiquement sont certainement les mêmes que celles vulnérables en premier aux changements climatiques.

Annexe 2: Plan de Gestion Environnementale et Sociale

CMLXXIV. Paramètres	CMLXXV. Activité	CMLXXVI. Indicateur de performance	CMLXXVII. Base de données	CMLXXVIII. Responsabilité du Monitoring	CMLXXIX. Moyen de Monitoring
CMLXXX. Biodiversité / conflit cheptel / faune sauvage	CMLXXXI. Suivi du nombre de conflit	CMLXXXII. Nombre de conflit reportés	CMLXXXIII. Apport annuel de gestion des parcs	CMLXXXIV. IUCN / ICRAF / parc nationaux	CMLXXXV. Analyse documentaire / visite de monitoring
CMLXXXVI. Ressources forestière	CMLXXXVII. Suivi de la ressource	CMLXXXVIII. Indicateur de couvert végétal	CMLXXXIX. Apport d'activité Plan de Gestion simplifié	CMXC. IUCN / ICRAF / inspection forestières	CMXCI. Analyse documentaire
	CMXCII. Suivi des prélèvements	CMXCIII. Quantité de produits vendus	CMXCIV. Apport d'activité Plan de Gestion simplifié	CMXCV. IUCN / ICRAF	CMXCVI. Analyse documentaire
CMXCVII. Ressources financière des communautés	CMXCVIII. Suivi des revenus issus de la gestion forestière	CMXCIX. Revenus des activités	M. Rapport d'activité	MI. IUCN / ICRAF	MII. Analyse documentaire
MIII. Activités spécifiques des vulnérables	MIV. Suivi du nombre de vulnérables actifs des filières PFNL	MV. % femmes MVI. % marginalisés	MVII. Enquêtes	MVIII. IUCN / ICRAF	MIX. Visite de monitoring
MX. Expropriation foncière des vulnérables	MXI. Suivi et résolution des conflits d'expropriations foncières des vulnérables	MXII. Nombre de conflit d'expropriation foncière résolu	MXIII. Enquêtes	MXIV. IUCN / ICRAF	MXV. Visite de monitoring et de soutien