gef GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

Naoko Ishii
CEO and Chairperson

January 15, 2015

Dear Council Member:

FAO as the Implementing Agency for the project entitled: *Cameroon: Sustainable Forest Management under the Authority of Cameroonian Councils*, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with FAO procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by Council in June 2012 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached project document prepared by FAO satisfactorily details how Council's comments and those of the STAP have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.TheGEF.org. If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

Naoko Ishii
Chief Executive Officer and Chairperson

Attachment: GEFSEC Project Review Document, FAO Project Document
Copy to: Country Operational Focal Point, GEF Agencies, STAP, Trustee

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REQUEST FOR: CEO ENDORSEMNT
PROJECT TYPE: FULL-SIZED PROJECT
TYPE OF TRUST FUND: GEF TRUST FUND

PART I: PROJECT INFORMATION

Project Title: Sustainable management of forest by cameroonian councils			
Country(ies):	Cameroon	GEF Project ID:[1]	4800
GEF Agency(ies):	FAO	GEF Agency Project ID:	615536
Other Executing Partner(s):	Ministry of Environment and Nature Protection (MINEP), Ministry of Forestry and Wildlife (MINFOF), Technical Center for Council forest (CTFC)	Submission Date:	22 December 2014
GEF Focal Area (s):	MFA	Project Duration(Months)	48
Name of Parent Program (if applicable): ➢ For SFM/REDD+	x	Project Agency Fee ($):	357,333

A. FOCAL AREA STRATEGY FRAMEWORK[2]

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount ($)	Co-financing ($)
BD-2	BD Outcome 2.1:Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation. (Indicator:Landscapes and seascapes certified by internationally or nationally recognized environmental standards that incorporate biodiversity considerations (e.g. FSC, MSC) measured in hectares and recorded by GEF tracking tool).	2.1- 80% of council forests covered by the project (449425ha) under forest management plans that integrate biodiversity conservation.	GEFTF	1,383,883	4,010,000
BD-1	BD Outcome 1.1 Improved management effectiveness of existing and new protected areas. (Indicator: Management effectiveness tracking tool).	1.1 New protected areas (conservation sites) covering 10% of the council forests (56200ha).	GEFTF	1,039,800	4,490,000
CCM-5	CCM Outcome 5.2: Restoration and enhancement of carbon stocks in forests and non-forest lands, including peatland (Indicator 5.2: Hectares restored)	5.2: Forest ecosystems under good management practices	GEFTF	179,812	4,500,000
SFM/REDD-1	SFM/REDD Outcome 1.2 Good management pratices applied in existing forests. (Indicator: Hectares of forests under sustainable forest management)	1.2 449,425 ha of council forests (80% of the council forests covered) under sustainable forest management (SFM).	GEFTF	849,000	4,328,571
		Sub-total		3,452,495	17,328,571
		Project Management Cost	GEFTF	120,838	521,429
		Total project costs		**3,573,333**	**17,850,000**

B.   **PROJECT FRAMEWORK**

Project Objective: to reduce deforestation and forest degradation in the council forests in order to improve biodiversity conservation, enhance carbon stocks and ensure implementation of sustainable forest management (SFM) practices.							
Project Component	**Grant Type**	**Expected Outcomes**	**Expected Outputs**	**Trust Fund**	**Grant Amount ($)**	**Confirmed Co-financing ($)**	
1. Establishment of Council forests for sustainable forest management and biodiversity conservation	TA	1.1 Increased forest area managed for biodiversity conservation and sustainable use of forest and enhanced biodiversity in unprotected ecological zones (*Indicator: 449,425ha of council forests targeted by the project are under SFM and 56200ha are managed for biodiversity conservation*).	1.1.1 Database of biodiversity in the council forests established 1.1.2 Forest management plans, integrating biodiversity conservation, developed and implemented 1.1.3. 56,200ha of conservation sites formally designated and established within the council forests	GEFTF	1,401,559	4,800,500	
2. Capacity Building to strengthen biodiversity conservation and SFM in Council Forests	TA	2.1 Strengthened capacity of selected councils to manage council forests and conservation sites (*Indicator: 80% of councils targeted by the project implement BD conservation practices*)	2.1.1 Technical guidance and standards for SFM and biodiversity conservation in conservation sites developed and disseminated in the council forests. 2.1.2. 85 local forest protection committees (FPC) established and trained and 170 local community leaders/change agents from the villages in/around the council forests trained in alternative livelihoods 2.1.3. 17 functional technical units (FTU) established and 85 council staff trained in the development and implementation of forest management plans.	GEFTF	1,737,269	3,700,000	
3. Capacity building for the management of forest carbon	TA	3.1 Council forest staff and Functional technical unit (FTU) have the tools and skills necessary to monitor and manage carbon stocks in the council forests. (*Indicator: Quality of carbon monitoring reports produced yearly and peer-reviewed*)	3.1.1 Existing accounting and carbon monitoring systems adapted to council forests and tested. 3.1.2 85 forest protection committees (FPC) and 34 functional technical unit (FTU) staff trained in forest carbon management	GEFTF	179,818	1,550,658	
4. Ecosystem restoration and enhancement of carbon stocks	Inv	4.1 Forest degradation reduced through restoration and reforestation of 56,200ha of degraded forests (*Indicator: 56,200ha of degraded forest areas (10%) reforested/restored*)	4.1.1 Reforestation and restoration of 56,200 in the council forests (10% of total council forest and forest reserves targeted by the projet)	GEFTF	0	6,960,000	
5. Monitoring	TA	5. 1 Project managed and	5.1.1: M&E plan implemented and	GEFTF			

and evaluation and information dissemination.	monitored effectively and efficiently and best practices and lessons learned disseminated	mid-term and final evaluations completed		133,850	317,413
		Subtotal		3,452,495	17,328,571
		Project management Cost (PMC)[3]	GEFTF	120,838	521,429
		Total project costs		3,573,333	17,850,000

C. SOURCES OF CONFIRMED CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME ($)

Please include letters confirming co-financing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Co-financing	Co-financing Amount ($)
National Government	MINEPDED	In-kind	4,500,000
National Government	MINFOF	In-kind	5,000,000
Bilateral Aid Agency	GIZ-ProPSFE	Grant	1,900,000
Local Government	PNDP	In-kind	1,500,000
NGO	Cameroon Ecology	In-kind	3,500,000
GEF Agency	FAO	In-kind	400,000
GEF Agency	FAO	Grant	1,050,000
Total Co-financing			**17,850,000**

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL, AREA AND COUNTRY[1]

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in $)		
				Grant Amount (a)	Agency Fee (b)[2]	Total c=a+b
FAO	GEFTF	BD	Cameroon	2,500,000	250,000	2,750,000
FAO	GEFTF	CCM	Cameroon	180,000	18,000	198,000
FAO	GEFTF	SFM/REDD+	Cameroon	893,333	89,333	982,666
Total Grant Resources				3,573,333	357,333	3,930,666

1 In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

2 Indicate fees related to this project

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount ($)	Co-financing ($)	Project Total ($)
Local consultants	384000	160000	544000
International consultants	116000	85000	201000
	500000	245000	745000

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT?

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

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[3] PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF[4]

The total size of council forest to be targeted by the project has changed. The figure of 400 000ha of council forests to be targeted by the GEF project provided at the PIF stage was established on the basis that these council forests will be selected within the three regions of Cameroon (East, Center, West) and that a preliminary work to establish criteria as well as examine the tenure status of the council forests were needed (work that was achieved by the PPG). Based on sound criteria established, the PPG work led to the identification of 546 690ha of council forests areas found suitable for the GEF project. As result of the PPG consultations with project stakeholders, it was agreed that only council forests that are classified and ready to implement field activities should be selected. Those still in the process to be classified were therefore withdrawn as it is likely that approval of their classification could take more time beyond the project cycle. Finally, 17 council forests already classified were selected totaling 416,901 ha (see project document table 2) as well as 33 forest reserves transferred to the councils totalizing 137 738 ha (see project document table 4) and 9 reforestation areas in the council forest totalizing 7,186 ha (see project document table 3). Finally, the total area targeted by the GEF project is 561 825 ha (see project document table 5).

Output 1.1.1 has been simply eliminated as it was not necessary, at least within the scope of the proposed project. Output 1.1.2, has been modified (as explained above).

As an evolution of the baseline situation, the PAF2C program has provided technical assistance to 9 council classified forests, produced 153 thematic cartographic maps for the council forests, assisted 6 council forests in the development of their forest management plans and has also provided technical support to 25 forest reserves that have been transferred to the councils.

A.1   National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Updates Reports, etc.

NA

A.2 GEF focal area and/or fund(s) strategies, eligibility criteria and priorities

 NA

A.3 The GEF Agency's comparative advantage

Sustainable natural resources management is a core area of expertise for FAO and sustainable forest management is one of FAO's greatest strengths. Between 1986 and 1993, FAO developed what is now the oldest large participatory, self-financing forest management pilot project in all of Africa, covering over 80,000 hectares and functioning very well to this day. From working with farmers in their fields to scientists in their laboratories to policy-makers in their ministries, FAO has a high level of awareness and understanding of the causes and drivers of deforestation and forest degradation and of the various options for the development of sustainable forest and ecosystem management strategies that reduce poverty through the generation of income and employment, that integrate biodiversity conservation into productive forest landscapes and that both mitigate climate change and that provide key tools for rural communities to adapt to climate change. FAO has strong international programs for knowledge management in support of SFM and for the restoration of forests. Both of these will provide critical support to this project. FAO has a

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[4] For question A.1-A,7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter "NA" after the respective question

strong comparative advantage for providing the type of cross-cutting analysis that is needed for the project, including: broad in-house expertise, information systems and networks, global partnerships and resource mobilization capacity.

Through the National Forest Program (NFP), FAO provides support to countries for the mainstreaming of SFM through review of forest policies and strategies, capacity building, knowledge management and resource mobilization. Building on its experience over the past 60 years, FAO is supporting SFM worldwide through a comprehensive programme covering aspects of forest management and conservation, environmental and economic aspects of forest utilization, and policy and institutions. FAO provides information on all aspects of SFM, direct technical support to countries through normative and field programme activities, develops best practice guidelines and technical tools, strengthens country capacity, catalyzes regional and international cooperation, and serves as a neutral forum.

FAO is one of the founding members of the UN-REDD Program in which FAO, UNDP and UNEP have embarked on a joint programme to provide coordinated REDD support to countries, as consistent with the "One UN" approach. The Joint Programme will provide support for REDD-readiness actions and implementation of the national REDD+ strategy. The proven ability to execute field projects gives FAO a comparative advantage unique in the UN system with respect to supporting GEF objectives and activities.

In addition, within the region, FAO's expertise and experience is demonstrated by its sub-regional forestry programme, which has included the following in recent years:

a. Monitoring and evaluation of compliance in West Africa with the international non-legally binding instrument on forests.
b. Implementation of the FAO-German forestry project on sustainable use of non-wood forest products in West and Central Africa (based in Cameroon).
c. Providing technical support to the development and implementation of national MRV with a regional approach covering ten member countries of COMIFAC (Forest Commission for Central African Countries).
d. GEF forestry projects currently being implemented on mangroves in Cameroon and the Republic of Congo.

A.4 The baseline project and the problem it seeks to address:

Following the PPG data collection and analyses, the description of the problem and the baseline has been improved. Please see sections 1.1 and 1.2 in the FAO project document.

A.5 Incremental / Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

The incremental reasoning has been refined based on PPG analyses. Please see section 1.2 in the FAO project document.

A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

The project risks have been identified and analysed and mitigation measures have been incorporated in the project design. FAO will provide technical support to the national project team responsible for the day-to-day management of these risks and the effective implementation of mitigation measures.

The table below summarizes the risks identified, their rating, and mitigation measures incorporated in the design of project components.

Risk	Probability	Impact	Mitigation measures
Environmental Risks			
Climate change impacts (e.g. changes in the water regime, longer and hotter dry seasons, increased incidence of fires/pests and diseases etc.)	Low	Reduction in habitats suitable for BD conservation and worsening habitat conditions for key species. Increased pressure on forests because of reduced productivity in agriculture. Impairment forest restoration activities.	Monitor impacts on biodiversity as part of conservation area monitoring; Collaborate and use the results of climate change adaptation projects carried out in Cameroon; Management measures will be adopted to minimize the incidence of forest fires; Potential synergistic links between climate driven changes and other anthropogenic disturbances will be identified and measures to reduce these other factors will be taken as part of the forest management plans..
Forest fires, pests and diseases	Low	Increased forest degradation. Direct reduction in threatened species populations through mortality, habitat and biodiversity loss	Countermeasures will be adopted in forest management plans to address forest fires, pests and diseases; Occurrence of such events will be recorded in monitoring activities and preventive actions will be improved; Trainings for FTUs and FPCs will address these specific threats and the actions to be undertaken
Economic Risks			
Delay in the transfer of funds from co-financing partners	Medium	Project progress at all levels will be delayed	A coordinating committee will be responsible for monitoring the project and reporting to the co-financing partners on how the funds are used and also constantly liaise with them to transfer their contribution in time
Social, governance and institutional risks			
Poor co-ordination between ministries (MINEPDED, MINFOF) and agencies (CTFC/ ACFCAM) and other stakeholders	Medium	Project progress stalled or delayed	Organize regular meetings between ministries and agencies concerned by the project to avoid misunderstanding or lack of information on the project. This will be through the PSC, PTCM and the Stakeholder Committees
Changes in political circumstances and govt.	Low to Medium	Project progress stalled	Broad stakeholder engagement throughout the project preparation and the continuation of this engagement during

priorities			the implementation will ensure continued political support for the project
Lack of interest or non-participation of the local communities in the project activities	Medium	Project will not achieve the targets set, and any targets achieved will not be sustainable	Awareness activities and education materials on the link between ensuring SFM and biodiversity conservation in the council forests and the improvement of livelihoods of the communities. Continued recognition of the rights of the local population for traditional collection of forest products in the council forests for their subsistence. Continued engagement of the local communities through the Stakeholder Committees and Forest Protection Committees, and capacity building activities.
Lack of adherence to the management plans and continued illegal utilization of forest products	Medium	Current threats to biodiversity conservation will not be reduced. Forest degradation will continue	Key stakeholders will be involved in formulating the management plans. Measures to prevent illegal logging of wood and non-wood forest products in the council forests and continuous forest surveillance will be an integral part of the management plans and the forest protection activities.
Limited support and implementation capacity in the councils	Low to Medium	Biodiversity conservation and SFM activities at the ground level will be severely hampered	Progress of capacity development activities at the council level will be regularly monitored by the PSC. During the project preparation, council staff and other stakeholders were engaged, and with their buy-in and continued engagement during implementation, timely corrective measures will be taken in case of any concerns.

A.7 Coordination with other relevant GEF financed initiatives

Same as presented in the PIF, no changes.

B.   Additional information not addressed at the PIF stage

B.1   Describe how the stakeholders will be engaged in project implementation

Workshops during project preparation as well as meetings with administrative authorities, councils and local communities during field visits helped to identify and consult key stakeholders and beneficiaries of this project. At the broadest level, the main stakeholders with a direct or indirect interest in this project can be divided into three groups:
National government and government agencies
The Government of the Republic of Cameroon will participate in the project at two levels. First, at the political level, the project will raise awareness amongst political decision makers on the importance of sustainable management of council forests with regards to their contribution to biodiversity conservation and carbon enhancement in Cameroon while improving the livelihoods of the local communities.
At the technical level, the **Ministry of Forest and Wildlife (MINFOF)** will be the lead Ministry for the project. MINFOF will lead the project steering committee (PSC), monitor that project activities are in compliance with rules and procedures in Cameroon for sustainable management of ecosystems and biodiversity conservation. MINFOF will appoint a senior staff member to act as National Project Co-ordinator (NPC).

Another key Ministry for this project is the **Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED)**. MINEPDED will be vice-chair of the PSC. MINEPDED, as the National GEF Focal Point, will also facilitate the coordination of this GEF project with other relevant GEF-funded activities in Cameroon. As part of its co-financing to the project, MINEPDED will appoint a staff to act as focal point for the project.

Furthermore, the decentralized services of MINFOF and MINEPDED will be involved in the project implementation as the representatives of these ministries at regional and council levels are the ones providing first hand technical support to the councils on issues related to biodiversity conservation and sustainable forest management.

National non-governmental organization (NGO)
Association des Communes Forestières du Cameroun (ACFCAM) will be one of the key implementing partners of the project. It is foreseen that ACFCAM will implement specific activities and deliver outputs through a Letter of Agreement with FAO. ACFCAM will ensure complementarity of the GEF-funded project activities with PAF2C ongoing activities. ACFCAM will facilitate the scaling-up and sharing of best practices among member councils of ACFCAM.

Environmental NGOs
The following NGOs identified during the project preparation as potential partners have been validated by MINFOF and MINEPDED as established NGOs with proven records of achievements in Cameroon. Both MINFOF and MINEPDED confirmed having positive working relationships with these NGOs. It is foreseen that they will be involved in the implementation of the project activities falling under their areas of comparative advantage. Their selection will be on a competitive basis, based on annual work plans and budget approved by the Project Steering Committee. These NGOs include:
-    WWF (World Wildlife Fund for Nature)
-    IUCN (International Union for the Conservation of Nature)
-    CAM-ECO (Cameroon Ecology)
-    CEW (Cameroon Environment Watch)

Other specialized organizations

The following specialised partners (ICRAF, IRAD, ANAFOR, University of Yaounde, University of Dschang) who took part to the project inception workshop and have expressed their interest to participate in project activities on the basis of their expertise as well as other organisations with experience in carbon mapping, accounting and management in Cameron (Pilot project REDD-Cameroon COMIFAC/GIZ project, GEO Forest Carbon Tracking, the project "Architecture of REALU, REDD-ALERT). They will be involved in the implementation of the project activities falling under their expertise and they will be selected on a competitive basis.

Local government and local communities

At the local level, the beneficiaries of the project will include local municipalities or councils and local communities living in the councils targeted by the project. Direct benefits to the councils will be in the form of technical capacity to allow for the sustainable management of forests under their responsibility. The communities within the councils will benefit from employment in forest management activities (forest protection committees, forest inventories and surveillance, etc) and capacity building in alternative income generating activities, including non-wood forest products etc etc. In the long run, the councils and local communities will also benefit more from the expected improvements in the condition of forests and associated services, including provision of resources.

To ensure participation of local communities in the project, local stakeholder members will be represented in the stakeholder committees (SC). At least four project stakeholder committees will be established (one of each regrouping 4 council forests targeted by the project). Each stakeholder committee will have 4 members representing 4 council forests.

B. 2. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits *(GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):*

One of the main objectives of the project is to generate socio-economic benefits for local councils and communities living in the councils, to ensure the sustainable management of forest resources in the councils. Direct benefits to the councils will be in the form of technical capacity to enable the councils and communities to manage the forests in a sustainable way, and in the form of revenues which will be generated as a result. Once the council forests are formally set-up, and MINFOF has approved a forest management plan (and is under implementation), 70 percent of revenues from forest management goes to the council to cover forest management expenses and to fund the councils' development programmes, while 30% of revenues go to a committee of villages to fund local development activities. With this there is a very high likelihood that the interest of councils and communities in sustainable forest management will last beyond the end of the project.

A couple of important elements included in the project: establishment of stakeholder committees to ensure participation of local communities in decision making; and promotion of non-timber forest products (NTFPs). In Cameroon, women are the primary gatherers and traders of non-timber forest products, so activities focusing on NTPFs will target and ensure that women participate in and benefit from the project.

Please also see sections 5.1 and 5.3 in the FAO project document.

B.3 Explain how cost-effectiveness is reflected in the project design

To ensure cost-effectiveness and sustainability project results, GEF funding will specifically support the development of technical capacity of council forest staff and local communities to develop and implement sustainable forest management plans which integrate new concepts and practices – biodiversity conservation and carbon management. By encouraging the participation of local populations in the implementation of the project activities on the ground (forest inventory, biodiversity conservation, carbon measuring, carbon stocks monitoring…), the project will be by far more cost-effective and sustainable compared to hiring external resources to carry operational work or to perform these services through direct intervention by the government or other institutions. Furthermore, by focusing on

capacity building in biodiversity conservation and carbon management, GEF funding will leave a lasting legacy in terms of technical skills and experiences gained by local stakeholders from the project.

C.   DESCRIBE THE BUDGETED M&E PLAN

Monitoring and evaluation (M&E) of progress in achieving project results and objectives will be done based on the targets and results indicators established in the project results framework and the annual work plans and budgets. M&E activities will follow FAO and GEF monitoring and evaluation policies and guidelines. The M&E plan, which has been budgeted at USD 133,850 will be reviewed and updated, as necessary, during the project inception phase. This will involve: (i) review of the project's results framework; (ii) refining of outcome indicators; (iii) identification of missing baseline information and actions to be taken to collect the information; and (iv) clarification of M&E roles and responsibilities of project stakeholders. The project's M&E system will be established within the first 6 months of project implementation.

To monitor project outputs and outcomes including contributions to global environmental benefits, specific indicators have been developed in the Results Framework (see Annex 1). Output target indicators will be monitored on a six-monthly basis and outcome target indicators will be monitored on an annual basis if possible or as part of the mid-term and final evaluations.

Project progress will be monitored at three levels:

- Activity. Implementation of project activities will be monitored on an ongoing basis, with summaries of progress reported in project progress reports. Every six months, the semi-annual reports will record the completion of project activities. These six-monthly reports will also include a record of co-financing contributions to the project. The comparison of progress against annual work plans and budget (AWP/B) will be an important management tool to identify, discuss and overcome any difficulties in project implementation.

- Output. The delivery of project outputs will be recorded as and when they occur. The information source will be the evidence of outputs - training workshop reports, list of participants in training activities, meeting minutes, communication material etc. The production of outputs will also be reported in the project progress reports.

- Outcomes. The achievement of project outcomes will be monitored and recorded in the project progress reports and the annual Project Implementation Reviews submitted by FAO to GEF. To track the achievement of outcomes, the project will mainly use process indicators as the main focus of the project is on strengthening the institutional and technical capacity for sustainable management of the council forests. Outcomes related to training and capacity building will be assessed qualitatively through training evaluations and reports, personal interviews with participants, independent peer review of reports/plans produced by individuals trained by the project and other methods. For monitoring of outcomes related to changes in the physical environment and socio-economic conditions, specific surveys, field inspections and assessments will be carried out. A number of consultant inputs have been included in the project budget to deliver the required information. FAO will also carry out periodic supervision missions to monitor progress towards the achievement of outcomes.

The monitoring and evaluation plan is summarized below.

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget
Project Reporting			
Project Inception Report.	Technical Project Coordinator with inputs from project partners. Cleared by FAO and the Project Steering Committee.	Immediately after the project inception workshop	- *(it is expected that the Technical Project Coordinator will dedicate at least 10 percent of his/her time to M&E activities)
Project progress reports (PPRs)	Technical Project Coordinator. Submitted to FAO Cameroon (Budget Holder) and Lead Technical Officer. Finalized reports submitted to the FAO GEF Unit by the LTO, and to the PSC by the Technical Project Coordinator.	Six- monthly	-
Project Implementation Review (PIR)	FAO Lead Technical Officer (LTO) with inputs from the Technical Project Coordinator, FAO Budget Holder and Lead Technical Unit (LTU). Submitted by the FAO GEF Coordination Unit to the GEF Secretariat. Final report submitted to the PSC by the Technical Project Coordinator.	Annually. Report due by 30 June.	GEF Agency fee.
Annual Work Plan and Budget (AWP/B)	Technical Project Coordinator.	Annually, updated every six months	-
GEF Tracking Tools	Technical Project Coordinator with support from other members of the Project Management Unit and the FAO LTO and LTU.	At project mid-term and final evaluation	-
Terminal report	Technical Project Coordinator	At least one month before end of project	-
Meetings			
Inception Workshop	National Project Coordinator leads the organization of the workshop, working with the Technical Project Coordinator and in consultation with MINFOF, MINEPDED and FAO Budget Holder (FAO Cameroon).	Within first two months of project inception	8,000 USD
Project Steering Committee	National Project Coordinator in consultation with FAO Cameroon.	Twice per year.	10,000 USD

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget
Terminal Workshop	National Project Coordinator leads the organization of the workshop, working with the Technical Project Coordinator and in consultation with MINFOF, MINEPDED and FAO Budget Holder (FAO Cameroon).	2 months before the end of the project.	8,000 USD
Independent Evaluations			
Mid-term Evaluation	External Consultant(s), FAO independent evaluation unit in consultation with the project partners	At project mid-point	40,000 USD
Final Evaluation	External Consultant(s), FAO independent evaluation unit in consultation with the project partners	At the end of project implementation	40,000 USD
Other Monitoring Activities			
Field-based impact monitoring and verification	Project staff and National Project Coordinator	At the end of each project year.	15,850 USD
Coordination meetings (PTCM, SC)	Organized by TPC in consultation with project team and local stakeholders	As appropriate	5,000 USD
Supervision missions	FAO	Annual or as required.	Paid by GEF Agency fee
Dissemination of results and best practices	Project Management Unit, project partners, FAO.	As appropriate	5,000 USD + co-financing
TOTAL			**USD 133,850**

PROVISION FOR EVALUATIONS

An independent Mid-Term Evaluation (MTE) will be undertaken at project mid-term to review progress and effectiveness of implementation in terms of achieving the project objectives, outcomes and outputs. Findings and recommendations of this evaluation will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term. FAO will arrange for the MTE in consultation with the project partners. The evaluation will, *inter alia:*

(i) review the effectiveness, efficiency and timeliness of project implementation;
(ii) analyze effectiveness of partnership arrangements;
(iii) identify issues requiring decisions and remedial actions;
(iv) propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and
(v) highlight technical achievements and lessons learned derived from project design, implementation and management.

An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting of the project partners. The FE will aim to identify the project impacts and sustainability of project results and the degree of achievement of long-term results. This evaluation will also have the purpose of indicating future actions needed to sustain project results and disseminate products and best-practices within the country and to neighbouring countries.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. **RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Justin Nantchou Ngoko	GEF Focal point	MINEPDED	08/29/2011

B. **GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.					
Agency Coordinator, Agency Name	**Signature**	**Date** *(Month, day, year)*	**Project Contact Person**	**Telephone**	**Email Address**
Gustavo Merino Director, Investment Centre Division Technical Cooperation Department FAO Viale delle Terme di Caracalla 00153, Rome, Italy		22 December, 2014	Jeremie Mbairamadji Forestry Officer, Forestry Department, FAO	+ 3906 57053603	Jeremie.mbairamadji@fao.org
Jeffrey Griffin Senior Coordinator FAO GEF Coordination Unit Investment Centre Division FAO				+3906 57055680	GEF-Coordination-Unit@fao.org

Annex A: **Project Results Framework**. (either copy and paste the framework from the Agency document, or provide reference to the page in the project document where the framework could be found)

Please see Appendix 1 in the FAO Project Document on page 57 . A detailed results budget is presented in Appendix 3 on page 71.

Annex B: **Responses to Project Reviews** (from GEF Secretariat and GEF Agencies and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF)

GEF Secretariat Review	Responses
Please include a comprehensive risk analysis	The section on risks analysis is revised with inclusion of a comprehensive risk analysis. Please see pp.33-34 in the FAO Project Document.
Detail the comparative advantage of FAO and provide core sources for co-financing	Detailed description of FAO's comparative advantage provided on page 17 FAO Project Document. FAO co-financing described on page 45.
Increase and confirm the co-financing	Co-financing has increased.
Detail the project implementation arrangement	Please see FAO Prodoc section 4.
Detail the nature and the role of local stakeholders	The nature and the role of stakeholders in section 4 as well. Especially section 4.2.5.
Please develop the sustainability aspect of the approach	Sustainability described in section 5.
Develop a Monitoring and Evaluation plan. Detail how the Global Environment Benefits will be measured	Please see the project results framework – appendix 1. The project plans to put in place biodiversity and carbon monitoring systems which will remain beyond the duration of the project (described in section 2). M&E plan description – please see sections 4.6 and 4.7.
STAP Review	
STAP suggests reviewing carefully the project framework to address potential inconsistencies between outputs and outcomes and the selection of indicators	The project results matrix has been revised accordingly.
STAP would like to see the intended GEBs be reflected in the choice of what scientific measures will be tracked and reported upon to indicate progress and success of the project, especially as three of the project components specifically mention building the capacity to measure environmental benefits.	These reflected in the project results matrix.
STAP has concerns that the biodiversity benefits receive almost no attention, either as targets to be achieved by the project or as subjects for monitoring. STAP strongly recommends defining more explicitly the intended biodiversity benefits during the proposal	Section on biodiversity benefits of the project has been revised with more details on how biodiversity will be monitored and which types of capacity building activities will be conducted in order to achieve biodiversity benefits of the projects .

development, paying attention to relevant indicators and their measurement. This could be made part of the capacity-building of forest user groups and local councils.	
STAP recommends strengthening the project baseline. Currently, the baseline narrative could define specifically the tree species and biodiversity species targeted by the project. The threats also could be described more comprehensively â€"for example what are the multiple drivers of, and potential response to, forest degradation, and biodiversity loss?	The project baseline has been revised and updated (please see section 1 FAO project document).
The proposal could include an ex-ante estimate of forest carbon stock using the REALU methodology (if appropriate), or another carbon methodology that is decided to be used. Similarly, a biodiversity baseline also needs to be defined during the proposal development.	An estimate of forest carbon is provided using a method built upon REALU methodology. It was not possible to define a biodiversity baseline during the project development as information on biodiversity in the council forests is lacking. The project aims to provide such information as part of the development of a biodiversity monitoring system during the first year of implementation.
On carbon methodologies, STAP recommends describing further the REALU methodology (ies), and to what extent they are appropriate for this project. If the REALU methodologies are not selected, STAP suggests describing the chosen methodology and its appropriateness for the project.	The REALU methodology is described in section 2 , as well as in appendix 7 in more detail.
STAP strongly recommends exemplifying the ways the project intends to rely on a multifunctional landscape approach to achieve the expected global benefits, and the project objective.	The landscape approach of the proposed methodology to take into account displaced emissions and successfully achieve global benefits of the project is explained in section 2 and appendix 7.
On risks, STAP has some concerns on the risks specified in the table in Section B4 (page 13 of the PIF). First, it is suggested that climate risks be included. Moreover, STAP recommends including climate trends, or projection data in the background section, as well as mainstreaming adaptive capacity as appropriate in the various interventions.	The section on risks analysis has been revised with inclusion of climate change risks.
Of the seven risks included, four (the first three and the last) essentially specify a risk that the project does not succeed in its aims. These â€˜risks' are failures in the internal design of the project and are not externalities over which the project has no control.	These remarks are considered and a revised risk analysis is provided accordingly.
As outlined in the PIF one of the main barriers for SFM and improved forest governance in Cameroon are the scattered responsibilities across different ministries and agencies (in this case	Lack of coordination between the two ministries is not a barrier as such at the local level at which the project intends to work. This part which was presented in the PIF has now been revised.

especially relevant: MINFOF, MINEP and CTFC). The full proposal should therefore clearly outline how the coordination/collaboration between these institutions is to be ensured (besides establishing a coordination committee). The committment of both institutions to work closer together and harmonize their activities should be a prerequisite (for a functioning coordination committee, the successful implementation of the Land Use Plans which are to be developed, etc.). The institutional challenges also have to be taken into account before setting up new structures (coordination committee, new local forest protection committees, etc.) to avoid further fragmentation of activities in the forest sector. It should furthermore be described more in detail how the cooperation with other donors (e.g. GIZ) and relevant initiatives will be ensured and how lessons learned will be used.	The project has taken advantage of existing cooperation between MINFOF, MINEPDED, ACFCAM, GIZ and other partners. There is already existing cooperation under the council forests programme which has facilitated exchange of lessons during preparation and will continue during the implementation of the project. A full description of implementation and coordination arrangements is provided in section 4.

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS[5]

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG GRANT APPROVED AT PIF: USD 62,800			
Project Preparation Activities Implemented	*GEF/LDCF/SCCF/NPIF Amount ($)*		
	Budgeted Amount	*Amount Spent to date*	*Amount Committed*
1. Inception workshop and stakeholder consultations.	12,350	**9, 185.31**	0
2. Assessment of baseline information on biodiversity, SFM and forest land use planning.	7,500	**2,429.31**	0
3. - Identification and assessment of methods and techniques for carbon measuring, management and monitoring. 4- Assessment of practices and approaches for forest ecosystem restoration and control of deforestation and forest degradation.	15,000	**10,657.24**	0
5. Analysis of policy, institutional and socio-economic constraints and opportunities.	7,500	**1 249.39**	0
6. Analysis of execution options and assessment of fiduciary standards.	6,000	**14 305,11**	0
7. - Detailed design, of project components and analysis of financial sustainability	14,450	**7,536.63**	0
8- Translation cost of PIF,PPG, Prodoc (English to French)	0	**7,523.56**	0
Total	**62 800**	**52,886.55**	**0**

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[5] If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent funds, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for activities.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

FAO/GLOBAL ENVIRONMENT FACILITY

PROJECT DOCUMENT

PROJECT TITLE: SUSTAINABLE FOREST MANAGEMENT UNDER THE AUTHORITY OF CAMEROONIAN COUNCILS	
PROJECT SYMBOL: GCP/CMR/033/GFF	
RECIPIENT COUNTRY: REPUBLIC OF CAMEROON	
RESOURCE PARTNER: GLOBAL ENVIRONMENT FACILITY	
FAO PROJECT ID: 615536 GEF PROJECT ID: 4800	
EXECUTING PARTNER(S): MINISTRY OF ENVIRONMENT, NATURE PROTECTION AND SUSTAINABLE DEVELOPMENT (MINEPDED), MINISTRY OF FORESTRY AND WILDLIFE (MINFOF), TECHNICAL CENTER FOR COUNCIL FORESTS (CTFC)	
EXPECTED EOD (STARTING DATE): 1 FEBRUARY 2015	
EXPECTED NTE (END DATE): 31 JANUARY 2019	
CONTRIBUTION TO FAO'S STRATEGIC FRAMEWORK	Strategic Objective 2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner
GEF FOCAL AREA: MULTI-FOCAL AREAS	
GEF STRATEGIC OBJECTIVES: BD-2, BD-1, CCM-5, SFM/REDD+-1	
ENVIRONMENTAL IMPACT ASSESSMENT CATEGORY: C	
FINANCING PLAN: GEF ALLOCATION:	USD 3,573,333
Co-financing:	
MINFOF (In-kind)	5,000,000 USD
MINEPDED (in-kind)	4,500,000 USD
FAO (Grant)	1,050,000 USD
FAO (In-kind)	400,000 USD
Cameroon Ecolology (In-kind)	3,500,000 USD
PNDP (In-kind)	1,500,000 USD
GIZ (In-kind)	1,900,000 USD
Subtotal Co-financing:	**17,850,000 USD**
Total Budget:	**21,423,333 USD**

As much as 44.5 percent of land in Cameroon, or 22 million ha, is forest area. The majority of the forests are dense forests which occupy 19.1 million hectares. These forests provide a number of key services, among which are: carbon storage, with carbon stored in the forest biomass estimated at about 2,696 million metric tons; they provide habitat for a vast array of globally important plant and animal species; and they support livelihoods of about 80 percent of the Cameroonian population. Rainforests alone provide about 8 million rural and poor people with food, medicines, fuel wood and construction material.

The Cameroonian forests and associated ecosystem services are under serious threat from illegal logging, forest fires, overharvest of wood and non-wood forest products and clearing of forests for agriculture. The rate of deforestation during the period 1990-2010 is estimated at 220,000 ha per year. This rate is expected to increase as the forests are under increasing pressure from population growth and the associated demand for timber, fuel wood, and non-timber forest products.

To improve the management of forest resources, the Government approved a Forest Law that promotes the decentralization of forest management in 1994. The 1994 Forest Law enables an increased participation of local communities and local councils in the management of forest and forest-based resources either through community forestry or through council forest management. Despite this Law and efforts by stakeholders in Cameroon, the decentralization of forest management has been slow. Many council forests remain to be established. Moreover, many of those that have been established do not have forest management plans in place, mainly due to the fact that local councils do not have sufficient capacities to implement sustainable forest management.

The main objective of is to reduce deforestation and forest degradation in council forests in order to improve biodiversity conservation, reduce emissions and enhance carbon stocks, and improve livelihoods of local communities. This objective will be achieved through empowering councils to better manage their forests by improving their technical skills and tools to: implement SFM practices, assess and monitor biodiversity, restore degraded forest areas, measure and monitor carbon stocks, and promote sustainable alternative forest based livelihoods.

The project has been structured into four interlinked technical components: Establishment of council forests for sustainable forest management and biodiversity conservation (Component 1); Capacity building to strengthen biodiversity conservation and SFM in council forests (Component 2); Capacity building for the management of forest carbon (Component 3); and Ecosystem restoration and enhancement of carbon stocks (Component 4). These four components will be supported by a horizontal project Monitoring and Evaluation component which will inform project execution decisions and facilitate the sharing of best practices and lessons learned.

The main institutional partners in this project are the Ministry of Forestry and Wildlife (MINFOF), the Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED), the Association des Communes Forestières du Cameroun (ACFCAM) through its technical unit Centre Technique de la Forêt Communale (CTFC), and FAO as the GEF Agency. To ensure participation of communities in project implementation and decision-making, stakeholder committees with representatives from local communities covered by the project, civil society, NGOs, council forest staff and representatives of MINFOF, MINEPDED and ACFCAM, will be established.

