Forest Carbon Partnership Facility (FCPF)
Carbon fund
-
Emissions Reduction Program Document (ER-PD)
-

Emissions Reduction Program Document for Taï National Park, Republic of Côte d'Ivoire

January 7, 2019

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ACRONYMS

ADERIZ	Rice Industry Development Agency (*Agence pour le Développement de la filière Riz*)
AFOLU	Agriculture, forestry and other land use
AFD	French Development Agency
AFOR	Ivoirian Rural Land Agency (*Agence Foncière Rurale*)
ANADER	National Agency for Rural Development Support (*Agence Nationale d'Appui au Développement Rural*)
ANDE	National Environmental Agency (*Agence Nationale De l'Environnement*)
AIPH	Inter-Professional Palm Oil Association (*Association Interprofessionnelle du Palmier à Huile*)
APROMAC	Association of Natural Rubber Professionals (*Association des Professionnels de l'hévéa naturel*)
VPA-FLEGT	Voluntary Partnership Agreement - Forest Law Enforcement Governance and Trade
AfBD	African Development Bank
WB	World Bank
BNETD	National Bureau of Technical and Development Studies (*Bureau National d'Etudes Techniques et de Développement*)
CCC	Coffee and Cocoa Council
UNFCCC:	United Nations Framework Convention on Climate Change
CEM	Conservation of Marine Species (*Conservation des Espèces Marines*)
ESMF	Environmental and Social Management Framework
CIGN	Geospatial and Digital Information Centre (*Centre d'Information Géospatiale et Numérique*)
CIRA	International Agricultural Research Centre (*Centre International de Recherche en Agroforesterie*)
CIRAD	Agricultural Research Center for International Development (*Centre de Coopération Internationale en Recherche Agronomique pour le Développement*)
FPIC:	Free, prior and informed consent
CNRA	National Center for Agricultural Research (*Centre National de Recherche Agronomique*)
CN-REDD+	National REDD+ Committee
CNTIG	National Committee of Remote Sensing and Geographic Information (*Comité National de Télédétection et d'Information Géographique*)
INDC	Intended Nationally Determined Contributions
ERC	Emission Reduction Certificates
CSRS	Swiss Center for Scientific Research
CTI-REDD+	REDD+ Interministerial Technical Committee
CURAT	University Center for Research and Application in Remote Sensing
EFI	European Forest Institute
ERPA	Emissions Reduction Payment Agreement
ER-PD	Emissions Reduction Program Document
ER-PIN	Emissions Reduction Program Idea Note
SESA:	Strategic Environmental and Social Assessment

FAO:	Food and Agriculture Organization of the United Nations
CF	Classified forest
(FCPF)	Forest Carbon Partnership Facility
FEREADD	Federation of Energy, Environment, and Sustainable Development Networks and Associations
FGRM	Feedback and grievance redress mechanism
FIB	Wood Industries Federation (*Fédération des industries du bois*)
FPRCI	Foundation for the Parks and Reserves of Côte d'Ivoire
GHG:	Greenhouse Gas
GIZ:	German Agency for International Cooperation and Development (*Deutsche Gesellschaft für Internationale Zusammenarbeit*).
HCS	High Carbon Stock
HCV	High Conservation Value
HDI	Sustainable Trade Initiative
INS	National Statistics Institute
JICA	Japanese International Cooperation Agency
JNR	Jurisdictional and Nested REDD+
KFW	German Development Bank (*Kreditanstalt für Wiederaufbau*)
MEF	Ministry of Economy and Finance
MINEF	*Ministère des Eaux et Forêts* [Ministry of Waters and Forests]
MINSEDD	Ministry of Environment and Sustainable Development
MRV	Measuring, Reporting and Verification
FRL	Forest Reference Level
OIPR	Ivorian Office of Parks and Reserves (*Office Ivoirien des Parcs et Réserves*)
OI-REN	Ivorian Observatory for the Sustainable Management of Natural Resources
SDP	Sustainable Development Plans
PDEF	Planned Deforestation
PDEG	Planned Forest Degradation
PAMFP	Protected Areas Management Framework Program
PFR	Rural Land Policy (*Politique Foncière Rurale*)
PGES	Environmental and Social Management Plan
FIP	Forest Investment Program
NEAP	National Environmental Action Plan
PNAT	National Land Planning Policy
NDP	National Development Plan
PNIA	National Farm Investment Plan
PNPREF	National Policy for Forest Preservation, Rehabilitation and Extension
PNRO	National Gold Panning Rationalization Program (*Programme National de Rationalisation de l'Orpaillage*)
PNSFR	National Program on rural Land tenure
TNP	Taï National Park
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
ER-P	Emissions Reduction Program
PSE	Payment for Environmental Services
RCI	Republic of Côte d'Ivoire
ER	Emission Reduction
R&D	Research and Development

REDD+	Reduced Emissions from Deforestation and Forest Degradation
GPRS	Growth and Poverty Reduction Strategy
REDD+ Permanent Executive Secretariat	Permanent REDD+ Executive Secretariat
SIS	Safeguards Information System
SODEFOR	Forestry Development Agency
SOGB	Grand-Béréby Rubber Plantations
SPIB	Wood Manufacturers and Producers Union
SRADT	Regional Land Use and Development Plans
SES	Social and Environmental Safeguards
STBC	Cavally Forest Logging Company (*Société de Transformation du Bois du Cavally*)
STBS	Bois du Sud Logging Company (*Société de Transformation du Bois du Sud*)
EU	European Union
UNDEF	Unplanned Deforestation
VCS	Verified Carbon Standard
WCF	Wild Chimpanzee Foundation
WWF	World Wildlife Fund

EXECUTIVE SUMMARY OF THE EMISSIONS REDUCTION PROGRAM FOR TAÏ NATIONAL PARK

SNAPSHOT

The RCI government considers the Taï National Park Emissions Reduction Program (abbreviated as "ER-P" in the rest of the document) to be the first step in implementing the country's National REDD+ Strategy at a jurisdictional level, and a green development model that offers alternatives and payment-based incentives in order to fight against climate change, diversify farmer income, create zero-deforestation cocoa production, protect natural resources, reclaim forest coverage and preserve biodiversity. The ER-P is a unique chance to secure long-term public and private funding in order to attain the objectives of the Paris Agreement and to achieve sustainable development.

Program Objective: The ER-P aims to implement a virtuous cycle and offer alternatives to deforestation by rewarding achievements in order to overcome the challenges of climate change and reconcile economic development, fight against poverty, and preserve biodiversity.

Jurisdiction: Regions of Cavally, Nawa, San-Pédro, Guémon et Gboklè in the south west of the Republic of Côte d'Ivoire.

- Total area of 4.63 million hectares.
- 935.752 hectares of forest.

Duration: The program will be rolled out with a long-term perspective of 20 years, with an ER-PA period of 5 years (2020-2024).

CO_2 Reductions: An estimation of 22 million tons of CO_2 by 2024.

Budget: USD 100,6 million for up-front investment funding, with the possibility of results-based payments for 22 million tons of CO_2 over 5 years.

The Proposal aims to sign an Emissions Reduction Payment Agreement with the Carbon Fund of the Forest Carbon Partnership Facility (FCPF) for 16.5 million tons of CO_2.

CONTEXT AND AIM

The Republic of Côte d'Ivoire plays a key role in the fight against deforestation and in reducing climate change in West Africa. The country is home to the last primary tropical rainforest in the region, located in Taï National Park. Although it is preserved, TNP faces high deforestation pressures, mainly due to cocoa growing and artisanal gold mining activities. With the decline of the old cocoa belt in the center of Côte d'Ivoire, the southwest region has become a major area for cocoa farming, and palm oil and rubber production. This was followed by a high demographic pressure due to the migration of cocoa producers and their families, who left the center of the country and their neighboring countries to the north of Côte d'Ivoire (Burkina Faso and Mali). The 24 classified forests in the ER-P area are close to complete deforestation. Forest cover, which was estimated to be 37% of the national territory in 1960, decreased to less than 14% in 2010. The average rate of deforestation increased from 1.5%/year between 1900 and 1980 to 4.3%/year between 1990 and 2015, becoming the highest rate in the world at this time. Between 2000 and 2008, during the political crisis, the rate of deforestation reached 25% in classified forest reserves. According to SODEFOR, the body in charge of managing classified forests, the rate of encroachment on classified forests increased from 18% of the total area in 1996 to around 50% in 2014.

The Côte d'Ivoire Government is committed to implementing zero-deforestation cocoa farming and retrieving a forest cover of 20% across the country by 2030. The Intended Nationally Determined Contributions, submitted by the Republic of Côte d'Ivoire to the UNFCCC in 2015, set out mitigation measures in the agricultural and forestry sectors, including: (i) ensuring consistency of the national planning and of the rural land planning for developing the agriculture and the forestry sectors in line with the REDD+ process of limiting deforestation, securing land and the demarcation of village territories; (ii) agricultural development without extending to the remaining forest areas, and less GHG emissions via more intensive farming practices, agroforestry and achieving the concept of "zero-deforestation agriculture", (iii) developing the forest sector through sustainable development of forests and forest governance, by applying forest regulations and launching FLEGT discussions, participative forest management plans, the stabilization of agricultural areas and classified forests and their restoration, the growth of carbon stock in degraded forests, and the implementation of PES, and (iv) developing energy solutions using fast-growing trees for the production and use of charcoal. The 2017 National REDD+ Strategy continues its objectives by including the 20% cover and the concept of green growth.

The Côte d'Ivoire became involved in the International REDD+ mechanism in 2011 in order to contribute to the global fight against climate change, and to restore its severely degraded forest cover. The Taï National Park ER Programme reflects the country's strong political commitment to ecological growth, the reduction of deforestation and the restoration of forest cover in Republic of Côte d'Ivoire. The design of the Emissions Reduction Program Document (ER-PD) for Taï National Park was developed over a period of two years in close and frequent consultation with local, national and international stakeholders, including the general public.

The aim of the ER-P is to implement a green development model at a provincial level that offers alternatives and payment-based incentives in order to fight against climate change, diversify farmer income, create zero-deforestation cocoa production, protect natural resources, reclaim forest coverage and preserve biodiversity.

The consultations and information in the design phase of the ER-P took place at multiple levels. In addition to large-scale consultations undertaken as part of the REDD+ preparation process, significant efforts were made to inform and consult local stakeholders (local communities, civil society organizations, decentralized administrations, businesses) through meetings organized in each region of the ER-P area.

INTERVENTION STRATEGY AND PROGRAM ACTIVITIES

In order to implement these changes, the program is designed to create a balance between (i) enabling activities, such as: securing land ownership with the formalization of land titles; reinforcing the governance and management of classified forests to create a sustainable participatory management of classified forests in line with the objectives of the national policy for forest preservation, rehabilitation and extension; local land use planning; building the forest management abilities of local communities; reinforcing protection in protected areas; and an incentivized support plan to relocate farmers to the center of the country; and **(ii) sectoral activities,** such as: promoting zero-deforestation agriculture; agroforestry; developing timber and industrial fuelwood plantations; developing small private and community wood plantations with high-value tree species; restoring and protecting the remaining natural forest cover in classified forests through supported natural regeneration; restructuring artisanal gold mining activities; and restoring sites. The operationalization of a green development model means that the regions in the ER-P area can offer a sustainable supply of deforestation-free cocoa, fuelwood, charcoal, timber and agricultural products, while also increasing the incomes of local populations and recovering and maintaining significant forest cover.

The following table shows a summary of the program activities in line with the focuses of the National REDD+ Strategy:

Strategic options of the national REDD+ strategy	Activities planned by the ER-P	Factors of deforestation/degradation and barriers
Option 1: Zero deforestation agriculture	In rural areas: • Agroforestry development, agricultural intensification and support for zero deforestation agriculture (AS1) In classified forests: • (i) Development of classified agroforests (AS2) with: • (ii) Industrial agroforestry concessions • (iii) Cooperative agroforestry concessions	- Extension of farming land for cocoa, palm oil and rubber. - Negative perception of the effect of shade on cocoa yield. - Demographic growth and migration movements. - Poverty of populations and economic appeal of growing cocoa. - Conflicts between managers of the SODEFOR and infiltrated populations.
Option 2: Sustainable domestic energy with agricultural biomass	In the rural areas: • Development of community and individual plantations of wood energy (ES1) • Development of alternatives to wood energy using agricultural residues (ES3) In classified forests: • Development of the Taungya system of community agroforestry (women and young people): concessions for the development of food agricultural activities associated with wood energy production plantations (ES2)	- Poor organization of operators and lack of a formal sector. - Inefficient carbonization methods. - Absence of alternative energies & prohibitive cost of butane gas.

Option 3: Sustainable management of forests and conservation of protected areas	In rural areas: • Development of small timber plantations and preservation of private and community forest relics through the PES system (FS1)	- Poor forest management - Unsuitable plans for development and management of classified forests. - Illegal & unsustainable forest management. - Lack of surveillance resources - Non-involvement of communities in forest management.
	Development of reforestation activities and sustainable management of classified forests through (FS2): • Development of sustainable industrial forest concessions with renewal of the resource; • The restoration and protection of forest relics through the development of conservation concessions.	
	Strengthening protection of protected areas, Tai and Peko Mountains National Parks, N'Zo Nature Reserve and possible other protected areas (FS3) through: • Strengthening the OIPR's intervention capacities for NP and NR management; • Strengthening intervention capacities of NGO supporting PA management and environmental protection	
Option 4: Aforestation/reforestation, restoration of forests and degraded land	In the rural areas: • Development of small timber plantations and preservation of private and community forest relics through the PES system (FS1) • Agroforestry development, agricultural intensification and support for zero deforestation agriculture (AS1)	- No strategy for reforestation in logging zones - No forest conservation incentives for local communities.
	In classified forests: • Development of afforestation activities in classified forests (FS2), through the implementation of the reforestation program by SODEFOR; • Development of agroforestry in classified forests: Agroforests (AS2)	
	In protected areas: • Natural restoration of the Peko Mountains NP (FS3)	
Option 5: Mining respectful of the environment	• • Rationalization of artisanal gold mining and site restoration (MS1)	- Low-level application of the law - Lack of will to manage and supervise mining activities.
Option 6: Payments for environmental services (PES) type incentive system	• Use of PES in rural areas for AS1, ES1 and FS1 activities	- Offsetting the economic appeal of cocoa

Option 7: Regional planning and land reform	In the rural domain • Tenure legal security in rural areas to remove obstacles to planting trees within agricultural plots, including formalizing land status (H1) • Development of Regional development and Land use plans (SRADT) (H2) **In classified forests:** • Development of the concession system (H3) with agricultural (AS2) and forestry (FS2) and with agricultural cooperatives (AS2) and women's and youth associations (ES2)	- Few or no planning schemes - No regional land use planning - Lack of land reform & conflicts
Option 8: National planning and structural reforms for the transition to a green economy	–	–

REFERENCE EMISSION LEVEL

An Emission Reference Level (ERL) was calculated for all activities considered in the ER-P, namely avoided deforestation and degradation, as well as the enhancement of forest carbon stocks. It is based on a detailed analysis of land use changes during the historical reference period (2000-2015) based on stratified sampling in accordance with GFOI Methods and Guidance Document (2017). Emission factors were based on in-situ inventory. Carbon fractions or root shoot ratios were based on estimates from the 2006 IPCC GL.