FAO, as the GEF Agency, will be responsible for the supervision and provision of technical guidance during the implementation of the project. The project has a duration of four years and a budget of 21,423,333 USD of which USD 3,573,333 is GEF financing and 17,850,000 USD co-financing.

EXECUTIVE SUMMARY

TABLE OF CONTENTS

GLOSSARY OF ACRONYMS

ACFCAM	Association des Communes Forestières du Cameroun
ANAFOR	Agence nationale d'appui au développent forestier
APIR	Annual project implementation reviews
AWP/B	Annual Work Plan and Budget
BD	Biodiversity
BH	Budget holder
CBFF	Congo Basin Forest Fund
CIDA	Canadian International Development Agency
CEO	Chief Executing Officer (GEF)
COMIFAC	Central African Forest Commission
EP	Executing Partner
EX-ACT	Ex Ante Appraisal Carbon-balance Tool
FAO	Food and Agriculture Organization of the United Nations
FEICOM	Fonds Spécial d'Équipement et d'Intervention Intercommunale
FFEM	Fonds Français pour l'Environnement Mondial
FPMIS	Field Project Management Information System
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GEFSEC	GEF Secretariat
GIZ	German Society for International Cooperation(former GTZ)
HDF	Humid dense forest
ICRAF	World Agroforestry Centre
IISD	International institute for sustainable development
IPCC	International panel on climate change
IITA	International institute for tropical agriculture
IR	Inception report
IRAD	Institut de Recherche Agricole pour le Développement
LULUCF	Land Use, Land-Use Change and Forestry
LTO	Lead Technical Officer
LTU	Lead Technical Unit
M&E	Monitoring and Evaluation
MINATD	Ministère de l'Administration territorial et de la décentralisation
MINEPAT	Ministère du plan et de l'aménagement du territoire
MINEPDED	Ministère de l'environnement de la protection de la nature et du développement durable
MINFOF	Ministry of Forestry and wildlife
MP	Mitigation Potential
NGO	Non governmental organization
NPC	National project coordinator
NWFP	Non wood forest product
PIF	Project Identification Form (GEF)
PIR	Project Implementation Review
PNDP	Programme National de Développent Participatif
OSFAC	Observatoire Satellital de la Forêt d'Afrique Centrale
PAF2C	Programme d'appui aux Forêts communales du Cameroun
PPG	Project Preparation Grant (GEF)
PPR	Project Progress Report
PRODOC	Project Document
PSC	Project Steering Committee
PSFE	Forest and Environment Program
PY	Project Year

REALU	Reducing emissions from all land uses
SAPPR	Semi-annual project progress reports
SC	Stakeholder committee
SFM	Sustainable forest management
STAP	Scientific and Technical Advisory Panel
TCI	Investment Centre Division (FAO)
TPC	Technical project coordinator
TOR	Terms of Reference
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations Programme on REDD
USD	United States Dollar

1   SECTION 1: RELEVANCE

1.1   GENERAL CONTEXT

1.1.1   General project context

The Republic of Cameroon is located in central Africa, bounded on the north by Lake Chad; on the east by Chad and the Central African Republic; on the south by the Republic of the Congo, Gabon, and Equatorial Guinea; and on the west by Nigeria. It covers an area of 475 442 km^2 lying between latitudes 2° and 13° N and longitudes 8° 30´and 16° 10´ E. Cameroon has a tropical climate, humid in the south but dryer to the north. The population of Cameroon is 19 088 000 with an annual growth rate of 2.3 percent and the GDP of USD 2 195 (FAO, 2011). As much as 44.5 percent of land in Cameroon, or 22 million ha, is forest area[1] . The vast majority of these are dense forests – in particular dense moist forest, occupy 19.1 million hectares, while dry woodlands cover another 1.3 million hectares. In addition, Cameroon has 12 million hectares of savannah woodland, 2.6 million hectares of shrub savannah and 2.6 million hectares of savannah mosaics. The deforestation rate over the last decade was estimated at 1 percent (Megevand 2013; FAO 2011).

In Africa, Cameroon is ranked fourth with reference to biodiversity richness after the Democratic Republic of Congo, Tanzania and Madagascar. Although precise figures on biodiversity richness of Cameroon are still not known, the following data on flora and fauna reflects what is commonly admitted by scholars. The flora of Cameroon has 9,000 plant species of which 160 are endemic. Regarding timber production, about 630 species have been identified and grouped into five categories, depending on their commercial value and their availability (26 species of high commercial value, 14 species currently found in local and international markets, 49 species found in the forest and produced mainly for local market close to logging zones, 522 species of potential commercial value and 30 species introduced). Mangroves spread over 243km^2 with 350 species of lianas, 15 species of mosses and 8 species of ferns. The humid forests of the littoral zones and mountains (South western regions of Cameroon) rank among the world's top 100 areas for endemic bird species, amphibians, reptiles and plants. As for the fauna, Cameroon has 354 species of freshwater fish of which 115 are endemic; more than 300 species of fungi and bacteria; 409 species of mammals of which 11 are endemic and 27 threatened; 1000 species of birds of which 25 are endemic and 47 threatened; 297 species of reptiles of which 19 are endemic; 1,110 species of insects; 85 species of snakes and over 15,000 butterfly species.

According to Bele et al. (2011), about 80 percent of the Cameroonian population depend in part on forest resources for their livelihoods. Rainforests alone provide about 8 million rural and poor people with important traditional products, including food, medicines, fuel wood and construction material (Robiglio et al. 2010). The values of the products that are traded in the informal market - such as wood energy, bush meat, medicinal plants, food, and domestic timber - exceed that of formal products (Topa et al. 2009). Moreover, non-timber forest products are increasingly marketed in the internal and export markets.

In addition to the contribution of timber to the Cameroonian economy, non-wood forest products (NWFP) also generate significant income for local communities and are important for traditional medicine and

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[1] Estimates of forest cover have varied widely in the past anywhere from 33% to 54% of the national territory (see Dkamela 2011: 5). The value of 44.5% used here is taken from the latest FAO / World Bank Indicators. There, "Forest area" is defined as "land under natural or planted stands of trees of at least 5 meters in situ, whether productive or not, and excludes tree stands in agricultural production systems (for example, in fruit plantations and agroforestry systems) and trees in urban parks and gardens." See FAO / World Bank Indicators, found at: http://data.worldbank.org/indicator/AG.LND.FRST.ZS?page=1

cultural purposes[2]. Many actors are involved in the commercialization of non wood forest products in Cameroon. In 2005, 195 access permits for 16 NWFP were issued by the Ministry of Forestry and Wildlife resulting in a volume of 57 681,6 tons of NWFP. Estimates of annual volumes of fuel wood collected differ somewhat, depending on the source: 9.8 million m^3 (FAO) and close to 12 million m^3 (MINFOF). More than 76% of this fuel wood is collected in the forest zones (Topa et al., 2010).

Cameroonian forests are also important for mitigating climate change. Estimates of carbon stocks currently available have been prepared on a small scale by technical partners of MINEPDED (See "Estimate of the carbon stock in the context of forest inventories" by MINFOF; last estimate dated 2003-2004).[3] Carbon stored in the forest biomass is estimated at about 2,696 million metric tons.

1.1.2 Forest management, legal and institutional framework

a) <u>Legal Framework</u>

The legal framework for forest management in Cameroon is established in the Forestry Law No. 94-01 of January 20, 1994 (Articles 20-39), also referred to as the Forests and Wildlife Law and in its decrees of application. Overall, the Forest Law is permeated by the principle that all forestlands in Cameroon are under some form of state control. The law establishes a division of forestland into the following two categories:

1. Domaine Forestier Permanent, or Permanent forest domain/estate (DFP): Forest lands falling in this category are meant to remain as forest or wildlife habitat. Council forests are included here, alongside State forests[4]. The category must cover at least 30% of the national territory; be representative of the nation's ecological diversity; and be managed sustainably following forest management plans approved by the relevant administrative authority. As of June 2011, the DFP covered an area of 16,333,687 ha, or 35% of the national total (Cameroon Interactive Atlas v.3)[5].

2. Domaine Forestier non Permanent, or Non-permanent forest estate (DFNP) : The DFNP consists of forested lands zoned as areas that may be converted into other land uses - e.g., for agriculture[6]. This category includes community forests, private forests and unclassified state forests (forêts du domaine national), which are mainly forest lands used customarily for swidden agriculture or agroforestry[7]. As much as 92% of the DFNP (13,550,889 ha) consists of unclassified areas or state forests, and only 1,129,578 ha are classified areas (Interactive Forest Atlas of Cameroon, version 3.0: pg 19).

The objective of the Forest Law is to "perpetuate and develop the economic, ecological and social functions of the forests within the framework of integrated and participatory management capable of sustainably and durably ensuring the conservation and the use of the resources of the forest ecosystems".

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[2] Topa et al. (2009) note that the total value of forest products for which trade statistics or estimates exist is about $590 million USD, of which $120 million derives from products other than timber.

[3] See: FAO and MINFOF, 2005 - NFMA-FAO, forest inventory: http://www.fao.org/forestry/fma/73410/en/cmr/

[4] State forests comprise both Protected Areas (national parks, wildlife sanctuaries, buffer zones, etc.), and Forest Reserves (including production, protection and recreation forests, as well as forest plantations).

[5] Note that these are not necessarily all forest areas, but also include hunting areas outside of the forest. Of the total, 22% of the DFP is comprised of non-forested land.

[6] Also includes non-forested land, comprising 12% of the national forest estate.

[7] All forested lands that are not explicitly classified as DFP fall by default into the DFnP under the category of unclassified state forests (*forêts du domaine national*).

A key element in the 1994 Forests and Wildlife Law was to empower local institutions in the sustainable management of forest resources through the decentralization of forest management. During the process of decentralization of forest management in Cameroon, local community groups or associations and local councils (municipalities) are offered the opportunities to obtain and manage either community forests or council forests. Both these two models of community based forest management are still fairly new.

The Forest Law recognizes the councils[8] as administrative units responsible for managing forests based on forest management plans that are approved by the MINFOF. By granting the councils the rights to manage council forests and use income generated from them to support local development, the objective of Forest law is to contribute to poverty reduction and improve the livelihoods of the rural populations depending on forest resources.

According to the Law, a council forest is a forest that has been classified as belonging to a council with defined boundary and a management objective taking into account the use rights of the indigenous communities. Council forests should have:

- Management plans approved by the ministry in charge of forestry and wildlife. The development of management plans as well as their implementation requires specialized skills which local council lack.
- Each activity carried in the council forest should comply with the approved forest management plan.
- The implementation of the forest management plan is the responsibility of the council under the control of the ministry of forestry and wildlife who can suspend the execution of activities if they are not indicated in the management plan.
- In case of incompetency, MINFOF can complete the work not properly implemented as planned in the management plan and the council pays the cost of the operations.
- Products from the council forests belong to the councils.

The classification of a council forest requires both technical skills (for data collection, cartography, production of background document, etc.) and financial resources (meetings with administrative authorities, awareness campaigns of the local communities, meeting and deliberation of the technical committee set to run the classification work).

b) Institutions

Two main national institutions were created to deal with issues related to biodiversity conservation, environmental management and forest management, namely the Ministry of environment, nature protection and sustainable development (MINEPDED) and the Ministry of forestry and wildlife (MINFOF).

MINEPDED is responsible for developing, implementing and monitoring environmental management and nature protection policy. This Ministry has the authority to set rules and measures for sustainable management of natural resources in consultation with other specialized ministries, in developing sectoral plans for environmental protection in Cameroon and in improving public participation in environmental management and protection. The Cameroonian law on environmental management (no 96/12 of August 1996) serves as a reference for issues related to environmental management in Cameroon and MINEPDED is responsible for its implementation. MINEPDED is also the ministry responsible for international cooperation and the conventions and protocols on environment that involve the participation of Cameroon.

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[8] Council or local municipality is an administrative entity led by a mayor and his counsellors who are elected locally to run local development issues of the villages under their responsibilities.

MINFOF is responsible for developing, implementing and assessing forest and wildlife policy. MINFOF has authority for general oversight of sustainable forest management in Cameroon, the implementation of the Forest Law as well as the follow-up of international conventions ratified by Cameroon related to forestry and wildlife. In support of the activities of MINFOF, a national agency for forests (ANAFOR) has been created specifically to support and promote the development of forest plantations by councils, communities and the private sector.

The **Ministry of territorial administration and decentralization (MITAD)** is the ministry responsible for the development and implementation of the policy on decentralization. The councils being decentralized institutions are under the responsibility of MITAD as well as FEICOM which is a co-financing partner of this project. **FEICOM** was created in 1977 to provide grants to the councils to support local development projects and programmes and to fund capacity building of council staff.

The **Ministry of the Economy, Planning and Regional Development (MEPRD**) is responsible for preparing and implementing economic policy and planning regional development. This ministry is also responsible for monitoring and controlling the implementation of national, regional and local development programmes. The government agency **PNDP**, which is one of the project co-financing partners, is under the responsibility of MEPRD. PNDP provides support to improve the capacity of the councils to develop and implement socio-economic initiatives that ensure sustainable use of natural resource and empower local institutions.

The **"Association des Communes Forestières du Cameroun" (ACFCAM),** a non-governmental institution, was created in 2005 to assist local council members with administrative and technical issues related to the creation and management of council forests. A technical unit of ACFCAM termed **"Centre Technique de la Forêt Communale" (CTFC)** was created in 2008 to provide technical assistance to councils regarding the development and implementation of forest management plans, training of council staff on sustainable forest management and governance, valuation and marketing of timber and non-timber forest products and other areas.

The focus of this project is on improving the management of forests under the authority of Cameroonian Councils. Threats, barriers and council forests sites targeted by the project are described in the next sections.

1.1.3   Threats to forests and forest ecosystem services

Despite the important foundation laid by the Government of Cameroon and partners, in decentralizing forest management, forests and associated ecosystem services are under serious threat. The rich variety of Cameroonian forest is experiencing **deforestation and forest degradation leading to biodiversity and carbon loss**. Although the deforestation estimates in Cameroon differ markedly,[9] in the period between 1990-2010 the deforestation rate was 220,000 ha per year (0.9%), with an average loss of carbon in living biomass of 122.5 tC ha$_{-1}$.This rate is expected to increase, as Cameroonian forests are under increasing pressure resulting from population growth[10] and associated clearing of lands for agricultural purposes, extraction of timber and fuelwood, as well as from international demands for timber and agricultural products.

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[9] According to FAO, the annual average deforestation rate in Cameroon for the 1990–2000 period was 0.9% and reached 1% between 2000 and 2010. Wasseige et al. (2009) reports an average net annual deforestation rate at 0.14% for the 1990–2000 period, with a gross average deforestation rate of about 0.2%. The État des Forêts du Congo (EdF 2010) estimate the rate of deforestation and degradation at 0.08% and 0.06% between 1990 and 2000.

[10] The country's annual growth rate is 2.6%, (INS, 2008) and is even reaching 2.8% in certain rural areas.

The current degradation of forests is mainly due to the large amount of **illegal logging**. Informal logging, usually called 'artisanal sawing', is carried out by small-scale loggers to meet local needs or the needs of neighbouring countries (Chad, Nigeria) and North Africa. A study conducted by Cerutti et al. between July 2008 and June 2009 shows that the domestic informal timber sector is booming[11,] with total log production figures estimated at 2.1 million m^3 RWE[12] - which is equivalent to the official production for the same period (2.2 million m^3 RWE). During this period, 990,000 m^3 was sawn and sold. Between 25 to 30 percent of wood is removed illegally to supply the domestic market (Topa et al., 2010)[13].

Additional threats include:

- **Forest fires**. Local communities use forest fires as a means to clear forestland prior to agriculture activities and also as means to facilitate hunting in the forest.
- **Overharvest of wood and non-wood forest products.** The increasing population growth coupled with the lack of alternative sources of income for local communities, as well as the growing demand for fuelwood and non wood forest products from urban cities of Cameroon (Bertoua, Yaoundé, Douala) represent a serious threat to forests. Estimated annual volumes of fuelwood collected range between 9.8 million m^3 (FAO) and 12 million m^3 (MINFOF). More than 76 percent of this fuel wood is collected in the forest zones (Topa et al., 2010).
- **Climate change.** Cameroon consists of several climate zones. Each will likely be affected differently by climate change. The coastal and maritime zone is predicted to be particularly affected by sea-level rise due to climate change. Sea-level rise may threaten the natural forests through inundation and more intense wave activity. In the savannah zone, climate change impacts are predicted to lead to more extreme inter-annual climatic variability and increasing aridity and more frequent droughts. In the tropical forest zone of Cameroon, changes in temperature will affect natural regeneration of forests and the water balance. A reduction in water availability and in the productivity of agricultural soils is expected to put additional pressure on forest land, because soils have more organic matter and therefore higher water retention capability and because of the need to find additional sources of food production.[14]

The following table presents **biodiversity loss** resulting from habitat degradation in the council forests and forest reserves.

Table 1: Biodiversity loss resulting from habitat degradation

Habitat	Degradation cause	Impact on biodiversity	Species threatened
Nesting area	Hunting and related acoustic pollution	Extinction of certain species	Birds
Corridor	forest exploitation, agriculture	Threat to the survival of certain animal species.	Monkey, elephants
Forest ecosystem	Non wood forest product (NWFP)	Extinction of certain NWFP, reduction of pollination	Gnetum spp, Garcia cola (NWFP), Birds (pollination)

[11] CIFOR estimates that the volume of timber produced by the informal sector in Cameroon has increased by a factor of 10 since 1996.

[12] Roundwood equivalent volume.

[13] For information on illegal logging http://www.illegal-logging.info/approach.php?a_id=67

[14] Africa Adaptation Programme

	gathering, forest exploitation		
Hunting area	Hunting, forest exploitation	Disturbance of fauna and disappearance of animals	Monkeys
Water point	Forest exploitation	Disturbance of fish and animal growth and reproduction	Fishes, mammals, reptiles
Breeding grounds	Forest fires, forest exploitation	Extinction of species	Mammals, reptiles, birds

In addition to the loss resulting from habitat degradation in the council forests, animal species overexploited in the council forests include Elephant (Loxodonta aficana); Buffalo (*Syncerus caffer nanus*); Chimpanzee (P*an troglodytes*) ; Gorilla (*Gorilla gorilla*) ; Panther (*Panthèra pandus*) and plant species Moabi (*Baillonella toxisperma*), Ayous (*Triplochyton –scleroxylon*), Sapelli (*Entandrophragma cylindicum*), Padouk (*Pterocarpus soyauxii*); Tali (*Erytrophleum ivorense*), Bibolo (*Lovoa trichilioides*) and Iroko (*Chlorophora excelsa*).

1.2   RATIONALE

1.2.1   Baseline programme and co-financing

This section describes what has been or being done to address the threats mentioned and improve the management of forests in Cameroon.

Leading Cameroonian councils with forest areas came together in 2005 to form the "*Association des Communes Forestières du Cameroun*" (ACFCam). In order to assist local councils on administrative and technical issues related to the classification and management of their forests, the ACFCAM created the *Centre Technique de la Forêt Communale* (CTFC). As the technical unit of the ACFCAM, the job of the CTFC is to provide technical assistance to guide councils in the classification of their council forests, in the development and implementation of management plans, training of council officials on sustainable forest management and governance, and in the valuation and marketing of timber and non-timber forest products.

Since its inception, the ACFCAM has been active in increasing the area and number of council forests allocated. In 2004 there were 13 council forests, both classified and in the process of classification, covering an area of 325,500 ha. Seven years later, in June 2011, there were 34 council forests, with an area of 827,285. This represented a change of more than 157 percent. With the classification of the inter-communal forest of Ndom-Ngambé-Nyanonas of 4 September 2013, the number of fully classified forest has reached 20. This work has been largely carried out under a programme **"Programme d'appui aux Forêts communales du Cameroun" (PAF2C)**, or Programme of Support to the Communal Forests of Cameroon funded by the Government (MINFOF/PSFE), the Councils and other organizations (GIZ, FFEM, FEICOM).

A small number of initiatives on carbon monitoring and accounting have been implemented or are ongoing on the ground in Cameroon. Of these initiatives, the "**REALU: Reducing Emissions from All Land Uses**" project stands out as providing the more relevant experience pertinent to the proposed project. A collaborative research project between the World Agroforestry Centre (ICRAF), the International Institute for Tropical Agriculture (IITA), and the Institut de Recherche Agricole pour le

Développement (IRAD), REALU is a study of the options for reducing emissions from all land uses, taking a whole landscape approach to analyze carbon stocks and carbon management. As will be explained in later sections, the REALU methodology will be used as a basis for the carbon accounting and monitoring system adapted to council forests to be applied in this project.

FAO, through the **Forest Law Enforcement, Governance and Trade Support Programme for African, Caribbean and Pacific countries (ACP-FLEGT)** funded by the European Union, has been supporting Cameroon in building capacity to tackle illegal logging.

1.2.2   Barriers to be addressed

Although there has been some progress in the classification/ transfer of management of forests to local councils, there are critical barriers that need to be addressed. Despite the effort of the Government, ACFCAM and partners, many council forests remain to be established. Moreover, many of those that have been established do not have forest management plans in place. With the absence of forest management plans and the lack of capacity to implement them, the council forests can be expected to follow the general fate of Cameroonian forests which are being lost and degraded. The following are three key barriers the proposed project will address:

-   **Weak capacity** (technical knowledge and tools) of local municipalities (councils) who have been granted the right to manage the council forests within the framework of the decentralisation of forest management. The councils do not have sufficient technical capacity to implement SFM and to mainstream biodiversity conservation into SFM practices. Although existing legal and policy documents propose guidelines to ensure SFM (land gazettement and registration, environmental impact assessment, forest management plan development and implementation, forest inventories, biodiversity conservation), still there are no simple, sound and practical guidelines that can be used by the councils. CTFC itself does not have sufficient capacity to provide technical support for forest management, restoration and biodiversity conservation.

    Carbon accounting, management and monitoring are new concepts that require new skills that need to be learned and practiced. The skills are lacking at the level of councils and support institutions (CTFC and MINFOF).

-   **Lack of reliable data on forest resources and the status of biodiversity and carbon stocks in the council forests**. Although Cameroon has a fairly good capacity in forest inventory it faces some technical limitations for carbon accounting, management and monitoring. There is very limited information about forest cover and forest resources at a scale suitable to understand local forest cover dynamics in particular in relation to logging and small scale farming in the forest zone that could help to develop sound strategies for sustainable carbon management or biodiversity conservation.

-   **Alternative forest based livelihoods not well developed.** A large majority of local populations depend on non-wood forest products (NWFP) as source of food, construction material, medicines and income. Fruits (e.g. from Irvingia gabonensis), leaves (e.g. Gnetum spp.) and spices (e.g. Ricinodendron heudelotii) are among the most relevant edible NWFP. Other important NWFP include medicinal plants (e.g. Prunus africana) and rattan (e.g. Laccosperma secundiflorum). Despite the actual and potential benefits of using NWFP for both subsistence and trade, various constraints hinder the development and sustainable use of NWFP. Among these constraints are limited capacities of communities in terms of organization, sustainable harvest, processing and marketing of NWFP.

Improving livelihoods of communities in council forests will have to be an integral part of sustainable forest management.

1.2.3 Incremental cost reasoning (added value of the GEF financing)

The project has been essentially designed to address the barriers stated above. The intention is to empower councils to better manage their forests by improving their technical skills and tools to implement SFM practices, to assess and monitor biodiversity in the council forests, to measure and monitor carbon stocks, to conduct restoration and forest enrichments activities and to promote alternative forest based livelihoods. Without addressing the capacity barrier, the current situation whereby forests are being transferred to local councils but not much happens in terms of sustainable forest management – in the absence of management plans – will continue. As will the deforestation and forest degradation.

GEF resources will be used to provide technical assistance to implement the following approach in selected council forests (described in the next section): (i) strengthen the council forest management structure by facilitating the establishment of functional technical units (FTUs) and forest protection committees (FPCs); (ii) training the FTUs, FPCs, CTFC and MINFOF technical staff; (iii) facilitating the preparation and implementation of forest management plans (improving them where they exist) with biodiversity conservation, carbon management and improvement of livelihoods objectives and actions; (iii) targeted communication/dissemination of best practices and lessons learned to facilitate their integration into the Programme of Support to the Communal Forests and other initiatives on communal forests. The selected council forests will serve as models for the expansion/scaling up of SFM in council forests.

Incremental activities are described in detail in section 2.

1.2.4 Project sites

In order to select local councils that will be targeted by this GEF project, the following criteria were used:

- progress made towards transfer of forests to councils and development and/or implementation of forest management plans by each council. As such, only classified forest areas effectively transferred to councils were considered;
- forest areas rich in biodiversity and/or are close to national parks or other protected areas;
- highest rate of deforestation and degradation, and high potential to generate carbon benefits;

The project also aimed to get a certain amount of geographical coverage and diversity of forest types, forest ecosystems and forest conditions (moist forest, semi-deciduous forest, gallery forest, degraded forest, savannah) so that broader lessons learned could be obtained for use across the whole country.

The sites of the council forest reserves and areas of reforestation effectively transferred to the councils and targeted by this GEF project encompass a wide range of forest types, forest ecosystems and forest conditions (moist forest, semi-deciduous forest, gallery forest, degraded forest, savannah). The following tables present some basic information about the target council forests, forest reserves and reforestation areas, as well as their biodiversity richness.

Table 2: List of classified council forests targeted by the GEF project

Council forest	Area (ha)	Status
Djoum	15 270	Classified and under management
Messondo	16 864	Classified and under management

Council forest	Area (ha)	Status
Dimako	16 240	Classified and under management
Yokadouma	22 206	Classified and under management
Moloundou	42 612	Classified and under management
Gari-Gombo	34 199	Classified and under management
Nanga Eboko	20 000	Classified and under management
Dzeng	21 212	Classified and under management
Mindourou/Messamena	36 508	Classified and under management
Minta	41 087	Classified and under management
Akom II/Efoulan	17 226	Classified and under management
Mvangan	33 721	Classified and forest management plan under development
Yoko	29 500	Classified and forest management plan under development
Lomié	15 190	Classified and forest management plan under development
Ndikiniméki	20 000	Classified and forest management plan under development
SIKOP (Ndom, Nyanon, Ngambé)	20 395	Classified and forest management plan under development
Oveng	14 671	Classified and forest management plan under development
Total	**416,901**	

Localisation des communes visées par le projet GEF

Légende:
- Commune avec forêt classée
- Commune avec forêt en cours de classement
- Limite territoriale

100   0   100   200Km
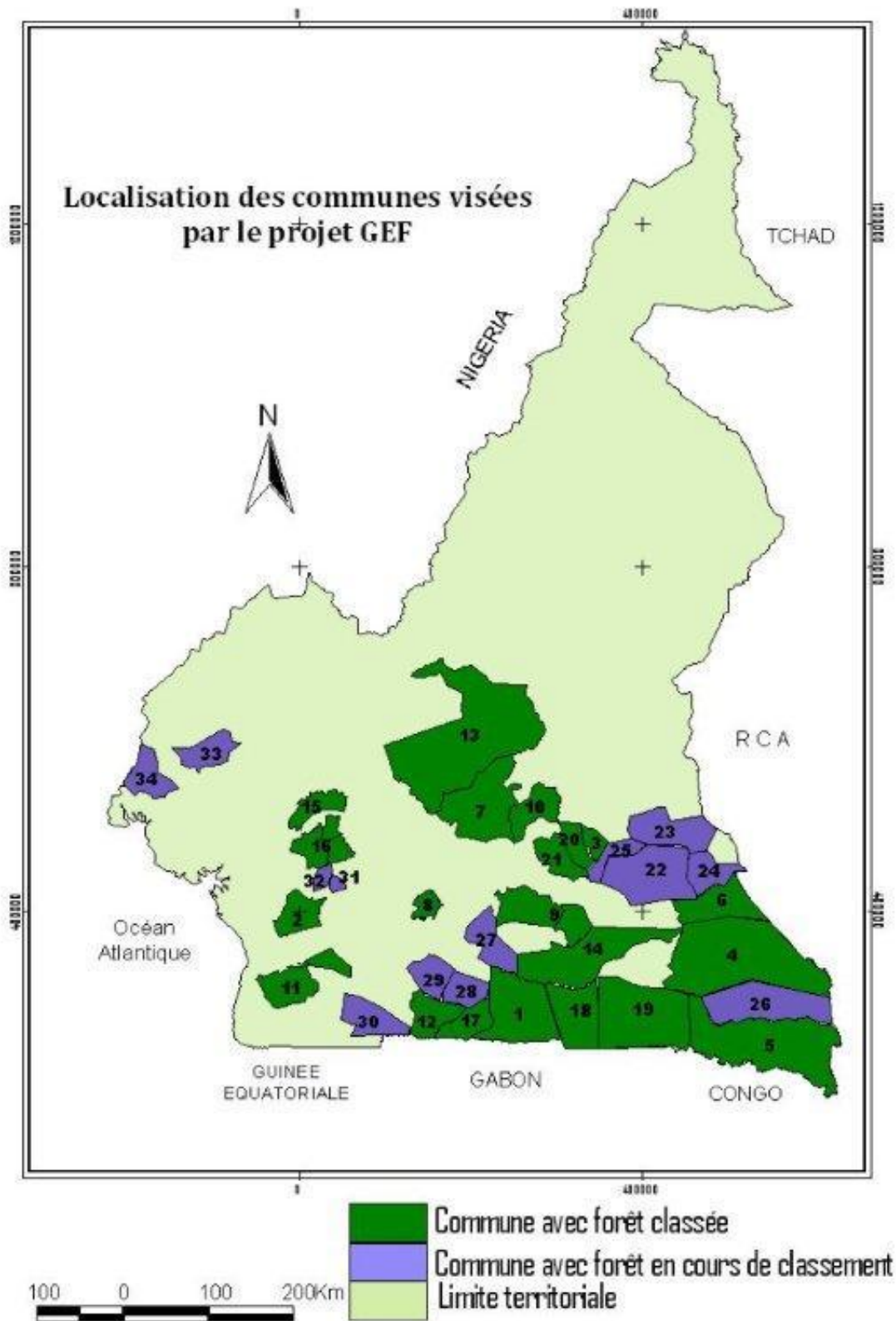
Legend

1. Djoum
2. Messondo
3. Dimako
4. Yokadouma
5. Moloundou
6. GariGombo
7. Nanga Eboko
8. Dzeng
9. Messaména/Mindourou
10. Minta
11. AkomII/Efoulan
12. Mvangan
13. Yoko
14. Lomié
15. Ndikiniméki
16. Sikop (Ndom/Ngambé/Nyanon
17. Oveng
18. Mintom
19. Ngoyla
20. Doumé
21. Doumaintang
22. Mbang
23. Batouri
24. Ndélélé
25. Nguélébock
26. Salapoumbé
27. Bengbis
28. Meyomessi
29. Sangmélima
30. Ambam
31. Ngog Mapubi
32. Dibang
33. Nguti
34. Mudemba

Table 3: List of council reforestation areas targeted by the project

Reforestation area	Area (ha)	Councils concerned
Amchidéré	1,000	Kousséri
Gaspala et Ziam	575	Maga
Makary	380	Makary
Mayel Ibbé	130	Maroua 2
Mayo Ferngo	150	Maroua 1
Sabakalé	1,000	Logone Birni
Zamay	3,500	Mokolo
Zébé	151	Yagoua
Mayo Oulo	300	Mayo Oulo
Total	**7,186**	

Localisation des communes visées par le projet GEF

TCHAD

NIGERIA

RCA

OCEAN
ATLANTIQUE

GUINEE
EQUATORIALE

GABON

CONGO

100   0   100   200Km

Sites de reforestation transférées aux communes

Réserves forestières transférées aux communes

Limite territoriale

CTFC, Dec 2014

N
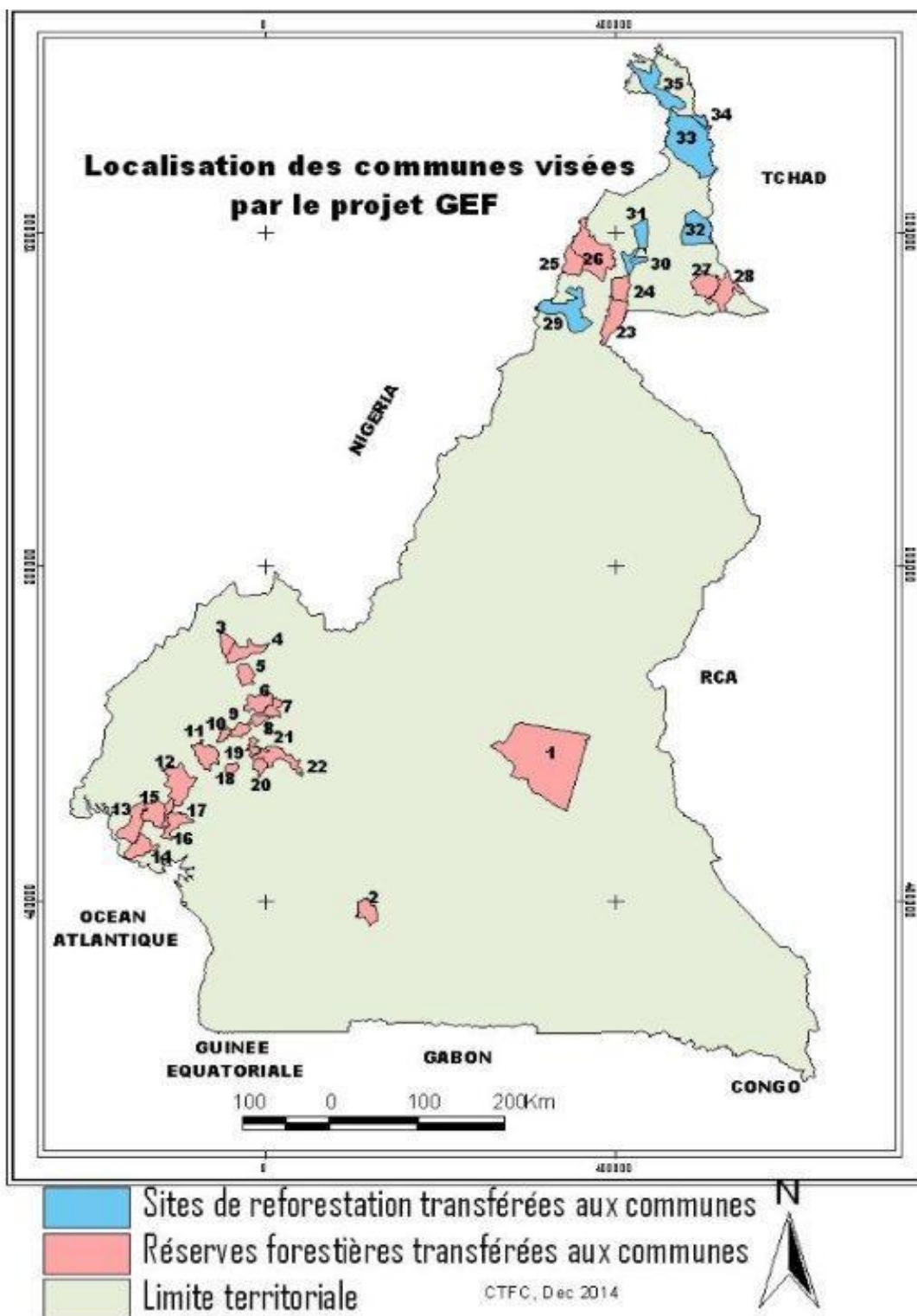
Table 4: List of forest reserves transferred to the councils and targeted by the project

Forest reserves	Area (ha)	Councils concerned
Mbalmayo	1000	Mbalmayo
Deng Deng	69500	Belabo/Ndiang
Bois de Boulogne	20	Yagoua
Kalfou	4000	Kalfou
Laf Madiam	6003	Moutourwa
Mayo Louti	3500	Mokolo
Mogodé	250	Mogodé
Melong	3000	Melong
Muyuka Kompina	4893	Mbanga
Lam	941	Figuil
Bambui	89	Tubah
Nkom Wum	8029	Fundong/Njinikom/Wum
Balengou	312	Bazou
Baloum	83	Penka Michel
Baloungou	169	Banganté
Bamendjing	145	Galim
Bamendou	63	Penka Michel
Bangou	25	Bangou
Bapouh Bana	4800	Bana/Bangou/Bangangté
Chègne Baham	100	Baham
Collines de Foréké	3000	Dschang
Kouabang	141	Bamougoum
Moa	300	Bakou
Mongoué Nkam	1200	Bakou
Mou	300	Kouoptamo
Mgambouo	600	Kouoptamo
Signal de Dschang	50	Dschang

Forest reserves	Area (ha)	Councils concerned
Bakossi	5517	Tombel
Buéa	300	Buéa
Lac Barombi Mbo	921	Kumba 1
Meme River	4865	Mbonge
Mungo river	4622	Kumba 3/Tombel
Sud Bakundu	9000	Kumba 3/Tombel
Total of forest reserves	**137,738**	

Table 5: Total areas of the sites of council forest targeted by the GEF project

Types of sites	Total area (ha)	Status
Council forests	416,901	Classified, under management or forest management plan under development
Forest reserves	137,738	Forest reserves effectively transferred to the councils
Reforestation areas	7,186	Areas of reforestation effectively transferred to the councils
Total	**561,825**	

Table 6: Biodiversity richness of the council forests targeted by the project

Vegetation			Fauna	
Forest type	Family	Species	Group	Species
Dense humid semi-caducifolous	Sterculiacea	*Cola altissima, Cola cordifolia,Cola gigantea, Mansonia altissima, Nesogordonia papaverifera, Pterygota macrocarpa, Sterculia rhinopetala, Triplochiton scleroxylon*	Mammals, Birds	Artiodactyles, primates, carnivorous
	Others	*Aningeria altissima, Autranella congolensis, Albizia ferruginea, Àlbizia iWa, Amphimas pterocappoïdes, Gossweilerodendron, balsamiferum, Khaya anthotheca, Gambeya lacourtiana, Pterocarpus mildbraedii, Entan, ophragma cylindricum, erythroxylum mannil, Parinari excelsa...* Faible regénération *: Triplochilon scleroxlon* ou de *Terminalia superba* raphiales ripicoles*, Raphia hookeri, Allanblackia floribunda, Uapaca guineensis, Xylopia staudtii, Cola lepidota , Cleistopholis patens, Garcinia mannii, Macaranga spp, Mitragyna ciliata, Nauclea pobeguinzi*		
Dense humid green forest	Meliacea	Moabi *(Baillonnella toxisperma)*, Padouk rouge *(Pterocarpus soyauxii)*, Movingui *(Distemonanthus benthamianus)*, Tali *(Erythrophleum ivorense)*, Sipo *(Entandrophragma utile)*, Bibolo *(Lovoa trichilioides)*, Iroko *(Chlorophora excelsa)*, Okan *(Cylicodiscus gabonensis)*, Ilomba *(Pycnanthus*		Artherurus africana, Thryonomys swinderianus, Manis spp, Panthera pardus, Gorilla gorilla, Syncerus caffer, C.callipygus, C.dorsalis, C.monticola, Hyemoschus aquaticus, Pan proglodytes,
semi decidous forest	Combretacea Sterculiacea,			

23

		angolensis), Fraké *(Terminalia superba),* Bilinga *(Nauclea diderrichii),*		Chelomlidea spp, Trinomis sw, Cephalophus sylvicultor, Cephalophus leucogaster, Viverra civetta, Crocodylus niloticus, Mandrilus sphinx, Papio anubis, Cercopithecus nictitans, cercopithecus cephus.
	NWFP	rotin, bambou, maranthacea leaves, okok *(Gnetum africanum),* Andok *(Irvingia gabonensis),* Djangsang/Essessang *(Ricinodendron heudelotii),* Moabi *(Baillonella toxisperma) and* other producst (honey, mushroom,.		
Dense humid green forest Semi deciduous forest	Meliacea, Sterculiacea Combrétacea Sterculiacea Ochnacea	Moabi *(Baillonnella toxisperma),* Padouk *(Pterocarpus soyauxii),* Movingui *(Distemonanthus benthamianus),* Tali *(Erythrophleum ivorense),* Sipo *(Entandrophragma utile*), Bibolo *(Lovoa trichilioides),* Iroko *(Chlorophora excelsa),* Okan *(Cylicodiscus gabonensis),* Ilomba *(Pycnanthus angolensis*), Fraké *(Terminalia superba),* Bilinga *(Nauclea diderrichii),*		Monkey (Cercopithecus spp), cephalophus (Céphalophorus spp), Pangolin (Manis gigantea), Potamochère (Potamochoerus porcus)
	NWFP	okok *(Gnetum africanum),* Andok *(Irvingia gabonensis),* Djangsang/Essessang *(Ricinodendron heudelotii),* Moabi *(Baillonella toxisperma)*		
Denses humide semi-deciduous		Alep *(Desbordesia glaucescens),* Emien *(Alstonia boonei),* Tali *(Erythropleum ivorense),* sapelli *(Entandrophragma cylindricum),* le Bossé *(Guarea cedrata),* le Fraké *(Terminalia superba),* Sipo *(Entandrophragma utile),* Tiama *(Entandrophragma angolense),* Bahia *(Mitragyna cililata),* Longhi *(Gambeya africana),* le Padouk rouge *(Pterocarpus soyanxii),* l'Afromasia *(Pericopsis elata),* Kossipo *(Entandrophragma candollei),* Niové *(Staudtia kamerunensis),* bilinga *(Nuclea diderrichii).*	Small and big mammals, reptiles, birds	gorilla (Gorilla gorilla), chimpanzés (Pan troglodytes), potamochères (Potamocherus porcus), elephants (Loxodonta cyclotis), genettes diverses (Genetta sp), civettes (Viverra civetta), céphalophes divers (Cephalophus sp),

1.3   FAO's COMPARATIVE ADVANTAGE

Sustainable management of natural resources is a core area of expertise for FAO and sustainable forest management is one of FAO's greatest strengths. FAO has a high level of awareness and understanding of the causes and drivers of deforestation and forest degradation and of the various options for the development of sustainable forest and ecosystem management strategies that reduce poverty through the generation of income and employment, that integrate biodiversity conservation into productive forest landscapes and that both mitigate climate change and that provide key tools for rural communities to adapt to climate change.

Through the National Forest Program (NFP), FAO provides support to countries for the mainstreaming of SFM through review of forest policies and strategies, capacity building, knowledge management and resource mobilization. Building on its experience over the past 60 years, FAO is supporting SFM worldwide through a comprehensive programme covering aspects of forest management and conservation, environmental and economic aspects of forest utilization, and policy and institutions. FAO provides information on all aspects of SFM, direct technical support to countries through normative and field programme activities, develops best practice guidelines and technical tools, strengthens country capacity, catalyzes regional and international cooperation, and serves as a neutral forum.

FAO is a founding member of the UN-REDD Program in which FAO, UNDP and UNEP have embarked on a joint programme to provide coordinated REDD support to countries, as consistent with the "One UN" approach. FAO supports several technical activities in the Congo Basin, for example, the UN-REDD program in the Democratic Republic of Congo and the Republic of Congo; the implementation of national

forest inventories in Cameroon and the Republic of Congo; harmonization of forest policies and programs in Central Africa.

FAO has long standing experience to provide technical advice on community forestry and more generally in community approaches to natural resource management (including conflict management). FAO Forestry Department has a substantial amount of information, tools, methodologies and expertise that can be used to support capacity-building in this sphere. In addition, the development of small-scale forestry enterprises within local communities has rapidly gained ground in recent years in the context of the Forestry Department's field projects (one of these projects was implemented in Cameroon). FAO is also supporting the implementation of a GEF-funded project on sustainable community-based management and conservation in Cameroon. Lessons learned from this and other projects and the methodologies developed in their course will be particularly useful for the proposed project.

1.4 PARTICIPANTS AND OTHER STAKEHOLDERS

Workshops during project preparation as well as meetings with administrative authorities, councils and local communities during field visits helped to identify and consult key stakeholders and beneficiaries of this project. At the broadest level, the main stakeholders with a direct or indirect interest in this project can be divided into three groups:

National government and government agencies

The Government of the Republic of Cameroon will participate in the project at two levels. First, at the political level, the project will raise awareness amongst political decision makers on the importance of sustainable management of council forests with regards to their contribution to biodiversity conservation and carbon enhancement in Cameroon while improving the livelihoods of the local communities.

At the technical level, the **Ministry of Forest and Wildlife (MINFOF)** will be the lead Ministry for the project. MINFOF will lead the project steering committee (PSC), monitor that project activities are in compliance with rules and procedures in Cameroon for sustainable management of ecosystems and biodiversity conservation. MINFOF will appoint a senior staff member to act as National Project Co-ordinator (NPC).

Another key Ministry for this project is the **Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED)**. MINEPDED will be vice-chair of the PSC. MINEPDED, as the National GEF Focal Point, will also facilitate the coordination of this GEF project with other relevant GEF-funded activities in Cameroon. As part of its co-financing to the project, MINEPDED will appoint a staff to act as focal point for the project.

Furthermore, the decentralized services of MINFOF and MINEPDED will be involved in the project implementation as the representatives of these ministries at regional and council levels are the ones providing first hand technical support to the councils on issues related to biodiversity conservation and sustainable forest management.

National non-governmental organization (NGO)

Association des Communes Forestières du Cameroun (ACFCAM) will be one of the key implementing partners of the project. It is foreseen that ACFCAM will implement specific activities and deliver outputs through a Letter of Agreement with FAO. ACFCAM will ensure complementarity of the GEF-funded project activities with PAF2C ongoing activities. ACFCAM will facilitate the scaling-up and sharing of best practices among member councils of ACFCAM.

CAM-ECO (Cameroon Ecology) will be one of the national non-governmental organizations that will play an important role in the co-financing of this GEF project through field implementation of activities that are complementary to this GEF project. From 2010 to 2014, Cam-Eco has provided technical support to the council forest of Messondo on participatory forest management, fight against illegal logging in council forest and the promotion of the participation of indigenous people in council forest management (these various supports were brought through specific projects funded by ACDI, EU, DFID and WRI, The co-financing of Cam-eco to this GEF project, thanks to funding from OIBT, CBFF, RRI, WRI and ACDI, will focus on reforestation of degraded forests areas in the council forest of Messondo and the council forest of Sikop (both part of the council forests targeted by this GEF project, see table 2). This will be a significant contribution from Came-Eco to the component 4 of this GEF project as the total amount ($ 3,500,000) to support activities of component 4 is funded by co-financing. In addition, Cam-Eco will also provide, as part of its co-financing, technical support to sustainable management of forest reserves transferred to some council forests targeted by this GEF project, namely the council forests of Melong, Muyuka Kompina, Bakossi, Buea, Lac Barombi Mbo, Meme River, Mongo river and Sud Bakundu (see table 4)..

International non-governmental organization (NGO)

GIZ is an international non-governmental organization that provides support to Cameroon in various projects dealing with natural resources management. GIZ is a key partner of both MINFOF (PSFE) and ACFCAM (PAF2C). GIZ is one of the key co-financing partner of this project and its contribution will mainly support component 4 of the project.

Other NGOs

The following NGOs identified during the project preparation as potential partners have been validated by MINFOF and MINEPDED as established NGOs with proven records of achievements in Cameroon. Both MINFOF and MINEPDED confirmed having positive working relationships with these NGOs. It is foreseen that they will be involved in the implementation of the project activities falling under their areas of comparative advantage. Their selection will be on a competitive basis, based on annual work plans and budget approved by the Project Steering Committee. These NGOs include:

- WWF (World Wildlife Fund for Nature)
- IUCN (International Union for the Conservation of Nature)CEW (Cameroon Environment Watch)

Other specialized organizations

The following specialised partners (ICRAF, IRAD, ANAFOR, University of Yaounde, University of Dschang) who took part to the project inception workshop and have expressed their interest to participate in project activities on the basis of their expertise as well as other organisations with experience in carbon mapping, accounting and management in Cameron (Pilot project REDD-Cameroon COMIFAC/GIZ project, GEO Forest Carbon Tracking, the project "Architecture of REALU, REDD-ALERT). They will be involved in the implementation of the project activities falling under their expertise and they will be selected on a competitive basis.

Local government and local communities

At the local level, the beneficiaries of the project will include local municipalities or councils and local communities living in the councils targeted by the project. Direct benefits to the councils will be in the form of technical capacity to allow for the sustainable management of forests under their responsibility. The communities within the councils will benefit from employment in forest management activities (forest protection committees, forest inventories and surveillance, etc) and capacity building in alternative income generating activities, including non-wood forest products. In the long run, the councils and local

communities will also benefit more from the expected improvements in the condition of forests and associated services, including provision of resources.

To ensure participation of local communities in the project, local stakeholder members will be represented in the stakeholder committees (SC). At least four project stakeholder committees will be established (one of each regrouping 4 council forests targeted by the project). Each stakeholder committee will have 4 members representing 4 council forests.

The project will ensure that women are well represented in the stakeholder committees.

Table 7 Summary of project stakeholders

Stakeholder group	Role in the project	Anticipated benefit
National stakeholders		
Ministries: - MINEPDED - MINFOF - MITAD - MEPRD	Project steering and management; contribution to technical activities, especially related to: monitoring compliance of forest activities carried out in council forests with Cameroonian forest law, technical advice and approval of forest management plans, technical advice on reforestation and forest inventories, control of field implementation of SFM practices in the council forests.	Improved technical capacity for carbon measurement and monitoring, improved knowledge about biodiversity status in the council forests, increased capacity for participatory forestry and sustainable forest management.
Governmental agencies - ANAFOR - FEICOM - PNDP	Financial support to councils in the preparation and implementation of SFM management plans.	Achievement of its mandates (implementation of natural resources management plans, funding to support local development plans of the councils).
ACFCAM/CTFC	Support to councils on administrative and technical issues related to the creation, classification and management of council forests.	Achievement of its mandates.
National NGOs and research institutes: - CAM-ECO - CEW - IRAD - ICRAF - REALU - University of Dschang (FASA/ CRESA) - Ecole de faune de Garoua - Ecole nationale des eaux et forêts de Mbalmayo	Technical support to implementation of specific project activities (e.g. data collection on biodiversity, carbon and biodiversity monitoring, development of non-timber forest products).	Improved technical capacity for environmental monitoring, promotion of sustainable livelihoods and community-based conservation and natural resource management.

Stakeholder group	Role in the project	Anticipated benefit
Local stakeholders		
Councils, Traditional authorities	Capacity development (as trainees); implementation of SFM practices, carbon measurement and management and biodiversity monitoring and conservation activities; awareness raising activities.	Achievement of their objectives for sustainable management of forests, carbon management and biodiversity conservation in the council forests.
Local communities	Participation in the implementation of forest management plans, forest inventories, forest delimitation, control of deforestation, control of illegal logging in the council forests. Participation in project awareness and capacity building activities, NTFP and other alternative income generating activities.	Socioeconomic benefits from their participation to the project activities, Increased skills gained through project capacity building activities for sustainable use of forest resources to reduce negative impact on biodiversity.
International Stakeholders		
- GIZ - FFEM - IUCN - WWF	Support to capacity building and technical assistance within their respective areas of expertise (institutional support to council forests, support to the process of creation and classification of council forests, support to the development and implementation of forest management plans, support to biodiversity conservation, natural resource management).	Achievement of their respective mandates (e.g. sustainable forest management, environmental conservation).
FAO	Project oversight; technical support including quality control of project activities and outputs; dissemination of lessons learned; information and knowledge sharing between this project and similar activities in other countries.	Contributes to the achievement of FAO Strategic Objective 2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner

1.5 LESSONS LEARNED FROM PAST AND RELATED WORK, INCLUDING EVALUATIONS

The ongoing GEF-funded project in Cameroon on Sustainable community-based management and conservation of mangrove ecosystems in Cameroon and other projects examined during the preparation of the proposed project have provided a number of lessons that have been taken into account in the design of this project. Based on the lessons learnt, the project design has integrated the following elements:

– promotion and improvement of the participation of local populations in the implementation of operational activities (forest inventories, forest delimitation, surveillance, biodiversity conservation, carbon measurement) during and after the project. With regard to constant surveillance of the forests, the project aims to involve a large number of local communities. To achieve such participation, the project will put a lot of effort on raising awareness and building

capacity. As long as the management of the council forest continues to be correctly planned and implemented, and the benefits accrue the council forest population as is envisioned by the law (according to Cameroon's 1994 Forest law, 70% of revenues from forest management goes to council forests to cover forest management expenses and to fund the councils' development programmes, while 30% of revenues go to a committee of villages to fund local development activities), there is a good chance that the interest of the population will last beyond the end of the project;

- use of participatory approaches in the training of stakeholders and council forest staff to gain necessary skills required for biodiversity conservation and monitoring, carbon measurement and monitoring and in approaches for sustainable use of forest resources (wood, non wood forest products);
- support to local communities to express their concerns on councils forest management through their participation in stakeholder committees (SC) proposed in this project, to ensure they have a role in decision making.

While the advantages of getting the councils and the local communities fully involved in sustainable management of the council forests are numerous, their level of engagement will depend most highly on potential socio-economic impacts resulting from effective carbon management and biodiversity conservation as proposed in this project. Such expectations have been fully considered in the project design, as ignoring them could negatively affect the project success and sustainability.

1.6 LINKS TO NATIONAL DEVELOPMENT GOALS, STRATEGIES, PLANS, POLICY AND LEGISLATION, GEF AND FAO'S STRATEGIC OBJECTIVES

a) Alignment with national priorities

This project is entirely consistent with the Cameroonian 1994 Forest Law which promotes the decentralization of forest management and an increased participation of local communities and local councils in the management of forest and forest-based resources either through community forestry or through council forest management. Issues related to reduction of carbon emissions (carbon management) in Cameroon have been increasingly promoted since the creation of the Ministry of the Environment, nature protection and sustainable development (MINEP) in 2004, and its mission was further strengthened in 2011 through the incorporation of the sustainable development dimension (MINEPDED). A national plan for environmental management in Cameroon has been developed and global environmental issues dealt with in this GEF project are aligned with the regulations on environmental management in Cameroon. This project is also aligned and complementary to the Cameroonian Forest and Environment Sector Programme (FESP), established in 2004, to strengthen forest governance in Cameroon through the involvement of various partners under the leadership of the Ministry of Forest and Wildlife.

The proposed project is also in line with the National Growth and Employment Strategy (DSCE), which envisages: (i) a better use and sustainable management of natural resources; and (ii) good management and regeneration of forest and wildlife resources.

b) Alignment to Conventions

The National Biodiversity Strategy and Action Plan (NBSAP) of Cameroon was validated and adopted in 2012 and a number of identified strategic goals and actions have already been implemented. This project will build upon existing efforts and support the implementation of the following NBSAP's strategic goals:

- Strategic goal 1: refers to the reduction of biodiversity loss and ecosystem degradation in the short and medium term and reversal of this trend in the long term. The project will provide tools to address these issues in the council forests;

- Strategic goal 3: refers to the development and strengthening of capacity for planning, implementation and monitoring of biodiversity programmes and projects.

By strengthening the technical capacity of councils to implement SFM and by conducting field activities to restore degraded forests and enhance carbon stocks in the council forests, the GEF project is contributing to the efforts made by Cameroon towards the reduction of carbon emissions from forests and from land use changes. Therefore, the project is consistent with climate change mitigation objectives set in the National Communication to the UNFCCC - reduction of greenhouse gas emissions and increase of carbon sequestration.

c) Alignment with GEF focal area strategies

This project aims to improve the sustainable management of 449,425 ha of council forests in Cameroon. This includes the creation and management of 56,200 ha of strictly conservation sites within the council forests as well as the restoration of 56,200 ha of degraded forests.

BD Outcome 2.1 (SFM and biodiversity conservation). The project will assist councils to develop and implement forest management plans taking into account the need for biodiversity conservation in production areas and complying with Cameroon's Forest Law requirements on SFM. Technical guidelines and practical tools will be produced and training provided to the council forest staff and the local stakeholders. It is aimed that implementation of the forest management plans will place 80% of the council forests under SFM and 10% under biodiversity conservation (conservation sites).

BD Outcome 1.1 (Management effectiveness of protected areas). The forest management plans developed will include areas set-aside for biodiversity conservation (conservation sites) in each council forest and the project will develop operational tools to facilitate the implementation and the management of the conservation sites[15]. These tools will be developed in accordance with the requirements of existing legal framework (Forest Law) as well as with the national strategy and action plan for biodiversity conservation in Cameroon. The project will provide support to council forest staff on techniques and criteria for the selection of conservation sites for protection within the council forests as well as on methods for biodiversity inventories, management, monitoring and reporting.

CCM Outcomes 5.2 (Management for restoration and enhancement of carbon stocks in the forests and non-forest lands). The project will adapt, test and implement a system for accounting and monitoring carbon in the council forests. Priority areas identified for reforestation will be enriched (with a focus on savannah fallow, degraded forests).

SFM/REDD Outcome 1.2 (Good management practices in existing forests). The project will contribute to this objective through implementation of SFM on 449,425 ha of forests.

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[15] The term **conservation site** used in this project document refers to the IUCN category IV of protected areas. As defined in IUCN classification such protected areas aim to protect particular species or habitats and management reflects this priority. Also, as stated in IUCN's classification, the primary objective of such protect areas is to maintain, conserve and restore species and habitats.

d) Alignment with FAO Strategic Framework and Objectives

The new FAO Strategic Framework is comprised of five Strategic Objectives (SOs) that represent the main areas of work of FAO. This project is linked to Strategic Objective 2 (SO-2), "Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner". In particular, the project will contribute to the achievement of the following outcome and output:

SO2 Organizational Outcome 1: Producers and natural resource managers adopt practices that increase and improve the provision of goods and services in the agricultural sector production systems in a sustainable manner.

> *Output 1.1:* practices and approaches assessed, widely shared and their scaling-up facilitated for the sustainable increase of production and the provision of environmental, social and economic goods and services;

2 SECTION 2: PROJECT FRAMEWORK AND EXPECTED RESULTS

2.1 PROJECT STRATEGY

The strategy of the project is to use a landscape approach for the sustainable management of council forests, promoting biodiversity conservation, enhancing carbon stocks, and contributing as well to socioeconomic benefits for local communities. The approach takes into account relevant constraints that might affect its effectiveness such as issues related to displacement of emissions that if not well tackled could compromise efforts of the project.

This approach includes the following four aspects[16]:

1. **Zoning of the council forest area.** Each council forest will be divided into three zones - forest conservation (FC) (10%); carbon stocks enhancement (ECS) (10%); and sustainable forest management (SFM) (80%). These zones will be designed to reflect substantial differences in their carbon stock level and biodiversity richness.
2. **Implementation of activities aimed at maximising both biodiversity conservation and mitigation benefits**. This consists of establishing a different set of management activities for each zone (i.e., FC, ECS, SFM), with different carbon reporting and accounting framework for each zone. Here the strategy is to use a framework that is consistent with the current treatment of forest-related activities under the UNFCCC, so that the framework will be implemented beyond the end of the project in order to claim carbon benefits under a mitigation incentive scheme such as REDD+.
3. **Training of local actors (council forest staff, stakeholders) on techniques for monitoring carbon stocks, restoring degraded forest and sustainable forest management**. The training will ensure the sustainable management of forests beyond the project cycle.
4. **Surveillance of forest and monitoring of forest biomass carbon stocks.** The project aims at involving the local population in the monitoring and surveillance of the forests. To achieve such participation the project will set activities to raise awareness and ensure that the local populations gain socio-economic benefits from the council forests. The involvement of the population in the management and implementation will be an important element for the sustainability of council forests.

The final strategy adopted gained from the results of the PPG work. In addition to consultations and working groups with key stakeholders in the three regions of Cameroon (West, Center, East), a team led by FAO including PPG consultants, ACFCAM, MINFOF, MINEPDED conducted field visits and field appraisal of biodiversity status and constraints in the some councils visited (see table below).

Region	Department	Councils forests sites visites
West	Nde	Tonga
	Noun	Foumban
Center	Mbam et Inoubou	Ndikinimiki
	Nyong et Kele	Dibang
		Ngog Mapubi

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[16] Details on the approach, which is also considered to be the innovative aspect of the project, are provided in section 2.7 Innovativeness.

| East | Lom et Djerem | Dimako |
| | | Belabo |

The figure of 400 000ha of council forests to be targeted by the GEF project provided at the PIF stage was to be considered within the three regions above without specific details of which council forest to select (work that was achieved by the PPG). Based on sound criteria established, the PPG work led to the identification of 546 690ha of council forests areas suitable for the GEF project. As result of the PPG workshop and discussion, it was agreed that only council forests that are classified and ready to implement field activities be selected. Those still in the process to be classified were withdrawn as it is likely that approval of their classification takes more time beyond the project cycle. Finally, 17 council forests already classified were selected totalising 416,901 ha (see table 2) as well as 33 forest reserves transferred to the councils totalising 137 738 ha (see table 4) and 9 reforestation areas in the council forest totalising 7,186 ha (see table 3). The total areas targeted by the GEF project is 561 825 ha (see table 5).

2.2   PROJECT OBJECTIVES

The Global Environmental Objective of the project is to reduce deforestation and forest degradation in council forests in order to improve biodiversity conservation, reduce emissions and enhance carbon stocks.

The Development Objective is to improve livelihoods of local communities by promoting sustainable income generating activities.

2.3   PROJECT COMPONENTS

The project has been structured into four interlinked technical components: Establishment of council forests for sustainable forest management and biodiversity conservation (Component 1); Capacity building to strengthen biodiversity conservation and SFM in council forests (Component 2); Capacity building for the management of forest carbon (Component 3); and Ecosystem restoration and enhancement of carbon stocks (Component 4). These four components will be supported by horizontal project M&E (Component 5) which will inform project execution decisions and facilitate the sharing of best practices and lessons learned. This section describes the scope of the components in terms of specific activities, outputs and outcomes expected to be achieved.

Component 1: Establishment of council forests for sustainable forest management and biodiversity conservation

The objective of this component is to increase the area effectively managed for biodiversity conservation and sustainable forest resource utilization in unprotected zones, in forests under the authority of councils. The component addresses the barrier related to lack of technical capacity and evidence of how to incorporate biodiversity conservation into forest management in council forests. At present, there is very little concrete information on biodiversity in the council forests, in spite of the general consensus on the biodiversity richness and the need to conserve and sustainably manage the resources.

Although one of the requirement of the forest law before any exploitation of forest resources to start in the council forest is to have a forest management plan developed and validated by MINFOF, the law does not require the setting of biodiversity conservation sites within the coiuncil forests. As a result not enough

attention is given to ensure biodiversity conservation within the coucil forests. The mapping of biodiversity hotspots within the council forest and the provision of technical support to ensure their sustainablility beyond the project cycle represents a new concept and an innovative approach for biodiversity conservatuion in the council forests. The biodiversity hotspot in this case refers to endemic species concentration, threatened species concentration and species richness. Both the Endemism & Threat Method and the Species Richness method will be used in defining biodiversity hotspot (conservation site) in the council forests.

Planning:

The component aims to support the formal designation and establishment of 56,200ha of conservation sites within the council forests targeted by the project. This total targeted for biodiversity conservation within council forests will be gazetted into forests areas for conservation (10% of the total targeted area), enrichment and restoration (10% of the total targeted area), and SFM (80% of the targeted area). At present, many of the council forests do not have any active forest management plans. The project will facilitate the preparation and implementation of forest management plans that integrates biodiversity conservation (creation of conservation sites) for all targeted council forests, with defined objectives and activities for each of the zones.

Implementation:

The main activities to be conducted in this component includes: : (i)- Map biodiversity hotspots within each council forest and forest reserve and the prominent hotspots will be selected as biodiversity conservation sites, (ii)- conduct inventory of biodiversity richness in the conservation sites and the results of the biodiversity status obtained will serve as reference for biodiversity monitoring, (iii)-Develop criteria and indicator to assess and monitor biodiversity in the council forests, (iv)- Create and update a database on biodiversity in the council forests and (v) develop and implement forest management plan for council forests integrating biodiversity conservation.

The implementation of these activities will be carried out by trained staff of the functional technical units (FTU) of the targeted council forests as well as trained member of the forest protection committees created for each council forest targeted by the project.

Monitoring:

As soon as the mapping of biodiversity richness in the council forest is completed (activity under output 1.1.1) the conservation sites will be designated based on criteria and indicators to be developped. Globally, the database on bodiversity in the council forests to be developed by the project will be used for continuous monitoring of biodiversity in these forests and it will be updated constantly. The conservation objective for each council forest is that 80% of the species identified as being threatened in the council forests will be under protection by the end of the project. The appropriate method for biodiversity monitoring to be used will be selected according to key biodiversity species identified (plant, animal). The monitoring data that will be gathered are (presence/absence, range, size, frequency, density, cover, biomass) and the approriated sampling method (random, stratified, multi-stage or cluster).

As result of the preliminary assessment conducted during PPG work, the following species have been identified as key species to monitor in the council forests targeted by the GEF project together key other species that will be identified during activities (i) and (ii) mentioned above (see section on implementation): The key species identified during PPG work include: Elephant (Loxodonta aficana); Buffalo (Syncerus caffer nanus); Chimpanzee (Pan troglodytes); Gorilla (Gorilla gorrilla); Panther (Panthèra pandus) and plant species Moabi (Baillonella toxisperma), Ayous (Triplochyton –scleroxylon), Sapelli (Entandrophragma cylindicum), Padouk (Pterocarpus soyauxii); Tali (Erytrophleum ivorense), Bibolo (Lovoa trichilioides) and Iroko (Chlorophora excelsa).

The biodiversity conservation sites will be continuously monitored to avoid unplanned/illegal activities as weel as activities not complying with biodiversity conservation parctices. The member of protection committees (FPCs) as well as those of the Technical forest unit (FTU) will ensure constant surveillance on the biodiversity conservation sites.

Outputs:

1.1.1 Database of biodiversity in the council forests established

1.1.2 Forest management plans integrating biodiversity conservation, developed and implemented

1.1.3 56,200 ha of conservation sites formally established within the council forests

Component 1 will be implemented in conjunction with component 2.

Component 2: Capacity building to strengthen biodiversity conservation and SFM in council forests

The objective of this component is to strengthen the capacity of council forests' staff and the local community leaders/change agents in biodiversity conservation and sustainable forest management practices. Taking into account the information gathered during the biodiversity mapping, existing literature and best practices on SFM and forest biodiversity conservation, and availability and level of local skills, technical guidelines for forest SFM and biodiversity conservation in the council forests will be developed, tested and disseminated. The guidelines will also serve as one of the foundations for the training programmes carried out in the project. At present, in Cameroon, there are no existing guidelines catering to the realities and needs of the council forests.

In each of the 17 councils targeted by the project, 5 forest protection committees (FPCs) will be established and trained in forest management, and biodiversity conservation and monitoring. The forest protection committee will be formed by local communities surrounding the council forests. The FPCs will be directly involved in the preparation and implementation of forest management plans (delimitation of conservation sites, biodiversity mapping, biodiversity and carbon monitoring) as well as in alternative income generating activities, which shall be part of the management plans. The composition of the FPC will be gender balanced ensuring equal representation of men and women both in the committees and in training sessions.

Field technical support and coordination of the work of the FPC will be carried out by functional technical units (FTU) hosted in the councils forests as the technical unit on forest management for the councils. FTUs will each consist of 5 council staff trained, through the project, in the development and implementation of participatory forest management plans with biodiversity and carbon emissions reduction and enhancement objectives. FTUs will be responsible for providing technical assistance, in forest management, to the councils and the local forest protection committees (FPCs).

In each of the 17 council forests, 10 local stakeholder leaders from villages surrounding the council forests, be they members of the forest protection committees or not, will be trained in alternative forest-based income generating activities. These stakeholder leaders in turn will disseminate the skills gained among the local populations. The group of 10 local stakeholder leaders selected from the villages surrounding the council forests will be gender balanced ensuring equal representation of men and women in the training sessions.

By uptake of alternative income generating activities that do not exert pressure on the forest and biodiversity resources, the threats to council forest biodiversity will be reduced and the cooperation from

the local communities will be enhanced. As alternative income generating forest activities, the following options will be considered and tailored to the reality of each council forest targeted by the project; ecotourism, non-timber forest products (NTFP), and subsistence hunting. The capacity building activities planned under these options will aim to empower women to acquire skills in the sustainable use of NTFP as alternative income generating activities.

The establishment of biodiversity conservation sites within the council forests (zoning) adds value to the traditional forest management plans where no specific conservation measures are set to monitor biodiversity and to ensure its sustainability in the council forests. In addition to the contribution of zoning (conservation sites) to the sustainability of biodiversity in the council forests, the training provide by the GEF project to the forest protection committees and functional technical units on forest management plans integrating biodiversity conservation and monitoring will ensure biodiversity sustainability as the trained FPC and FTU members are selected from the local populations and the skills gained on biodiversity zoning and conservation will remain at the council forests to monitor biodiversity ensure its sustainability.

Outputs:

2.1.1 Technical guidance and standards for SFM and biodiversity conservation in conservation sites developed and disseminated in the council forests

2.1.2 85 local forest protection committees (FPCs) established and trained, and 170 local community leaders/change agents from the villages in/around the council forests trained in alternative livelihoods

2.1.3 17 functional technical units (FTUs) established and 85 council staff trained in the development and implementation of forest management plans.

Component 3: Capacity building for the management of forest carbon

The objective of component 3 is to develop a carbon monitoring system and train functional technical units in ecosystem restoration and enhancement of carbon stocks, and carbon monitoring. Although Cameroon is involved in international programs on readiness for REDD+, the country does not have an operational carbon monitoring and accounting system in place yet. Of the small number of initiatives on carbon monitoring and accounting being implemented on the ground, REALU- Reducing Emissions from All Land Uses project was identified as the most appropriate for this project for adapting it to the council forests. REALU takes a landscape approach to analyze carbon stocks and carbon management, considering the various types of forest and agricultural land. REALU methodology provides due consideration to crosssectoral linkages and social dynamics, and is most well suited to address leakage and identify compensation activities for loss of access to wood and forest lands.

The REALU methodology has to be modified to make it consistent with the proposed project scope. The methodology assesses carbon stock changes at the landscape level (that is, including the entire area of a region regardless of different uses), wheras the project will focus on carbon stock changes within the council forests. It is also noted that the REALU methodology is based on subsequent inventories of carbon stocks in carbon pools to estimate longterm carbon stock in the landscape and on a comparison between longterm carbon stocks at different points in time in order to calculate annual changes, this includes comparing reference level long-term carbon stocks and the actual, as measured. The methodology also operates on the principle that, under constant conditions, carbon stocks tend to achieve over time an equilibrium where carbon losses equal carbon inputs. In the case of council forests, where there are no management plans or where there are plans, there is no certrainty that planned activities will be implemented according to the agreed calendar, as it is contingent upon various factors. The REALU methodology will be modified and made simpler along the following lines:

- In council forest areas under forest conservation, there is no need to measure the biomass carbon stocks since the annual average carbon stocks change of unmanaged/primary forests is assumed, by IPCC default methodologies, to be 0; this is so unless illegal activities occur, in which case the impact of these activities on biomass carbon stock must be quantified;
- In council forest areas under SFM, carbon stocks are measured at the beginning and at the end of the project activity, although, according to IPCC default methodology, only wooden aboveground biomass carbon stocks are monitored;
- In council forest areas under restoration and reforestation, carbon stocks are measured at the end of the project activity only and other carbon pools are not accounted. This is a conservative assumption since all carbon pools are expected to increase their stock as a result of reforestation. Further, the exclusion of dead organic matter and soil organic matter carbon pools greatly reduces the cost and the skills needed for an accurate monitoring, reporting and accounting, and in so doing increases the possibility of the project to produce accurate estimates.

The methodology adapted will not rely on satellite data as this is expensive and difficult to come by. Instead, it makes use of existing human capital in the councils and it is meant to further build this capacity so that it may feed into the future national carbon accounting and monitoring system. Finally, this method is well informed by the international REDD+ process, following guidelines and guidance under the UNFCCC and IPCC, so that it may eventually be easily incorporated into a national accounting system within Cameroon. ***The adapted system will be tested and implemented in the council forests targeted by the project***.

The second aspect of the component will focus on building capacities at the council forest level in forest carbon management. Given the distinct lack of capacities in the subject area, 34 FTU staff (two per FTU) will be trained in methods of carbon accounting and monitoring, and approaches to conserve and enhance forest carbon, and in forest surveillance and protection. 85 FPCs, given their mandate to ensure forest protection and monitoring of activities in the council forests, will be trained in forest surveillance and protection measures. All these training will be gender balanced to ensure equal participation and empowerment of women.

Outputs:

The component comprises two major outputs:

3.1.1 Existing carbon accounting and monitoring systems adapted to council forests and tested

3.1.2 85 Forest Protection Committees (FPCs) and 34 Functional Technical Units (FTUs) staff trained in forest carbon management and in forest surveillance.

Component 4: Ecosystem restoration and enhancement of carbon stocks in the council forests

This component will focus on the actual implementation of forest restoration and carbon enhancement in the council forests. To restore degraded forests and achieve sustainable management, the activities to be implemented will be built on three pillars: planning, monitoring and capacity building (component 3).

Planning. The planning which will be done as part of the development of management plans under component 1, will:

- Quantify: standing stocks, distribution and species composition; accessibility for management operations as well as illegal activities (i.e. illegal logging, cropping increment)
- Establish: calendar of all operations including harvesting (outside forest conservation zones), planting and associated management activities (e.g. thinning, weed control); the cultural cycle, i.e. the return time of harvesting. In general, such return time should possibly be established at 50 – 60 years(should

not be shorter than 30 years in any case); the amount, for each species, of wood to be harvested when logging takes place; species composition for reforestation.

Implementation. Implementation of activities, including reforestation, will be carried out by trained forest technical units and forest protection committees. There is no GEF funding allocated to this compoment, which will be entirely supported by co-financing.

Monitoring. The council forests will be continuously monitored to avoid unplanned/illegal activities and to verify the status of the forests in terms of biodiversity and carbon stocks (using tools developed under components 3 and 1). Constant surveillance on the ground will be the responsibility of forest protection committees (FPCs). However, because of the wide extension of council forests, the limited number of staff and lack of vehicles available for patrolling, support from entire communities will be crucial. The project will raise awareness on the benefits that the entire community may retain from a sustainably managed forest, and therefore on the need for cooperation by the whole community in the proper use of forest resources and reporting of any legal activities in the forests.