Activity	Forest type	Annual emissions [tCO2/year]	90% confidence interval [tCO2/year]	90% confidence interval [%]
Deforestation	Dense - Ombrophile	4,455,126	1,282,457	28.79%
	Dense - Mesophile	753,721	331,730	44.01%
	Degraded - Ombrophile	2,312,539	680,184	29.41%
	Degraded - Mesophile	971,133	433,911	44.68%
Forest degradation	Ombrophile	794,894	434,788	54.70%
	Mesophile	187,252	102,421	54.70%
Carbon stock enhancement (natural regeneration)		-139,203	-55,180	39.64%
Forest Reference Level		**9,335,462**	**1,615,007**	**17.30%**

EXPECTED EMISSIONS REDUCTIONS

The ER-P aims to reduce and sequester more than 39 million tCO2-e over the period 2019 – 2027 and over 22 million tCO2 over the ERPA term, taking into account reduced deforestation, reduced degradation and forest

carbon stock enhancement activities. These ex-ante estimates are based on a number of parameters: (i) the estimated emissions for the program scenario, (ii) the number of emission reductions that will be set aside to compensate for the uncertainty level of the estimate for the number of emissions reductions that will be set aside for the reversal risk (non-permanence).

The total share of emissions reductions to be set aside, whether for uncertainty or reversal risks, the amount of ERs to be set aside is up to just over11 million tCO2e during the period 2019-2027 are set aside into a buffer reserve.

The table below summarizes the estimates the emission reductions expected from the program:

Year	RL Deforestation (tCO2eq)	RL Forest degradation (tCO2eq)	RL stock enhancement (tCO2eq)	Emissions PRE scenario (tCO2eq)	Removals PRE scenario (tCO2eq)	Uncertainty buffer (tCO2eq)	Non permanence buffer (tCO2eq)	Net emission reductions (tCO2eq)
2019	4,246,260	491,073	-69,601	4,288,153	-480,827	34,416	154,453	671,535
2020	8,492,519	982,146	-139,203	7,727,054	-2,035,767	145,767	654,174	2,844,234
2021	8,492,519	982,146	-139,203	7,677,946	-3,202,548	194,403	872,441	3,793,220
2022	8,492,519	982,146	-139,203	7,253,320	-4,300,267	255,296	1,145,720	4,981,392
2023	8,492,519	982,146	-139,203	7,204,213	-4,361,115	259,695	1,165,459	5,067,211
2024	8,492,519	982,146	-139,203	7,204,213	-4,433,307	262,582	1,178,418	5,123,556
2025	8,492,519	982,146	-139,203	6,730,480	-4,511,534	284,661	1,277,501	5,554,354
2026	8,492,519	982,146	-139,203	6,681,373	-4,593,515	289,904	1,301,033	5,656,666
2027	8,492,519	982,146	-139,203	6,632,265	-4,677,522	295,229	1,324,929	5,760,560
TOT ERPA term	46,708,855	5,401,802	-765,616	41,354,900	-18,813,831	1,152,159	5,170,664	22,481,149

IMPLEMENTATION AND MONITORING MECHANISM

Côte d'Ivoire Government will be signing the Emissions Reduction Payment Agreement (ER-PA) through the Ministry of Economy and Finance.

At a national level, the SEP-REDD+ will be responsible for the day-to-day management of the ER-P, under the supervision of the REDD+ National Committee and Interministerial Technical Committee. It will be the main agency responsible for emissions reduction credits generated by the program and will be responsible for the national verification of carbon and non-carbon monitoring reports and for safeguards monitoring and complaints and conflict resolution decision monitoring and implementation as well as forwarding appeals to REDD+ National Committee for resolution as a final court of appeals. In its tasks the SEP-REDD+ will be supported by the different departments of the MINEDD, MINEF, MINADER, MEF, SODEFOR, OIPR, private operators, NGOs, and the bilateral organization bodies.

At a regional level, the organization of the area includes a set of statewide and local structures, and parties for implementing projects and activities. To ensure the regional supervision of the ER-P, the SEP-REDD+ will organize twice-yearly meetings in the ER-P area regions between the different parties involved in its implementation, including: prefects and chairs of regional councils (as representatives of the 5 REDD+ regional committees concerned), managers and NGOs involved in implementing REDD+ projects, representatives from the private sector, and local SODEFOR and OIPR representatives.

The on-site program activities will be implemented **by different operators, such as national institutions, the private sector (agro-industrial, mining and timber industry), agricultural cooperatives, NGOs, bilateral agencies and local communities.** Their role is to develop and implement activities designed to reduce greenhouse gas emissions. In the program area, several projects coexist with specific institutional arrangements.

The monitoring-assessment of the program will allow two progress reports to be produced: (i) a monitoring report on the emissions reductions, which will release the Carbon Fund payments, (ii) a monitoring report on safeguards and non-carbon benefits, which will include information on the impact studies and respecting safeguards where necessary. The institutions responsible for the monitoring-assessment of the program include the SEP-REDD+, which will coordinate the collection of the necessary information and compile the reports with: project and program operators, independent and mandated observers, regional councils, SODEFOR and OIPR, and the SNSF, which may be a key source of information on certain safeguards.

BENEFIT SHARING

The enefit Sharing Arrangements (BSA) will be included in a framework agreement signed between the Minister of Economy and Finance and the FCFRCI, which will be in charge of managing the revenues from the sale of emission reductions to the Carbon Fund. Once validated by the Government, the BSA will be formally adopted by Decree.

The BSA are developed on the basis of a number of guiding principles, including the principle of equity in which local people are the main beneficiaries of the program:

- *Principle of legality:* the BSP reflects and respects all the rules of public order and all other relevant legislative or regulatory provisions applicable in Côte d'Ivoire, including those arising from the international conventions it has ratified.
- *Efficiency Principle:* The distribution of benefits is based on stakeholder engagement and program performance.
- *Principle of equity:* Local populations in the program area are the main beneficiaries.
- *Sustainability Principle:* Benefits are provided for achieving measurable, verifiable and sustainable emission reductions aimed at effectively and sustainably addressing net emission factors.

The BSA identifie two major groups of beneficiaries following a land-status territorial approach, divided into different areas according to the land status of the land on which the program is implemented (protected areas - classified forests - rural area): (i) stakeholders in charge of the structural and operational management of the program in the accounting area (constituting the "REDD+ infrastructure"), and (ii) the stakeholders directly contributing to the emission reductions.

The beneficiaries are the following:

Bénéficiaries	**Activities**
OIPR	FS3. Strenghtening protection of protected areas
SODEFOR	H3. Improved management of classified forests. FS2. Reforestation and sustainable management of classified forests FS2. Reboisement et gestion durable des forêts classées.
Industrial logging companies (concession holders)	H3. Improved management of classified forests. FS2. Reforestation and sustainable management of classified forests FS2. Reboisement et gestion durable des forêts classées.
Industrial agroforestry companies (concession holders)	AS2. Agroforest in classified forests
Agroforestry cooperatives and women and youth associations (concession holders)	ES2. Taungya - Agroforesterie communautaire vivrier-bois énergie
Environmental protection NGO	FS2. Reforestation and sustainable management of classified forests FS3. Strenghtening protection of protected areas
Local authorities and traditional chiefdom	H1. Land security. H2. Land Use planning and territory development

Rural Land Agency (AFOR) and land tenure local committees	H1. Land security. H2. Land Use planning and territory development
Promoters of PES initiatives (Individuals, local communities and agricultural cooperatives)	AS1. Agroforestry and agricultural intensification ES1. Wood energy plantation FS1. Small timber plantations and preservation of private and community forest relics
Local Mines departments	MS1. Rationalisation de l'orpaillage et restauration des sites
Artisanal gold mining cooperatives	MS1. Rationalization of artisanal gold mining
NGO valorisation alternative energy sources	ES3. Alternatives to wood energy - agricultural and timber residues

The territorial approach linked to the status of land makes it possible to link the drivers of deforestation and forest degradation in areas of the program, to the strategic options of the program, and to their specific implementation methods in each of the zones having special status.

The benefit sharing plan based on these BSA will be developed and finalized by the first 2019 mid-term and my change accordingly to ERPA negociations.

MANAGING SOCIAL AND ENVIRONMENTAL RISKS

The ER-P intervention strategy has been developed in accordance with the guidelines of the safeguard instruments of the National REDD+ Strategy Framework, and it takes into account **the recommendations arising from the Strategic Environmental and Social Assessment (SESA) and the national Environmental and Social Management Framework (ESMF)** of the National REDD+ Strategy. These social and environmental instruments are the EESS report, the Environmental and Social Management Framework (ESMF), the Resettlement Policy Framework (RPF), the Process Framework (PF), the Physical Cultural Resource Management Framework (CGRPF), the Pest Management Plan (PMF) and they find their sources in the World Bank's Safeguard Policies, OP 4.01 (Environmental Assessment), OP 4.12 (Involuntary Resettlement), OP 4.04 (Natural Habitats), OP 4.09 (Pest Management), OP 4.11 (Physical Cultural Resources) and OP 4.36 (Forests).

Thus, through the guidelines of these instruments, the formulation and design of the activities of the ER-P automatically address the issues, constraints as well as the environmental and socio-economic opportunities related to the program.

To this end, the guidelines, mechanisms and procedures set out by the ESMF, IRPF, the CGRCP, CFARN and the PPMP will be followed as part of the overall design and completion of the ER-P and its related sub-projects, and a technical and financial support will be put in place to make the SIS and the Feedback and Grievance Redress Mechanism (FGRM) operational in the ER-P regions.

The correct application of the safeguards as well as the generation of non-carbon benefits will be communicated via the following channels: (i) regular information published on the national REDD+ register, and (ii) a regular monitoring report that ensures that the National Social and Environmental Standards are being followed. An environmental and social monitoring and surveillance framework is being created, under the supervision and coordination of the National REDD+ Commission, by the agencies and stakeholders that will be implementing the ER-P activities and related sub-projects.

The FGRM proposes a management of complaints at the local scale aligned with the different territorial entities (villages, sub-prefectoral, departmental, regional) and at the national level with the CN-REDD+, which will serve as the last instance for complaints that have not found satisfaction at local level. To ensure the effectiveness of the process, the proposed mechanism builds on the committees and on existing administrative and customary complaints management mechanisms on different scales by adding a specific prerogative for REDD+; complainants may appeal to the courts at any level in the procedure. Resolutions or arbitration pronouncing the solution to grievances and appeals procedure will be published on the register/geoportal. The implementation of decisions will then be subject to monitoring from the national coordination committee, and also, where appropriate, from the sub-prefectural committee, NGOs and independent mandated observers.

1 ENTITIES RESPONSIBLE FOR THE MANAGEMENT AND IMPLEMENTATION OF THE PROPOSED PROGRAM

1.1 ER Program Entity to sign the Emissions Reduction Payment Agreement (ER-PA) with the FCPF Carbon Fund

Name of entity	Ministry of Economy and Finances
Type and description of the organization	Fundraising and financial management of the program
Main contact person	Elie Gnanzou
Title/Role	Analyst at the MEF
Address	
Telephone	(+225) 0112-5237
E-mail	eliegnanzou@gmail.com
Website	http://www.finances.gouv.ci

1.2 Organization responsible for managing the proposed ER-P

Same entity as the ER-P entity identified in Section 1.1 above ?	No
Name of entity	National REDD+ Commission
Type and description of the organization	The national REDD+ Commission has been established by Decree No. 2012-1049 of 24 October 2012. This Commission is an intersectoral structure of analysis, advice and guidance for the implementation of the REDD+ mechanism. It is composed of a National REDD+ Committee (CN-REDD+) in charge of piloting the REDD+ mechanism, a REDD+ Interdepartmental Technical Committee (CTI REDD+) in charge of cross-sectoral coordination and a Permanent Executive Secretariat REDD+ (SEP-REDD+) Who is responsible for the implementation of the REDD+ mechanism.
Organizational or contractual relationship between the organization and the ER-P entity identified in 1.1	The Minister of Finance is a member of the National REDD+ Committee (the national commission's decision-making body).
Main contact person	Mr. Ernest Ahoulou Kouame
Title	SEP Coordinator
Address	20 B.P. 650 Abidjan 20 Abidjan, Cocody, Angré - 7e Tranche
Telephone	(+225) 22 50 30 97
E-mail	ernest.ahoulou@reddplus.ci
Website	www.reddplus.ci

1.3 Partner agencies and the organizations involved in the ER-P

Institutional partners

Name of the partner	Contact	Capacity and role in the ER Programme
Ministère de l'économie et des finances (MEF)	Monsieur Elie Gnanzou (+225) 0112-5237	Fundraising and overall financial management of the program
Ministère du Plan et du Développement	Monsieur Jean-Claude KOYA Technical councellor koyajc@gmail.com (+225) 48 24 23 27 Dr. Kouassi Joseph KOUAKOU Director of spatial planification ecologuet12@yahoo.fr (+225) 05 34 27 48 / 03 38 17 96	The Ministry of Planning manages the working group responsible for supervising the development of the REDD+ strategy in Côte d'Ivoire and supports its integration into national policies. The ministry uses decentralized guidelines managed by regional directors, although the decisions are still made centrally. A mapping department is currently being created.
Ministère de l'Environnement et du Développement Durable (MINEDD)	Mme Nasséré KABA Directeur de Cabinet Adjoint kabanassere@fotmail.com (+225) 22 49 10 77	Technical Ministry of ER-P Management
Ministère de l'Agriculture	Monsieur Koffi Rodrigue N'GUESSAN Directeur de la Planification ngkoffiro@gmail.com (+225) 07 73 25 50 / 20 22 32 35	The Ministry is a member of the CN-REDD+, which is the national REDD+ decision-making body in the Côte d'Ivoire Republic, and forms part of the initiative to promote zero-deforestation agriculture.
Ministère des Eaux et Forêts (MINEF)	Col. Jérôme AKE ABROBA Directeur du Cadastre et du Développement forestier akabrojj2@yahoo.fr (+225) 01 08 79 51 / 07 51 31 31 Col ME Kouame Martial, CT Projets	The MINEF has 3,500 staff distributed across the Ministries of Agriculture, Planning and the Environment. The MINEF has decentralized services up to the sub-prefecture in the ER-P area and is a stakeholder in the initiative to promote zero-deforestation agriculture.
Ministère de l'Industrie et des Mines	Monsieur Ibrahima COULIBALY Directeur Général des Mines et Géologie (+225) 20 22 20 27	The Ministry is a member of the CN-REDD+, which is the national REDD+ decision-making body in the Côte d'Ivoire Republic and is in charge of implementing the gold panning rationalization plan.
Ministère de la Femme,	(+225) 20 21 77 02 / 20 21 76 26	Supports the ER-P in order to promote women's access to land ownership and child protection.