Capacity building. As described in components 3 and 2.

Outputs:

4.1.1 56,200ha in the council forests (10% of total council forest and forest reserves) under restoration.

Component 5: Monitoring and evaluation and information dissemination.

The objective of component 5 is to ensure a systematic results-based monitoring and evaluation of project progress towards achieving project outputs and outcome targets as established in the Project Results Framework as well as promote the wider dissemination of project results for replication. Further details on M&E are provided in section .4.6.

Outputs:

5.1.1: M&E plan implemented and mid-term and final evaluations completed

2.4 GLOBAL ENVIRONMENTAL BENEFITS

The global environmental benefits to be generated by the project include:

- 449,425 ha of council forests under sustainable forest management (80% of total area targeted);
- 56,200 ha of council forests formally designated conservation sites (10% of total area of council forest targeted);
- 56,200 ha of degraded forest under restoration (10% of total area);
- At least 80% of the animal and plant species identified as threatened within target council forests under protection by the end of the project;
- A total of 23,349,330 tonnes CO_2 emissions avoided and CO_2 removals achieved during the 4 years project-cycle (tCO_2);

Table 8 below presents an estimation of mitigation potential of each of the three council forest zones/areas (conservation, carbon enhancement, SFM) based on assumptions provided in the table.

Table 8: Estimation of mitigation potential of each of the three council forest zones

CF management allotment	Assumptions for calculation of Carbon benefits	Carbon benefits gained by the project

CF area under Forest Conservation By conserving forests, expected losses of carbon resulting from forest conversion and forest degradation are avoided. Area for this activity is 56,200 ha (10% of the project area).	Deforestation rate is 1.1% year^{-1}. Per ha expected carbon losses associated with deforestation of 293 t C ha^{-1}, including all C pools, corresponding to 1,074 t CO_2 ha^{-1} yr^{-1}. Per hectare expected carbon losses associated with forest degradation is 1.8 t CO_2 ha^{-1} yr^{-1}.	Emissions that can be annually avoided with the implementation of this project in the CF is **765,107 t CO_2 yr^{-1}.** This corresponds to an average annual per hectare mitigation potential (mpFC) during the project activity of **13.6 t CO_2 yr^{-1}.**
CF area under Enhancement of Carbon Stock Reforestation increases both the sink capacity of the land as well as the carbon stocks, whilst the avoidance of carbon stock losses from deforestation and forest degradation is not an option since carbon stocks are already at minimum level. Area for this activity is 56,200 ha (10% of the project area).	The average rate of reforestation is 14,050 ha year^{-1}. Per hectare expected carbon gains associated with reforestation used for this calculation this is 4.4 t C ha^{-1}, corresponding to 16 t CO_2 ha^{-1}.	The expected average amount of CO_2 removals that are expected to be annually achieved with the implementation of this project in CF area under ECS is: 512,800 t CO_2 yr^{-1}. This corresponds to an average annual per hectare mitigation potential (mpECS) during the project activity of **9.1 t CO_2 yr^{-1}.**
CF area under Sustainable Forest Management (SFM) SFM increases carbon stocks in the forest. By sustainably managing forests, expected losses of carbon that result from forest conversion and forest degradation are avoided. Area for this activity is 449,425 ha (80% of the project area).	Expected rate of deforestation is 1.1% year-1. Per hectare expected carbon stocks level is assumed to be 2/3 of that of Primary forests, consequently losses associated with deforestation are assumed to be 2/3 of that of Primary forests, and consequently correspond to 716 t CO_2 ha^{-1} yr^{-1}. Per hectare expected carbon losses associated with forest degradation is 0.5 t CO_2 ha^{-1} yr^{-1}. The net carbon increase associated with saving from harvesting of annual increment is assumed to be 1/3 of the annual increment value, and has been calculated assuming that most of the area under SFM is in the tropical moist zone - that is 60%, while 30% is in the tropical dry and 10% in the tropical wet - and it corresponds to 1.8 t CO_2 ha^{-1} yr^{-1}.	Amount of emissions that can be annually avoided by the implementation of this project in the CF under SFM is: **3,764,384 t CO_2 yr^{-1}.** Further, amount of CO_2 removals that can be accumulated by the implementation of this project in the CF under SFM is: **795,042 t CO_2 yr^{-1}.** For a total of **4,559,425 t CO_2 yr^{-1}.** This corresponds to an average annual per hectare mitigation potential (mpSFM) during the project activity of **10.1 t CO_2 yr^{-1}.**

The total carbon benefits of the project cycle are sumarrized in the tables below.

Mitigation potential FC			
Avoided emissions	Surface (ha)		56,200
	Deforestation rate yr^{-1}		1.1%
	Per ha, Deforestation emissions t CO_2 ha^{-1}		1,074
	Per ha, Degradation emissions (t CO_2 ha^{-1} yr^{-1})		1.8
	Annual Total (t CO_2 yr^{-1})		**765,107**
	Project Total (t CO_2)		*3,060,427*
	Per ha, annual benefit (t CO_2 ha^{-1} yr^{-1})		*13.6*

Mitigation potential ECS			
Net removals	Per ha, Net removals (t CO_2 ha^{-1} yr^{-1})		16
	Year 1, total reforested area (ha)		8,000
	Year 2, total reforested area (ha)		24,000
	Year 3, total reforested area (ha)		40,000
	Year 4, total reforested area (ha)		56,200
	Project Total (t CO_2 yr^{-1})		**2,051,200**
	Annual Total (t CO_2 yr^{-1})		*512,800*
	Per ha, annual benefit (t CO_2 ha^{-1} yr^{-1})		*9.1*

Mitigation potential SFM			
Avoided emissions	Surface (ha)		449,425
	Deforestation rate yr^{-1}		1.1%
	Per ha, Deforestation emissions t CO_2 ha^{-1}		716
	Per ha, Degradation emissions (t CO_2 ha^{-1} yr^{-1})		0.5
	Annual Subtotal (t CO_2 yr^{-1})		**3,764,384**
Net removals	Surface (ha)		441,690
	Per ha, Net removals (t CO_2 ha^{-1} yr^{-1})		1.8
	Annual Subtotal (t CO_2 yr^{-1})		**795,042**
	Annual Total (t CO_2 yr^{-1})		**4,559,426**
	Project Total (t CO_2)		*18,237,703*
	Per ha, annual benefit (t CO_2 ha^{-1} yr^{-1})		*10.1*

Type of activity	CO_2 emission avoided and CO_2 removals achieved during the 4 years project-cycle (tCO_2)	Per hectare, Mitigation potential during project cycle (tCO_2 ha^{-1} yr^{-1})
FC	3,060,427	13.6
ECS	2,051,200	9.6
SFM	18,237,703	10.2
TOTAL Carbon benefit	**23,349,330**	**10.4**

In sum, the potential carbon benefits of the project are 5,837,333 t CO_2 yr^{-1}, which corresponds to 10.4 t CO_2 ha^{-1} yr^{-1}. The mitigation potential of council forests will remain considerable at the end of the project implementation period, even if in 20-years time it is expected that the sink part of the mitigation contribution will achieve saturation, since carbon stocks are expected to be at their long-term average. Further, the expected integration in the future of the council forests under the national Cameroonian REDD+ monitoring, reporting and accounting system will remove the risks associated with failures in implementing the offset activities for displacement of emissions, since under a national system no displacement of emissions outside of the boundaries of the monitoring, reporting and accounting system may occur.

The participation of the local communities in the implementation of remunerated forest activities (forest inventories, implementation of forest management plans, ecosystem restoration..) and the socio-economic benefits they will get from the project (non wood forest products) provides the confidence that sustainable forest management activities in the council forests will last after the end of the project, so far as the technical coordination and assistance lasts.

2.5   COST EFFECTIVENESS

To ensure cost-effectiveness and sustainability project results, GEF funding will specifically support the development of technical capacity of council forest staff and local communities to develop and implement sustainable forest management plans which integrate new concepts and practices – biodiversity conservation and carbon management. By encouraging the participation of local populations in the implementation of the project activities on the ground (forest inventory, biodiversity conservation, carbon measuring, carbon stocks monitoring…), the project will be by far more cost-effective and sustainable compared to hiring external resources to carry operational work or to perform these services through direct intervention by the government or other institutions. Furthermore, by focusing on capacity building in biodiversity conservation and carbon management, GEF funding will leave a lasting legacy in terms of technical skills and experiences gained by local stakeholders from the project.

2.6   INNOVATIVENESS

Compared to what has so far been achieved in Cameroon in the council forests, this GEF project is innovative, particularly with regards to the following five aspects:

1. The zoning of council forests. The council forests will be placed under one of three main activities, designed to reflect substantial differences in their carbon stock level and carbon stock dynamic. These activities are:

– *Forest Conservation (FC)*, to include primary forests, where economic exploitation of wood resources is not allowed. Their high environmental value in terms of biodiversity and carbon stocking is considered to be higher than the financial value of wood resources. Through the effective implementation of this project, their environmental value is meant to result in a flow of financial resources so that the local population will experience the economical convenience of protecting their forests. In primary forests, the carbon pools are assumed to be fully stocked, which means that the carbon stock in each carbon pool has achieved the equilibrium level of the sigmoidal growth curve. Consequently, in primary forests the annual carbon gain due to the net carbon intake (NPP) equals the carbon loss due to mortality, so that the annual net carbon stock change is 0.

- *Enhancement of Carbon Stock (ECS)*, to include those areas where forest cover has almost completely disappeared and therefore carbon stocks in carbon pools are at their lowest level (unstocked pool). In these areas, the project aims at increasing the carbon stock through reforestation/forest plantations.
- *Sustainable Forest Management (SFM)*, to include those areas where the forest is subject to extraction of wooden resources for commercial use (harvesting), as well as for sustainable use of non-wood forest products, biodiversity conservation and restoration of degraded areas. Carbon stocks in carbon pools annually move around an average level determined by the frequency and intensity of the harvesting (frequency being inversely proportional to intensity, and vice versa, to avoid degradation of the carbon stock) and by the following regrowth. Consequently, in these forests, where sustainably managed, the annual carbon gain due to the net carbon intake (NPP) equals the carbon loss due to mortality and harvesting, so that the expected annual net carbon stock change is 0.

Such zoning is expected to last indefinitely for the forest areas included in the FC zone or in the SFM zone, while forest areas included in the ECS zone are expected to be transferred and converted to the SFM zone as soon as they are ready for harvesting.

2. Constant surveillance of the forest land, to be achieved with the participation of the council forest population: The project aims at involving the local population in the management of the forest. To achieve such participation the project will set activities for raising awareness and building capacity and economic incentives in the form of activities aimed at avoiding displacement of emissions. As long as the management of the council forest continues to be correctly planned and implemented, and the benefits accrue the council forest population as is envisioned by the law, there is a good chance that the interest of the population will last beyond the end of the project.

3. Constant monitoring of forest biomass carbon stocks. The project will support the continuous collection of data for wooden biomass, which is a fundamental element of any planning for sustainable management. Further, the implementation of the project will ensure that the biomass carbon stocks level will be measured and that most significant biomass carbon stock changes will be accounted. The capacity that will be built as a result of the implementation of the project and the routine activities for monitoring that will be established as part of the project, will ensure that the monitoring of biomass carbon stocks will continue after the end of the project as a core element of planning and of associated management activities.

4. Implementation of activities aimed at maximising the mitigation benefits of a sustainable management of forests: The implementation of activities aimed at maximising the mitigation benefits of a sustainable management of forests consists in establishing a different set of management activities for each zone (i.e., FC, ECS, SFM), and a different carbon reporting and accounting framework for each of the zones. The methodologies proposed are consistent with the 2006 IPCC Guidelines and with the current framework for reporting and accounting for carbon stock changes in forest land under the UNFCCC (e.g. forest management, deforestation, afforestation/reforestation, REDD+ activities). Since the reporting and accounting framework proposed is fully consistent with the current treatment of forest-related activities under the UNFCCC, it is reasonable to expect that the framework will be implemented also after the end of the project in order to claim carbon benefits under a mitigation incentive scheme such as REDD+.

5. Training council staff on carbon stock management techniques and sustainable forest management:
The training of coouncil staff on techniques for monitoring carbon stocks and sustainable forest management is understood here as a core element of the project, most important and most relevant for ensuring that the sustainable management of forests and their use for mitigating climate change will continue to be implemented in the council forests beyond the end of this project.

3   SECTION 3: FEASIBILITY

3.1   ENVIRONMENTAL IMPACT ASSESSMENT

As described in the previous section, the project is designed to have positive benefits to the environment. No adverse environmental or social impacts are likely to compromise the project and it conforms to FAO's pre-approved list of projects excluded from a detailed environmental assessment.

 The project is classified as Category C under FAO's guideline "Environmental Impact Assessment – Guidelines for FAO's field projects".

3.2   RISK MANAGEMENT

An initial identification and ranking of risks has been conducted as well as a preliminary identification of mitigation measures. Overall, the risks are not exceptionally high and should be manageable. Risks, their ranking and mitigation measures are presented in the following table:

Risk	Probability	Impact	Mitigation measures
Environmental Risks			
Climate change impacts (e.g. changes in the water regime, longer and hotter dry seasons, increased incidence of fires etc.)	Low	Reduction in habitats suitable for BD conservation and worsening habitat conditions for key species. Increased pressure on forests because of reduced productivity in agriculture. Impairment forest restoration activities.	Monitor impacts on biodiversity as part of conservation area monitoring; Management measures will be adopted to minimize the incidence of forest fires; Potential links between climate driven changes and other anthropogenic disturbances will be identified and measures to reduce these will be included in the forest management plans.
Forest fires, pests and diseases	Low	Increased forest degradation. Direct reduction in threatened species populations through mortality, habitat and biodiversity loss	Counter measures will be adopted in forest management plans to address forest fires, pests and diseases; Occurrence of such events will be recorded in monitoring activities and preventive actions will be improved; Trainings for FTUs and FPCs will address these specific threats and actions to be undertaken
Funding Risks			
Delay in the transfer of funds from co-financing partners	Medium	Project progress at all levels will be delayed	Co-financing partners will be part of the project steering committee. Any short-fall in co-financing will be brought to the attention of the PSC for action to be taken.
Social, governance and institutional risks			
Poor co-ordination between ministries (MINEPDED, MINFOF) and agencies (CTFC/ ACFCAM) and other stakeholders	Medium	Project progress stalled or delayed	Organize regular meetings between ministries and agencies concerned by the project to avoid misunderstanding or lack of information on the project. This will be through the PSC, PTCM and the Stakeholder Committees

Changes in political circumstances and govt. priorities	Low to Medium	Project progress stalled	Broad stakeholder engagement throughout the project preparation and the continuation of this engagement during the implementation will ensure continued political support for the project
Lack of interest or non-participation of the local communities in the project activities	Medium	Project will not achieve the targets set, and any targets achieved will not be sustainable	Awareness activities and education materials on the link between ensuring SFM and biodiversity conservation in the council forests and the improvement of livelihoods of the communities. Continued recognition of the rights of the local population for traditional collection of forest products in the council forests for their subsistence. Continued engagement of the local communities through the Stakeholder Committees and Forest Protection Committees, and capacity building activities.
Lack of adherence to the management plans and continued illegal utilization of forest products	Medium	Current threats to biodiversity conservation will not be reduced. Forest degradation will continue.	Key stakeholders will be involved in formulating the management plans. Measures to prevent illegal logging of wood and non-wood forest products in the council forests and continuous forest surveillance will be an integral part of the management plans and the forest protection activities.
Limited support and implementation capacity in the councils	Low to Medium	Biodiversity conservation and SFM activities at the ground level will be severely hampered	Progress of capacity development activities at the council level will be regularly monitored by the PSC. During the project preparation, council staff and other stakeholders were engaged, and with their buy-in and continued engagement during implementation, timely corrective measures will be taken in case of any concerns.

4 SECTION 4: IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

4.1 INSTITUTIONAL ARRANGEMENTS

The main institutional partners in this project are: the Ministry of Forestry and Wildlife (MINFOF), the Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED), the Association des Communes Forestières du Cameroun (ACFCAM) through its technical unit Centre Technique de la Forêt Communale (CTFC), and FAO as the GEF Agency.

Ministry of Forestry and Wildlife (MINFOF)

MINFOF is responsible for forest management, as well as for the implementation of forest law in Cameroon. In this regard, MINFOF is responsible for the sustainable management of Cameroonian forests (including council forests), ensuring that forest management activities conducted by different actors comply with forest laws and regulations, ensuring field implementation of forest management good practices, reforestation and forest inventories' programmes, as well as validation of forest management plans and the control of their implementation. It is MINFOF that approves forest management plans submitted by the councils for their council forests to be operational.

Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED)

The main mission of MINEPDED consists of developing, implementing and monitoring environmental management and nature protection policy. MINEPDED is responsible for setting measures for sustainable management of natural resources, sustainable management of ecosystems and biodiversity conservation, environmental awareness of communities to foster their participation in environmental management. Issues related to biodiversity conservation, climate change and carbon management that need to be tackled in this GEF project are under the competencies and responsibilities of MINEPDED.

ACFCAM

As stated in Section 1, ACFCAM was created in 2005 by the Cameroonian councils to assist their members (local councils) on administrative and technical issues related to the creation and management of council forests. ACFCAM has a technical unit called CTFC which is responsible for providing technical support to member councils in the development and implementation of forest management plans, training of council staff on sustainable forest management, valorisation and marketing of timber and non-timber forest products and other areas. ACFCAM is currently leading the implementation of "Programme d'appui aux Forêts communales du Cameroun" (PAF2C) – a support program for council forests in Cameroon.

4.2 IMPLEMENTATION ARRANGEMENTS

The Food and Agriculture Organization (FAO) will be the GEF Agency responsible for the supervision, and provision of technical guidance during the implementation of the project. In addition, FAO will act as financial and operational Executing Agency responsible for the management of GEF resources and the provision of procurement and contracting services to the project using FAO rules and procedures. These will be done in close consultation with MINFOF, MINEPDED and ACFCAM, as the key partners, and the Project Steering Committee. The day-to-day coordination and management of project activities will be done through a Project Management Unit that will be hosted by MINFOF.

FAO as the financial and operational executing agency will conclude standard Letters of Agreement with ACFCAM and other partners for the delivery of specific project outputs. Two years after the start of project implementation, another independent fiduciary assessment of the technical unit of ACFCAM (CTFC) will be conducted. The implementation arrangements will be reviewed based on the results of the second fiduciary assessment.

Figure 4.1: Organizational Chart


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                        ┌─────────────────────┐
                        │  MINFOF             │
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                        │   │  PMU     │      │
                        │   └──────────┘      │
                        └─────────────────────┘
        ┌──────────────────────────────────────────┐
        │   MINEPDED                                │
┌──────┐│                                           │  ┌──────────┐
│ FAO  ││                                           │  │  PSC     │
│      ││                                           │  │  PTCM    │
└──────┘└──────────────────────────────────────────┘  └──────────┘
        ┌──────────────────────────────────────────┐
        │   ACFCAM                                  │
        │                                           │
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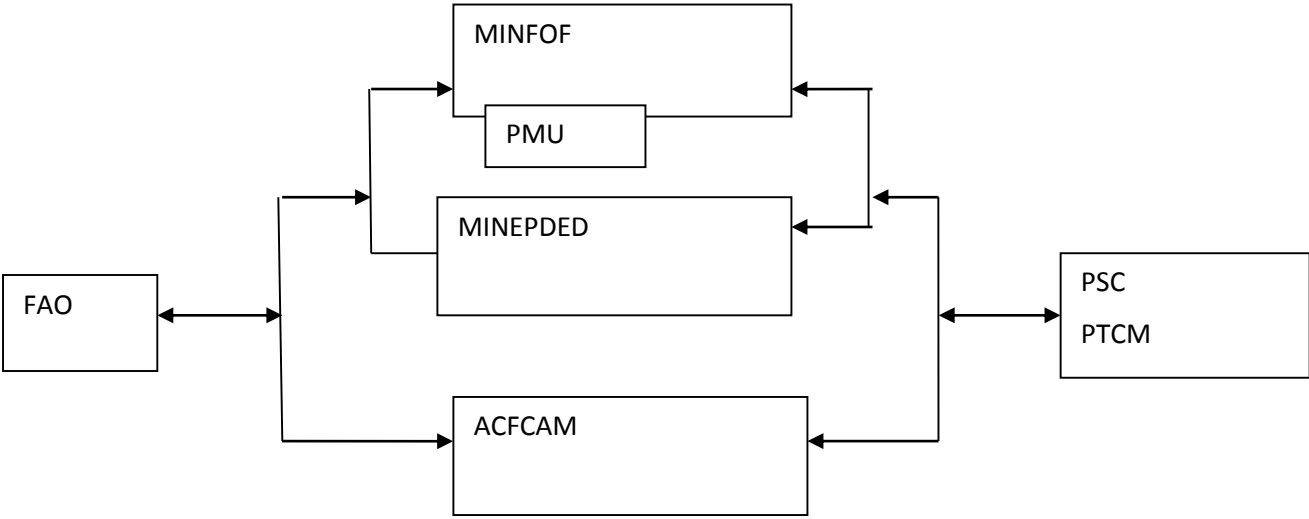
4.2.1 Project Steering Committee

A multi-stakeholder Project Steering Committee (PSC) will be established as the policy setting body with regard to all issues affecting achievement of the project's objectives. MINFOF and MINEPDED will facilitate the establishment of the PSC in consultation with ACFCAM. The PSC will provide general oversight of the execution of the project and ensure that all inputs and activities agreed upon in the project document are adequately prepared and implemented and that results are being achieved. The PSC will specifically:

i)   provide guidance to the Project Management Unit (PMU) in the execution of the project;
ii)   ensure that all project activities and outputs are in accordance with the project document;
iii)   review, amend (if appropriate) and endorse all Annual Work Plans and Budgets of the project;
iv)   review project progress and achievement of planned results as presented in six-monthly Project Progress Reports, Project Implementation Reviews (PIRs) and Financial Reports;
v)   provide inputs to the mid-term and final evaluations, review findings and provide comments;
vi)   advise on issues and problems arising from project implementation, submitted for consideration by the Project Management Unit or by various stakeholders;
vii)   facilitate dissemination and integration of project outcomes into national policies and programmes as appropriate; and
viii)   facilitate collaboration amongst stakeholders and ensure the timely availability of co-financing sources.

Membership. Permanent members of the PSC will include the representatives of the following institutions: MINFOF, MINEPDED, ACFCAM, GIZ, FEICOM, PNDP, SC and FAO. In addition to the permanent members, the PSC will invite relevant institutions and experts to participate in the PSC as observers. These observers may be from government and local authorities, civil society and the private sector and they will be invited to participate (as necessary) by the Chair of the PSC.

Meetings. MINFOF will chair the PSC and MINEPDED will be vice-chair. PSC meetings will be held twice a year, but the Chairperson will have the discretion to call additional meetings if necessary. The PMU will act as Secretariat to the PSC and be responsible for providing PSC members with all required documents in advance of PSC meetings, including the draft Annual Work Plan and Budget and any significant technical proposals or analyses. The PMU will prepare written report of all PSC meetings

and be responsible for logistical arrangements relative to the holding of such meetings, supported by FAO Cameroon as the Budget Holder.

Compensation: Travel and associated travel costs incurred by the PSC shall be refunded in accordance with FAO rules and regulations. No sitting fees shall be paid from the project budget to any person for their participation in the PSC and PSC meetings.

4.2.2 National projection coordination (NPC)

A NPC will be will be hosted by MINFOF. The NPC will be led by a national coordinator appointed by MINFOF. The NPC will work in close collaboration with project partners and the project management unit and will: act as secretary to the PSC and ensure regular communications between the PSC, FAO and all project partners; organize and coordinate the meetings of the project technical Consultative Mechanism (PTCM), organize and coordinate meetings of the project stakeholder committees (SC), provision of assistance to consolidate the various dialogue platforms and facilitate dialogue among the stakeholders within these platforms; give guidance for the development of an appropriate internal monitoring and evaluation system for project performance and general guidance for the implementation of annual work plans.

4.2.3 Project Management Unit (PMU)

A PMU will be hosted by MINFOF and report to FAO (GEF Agency). The PMU will be responsible for day-to-day project operations and will ensure the coordination and execution of the project through timely and efficient implementation of agreed work plans, in close consultation with the MINFOF, MINEPDED, FAO (BH and LTU) and the PSC. The PMU will act as secretariat to the PSC. It will ensure timely delivery of inputs and outputs, closely monitor project progress, and facilitate collaboration with other on-going initiatives. The PMU will be responsible for implementing the project's M&E plan and the preparation and submission of the project progress reports and other reports as outlined in the M&E plan. It will assist in the preparation of the annual Project Implementation Reviews (PIR). Project Progress Reports on implemented activities and achieved project outputs and outcomes will be submitted together with the Annual Work Plan and detailed budget (AWP/B) to the PSC and FAO.

Composition of the PMU. The PMU will consist of a full-time project coordinator, two part-time international consultants, an administrative assistant, a driver and short-term consultants. All project staff paid with GEF resources will be selected through a transparent and open selection process. A brief description of the duties of the long-term PMU staff is given below and more detailed ToRs are given in Annex 6.

Technical Project Co-ordinator (TPC). The TPC will be a full-time consultant paid from GEF funding and selected jointly by MINFOF /MINEPDED/ACFCAM and FAO through a transparent and open selection process. The TPC will provide technical guidance to the project on SFM, biodiversity conservation and carbon management in the council forests and on related capacity building and training activities planned for the project. The TPC will be responsible for the day-to-day management of the project. In particular, the TPC will; i) prepare annual work plans and budgets and draft consultant TORs ii) review and evaluate consultants reports, iii) assist consultants and institutions with the preparation of technical reports for the project, iv) facilitate, prepare and implement project training and capacity building events, v) provide technical advice so that the appropriate approaches and technical requirements are followed during project implementation, vi) prepare progress reports and perform other project management duties, and viii) act as Rapporteur of the Project Steering Committee.

International Consultant - Carbon Project Expert (IC-CPE). The IC-CPE will be a part-time consultant paid from GEF funding and selected jointly by the MINFOF/MINEPDED, ACFCAM and the FAO through a transparent and open selection process. The IC-CPE will; i) provide technical advice and support on specific emerging issues on carbon management and monitoring, ii) facilitate networking and exchange with other countries in order to learn from other carbon accounting and monitoring projects, including GEF funded projects in the region or worldwide, and stimulate international collaboration, iii) provide

advice on fund mobilisation and partnership for the implementation of the project, and for the follow-up of the carbon accounting and monitoring system developed after the end of the project, and iv) provide special and strategic advice on any carbon management issue as the need arises, including inter alia on a scientific level as well as on a policy and communication level.

International Consultant –Monitoring and Evaluation Expert (IC-MEE). The IC-MEE will be a part-time consultant paid from GEF funding and selected jointly by the MINFOF/MINEPDED, ACFCAM and the FAO through a transparent and open selection process. The IC-MEE will: be responsible for the planning and carrying out of the Project's monitoring activities, based in particular on the Appendix 1 (Results Matrix) of the Project Document. The consultant will: i)- set up the Project's M&E system in coordination with the Technical Project Coordinator; ii)- assist the Project Coordinator in the regular monitoring of the Project's activities; iii)- contribute to the preparation of the Annual Work Plans and Budgets; iv)-participate in collaborative meetings with project partners and PSC meetings, as required; v)- undertake missions as appropriate to monitor project progress; and vi)- perform other related duties as required.

4.2.4- Project Technical Consultative Mechanism (PTCM)

A PTCM will be established and led by the National Project Coordinator (NPC) to: i)- provide technical and scientific advice to the project on an ad-hoc basis ii)- advise on ways to facilitate synergy and co-ordination between activities funded by the GEF and cofinanced activities; iii)- give general guidance for the coordination of the development and implementation of all the project's technical activities described in the project annual work plans, iv)- promote close collaboration between other executing partners and local organizations, and also with the leaders of other projects or initiatives being developed or carried out in the field, v) provide guidance for the development of an appropriate internal monitoring and evaluation system for project performance, vii) advise on the development of strategic partnerships in the implementation of the project activities.

The PTCM will include the following: relevant technical experts from government (e.g. staff from MINFOF and MINEPDED); technical experts from (ACFCAM, GIZ, FEICOM, PNDP, long-term project staff (TPC, NPC), representatives of research organizations and international organizations (IRAD, CIFOR, IITA, ICRAF), Universities and other institutions with relevant expertise and experience in biodiversity conservation, forest and carbon management relevant to the project. The NPC will call for meetings of the PTCM as and when required and the Technical Project Co-ordinator (TPC) will act as facilitator.

4.2.5 Stakeholder Committees (SC)

The mandate of the SCs will be to; i) provide advice and new ideas on options for increased biodiversity conservation and sustainable use of forest resources within the council forests, ii) discuss and find solutions for potential conflicts between council forest and the local populations, iii) propose creative initiatives on how to increase public awareness of council forest biodiversity value, iv) explore innovative incentives for the local populations to improve biodiversity conservation and carbon enhancement in the council forests and promote collaboration between local populations and council forest staff for a successful implementation of project activities. The composition of the SCs will include representatives from local communities covered by the project, council forest staff and representatives of MINFOF, MINEPDED, ACFCAM, as well as representatives from NGOs and civil society. SC will promote good synergy and an effective collaboration between the project team, the councils and local communities for an efficient implementation of the project. At least four project SCs will be established, one of each regrouping 5 council forests covered by the project (the project will cover 17 council forests).

The meeting of the SC will be held prior to PSC meetings. The NPC will call for meetings of the SC and the Technical Project Co-ordinator (TPC) will act as facilitator.

4.2.6 Project Focal point (PFP)

The project focal point will be a part time staff appointed by MINEPDED as part of Government co-financing contribution to the project. On behalf of the MINEPDED, the PFP will follow the GEF project issues related to biodiversity conservation and carbon management (biodiversity monitoring, environmental impact assessment, ecosystem restoration…). Specifically, the PFP will ; i) ensure regular communication between MINEPDED, MINFOF, ACFCAM, the PSC and all project partners, ii) prepare, compile and monitor the contributions of all co-financing agencies on these issues, iii) review Annual Work Plans and Budget prepared by the TPC and provide any additional inputs before submission to FAO and the PSC for approval, iv) provide general guidance and supervision in the implementation of project activities and v) promote close collaboration between the project and relevant ongoing and planned Government (and non-Government) initiatives related to biodiversity, and REDD+.

4.2.7 Functional technical unit (FTU)

The Functional technical unit (FTU) will be established in each of the 17 council forests targeted by the GEF project. The FTU will provide technical assistance to the councils on forest management as well as supporting and coordinating the work of the forest protection committees and the local stakeholders involved in the implementation of the GEF project activities in the council forests and forest reserves (mapping of biodiversity hostpots, delimitation of conservation sites, inventory of biodiversity satuts, field implementation of forest management plans). These units are expected to continue provising support in updating and implementing council forest management plans beyond the project.

4.2.8 Forest protection committee (FPC)

The forest protection committee (FPC) is a local committee to be formed in each of the 17 council forests targeted by the project. Each council forest will have 5 local forest protection committee (FPC) totalling 85 FPC. The FPC is formed by the local populations surrounding the council forests and who are involved in the implementation of the GEF funded activities (delimitation of conservation sites, biodiversity mapping, biodiversity and carbon monitoring, implementation of forest management plans) as well as in alternative income generating activities in the council forests.

4.2.9 Roles and responsibilities of the main institutional units involved in project implementation

MINFOF

As the ministry responsible for forests and forest management in Cameroon, MINFOF is the main government institution partner. The MINFOF will:

- chair the project steering committee (PSC);
- in consultation with the MINEPDED facilitate the establishment of the Project Steering Committee (PSC);
- advise the PSC on areas of their expertise and ensure that project activities are in compliance with the forest law, rules, standards and procedures on sustainable forest management and protected areas in Cameroon;
- Appoint a national project coordinator to facilitate coordination of the project with other ongoing activities in Cameroon related to council forest management as the national project coordinator is based within MINFOF.

MINEPDED

MINEPDED is a key governmental partner in the implementation of the project. The MINEPDED will:

- be vice-chair to the project steering committee (PSC);
- advise the PSC on areas of MINEPDED's expertise;

- ensure that project activities are in compliance with rules, standards and procedures set in Cameroon for sustainable management of natural resources, sustainable management of ecosystems and biodiversity conservation;
- appoint a part time staff member as Project Focal Point (PFP) part of the Government's cofinancing to the project.

ACFCAM

ACFCAM through its technical unit CTFC is one of the a key partners in the implementation of the project based on its experience in providing technical assistance in the creation and management of council forests and the implementation of the baseline PAF2C programme. ACFCAM will:

- be responsible for the technical execution of some project activities for which ACFCAM has comparative advantage;
- based on Annual Work Plans and Budgets approved by the PSC, FAO will enter into Letters of Agreement (LoAs) with ACFCAM as well as with other partners for the delivery of specific outputs under the project in line with their respective technical comparative advantage and experience.

Other executing partners

The following NGOs and institutions based in Cameroon and working on issues related to sustainable forest management, biodiversity conservation, carbon management and forest ecosystem enrichment and restoration will assist in capacity building and development of good practices for sustainable forest management, biodiversity conservation and carbon accounting and monitoring in the council forests. Their engagement will be through MoUs or Letters of Agreement based on work plans and budget approved by the Project Steering Committee. They include:

- Agence nationale d'appui au développent forestier (ANAFOR),
- Institut de Recherche Agricole pour le Développement (IRAD)
- World Agroforestry Centre (ICRAF)
- University of Yaounde,
- University of Dschang
- GEO Forest Carbon Tracking
- REALU, REDD-ALERT
- International Union for the Conservation of Nature (IUCN)
- Cameroon Ecology (CAM-ECO)
- Cameroon Environment Watch (CEW)
- World Wildlife Fund for Nature (WWF)

FAO's Role

FAO will be the GEF Agency for the project. As the GEF agency, FAO will maintain project oversight to ensure that GEF policies and criteria are adhered to and that the project meets its objectives and achieves expected outcomes in an efficient and effective manner. FAO will report on project progress to the GEF Secretariat; financial reporting will be to the GEF Trustee. FAO will closely monitor and provide technical support to the project.

As the GEF agency for the project, FAO will:

- Manage and disburse funds from GEF in accordance with the rules and procedures of FAO;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities;
- Carry out at least one supervision mission per year; and

- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee.

FAO will also be responsible for the financial execution of the project. This implies that FAO will be responsible for the procurement of goods and services for the project in consultation with project partners based on the annual work plans and budgets approved by the PSC.

The **FAO Representative in Cameroon** will be the **Budget Holder** (BH) responsible for the timely operational, administrative and financial management of the project. The Budget Holder, working closely with the PMU, the FAO Lead Technical Officer and Lead Technical Unit, will be responsible for:

a) management of GEF resources in accordance with the Project Document, and approved Annual Work Plans and Budgets;
b) procurement of goods and contracting of services for the project and financial reporting in accordance with FAO rules and procedures;
c) preparation of annual/six-monthly budget revisions, as required, for submission to the LTO/LTU and the GEF Coordination Unit;
d) preparation of six-monthly financial reports to be submitted to the GEF Unit and shared with the executing partners and the PSC;
e) represent FAO in the PSC.

The BH will also be responsible for reviewing and giving no-objection to Annual Work Plans and Budgets (AWP/B), Project Progress Reports and co-financing reports submitted by the Project Management Unit, in consultation with the FAO Lead Technical Officer (LTO), Lead Technical Unit (LTU) and the GEF Coordination Unit.

FAO Project Task Force (PTF): The BH will establish a multi-disciplinary PTF to support the project. Members of the task force will be responsible for supervision of activities in their area of technical competence in collaboration with the LTO and BH.

The FAO Lead Technical Unit (LTU): Forest Economics, Policy and Products Division (FOE) at FAO Forestry Department will be the FAO Lead Technical Unit (LTU). The LTU will support the LTO in providing technical advice and backstopping (at least one annual field project supervision mission) in consultation with other teams in the Department and FAO. The LTO will:

a) Review and provide clearance to TORs for consultancies, LOAs and contracts, in consultation with the LTU and relevant technical officers in FAO;
b) Participate in the selection of consultants and firms to be hired with GEF funding;
c) Review and provide technical comments to draft technical products/reports and, as necessary, ensure clearance by relevant FAO technical officers of final technical products delivered by consultants and contract holders financed by GEF resources before the final payment can be processed;
d) Review and approve project progress reports submitted by the Project Management Unit to the BH;
e) Support the BH in reviewing, revising and giving no-objection to AWP/B to be approved by the Project Steering Committee;
f) Prepare the annual Project Implementation Review (PIR) report to be submitted to the LTU and the GEF Coordination (TCI) for clearance. The PIR will subsequently be submitted to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report;
g) Field annual (or as needed) backstopping missions;
h) With the LTU, review and clear TORs for the mid-term evaluation, participate in the mid-term workshop with all key project stakeholders, development of an eventual agreed adjustment plan in project execution approach, and supervise its implementation;
i) With the LTU, review and clear TORs for the final evaluation, participate in the final project closure workshop with all key project stakeholders and the development of and follow up on

recommendations on how to ensure sustainability of project outputs and results after the end of the project.

The GEF Coordination Unit in the Investment Centre Division (TCI) will review and clear project progress reports, annual project implementation reviews (PIRs) and financial reports and budget revisions. The unit will also participate in the mid-term and final evaluations and the development of any corrective actions to mitigate eventual risks affecting the timely and effective implementation of the project. The GEF Coordination Unit will, in collaboration with the FAO Finance Division, request transfer of project funds from the GEF Trustee based on 6 monthly projections.

The FAO Finance Division will clear budget revisions, provide annual Financial Reports to GEF and, in collaboration with the GEF Coordination Unit, call for project funds on a six-monthly basis from the GEF.

4.3 FINANCIAL PLANNING AND MANAGEMENT

4.3.1 Financial plan (by component, outputs and co-financier)

The total cost of the project will be USD 21,423,333, to be financed through a USD 3.6 million GEF grant and co-financing from: (i) Government (national, local/councils); (ii) Cameroon Ecology; (iii) the GIZ through GIZ-ProPSFE; (iv) the national programme for local development (PNDP) and (v) FAO. The table 7 presents the project cost by component and outputs and by sources of financing as well.

Table 9: Project cost by component and outputs and by source of financing

Component/output	Government and councils	Cam-Eco	GIZ	PNDP	FAO	Total Co-finan-cing	% Co-finan-cing	GEF	% GEF	Total
Component1: Establishment of council forests for sustainable management and biodiversity conservation	**2,500,000**	**1,000,500**	**750,000**	**400,000**	**150,000**	**4,800,500**	**77**	**1,401,559**	**23**	**6,202,059**
O.1.1.1: Database of biodiversity in the council forests established	900,000	-			70,000	970,000		347,343		
O 1.1.2: Forest management plans, integrating biodiversity conservation, developed and implemented	800,000	1,000,500	750,000	400,000	40,000	2,490,500		404,208		
O.1.1.3: 56,200ha of conservation sites formally designated and established	800,000	-	-		40,000	840,000		650,008		
Component 2: Capacity Building to strengthen biodiversity conservation and SFM in Council Forests	**2,500,000**	**650,000**	**0**	**0**	**550,000**	**3,700,000**	**68**	**1,737,269**	**32**	**5,437,269**
O 2.1.1: Technical guidance and standards for SFM and biodiversity conservation in conservation sites developed and disseminated in the council forests.	800,000	-	-	-	200,000	1,000,000		139,995		
O 2.1.2: 85 local forest protection committees (FPCs) established and trained, and 170 local community leaders/change agents from the	900,000	350,000	-	-	150,000	1,400,000		549,846		

villages in/around the council forests trained in alternative livelihoods										
O 2.1.3:: 17 functional technical units (FTU) established and 85 council staff trained in the development and implementation of forest management plans.	800,000	300,000	-	-	200,000	1,300,000		1,047,428		
Component 3: Capacity building for the management of forest carbon	**500,000**	**323,000**	**257,658**	**170,000**	**300,000**	**1,550,658**	**90**	**179,818**	**10**	**1,730,476**
O 3.1.1: Existing accounting and carbon monitoring systems adapted to council forests and tested	-	-	-	-	150,000	150,000		89,909		
O 3.1.2: 85 forest protection committees (FPC) and 34 Functional technical units (FTU) staff trained in forest carbon management	500,000	323,000	257,658	170,000	150,000	1,400,658		89,909		
Component 4: Ecosystem restoration and enhancement of carbon stocks	**3,500,000**	**1,430,000**	**810,000**	**870,000**	**350,000**	**6,960,000**	**100**	**0**	**0**	**6,960,000**
O.4.1.1: Reforestation and restoration of degraded council forests	3,500,000	1,430,000	810,000	870,000	350,000	6,960,000		0		
Component 5: Monitoring and evaluation and information dissemination	**47,619**	**96,500**	**82,342**	**60,000**	**30,952**	**317,413**	**70**	**133,850**	**30**	**451,263**
O 5.1.1 M&E plan implemented and mid-term and final evaluations completed	47,619	96,500	82,342	60,000	30,952	317,413		133,850		
Project Management	452,381	-	-	-	69,048	521,429	81	120,838	19	642,267
Total Project	9,500,000	3,500,000	1,900,000	1,500,000	1,450,000	**17,850,000**	83	**3,573,333**	17	**21,423,333**

4.3.2 GEF inputs

GEF resources (USD 3,573,333) will be provided to Cameroon as a grant and the majority of GEF-funded activities will be technical assistance. Most of this will be focused on improving biodiversity conservation in conservation sites within council forests as well as enhancing carbon stocks in the council forests.

4.3.3 Government inputs

The confirmed sources of national government cofinancing (MINFOF, MINEPDED) amount to USD 9,500,000. The contribution from the national government will cover: (i) the salary of a part-time national project focal point and the salary of the national project coordinator; (ii) the cost of staff time for government officers and technicians working with project-funded consultants and other staff directly engaged in implementing project activities; and (iii) the provision of appropriate office space to host the project management unit at MINFOF, related office operational costs and local transportation costs. Under (ii) above, collaboration will focus, in particular, on support to documentation, norms, procedures on biodiversity conservation, carbon management, support to collection of data and monitoring activities related to biodiversity monitoring and conservation, carbon accounting and management.

4.3.4 FAO inputs

The total FAO co-financing contribution to the project will amount to USD 1,450, 000. This will comprise an in-kind contribution of USD 400,000 of staff time to provide additional international expertise for technical assistance and expenditure of USD 1,050,000 from other FAO projects and programmes in Cameroon (on forest and farms facility, TCP facility Cameroon, FLEGT support programme II) that will be directed towards the aims and objectives of this GEF Project. Specifically, the following projects will contribute to this effort: (i) Support the development of small scale non wood forest products enterprises in the Central Africa that aims to improve the contribution of non wood forest products to food security and poverty alleviation; and (ii) The EU-FAO Forest Law Enforcement, Governance and Trade Programme (EU FAO FLEGT Programme), provides support to timber producing countries to implement projects that target aspects of the EU FLEGT Action Plan. In Cameroon this programme supports MINEPDED through the project *Appui au renforcement des capacités du MINEPDED pour la mise en œuvre du Système de Vérification de la legalité (SVL)* and it also supports MINFOF through the project *Prise en compte des systèmes de certification privée de légalité et de gestion durable dans la délivrance des certificats de légalité émis dans le cadre de l'APV/FLEGT.*

4.3.5 Other co-financiers inputs

Other cofinancing inputs will come from a national NGO Cameroon Ecology which will provide technical support in the development and implementation of council forest management plans, and training of council forest staff. Cameroon Ecology will contribute USD 3,500,000. Another programme (Programme National de développement Participatif, PNDP) will provide contributions of USD 1,500,000 to support the councils in the implementation of local development plans related to territorial land planning for sustainable use of natural resources and ecosystems. An international NGO (GIZ) will contribute with an amount of USD 1,900,000. The contribution of GIZ will support the process of classification and management of council forests and the creation of functional technical units.

In addition, the project beneficiaries (e.g. local community members) are expected to contribute their time to the project activities, but this has not been included in the total for cofinancing to avoid over-estimating the value of cofinancing contributions.

4.4 FINANCIAL MANAGEMENT AND REPORTING ON GEF RESOURCES

FAO will maintain a separate account in USD for the Project GEF resources showing all income and expenditures. Expenditures incurred in a currency other than USD will be converted into USD at the

United Nations operational rate of exchange on the date of the transaction. FAO shall administer the GEF resources in accordance with its regulations, rules and directives.

Financial reports

FAO Cameroon as the Budget Holder will prepare six-monthly Project expenditure accounts and final accounts for the Project GEF resources, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the unliquidated obligations as follows:

- Details of Project expenditures on an output-by-output basis, reported in line with Project budget codes as set out in the Project Document, as at 30 June and 31 December each year.
- Final accounts on completion of the Project on an output-by-output cumulative basis, reported in line with Project budget codes as set out in the Project Document.
- A final statement of account in line with FAO Oracle Project budget codes, reflecting actual final expenditures under the GEF component of the Project, when all obligations have been liquidated.
- An annual budget revision will be prepared by the BH in consultation with the LTO and LTU and submitted for approval to the FAO GEF Coordination Unit.

The BH will submit the financial reports for review and monitoring by the FAO GEF Coordination Unit. Financial reports for submission to the GEF will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement and submitted by the FAO Finance Division.

Responsibility for cost overruns

The BH is authorized to enter into commitments or incur expenditures up to a maximum of 20 percent over and above the annual amount foreseen in the GEF component of the Project budget under any budget sub-line provided the total cost of the annual budget is not exceeded.

Any cost overrun (expenditure in excess of the budgeted amount) on a specific budget sub-line over and above the 20 percent flexibility should be discussed with the FAO GEF Coordination Unit with a view to ascertaining whether it will involve a major change in Project scope or design. If it is deemed to be a minor change, the budget holder shall prepare a budget revision in accordance with FAO standard procedures. If it involves a major change in the Project's objectives or scope, a budget revision and justification should be prepared by the BH for discussion with the GEF Coordination Unit and eventually with the GEF Secretariat.

Savings in one budget sub-line may not be applied to overruns of 20 percent in other sub-lines even if the total cost remains unchanged, unless this is specifically authorized by the FAO GEF Coordination Unit upon presentation of the request. In such a case, a revision to the Project Document amending the budget will be prepared by the BH.

Under no circumstances can expenditures exceed the approved total Project budget for the GEF resources or be approved beyond the completion (NTE) date of the Project. Any over-expenditure is the responsibility of the BH.

Audit

Project GEF resources will be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the governing bodies of the Organization and reporting directly to them, and an internal audit function headed by the Inspector-General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by senior management, and furthermore has a reporting line to the governing bodies. Both functions are required under the Basic Texts of FAO, which establish a

framework for the TOR of each. Internal audits of imprest accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

4.5   PROCUREMENT

Goods and services will be procured in accordance with FAO's regulations, rules, procedures, and administrative instructions for procurement and finance. A procurement plan shall be prepared following the approval of the project (inception phase).

4.6   MONITORING, EVALUATION AND REPORTING

4.6.1   Oversight and reviews

Project oversight will be carried out by the PSC and FAO. Project oversight will be facilitated by: (i) documenting project transactions and results through traceability of related documents throughout the implementation of the project; (ii) ensuring that the project is implemented within the planned activities applying established standards and guidelines; (iii) continuous identification and monitoring of project risks and risk mitigation strategies; and (iv) ensuring project outputs are produced in accordance with the project results framework. At any time during project execution, underperforming components may be required to undergo additional assessments, implementation changes to improve performance or be halted until remedies have been identified and implemented.

Project revisions

The following types of revisions may be made to this project document with no-objection from the PSC and the approval of FAO GEF Coordination Unit in consultation with the LTO, LTU and BH:

- Minor revisions that do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of inputs already agreed to or by cost increases due to inflation. These minor amendments are changes in the project design or implementation that could include, *inter alia*, changes in the specification of project outputs that do not have significant impact on the project objectives or scope, changes in the work plan or specific implementation targets or dates, renaming of implementing entities.
- Revisions in, or addition of, any of the annexes of the project document.
- Mandatory annual revisions which rephase the delivery of agreed project inputs or take into account expenditure flexibility.

All minor revisions shall be reported in the annual Project Implementation Reviews (PIRs) submitted by FAO to the GEF Secretariat and Evaluation Office.

4.6.2   Monitoring responsibilities

Monitoring and evaluation (M&E) of progress in achieving project results and objectives will be done based on the targets and results indicators established in the project results framework and the annual work plans and budgets. M&E activities will follow FAO and GEF monitoring and evaluation policies and guidelines. The M&E plan, which has been budgeted at USD 133,850 will be reviewed and updated, as necessary, during the project inception phase. This will involve: (i) review of the project's results framework; (ii) refining of outcome indicators; (iii) identification of missing baseline information and actions to be taken to collect the information; and (iv) clarification of M&E roles and responsibilities of project stakeholders. The project's M&E system will be established within the first 6 months of project implementation.

The day-to-day monitoring of the project implementation will be the responsibility of the Project Management Unit and driven by the preparation and implementation of annual work plans and budgets (AWP/B) and six-monthly project progress reports (PPRs). The preparation of the AWP/B and six-monthly PPRs will represent the product of a unified planning process between main project partners. As tools for results-based-management (RBM), the AWP/B will identify the actions proposed

for the coming project year and provide the necessary details on output targets to be achieved, and the PPRs will report on the achievement of output and outcome targets. An annual project progress review and planning meeting should be organized by the Project Management Unit with the participation of representatives from key executing partners prior to the Project Steering Committee Meeting. The AWP/B will be submitted to FAO and to the PSC for approval. The AWP/B will be developed in such a way that it always linked to the project's Results Framework to ensure the achievement of outputs and outcomes.

4.6.3   Indicators and information sources

To monitor project outputs and outcomes including contributions to global environmental benefits, specific indicators have been developed in the Results Framework (see Annex 1). Output target indicators will be monitored on a six-monthly basis and outcome target indicators will be monitored on an annual basis if possible or as part of the mid-term and final evaluations.

Project progress will be monitored at three levels:

− Activity. Implementation of project activities will be monitored on an ongoing basis, with summaries of progress reported in project progress reports. Every six months, the semi-annual reports will record the completion of project activities. These six-monthly reports will also include a record of co-financing contributions to the project. The comparison of progress against annual work plans and budget (AWP/B) will be an important management tool to identify, discuss and overcome any difficulties in project implementation.

− Output. The delivery of project outputs will be recorded as and when they occur. The information source will be the evidence of outputs - training workshop reports, list of participants in training activities, meeting minutes, communication material etc. The production of outputs will also be reported in the project progress reports.

− Outcomes. The achievement of project outcomes will be monitored and recorded in the project progress reports and the annual Project Implementation Reviews submitted by FAO to GEF. To track the achievement of outcomes, the project will mainly use process indicators as the main focus of the project is on strengthening the institutional and technical capacity for sustainable management of the council forests. Outcomes related to training and capacity building will be assessed qualitatively through training evaluations and reports, personal interviews with participants, independent peer review of reports/plans produced by individuals trained by the project and other methods. For monitoring of outcomes related to changes in the physical environment and socio-economic conditions, specific surveys, field inspections and assessments will be carried out. A number of consultant inputs have been included in the project budget to deliver the required information. FAO will also carry out periodic supervision missions to monitor progress towards the achievement of outcomes.

The results indicators and targets will be reviewed and refined during project inception.

4.6.4   Reports and their schedule

The specific reports that will be prepared under the M&E program are the: project inception report; Annual Work Plan and Budget (AWP/B); Project Progress Reports (PPRs); annual project implementation review (PIR); technical reports; co-financing reports; and a terminal report. In addition, GEF tracking tools for Biodiversity, Climate Change and SFM/REDD+ will be completed by the project team at mid-term at mid-term and final evaluation.

Project Inception Report: After FAO approval of the project and signature of the FAO/Government Cooperative Programme (GCP) Agreement, the project will initiate with a six month inception period. An inception workshop will be held and immediately after the workshop, the Technical Project Coordinator will prepare a project inception report in consultation with the National Project Coordinator, FAO Cameroon and Lead Technical Officer (LTO), and other project partners. The report

will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed First Year Annual Work Plan and Budget (AWP/B) and a supervision plan with all monitoring and supervision requirements. The draft report will be circulated to FAO and the Project Steering Committee for review and comments before its finalization. The report should be cleared by the FAO Budget Holder (FAO Cameroon) in consultation with the LTO, Lead Technical Unit and the FAO GEF Coordination Unit and uploaded in FPMIS by the Budget Holder.

Annual Work Plan and Budget (AWP/B): The Technical Project Coordinator will prepare, in consultation with the National Project Coordination and other members of the Project Management Unit, an Annual Work Plan and Budget. The AWP/B, divided into monthly timeframes, should include detailed activities to be implemented and outputs (targets and milestones for output indicators) to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The draft AWP/B will be circulated to and reviewed by FAO. The Technical Project Coordinator will incorporate eventual comments and the final AWP/B is sent to the PSC for review and approval. The final AWP/B will be uploaded in FPMIS by the FAO Budget Holder.

Project Progress Reports: One month before the mid-point of each project year, the Technical Project Coordinator will prepare a semi-annual Project Progress Report (PPR). The report will contain the following: (i) an account of actual implementation of project activities compared to those scheduled in the AWP/B; (ii) an account of the achievement of outputs and progress towards achieving project objectives and outcomes (based on the indicators contained in the results framework); (iii) identification of any problems and constraints (technical, human, financial, etc.) encountered in project implementation and the reasons for these constraints; (iv) clear recommendations for corrective actions in addressing key problems resulting in lack of progress in achieving results; (iv) lessons learned; and (v) a revised work plan for the final six months of the project year. The report will also include an estimate of co-financing received from all co-financing partners.

The PPR will be submitted by the Technical Project Coordinator to FAO no later than one month after the end of each six-monthly reporting period (30 June and 31 December). The draft PPR will be reviewed and cleared by FAO (BH and LTO). The LTO will submit the PPR to the GEF Coordination Unit for final clearance. The final PPR will be circulated by the Budget Holder to the PSC.

Project Implementation Review: The LTO supported by the FAO LTU, with inputs from the Project Management Unit will prepare an annual Project Implementation Review (PIR) covering the period July (the previous year) through June (current year). The PIR will be submitted to the GEF Coordination in TCI for review and approval no later than 15 July. The GEF Coordination Unit will submit the final report to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio.

Technical Reports: Technical reports will be prepared to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by the Technical Project Coordinator to the FAO Budget Holder in Cameroon who will share it with the LTO for review and clearance, prior to finalization and publication. Copies of the technical reports will be distributed to the Project Steering Committee and other project partners as appropriate. These will be posted on the FAO FPMIS by the LTO.

Co-financing Reports: The Technical Project Coordinator will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by all co-financing partners. The Technical Project Coordinator will provide the information in a timely manner and will transmit such information to FAO. The co-financing reports should be completed as part of the semi-annual PPRs and annual PIRs.

GEF-5 Tracking Tools: Following the GEF policies and procedures, the tracking tools for Biodiversity, Climate Change and SFM/REDD+ will be submitted at three moments: (i) with the project document at CEO endorsement; (ii) at project mid-term evaluation; and (iii) at final evaluation. These should be completed by the Technical Project Coordinator with support from other members of the Project Management Unit and the LTO at mid-term and final evaluation.

Terminal Report: Within two months before project completion, the Technical Project Coordinator will submit to the National Project Coordinator and FAO, a draft Terminal Report, including a list of outputs detailing the activities taken under the Project, "lessons learned" and any recommendations to improve the efficiency of similar activities in the future. This report will specifically include the findings of the final evaluation as described above.

4.6.5 Monitoring and evaluation plan summary

Monitoring of project progress will be against indicators identified in the project results framework. These indicators will be further refined, as necessary, in consultation with project stakeholders during the project inception phase. This process of further collaborative refinement of project indicators will facilitate greater stakeholder engagement with the project and support broader monitoring and reporting of project achievements and failures.

The monitoring and evaluation plan is summarized below.

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget	
Project Reporting				
Project Inception Report.	Technical Project Coordinator with inputs from project partners. Cleared by FAO and the Project Steering Committee.	Immediately after the project inception workshop	–	*(it is expected that the Technical Project Coordinator will dedicate at least 10 percent of his/her time to M&E activities)
Project progress reports (PPRs)	Technical Project Coordinator. Submitted to FAO Cameroon (Budget Holder) and Lead Technical Officer. Finalized reports submitted to the FAO GEF Unit by the LTO, and to the PSC by the Technical Project Coordinator.	Six- monthly	–	
Project Implementation Review (PIR)	FAO Lead Technical Officer (LTO) with inputs from the Technical Project Coordinator, FAO Budget Holder and Lead Technical Unit (LTU). Submitted by the FAO GEF Coordination Unit to the GEF Secretariat. Final report submitted to the PSC by the Technical Project Coordinator.	Annually. Report due by 30 June.	GEF Agency fee.	

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget
Annual Work Plan and Budget (AWP/B)	Technical Project Coordinator.	Annually, updated every six months	-
GEF Tracking Tools	Technical Project Coordinator with support from other members of the Project Management Unit and the FAO LTO and LTU.	At project mid-term and final evaluation	-
Terminal report	Technical Project Coordinator	At least one month before end of project	-
Meetings			
Inception Workshop	National Project Coordinator leads the organization of the workshop, working with the Technical Project Coordinator and in consultation with MINFOF, MINEPDED and FAO Budget Holder (FAO Cameroon).	Within first two months of project inception	8,000 USD
Project Steering Committee	National Project Coordinator in consultation with FAO Cameroon.	Twice per year.	10,000 USD
Terminal Workshop	National Project Coordinator leads the organization of the workshop, working with the Technical Project Coordinator and in consultation with MINFOF, MINEPDED and FAO Budget Holder (FAO Cameroon).	2 months before the end of the project.	8,000 USD
Independent Evaluations			
Mid-term Evaluation	External Consultant(s), FAO independent evaluation unit in consultation with the project partners	At project mid-point	40,000 USD
Final Evaluation	External Consultant(s), FAO independent evaluation unit in consultation with the project partners	At the end of project implementation	40,000 USD
Other Monitoring Activities			
Field-based impact monitoring and verification	Project staff and National Project Coordinator	At the end of each project year.	15,850 USD

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget
Coordination meetings (PTCM, SC)	Organized by TPC in consultation with project team and local stakeholders	As appropriate	5,000 USD
Supervision missions	FAO	Annual or as required.	Paid by GEF Agency fee
Dissemination of results and best practices	Project Management Unit, project partners, FAO.	As appropriate	5,000 USD + co-financing
TOTAL			**USD 133,850**

4.7 PROVISION FOR EVALUATIONS

An independent Mid-Term Evaluation (MTE) will be undertaken at project mid-term to review progress and effectiveness of implementation in terms of achieving the project objectives, outcomes and outputs. Findings and recommendations of this evaluation will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term. FAO will arrange for the MTE in consultation with the project partners. The evaluation will, *inter alia:*

(i)   review the effectiveness, efficiency and timeliness of project implementation;
(ii)   analyze effectiveness of partnership arrangements;
(iii)   identify issues requiring decisions and remedial actions;
(iv)   propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and
(v)   highlight technical achievements and lessons learned derived from project design, implementation and management.

An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting of the project partners. The FE will aim to identify the project impacts and sustainability of project results and the degree of achievement of long-term results. This evaluation will also have the purpose of indicating future actions needed to sustain project results and disseminate products and best-practices within the country and to neighbouring countries.

4.8 COMMUNICATION AND VISIBILITY

Communication and visibility are of key importance to this project in order to promote the establishment of constructive dialogue among project stakeholders.

A project communication plan will be drawn up during inception of the project and it is expected that communication will take place at three levels:

- in the local communities: by the councils, Association des Communes Forestières du Cameroun (ACFCAM) and local NGOs;
- in the local councils targeted by the project: ACFCAM, MINFOF, CTFC and other NGOs;
- at national and international level: by MINFOF, co-financing partners, PSC and FAO.

5   SECTION 5: SUSTAINABILITY OF RESULTS

5.1   SOCIAL SUSTAINABILITY

One of the main objectives of the project is to generate socio-economic benefits for local councils and communities living in the councils, to ensure the sustainable management of forest resources in the councils. Direct benefits to the councils will be in the form of technical capacity to enable the councils and communities to manage the forests in a sustainable way, and in the form of revenues which will be generated as a result. Once the council forests are formally set-up, and MINFOF has approved a forest management plan (and is under implementation), 70 percent of revenues from forest management goes to the council to cover forest management expenses and to fund the councils' development programmes, while 30% of revenues go to a committee of villages to fund local development activities. With this there is a very high likelihood that the interest of councils and communities in sustainable forest management will last beyond the end of the project.

A couple of important elements included in the project: establishment of stakeholder committees to ensure participation of local communities in decision making; and promotion of non-timber forest products (NTFPs). In Cameroon, women are the primary gatherers and traders of non-timber forest products, so activities focusing on NTPFs will target and ensure that women participate in and benefit from the project.

(please also see section 5.3 below).

5.2   ENVIRONMENTAL SUSTAINABILITY

The project promotes good management of forests to contribute to biodiversity conservation and sustainable use and the reduction of deforestation and forest degradation. In this way, the project directly contributes to environmental sustainability.

5.3   FINANCIAL AND ECONOMIC SUSTAINABILITY

As mentioned above, in line with Cameroon's forest law for council forests, once the council forests are formally set-up and SFM practices implemented, 70 % of the income from these forests (timber, non timber forest products) will be used to support the cost of SFM (operational activities in the forests: biodiversity monitoring, restoration, enrichment, carbon monitoring, control of illegal logging) and the cost of investments for local development to improve the livelihoods of the local populations. 30% of the income will be used to fund specific development activities proposed by the local communities living in the councils targeted by the project (water supply, health, education). For the 70%, a specific committee set within the council will be responsible to monitor the use of these revenues and for the 30% another committee set at village level will be responsible to monitor the compliance of its activities with what has been proposed by local communities.

Furthermore, as forest income is public income, the Mayors of the councils as well as the presidents of the two local committees described above will be held responsible to produce a report on the use of the revenues every six months and an independent control by public service will assess the validity of these progress reports.   While the development projects funded with the 70% will target all villages at the council level, the 30% will support only projects proposed by the villages surrounding the council forests targeted by the project as an additional incentive for them to protect these council forests and continue benefiting from income therefrom. This incentive coupled with opportunities given to these communities to participate in income generating activities in the council forests (NTFP valorization, other project field activities) will contribute to reinforce their interest to protect these forests and continue benefiting from income resulting from their sustainable management.

5.4   SUSTAINABILITY OF CAPACITIES DEVELOPED

A considerable amount of capacity building activities have been proposed under this project to ensure that an adequate number of people are trained to sustain project impacts and outcomes beyond the end of the project.

The project will build the capacity of councils to implementation SFM practices in order to conserve biodiversity, ensure carbon enhancement and socio-economics benefits for the local populations and global environmental benefits. Moreover, by putting emphasis on capacity building and technical training for the council forest staff and local populations, this project guarantees the availability and sustainability of local technical skills to conduct operational activities for biodiversity conservation, carbon enhancement and sustainable forest management.

The involvement of MINFOF staff and CTFC at local level is going to be very important to ensure the flow of technical support to the councils beyond the project.

5.5   APPROPRIATENESS OF TECHNOLOGY INTRODUCED

The project intends to develop very simple practical guidelines for planning and implementing sustainable forest management practices, guidelines that take into account the level of capacity available at council level.

Particular care has been taken when developing the proposed methodology for carbon monitoring (described in previous sections). The method proposed is adapted to the current context, needs and resources available within the councils. For this reason, it does not rely on satellite data as this is expensive and difficult to come by. Instead, it makes use of the existing human capital and it is meant to further build this capacity so that it may feed into the future national carbon accounting and monitoring system. Finally, this method is well informed by the international REDD+ process, following guidelines and guidance under the UNFCCC and IPCC, so that it may eventually be easily incorporated into a national accounting system within Cameroon.

Lessons in implementing and other practices introduced will provide feedback on what is appropriate and what is not, and modifications will be done accordingly.

5.6   REPLICABILITY AND SCALING UP

The project builds on partnerships already established between the Government agencies, the association of council forests in Cameroon and NGOs – both national and international. These partnerships will facilitate exchange and scaling up of successful management approaches for biodiversity conservation and carbon stocks enhancement in Cameroon.

Emphasis will be placed on communicating project results (and how to go about the classification process), in order to raise awareness of all Cameroonian councils on the benefits of sustainable forest management to the councils and communities. This will be done mainly through the association (ACFCAM) and partner NGOs.

The project will also support replicability elsewhere through communication and visibility of the results at regional and global stakeholder platforms with an interest in forest biodiversity conservation and carbon management.

APPENDICES

APPENDIX 1: RESULTS MATRIX

Project objectives and impacts:

Objectives	Indicators	Baseline	Targets	Assumptions
Global Environmental Objective To reduce deforestation and forest degradation in council forests in order to improve biodiversity conservation, reduce emissions and enhance carbon stocks.	1. Area of council forests covered by forest management plans that integrate biodiversity conservation and SFM practices	1. Council forests targeted by the project do not have management plans integrating biodiversity conservation and they neither have information and data on the biodiversity richness of these forests nor on their carbon stocks.	1. At least 449,425 ha of council forests (80% of total area targeted) implementing forest management plans. Conservation sites covering a total of 56,200 ha established by project mid-term. (10% of total area targeted)	Strong support of both national and local governments (ministries, mayors of councils) in the implementation of the project. Other incentives outside the control of the project do not perversely influence the involvement of the communities in the implementation of the project activities.
	2. Degraded forest area under restoration.	2. Large areas in the council forests are severely degraded.	2. 56,200 ha of degraded council forest under restored/enriched (10% of total targeted area).	
	3. Total amount of carbon sequestered and emissions avoided;	3. Zero. No estimate on the status of carbon in the council forests in Cameroon exists; The calculations were made based on assumptions on rates of deforestation and degradation, and corresponding loss of carbon.	3. Carbon stocks in the council forest (561 825 ha) will be assed and monitored. The total carbon benefit of the project for the four years is 23,349,330 tonnes CO2. The per hectare, Mitigation potential during project cycle is 10.4 tCO2	
Development objective To improve the livelihoods of local communities by promoting sustainable forest-based income generating activities	Number of people (M/F) participating in sustainable income generating activities implemented (% increase in income against baseline).	Baseline to be determined in PY1.	Target to be determined during the development of management plans.	

Project outputs and outcomes

	Baseline	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
		Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Component 1: Establishment of Council forests for sustainable forest management and biodiversity conservation							
Outcome 1.1 Increased forest area managed for sustainable use, biodiversity conservation and enhancement in unprotected ecological zones	561,825 ha of council forests do not effectively integrate biodiversity conservation into their management	Baseline biodiversity and socio-economic data in target established	561,825 ha of council forests gazetted for conservation, restoration and SFM, with forest management plans approved by MINFOF. Implementation of management plans initiated.	Biodiversity loss reduced in the council forests (species specific indicators to be provided after the mapping and identification of the threatened species and their number in the first year of the project)	Biodiversity loss reduced in the council forests (species specific indicators to be provided after the mapping and identification of the threatened species and their number in the first year of the project)	Project progress reports, field monitoring, project evaluation documents	MINFOF, Project Unit
Outputs and targets							

	Baseline	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
		Year 1	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
1.1.1 Database of biodiversity in the council forests established	Very little information exists on biodiversity in the council forests targeted by the project.	1. Criteria and indicators for designation of conservation sites, assessment and monitoring of biodiversity in the council forests developed. 2.Mapping and inventory of biodiversity in the conservation sites to serve as reference for monitoring completed 3. Database on biodiversity in the council forests created		Database on biodiversity updated (linked to output 1.1.3)	Database on biodiversity updated (linked to output 1.1.3	Mapping reports, criteria and indicators, database, and the inventories	MINFOF, Project Unit

	Baseline	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
		Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
1.1.2.Forest management plans, integrating biodiversity conservation, developed and implemented	Zero. The council forests to be targeted are neither gazetted nor do they have forest management plans integrating biodiversity	-	1. 561,825 ha of council forests gazetted into three blocks (10% for conservation, 10% for enrichment and restoration, and 80% for SFM) 2.Forest management plans for council forests integrating biodiversity conservation developed	Forest management plans implementation and monitoring	Forest management plans implementation and monitoring continued.	Gazette documents, forest management plans, monitoring reports	MINFOF, Project Unit
1.1.3. 56,200 ha of conservation sites formally designated within the council forests	Zero. The council forest sites targeted do not have any biodiversity conservation sites	-	Establishment and designation of conservation sites completed. Management effectiveness baseline established.		Monitor the management effectiveness of the conservation sites	Designation documents, monitoring reports	MINFOF, Project Unit
Component 2: Capacity Building to strengthen biodiversity conservation and SFM in Council Forests							
Outcome 2.1 Strengthened capacity of selected councils to manage council forests and conservation sites	Poor capacity, organization and technical direction at the level of council forests in implementing SFM and biodiversity conservation.	Forest Protection Committees FPCs (45) and functional technical units FTUs (17) created and trained.	Further creation of FPCs (40) completed. Local communities trained on activities related to ecotourism,			Monitoring reports and , evaluation documents	MINFOF, Project Unit

	Baseline	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
		Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
			NTFP collection and processing and hunting				
	Capacity baseline and target scores will be established during PY1.		% increase in the capacity score		%increase in the capacity score.	Capacity development scorecard	
Outputs and targets							
2.1.1 Technical guidance and standards for SFM and biodiversity conservation in conservation sites developed and disseminated in the council forests.	No specific technical guidance exists for biodiversity conservation in the council forests	1.Draft technical guidelines developed, tested and reviewed, refined and finalized	Technical guidelines disseminated	-	-	Technical guidelines document, project progress reports	MINFOF, Project Unit
2.1.2 85 local forest protection committees (FPCs) established and trained, and 170 local community leaders/change agents from the villages in/around the council forests trained in alternative livelihoods	The council forests targeted do not have any FPCs or appropriate skills in forest management and monitoring. Local communities in the council forests have minimal capacity and skills in SFM and taking up alternative livelihood activities	1. Establishment and training of 45 forest protection committees (FPC) in forest management and monitoring 2. Training of 90 local stakeholders in SFM and alternatives forest income generating activities	1. Establishment and training of 40 forest protection committees (FPC) in forest management and monitoring 2. Training of 80 local stakeholders in SFM and alternatives forest income generating	-	-	Formal documents related to the establishment of FPCs, training materials and reports	MINFOF, Project Unit

	Baseline	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
		Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
		(NTFP, hunting, ecotourism)	activities (NTFP, hunting, ecotourism)				
2.1.3 17 functional technical units (FTU) established and 85 council staff trained in the development and implementation of forest management plans.	The council forests do not have any FTUs, or skills in developing and implementing forest management plans	1.Establishment of 17 FTUs in the council forests (two per council forest) 2.45 council staff trained in the development and implementation of forest management plans	1.40 council staff trained in the development and implementation of forest management plans	-	-	Formal documents related to the establishment of FTUs, training materials, management plans and training reports	MINFOF and Project Unit
Component 3: Capacity building for the management of forest carbon							
Outcome 3.1 Council forest staff and functional technical unit have the tools and skills necessary to monitor and manage carbon stocks in the council forests	Lack of capacity and tools to enhance, monitor and account forest carbon in the council forests				% improvement in the capacity score as a result of training of FTUs and FPCs in forest carbon management.	Capacity development scorecard.	IRAD-IITA-ICRAF (REALU)
	No carbon accounting and monitoring system			Carbon accounting and monitoring system fully operational.		project reports (documenting the utilization of the carbon account and monitoring	

	Baseline	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
		Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
						system and the results)	
Outputs and targets							
3.1.1 Existing accounting and carbon monitoring systems adapted to council forests and tested	No accounting and carbon monitoring system exists for council forests	1.Assessment of existing accounting and carbon monitoring systems, in the region, completed	1.Adapted carbon accounting and monitoring system for the council forests developed 2. Adapted carbon accounting and monitoring system tested.	1. Adapted system for carbon accounting and monitoring applied in the council forests 2. Measure and monitor carbon in the council forests	1. Measure and monitor carbon in the council forests	Adapted carbon accounting system, carbon accounting and monitoring reports	IRAD-IITA-ICRAF (REALU)
3.1.2 85 forest protection committees (FPC) and 34 Functional technical unit (FTU) staff trained in forest carbon management	Very little capacity in the council forests in a) methods for carbon accounting and approaches to enhance and conserve forest carbon, b) forest surveillance and protection (combating. illegal logging, illegal grazing, and forest fires)	1. Training of 17 FTU staff in methods for carbon accounting and monitoring, approaches to conserve and enhance forest carbon in the council forest and in forest surveillance and protection (combatting illegal logging, illegal grazing and forest) 2. Training of 45 forest protection	1. Training of 17 FTU staff in methods for carbon accounting and monitoring, approaches to conserve and enhance forest carbon in the council forest and in forest surveillance and protection (combatting illegal logging, illegal grazing and forest fires); 2. Training of 40 forest protection committees (FPC) in forest surveillance and	-	-	Training reports	IRAD-IITA-ICRAF (REALU)

	Baseline	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
		Year 1	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
		committees (FPC) in forest surveillance and protection (combatting illegal logging, illegal grazing and forest fires)	protection (combatting illegal logging, illegal grazing and forest fires)				
Component 4: Ecosystem restoration and enhancement of carbon stocks							
<u>**Outcome 4.1**</u> Forest degradation reduced through restoration and reforestation of 56,200 ha of degraded forests	Large areas in the council forests have been severely degraded	14,050 ha of council forests under restoration.	14,050 ha of council forests under restoration	14,050 ha of council forests under restoration	14,050 ha of council forests under restoration.	Project evaluation documents (documenting the health/area/quality of the forests restored and reforested)	MINFOF and MINEPDED
Outputs and targets							
<u>4.1.1</u>Reforestation and restoration of 56,200 ha in the council forests (10% of total council	There are a few reforestation and restoration activities conducted by MINFOF and MINEPDED, but they have not been effective	1.2810 ha of degraded fallow/arid and savannah land in the council forests rehabilitated	1.2810 ha of degraded fallow/arid and savannah land in the council forests rehabilitated 2. 8430 ha reforested	1.2810 ha of degraded fallow/arid and savannah land in the council forests rehabilitated	1.2810 ha of degraded fallow/arid and savannah land in the council forests rehabilitated	Project progress reports	MINFOF and MINEPDED

	Baseline	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
		Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
forests targeted by the project)	and not targeting specifically the council forests	2.8430 ha reforested 3.2810 ha of degraded forest areas restored	3.2810 ha of degraded forest areas restored	2. 8430ha reforested 3.2810 ha of degraded forest areas restored	2. 8430 ha reforested 3.2810 ha of degraded forest areas restored		
Component 5: Monitoring and evaluation and information dissemination							
Outcome 5.1. Project managed and monitored effectively and efficiently and best practices and lessons learned disseminated	Nil.		M&E activities implemented according to the M&E plan (throughout project implementation), and mid-term evaluation findings used to refine/improve project design.		Best practices and lessons learnt captured and disseminated for future use	Project progress reports; Evaluation reports; Newsletters	FAO, MINFOF and MINEPDED
Outputs and targets							
5.1.1: M&E plan implemented and mid-term and final evaluations completed	Nil.	M&E plan implementation from year 1 to year 4 and all reports prepared.	1. Midterm evaluation conducted. 2. Communication and awareness raising on project activities		1. Final evaluation conducted. 2. Project best practices and lessons learned captured,	Monitoring reports; evaluation reports	FAO, MINFOF and MINEPDED

	Baseline	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
		Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
			conducted through to year 4.		published and disseminated.		