de la protection de l'Enfant et de la Solidarité		
Ivorian Office of Parks and Reserves (OIPR)	Monsieur Adama TONDOSSAMA Directeur Général Adam.tondossama@oipr.ci	Public body under the supervision of the Ministry of Environment. A team in Abidjan (including 2 SIG) + 1 person in each of the 5 areas of the country with the OIPR leading + local management committees in the field. It is responsible for the management of the 12 national parks and nature reserves (including Taï National Park, Mont-Péko National Park and N'zo natural reserve). It produces studies on ecosystem services and supports the development of micro-projects and community projects. It contributes to the preservation of national resources, and regular monitoring of plant cover in TNP (with the support of the GIZ for remote sensing). It is also part of the forest observation platform. The aim of the OIPR is not reforestation, but rather to promote a natural regeneration of the 5,000 ha in the park where cocoa is currently illegally growing.
National Environment Agency (ANDE)	Monsieur GBE Nondai Didier Directeur Général (+225) 22 43 32 56	Supporting the management of all of the ER-P safeguard instruments and the SNSF (database management platform), in collaboration with the safeguarding unit of the SEP-REDD+.
Forest Development Agency (SODEFOR)	Monsieur Mamadou SANGARE Directeur Général sangare@sodefor.ci Monsieur Valentin Bah Bilé Conseiller technique DG/cellule REDD+ ebabilenvatin@yahoo.fr Monsieur Konan KOFFI Conseiller technique DG/REDD+ abidkoffi@gmail.com	SODEFOR is appointed by the MINEF to manage the 231 gazetted forests (GF) in the country including 24 classified forests in the ER-P area. It is responsible for creating participatory development, co-plantation and contractual plans, in order to promote agroforestry in certain CFs in the ER-P area. It particularly works with the NGO WCF and other partners (such as the IDH) on Cavally forest, to improve the monitoring of forest activities and ensure the correct application of the CF management development plan. SODEFOR also has a collaboration agreement with the SEP-REDD, and actively participates in developing the National REDD+ Strategy as well as helping to implement the national forest monitoring system (with the SEP-REDD).
National Agency for Rural Development Support (ANADER)	Monsieur Cissé SIDIKI Directeur Général (+225) 20 21 65 00 Sdk_vet@yahoo.fr Monsieur Amin GBO Chef de Division Changement Climatique	Participates in the CN-REDD+, and has a representative in the SEP-REDD+. It is involved in the development of the REDD+ strategy in the Côte d'Ivoire Republic. It participates in the Mars Chocolate Vision for Change (V4C) project, developed by the World Agroforestry Centre (ICRAF) in the Soubré region, which aims to revitalize and regenerate cocoa farming by transforming old cocoa plantations to increase their productivity, while limiting the expansion of plantations to the detriment of the forest.

	amindzamla@gmail.com	
Rural Land Agency (AFOR)	Monsieur Nanakan OUATTARA Directeur (+225) 20 21 14 21 / 20 21 08 33 http://www.foncierural.ci	Its role is to reduce, if not eliminate, land disputes, by securing rural land, identifying and securing the country's rural areas, marking out land boundaries, significantly simplifying land registry procedures, and issuing land certificates.
National Center for Agricultural Research (CNRA)	Dr Wongbe YTE Directeur Général (+225) 22 48 96 24	Participates in the CTI-REDD+ and is actively involved in the REDD+ process through its technical assistance and contribution to the development of REDD+ management instruments. Participates in research on cacao tree hybrids and transplanting older cacao trees in order to increase their yield. It also contributes to the regeneration of old cacao trees via transplantation for the V4C program.
World Agroforestry Centre (ICRAF)	Monsieur Hervé B. BISSELEU System scientist Monsieur Thomas d'Aquin KOUAKOU Gestionnaire des opérations	The ICRAF has been involved with the V4C (Vision4Change) project in the Soubré region since 2010. The research team is currently working on the regeneration of existing plots in rural areas, restoring fertility thanks to the introduction of legumes (climbing or trees), increasing production through plant nursery transplanting techniques, and introducing fruit trees for agroforestry. The ICRAF has 70 people in Côte d'Ivoire (including some staff in Soubré) and receives international support from its offices in Nairobi and Yaoundé.
Rice Industry Development Agency (ADERIZ)	Monsieur Yacouba DEMBELE 1, Rue Paris Village – Plateau - Abidjan (+225) 20 22 80 00 / 20 22 78 35	The agency helps to promote rice growing, strengthen the capacities of the rice-growing interbranch organization, invest in rice-growing infrastructures, and implement a long-term mechanism to cover the national need for certified rice-sowing and improved varieties. It supports the implementation of the national rice industry development strategy, which aims to cover all of Côte d'Ivoire's milled rice consumption needs. It will support agricultural diversification initiatives with rice-growing projects in the lowlands of the ER-P area.
Foundation for the Parks and Reserves of Côte d'Ivoire	Dr Fanny N'GOLO Directeur exécutif (+225) 22 41 71 00 fannyngolo@yahoo.fr	The Foundation for the Parks and Reserves of Côte d'Ivoire is the first Ivorian trust fund dedicated to the conservation and funding of national parks and reserves. Its aim is to manage environmental funds earmarked for funding national parks and reserves conservation projects and programs, and for strengthening management capacities in this sector. It can act as a trust fund, acquire or fund the acquisition of private land that will eventually be turned into a park or reserve, and can take part in debt-for-nature swaps. It funds the OIPR for managing TNP and the N'ZO reserve in the ER-P area.

Development partners

Name of the partner	Contact	Capacities and role within the ER-P
World Bank	Ms. Salimata FOLLEA sfollea@worldbank.org Mr. Laurent VALIERGUE lvaliergue@worldbank.org Mr. Idriss DEFFRY ideffry@worldbank.org	Technical and financial support for REDD+ readiness process in Côte d'Ivoire. Funds the development of sustainable cocoa practices in the Nawa region, as part of the agricultural sector support project (PSAC). Supervision of the Forest Investment Program (FIP) in the south-west and the center of Côte d'Ivoire Republic and associated DGM.
French Development Agency (AFD)	Mr. Emmanuel DEBROISE (+225) 22 40 70 40	The AFD carries out actions in the program area through (i) producing land cover maps in partnership with the BNETD, (ii) the OSFAC project, for the creation of a satellite image (Spot 6) platform, (iii) the PADETER project in the west of the country, including the Cavally and South Guémon regions. The AFD also provides support to the MINEF through the C2D on the general conditions of the forests, Forest Code implementing provisions and on the nationwide forest inventory. There is a plan to provide support to SODEFOR, particularly on inventories, following an agreement on the matter of managing agricultural occupations in classified forests and entering into contractual agreements with the occupants. The AFD supports the Côte d'Ivoire Republic in its REDD+ preparation process with its C2D program, particularly in the creation of the satellite land monitoring geoportal as part of the implementation of the SNSF.
Swiss Center for Scientific Research (CSRS)	Prof. Inza KONE +225 23 47 27 90 inza.kone@csrs.ci	A research institute specializing in agronomy, biodiversity, health, and so on. It works in the ER-P area through its Taï chimpanzee project; the institution leads research, awareness and conservation activities on chimpanzees in TNP.
United Nations Development Program (UNPD)	Mr. Joseph EZOUA UNPD Program Adviser joseph.ezoua@undp.org Mr. Yao Bernard BROU Program Analyst SGIE Coordinator bernard.brou@undp.org	Through the UN-REDD, the UNDP contributes to the national REDD+ preparation process, particularly helping to develop the REDD+ National Strategy. The other actions that the UNDP take in the REDD+ process are: (i) participation as an implementing agency in the zero-deforestation project funded by the GCF in the south west, center, and east. The activities focus mainly on agreeing contracts for the classified forests and agroforestry in rural areas (for timber and fuelwood purposes); (ii) working with the AFD on public-private partnerships, REDD+ classified forests (C2D): land tenure security and planning (demarking territories, securitization); (iii) supporting the structuring of CSOs (forest, agriculture, energy); and (iv) strategic support of low-carbon, INDC, environmental information management, and micro-financing.
German Cooperation Agency (GIZ), Federal Ministry of Economic Cooperation and Development (BMZ)	Mr. Hans-Ulrich CASPARY Head of the Biodiversity Component hans-ulrich.caspary@giz.de Mr. Alain ROUSSEAU Head of the Sectors Component alain.rousseau@giz.de	GIZ works in the ER-P area through several projects: (i) PROFIAB (conservation/biodiversity and work on the agricultural and forest sectors around Taï and Comoé); (ii) TGS-FL (Taï-Grebo-Sapo corridor project, coupled with a KFW project); (iii) CAZ-ELK (zero-deforestation cocoa supply chain in the San-Pédro region). PROFIAB works in partnership with Cocoanect and the WCF in the Djouroutou area around the Hana River. GIZ works closely with the private sector (cocoa and palm oil) and has signed a tri-party agreement with Barry Callebaut and WoodIvoire for the Rapides-Grah CF. GIZ has 10

	(+225) 22 43 72 75 / 57 07 03 57	permanent members of staff in San-Pédro and will soon have an office in Taï.
Food and Agriculture Organization (FAO)	Ms. Minoarivelo RANDRIANARISON Minoarivelo.Randrianarison@fao.org	As part of the UN-REDD Program, the FAO has supported the REDD+ preparation phase in the Côte d'Ivoire Republic, particularly in terms of: (i) the forest reference level, (ii) completing the forest biomass inventory to estimate emission factors, before allowing the Côte d'Ivoire Republic to provide its own emission factors, and (iii) the SNSF. It is responsible for developing the reference scenario in the program area and writing chapters 7 and 8 of the ER-PD.
Sustainable Trade Initiative (IDH)	Ms. Renske AARNOUDSE Aarnoudse@idhsustainabletrade.com (+225) 47 30 41 57	The ISLA project works with several private sector organizations to promote agroforestry techniques for cocoa growing in the Cavally and Nawa regions. It is also involved with SODEFOR in support of contractual arrangements (identification and georeferencing of plantation in the Goin-Débé CF), and to support surveillance to counteract forest clearance in Cavally CF.
European Union (EU-REDD)	Mr. Stephan COCCO Stephan.COCCO@eeas.europa.eu	Since 2006, the European Union has supported Côte d'Ivoire in implementing the land ownership law through budgetary support (€30 million to €40 million). The country has therefore initiated a land reform policy in order to simplify procedures and reduce land registry costs. The EU also funds some pilot projects on land by taking an approach launched in November 2014 for sectors and public-private partnerships along the lines of '1 rubber tree plot = 1 land certificate'. It supports the VPA-FLEGT process (Forest, Law Enforcement, Governance and Trade) to which the Côte d'Ivoire has committed since 2012, and which is supported by the REDD+ strategy for the sustainable development of classified forests and protected areas. With the EFI, the EU supports the implementation of the National REDD+ Strategy, particularly in the areas of zero-deforestation agriculture, funding small-scale producers, and aligning national policies.
UN Environment (UNEP)	Ms. Angèle LUH angele.luh@unep.org	Supports the REDD+ preparation in the Côte d'Ivoire Republic as part of the UN-REDD program.
African Development Bank (AfDB)	Ms. Marie-Laure AKIN-OLUGBADE Director General (+225) 20 26 40 47 M.akin-olugbade@afdb.org Mr. Léandre GBELI Head of AfDB FIP Program (+225) 09 72 51 34 l.gbeli@afdb.org	The AfBD co-finances the FIP with the World Bank, specifically in the center of Côte d'Ivoire.
JICA	Madame Sadako OGATA (+225) 22 48 27 27/ 28	The Japanese Cooperation Agency is involved in: (i) forest preservation programs, and (ii) forest rehabilitation and restoration projects with the involvement of local communities, and (iii) building up Ivorian agricultural productivity.

Civil society/NGOs

Name of the partner	Contact	Capacity and role in the ER Programme
OI-REN	Mr. Yousouf DOUMBIA doumbi2@yahoo.fr (+225) 05 35 43 45	The OI-REN has been a platform for civil society organizations since 2014. Its mission is to protect the environment and community rights. The objectives of the OI-REN set out in its by-laws are "promoting and coordinating the participation of Ivorian Civil Society Organizations (CSOs) in the implementation of all of their initiatives relating to natural resources and people's rights, particularly the FLEGT/REDD+ process." It takes part in (i) the Forest Law Enforcement and Governance Trade (FLEGT) process, (ii) REDD+ preparation and (iii) developing the ER-PD with the SEP-REDD+. It has two focal points, including an office in Cavally for observing logging as an independent and mandated observer. It also conducts consultations with local populations for REDD+ and the ER-PD.
FEREADD	Mr. Jules LOUKOU Loukou_jules@yahoo.fr (+225) 05 46 07 71	Mixed platform of 144 civil society organizations in Côte d'Ivoire for the protection of natural resources, the environment and the promotion of sustainable development. It takes part in consultations carried out for the ER-PIN and ER-PD, completing the Strategic Environmental and Social Assessment, and using REDD+ instruments in the RCI as part of the REDD+ preparation.
Wild Chimpanzee Foundation (WCF)	Mr. Arnaud GOTANEGRE Country Director (+225) 87 42 49 99 / 02 25 18 05 abidjan@wildchimps.org	The NGO WCF works in the program area through: (i) a partnership with SODEFOR on Cavally classified forest in order to appoint an independent and mandated observer; (ii) supporting SODEFOR (with IDH) in implementing a contractual process for Goin-Débé; (iii) partnering with the OIPR on an ecotourism project in Taï; (iv) an ecological corridor project around the Hana River (with PROFIAB and Cocoanect); (v) a project funded by IDH to halt supplies by Barry Callebaut in Cavally and Goin-Débé.
Conservation of Marine Species (CMS)	Mr. José Gómez Peñate (+225) 05 75 53 66 gomezp_jm@hotmail.com	The CEM was created in 2014. The CEM is implementing a voluntary natural reserve project at the mouth of the Dodo River which will allow them (i) to protect natural formations, (ii) to allow populations to obtain land rights, (iii) to gain revenue from ecotourism, and (iv) to reforest 5,000 ha across 3 villages in the ER-P area. The project is currently funded by FWS (Fish and Wildlife Services) and is expecting further funding from the CEPF and the Rainforest Trust.
IMPACTUM	Mr. Jean-Michel Patrick BROU (+225) 47 567794 (+225) 06436961 broujm41@yahoo.fr	Impactum is an NGO, which has partnered with the SEP-REDD, supported by EFI and Mondelez, to undertake a PES pilot program for the reforestation and agroforestry of the ER-P area. In collaboration with UTZ, it is taking part in a "tree advocacy" ownership project, targeting farmers.
Regional DGM Representatives	Mr. Christophe SARE PLAY Chair of the National Steering Committee (+225) 07 67 26 94 playchristophesare@gmail.com	Regional representatives of local populations as part of the DGM/FIP program in the ER-P area.
The Forest Trust (TFT)	Mr. Gérome TOKPA	TFT is an organization whose aim is to support companies and communities in placing responsible products

	Senior Manager g.tokpa@tft-earth.org (+225) 58 53 04 19 Mr. Ibrahima FOFANA Project Manager i.fofana@tft-earth.org (+225) 57 89 54 79	on the market. For Mondelez, it supports the development of cocoa agroforestry, with the introduction of the PES as part of the Cacao-Life program in the ER-P area.
Rainforest Alliance		The "rejuvenate the cocoa industry" certification program is a project launched by the Rainforest Alliance (RA) in the ER-P area, with the support of the Global Environment Facility (GEF) and the United Nations Environment Program (UNEP). Its aim is to change farming practices in cocoa-producing countries as well as the management procedures of cocoa and chocolate companies, so that the industry participates more actively in conserving biodiversity while helping to increase the revenue of small-scale farmers, in order to ensure sustainable development for the cocoa industry. With the WCF, the IOPR and Barry Callebaut, it has conducted a sustainable agriculture certification project with the cocoa growers located around Taï National Park.
UTZ	Mr. Siriki DIAKITE siriki.diakite@utz.org Mr. Nanga KONE (+225) 07 03 51 94 Nanga.Kone@utz.org	UTZ/RA is a program and a certification label whose vision is to make sustainable agriculture the norm in the ER-P area. The sectorial partnerships program, which was launched in 2016 by UTZ/RA and is funded by the Dutch Ministry of Foreign Affairs, has three objectives: (i) reinforcing capacities and involving producer organizations by improving the management of cooperatives, the quality of services offered to members, and including women in decision-making bodies within the cooperatives; (ii) fighting against child labor, and (iii) combating climate change by raising public awareness on managing and protecting natural resources, developing land management community plans and advocating for a better enforcement of tree ownership provisions.

Private Sector

Name of the partner	Contact	Capacity and role in the ER Program
World Cocoa Foundation (WCF)	Ms. Suzanne NGO-EYOK Director (+225) 58 48 45 77 suzanne.ngoeyok@worldcocoa.org	An international, not-for-profit organisation whose members are farm-level input providers, financial institutions, cocoa processors, chocolate makers and manufacturers, farmer cooperatives, cocoa trading companies, ports, warehousing companies, and retailers, representing 80% of the global cocoa market. The WCF has worked with its members and in conjunction the Côte d'Ivoire government on the Cocoa and Forests Initiative to put an end to deforestation and restore forest areas, and to eliminate illegal cocoa growing in national parks, including Taï National Park (TNP). In the CÔTE D'IVOIRE REPUBLIC and Ghana it also promotes the voluntary CocoaAction initiative, whose activities include: (i) delivering improved planting material, (ii) training in good agricultural practice, and (iii) developing and strengthening the capacities of farming organisations. The WCF also promotes sustainable livelihoods by helping cocoa producers to diversify their income by food crop diversification and intercropping.
Interprofessional Association of the Palm Oil Sector (AIPH)	Mr Jean-Louis KODO (+225) 07 02 96 96 kodo@sifca.ci	The AIPH comprises all professionals of the palm oil sector, growers' cooperatives, processing companies and manufacturers. It regulates the sale price of raw palm oil and the buying price of palm bunches in Côte d'Ivoire via a mechanism agreed by all actors. The AIPH is a stakeholder in the sustainable palm oil development action plan along with the Palm Oil Initiative of Tropical Forest Alliance (TFA) 2020, a public-private partnership whose objective is to reduce, by 2020, the deforestation of tropical forests associated with the production of agricultural raw materials such as palm oil, soya and paper pulp.
Association of Natural Rubber Professionals (APROMAC)	Mr Francis KOUAO Head of Training (+225) 02 14 82 08	The APROMAC is a not-for-profit organisation with the objective of organising, protecting and developing the natural rubber industry in RCI. It has put in place a mechanism to fix buying prices for natural rubber growers, created new processing units and set up natural rubber plant development funds (FDH). Rubber production in Côte d'Ivoire, including the number of growers in village settings, has grown from 10,600 ha to 550,000 ha, making Côte d'Ivoire Republic the largest producer in Africa and the seventh largest in the world. The APROMAC promotes the development of plantations and trains growers in ER program area.
Wood Industries Association (SPIB)	Mr. Boubacar BEN SALAH President salahboubacar@yahoo.fr (255) 07 07 53 23 (225) 22 44 44 80	The SPIB is comprised of 24 active members including the main timber producers in Côte d'Ivoire. The SPIB maintains close contact to exchange information with the ATO, ITTO, FAO, WB, EU, the French Development Agency (AFD), and national agencies such as the National Forest Development Agency (SODEFOR), the Côte d'Ivoire Office of Parks and Reserves (OIPR) and the Société d'Exploitation du Parc à Bois d'Abidjan (SEPBA), in order to ensure better integration of the timber industry. Within the context of the FLEGT process, the SPIB represents industry producers at the National Technical Committee and, within the context of the International Tropical Timber Technical Association (ATIBT) agreement (the agreement signed in 2013 by the SPIB, the Ministry of Forestry, the Ministry for the Environment and the Directors of the ATIBT), facilitates a public-private dialogue for a multipartite partnership working towards responsible tropical forestry and forest conservation. It can play a role in promoting the sustainable management of forests in the ER program area.
Société hévéicole de Grand-Béréby (SOGB)	Mr Jean-Christophe DIENST (+225) 22 48 00 38 (+225) 34 72 15 22	SOGB is a private company that cultivates natural rubber, of which 15,700 ha of plantations are located in San Pedro and Grand Béréby in the ER program area.

Cocoanect	Mr Alain Konan Cocoanect Office - Côte d'Ivoire Boulevard de Marseille - Biétry 26 BP 993 Abidjan (+225) 07 60 55 01 alain.konan@cocoanect.com	Cocoanect is a cocoa trading company based in Rotterdam that connects farmers, cooperatives and local exporters with the world's main grinding and chocolate makers, as well as chocolate bar makers. The company is involved in the Forest Conservation Initiative, and with the GIZ, the ICRAF and the Société de commercialisation du Café et Cacao (S3C) in an agrofoerstry project spanning the length of TNP, involving the restoration of the Hana banks. Cocoa producers must leave a 15-metre strip of land from their farms along the river for reforestation, with an additional ten-metre buffer zone where no agricultural inputs may be used. Agroforestry practices are currently being devised for use in the remaining agricultural area in conjunction with PESs.
Barry Callebaut - SACO	Mr Yacouba KONE Director of African Research and Development yacouba_kone@barry-callebaut.com	The Barry Callebaut group, registered in Zurich, Switzerland, is a chocolate and cocoa producer with a strong presence in cocoa-producing countries, including Côte d'Ivoire Republic. Under the Cocoa and Forests Initiative, Barry Callebaut and the Côte d'Ivoire Coffee-Cocoa Board (CCC) signed a letter of intent on 4 June 2018, with the purpose of strengthening their cooperation as regards sustainable cocoa production. The purpose of this letter of intent is to work together to devise and validate a sustainable cocoa production model, focusing in particular on (i) the clearing of cacao trees infected with cacao swollen-shoot virus (CSSV), followed by (ii) replantation, (iii) agroforestry, diversifying the incomes of cocoa producers, and the plantation of shade trees.
Mondelez	Mr M'Balo N'Diaye Country Director Mbalo.ndiaye@mdlz.com Mr Brou Fulbert YAO Head of M&E (+225) 22 52 45 22 Fulbert.yao@mdlz.com	Mondelez is an American food-processing multinational with a presence in the biscuit and chocolate industry and established in several countries around the world. It is the second largest global actor in the food-processing industry. In June 2017, the chocolate maker Mondelez and the Ministry for the Environment signed an agreement with the purpose of promoting the emergence of a Forest-Friendly Cocoa industry in Côte d'Ivoire. This agreement was entered into within the context of implementing the REDD+ mechanism and will contribute to restoring forest cover, primarily in the regions supplying Mondelez. Through its internal Cocoa Life programme, Mondelez is involved in a pilot agroforestry and PES implementation programme in the Nawa Region, with EFI and Impactum support.
Cémoi	Mr Joaquim MUÑOZ Director of SD (+33) 4 11 64 31 89 j.munoz@cemoi.com Ms Stéphanie Kadio Head of Sustainability RCI s.kadio@cemoi.com	The Cémoi group is a French food processing company specialising in the production of chocolate and confectionery. In 2015, it launched its own Cocoa Transparency programme before securing a public-private partnership with the Coffee-Cocoa Board of Côte d'Ivoire for the agroforestry arm of the programme, which (i) guarantees the traceability of cocoa from bunch to chocolate, (ii) aims to convince farmers to practice cacao tree agroforestry, (iii) aims to help farmers become entrepreneurs and secure land, (iv) provides cooperatives with training and a framework, and (v) creates cocoa and forest nurseries and sets up ethics committees. Since then, it has joined the Forest-Friendly Cocoa programme to conserve the TNP primary forest.
Olam international	Mr Andrews Brooks Head of Cocoa Sustain. andrews.brooks@olamnet.com (+225) 21 21 89 89 (+225) 06 72 72 10	Olam is a Singaporean food commodity trading and brokerage company with a presence in Africa in the cocoa, coffee and palm oil markets. In 2017, it launched its Olam Living Landscapes Policy for responsible growth, which ensures that its activities and those of its suppliers (its supply chain) adhere to the following principles: (i) no illegal activities (respect for protected areas), (ii) no conversion or degradation of critical habitats (HCV areas), (iii) no conversion or degradation of peatlands, (iv) no conversion or degradation of habitats or HCS forests, (v) no use of fire in land preparation including planting/replanting, and (iv) no development without the FPIC of local populations. The objective between now and 2020 is to put an end to deforestation in the supply chains (palm oil, natural rubber, cocoa and coffee).

		Olam is under discussion with Côte d'Ivoire for development of Agroforest concessions in 2 classified forests (Rapides Grah and Haute-Dodo)
SIAT group	Mr. Mano Demeure Chief Business Dev. officer Mano.demeure@siat-group.com (+225) 72 51 66 37	SIAT is a Belgian commodity company specialized in Rubber, Palm Oil and cocoa. SIAT is under discussion with Côte d'Ivoire for development of Agroforest concessions in Goin-Débé classified forest
Société Industrielle Thanry (SIT)	Mr Patrick PERONNET (+225) 20 21 31 23	An industrial wood-processing group located in Duékoué (Guémon), Guiglo (Cavally) and Danané (18 mountains). SIT is a partner of SODEFOR in the contracted management of the Goin-Débé (Thanry: 133,000 ha, 2010-2035) and Scio (IFD: 88,000 ha, 2010-2035) classified forests.
Tranchivoire	Mr Silue SONGUILIME Head of Planning (+225) 07 52 55 62 songuilmes@yahoo.fr	Tranchivoire is a timber processing company involved in the certification of timber origin and legality (OLB), in order to satisfy its increasingly demanding clients. This certification obliges the timber manufacturers concerned to adhere to all national and international regulation and insists on the traceability of timber. The company operates in the ER Programme area.
SIFCA	Mr Sié NOUFE Head of Sustainable Development (+225) 08 51 90 44 noufe@sifca.ci	SIFCA is an Ivorian agro-industrial group operating in three markets: (i) natural rubber, (ii) palm oil and (iii) sugar. It has ten subsidiaries, including PALMCI (palm oil) and SIPH (natural rubber). Within the ER Programme area, PALMCI operates in Taï, and SIPH in San Pedro/Rapides-Grah. Since 2015, SIFCA has adopted a zero-deforestation approach. SIFCA is involved in implementing the REDD+ mechanism by participating in meetings with the REDD+ Permanent Executive Secretariat (SEP-REDD+) and works closely with communities to reforest fallow land and with producers by providing them with training in sustainable planting techniques, climate change and conservation. SIFCA is a member of the Roundtable on Sustainable Palm Oil (RSPO) and Sustainable Natural Rubber Initiative (SNRI).
Société de transformation du bois du Cavally (STBC)	Marwan FATTAL	STBC is a timber processing company of the Fattal Group, with plants in Zagné and Taï. The company is a partner of SODEFOR in the contracted management of the Cavally classified forest (67,000 ha, 2010-2035). The Company signed a 5-year partnership agreement with SODEFOR in December 2004, then 25 years in November 2010 for the management of the Cavally classified forest.
Société de transformation du bois du Sud (STBS)	Marwan FATTAL	STBC is a timber processing company of the Fattal Group, with a plant in San-Pedro. The company is a partner of SODEFOR in the contracted management of the Haute-Dodo classified forest (196,000 ha, 2010-2035).
SIBD	Ms KESSELI	SIBD is a timber processing company with a plant in San-Pedro. The company is a partner of SODEFOR in the contracted management of the Dassioko classified forest (12,500 ha, 2008-2013).
SMCI	Mr Boubacar BEN SALAH	SMCI is a timber processing company of the Zein Group, with a plant in Yopougon. The company is a partner of SODEFOR in the contracted management of the Niégré classified forest (92,500 ha, 2010-2025).
TRABEX	(+225) 23 46 65 39	TRABEX is a timber processing company of the Zein Group. The company is a partner of SODEFOR in the contracted management of the Niouniourou classified forest (19,600 ha, 2010-2025) and works with SODEFOR in the reforestation of degraded forests and the assisted natural regeneration of non-degraded forests.

2 STRATEGIC CONTEXT AND JUSTIFICATION OF THE ER PROGRAM

2.1 Current status of the Readiness Package and summary of additional achievements of readiness activities in the country

A REDD+ readiness preparation proposal (R-PP) was submitted by the Republic of Côte d'Ivoire to the Participants Committee of the FCPF's Readiness Fund in November 2013 and was adopted by the Committee in December 2013[1]. Later the same year, the Republic of Côte d'Ivoire and the FCPF entered into a partnership agreement, followed by an agreement worth almost $3.8m on 24 September 2014[2].