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Establishment of council forests for sustainable management and biodiversity conservation																		
Output 1.1.1 Database of biodiversity in the council forests established	*Activity1:* Develop criteria and indicators for designation of conservation sites, assessment and monitoring of biodiversity in the council forests	MINFOF and Project Management Unit	x	x														
	Activity2: Mapping and inventory of biodiversity in the identified conservation sites to serve as reference for monitoring	MINFOF and Project Management Unit			x	x												
	Activity 3: Create and update a database on biodiversity in the council forests	MINFOF and Project Management Unit				x							x	x			x	x
Output 1.1.2 Forest management plans, integrating biodiversity conservation, developed and implemented	*Activity1:* Gazetting of 561825ha of council forest into three blocks (10% for conservation site, 10% for enrichment and restoration and 80% for SFM)	MINFOF and Project Management Unit					x	x										
	Activity2: Development of forest management plans, integrating biodiversity conservation	MINFOF and Project Management Unit							x	x								
	Activity3: Implementation of forest management plans, integrating biodiversity conservation	MINFOF and Project Management Unit									x	x	x	x	x	x	x	x

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Activity4: Monitoring of forest management plan implementation	MINFOF and Project Management Unit											x	x	x	x	x	x
Output 1.1.3 56,200ha of conservation sites formally designated and established within the council forests	*Activity 1:* Establishment and designation of conservation sites	MINFOF and Project Management Unit						x	x									
	Activity 2: Establishment of management effectiveness baseline	MINFOF and Project Management Unit							x	x								
	Activity 3: Monitoring the management effectiveness of the conservation sites	MINFOF and Project Management Unit													x	x	x	x
Component 2: Capacity Building to strengthen biodiversity conservation and SFM in Council Forests																		
Output 2.1.1 Technical guidance and standards for SFM and biodiversity conservation in conservation sites developed and disseminated in the council forests.	*Activity1:* Development, testing and review of draft technical guidelines	MINFOF and Project Management Unit		x	x	x												
	Activity2: Dissemination of the technical guidelines	MINFOF and Project Management Unit					x	x	x									
Output 2.1.2 85 local forest protection committees (FPCs) established and trained, and 170 local community leaders/change agents from the	*Activity1:* Establishment and training of 45 forest protection committees (FPC) in forest management and monitoring	MINFOF and Project Management Unit	x	x	x	x												

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
villages in/around the council forests trained in alternative livelihoods	*Activity2:* Training of 90 local stakeholders in SFM and alternatives forest income generating activities (NTFP, hunting, ecotourism)	MINFOF and Project Management Unit	x	x	x	x												
	Activity3: Establishment and training of 40 forest protection committees (FPC) in forest management and monitoring	MINFOF and Project Management Unit					x	x	x	x								
	Activity4: Training of 80 local in SFM and alternatives forest income generating activities (NTFP, hunting, ecotourism)	MINFOF and Project Management Unit					x	x	x	x								
Output 2.1.3 17 functional technical units (FTU) established and 85 council staff trained in the development and implementation of forest management plans.	*Activity1:* Establishment of 17 FTUs in the council forests	MINFOF and Project Management Unit	x	x														
	Activity2: Training of 45 council staff in the development and implementation of forest management plans	MINFOF and Project Management Unit			x	x												
	Activity3: Training of 40 council staff in the development and implementation of forest management plans	MINFOF and Project Management Unit					x	x										
Component 3: Capacity building for the management of forest carbon																		
	Activity1: Assessment of existing accounting and carbon monitoring systems	IRAD-IITA-ICRAF (REALU)		x	x	x												

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 3.1.1 Existing accounting and carbon monitoring systems adapted to council forests and tested.	*Activity2:* Adapting carbon accounting and monitoring system for the council forests	IRAD-IITA-ICRAF (REALU)					x	x										
	Activity3: Testing the adapted carbon accounting and monitoring system	IRAD-IITA-ICRAF (REALU)							x	x								
	Activity4: Applying the carbon accounting and monitoring system in the council forests	IRAD-IITA-ICRAF (REALU)									x	x						
	Activity5: Measure and monitor carbon in the council forests	IRAD-IITA-ICRAF (REALU)											x	x	x	x	x	x
Output 3.1.2 85 forest protection committees (FPC) and 34 Functional technical units (FTU) staff trained in forest carbon management	*Activity1:* Training of 17 FTU staff in methods for carbon accounting and monitoring, approaches to conserve and enhance forest carbon in the council forest and in forest surveillance and protection (combatting illegal logging, illegal grazing and forest)	IRAD-IITA-ICRAF (REALU)	x	x	x	x												
	Activity2: Training of 45 forest protection committees (FPC) in forest surveillance and protection (combatting illegal logging, illegal grazing and forest fires)	IRAD-IITA-ICRAF (REALU)	x	x	x	x												
	Activity3: Training of 17 FTU staff in methods for carbon accounting and monitoring, approaches to conserve and enhance forest carbon in the council forest and in forest surveillance and protection (combatting illegal logging, illegal grazing and forest)	IRAD-IITA-ICRAF (REALU)					x	x	x	x								
	Activity4: Training of 40 forest protection committees (FPC) in forest surveillance and	IRAD-IITA-ICRAF (REALU)					x	x	x	x								

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	protection (combatting illegal logging, illegal grazing and forest fires)																	
Component 4: Ecosystem restoration and enhancement of carbon stocks in the council forests																		
Output 4.1.1 Reforestation and restoration of 56,200 ha in the council forests (10% of total council forest and forest reserves targeted by the project)	*Activity1:* Enrichment /rehabilitation of degraded fallow/arid lands and savannah land in the council forests (11,240 ha).	MINEPDED, MINFOF	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Activity 2: Reforestation (33,720 ha)	MINFOF	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Activity 3: Restoration of degraded forest areas (11,240 ha)	MINFOF	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Component 5: [Monitoring and evaluation and information dissemination]																		
Output 5.1.1 M&E plan implemented and mid-term and final evaluations completed	*Activity1:* M&E plan implementation from year 1 to year 4 and preparation of all reports	Project management unit	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Activity2: Midterm evaluation	FAO Evaluation Office								x								
	Activity3: Communication and awareness raising on project activities	Project management unit	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Activity4: Final evaluation	FAO Evaluation Office																x
	Activity5: Project best practices and lessons learned, captured, published and disseminated	Project management unit																x

APPENDIX 3: RESULTS BUDGET

Oracle code and description	Unit	No.	Unit cost	Component 1 Total	Component 2 Total	Component 3 Total	Component 4 Total	Component 5 Total	PM Total	GEF Total	Year 1	Year 2	Year 3	Year4
5011														
5300 Salaries professional														
Budget and Operations Officer	Weeks	202	1,000	0	0	0	0	0	202,265	202,265	50,566	50,566	50,566	50,566
5300 Sub-total				**0**	**0**	**0**	**0**	**0**	**202,265**	**202,265**	**50,566**	**50,566**	**50,566**	**50,566**
5013														
5570 Consultants														
5542 International consultants														
Carbon project expert (IC-CPE)	Weeks	20	3,000	0	0	60,000	0	0	0	60,000	21,000	21,000	9,000	9,000
BD monitoring expert (IC-BDM)	Weeks	12	3,000	24,000	12,000	0	0	0	0	36,000	12,600	12,600	5,400	5,400
Evaluation	Weeks	15	3,000	0	0	0	0	45,000	0	45,000		15,000		30,000
5542 Sub-total				*24,000*	*12,000*	*60,000*	*0*	*45,000*	*0*	*141,000*	*33,600*	*48,600*	*14,400*	*44,400*
5543 National consultants														
Technical project coordinator (NC-TPC)	Weeks	208	900	74,880	93,600	18,720	0	0	0	187,200	46,800	46,800	46,800	46,800
Biodiversity expert (NC-BDE)	Weeks	28	750	8,400	12,600	0	0	0	0	21,000	5,250	5,250	5,250	5,250
Eco-rest. and C mgt expert (NC-ERC)	Weeks	28	750	8,400	12,600	0	0	0	0	21,000	5,250	5,250	5,250	5,250
Community forestry and gender expert (NC-CFGE)	Weeks	28	750	8,400	12,600	0	0	0	0	21,000	5,250	5,250	5,250	5,250
Socio-economist (NC-SEE)	Weeks	28	750	8,400	12,600	0	0	0	0	21,000	5,250	5,250	5,250	5,250
Comms and outreach expert (NC-COE)	Weeks	16	750	3,600	3,600	1,200	0	3,600	0	12,000	3,000	3,000	3,000	3,000
Monitoring and Evaluation expert (NC-MEE)	Weeks	15	750	0	0	0	0	11,250	0	11,250		3,750		7,500
Secretary of PMU	Weeks	208	250	20,800	20,800	5,200	0	5,200	0	52,000	13,000	13,000	13,000	13,000
5543 Sub-total				*132,880*	*168,400*	*25,120*	*0*	*20,050*	*0*	*346,450*	*83,800*	*87,550*	*83,800*	*91,300*
5551 National projects personnel														
Driver	Weeks	208	200	19,200	19,200	0	0	0	0	38,400	9,600	9,600	9,600	9,600
5551 Sub-total				*19,200*	*19,200*	*0*	*0*	*0*	*0*	*38,400*	*9,600*	*9,600*	*9,600*	*9,600*
5570 Sub-total				**176,080**	**199,600**	**85,120**	**0**	**65,050**	**0**	**525,850**	**127,000**	**145,750**	**107,800**	**145,300**
5014														
5650 Contracts														

Oracle code and description	Unit	No.	Unit cost	Component 1 Total	Component 2 Total	Component 3 Total	Component 4 Total	Component 5 Total	PM Total	GEF Total	Year 1	Year 2	Year 3	Year4
Technical consultation on BD C+I	Lumpsum	na	na	41,965	0	0	0	0	0	41,965	41,965	0	0	0
Council forest BD mapping and inventory	Lumpsum	na	na	200,000	0	0	0	0	0	200,000	70,000	70,000	30,000	30,000
Creation and maint of BD database	Lumpsum	na	na	40,000	0	0	0	0	0	40,000	14,000	14,000	6,000	6,000
Creation and mapping of council forest zones	Lumpsum	na	na	120,000	0	0	0	0	0	120,000	48,000	36,000	36,000	0
Dev and imp of forest mgt plans	Lumpsum	na	na	150,000	0	0	0	0	0	150,000	0	60,000	45,000	45,000
Dev and imp guidelines for forest BD cons	Lumpsum	na	na	30,000	30,000	0	0	0	0	60,000	0	30,000	30,000	0
Est and training of 85 FPCs (5 per forest)	Lumpsum	na	na	395,000	200,000	0	0	0	0	595,000	297,500	297,500	0	0
Train 170 local ppl in SFM and alt livelihoods	Lumpsum	na	na	0	85,000	0	0	0	0	85,000	42,500	42,500	0	0
Provide support for alt livelihoods	Lumpsum	na	na	0	74,918	0	0	0	0	74,918	18,730	18,730	18,730	18,728
Est and train 17 FTUs (5 ppl each)	Lumpsum	na	na	0	255,000	0	0	0	0	255,000	127,500	127,500	0	0
Develop and adapt C A+M system	Lumpsum	na	na	0	180,000	0	0	0	0	180,000	100,000	80,000	0	0
Implement C A+M system	Lumpsum	na	na	0	42,500	0	0	0	0	42,500	0	0	21,250	21,250
Train FPCs and FTUs in forest protection	Lumpsum	na	na	0	335,000	0	0	0	0	335,000	83,750	83,750	83,750	83,750
Implemement forest surveillance and prot	Lumpsum	na	na	0	85,000	0	0	0	0	85,000	0	0	42,500	42,500
Prepare BP and lessons learned document	Lumpsum	na	na	0	0	0	0	25,000	0	25,000	0	0	0	25,000
5650 Sub-total				**976,965**	**1,287,418**	**0**	**0**	**25,000**	**0**	**2,289,383**	**843,945**	**859,980**	**313,230**	**272,228**
5021														
5800 Duty travel														
Carbon project expert (IC-CPE)	Lumpsum	na	na	0	0	41,035	0	0	0	41,035	14,362	14,362	6,155	6,155
BD monitoring expert (IC-BDM)	Lumpsum	na	na	19,200	9,600	0	0	0	0	28,800	10,080	10,080	4,320	4,320
Monitoring and Evaluation expert (IC-MEE)	Lumpsum	na	na	0	0	0	0	36,000	0	36,000		12,000		24,000
National consultants (local field allowances)	Lumpsum	na	na	16,000	24,000	0	0	0	0	40,000	10,000	10,000	10,000	10,000
5800 Sub-total				**35,200**	**33,600**	**41,035**	**0**	**36,000**	**0**	**145,835**	**34,442**	**46,442**	**20,475**	**44,475**
5920 Training and Workshops														
Inception and closing workshops	Lumpsum	na	na	18,000	9,000	3,000	0	0	0	30,000	15,000	0	0	15,000
PSC meetings	Lumpsum	na	na	12,000	6,000	2,000	0	0	0	20,000	5,000	5,000	5,000	5,000
Workshop on alternative income generation	Lumpsum	na	na	0	40,000	0	0	0	0	40,000	0	40,000	0	0
Training in C measurement, mgt and mon	Lumpsum	na	na	0	0	40,000	0	0	0	40,000	0	40,000	0	0
Sub-total				**30,000**	**55,000**	**45,000**	**0**	**0**	**0**	**130,000**	**20,000**	**85,000**	**5,000**	**20,000**

Oracle code and description	Unit	No.	Unit cost	Component 1 Total	Component 2 Total	Component 3 Total	Component 4 Total	Component 5 Total	PM Total	GEF Total	Year 1	Year 2	Year 3	Year4
6000 Expendable Procurement														
Public information supplies	Lumpsum	na	na	30,000	30,000	0	0	0	0	60,000	15,000	15,000	15,000	15,000
Education materials and translation	Lumpsum	na	na	20,000	20,000	0	0	0	0	40,000	10,000	10,000	10,000	10,000
GIS Software	Lumpsum	na	na	5,000	5,000	0	0	0	0	10,000	10,000	0	0	0
Sub-total				**55,000**	**55,000**	**0**	**0**	**0**	**0**	**110,000**	**35,000**	**25,000**	**25,000**	**25,000**
6100 Non-expendable Procurement														
Computers, printers, photocopier, cameras	Lumpsum	na	na	15,000	12,000	0	0	1,800	1,200	30,000	7,500	7,500	7,500	7,500
Toyota Pick up	One vehicle	1	40,000	20,000	20,000	0	0	0	0	40,000	40,000	0	0	0
Other office and field equipment	Lumpsum	na	na	10,000	8,000	0	0	1,200	800	20,000	5,000	5,000	5,000	5,000
Sub-total				**45,000**	**40,000**	**0**	**0**	**3,000**	**2,000**	**90,000**	**52,500**	**12,500**	**12,500**	**12,500**
6300 General Operating Expenses														
Operation and maintenance of equipment	Lumpsum	na	na	25,000	20,000	0	0	3,000	2,000	50,000	12,500	12,500	12,500	12,500
Utilities	Lumpsum	na	na	10,000	8,000	0	0	1,200	800	20,000	5,000	5,000	5,000	5,000
Office supplies	Lumpsum	na	na	5,000	4,000	0	0	600	400	10,000	2,500	2,500	2,500	2,500
Sub-total				**40,000**	**32,000**	**0**	**0**	**4,800**	**3,200**	**80,000**	**20,000**	**20,000**	**20,000**	**20,000**
TOTAL BUDGET				**1,358,245**	**1,702,618**	**171,155**	**0**	**133,850**	**207,465**	**3,573,333**	**1,183,454**	**1,245,239**	**554,572**	**590,070**

SFM Cameroon
Budget AW07Oct.xlsx

APPENDIX 4: DRAFT TERMS OF REFERENCE

National project coordinator (NPC)

The full time national Project Co-ordinator (NPC) will be based in Yaoundé in MINFOF and will be provided as a national Government in-kind co-financing contribution from MINFOF. The NPC will work in close collaboration with MINEPDED, FAO Cameroon, the project management unit and other project partners.

Duties and responsibilities

The NPC will carry out the following duties:

1. Provide general guidance in the development and implementation of project activities according to annual work plans;
2. Prepare budget requests for Government co-financing from its annual budget allocations;
3. Report on co-financing from the Government, and monitor contributions of all co-financing agencies;
4. Ensure regular communications between the PSC, FAO and all project partners;
5. Facilitate the preparation and implementation of training/capacity building events;
6. Provide guidance in the various dialogue platforms and facilitate dialogue among the stakeholders within these platforms;
7. Promote close collaboration between executing partners and local organizations, and also with the leaders of other projects or initiatives being developed or carried out in the country;
8. Advise on the development of an appropriate internal monitoring and evaluation system for project performance;
9. Communicate project results within MINFOF and among Government decision-makers.

Minimum requirements

MINFOF will appoint a candidate with an appropriate profile for the position of National project coordinator (NPC).

Additional information

Duty Station: Yaoundé, with travel to the project sites

Duration: Part-time or full-time (48 months)

Funding: Co-financing contribution by the Government of Cameroon

Technical Project Co-ordinator (TPC)

A Technical Project Co-ordinator (TPC) will be selected jointly by MINFOF, MINEPDED, ACFCAM and FAO through a transparent and open selection process.

Under the direct supervision of the FAO Representative in Cameroon/Budget Holder and MINFOF (National Project Coordinator) and the technical guidance of the FAO Lead Technical Officer, the Technical Project Coordinator will fulfil a dual role: first as Manager leading the PMU team in implementing the Project and as Secretary to the PSC (estimated at about 40% of the contract duration), and second as Project technical Specialist providing technical support to the Project (estimated at about 60% of the contract duration).

Specifically, **as Project Manager, she/he will:**

1. Be directly responsible for the overall functioning and performance of the PMU;

    Manage and supervise the human resources allocated to the PMU;

2. Prepare and submit Annual Work Plans and Budgets;

3. Prepare draft TORs for consultancies and letters of agreement (e.g. NGOs, Universities..) and supervise their implementation

4. Ensure a systematic and regular monitoring of the Project's activities and prepare progress reports for transmission to FAO Cameroon and the Lead Technical Officer for clearance and approval, and to the PSC;

5. and coordination of activities with executing partner institutions, collaborative institutions and beneficiary stakeholders;

6. Ensure regular communication and coordination with appropriate national, local institutions, project partners and beneficiary stakeholders to ensure effective technical implementation of the project- activities;

7. Serve as FAO's point of contact (working with the National Project Coordinator) with the Project and Project partners;

8. Act as the Rapporteur for all PSC meetings and activities, including the preparation of documents and reports and the timely organization of PSC sessions;

As Project technical Specialist, she/he will:

9. Be responsible for organizing and providing technical support to workshops or meetings and training activities;

10. Provide technical inputs on methodologies/approaches and implementation of all project activities under the four technical components;

11. Review and give inputs in the preparation and finalization of technical reports before submission to FAO;

12. Be responsible for monitoring of project partners' technical performance in the implementation of co-financing project activities ;

13. Represent the project in relevant technical meetings, seeking to facilitate coordination and integration beneficial to the achievement of the project's objectives;

14. Ensure that the GEF Biodiversity, Climate Change and Sustainable Forest Management tracking tools are filled out in correct and timely manner;

15. Supervise the preparation of and edit technical reports and publications on project topics and contribute to guidelines and other publications associated with the project; results;

16. Perform other related duties as required.

Minimum requirements

Candidates should meet the following criteria:

- o University graduate degree in forestry, biology, geography or other relevant specialization.
- o A minimum of 7 years of relevant professional experience, including practical experience in biodiversity conservation, carbon management, forest management project implementation, institutional networking and decision-making advice.

Selection criteria

Candidates will be assessed against the following criteria:

- o Extent and relevance of experience and skills in project management and project and programme implementation in Cameroon or Central Africa, including supervision of contracts and institutional agreements, reporting and evaluation.
- o Extent and relevance of experience in and related to biodiversity conservation, carbon management and forest management in Cameroon or Central Africa.
- o Relevance of academic training and field experience in the areas of expertise as well as expertise in participatory approaches and dialogue building in multi-sectorial institutional frameworks.
- o Experience related to this GEF-funded Sustainable Forest Management (SFM) Project would be an advantage.
- o Relevant expertise in research and development projects as well as international networking in forest management, biodiversity conservation, carbon management are an advantage.
- o Ability to write clear and concise analytical reports for project management, strategic decision making and technical advice on best practices.
- o Quality of communication and interpersonal skills.
- o Extent of language skills, including in writing.
- o Bilingual (French, English)

Additional information

Duty Station: Yaounde
Duration: Full-time (48 months)
Funding: GEF Funds.

International Consultant - Carbon Project Expert (IC-CPE)

An International Consultant – carbon accounting and monitoring will be selected jointly by MINFOF, MINEPDED, ACFCAM and FAO through a transparent and open selection process. The IC-CPE will report directly to the Budget Holder (FAO Cameroon), MINFOF (though the National Project Coordinator), and the FAO Lead Technical Officer. He/she will be under the general guidance of the Technical Project Coordinator.

Duties and responsibilities

The IC-CPE will provide technical support on carbon accounting, management and monitoring and assist with the review of technical reports and the development of the M&E system. In particular, the International Consultant will carry out the following duties.

Technical support on carbon measurement, management and monitoring and forest restoration/enrichment (75% of time allocation)

1. Provide technical support to the testing of the proposed adapted carbon monitoring system for council forests;
2. Provide technical support to the preparation of annual carbon monitoring reports for each council forest targeted by the project;
3. Provide technical support to the production of a consolidated annual carbon monitoring report for the whole council forests targeted by the project;
4. Provide technical support to the content and the organization of training on carbon measurement, management and monitoring;
5. Provide technical support to the content and the organization of trainings on methods to control deforestation and forest degradation in the council forests, forest surveillance, forest restoration and enrichment, methods to combat forest fires and illegal logging in the council forests;
6. Facilitate networking and exchange with other countries in order to learn from other carbon accounting and monitoring systems projects, including GEF funded projects in the region or worldwide, and stimulate international collaboration;
7. Provide technical advice and support on specific emerging issues on carbon management, accounting and monitoring such as in the field of research and training, information collection and databases, sustainable management practices, impact evaluation and policy;
8. Provide advice on funds mobilisation and partnership for the implementation of the project, and for the follow-up of the carbon accounting and monitoring system after the end of the project;
9. Provide special and strategic advice on any carbon management issue as needs arise, including inter alia on the scientific and research, policy and communication level;
10. Assess the performance of carbon accounting system developed for council forest and provide adjustment as necessary

Monitoring and evaluation (25 % of time allocation)

11. Develop a monitoring & evaluation system that will allow: (i) to monitor the progress of the activities of the project executed by the GEF funds on carbon accounting, monitoring, forest restoration and enrichment to identify the main constraints and key elements of solutions, foresee the impacts at national and regional level; (ii) to monitor the progress of the overall project implemented in collaboration with the co-funding and other partners, in order to maximise the synergies and impact at national level;
12. Conduct 2 periodic monitoring missions to the project site per year;
13. Support the TPC in the preparation of the Project Steering Committee meetings;

14. Support and guide the work of the national consultant - Ecosystem restoration and carbon management.
15. Give inputs in the preparation of the annual Project Implementation Review (PIR) report and the terminal report.
16. Perform other related duties as required.

Minimum requirements

Candidates should meet the following criteria:

The consultant will be a specialist carbon measuring, management and monitoring, with:

- o University graduate degree in forestry, biology or other relevant specialization.
- o A minimum of 7 years of relevant professional experience, including practical experience in monitoring and evaluation, carbon project implementation and institutional networking and decision-making advice.

Selection criteria

Candidates will be assessed against the following criteria:

- o Depth of scientific knowledge of the area of expertise (carbon accounting, management, monitoring, forest restoration/enrichment, control of deforestation, forest degradation)
- o Scientific and technical contributions in the field of expertise
- o Extent and relevance of practical experiences at international level and in developing countries
- o Extent and relevance of experience in programme/project implementation in developing countries in the Africa Region.
- o Ability to write clear and concise analytical reports for project management, strategic decision making and technical advice on best practices.
- o Quality of communication and interpersonal skills.
- o Working experience with IPCC, UNFCC is an asset
- o Extent of working experience with UN system
- o Working experience with GEF projects (asset)
- o Bilingual (French, English)

Additional information

Duty Station: Yaounde

Duration: Part-time (20 weeks over the 48 months of the project)

Funding: GEF Funds

International Consultant – Monitoring and Evaluation Expert (IC-MEE)

An International Consultant – Monitoring and Evaluation Expert (IC-MEE) will be selected jointly by MINFOF, MINEPDED, ACFCAM and FAO through a transparent and open selection process. The IC-MEE will report directly to the Budget Holder (FAO Cameroon) and the FAO Lead Technical Officer. He/she will be under the general guidance of the Technical Project Coordinator.

Duties and responsibilities

The IC-MEE will provide technical advice on project monitoring and evaluation. In particular, the International Consultant will carry out the following duties.

Specifically she/he will:

1. Set up the Project's M&E system in coordination with the Technical Project Coordinator;
2. Assist the Technical Project Coordinator in the regular monitoring of the Project's activities;
3. Contribute to the preparation of the Annual Work Plans and Budgets;
4. Participate and represent the Project in collaborative meetings with project partners and PSC meetings, as required;
5. Undertake missions as appropriate to monitor project progress; and
6. Perform other related duties as required.

Minimal Requirements:

1. Advanced university degree in a field related to natural resources management project formulation and monitoring;
2. Three years of experience with results-based M&E systems, and/or project support activities;
3. Proven written and communication skills in English;
4. Ability to work in an international environment with various partners (including donors), as a member of a team; and
5. Ability to take initiatives and to work with minimum supervision.
6. M&E experience, knowledge of FAO and GEF M&E requirements and knowledge of forestry is desirable.
7. Bilingual (French, English)

Additional information

Duty Station: Yaounde

Duration: Part-time (12 weeks over the 48 months of the project)

Funding: GEF Funds

National Consultant – Biodiversity Project Expert (NC-BPE)

A national Consultant – biodiversity expert (NC-BPE) will be selected jointly by MINFOF, MINEPDED, ACFCAM and FAO through a transparent and open selection process. The NC-BPE will report directly to the Budget Holder (FAO Cameroon) and the FAO Lead Technical Officer. He/she will be under the technical guidance of the Technical Project Co-ordinator (TPC).

Duties and responsibilities

The NC-BPE will provide technical advice on biodiversity conservation and monitoring and assist with the review of technical reports and the preparation of the M&E system. In particular, the consultant will carry out the following duties:

1. Provide technical advice and support on specific emerging issues on biodiversity conservation and monitoring in the council forests;
2. Provide technical advice and support on the mapping and inventory of biodiversity in the council forests;
3. Provide technical advice and support on the identification and establishment of biodiversity conservation sites within council forests;
4. Develop capacity building material to mainstream biodiversity conservation and SFM practices in the council forests;
5. Perform capacity building activities and training on forest protection, forest biodiversity monitoring and conservation;
6. Produce field technical guidance for SFM and biodiversity conservation in conservation sites within the council forests;
7. Develop a Database on biodiversity in council forests;
8. Develop criteria and indicator to minitor biodiversity in the council forests;
9. Support the TPC in providing timely information and data on biodiversity as necessary;
10. Propose sound solutions for biodiversity conservation and sustainable management of conservation within the council forests, based on lessons learnt from the case studies and previous biodiversity conservation initiatives;
11. Complete the GEF biodiversity and SFM tracking tools and produce sound indicators to monitor biodiversity during the project implementation;
12. Perform other tasks as required.

Minimum requirements

Candidates should meet the following criteria:

- o University graduate degree in forestry, biology or other relevant specialization.
- o A minimum of 7 years of relevant professional experience, including practical experience in biodiversity conservation and monitoring project implementation, institutional networking and decision-making advice.
- o Working knowledge of French.

Selection criteria

Candidates will be assessed against the following criteria:

- o Extent and relevance of experience in and related to biodiversity conservation and monitoring in Cameroon.

- o Relevance of academic training and field experience in the areas of expertise as well as expertise in sustainable forest management (SFM);
- o Experience related to the GEF SFM Project would be an advantage.
- o Relevant expertise in research and development of projects on biodiversity conservation as well as international networking in forest management and biodiversity conservation are an advantage.
- o Ability to write clear and concise analytical reports for project management, and technical advice on best practices related to biodiversity conservation and monitoring.
- o Quality of communication and interpersonal skills.
- o Extent of language skills, including in writing.
- o Bilingual (French, English)

Additional information

Duty Station: Yaounde

Duration: Part-time (28 weeks)

Funding :   GEF Funds.

National Consultant – Ecosystem restoration and carbon management Project Expert (NC-ERCPE)

A national Consultant – Ecosystem restoration and deforestation/forest degradation expert (NC-ERCPE) will be selected jointly by MINFOF, MINEPDED, ACFCAM and FAO through a transparent and open selection process. The NC-ERCPE will report directly to the Budget Holder (FAO Cameroon) and the FAO Lead Technical Officer, under the technical guidance of the Technical Project Co-ordinator (TPC).

Duties and responsibilities

The NC-ERCPE will provide technical advice on carbon management and assist with the review of technical reports and the preparation of the M&E system. In particular, the Consultant will carry out the following duties:

1. Provide technical advice and support on specific emerging issues on ecosystem restoration and reduction of deforestation/forest degradation in the council forests;

2. Develop capacity building materials to restore degraded ecosystem and control deforestation in the council forests;

3. Perform capacity building activities and training on methods to control deforestaion, forest degradation and carbon measuring and monitoring;

4. Provide technical advice on best ways to improve effectiveness of land use and forest management plans, integrating biodiversity conservation in the council forests.

5. Provide technical advice and support on carbon stocks measuring, management and monitoring in the council forests;

6. Propose options for carbon enrichment in the council forests, based on the lessons learnt from past initiatives and projects carried in Cameroon on ecosystem restoration/forest degradation and control of deforestation;

7. Support the TPC in providing timely information and data on deforestation, reforestation, restoration and carbon management in the council forests ;

8. Complete the GEF CC tracking tools and produce sound indicators to monitor carbon stocks in the council forests;

9. Provide technical advice and mitigation measures to tackle climate change risks that might prevent the achievement of the GEF project's related to carbon management and monitoring in the council forests;

10. Support the international consultant CC in providing updated information to measure, monitor and enhance carbon stocks in the council forests;

11. Perform other tasks as required.

Minimum requirements

Candidates should meet the following criteria:

- o University graduate degree in forestry, biology or other relevant specialization.
- o A minimum of 7 years of relevant professional experience, including practical experience in ecosystem restoration and deforestation/forest degradation and monitoring and project implementation;
- o Working knowledge of French.

Selection criteria

Candidates will be assessed against the following criteria:

- o Extent and relevance of experience in and related to ecosystem restoration and deforestation/forest degradation in Cameroon.

- Relevance of academic training and field experience in the areas of expertise as well as expertise in sustainable forest management (SFM);
- Experience related to the GEF SFM Project would be an advantage;
- Relevant expertise in research and development projects on ecosystem restoration and deforestation/forest degradation as well as international networking in forest management are an advantage;
- Ability to write clear and concise analytical reports for project management, and technical advice on best practices related to ecosystem restoration and deforestation/forest degradation;
- Quality of communication and interpersonal skills;
- Extent of language skills, including in writing;
- Bilingual (French, English).

Additional information

Duty Station: Yaounde

Duration: Part-time (28 weeks)

Funding :   GEF Funds.

National Consultant – Community forestry and gender Expert (NC-CFGE)

A national Consultant – Community forestry Project Expert (NC-CFPE) will be selected jointly by MINFOF, MINEPDED, ACFCAM and FAO through a transparent and open selection process. The NC-CFPE will be under the technical guidance of the Technical Project Coordinator (TPC) and report directly to the Budget Holder (FAO Cameroon) and the FAO Lead Technical Officer,

Duties and responsibilities

The NC-CFPE will provide technical advice on sustainable management of council forests and assist with the review of technical reports and the preparation of the M&E system. In particular, the Consultant will carry out the following duties:

1. Provide technical advice and support on specific emerging issues on sustainable forest management, participatory approaches, stakeholder consultations and involvement in council forest management;
2. Develop capacity building materials to improve the use of SFM practices in the council forests;
3. Perform capacity building and technical support to strengthen the capacity of functional technical units (FTU) and forest protection communities (FPC) in forest management and biodiversity conservation;
4. Perform capacity building activities and training on conflict management in the council forests;
5. Perform capacity building activities and training on sustainable use of non-timber forest products;
6. Provide technical advice on best ways to improve the participation of the local communities in the implementation of activities in the council forests (biodiversity inventory, implementation of forest management plans, delimitation of conservation sites, forest surveillance, control of illegal logging).
7. Provide technical advice on best ways to select local stakeholders for training and consultations, participation to project committees.
8. Provide technical advice on best ways to take into account gender elements in the project implementation and review.
9. Perform monitoring and evaluation of gender mainstreaming progress
10. Undertake project gender analysis.
11. Propose options for sustainable management of council forest taking into account the interest and participation of local populations based on lessons learnt from past initiatives and projects carried in Cameroon;
12. Support the TPC in providing timely information and data on SFM, participation of local populations, and conflict management in the council forests;
13. Provide technical advice and mitigation measures to tackle illegal logging, deforestation and forest fires in the council forests that may be caused by the local populations surrounding the forests.
14. Perform other tasks as required.

Minimum requirements

Candidates should meet the following criteria:

o University graduate degree in forestry, biology or other relevant specialization.
o A minimum of 7 years of relevant professional experience, including practical experience in sustainable forest management, community forestry and development and implementation of forestry projects;

Selection criteria

Candidates will be assessed against the following criteria:

- o Extent and relevance of experience in and related to sustainable forest management, community forestry in Cameroon.
- o Relevance of academic training and field experience in the areas of expertise as well as expertise in biodiversity conservation;
- o Experience related to the GEF SFM Project would be an advantage.
- o Relevant expertise in research and development projects on sustainable forest management, community forestry as well as international networking in forest management are an advantage.
- o Ability to write clear and concise analytical reports for project management, and technical advice on best practices related to SFM and community forestry.
- o Quality of communication and interpersonal skills.
- o Extent of language skills, including in writing.
- o Bilingual (French, English)

Additional information

Duty Station: Yaounde

Duration: Part-time (28 weeks)

Funding :   GEF Funds.

National Consultant – Socio economist Project Expert (NC-SPE)

A national Consultant – Socio economist expert (NC-SPE) will be selected jointly by MINFOF, MINEPDED, ACFCAM and FAO through a transparent and open selection process. The NC-SPE will be under the technical guidance of the Technical Project Coordinator (TPC) and report directly to the Budget Holder (FAO Cameroon) and the FAO Lead Technical Officer.

Duties and responsibilities

The NC-SPE will provide technical advice on socioeconomic issues related to sustainable management of council forests and the improvement of livelihoods of the local communities as well as policy and institutional issues of council forests. She/he will assist with the review of technical reports and the preparation of the M&E system with inputs on his expertise. In particular, the Consultant will carry out the following duties:

1. Provide technical advice and support on specific emerging socioeconomic, policy and institutional issues related to the sustainable management of council forests;

2. Perform capacity building activities and training of local stakeholders in forest income generating activities based on sustaibale use of forest products;

3. Propose sound options to ensure financial and economical sustainability of the project while conserving biodiversity and ensuring SFM in the council forests;

4. Support the TPC in providing timely information and data on socioeconomic, policy and institutional issues related to the sustainable management of council forests;

5. Provide technical advice on ways to improve the socio-economic contribution of council forests to local populations without compromising the project's global environmental benefits;

6. Develop policy and socio-economic impact indicators to monitor the field implementation of the project;

7. Propose mitigation measures to address institutional and political risks during project implementation;

8. Propose sound solutions to strengthen coordination/collaboration between institutions involved in the implementation of the project.

9. Perform other tasks as required.

Minimum requirements

Candidates should meet the following criteria:

o University graduate degree in economics, policy, forestry, natural resources management, or related field;

o A minimum of 7 years of relevant professional experience, including practical experience in Forest Economics, Policy, institutional analysis and project implementation.

Selection criteria

Candidates will be assessed against the following criteria:

o Extent and relevance of experience in and related to forest economics, policy, institutional analysis in Cameroon.

o Relevance of academic training and field experience in the areas of expertise as well as expertise in sustainable forest management (SFM);

o Experience related to the GEF SFM Project would be an advantage.

- o Relevant expertise in development and implementation of projects on forest economics, policy, institutional analysis as well as international networking in forest management are an advantage.
- o Ability to write clear and concise analytical reports for project management, and technical advice on best practices related to forest economics, policy, institutional analysis.
- o Quality of communication and interpersonal skills.
- o Extent of language skills, including in writing.
- o Bilingual (French, English)

Additional information

Duty Station: Yaounde

Duration: Part-time (28 weeks)

Funding :   GEF Funds.

Secretary to the Project Management Unit

The PMU Secretary will be selected jointly by MINFOF, MINEPDED, ACFCAM and FAO through a transparent and open selection process. The PMU Secretary will work under the direct supervision of the Technical Project Co-ordinator and the general guidance of FAO Budget Holder (FAO Cameroon).

Duties and responsibilities

The PMU Secretary will carry out the following duties:

1. Facilitate communications with FAO, national executing partner, other executing partners and collaborative institutions.
2. Provide assistance to final editing of technical reports.
3. Provide assistance to editing of annual and progress reports.
4. Assist the TPC in the preparation of the documentation for the Project Steering Committee and the PSC meetings.
5. Assist for follow-up of budget reporting and monitoring and evaluation databases.
6. Assist in the organization of meetings and training workshops.
7. Perform other related duties as required.

Minimum requirements

Candidates should meet the following criteria:

o   Minimum a secondary school education and a completed certificate in vocational training;
o   At least 7 years of experience in secretarial work and assistance to project manager.

Selection criteria

Candidates will be assessed against the following criteria:

o   Proficiency in Excel, Word, PowerPoint, MS Office.
o   Ability to work productively and harmoniously with people of different national and cultural backgrounds in a team environment.
o   Flexibility and ability to work under pressure.
o   Working knowledge in English is an advantage.
o   Bilingual (French, English)

Additional information

Duty Station: Yaounde

Duration: Full-time (48 months)

Funding: GEF Funds.

Budget and Operations Officer

Under the direct supervision of the FAO Budget Holder, the Budget and Operations Officer will:

1. Ensure smooth and timely implementation of project activities in support of an approved, results-based workplan, through operational and administrative procedures according to rules and regulations of FAO and GEF;
2. Coordinate the project's operational arrangements through contractual agreements with key project partners;
3. Be operationally responsible for Letter of Agreements with relevant project partners;
4. Responsible for the day to day management of the project's budget including monitoring of cash availability, and for preparation of budget and project revisions for review by the Budget Holder;
5. Responsible for ensuring accurate recording of all relevant data for operational, financial and results-based monitoring;
6. Responsible for ensuring that relevant reports on expenditures, forecasts, progress against work-plans, and closure of projects are prepared and submitted in accordance with defined procedures and reporting formats, schedules and communication channels, as required;
7. Responsible for accurate and timely actions on all operational requirements for personnel related matters, equipment and materials, and field disbursements;
8. Assist with the preparation of Terms of Reference of consultants and short-term staff assigned to the project;
9. Undertake any other duties as required.

Minimum requirements

- Degree in finance or related subject;
- 5 years experience in project operation and management;
- Excellent communication skills in French and English.

Additional information

Duty Station: Yaounde

Duration: Part-time (5 weeks)

Funding : GEF Funds.

Project Steering Committee

The Project will put in place a Project Steering Committee (PSC) which will oversee and guide the overall project implementation, review and approve annual progress reports and project work plans. The PSC will take necessary actions to overcome major constraints and improve impact of the project and support and underwrite the establishment of new partnerships.

MINFOF and MINEPDED will facilitate the establishment of the PSC in consultation with ACFCAM. The PSC will provide general oversight of the execution of the project and ensure that all inputs and activities agreed upon in the project document are adequately prepared and implemented and that results are being achieved. The PSC will specifically:

1. provide guidance to the Project Management Unit (PMU) in the execution of the project;
2. ensure that all project activities and outputs are in accordance with the project document;
3. review, amend (if appropriate) and endorse all Annual Work Plans and Budgets of the project;
4. review project progress and achievement of planned results as presented in six-monthly Project Progress Reports, Project Implementation Reviews (PIRs) and Financial Reports;
5. provide inputs to the mid-term and final evaluations, review findings and provide comments;
6. advise on issues and problems arising from project implementation, submitted for consideration by the Project Management Unit or by various stakeholders;
7. facilitate dissemination and integration of project results into national policies and programmes as appropriate; and
8. facilitate collaboration amongst stakeholders and ensure the timely availability of co-financing sources.

Membership. Permanent members of the PSC will include the representatives of the following institutions: MINFOF, MINEPDED, ACFCAM, GIZ, FEICOM, PNDP, SC and FAO. In addition to the permanent members, the PSC will invite relevant institutions and experts to participate in the PSC as observers. These observers may be from government and local authorities, civil society and the private sector and they will be invited to participate (as necessary) by the Chair of the PSC.

Meetings. MINFOF will chair the PSC and MINEPDED will be vice-chair. PSC meetings will be held twice a year, but the Chairperson will have the discretion to call additional meetings if necessary. The PMU will act as Secretariat to the PSC and be responsible for providing PSC members with all required documents in advance of PSC meetings, including the draft Annual Work Plan and Budget and any significant technical proposals or analyses. The PMU will prepare written report of all PSC meetings and be responsible for logistical arrangements relative to the holding of such meetings, supported by FAO Cameroon as the Budget Holder.

Compensation: Travel and associated travel costs incurred by the PSC shall be refunded in accordance with FAO rules and regulations. No sitting fees shall be paid from the project budget to any person for their participation in the PSC and PSC meetings.

Project Focal Point (PFP)

MINEPDED will appoint a senior staff member to act as the PFP (part-time) as part of the Government's co-financing contribution to the project.

On behalf of the MINEPDED, the PFP will follow the GEF project issues related to biodiversity and environment (biodiversity monitoring, environmental impact assessment, ecosystem restoration…).

Specifically, the PFP will:

1. ensure regular communication between MINEPDED, MINFOF, ACFCAM, the PSC and all project partners,
2. prepare, compile and monitor the contributions of all co-financing agencies on these issues,
3. provide general guidance and supervision in the implementation of project co-financing activities carried by MINEPDED and its partners and relevant to the project
4. promote close collaboration between the project and relevant ongoing and planned projects and programmes initiated or led by MINEPDED and related to biodiversity, carbon monitoring and ecosystem enrichment and restoration.

APPENDIX 5: ACCOUNTING - QUANTIFYING THE MITIGATION POTENTIAL OF COUNCIL FORESTS

Disclaimer: All default values provided in this accounting framework have been calculated according to the IPCC climatic zones (see chapter 3 of volume 4 of the 2006 IPCC Guidelines). If data from country-specific stratification of forest were used, default factors would have to be recalculated accordingly.

To account for the mitigation contribution of each mitigation activity -i.e., Accounted Quantity for Forest Conservation (FC), Enhancement of Carbon Stocks (ECS), and Sustainable Forest Management (SFM) ($AQ^{fc}, AQ^{ecs}, AQ^{sfm}$), actual emissions and removals ($AER^{fc}, AER^{ecs}, AER^{sfm}$) during the project-implementation period need to be compared with a benchmark value in order to exclude business-as-usual emissions and removals –that is, those emissions that are not the result of the mitigation activity and as such should neither be debited nor credited.

Actual emissions and removals ($\boldsymbol{AER^{fc}, AER^{ecs}, AER^{sfm}}$), which include the GHG fluxes associated with anthropogenic activities, are to be estimated for 5 categories:

1. Deforestation: Includes CO2 emissions associated with conversion of forest land to non-forest lands, and is reported as net carbon stock changes in the five carbon pools (aboveground biomass, belowground biomass, dead wood, litter, and soil organic carbon). This category is to be estimated for forests under FC management and SFM.

2. Forest management: Includes CO2 emissions and removals associated with sustainable management of forests, and is reported as net carbon stock changes in the aboveground biomass pool only. This category is to be estimated for forests under SFM.

3. Forest degradation: Includes CO2 emissions associated with illegal exploitation of forest, and is reported as carbon stock losses in the aboveground biomass pools only. Note that in forest under SFM losses associated with illegal forest exploitation are already included in the estimate of the "forest management" category and therefore need not to be reported again in this category. This category is to be estimated for forests under FC management.

4. Reforestation: Includes CO2 removals associated with tree planting, and is reported as net carbon stock change in the aboveground biomass pools only. This category is to be estimated for forests under ECS management.

5. Forest fires: Includes non-CO2 emissions from biomass burning, and is reported as GHG fluxes. Note that CO2 emissions associated with forest fires are not estimated in this category since:
   - They are already included: in the category "forest management" for forest under SFM, and in the category "reforestation" for forests subject to ECS management;

   - They are not to be counted for forests under FC management since CO2 emissions are expected to be offset by subsequent removals that will occur as long as the forest remains under conservation management.

Important notes:

- The Deforestation, Forest Management and Reforestation categories are mutually exclusive, which means that each (and any) single hectare of forest land can be (has to be) accounted for under a single category only.
- Forest fires (i.e. non-CO2 emissions) needs to be accounted for any forest area under any activity on which fire occurs regardless of the fact whether the forest area has been reported under any other category (i.e. Deforestation, Forest Management, Reforestation, Forest Degradation).
- Forest Degradation needs to be accounted for only on forest areas where it occurs and that is not accounted for under Deforestation, Forest Management and Reforestation.

The benchmark value is the reference level (RL), or the reference emissions level (REL) when it simply includes emissions to be avoided (avoided deforestation and avoided forest degradation).

However, a negative difference -i.e. a net reduction- between emissions included in the reference level and actual emissions during the project-implementation period can be either the result of avoided emissions, as per the effect of the mitigation activity, or a simple displacement of those emissions (DE) outside the boundaries of the area where the mitigation activity is implemented. Therefore, for accounting purposes, displaced emissions are defined as those emissions that have been avoided within the council forest and for which no offset-activities have been implemented outside of the project area (see section Potential displaced emissions associated with avoided deforestation and forest degradation of council forests).

To assess the real mitigation contribution of the project, such displaced emissions, if any, have to be added when accounting for the management activity. The mitigation contribution of each management activity will therefore be:

Equation 1: $AQ = AER - RL + DE$

The total mitigation contribution of the project implementation in a council forest will be equal to the sum of the accounted mitigation of each management activity -i.e. FC, ECS, SFM.

Equation 2: $AQ_{mf} = AQ^{fc} + AQ^{ecs} + AQ^{sfm}$

The boundaries of the accounting system will not be limited to the council forest areas. Other data is to be used for this purpose. This includes:

- Data collected for the whole Cameroon territory, used to establish expected levels of emissions and removals to be used as reference levels.

- Data collected from the municipal territories on offset-activities (activities to avoid potential displacement of emissions), used to account for displacement of emissions.

- Data collected on carbon stocks, harvesting and forest fires from council forests, used for estimating actual emissions and removals during the project-implementation period.

In absence of data related to the respective municipality, deforestation is calculated as the national percent deforestation rate, and forest degradation is calculated as the average annual amount of wood illegally harvested per hectare of Cameroonian forests, for forest subject to SFM, and as the average annual amount of wood legally and illegally harvested per hectare of Cameroonian forests, for forests subject to FC management.

Collecting data on and estimating carbon stock changes and other emissions

Data needs are identified according to equations used for estimating carbon stock changes and other emissions during the project-implementation period.

Such equations have been designed to be consistent with good practices in reporting national GHG Inventories, as contained in the 2006 IPCC Guidelines, and with the accounting framework of the Kyoto Protocol, which is, so far, the only accounting framework for carbon units agreed at global level.

According to tier 1 methodological level of the 2006 IPCC Guidelines:

- No carbon stock changes are accounted in forest lands not subject to wood exploitation, i.e. forest lands subject to Forest Conservation. However, considering that forest fires have human actions among their causes, to be conservative, non-CO_2 emissions associated with forest fires, will be accounted for (CO_2 emission are not accounted for since, in forest subject to FC, those emissions will be offset by the following regrowth of the forest).
- The aboveground biomass carbon pool, only, is accounted for in forest land subject to wood exploitation, i.e. forest lands subject to Sustainable Forest Management or forest lands subject to Forest Conservation where illegal activities occurred. Further, emissions associated

with forest fires, will be accounted for (CO2 emission are indirectly accounted for by accounting carbon stock changes in the aboveground biomass pool).

- Considering that the exclusion from the accounting of sinks is a conservative assumption under the Kyoto Protocol, the aboveground biomass carbon pool, only, is accounted for in land subject to reforestation, i.e. forest lands subject to Enhancement of Carbon stocks. Further, emissions associated with forest fires, will be accounted for (CO2 emission are indirectly accounted for by accounting carbon stock changes in the aboveground biomass pool).
- All carbon pools are accounted for in deforested lands. Further, emissions associated with forest fires, will be accounted for (CO2 emission are indirectly accounted for by accounting stock changes in carbon pool).

Carbon stock changes in council forests will be estimated on a per area basis, which means that the carbon stock change will be calculated for each activity as the average per hectare carbon-stock-change factor, and subsequently multiplied by the area subject to the activity:

Equation 1.1a $AER_{CO2} = CSCF * A * -44/12$

Where:

- AER_{CO2} is the actual emissions and removals accounted for since the beginning of the project-implementation period (in tCO2-equivalent);
- CSCF is the carbon-stock-change factor (tC ha-1) that, in order to be used in this equation, needs to be multiplied by -44/12 for converting it in tCO2-equivalent ha-1;
- A is the area for which the estimate is calculated (ha).

However, in forest subject to FC management activity, only CO2 emissions associated with forest exploitation are accounted (those CO2 emissions are calculated with equation 1.1a.2.3 instead of with equation 1.1a).

CO₂ emissions and removals in the areas subject to the management activities (i.e. FC, SFM, ECS)

CO₂ emissions and removals should be estimated as carbon stock changes for the following categories:

1. Deforestation

Encompasses all forest land from which the forest cover is removed[1] for whatever reason, where CSCF is the difference in the per hectare carbon content in the 5 carbon pools [above (AB) and belowground (BB) biomass, dead wood (DW), litter (L) and soil organic carbon (SOC)] in the land without and with the forest cover, and A is the area deforested;

Equation 1.1a.1:

$$CSCF_{def} = \sum_{nonforest} \left(AB_{cstock}^{nf} + BB_{cstock}^{nf} + DW_{cstock}^{nf} + L_{cstock}^{nf} + SOM_{cstock}^{nf} \right) - \sum_{forest} \left(AB_{cstock}^{f} + BB_{cstock}^{f} + DW_{cstock}^{f} + L_{cstock}^{f} + SOM_{cstock}^{f} \right)$$

Where:

a) AB_{cstock}^{nf} after the deforestation is assumed to be 3%[2] of its value before deforestation,
b) AB_{cstock}^{f} before deforestation:

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[1] The tree cover does not match the minimum thresholds as set by the forest definition.

[2] This value has been calculated by comparing IPCC default data provided in tables 4.7 and 5.9 of Volume 4 of the 2006 IPCC Guidelines

a. In forest subject to SFM is to be measured, and it corresponds to AB^{end}_{cstock} of *Equation 1.1a.2*;
   b. In forests subject to FC is assumed by default be equivalent[1] to:
      i. 216 t C ha^{-1} in tropical wet forests,
      ii. 181 t C ha^{-1} in tropical moist forests,
      iii. 84 t C ha^{-1} in tropical dry forests

c) BB^{nf}_{cstock} and BB^{f}_{cstock} are equivalent to $AB_{cstock} * R$; where R is the ratio[2] of below-ground biomass to above-ground biomass:
   i. 0.37 [ton root d.m. (ton shoot d.m.)$^{-1}$] in tropical wet forests,
   ii. 0.24 [ton root d.m. (ton shoot d.m.)$^{-1}$] in tropical moist forests,
   iii. 0.28 [ton root d.m. (ton shoot d.m.)$^{-1}$] in tropical dry forests

d) DW^{nf}_{cstock} is 0.

e) DW^{f}_{cstock} is equivalent to $AB^{f}_{cstock} * 0.11$[3].

f) L^{nf}_{cstock} is 0.

g) L^{f}_{cstock} is equivalent[4] to 2.1 tC ha^{-1}.

h) $SOM^{nf}_{cstock} - SOM^{f}_{cstock}$, in absence of knowledge of soil types, the carbon stock losses for deforestation are calculated assuming as average carbon content for soils the carbon content of low activity clay soils (LAC soils) as reported in table 2.3 of the IPCC 2006 Guidelines (Chapter 2, Volume 4) for three different climate zones[5]: dry (north Cameroun), moist (coastal area) and wet (south Cameroun) and assuming a prevalent conversion to cropland[6] where carbon factors associated with management and inputs of organic matter are assumed to be equal to 1. Such assumptions are formulated to ensure reliability and conservativeness of estimated values, so that the SOC carbon content after deforestation is: 28 tC ha^{-1} for dry tropical climate, 37.6 tC ha^{-1} for moist tropical climate and 48 tC ha^{-1} for wet tropical climate. While the SOC carbon content before deforestation is 35 tC ha^{-1} for dry tropical climate, 47 tC ha^{-1} for moist tropical climate and 60 tC ha^{-1} for wet tropical climate. Therefore, the loss of carbon from SOM subject to deforestation is estimated to be:
   a. -7 tC ha^{-1} in dry tropical climate in a 20-years time period, which means 0.35 tC ha^{-1} yr^{-1};
   b. -9.4 tC ha^{-1} in moist tropical climate in a 20-years time period, which means 0.47 tC ha^{-1} yr^{-1};
   c. -12 tC ha^{-1} in wet tropical climate in a 20-years time period, which means 0.6 tC ha^{-1} yr^{-1}.

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[1] This value has been derived from the average carbon content in aboveground biomass of Cameroonian forests, as communicated by Cameroun to FAO for the GFRA 2010. To derive the value it has been assumed that:

1. C stocks of Cameroonian forests ranges between -75% and + 50% of the average value; such assumption is consistent with IPCC default data for tropical forests in Africa provided in table 4.7, volume 4, of the 2006 IPCC Guidelines; and
2. Pristine forests (which are the forests expected to be subject to the FC management) are at the higher value of the range.
3. The proportion among C stocks of wet, moist and dry forests is that of data in table 4.7, volume 4, of the 2006 IPCC Guidelines.

[2] Values are provided in table 4.4, Chapter 4, Volume 4 of the 2006 IPCC Guidelines

[3] From table 3.2.3 of 2003 IPCC GPG for LULUCF (Chapter 3)

[4] From table 2.2, Chapter 2, Volume 4 of the 2006 IPCC Guidelines

[5] See Chapter 3 of Volume 4 of the 2006 IPCC Guidelines

[6] Conversion factor 0.8, according to 2006 IPCC Guidelines (Volume 4, Chapter 5)

NOTE: Deforestation is a category to be estimated, if any, for lands under Forest Conservation and for lands under Sustainable Forest Management activities. Note that lands under Enhancement of Carbon Stocks cannot be "deforested" since their forest cover is already almost zero.

$$CSCF^{sfm} = AB_{cstock}^{end} - AB_{cstock}^{start}$$ Actual CO_2 emissions from deforestation (AE_{CO2_def}) are therefore estimated from the actual area deforested (A_{act_def}). The equation to apply is:

Equation 1.1a.1.1

$$AE_{CO2\_def} = * CSCF_{def} * A_{act\_def} - 44/12$$

While the emissions associated with expected deforestation are estimated from the expected area deforested (which is calculated as A_{exp_def} = %D * A_{fc} or A_{sfm}). The equation to apply is:

Equation 1.1a.1.2

$$REL_{def} = CSCF_{def} * A_{exp\_def} * -44/12$$

Note that $CSCF_{def}$ is first calculated when setting the REL by using country-specific and IPCC default values available at the beginning of the project and need to be recalculated at the of the project-implementation period for forest subject to SFM and, only if deforestation occurs, for forest subject to FC.

2. Forest Management

Encompasses forest lands with a productive function (i.e. wood harvesting), where CSCF is the difference in the per hectare carbon content in the aboveground biomass carbon pool only, between the end (AB_{cstock}^{end}) and the start (AB_{cstock}^{start}) of the project-implementation period on the area that at the end of the project-implementation period is subject to SFM, and A is the area under SFM at the end of the project-implementation period:

Equation 1.1a.2

Actual CO_2 net emissions/removals from Forest management (AER_{CO2_fm}) is a category to be estimated for lands under the SFM activity only. The following equation applies:

Equation 1.1a.2.1

$$AER_{CO2\_fm} = CSCF_{fm} * A_{fm} * -44/12$$

Where:

A_{fm} is the actual area subject to Forest Management (i.e. under SFM activity) at the end of the project implementation period.

Further, the expected net emissions/removals associated with management of forests, when sustainable, is zero, i.e.:

Equation 1.1a.2.2

$$REL_{fm} = 0$$

3. Forest Degradation

Encompasses CO_2 emissions associated with illegal logging (without consideration of subsequent CO_2 removals). Forest degradation can be counted as a category when associated CO_2 emissions are not already included under forest management.

The illegal logging encompasses all aboveground biomass carbon stock losses associated with non-authorized harvesting and girdling of trees (even if girdled trees are not removed from the forest). CO_2 emissions associated with illegal logging are estimated on the basis of the volume of tree harvested.

The volume and the carbon stock of illegally logged trees can be calculated, either from the diameter of the stump (which indicates where the illegally harvested tree was) or from the roundwood, or, whether girdled, from the standing dead tree, by applying the species-specific allometric equations taken from the FAO database www.globallometree.org:

$$AB_{act\_loss} = \sum_i B_t * 0.49$$ **Equation 1.1a.4, 5**:

$$\sum_i V_s \text{ or } V_t * B_s \text{ or } B_t = \sum_i f(D) * \{BEF_2 * WD\}_t$$

Where V_s or V_t is the volume either of the stem or of the entire aboveground portion of the tree and B_s or B_t is the dry matter either of the stem or of the entire aboveground biomass and depends from the type of allometric equation applied, and D is the diameter at breast height (dbh) or basal diameter in case of an illegally harvested tree). Where needed, an expansion factor as BEF_2 (for converting volumes of extracted roundwood to total aboveground biomass volume, including bark)[1] and a conversion factor WD (wood basic density for converting volume (m^3) in tons of dry matter)[2] are applied.

The dry matter, calculated by applying equation 1.1a.4, 5, is converted in carbon units by multiplying by 0.49 and then in tCO_2-equivalent by multiplying by 44/12. That is:

Equation 1.1a.6:

Actual CO_2 emissions from Forest Degradation (AE_{CO2_deg}) is a category to be estimated for forests subject to FC only; this needs actual aboveground biomass losses to be measured (AB_{act_loss}). The equation to apply is:

Equation 1.1a.2.3

$$AE_{CO2\_deg} = AB_{act\_loss} * 44/12$$

While the emissions associated with expected Forest Degradation are to be estimated for forest subject either to FC or to SFM; this needs expected aboveground biomass losses to be estimated (AB_{exp_loss}). The equation to apply is:

Equation 1.1a.2.4

$$REL_{deg} = AB_{exp\_loss} * A^{fc\_or\_sfm} * 44/12$$

where AB_{exp_loss} is the expected per hectare average carbon loss from illegal activities (see section on The reference emissions level associated with expected forest degradation).

4. Reforestation
Encompasses lands re-planted with forest trees. This is a category to be estimated for planted forest lands, where CSCF$_{ref}$ is the per hectare aboveground biomass carbon stock of planted trees at the end

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[1] Values for this factor can be found in the 2003 IPCC GPG for LULUCF (Chapter 3, Annex 3A.1)

[2] Values for this factor can be found in the 2003 IPCC GPG for LULUCF (Chapter 3, Annex 3A.1) and in the 2006 IPCC Guidelines (Chapter 4, Volume 4); further, a combined factor BCEF (biomass conversion and expansion factors) can be found in the 2006 IPCC Guidelines (Chapter 4, Volume 4) which could be used instead of both the BEF_2 and the WD.

of the project-implementation period[1], and A_{ref} is the area reforested under ECS at the end of the project-implementation period.

Equation 1.1a.3:

$$\mathbf{CSCF}_{ref} = \mathbf{AB}_{cstock}^{end}$$

Actual CO_2 net emissions/removals from Reforestation is a category to be estimated for lands under Enhancement of Carbon Stock activity, only. The equation to apply is:

Equation 1.1a.3.1

$$AER_{CO2\_ref} = CSCF_{ref} * A_{ref} * -44/12$$

However, there is no expectation of net CO_2 emissions/removals from the aboveground biomass in land subject to ECS to be reforested. Therefore, the associated reference level is:

Equation 1.1a.3.2

$$REL^{ecs} = 0$$

Data needs for equation 1.1a are:

- For calculating the **CSCF of the aboveground biomass pool** of each council forest, the average per hectare aboveground biomass at the begin (AB_{cstock}^{start}) and at the end (AB_{cstock}^{end}) of the project-implementation period is needed for each council forest area subject to each management activity (i.e. Forest Conservation, Enhancement of Carbon Stocks, and Sustainable Forest Management). NOTE that data requirements, however, differ from activity to activity - see related sections on FC, ECS and SFM.

Data needed to calculate the average aboveground biomass will be collected when sampling council forests for collecting data on their forest resources, according to their management plan. It is recommended that the data be collected by setting a net of sample plots distributed on the ground according to a grid. Possibly, sample plots should be permanent and not identifiable, covering 1 ha of area each and with a square shape (a circular shape would minimize errors due to cross-border trees; however, an accurate circular plot is much more difficult to realize than a squared one, where instruments like the laser-relascope cannot be used because of vegetation, topography, lack of instruments or technical capacity of those using the instruments).

The total area to be sampled (sample size) depends on three factors: (1) the variability of the population to be sampled, (2) the expected accuracy of the estimate, and (3) its level of confidence. So:

$$n = \left[\frac{z_{\frac{\alpha}{2}} * \sigma}{e}\right]^2$$

where n is the sample size, σ is the standard deviation of the population, $z_{\frac{\alpha}{2}}$ is known as the critical value, the positive z value that is at the vertical boundary for the area of $\alpha/2$ in the right tail of the standard normal distribution and depends from the confidence level selected[2] and from the level of accuracy that is expected to be achieved (e).

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[1] Considering that the starting stock of biomass is so small that can be approximated to 0.

[2] Under the UNFCCC estimates are prepared with a 95% confidence level.

Although, this equation cannot be applied for setting the sample size to be sampled at the beginning of the project-implementation period, because of the lack of knowledge about the variability of the average stock of aboveground biomass in the council forests, it can be used at a second stage to refine the sample size. At the beginning, the Yamane proportion[1] can be applied to determine the size of the sample: $n = \frac{N}{1+N(e)^2}$; where n is the sample size, N is the population size (the number of hectares of the forest area) and (e) is the level of accuracy that is expected to be achieved (e.g. when an accuracy of ±20% is desired and the total area is 16,000 ha, the sample size would be equal to 25 ha, which means 25 sample plots).

In each sample plot, all standing trees with a diameter equal or higher than 10 cm dbh[2] will be measured and the species identified. NOTE that the biomass of planted crops -e.g. banana, coffee, cocoa, etc- should neither be measured nor accounted for, according with REDD+ safeguards.[3] Then, for each sample plot, from the dbh the aboveground biomass (tons of dry matter) will be calculated for each tree by applying species-specific allometric equations taken from the FAO database www.globallometree.org, and summed up to have the aboveground biomass of each sample plot.

Note (see above) that according to the selected allometric equation it could be necessary also to:

1. measure the height of trees, or at least the average height of the canopy, where the allometric equation needs the height as input;
2. apply an expansion factor (BEF$_2$)[4] for converting volumes of stem to total aboveground biomass volume, including bark, where the output of the allometric equation is the stem volume;
3. apply the wood basic density[5], in order to convert the volume (m^3) in dry matter (tons), where the output of the allometric equation is the volume instead of the dry matter weight.

The average per hectare aboveground biomass (AB) will be calculated as follows:

$$AB = \frac{\sum_1^n \left(\frac{ab}{a_n} * fA_s\right)}{A_{tot}}$$

where ab is the aboveground biomass of the single n-plot, n is the number of plots, a_n is the area of the single n-plot, fA_s is the fraction of the area of the stratum that is represented by the single n-plot (fA_s is calculated by dividing the total area of the stratum A_s by the number of plots that have been placed in that stratum; where no stratification is applied, fA_s is equal to 1), and A_{tot} is the total area subject to the activity (e.g. the total area subject to sustainable forest management).

Consequently, the CSCF associated with the activity will be calculated as:

$$AB_{start} - AB_{end}$$

where AB_{start} is the per hectare aboveground biomass at the begin of the project-implementation period and AB_{end} is the aboveground biomass at the end of the project-implementation period.

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[1] See Yamane, Taro. 1967. Statistics, An Introductory Analysis, 2nd Ed., New York: Harper and Row.

[2] This is because smaller trees often constitute a relatively insignificant proportion of the total ecosystem carbon stock (GOFC-GOLD, 2012 A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals caused by deforestation, gains and losses of carbon stocks in forests remaining forests, and forestation. GOFC-GOLD Report, version COP18.

[3] Paragraph 2 (e) of appendix I to decision 1/CP.16 that states that REDD+ actions shall not be used for the conversion of natural forests

[4] Values for this factor can be found in the 2003 IPCC GPG for LULUCF

[5] E.g. from the 2003 IPCC GPG for LULUCF

The CSFC will be converted in tons of carbon by multiplying it by 0.49 (conversion factor taken from the 2006 IPCC Guidelines that convert the tons of dry matter in tons of carbon).

- The area value A to be used in equation 1.1a is the area of the category at the end of the project-implementation period. Therefore:
  - for Deforestation, under both FC and SFM management activities, A is the total area deforested during the project-implementation period among lands subject to the relative management activity;
  - for Reforestation, under the ECS management activity, A is the total area reforested at the end of the project-implementation period; and
  - for Forest Management, under both SFM and FC management activities, A is the total area subject to the management activity at the end of the project-implementation period which has not been deforested.

In addition, data on harvesting, legal and/or illegal, have to be collected. These data are needed:

- either as a verification tool when data on aboveground biomass stocks are measured and stock changes calculated;
- or as the main source of data of accounting when aboveground biomass data are not available.

Diameter (dbh) and species of legally and illegally logged trees need to be measured in order to calculate the associated carbon stock loss by applying the allometric (see Equation 1.1a.4, 5) and following equations.

5. <u>Forest fires (Non-CO$_2$ emissions)</u>

Non-CO$_2$ emissions are estimated for the category forest fires, only, on a per area basis, which means that the emissions will be calculated for each portion of the area subject to each and any of the three management activities (i.e. FC, ECS, SFM) that has been burnt, as the average per hectare emissions, and subsequently multiplied by the area burnt.

Equation 1.1b

$$AE_{non-CO2} = EF * A_{burnt}$$

where **AR$_{non-CO2}$** is the actual non-CO$_2$ emissions accounted for since the beginning of the project-implementation period (tCO$_2$-equivalent), **EF** is the emissions factor (tCO$_2$-equivalent ha^{-1}), and **A$_{burnt}$** is total the area burnt (ha) under each and any of the three management activity (i.e. FC, ECS, SFM).

- For calculating the **EFs for nitrous oxide (N$_2$O) and methane (CH$_4$) emissions from forest fires** of each council forest, the mass of fuel (i.e. aboveground biomass + dead wood) is needed for each council forest area subject to each management activity (i.e. FC, ECS, SFM):

$$M_{fuel} = AB_{cstock}^{f} * 1.11^{1};$$

Note in lands under deforestation (slash and burn) the AB_{cstock}^{f} is the stock of the forest before clearing.

The EFs associated with forest fires will be calculated by applying the IPCC Tier 1 method (see 2006 IPCC Guidelines, Volume 4, Chapter 2, from which the equation and the factors have been derived):

Equation 1.1b.1, 2:

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[1] To include the dead wood by applying the factor from table 3.2.3 of 2003 IPCC GPG for LULUCF (Chapter 3)

$$EF_{N2O} = AB_{start} * \begin{array}{cc} 0.36 & 0.2 \\ 0.55 & 0.2 \\ 0.74 & 0.21 \end{array} \begin{array}{l} (in\ forest\ underFC) \\ (in\ forest\ under\ SFM) \\ (in\ forest\ under\ ECS) \end{array} * 10^{-3}$$

The EF_{N2O} will be converted in t CO_2-equivalent by multiplying by 298.

$$EF_{CH4} = AB_{start} * \begin{array}{cc} 0.36 & 6.8 \\ 0.55 & 6.8 \\ 0.74 & 2.3 \end{array} \begin{array}{l} (in\ forest\ underFC) \\ (in\ forest\ under\ SFM) \\ (in\ forest\ under\ ECS) \end{array} * 10^{-3}$$

The EF_{CH4} will be converted in t CO_2-equivalent by multiplying by 25.

- The area burnt will be quantified by the CTFC/MINEPDED/MINFOR by using freely available dataset on area burnt for the African continent as e.g. http://modis-fire.umd.edu/Burned_Area_Products.html

The sum of CO_2 emissions and removals and non-CO_2 emissions which occur in the area subject to the project implementation of each and any of the three management activities (i.e. FC, ECS, SFM) gives the actual total GHG emissions and removals associated with the implementation of that management activity:

Equation 1.1

$$AER = AER_{CO2} + AER_{nonCO2}$$

Offset-activities implemented to avoid potential displacement of avoided emissions

Actions to avoid potential displacement of emissions can be subdivided in three categories:

1. Enhanced productivity of agricultural lands
2. Alternative revenues from forest lands
3. Improved use of wood
4. Additional legal wood production.

Data to quantify the implementation of offset-activities are needed in terms of:

A. When an enhanced agricultural system/practice is implemented:
   - The percentage increase in productivity of the improved practice - %P
   - The number of hectares where the improved practice is implemented - A_{imp} (ha)
B. When alternative financial resources are produced:
   - The amount of revenues, alternative to the trading of roundwood, that the forest has generated – $ (RFA yr^{-1})
   - The price on the trading market for unit of roundwood – W$ (RFA m^{-3})
C. When a more efficient use of wood is applied:
   - The percentage increase in the use of wood of the improved system/practice – %E
   - the total amount of wood used with the improved system/practice – WU (m^3 (or t dm) yr^{-1})
D. When a new source of legal wood is added:
   - The area reforested – A_{ref} (ha)
   - The net per hectare average growth rate, i.e. the wood production, within the normal harvesting cycle of the forest plantation – WP (m^3 ha^{-1} yr^{-1}).

The mitigation contribution of the council forests under forest conservation (FC)

Within council forests, primary forests, for a total area of circa 55,000 ha, will be assigned to conservation. Primary forests are assumed[1] to have a net carbon balance close to zero[2], being gains and losses in equilibrium; consequently no net removals are expected. Further, in these forests no exploitation will be allowed, including their conversion to other land uses, so avoiding business-as-usual (BAU) emissions associated with the expected Cameroonian rate of deforestation and forest exploitation. For Forest Conservation the forest degradation corresponds to human exploitation, so that forest degradation includes all losses of carbon stocks and other emissions associated with human activities from forest land under FC.

In general (see Equation 1 in section on Quantifying the mitigation contribution of council forests), the mitigation contribution of the council forests is accounted as actual emissions and removals during the project-implementation period minus the emissions and removals included in the reference level plus the displaced emissions, being the displaced emissions equivalent to the fraction of accounted avoided emissions for which an offset-activity has not been implemented (see section on How to account for displaced emissions). Therefore, applied to the forest conservation the annual accounted quantity (AQ^{fc}), expressed in tons of CO_2-equivalent, will be:

- Actual CO_2 and non-CO_2 emissions[3] (AE^{fc}) during the project-implementation period:

  Equation 3.1 $$AE^{fc} = AE^{fc}_{CO2\_def} + AE^{fc}_{CO2\_deg} + AE^{fc}_{fire}$$

  Where:

  $AE^{fc}_{CO2_{def}}$ is CO_2 emissions from deforestation, if any, associated with carbon stock losses from all carbon pools; Equation 3.1a $$AE^{fc}_{CO2\_def} = CSCF^{fc}_{def} * A^{fc}_{def} * -44/12$$

  $AE^{fc}_{CO2\_deg}$ is CO_2 emissions from Illegal logging[4], if any;

  AE^{fc}_{fire} is non-CO_2 emissions from forest fires, if any; Equation 3.1b $$AE^{fc}_{fire} = [(EF_{N2O} * 298) + (EF_{CH4} * 25)] * A^{fc}_{burnt}$$

MINUS

- Reference level for expected emissions from deforestation - REL^{fc}_{def}

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[1] Odum EP (1969). The strategy of ecosystem development. Science 164: 262-270. [doi: 10.1126/science.164.3877.262].