Between June and July 2018, the Republic of Côte d'Ivoire carried out a participatory self-assessment of REDD+ readiness process. It revealed the significant progress made since the Republic of Côte d'Ivoire began the process and the impetus gained since the mid-process progress review made in May 2016.

This self-assessment process was based on 34 criteria of the Readiness Evaluation Framework Document. National interlocutors' evaluation was that 19 criteria had progressed significantly and five had progressed satisfactorily. No criteria were found less than satisfactory enough in terms of progress.

The consensus reached among the various national participants on the status of REDD+ readiness demonstrates that the Republic of Côte d'Ivoire has made sufficient progress to enter, in the medium term, the REDD+ investment phase, even though improvements are yet to be made to certain elements. Seven years after initiating the REDD+ procedure, the Republic of Côte d'Ivoire is convinced that only by entering the investment phase will the country be able to develop and improve REDD+ tools by testing them in the field, like with the ER Programme.

The final progress report on REDD + readiness (R-Package[3]) noted that the participatory self-assessment conducted between June and July 2018 has highlighted significant progress since the beginning of Côte d'Ivoire's engagement in the REDD + process with an acceleration compared to the mid-term review of the progress made in May 2016. The level of progress is considered as being sufficiently satisfactory by all stakeholders to consider the initiation of the investment phase. The report was validated by the FCPF Participants Committee on October 11, 2018 in Washington DC, USA.

Execution of the REDD+ readiness process

The Côte d'Ivoire REDD+ readiness process has involved the following studies and analyses:

- Analysis of the legal and regulatory framework related to the implementation of REDD+ in Côte d'Ivoire (2014, FAO);
- Cost-benefit study of the REDD+ in Côte d'Ivoire and mobilisation of the actors of the major agricultural and forest sectors (2014, EU-EFI);
- Analysis of the institutional framework of the REDD+ in Côte d'Ivoire (2015, UN-REDD/FAO);
- Evaluation of the ecosystem services of Taï National Park (2015, GIZ);
- Feasibility study on the implementation of a zero-deforestation agricultural policy (2015, EU-EFI);
- Wood-energy sector: Evaluation of the supply and demand of various sources of domestic cooking energy (2016, FCPF);
- Study of identification, analysis and mapping of the drivers of deforestation and forest degradation in Côte d'Ivoire (2016, UN-REDD/FAO);
- Evaluation of the potential for reforestation and agroforestry in Côte d'Ivoire (2016, FCPF);
- Analytical study of the state of land occupation and proposal for a standard regional land-use planning model integrating natural resource conservation issues (2016, FCPF);

[1] https://www.forestcarbonpartnership.org/sites/fcp/files/2013/Dec2013/FR%20Final%20Resolution%204%20Cote%20d%27Ivoire.pdf

[2] https://www.forestcarbonpartnership.org/sites/fcp/files/2015/April/FCPF_RCI_GA_9-22-2014%20Signed%20PDF.pdf

[3] https://www.forestcarbonpartnership.org/sites/fcp/files/CDI-R-Package%20RCI-EN%20-%20FV.pdf

- Analysis and mapping of public funding flows related to land use (2016, EU-EFI);
- Study evaluating the economic value of ecosystem services (2016, UN-REDD/UNEP).
- Design study of a REDD+ grievance redress mechanism (2016, FCPF);
- Feasibility study of a national system of payments for environmental services (PES) (2016, UN-REDD/UNEP);
- Evaluation of the private sector investment potential in Côte d'ivoire (2016, UN-REDD/UNEP);
- Diagnosis for the promotion and strengthening of the timber value chain in the context of REDD+ in Côte d'Ivoire (2017, UN-REDD/FAO);
- Mapping of the multiple benefits of the REDD+ in Côte d'Ivoire (2017, UN-REDD/UNEP);
- Economic and financial models for the scaling of sustainable cocoa production in Côte d'Ivoire (2018, EU-EFI);
- Social and strategic environmental assessment of the REDD+ mechanism and framework reports (Environmental and Social Management Framework, Resettlement Policy Framework, Process Framework for Access to Natural Resources, Physical Cultural Resource Management Framework, Pest and Pesticide Management Plan) (2018, FCPF).

All these studies are available on the website of the SEP-REDD+[4] of Côte d'Ivoire.

Table 1: REDD+ readiness tasks (R-package)

R-package objectives	Progress status	Validation dates
National institutions managing REDD+	Complete	October 2012
National guidance on payments for environmental services (PES)	Complete	July 2015
Qualitative analysis of factors of deforestation and forest degradation in Côte d'Ivoire	Complete	November 2016
Forest reference emission level (FREL)	Complete	December 2016 (UNFCCC submission - May 2017)
National REDD+ strategy	Complete	August 2017
Basic forestry data (biomass inventory, mapping)	Complete	October 2017
Information system on environmental and social safeguards	Complete	May 2018
Feedback and Grievance Redress Mechanism (FGRM)	Complete	July 2018
Strategic Environmental and Social Assessment	Under validation	November 2018
Environmental and Social Management Framework	Under validation	November 2018
National forest monitoring system (NFMS) + MRV of GHGs	Complete / Implementation plan 2017-2020 validated Updating on degradation component.	End of second quarter 2019
REDD+ benefit sharing mechanism	Under development	End of fourth quarter of 2018
National REDD+ register	Under development	First quarter of 2019

[4] http://reddplus.ci/bibliotheques/

2.2 Ambition and strategic rationale for the ER Program

The Taï National Park REDD+ programme is the first large-scale, integrated attempt at ecological development in the Republic of Côte d'Ivoire. The ER Programme involves climate change mitigation actions by establishing a holistic, coordinated framework for a land planning plan, and the strengthening of both public and private capacities for sustainable development, in order to reduce the pressure on existing forests and to re-establish forest cover, and based on pilot projects and initiatives to test activities against deforestation and degradation drivers.

The ER Programme should have a significant impact on the transformation of cocoa agriculture into zero deforestation agriculture, the restoration of forest cover, improved timber production and forest management. This would serve to meet energy requirements, ensure an increase in incomes and income diversification, and promote the conservation and sustainable management of natural resources and the protection of the diversity of local fauna and flora and of essential ecosystem services.

This is because, although the Republic of Côte d'Ivoire has seen strong economic growth (8.5% growth in 2016)[5], largely due to its agricultural sector, in particular cacao[6], this has been at the expense of its forest cover. Since 1960, the surface area of forest has dropped from 16 million hectares *(Lanly, 1969)* to 7.85 million hectares in 1986, 5.09 million hectares in 2000 and 3.40 million in 2015[7]. If nothing is done, the forests of Côte d'Ivoire will face the threat of being wiped out within the next decade.

***The overall objective of the programme is to develop a regional model of green development** that offers alternatives and incentives based on results-based payments. The purpose of this is to combat climate change, to help farmers diversify and increase their incomes, to protect natural resources, to restore forest cover and, to protect and enhance biodiversity.*
Ultimately, the programme aims to set in motion a virtuous circle combining economic development and environmental conservation.

[5] World Bank, 2016
[6] Agriculture accounts for 27% of the country's GDP, with agricultural products making up 66% and cocoa 38% of its export revenues (UNDP,2015).
[7] http://reddplus.ci/download/rapport-de-la-cartographie-de-la-dynamique-des-forets-en-cote-divoire/?wpdmdl=8121

AMBITION AND STRATEGIC JUSTIFICATION

Program area

The ER Programme covers 4,632,941 ha (more than 14% of the country), located in the southwest of the country, and encompasses five (5) of the thirty-two (32) regions of the country (Cavally, Nawa, San Pédro, Guémon and Gboklè). It contains the last existing primary forest of the Côte d'Ivoire, along with the Taï National Park and the N'Zo partial nature reserve, which constitute a haven for the conservation of biodiversity and ecosystems[8] in a dire state of conservation. The area has 97.7% forest cover and hold twenty-four (24) of classified forests largely degraded or deforested[9]. With the decline of the former cacao tree circles in the center of Côte d'Ivoire, the southwestern region has become a hotspot for cocoa farming and for the development of palm oil and natural rubber cultivation. This causes intense demographic pressure due to the migration of farmers and their families from the center of the country or from countries neighboring Côte d'Ivoire in the north (Burkina Faso and Mali). It is important to note that the greatest wealth of endangered species in the Republic of Côte d'Ivoire is in the southwest and southeast of the country, which also corresponds to areas that have lost a significant amount of forest cover over the past 15 years[10].

The ER Programme area already hosts a certain number of pilot programs/projects and initiatives run by bilateral organisations such as the GIZ with the CAZ and PROFIAB, or the World Bank with the Forest Investment Program (FIP), or private organisations such as Mendelez and NGOs. These organisations are already present in the area, and the activities of such pilot programs and initiatives are combatting deforestation and degradation, allow to test these pilot activities, and make an alternative kind of development possible. Building on these pilot projects, the ambition of the programme is: (i) to expand and to ensure the continued existence of the activities started, even if this means incorporating further activities according to the lessons learned, and (ii) to test results-based payments on a large scale within the REDD+ framework in the chosen region.

Ambition of the ER Program

Over the course of the program's reference period (2005-2015), total deforestation in the ER Programme accounting area amounted to 416 301,1 ha, constituting 27 753,4 ha per year (see table 11, section 8). According to its Intended Nationally Determined Contributions (INDCs), Côte d'Ivoire strives to reduce its GHG emissions by 28% compared with 2012 levels; that is, to 24.5 MtCO2 Eq by 2030 (excluding the forestry sector). One of its reduction strategies is to reduce GHG emissions resulting from deforestation and forest degradation, combined with sustainable forest management and ambitious reforestation policies.[11] **The ER Program should not least contribute to this objective, with ambitions of reaching a total emissions reduction of 42 million tCO2e between 2019 and 2027**, but program's **tCO2e** won't account in the INDC, as forestry is excluded.

[8] The Taï National Park and the N'Zo fauna reserve (which extends the park into the north) account for more than 50% of the total surface area of forest in Western African under strict protection. It is home to a variety of rare flora and fauna, including the pygmy hippopotamus, mouse-deer, forest elephants and chimpanzees. The park was included on the list of biosphere reserves in 1978 and became a UNESCO world heritage site in 1982 under the MAB-UNESCO programme.

[9] The classified forests managed by SODEFOR, such as those of the ER Programme area, are severely degraded, by around 30% according to the Ministry for Water and Forests (MINEF) (2008) or by 30-40% according to SODEFOR (2014). The primary reason for this is incursion by corn crops, cocoa and mining-related forest activities. Of the 231 nationally classified forests, only 26% have a development plan devised, while only 17% have one in place.

[10] See study : "Cartographie des bénéfices multiples de la REDD+ en Côte d'Ivoire" EU-EFI.

[11] GHG emissions related to land use and changes in land and forest use are not included in the general reduction objective but must undergo more precise studies (inventories) between now and 2020 if they are to be included in the general objective. However, mitigation actions in the forestry sector are expected in Côte d'Ivoire's INDCs.

Coherence with national policies and development strategies

In a general sense, the ER Programme is completely congruous with the following national policies and development strategies:

The National Gold Panning Streamlining Programme (PNRO, 2013) promotes the concept of mine site rehabilitation as a way of combatting deforestation caused by illegal panning activities and restoring degraded sites. The mining sector reform led to the enactment of law 2014-138 of 24 March 2014 on the Mining Code[12]. This law defines the concept of site rehabilitation as the return of an exploited site to a state close to its original state (including forest cover) and applies to all industrial or semi-industrial mining operations. Industrial and semi-industrial exploitation licenses are also subject to environmental and social impact assessments (ESIAs) and environmental and social management plans (ESMPs) (including a rehabilitation plan). Although the site rehabilitation requirements are less stringent for artisanal miners (to restore the state of the site after relinquishing a license, article 73), the gold panning streamlining programme enforced in 2014 serves as a means of implementing guidance on the law and limiting deforestation resulting from the appearance of new illegal sites.

The Protected Area Management Programme (PCGAP, 2013). The updted PCGAP (2014-2018) is substantiated by the limitations of the current system of managing national parks and reserves, in light of the various and increasing pressures to which they are subject. A prospective analysis of the problems identified shows that the pressures exerted on protected areas will only increase in the future and that the spiraling degradation of biological diversity cannot but intensify in the absence of a significant response. The general objective of the PCGAP is to contribute, in a sustainable manner, to the development and conservation of a representative sample of national biological diversity in national parks and nature reserves, as well as maintaining ecological processes. Its specific objective is to implement an effective and sustainable system of protecting and developing national parks and reserves (NPRs) and of expanding their network. There are six (6) intended outcomes: (i) for an adapted, functional legal and institutional framework to be implemented, (ii) for NPRs to be staffed by suitable, competent and motivated individuals, (iii) for the introduction of a functional system for the sustainable funding of NPRs, (iv) for PNRs to be protected, planned and developed, (v) for the populations to sustain the sustainable management of NPRs, and (vi) for the network of NPRs to become more representative of Ivorian ecosystems and for a system of corridors to be introduced. With a view to ensuring the sustainability of the actions implemented, the PCGAP will prioritize the strengthening of management capacity and will be implemented according to a concerted, integrated approach.

The National Development Plan (PND, 2015), The PND (2016–2020), adopted in December 2015, identifies five (5) lines of development. Line 4 on the "Development of infrastructure distributed in a standardized manner across the country and environmental conservation" provides for: (i) the reconstitution of forest heritage and the stabilization of forest cover of 20% of the country, and (ii) the conservation of biodiversity and forest governance, in line with the FLEGT action plan and the sustainable management of forest resources of the new Forest Code 2014. The latter outlines a number of objectives related to sustainable forest management:

- To strengthen the contribution of the forestry sector to sustainable development, for the benefit of future generations, by promoting the environmental, socioeconomic and cultural functions of forest resources;
- To develop and conserve biological diversity and to contribute to the balance of forest ecosystems and other related ecosystems;

[12] http://www.gouv.ci/doc/accords/1449057553code-minier-2014.pdf

- To promote the participation of local populations, NGOs and partnerships working for the sustainable management of forest resources, in order to increase their incomes and improve their living conditions, taking into account their individual and collective rights;
- To promote the creation of forests for communities, territorial groups, natural persons and entities under private law;
- To develop forest resources by means of more advanced timber processing and more profitable forest products;
- To promote forest cover of at least 20% of the country's surface area.