[2] Although there are some evidences that primary forest may act as a sink in response to the impact of climate change and nitrogen deposition:

- Lewis SL, Lopez-Gonzalez G., Sonké B, Affum-Baffoe K, Baker TR, Ojo LO, Phillips OL, Reitsma JM, White L, Comiskey JA, Djuikouo M, Ewango CEN, Feldpausch TR, Hamilton AC, Gloor M, Hart T, Hladik A, Lloyd J, Lovett JC, Makana J, Malhi Y, Mbago FM, Ndangalasi HJ, Peacock J, Peh KS-H, Sheil D, Sunderland T, Swaine MD, Taplin J, Taylor D, Thomas SC, Votere R & Wöll H (2009). Increasing carbon storage in intact African tropical forests. Nature 457: 1003-1006. [doi: 10.1038/nature07771].

- Luyssaert S, Schulze E-D, Börner A, Knohl A, ller DH, Law BE, Ciais P, Grace J (2008). Old-growth forests as global carbon sinks. Nature 455: 213-215. [doi: 10.1038/nature07276].

[3] Note that under FC actual net (Gross annual increment minus natural mortality) removals (AR), are set to 0 by default since primary forests are assumed having not net carbon accumulation; therefore the term AER of equation 1.1a becomes AE

[4] Any harvest in forest subject to the Forest Conservation management activity is to be considered an illegal logging

- Reference level for expected emissions from forest degradation (REL_{deg}^{fc}), which includes, for forests under FC, any harvesting of trees (since any harvesting is illegal in forest under FC);
- Reference level for expected net removals, set to 0 by default since primary forests are expected having not net carbon accumulation – RL = 0;

PLUS

- Displaced emissions associated with avoided deforestation - DE_{def}^{fc},
- Displaced emissions associated with avoided forest degradation - DE_{deg}^{fc}

Equation 3 $\quad AQ^{fc} = AE^{fc} - REL_{def}^{fc} - REL_{deg}^{fc} + DE_{def}^{fc} + DE_{deg}^{fc}$

<u>Data to be collected when accounting for Forest Conservation</u>

The monitoring system will therefore collect data needed for equation 3.

However, considering that whether forest conservation activities will be efficaciously implemented AE will be equal to 0 (no forest exploitation during the project-implementation period), the final accounting equation might be further simplified in:

Equation 3.3 $\quad AQ^{fc} = -REL_{def}^{fc} - REL_{deg}^{fc} + DE_{def}^{fc} + DE_{deg}^{fc}$

Such equation does not set the need of taking routine measurements within the forest under conservation so minimizing the impact of human activities in those highly protected areas, as well as minimizing costs.

Additionally to the collection of data needed for calculating reference levels (see section on Setting reference level for accounting for the mitigation contribution of the council forests) and displaced emissions (see section on Potential displaced emissions associated with avoided deforestation and forest degradation), the monitoring system needs to ensure continuous surveillance to avoid forest fires and illegal activities, including penetration of crops-cultivation in the forests (e.g. banana, cocoa) and, if any, to measure the impact of those activities in terms of aboveground biomass lost (either harvested or girdled), this means that their species and diameter should be collected in order to calculate their carbon content. Note that biomass of planted crops should be neither measured nor accounted according with REDD+ safeguards[1].

In case deforestation occurs data on per hectare aboveground biomass carbon stock of neighboring forest areas needs to be collected in order to calculate the CSCF$_{def}$; in such a case the same value of aboveground biomass carbon stock[2] should be used for recalculating the REL$_{def}$. Also the area deforested needs to be measured.

Further, where fire spreads, the area burnt has to be measured and non-CO_2 emissions estimated (see section on Data on carbon stock changes and other emissions during the project-implementation period).

Note that if offset-activities are not implemented during the project-implementation period, then displaced emissions are assumed to be equivalent to the potentially avoided emissions, so that DE$_{def}$ = REL$_{def}$ and DE$_{deg}$ = REL$_{deg}$, and the accounted quantity is zeroed: AQ$_{fc}$ = 0

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[1] Paragraph 2 (e) of appendix I to decision 1/CP.16 that states that REDD+ actions shall not be used for the conversion of natural forests

[2] The use of the same carbon-stock-change factor, i.e. the actual average carbon stock, for calculating the reference emission level and the actual emissions during the project-implementation period reduces the uncertainties of the estimate

The potential mitigation contribution of Forest Conservation

Equation 3.3 can be further simplified in order to assess what could be the potential mitigation contribution of forest under FC. Indeed:

- assuming effective management of forests subject to conservation policies and
- assuming that offset-activities will be implemented at a scale that fully avoid any potential displacement of avoided emissions counted in the RELs,

thus the accounted mitigation will be equal to (tCO$_2$-equivalent ha^{-1}) the avoidance of emissions that are included in the RELs:

Equation 3.4 $AQ^{fc} = -REL_{def}^{fc} - REL_{deg}^{fc}$

The mitigation contribution of the council forests under enhancement of carbon stocks (ECS)

Within council forests, degraded lands, for a total area of circa 50,000 ha, will be assigned to enhancement of carbon stocks by means of reforestation. Degraded lands are lands where the tree cover, and consequently the biomass stock, has been completely lost or if still present is below the forest definition's threshold. In these lands the expected net changes of the biomass stock are:

- either 0, since no more trees remaining on the land,
- or negative, because the remaining biomass stock is still degrading; however the stock net losses are so small that, being conservative, can be assumed to be 0.

In land under ECS the BAU net emissions and removals are therefore assumed to be 0 i.e. no expected significant losses and gains of carbon stocks from the aboveground biomass pool; which means that RELs and RL are set to 0. Consequently, being not accounted any avoided emission there is not potential for displacement of emissions that need to be accounted for; which means that DEs are set to 0.

In general, the mitigation contribution of the council forests is accounted as actual emissions and removals during the project-implementation period minus the emissions and removals included in the reference level plus the displaced emissions, being the displaced emissions equivalent to the fraction of accounted avoided emissions for which an offset-activity has not been implemented (see section on How to account for displaced emissions). Because in lands subject to ECS, the RELs, the RL and the DEs are set to 0, the annual accounted quantity (AQ^{ecs}), expressed in tons of CO$_2$-equivalent, will be:

- Actual CO$_2$ emissions and removals and non-CO$_2$ emissions[1] (AER^{ecs}) during the project-implementation period:
  Equation 4.1 $AER^{ecs} = AER_{CO2\_ref}^{ecs} + AE_{fire}^{ecs}$ is net CO$_2$ emissions and removals from planted trees;
  Equation 4.1a $AER_{CO2\_ref}^{ecs} = CSCF_{ref}^{ecs} * A_{ref}^{ecs} * -44/12$
  AE_{fire}^{ecs} is non-CO$_2$ emissions from forest fires, if any;
  Equation 4.1b $AE_{fire}^{ecs} = [(EF_{N2O} * 298) + (EF_{CH4} * 25)] * A_{burnt}^{ecs}$

  MINUS
- Reference level for expected net emissions and removals, set to 0 by default since significant losses of biomass are not possible (there is almost not biomass!) and significant gains of

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[1] Note that under FC actual net (Gross annual increment minus natural mortality) removals (AR), are set to 0 by default since primary forests are assumed having not net carbon accumulation; therefore the term AER of equation 1.1a becomes AE

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biomass are also not expected because the ongoing degradation dynamic. Therefore, RELs = 0; RL = 0

Equation 4 $\quad AQ^{ecs} = AER^{ecs}_{CO2\_ref} + AE^{ecs}_{fire}$

Data to be collected when accounting for Enhancement of Carbon Stocks (ECS)

Further, considering that whether enhancement of carbon stocks activities will be efficaciously implemented also AE_{fire} will be equal to 0 (no fires during the project-implementation period), the final accounting equation might be further simplified in:

Equation 4.1 $AQ^{ecs} = AER^{ecs}_{CO2\_ref}$

which, according to Equation 1.1a.3, can be further simplified in

Equation 4.2 $AQ^{ecs} = AB^{end}_{cstock} * A_{ref}$

Therefore, data needed for accounting for ECS are the aboveground biomass carbon stock of planted trees at the end of the project-implementation period and the area reforested (A_{ref}) subject to the ECS management activity, as at the end of the project-implementation period.

Such equation needs routine measurements of the aboveground biomass of planted trees[1] within the area under enhancement of carbon stocks.

Additionally to the collection of data on aboveground biomass and to the collection of data needed for calculating reference level for accounting for the mitigation contribution of the council forests and displaced emissions, the monitoring system needs to ensure continuous surveillance to avoid penetration of livestock and crop-cultivation, and to avoid fires. For fires, an alarm system has to be set and local people should be equipped and trained for fire suppression. Further, where fire spreads, the area burnt has to be measured and non-CO_2 emissions estimated.

The potential mitigation contribution of Enhancement of Carbon Stocks

The potential mitigation contribution of lands subject t ECS is directly proportional to the increment rate, ton C ha^{-1} year^{-1}, of planted trees and on the scale of plantation (total ha). It should also be considered that such contribution will last long after the end of the project-implementation period, until trees will keep growing; and that the mitigation contribution after the end of the project-implementation period will be likely larger than that during the project-implementation period since in the first years plantations in degraded lands do not usually have high growth rate, which however increase considerably in the following years.

The mitigation contribution of the council forests under Sustainable Forest Management (SFM)

Within council forests, forest land for a total area of circa 441,690 ha, will be assigned to sustainable forest management activity. By law those forests are already subject to sustainable forest management that, in terms of carbon stocks, means that average annual stock losses are paired by annual average stock gains so that the expected net stock change is 0. However, without the development and implementation of proper management plans, as those supported by this project, council forest have experienced degradation of their carbon stocks caused by illegal logging, fires and crops-cultivation with associated change in use.

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[1] However, considering that in the first years after plantation the growth rate could be very small, the expected mitigation contribution of lands subject to ECS during the project-implementation period could be conservatively set at 0 (AQ=0) to avoid biomass measurements avoided.

Therefore, a BAU scenario should include emissions associated with deforestation and forest degradation. Being forest degradation the illegal logging of forests under Sustainable Forest Management activity.

In general, the mitigation contribution of the council forests is accounted as actual emissions and removals during the project-implementation period minus the emissions and removals included in the reference level plus the displaced emissions, being the displaced emissions equivalent to the fraction of accounted avoided emissions for which an offset-activity has not been implemented (see section on How to account for displaced emissions). Applied to the sustainable forest management activity the annual accounted quantity (AQ^{sfm}), expressed in tons of CO_2-equivalent, will be:

- Actual CO_2 emissions and removals and non-CO_2 emissions[1] (AER^{sfm}) during the project-implementation period:

  Equation 5.1 $AER^{sfm} = AE^{sfm}_{CO2\_def} + AER^{sfm}_{CO2\_fm} + AE^{sfm}_{fire}$

  Where: $AE^{sfm}_{CO2\_def}$ is CO_2 emissions from deforestation, if any, associated with carbon stock losses in carbon pools;

  Equation 5.1a $AER^{sfm}_{CO2\_def} = CSCF^{sfm}_{def} * A^{sfm}_{def} * -44/12$

  AER^{sfm}_{CO2} is CO_2 emissions and removals associated with net changes in carbon stock during the implementation period (which includes also any emission associated with illegal logging, if any) over the entire area subject to SFM which has not been deforested;

  Equation 5.1b $AER^{sfm}_{CO2\_fm} = CSCF^{sfm}_{fm} * A^{sfm}_{fm} * -44/12$

  Equation 5.1c $AE^{sfm}_{fire} = [(EF_{N2O} * 298) + (EF_{CH4} * 25)] * A^{sfm}_{burnt}$

  MINUS

- Reference level for expected emissions from deforestation - REL^{sfm}_{def}
- Reference level for expected emissions from forest degradation (REL^{sfm}_{deg}), which includes, for forests under SFM, the illegal harvesting of trees;
- Reference level for expected net CO_2 emissions and removals, set to 0 by default since under a sustainable management carbon losses are paired by carbon gains so that net change is 0 – RL=0
  PLUS
- Displaced emissions associated with avoided deforestation - DE^{sfm}_{def}
- Displaced emissions associated with avoided forest degradation - DE^{sfm}_{deg}

Equation 5 $AQ^{sfm} = AER^{sfm} - REL^{sfm}_{def} - REL^{sfm}_{deg} + DE^{sfm}_{def} + DE^{sfm}_{deg}$

Data to be collected when accounting for Sustainable Forest Management

The monitoring system will therefore collect data needed for equation 5.

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[1] Note that under FC actual net (Gross annual increment minus natural mortality) removals (AR), are set to 0 by default since primary forests are assumed having not net carbon accumulation; therefore the term AER of equation 1.1a becomes AE

However, considering that whether sustainable forest management activities will be efficaciously implemented AE_{fire}^{sfm} will be equal to 0 (no forest fires during the project-implementation period), the final accounting equation might be further simplified in:

Equation 5.1 $AQ^{sfm} = AER_{CO2}^{sfm} - REL_{def}^{sfm} - REL_{deg}^{sfm} + DE_{def}^{sfm} + DE_{deg}^{sfm}$

Such equation needs routine measurements of the aboveground biomass within the area under sustainable forest management (see section on Data on carbon stock changes and other emissions during the project-implementation period).

If displaced emissions are not quantified for a failure of the monitoring system or because lack of data, then those emissions are assumed to be equivalent to the potentially avoided emissions, so that $DE_{def}^{sfm} = REL_{def}^{sfm}$ and $DE_{deg}^{sfm} = REL_{deg}^{sfm}$, and the accounted quantity is simply equivalent to the measured net stock change of the aboveground biomass:

Equation 5.2 $AQ^{sfm} = AER_{CO2}^{sfm} = CSCF_{fm}^{sfm} * A_{fm}^{sfm}$

Additionally to measurements of aboveground biomass and to the collection of data needed for calculating reference level and displaced emissions (see section on Potential displaced emissions associated with avoided deforestation and forest degradation), all elements that allow for accounting for the mitigation contribution of the council forests, the monitoring system needs to ensure continuous surveillance to avoid forest fires and illegal activities, including penetration of crops-cultivation in the forests (e.g. banana, cocoa) and, if any, it should measure the impact of those activities in terms of aboveground biomass lost (either harvested or girdled), this means that their species and diameter should be collected in order to calculate their carbon content. Note that biomass of planted crops should be neither measured nor accounted according with REDD+ safeguards[1].

For fires, an alarm system has to be set and local people should be equipped and trained for fire suppression (see section on Preventing and suppressing forest fires). Further, where fire spreads, the area burnt has to be measured and non-CO_2 emissions estimated (see section on Data on carbon stock changes and other emissions during the project-implementation period).

In case deforestation occurs the area deforested needs to be measured.

The potential mitigation contribution of Sustainable Forest Management

Equation 5.1 can be further simplified in order to assess what could be the potential mitigation contribution of forest under SFM. Indeed:

- assuming effective management of forests subject to sustainable management policies and
- assuming that offset-activities will be implemented at a scale that fully avoid any potential displacement of avoided emissions counted in the RELs,

thus the accounted mitigation will be equal to (tCO$_2$-equivalent ha^{-1}) the avoidance of emissions that are included in the RELs plus the achieved net stock change of the aboveground biomass carbon stock:

Equation 5.3 $AQ^{sfm} = AER_{CO2}^{sfm} - REL_{def}^{sfm} - REL_{deg}^{sfm}$

Setting the reference level for accounting for the mitigation contribution of the council forests

The reference level is a benchmark value to be used in the accounting to exclude expected business-as-usual emissions and removals -i.e. those emissions that are not the result of the mitigation activity-to be either debited or credited. In other words, the reference level is the amount of emissions and removals that in absence of the implemented mitigation-activities are expected to be originated in

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[1] Paragraph 2 (e) of appendix I to decision 1/CP.16 that states that REDD+ actions shall not be used for the conversion of natural forests

the land subject to the activity. In previous sections, the reference level of each of the three management activities –i.e. FC, SFM and ECS- has been described as the sum of different components that reflects the expected emissions and removals in absence of the specific management activity.

The reference level for Forest Conservation (FC)

Under FC, being this management activity implemented in forests still undisturbed -i.e. primary forests-, the reference level is built on the expected average fate of forest carbon stocks in Cameroon that includes only losses associated with deforestation and forest exploitation (indicated as forest degradation, since for forest under FC any harvesting is to be considered illegal and therefore a degradation of forest stocks). It is therefore the sum of two components:

- o   the reference emissions level associated with deforestation, that need to be avoided, and
- o   the reference emissions level associated with forest degradation, that need to be avoided too.

The reference level for SFM

Under SFM, the reference level is built on the expected average fate of forest carbon stocks in Cameroon that includes only losses associated with deforestation and forest degradation (in this case forest degradation does not include the legal harvesting since such harvesting is expected to occur at a sustainable pace so that carbon losses are paired by carbon gains). It is therefore the sum of two components:

- o   the reference emissions level associated with deforestation, that need to be avoided, and
- o   the reference emissions level associated with forest degradation, that need to be avoided too.

The reference level for ECS

Under ECS, being the current level of stock 0 or very close to 0, there are not expected significant emissions or removals associated with the woody aboveground biomass stock therefore the reference level is simply set to 0.

The reference emissions level associated with expected deforestation

The reference emissions level associated with expected deforestation REL$_{def}$ is calculated as the annual percent rate of deforestation (%D) projected for the project-implementation period, multiplied by the area under either FC (A^{fc} if applied to FC accounting) or SFM (A^{sfm} if applied to SFM accounting) at the end of the project-implementation period, multiplied by the CSCF$_{def}$ (see section on Data on carbon stock changes and other emissions during the project-implementation period) as calculated respectively for either FC or SFM.

Thus, for each portion of council forests managed either under FC or SFM, the emissions to be accounted in the reference level associated with expected deforestation are:

<u>For forest conservation</u>: *Equation 6.0* $REL^{fc}_{def} = \%D * A^{fc} * CSCF^{fc}_{def} * -44/12$

<u>For sustainable forest management</u>: *Equation 6.1* $REL^{sfm}_{def} = \%D * A^{sfm} * CSCF^{sfm}_{def} * -44/12$

The area under forest conservation (A^{fc}) is the area set by the council within the management plan of its forest as subject to Forest Conservation management. This value may change from the beginning to the end of the project-implementation period because of actual deforestation; this means that the REL^{fc}_{def} may need to be recalculated at the end of the project-implementation period.

The area under sustainable forest management (A^{sfm}) is the area set by the council within the management plan of its forest as subject to Sustainable Forest Management. This value may change from the beginning to the end of the project-implementation period because of actual deforestation;

this means that the REL_{def}^{sfm} may need to be recalculated at the end of the project-implementation period.

The $CSCF_{def}^{fc}$ is calculated applying Equation 1.1a.1 and using available data at national level. The default value[1] to be applied is

  i.   -333 t C ha⁻¹ in tropical wet forests,
  ii. -253 t C ha⁻¹ in tropical moist forests,
  iii. -125 t C ha⁻¹ in tropical dry forests

However, whether deforestation occurs during the project-implementation period the $CSCF_{def}^{fc}$ should be recalculated by collecting actual data on aboveground biomass carbon stock in neighboring areas.

The $CSCF_{def}^{sfm}$ is calculated applying Equation 1.1a.1 and using data collected on aboveground biomass stocks at the start and at the end of the project-implementation period.

%D is the expected percent annual rate of deforestation, and is equivalent to 1.1% (this value is that calculated, for 2010, by using the official data reported by Cameroun to FAO for the Global Forest Resource Assessment 2010)[2]

*Example FC: the REL_{def}^{fc} of an area of 1,000 ha of a tropical wet forest subject to FC will be = 1.1% yr⁻¹ * 1,000 ha * 333 t C ha⁻¹ * 44/12 = 13,431 t CO₂ yr⁻¹*

*Example SFM[3]: the REL_{def}^{sfm} of an area of 1,000 ha of a tropical dry forest subject to SFM will be = 1.1% yr⁻¹ * 1,000 ha * 125 t C ha⁻¹ * 44/12 = 5,042 t CO₂ yr⁻¹*

The reference emissions level associated with expected forest degradation

Forest degradation is the consequence of unplanned removals of aboveground biomass carbon stock; losses that are not within the cultural cycle of the forest, as planned under a sustainable management of forests, could be a threat or damage for forest productivity and for the ability of the forest to fulfill all other relevant ecological and social functions. Under FC activity any harvesting, with the exclusion of that of forest dwellers for their subsistence, is an illegal removal. Under SFM activity, only illegal harvesting is a not legitimate removal of wood, any other harvesting operation is expected to be conducted under a planned and sustainable use of the forest resource. Therefore:

  1. <u>For FC, the reference emissions level associated with forest degradation REL_{deg}^{fc}</u> is calculated as the expected per hectare average annual amount of aboveground biomass carbon losses ($AB_{exp\_loss}^{fc}$) associated with wood legally and illegally harvested in Cameroonian forests (AB_{harv}) after having subtracted the amount of wood originated from deforestation (CSCF_def),

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[1] This value is very close to the value of total carbon stock in lowland evergreen forests measured by the REDD-Cameroun pilot project. The value measured is 284 t C for living biomass and DOM and 42 t C for SOM. The value measured for living biomass and SOM is indeed a central value of the range 321 t C (the default value of tropical wet forests without the SOM component) and 244 t C (the value of tropical moist forests without the SOM component)

[2] To calculate the deforestation annual rate, historical data on deforestation could also be projected on the basis of two proxies: the population and the agricultural production. Population is indeed a main indicator (i.e. good consumptions, financial capacity) of land needs and agriculture (i.e. per ha productivity, commodities market, development plans) is the main alternative use of forest land.

[3] Note that in the case of SFM the default value of CSCF is not applied in the real accounting since the CSCF is calculated by direct measurements of the aboveground carbon stock to be taken at the onset and at the end of the project

multiplied by the area expected to be subject to FC (A^{fc}) at the end of the project-implementation period.

Thus, for each portion of council forests managed under Forest Conservation, the emissions to be accounted in the reference level associated with expected degradation is:

Equation 6.2 $REL_{deg}^{fc} = AB_{exp_{loss}}^{fc} * A^{fc}$

further REL_{deg}^{fc} cannot be negative, i.e. $REL_{deg}^{fc} \geq 0$

Where:

A^{fc} is the area of the council forest subject to FC. This value may change from the beginning to the end of the project-implementation period because of actual deforestation (this means that the REL_{deg}^{fc} may need to be recalculated at the end of the project-implementation period).

$AB_{exp\_loss}^{fc}$ is the average, per hectare, annual loss, tons CO_2, of aboveground biomass associated with harvesting (including illegal), calculated as: expected total annual harvest in Cameroonian forests (AB_{harv}) during the project-implementation period divided by the total area of Cameroonian forests (A_{Cam_for}) as projected for the project-implementation period. That is:

Equation 6.2.1 $AB_{exp\_loss}^{fc} = \frac{AB_{harv}}{A_{Cam\_for}} * \frac{44}{12}$

AB_{harv} is calculated by summing all industrial roundwood and fuelwood (including charcoal[1]) production, volume data need to be transformed in carbon stocks by applying the method and equations provided in the section on Collect data on carbon stock changes and other emissions and account for. By default is calculated[2] as the 2012 amount of roundwood harvested in Cameroonian forest (see http://faostat3.fao.org/faostat-gateway/go/to/download/F/FO/E) = 9.95 Mt C yr^{-1};

A_{Cam_for} is the total area of Cameroonian forests, as projected for the project-implementation period. By default it has been assumed[3] equivalent to 19.916 Mha[4].

The default value of $AB_{exp\_loss}^{fc}$ is therefore: 1.8 t CO_2 ha^{-1} yr^{-1}.

*Example FC: the REL_{deg}^{fc} of an area of 1,000 ha of a tropical wet forest subject to FC will be = 1.8 t CO$_2$ ha^{-1} yr^{-1} * 1,000 ha = 1,800 t CO$_2$ yr^{-1}*

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[1] In including charcoal production care should be put in order to avoid any double counting. Further, charcoal is converted to the original amount of wood which has been used to produce it by multiplying by a factor of 6 (FAOSTAT).

[2] The 2012 roundwood harvested in Cameroon was: 12,255,710 m^3, which has been expanded to over bark volume by multiplying for 1.15, then the BCEF$_R$ has been applied to expand to the total aboveground biomass (BCEF$_R$ is taken from table 4.5, chapter 4, volume 4, of the 2006 IPCC Guidelines i.e. 1.44). Finally, it has been converted to t C, by multiplying for 0.49.

[3] It could be derived as the average between the total area of Cameroonian forests at the onset of the project and that value to which the deforestation rate is subtracted for a number of years equivalent to the project time period.

[4] It is the 2010 value contained in the FAO GFRA 2010, as communicated by Cameroon

2. <u>For SFM, the reference emissions level associated with forest degradation</u> REL_{deg}^{sfm} is calculated as the expected per hectare annual average amount of aboveground biomass carbon losses ($AB_{exp\_loss}^{sfm}$) associated with biomass illegally harvested (AB_{ill_harv}), after having subtracted an amount of biomass expected to be originated by deforestation ($A^{sfm} * CSCF_{def}^{sfm}$), multiplied by the area expected to be subject to SFM (A^{sfm}) at the end of the project-implementation period.

Thus, for each portion of council forests managed under Sustainable Forest Management, the emissions to be accounted in the reference level associated with expected degradation is:

Equation 6.3 $REL_{deg}^{sfm} = AB_{exp\_loss}^{sfm} * A^{sfm}$

further REL_{deg}^{sfm} cannot be a negative number $REL_{deg}^{sfm} \geq 0$

Where:

AB_{loss}^{sfm} is the average, per hectare, annual loss of aboveground biomass associated with illegal harvesting, calculated as: expected total annual illegal harvest in Cameroonian forests (AB_{ill_harv}) during the project-implementation period divided by the total area of Cameroonian forests (A_{Cam_for}) as projected for the project-implementation period. That is:

Equation 6.3.1 $AB_{exp\_loss}^{sfm} = \frac{AB_{ill\_harv}}{A_{Cam\_for}} * \frac{44}{12}$

AB_{ill_harv} is calculated by summing all industrial roundwood, fuelwood and charcoal[1] production from illegal activities as expected[2] during the project implementation period, volume data have to be transformed in tons of dry matter by applying the method and equations provided in the section on Collect data on and estimates carbon stock changes and other emissions. By default is assumed to be 25% (Topa et al., 2010) of the official data reported by Cameroon for the year 2012 as contained in the FAOSTAT database. The default value of AB_{ill_harv} is therefore: 2.49 Mt C yr^{-1}.

The default value of $AB_{exp\_loss}^{sfm}$ is therefore: 0.5 t CO$_2$ ha^{-1} yr^{-1}.

A^{sfm} is the area sets by the council, within the management plan, as subject to Sustainable Forest Management. This value may change from the beginning to the end of the project-implementation period because of actual deforestation; this means that the REL_{deg}^{sfm} may need to be recalculated at the end of the project-implementation period.

*Example SFM: the REL_{def}^{sfm} of an area of 1,000 ha of a tropical dry forest subject to SFM will be = 0.5 t CO$_2$ ha^{-1} yr^{-1} * 1,000 ha = 500 t CO$_2$ yr^{-1}*

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[1] In including charcoal production care should be put in order to avoid any double counting. Further, charcoal is converted to the original amount of wood which has been used to produce it by multiplying by a factor of 6 (FAOSTAT).

[2] To calculate the forest degradation annual rate, historical data on legal and illegal harvesting could also be projected on the basis of two proxies: the population and the wood price. Population is indeed a main indicator of consumption of legally and illegally harvested wood (i.e. good consumptions, financial capacity). Further, per-capita consumption of wood and the international demand of wood (Cameroon is a net exporter) determines its price, so that wood price can be considered a driver of harvesting, including illegal logging, of Cameroonian forests.

Displacement of emissions

Calculating displaced emissions associated with avoided deforestation

Deforestation occurs because alternative uses of land are needed; consequently in the methodology here proposed the area is the proxy used for calculating whether displaced emissions occur; further this methodology only target agricultural lands as alternative use for forest land since this is in Cameroon largely the first cause of conversion[1]. The starting assumption is that:

Equation 6.4 $\boldsymbol{DE_{def} = REL_{def} - AE_{CO2\_def}}$ if $AE_{CO2\_def} < REL_{def}$

or

$DE_{def} = 0$ if $AE_{CO2\_def} > REL_{def}$ (of course, in case of actual emissions from deforestation higher than those expected as reference emissions level, displacement of emissions is not occurred)

This means that in absence of additional activities aimed at reducing the needs of new lands, the avoided deforestation achieved within the council forest boundaries is assumed to have been displaced to other forest lands.

The enhanced productivity of agricultural lands is therefore the goal to be achieved by offset-activities implemented to avoid the displacement of emissions associated with achieved reduction in deforestation. To calculate how much displaced emissions have been avoided, information needed is:

- The percentage increase in productivity (e.g. tons of good produced per hectare of cultivation) of the improved practice - %P
- The number of hectares where the improved practice is implemented - A_{imp}

That information is needed for each implemented improved activity. To calculate the displaced emissions the total area subject to the offset-activity is multiplied by the estimated average per hectare carbon stock loss associated with deforestation ($CSCF_{def}$), as calculated for setting the reference level, the resulting value is subtracted from the achieved reduction of deforestation; whether the value is negative, or 0, no displaced emissions need to be accounted, whether it is positive then it as to be accounted for as displaced emissions from avoided deforestation in the equations 3 and 5.

In case of avoided deforestation (which means that actual emissions from deforestation are lower than those included in the reference emission level), displaced emissions associated with avoided deforestation are quantified as:

<u>For FC</u>: *Equation 6.5* $\boldsymbol{DE_{def}^{fc} = REL_{def}^{fc} - AE_{CO2\_def}^{fc} - \left[\sum_i (A_{imp} * \%P) * CSCF_{def}^{fc} * 44/12\right]}$

<u>For SFM</u>: *Equation 6.6* $\boldsymbol{DE_{def}^{sfm} = REL_{def}^{sfm} - AE_{CO2\_def}^{sfm} - \left[\sum_i (A_{imp} * \%P) * CSCF_{def}^{sfm} * 44/12\right]}$

where i is each offset-activity that improves land productivity.

Note that DE_{def}^{fc} and DE_{def}^{sfm} cannot be negative (i.e. a net removal), which means that when equation 6.6 or 6.7 give a negative result the value to be used for accounting for displaced emissions is 0. Therefore: $DE_{def}^{fc} \geq 0$ and $DE_{def}^{sfm} \geq 0$

Example FC: assuming that no deforestation occurred and that 50 ha of agricultural common lands have been improved with a resulting increase of 20% of their productivity, the DE_{def}^{fc} of an area of

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[1] The context of REDD+ in Cameroon - Drivers, agents and institutions. Guy Patrice Dkamela - CIFOR

1,000 ha of a tropical wet forest subject to FC will be = 13,431 t CO₂ yr⁻¹ – 0 t CO₂ yr⁻¹ – [(0.2 * 50 ha) * 333 t C ha⁻¹ * 44/12] = 1,221 t CO₂ yr⁻¹

Example SFM: assuming that no deforestation occurred and that 50 ha of agricultural common lands have been improved with a resulting increase of 20% of their productivity, the DE_{def}^{sfm} of a tropical dry forest subject to SFM will be = 5,042 t CO₂ yr⁻¹ – 0 t CO₂ yr⁻¹ – [(0.2 * 50 ha) * 125 t C ha⁻¹ * 44/12] = 458 t CO₂ yr⁻¹

Calculating displaced emissions associated with avoided forest degradation

As described in sections on calculation of the reference emissions level associated with forest degradation, two different equations applies to forests under either FC or SFM, since the anthropogenic unplanned losses of carbon stocks that is expected that may occur in lands subject to either FC or SFM differ. Under FC any anthropogenic carbon loss is an unplanned carbon loss; under SFM planned harvesting losses are not to be considered as forest degradation.

Anyhow, even if REL_{deg} includes different expected sources of emissions, and being AE_{CO2_deg} all occurred aboveground biomass losses associated with unplanned harvesting, the starting assumption in both cases (i.e. FC and SFM) is that:

Equation 6.7 $DE_{deg} = REL_{deg} - AE_{CO2\_deg}$ if $AE_{CO2\_deg} < REL_{deg}$

   or

$DE_{deg} = 0$ if $AE_{CO2\_deg} > REL_{deg}$ (of course, in case of actual emissions from forest degradation higher than those expected as reference emissions level, displacement of emissions is not occurred)

Note that in case of SFM the illegal logging is included in the estimate of CO₂ emissions and removals of forest management so that AER_{CO2_fm} should be used in equation 6.8.

This means that in the absence of additional activities aimed at reducing the needs of wood, the reduction of illegal harvesting achieved within the council forest boundaries is assumed to have been displaced to other forest lands.

Three types of offset-activities, as discussed in section on Potential displaced emissions associated with avoided deforestation and forest degradation, can be implemented avoid potential displacement of emissions associated with a decrease in illegal harvesting in council forests:

- Compensating for revenue losses caused by the reduced trading of roundwood;
- Increasing the efficiency in the use of fuelwood[1];
- Increasing the production of "legal" wood by reforestation of degraded lands

To calculate how much displaced emissions have been avoided, the information needed according with the offset-activity is:

   A. When alternative financial resources are produced:
      o The amount of revenues, alternative to the trading of roundwood, that the forest has generated - $ (RFA yr⁻¹)
      o The price on the trading market for unit of roundwood – W$ (RFA m⁻³)
   B. When a more efficient use of wood is applied:
      o The percentage increase in the use of wood of the improved system/practice - %E

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[1] This includes charcoal

o the total amount of wood used with the improved system/practice – WU (m^3 (or t dm))

    C. When a new source of legal wood is added:
- o The area reforested – A_{ref} (ha yr^{-1})
- o The average wood stock, within the normal harvesting cycle, of the forest plantation – WP (m^3 ha^{-1})

To calculate the displaced emissions:

- the total amount of avoided trading of roundwood[1] (ATW^{fc} or ATW^{sfm}), which has been replaced by alternative revenues; and
- the total amount of reduced use of fuelwood[2] (RUW^{fc} or RUW^{sfm}); and
- the total amount of additional legal-wood produced (ALW^{fc} or ALW^{sfm})

are subtracted from the achieved reductions of forest degradation; whether the value is negative, or 0, no displaced emissions need to be accounted, whether it is positive then it as to be accounted for as displaced emissions from avoided forest degradation in equations 6.11 and 6.12.

Where:

Equation 6.8 $ATW^{fc} or ATW^{sfm} = \frac{\$}{W\$} * WD * BEF_2$

Equation 6.9 $RUW^{fc} or RUW^{sfm} = WU \left(\frac{\%E}{1-E\%}\right) * WD$

if WU is in volume (m^3) then the value should be multiplied by the wood basic density in order to convert it in tons of dry matter (t dm).

Equation 6.10 $ALW^{fc} or ALW^{sfm} = WP * A_{ref} * WD$

In case of avoided forest degradation (which means that actual emissions from forest degradation are lower than those included in the reference emissions level), displaced emissions associated with avoided forest degradation are quantified as:

<u>For FC</u>: *Equation 6.11* $DE^{fc}_{deg} = REL^{fc}_{deg} - AE^{fc}_{CO2\_deg} - \left(\sum_i ATW^{fc} + \sum_i RUW^{fc} + \sum_i(ALW^{fc})\right) * 0.49 * 44/12$

<u>For SFM</u>: *Equation 6.12* $DE^{sfm}_{deg} = REL^{sfm}_{deg} - AER^{sfm}_{CO2\_fm} - \left(\sum_i ATW^{sfm} + \sum_i RUW^{sfm} + \sum_i(ALW^{sfm})\right) * 0.49 * 44/12$

where i is each offset-activity.

Note that DE^{fc}_{deg} and DE^{sfm}_{deg} cannot be negative (i.e. a net removal), which means that when equation 6.12 or 6.13 give a negative result the value to be used for accounting for displaced emissions is 0. Therefore: $DE^{fc}_{deg} \geq 0$ and $DE^{sfm}_{deg} \geq 0$

Example FC: assuming that no forest degradation occurred and that:

- *no alternative financial resources have been produced*
- *a more efficient use of wood has not been implemented*
- *10 ha of teak plantation have been established*

the $\boldsymbol{DE^{fc}_{deg}}$ *of an area of 1,000 ha of a tropical wet forest subject to FC will be = 1,800 t CO$_2$ yr^{-1} – 0 t CO$_2$ yr^{-1} – (100 t d.m.[3] ha^{-1} * 10 ha yr^{-1} * 0.49 * 44/12) = **3 t CO$_2$ yr^{-1}***

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[1] Expressed in tons of CO$_2$-equivalent

[2] Expressed in tons of CO$_2$-equivalent

[3] This value has been taken from table 4.8 of chapter 4, volume 4, of the 2006 IPCC Guidelines

Example SFM: assuming that no forest degradation occurred and that:

- *no alternative financial resources have been produced*
- *a more efficient use of wood has not been implemented*
- *10 ha of teak plantation have been established*

*the DE_{deg}^{fc} of an area of 1,000 ha of a tropical wet forest subject to FC will be = 500 t CO_2 yr^{-1} – 0 t CO_2 yr^{-1} – (100 t d.m.[1] ha^{-1} * 10 ha yr^{-1} * 0.49 * 44/12) = -1,297 t CO_2 yr^{-1} **= 0 t CO_2 yr^{-1}** (Note: DE can never be negative).*

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[1] This value has been taken from table 4.8 of chapter 4, volume 4, of the 2006 IPCC Guidelines