The Intended Nationally Determined Contributions (INDC, 2015), INDC in their major guidelines, provide, in relation to agricultural and forestry mitigation, for: (i) the alignment of national planning and the planning of rural areas for the development of agriculture and forestry, according to the National Agricultural Investment Plans, in accordance with the REDD+ process on the limitation of deforestation, the regional land use planning and development schemes, the securing of land and the delineation of village land; (ii) agricultural development that does not expand into remaining forest areas and emits fewer GHGs via more intensive agricultural practices, agroforestry and the attainment of "zero deforestation agriculture"; (iii) the development of the forestry sector through sustainable forest management and forest governance, via the application of forestry regulation and trade under FLEGT, participatory forest management plans, the stabilisation and restoration of farmland in classified forests, the strengthening of carbon stock in degraded forests, and the implementation of PES, and (iv) the development of energy solutions based on fast-growing trees for the production of coal and the development of agricultural biomass.

The Rural Land Policy (PFR, 2015), The PFR was developed to compensate the failures and difficulties of implementation of Law 98-750 of December 23, 1998 on rural land. The overall goal of the Rural Land Policy is to secure rural land tenure for rural poverty reduction, social cohesion and sustainable natural resource management, and aims to (i) to clarify rural land rights, (ii) to establish security of rural land ownership, (iii) to encourage and facilitate the acquisition of land titles, (iv) to ensure the sustainable management of land conflicts, (v) give value to the rural property, (vi) contribute to the modernization of agricultural lands, (vii) secure investment in rural land, and (ix) promote climate-friendly agriculture.

The PFR is planned over a period of ten (10) years, from 2017 to 2027, and will take place in three (3) phases: (i) Preparatory phase (2017 - 2018), this phase prepares the implementation through the popularization of the policy document and the finalization of strategic and programmatic frameworks such as the National Rural Land Security Program (PNSFR) and legal and institutional reforms; (ii) the start-up phase (2018 - 2019) during which the autonomous organization ‘’Agence Foncière Rurale’’ (AFOR) will be set up, training in the land sector, continuing training, information and sensitization of the populations, the capacity building of the various stakeholders, the installation of rural land management bodies, the setting up of conflict management mechanisms, the regulation of the number of experts and equipment of the field departments; and (iii) the Extension Phase (2019 - 2027), which corresponds to the acceleration of the implementation of the rural land policy.

The National Land Planning Policy (PNAT, 2018) constitutes a regulatory reform of land planning currently under way. A pilot framework law on Land Planning and Development has been devised with the support of the agencies managing REDD+ in Côte d'Ivoire. This contribution has made it possible to incorporate the REDD+ concept into the pilot law, including: (i) the REDD+ definition in the general provisions, (ii) an incentive to set in motion activities aimed at achieving the REDD+ objectives in the provisions on environmental protection and improvements to quality of life, and (iii) the promotion of sustainable forest management in an approach where REDD+ is used as a technical instrument for land planning and development, within the framework of the National Land Planning Scheme (SNAT). A pilot phase incorporating REDD+ guidance into land planning tools, in accordance with the guidance of the pilot law, is currently being put into action, with (i) a revision of the Regional Land Planning Blueprint Scheme of Nawa and Cavally, and (ii) the creation of local development plans in the Mé region.

The National Forest Rehabilitation Conservation and Expansion Policy (PNPREF, 2018) has four (4) objectives: (i) to conserve biodiversity, (ii) to conserve a national climate favorable to agricultural activities, (iii) to respect international commitments against climate change, to forest rehabilitation, carbon sequestration and zero deforestation agriculture, and (iv) to promote social and economic development and the sustainable development of a competitive timber industry in order to meet the wood energy needs of populations (firewood and charcoal). A particular emphasis is placed on: (i) restoring classified forests according to their degree of degradation by providing appropriate but different solutions according to their state, (ii) implementing the agroforestry system, and (iii) developing forests useful for meeting the demand for wood energy.

The National Agriculture Investment Plan (PNIA, 2016) (2016–2020): an analysis of alternative sources of growth revealed that agriculture will remain the primary source of growth and poverty reduction both nationally and in rural settings, at least until 2020. For this reason, Côte d'Ivoire's Ministry of Agriculture has developed the second-generation National Agriculture Investment Programme, in order to address certain factors from a growth and poverty-reduction perspective. The PNIA identifies the agricultural development programs and guidance to be adopted in coming years as well as the investment schedule. However, it must be noted that the current PNIA, drawn up for the period 2010-2015, has been superseded and that a new programme (2017-2025) is in the process of being finalised to initiate a transition towards zero-deforestation agriculture. This decision was taken in 2014 and announced by the country's President at the Climate Summit in September 2014, within the context of the New York Declaration on Forests, and reiterated in the INDCs (see above). The practical ways in which the guidelines of the Zero Deforestation Agriculture law and policy are to be put into effect are discussed with professionals from the various sectors, culminating in their signing the Cocoa & Forests Frameworks for Action.

The National Environmental Action Programme (PNAE, 1996). After validating the white paper on the environment, which defines a diagnosis and strategy, in 1994, Côte d'Ivoire went on to draw up the PNAE, which it adopted in 1996. The diagnosis established above had highlighted the principal problems to be resolved, including the disappearance of forest cover and, therefore, the loss of biodiversity, and the generally poor technical advancement of rural communities, thus contributing to overexploitation, soil impoverishment and the rapid occupation of natural resources. In order to implement the PNAE, a strategy was proposed based on six (6) action principles: continuity/consultation, participation, consistency, cooperation/dialogue and coordination. The following three general objectives were also defined: (i) to promote sustainable development and to manage natural resources in a reasonable manner, (ii) to protect heritage and biodiversity, and (iii) to improve quality of life.

The PNAE, which has been in place for 15 years (1996-2010), consists of ten (10) sections, namely: (i) Sustainable agricultural development; (ii) Conservation of biodiversity; (iii) Management of human settlements; (iv) Coastal management; (v) Combatting pollution; (vi) Integrated water resources management; (vii) Improved energy resource management; (viii) Research, education, training and awareness; (ix) Integrated and coordinated management of environmental reporting, and (x) Improvement of the institutional and regulatory framework. However, the PNAE became obsolete in 2011 and no steps have been taken to update it in light of the new environmental challenges facing the country.

Consistency of the ER Programme with the National REDD+ Strategy

The ambition of the ER Programme is entirely aligned with the national REDD+ strategy adopted by the government in 2017, which promotes integrated sectoral and inter-sectoral measures. These measures aim to (i) stabilise and sustainably reverse, from 2017, the trend of the disappearance of natural forests, (ii) to gradually and simultaneously restore forest cover until 20% forest cover is achieved, between now and 2030, and then (iii) to sustainably manage these forests while meeting the objectives of poverty reduction and the human and social development of local communities, within a framework of social, cultural and gender equity (SN REDD+, 2017). The measures are perfectly in line with the interventions provided for in the ER Programme, outlined in section 4.3 below.

This translates into two general objectives measured upon reaching 2030:

(i) An 80% reduction in the deforestation resulting from agricultural production from 2015, and

(ii) The restoration of five million hectares of degraded land and forest.

The ER Programme is based on a number of actions stemming from eight strategic options of the national REDD+ strategy, of which five are sectorial and three are cross-sectoral.

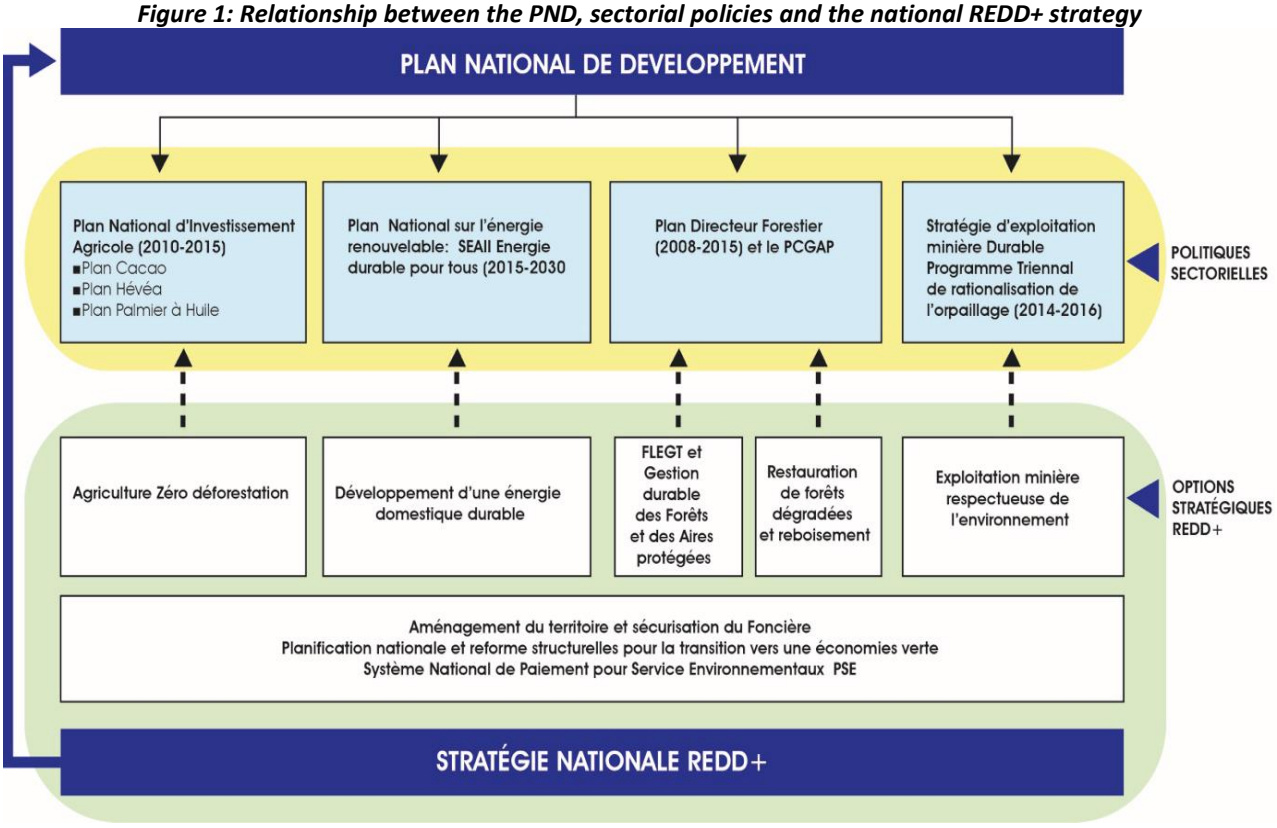
The five sectoral options are:

1. Zero deforestation agriculture in public-private partnership,
2. Development of a sustainable domestic energy strategy with the development of agricultural biomass,
3. Sustainable management of forests and the conservation of protected areas and sacred groves,
4. Afforestation, reforestation and restoration of degraded lands and forests, and
5. Environmentally friendly mining.

These are underpinned by three cross-sectoral options, namely:

1. The implementation of a payment for environmental services (PES)-type incentive system,
2. Land planning and acquisition, and
3. National planning and structural reforms for the transition towards a green economy.

Figure 1: Relationship between the PND, sectorial policies and the national REDD+ strategy



Updating the REDD+ National Strategy:

The National REDD+ strategy first period of implementation runs over thirteen (13) years period, from 2017 to 2030. Before assessing the National REDD+ strategy implementation and its achievements planned by 2030, an iterative mid-term assessment will be done after every five (5) year period. It will identify barriers and challenges, assess progress, and identify gaps to achieve overall goals. In this regard, the ER-P experience will update the National REDD+ strategy, be part of the iterative assessment, and provide lessons from field experiences.

2.3 Political commitment

The Taï National Park ER Programme reflects the country's strong political commitment to ecological growth, the reduction of deforestation and the restoration of forest cover in Republic of Côte d'Ivoire. Côte d'Ivoire adopted the international REDD+ mechanism in 2011, in a bid to contribute to the global fight against climate change and to restore its severely degraded forest cover. The country re-affirmed its commitment at Côte d'Ivoire's highest summit in 2012 by enacting presidential decree no. 2012-1049 of 24 October 2012, on the creation, organisation and operation of the National REDD+ Commission.

The Ivorian government's objective is to expand forest cover to at least 20% of the country by 2030. This objective of 20% forest cover was driven by political will, expressed by the country's President during the signing of the New York Declaration in September 2014 and in front of the United National General Assembly, when he declared Côte d'Ivoire's intention to transition towards "zero deforestation cocoa" from 2017. This was followed by various speeches to the United Nations General Assembly on climate change, when the Forest Friendly Cocoa strategy was presented, incorporated into the guidance note on Zero Deforestation Agriculture, presented during COP 21 in Paris in 2015.

The creation of the National REDD+ Commission also attests to the political and inter-sectorial commitment of the different ministries to REDD+. The commission is an inter-sectorial body charged with providing analysis, advice and guidance in connection with REDD+ implementation. It is composed of a National REDD+ Committee (CN-REDD+) responsible for piloting the REDD+ mechanism, an Inter-Ministerial REDD+ Technical Committee (CTI REDD+) responsible for inter-sectorial coordination, and a REDD+ Permanent Executive Secretariat (SEP-REDD+) responsible for implementing the REDD+ mechanism.

The CN-REDD+ is Côte d'Ivoire's highest national decision-making authority. The First Minister or his representative chairs it, and its secretariat is answerable to the Minister for the Environment and Sustainable Development. In addition, its members form the advisory board to the country's President on environment and forests, and act as representatives of the Ministers for forests, the Economy, Planning and Development, Agriculture, Infrastructure, Decentralisation, and Mining and Energy.

To support the SEP-REDD+, a small team of representatives of certain ministries, called the REDD+ Inter-Sectorial Task Force, has been instated within the context of the T21 Model. This tool, devised with the support of the UN-REDD programme, takes into account the cornerstones of sustainable development in national planning. The tool provides a way of analysing the different development scenarios and choosing the best one based on an analysis of the economic, social and environmental aspects, as well as the interactions between the different sectors. It will also allow adjustments to be made to Côte d'Ivoire's 2040 vision and inform the development of future National Development Plans (PND) by ensuring that forests are managed sustainably.

Prior to the development of the program, Côte d'Ivoire has embarked on pilot projects and initiatives that test the activities and policy initiatives that will be used for program development and implementation:

- 2014 - 2017: Preparation and validation of the National REDD + Strategy.
- 2014 - 2017: Preparation of REDD + pilot projects and agricultural policy reforms with the National Agricultural Investment Program 2 (PNIA 2 2018 - 2025).
- 2017 - 2019: Implementation of the REDD + pilot projects of La Mé and la Nawa.
- 2016 - 2018: Preparation and validation of the PIF project.
- 2016 - 2019: Conceptualization and finalization of the PRE.
- 2018 - 2019: Forest Policy Reform and the Cocoa Forest Initiative (CFI).
- 2018 - 2019: Preparation of projects for the reform of the cocoa sector.

The Republic of Côte d'Ivoire has also demonstrated its political commitment to REDD+ and the Taï National Park ER Programme at the following events over the past six (6) years:

- **July 2012** - The Minister for the Environment and Sustainable Development requested to participate in the Carbon Forest Partnership Facility for REDD+ readiness.
- **October 2012** – The President of Republic of Côte d'Ivoire enacted decree no. 2012-1049 of 24 October 2012 on the creation, organisation and operation of the REDD+ National Commission.
- **May 2014** - The Minister for the Environment, Urban Health and Sustainable Development, Rémi Allah-Kouadio, chairs the national workshop on the validation and endorsement of the REDD+ readiness document (R-PP).
- **September 2014** - The President of the Republic of Côte d'Ivoire, Alassane Ouattara, signed the New York Declaration on Forests with the objective of eliminating deforestation related to agricultural production, and presented to the United Nations General Assembly on its transition towards "Zero Deforestation Cocoa" from 2017 and its objective of ensuring 20% national forest cover by 2030.
- **February 2015** - The President of Republic of Côte d'Ivoire enacted law no. 2014-427 of 14 July 2014, on the new Ivorian forest code, which embeds the objective of 20% forest cover in legislation.
- **October 2015** - The Minister for the Environment, Urban Health and Sustainable Development, Rémi Allah-Kouadio, adopted the Emissions Reduction Programme idea note (ER-PIN) during a national workshop on the Taï National Park, which he chaired in the southwest.
- **November 2015** - The Minister for the Environment, Urban Health and Sustainable Development, Rémi Allah-Kouadio, signed a letter of intent with the Forest Carbon Partnership Facility (FCPF) to purchase 16.5 million tones of CO2e under the Taï National Park ER Programme.
- **December 2015** – The Minister for the Environment presented to the SEP-REDD the Forest Friendly Cocoa strategy, which was incorporated into the "Zero Deforestation Agriculture" policy guidance note presented at the COP 21 in Paris.
- **November 2017** - The Minister for the Environment, Urban Health and Sustainable Development presented the National REDD+ Framework Strategy and Cocoa and Forests action plan at the COP 23 in Bonn.
- **January 2018** – The Minister for Health, the Environment and Sustainable Development, Anne Désirée Ouloto, launched the Cocoa and Forests Initiative for the practical implementation of Zero Deforestation Agriculture.
- **May 2018** – A communication from the Minister for the Environment and Sustainable Development, Anne Désirée Ouloto, was presented to the carbon market readiness partnership assembly in Frankfurt on the recent commitment of the Ivorian government and private sector to halt deforestation with zero deforestation agriculture policy.

3 ER PROGRAM LOCATION

3.1 Accounting Area of the ER Program

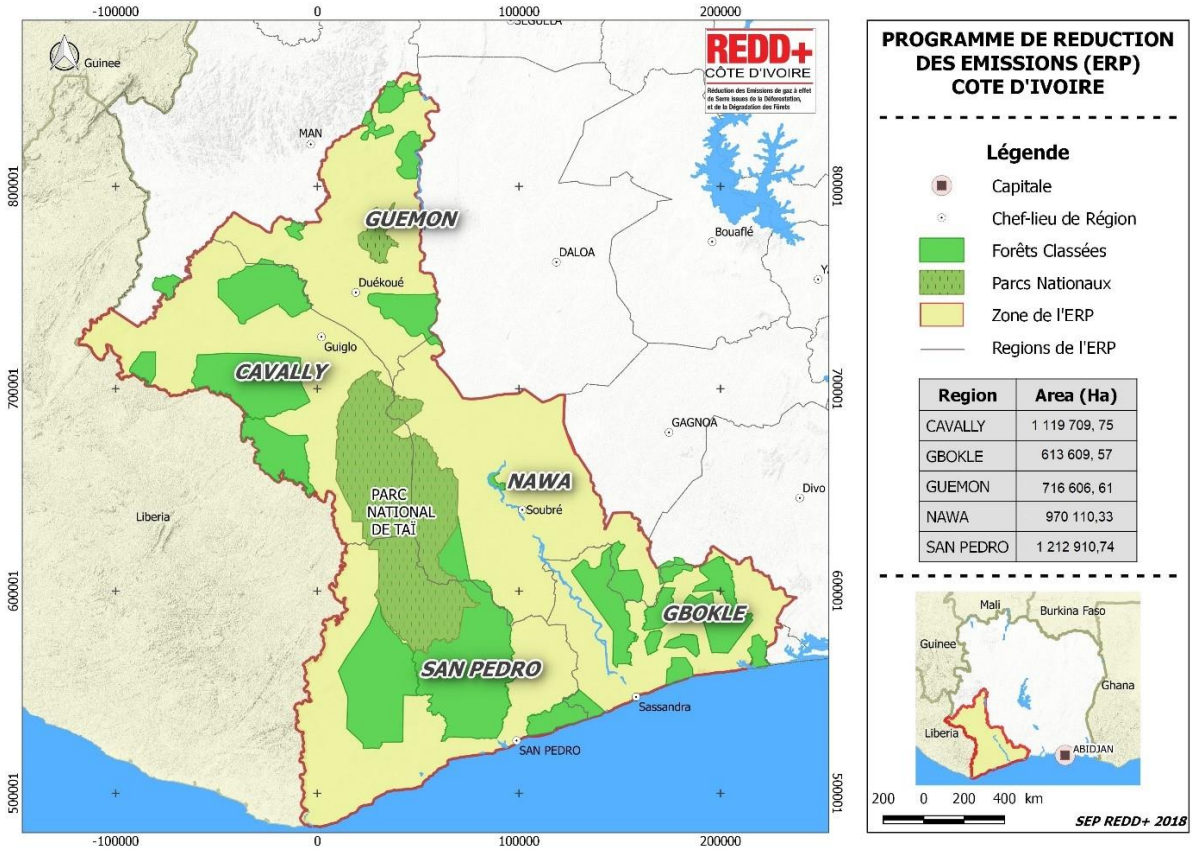
The ER Programme area is located in the west and southwest of Côte d'Ivoire (between the 4th and 7th parallels north and the 5th and 9th meridians west). It encompasses the country's primary forest and biodiversity resources, and cocoa, natural rubber and palm oil crops. The area covers 4,632,941 hectares (more than 14% of the country area), has an estimated population of 3,659,904 inhabitants (General Population and Housing Census *(RGPH, 2014),* and comprises five (5) of the thirty-two (32) regions of the country (Cavally, Nawa, San Pédro, Guémon and Gboklè). It is one of the last remaining pockets of primary forest in Côte d'Ivoire. Figure 2 below shows a map of the region. The Regions correspond to the new administrative division of Côte d'Ivoire, they are both local authorities and administrative districts, composed of Regional Councils with an elected Presidents for 5 years. In each Region, a Prefet, who is therepresentative of the Central State, is appointed.

The program area is one of the last pockets of primary forest in Côte d'Ivoire, but also has many degraded forests. It is important to note that the greatest wealth of endangered species in Côte d'Ivoire is in the southwest and southeast of the country, which also corresponds to areas that have lost a significant amount of forest cover over the past 15 years[13].

The rate of deforestation[14] in the ER-P area between 2000 and 2015 is estimated at 1.94%, which is lower than the national deforestation rate over the same period, which was 2.66%.

Figure 2 below shows a map of the region.

Figure 2: Map of the ER Program area



[13] See study: "Cartographie des bénéfices multiples de la REDD+ en Côte d'Ivoire" EU-EFI.

[14] The rate of deforestation is calculated from the FAO formula (1995) where $\boldsymbol{T} = (\frac{S2}{S1}^{\frac{1}{t2-t1}} - \mathbf{1}) \times \mathbf{100}$

This southwestern region is the most forested area of Republic of Côte d'Ivoire and also contains the country's largest carbon stock (see figure 3 below). Its forestland is divided between the Taï National Park and the N'Zo partial reserve, both of which cover 581,016 hectares, representing 50% of the total surface area of West African forest. The Mont Peko National Park, and the 24 classified forests are covering a total of around 1.1 million hectares. However, these classified forests are severely degraded or even completely defrosted. A list of protected areas and classified forests in the ER-P is outlined in the table below:

Table 2: Classified forests and protected areas of the ER Programme area

Type	Name	Category	Region	Department	Area in ha
Classified forest	Bolo-Est	3.	GBOKLÈ	SASSANDRA/FRESCO	10.174.
Classified forest	Bolo-Ouest	3.	GBOKLÈ	SASSANDRA	6.605.
Classified forest	Cavally	1.	CAVALLY	GUIGLO/TAÏ	64.200.
Classified forest	Cavally-Mont-Sainte	3.	CAVALLY	BLOLEQUIN/TOULEPLEU	10.000.
Classified forest	Dakpadou	3.	GBOKLÈ	SASSANDRA	300.
Classified forest	Dassioko	2.	GBOKLÈ	FRESCO/SASSANDRA	12.540.
Classified forest	Duekoue	3.	GUEMON	DUEKOUE	52.679.
Classified forest	Flansobli	3.	GUEMON	FACOBLY	13.900.
Classified forest	Goin-Debe	3.	CAVALLY	GUIGLO/BLOLEQUIN	133.170.
Classified forest	Haute-Bolo	3.	GBOKLÈ	SASSANDRA	19.674.
Classified forest	Haute-Dodo	3.	SAN-PEDRO/NAWA	TABOU/SAN-PEDRO	196.733.
Classified forest	Kouin	3.	GUEMON	FACOBLY	5.000.
Classified forest	Krozalie	3.	GUEMON/TONKPI	ZOUAN HOUNIEN	9.300.
Classified forest	Monogaga	3.	SAN-PEDRO	SAN-PEDRO	39.828.
Classified forest	Mont Kourabahi	3.	NAWA	SOUBRÉ	3.350.
Classified forest	Mont Tia	3.	GUEMON	KOUIBLY	24.900.
Classified forest	Niégré	3.	GBOKLÈ/NAWA	SASSANDRA/SOUBRÉ/ GUÉYO	92.500.
Classified forest	Niouniourou 2	3.	LO-DJIBOUA/GBOKLE	LAKOTA/GUÉYO	19.600.
Classified forest	Okromoudou	3.	LO-DJIBOUA/GBOKLE	DIVO/LAKOTA/FRESCO/ SASSANDRA	96.443.
Classified forest	Port-Gauthier	3.	GBOKLÈ/GÔ-DJIBOA	FRESCO	10.694.
Classified forest	Rapides Grah	3.	SAN-PEDRO/NAWA	SAN-PEDRO/TABOU/SOUBRÉ/MÉAGUI	263.900.
Classified forest	Scio	3.	CAVALLY/GUEMON	GUIGLO/BLOLEQUIN/ BANGOLO	88.000.
Classified forest	Semien	3.	GUEMON	FACOBLY	3.730.
Classified forest	Tyonle	3.	GUEMON/TONKPI	MAN	2.112.
National Park	Taï		SAN PEDRO/NAWA/ CAVALLY	GUIGLO/SOUBRÉ/ SAN PEDRO/TABOU	508.186.
National Park	Mont Peko		GUEMON	GUIGLO/SOUBRÉ/ SAN PEDRO/TABOU	34.000.
Natural Reserve	N'Zo		NAWA	BUYO	72.830.

Figure 3: Map of carbon stock in Republic of Côte d'Ivoire and in the ER Programme area.

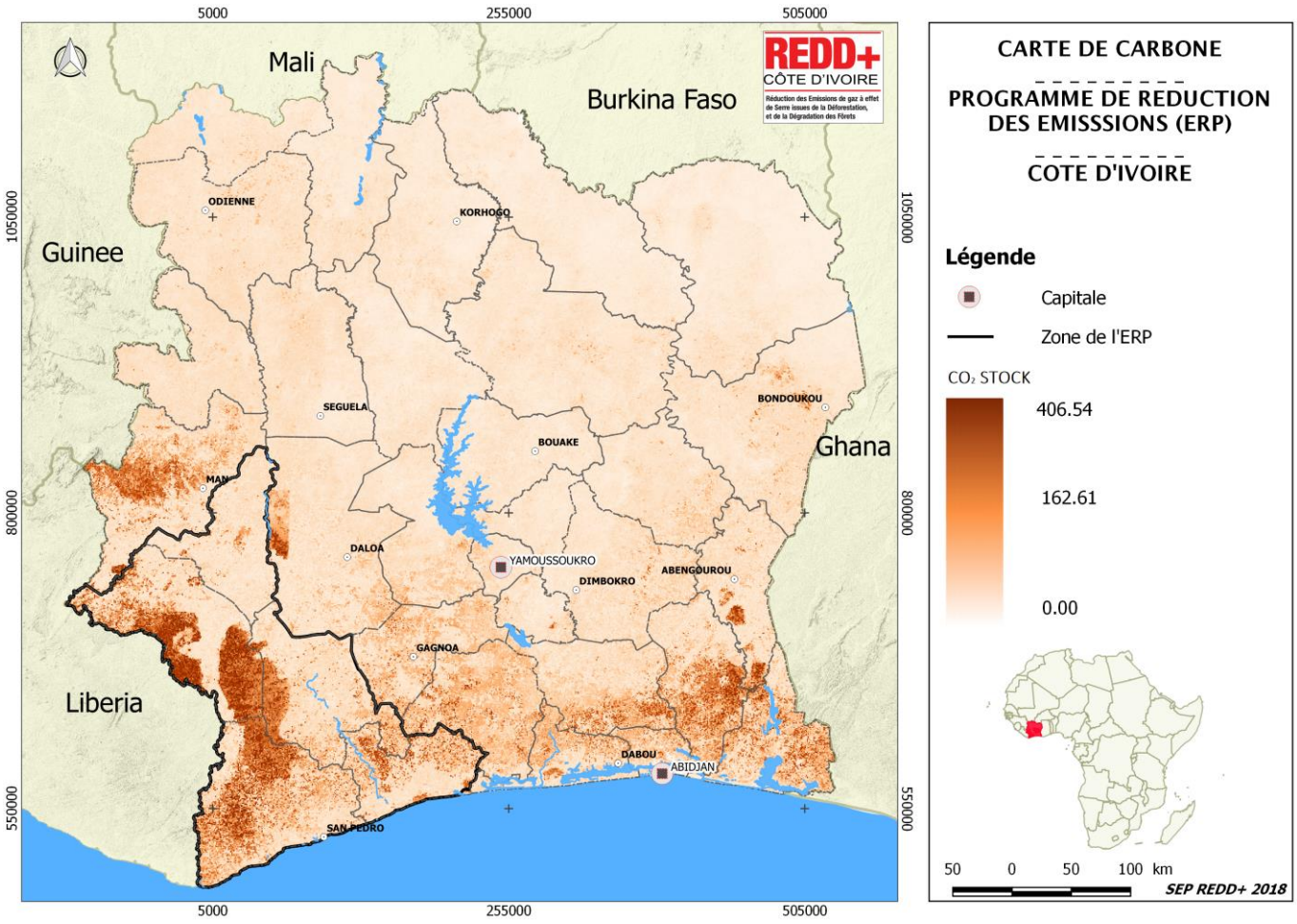


Table 3: Surface area in the ER Programme area

Programme area	4,632,941 **ha**
Forest area included in the ER Programme area (parks, reserves and classified forests)	1,740,032 ha
Rural estate	2,892,909 ha
Percentage forest cover in the ER-P area in 2015	20.20%*

*It should be noted that the total area covered by parks, reserves and classified forests refers to their administrative boundaries and not to forested areas.

3.2 Environmental and social conditions in the Accounting Area of the ER Program

ENVIRONMENTAL CONDITIONS

The ER Program (ER-P) area is located in the southwest of Republic of Côte d'Ivoire, a subequatorial region with heavy precipitation. As a result, vast, dense, humid forests would have formerly covered the ER-P area. Nowadays, only the large massif of primary forest, represented by the Taï National Park and the N'Zo fauna partial reserve, remains, along with relics of natural vegetation that have been spared in Mont-Péko National Park, in certain classified forests, at sites that are difficult to access due to slopes or the risk of flooding, and in very small forests sacred to local communities.

The natural plant formations typical of the ER Programme area are as follows:

In ombrophilic areas, which cover the regions of San-Pedro and Gbôklè, as well as half of the Cavally and Nawa regions, representing around 70% of the ER-P area:

Dense, extremely humid forest: this formation, associated with heavy precipitation and soil with good water retention, makes up the majority of the San-Pedro region. It remains only in the south and west of Taï National Park, along the length of the river Hana and on fragments of land elsewhere in the region, including on the steepest slopes and hill summits of Grabo (in the classified forest of Haute-Dodo).

Dense evergreen forest: this formation occupies the west of the San-Pedro region, the Gbôklè region and the southern half of the Cavally and Nawa regions. It exists in significant-sized colonies only in the Taï National Park, where it occupies northern and southeastern areas, and in the classified forests of Cavally, Port-Gauthier and the southern part of the classified forest of Dassioko. This type of forest exists only in residual pockets in several other classified forests of the ER Programme area (Bolo-Est, Bolo-Ouest and Haute-Bolo, Cavally-Mont-Sinté, Dakpadou, Monogaga, Niégré, Okromodou and Rapides-Grah) and in rural areas.

In mesophilic areas, which cover the northern halves of the Cavally and Nawa regions, as well as the Guémon region, representing around 30% of the ER Programme area:

Dense, semi-deciduous forest: this group characterises the northern halves of the Cavally and Nawa regions. No significant colonies of this type remain, given that the Mont-Péko National Park and classified forests of the area (Davo, Duékoué, Monts-Kourabahi, Niouniourou, Scio and Tyonlé) have, for the most part, been used for agriculture.

In every one of the area types below, particular, natural formations associated with the soil conditions can be found, albeit over small surface areas, with floristic variations associated with the phytogeography areas concerned:

Forests in hydromorphic soils (marshy, riparian or temporarily flooded zones, depending on the case) can be found in certain shallows. The restoration of vegetation after the destruction of hydromorphic and raffia forests is often characterised by non-woody or herbaceous plants.

Aquatic plants are found in permanent rivers and the Buyo, Fahé and Soubré dams.

Mangroves can be found at the mouth of coastal rivers (including a small stretch of the Dassioko classified forest) and at the western end of the Ebrié lagoon (Port-Gauthier classified forest).

Vegetation on exposed rocks, including all xerophilic formations located on granite inselbergs (Mont Niénokoué in Taï National Park, the peaks of the Mont-Péko National Park, and several classified forests).

Given that natural formations have been considerably affected by agriculture in the entire ER Programme area, to a great extent, only anthropised formations and patches of crops, fallow land and strips of degraded forest remain. Farming practices (the race for land and the cutting back of fallow land) combined with the

forest exploitation practices of rural areas have resulted in a drastic reduction in forest cover in these areas.

Only the Taï National Park has dense forest cover, despite some attempts by cocoa farmers to settle within the parc boundaries during the political and military crisis early 2000. Thereafter, the illegal cocoa farms (over 4480ha) within the park boundaries were destroyed between the time period of 2012 to 2014, and since then, the total forest recovery is on track.

The climate is sub-equatorial, hot and humid all year round, and was characterized until the 1970s by an average annual rainfall of more than 1,500 mm over the entire ER-P area. The regional maximum rainfall is observed towards Tabou and Grabo, with an average of 2,300 mm/year.

From the southwest corner of Tabou, a double decreasing gradient is observed:

- Towards the north, precipitation decreases progressively to 1,950 mm/year in Tai, 1,700 in Guiglo and 1,500 in Bangolo;
- Towards the East, precipitation falls to 1,600 mm/year in Buyo and less than 1,500 mm/year in Soubré and on the Sassandra river.

This precipitation is divided into four seasons:

- long rainy season: March-April to July / May-June north of the ER-P area;
- short dry season : July-August - this short season is not very marked towards Grabo;
- short rainy season : September-October;
- long dry season : November to February-March.

As in all regions with a subequatorial climate, the inter-annual variability is high (may double), but a downward trend in rainfall is generally observed. The question is whether this trend is simply a phase of decreasing climatic cycles over a period of 30-35 years, which should be followed by resumption in rainfall, or if the axis of the curves reflecting these cycles is itself tending towards a decline. For the decade 1981-1989, marked by several exceptionally dry years, average rainfall had fallen to 1,327 mm/year at Duékoué and 1,345 mm/year at Bangolo. According to ORSTOM (French Office for Scientific Research in Overseas Territories) analyses, the decline over the last thirty years is around 8 to 9%, placing the current average rainfall at around 1,400 mm/year.

The average annual temperature is 25°C, the minimum and maximum values being respectively 19° and 34°. The daily ranges remain small and the temperature does not play the role of being a limiting driver for vegetation.

The relative humidity in monthly averages is between 85 and 80% from the southwest to the northeast of the ER-P. In the northeast, the minimum monthly average, 60%, is recorded during the month of January, with daily minimums of less than 30%, which is a definite risk driver for bush fires. This risk of fire gradually spreads to all heavily anthropogenic areas to the south of the ER-P area.

At the soil level, the age of the soils and the alterations they undergo mask the initial differences in the substrates.

In the rain forest zone, the dominant soils are highly denatured ferralitic soils. According to *Perraud (1971),* "the soil fertility characteristics depend on the thickness and the percentage of coarse elements of the gravelly horizon: low if the gravelly horizon is more than one meter thick with 60% coarse elements, medium if it is only 40-50 cm and less than 40% coarse elements. The chemical properties only come into play secondarily: the highly denatured soils will be better adapted to oil palm or rubber crops, which can compensate for the poverty of mineral reserves by a large production volume, whereas Moderately denatured soils will be more favorable to more demanding shrub crops such as coffee and cocoa.

In the mesophilic zone, in Guémon, characterizing the interfluve of the Sassandra and N'zo, soils from granites form a uniform whole within the southern glacis zone. Ferralitic and always strongly denatured, they belong

to the "remodeled" groups - the presence of a horizon rich in coarse elements; thin - and "typical" - humic horizon, soils with a profile formed by the normal succession of ABC horizons; humic horizon with a more or less lumpy structure depending on the surface clay content. In direct contact with the gravel horizon, a variegated horizon sometimes leads to phenomena of induration and even to the formation of a carapace.

The valley bottoms are occupied by hydromorphic soils with a heterogeneous texture that is rather coarse with weak chemical properties. The humic horizon is very thin, resting on a level of coarse sand or pebbles and quartz gravels, itself on a gleyed weathered horizon.

At the top of the landforms soils are characterized by shallow depth. The weathered horizon and, often, weathered granite are less than 80 cm. When the sound rock is very close to the surface (less than 20 cm), it becomes either lithic soils or tropical rankers at altitude.

In the state of knowledge of around the year 2000 (ECOSYN project), the Taï area southwest of the ER-P zone contained at least 32% of the plant species of the humid, dense, West African forests - 1,421 species out of nearly 4,500 identified - and 65% of the rare or endemic species of West Africa - i.e. 321 out of 494 species. The endemic species known as "Sassandrian", of which there are about a hundred, would have appeared during dry episodes during which the dense rain forest would have been reduced to a few refuges, including one at the borders of Côte d'Ivoire and Liberia, in the Grabo hills region and the Haute-Dodo classified Forest (what's left of it...), and the Bas-Cavally floral hotspot. The conservation of the southwest of the Tai National Park is a crucial issue.

On the other hand, in Mont-Péko National Park in the north-east of the ER-P zone, only twenty-three (23) "endemic West-African" species are present, including three (3) "West Sassandrians", of which one (1) was considered "rare" and six (6) as "relatively rare". The current state of natural formations suggests that they may have disappeared.

With regard to animal species, the pronounced degradation or loss of their habitats outside Tai National Park has jeopardized their survival. Today, Taï National Park is home to over forty (40) species of mammals, birds, reptiles and gastropods on the IUCN Red List, including the elephant and the chimpanzee, as well as several endemic species and subspecies of West Africa (arboreal monkeys, flying squirrels, Diana monkeys and King and Ursine colobus monkeys; shrews; micropotamogale; pygmy hippopotamus; Jentink's, Ogilby's and zebra duikers; white-breasted guinea fowl and yellow-headed hornbill, four (4) species of amphibians and one of snakes). An inventory of rare, endangered or vulnerable species in the Mont-Péko National Park (elephant, chimpanzee, nine (9) species of bird, several amphibians) is waiting to be made after the serious damage to its vegetation.

SOCIAL CONDITIONS

The population of the Southwest zone of the country amounts to approximately 3,656,904 inhabitants, i.e. 1.61 of the Ivorian population. According to data from the 2014 census, Côte d'Ivoire has 22.7 million inhabitants, with an annual growth rate of 2.6%. This population is relatively young, with 36% of people between the ages of 15 and 34 and 77.7% of the population between 0 and 35 years old. Demographic dynamics have put increasing pressure on the country's natural resources, particularly in the forest zone, where the vast majority of the population lives: 75.5% compared with 24.5% in the savanna zone.

With regard to the distribution of ethnic communities, the forest area covering the southern and western parts (a major part of the Guinean zone, as defined by *Halle and Bruzon 2006*), is occupied by almost all the local ethnic groups (Bété, Guéré, Yacouba, Wobe) and non-local groups (Baoule, Senoufo, Lobi, Malinke), with foreign communities.

Traditional fishing (lines and bulk) is practiced on forest streams, irregularly and individually by men, and collectively by women in the dry season. The local population of the TNP practices fishing on the islands of Lake Buyo (PAG-TNP, 2014-2018). As for hunting, it is practiced in some living forests for the needs of

households, and for the supply of urban centers as "bush meat". However, the main activity of 90% of the communities is agriculture.

Traditionally, until the late 1960s, food crops dominated land use in the ER-P area, and access to land was governed by customary law under the control of traditional leaders and heads of households. Cash crops developed very slowly in the region, dominated by cocoa in Nawa, east of Sassandra, and coffee around Duékoué and Guiglo. Several "agricultural plantations" of rubber and mainly cocoa trees, oil palms, and coffee are operating. Harvested traditionally in the Guiglo-Taï-Tabou corridor, oil palms were introduced in plantations in Grand-Drewin (Sassandra) and in agro-industrial blocks in the Soubré classified forest. Rubber was planted on an experimental basis in Olodio, in connection with the Firestone plantations in neighboring Liberia.

Food crops include mainly rice, maize, yams and plantains. Rice, the dominant crop grown in the west as rainfed cultivation on dry land, is increasingly practiced in the lowlands, the only land where it does not compete with cash crops. The non-native people influenced by their culture of origin grow maize and yam. Finally, there is plantain, an essential component of the pioneering system for cocoa production.

With the "openness to development" in the 1970s in western Sassandra, the boom in logging and forest industries, and the creation of agro-industrial complexes, created an attractive context for groups of people in Côte d'Ivoire and elsewhere. In the migratory dynamic that has been created, access to land has been negotiated according to customary rules between migrants and landowners, giving rise to worrying questions of differences of opinion between "insecure sale" and "sale under the law". East of the Taï National Park, both in the rural area and in the Rapides-Grah classified forest, which has been left open to anarchic exploitation since the 1980s, the numerical weakness of the local population has created a context of a quasi outsourcing of land sharing to the first to arrive. The importance of the "opening up" driver was also illustrated by the influx of migrants into the Gbôklè forests with the opening of the coastal road.

Finally, the events that took place due to the socio-political crises that the country experienced between 1999 and 2011 strongly influenced the regions of Guémon and Cavally in their northern parts. Serious conflicts are now latent between displaced populations returning to their lands and newcomer migrants. In these two regions, land occupations "by force" (whether against local people or against the State in the permanent forest estate) are numerous, the most striking example having been that of Mont-Péko National Park. In general, classified forests and protected areas such as parks and reserves, which are part of the state's permanent forest estate, have suffered illegal incursions and occupations by these new non-native migrants. While in the national parks, they have been relocated outside with the example of the Tai National Park (see above), many have settled within the classified forests.

The cultivation of cocoa is practiced on land that had previously been forested, and has been for about twenty years to the detriment of the classified forests which are under the demographic pressure of the populations coming from center-north, because of the crisis of 1999-2011 and the sharp decline in the productivity of the lands of the center-west, the former "cocoa belt", and currently the strong Burkinabe and Malian immigration in the southwest. SODEFOR, is in charge of the management of classified forests, which it gives to private companies to operate under convention, without exerting real control on the operating conditions and meeting regulations.

Craft mining (placer mining) contributes to forest degradation and deforestation, not only through the disruption to the soils worked on, but particularly through the establishment of populations practicing traditional agriculture to produce their food. Illegal craft mining sites are found mainly along certain rivers within the classified forests and the TNP (Hana River).

Table 4: Proportions of land use categories in the Taï area (after Schweter, 2016)

Category	Taï NP	Classified forests	Rural estate
Homes	-	-	1%
Bare soil	-	1%	2%
Non-cultivated lowlands and grassy vegetation	-	10%	10%
Food production	-	5%	11%
Cocoa plantations without or with few trees	-	70%	54%
Cocoa plantations with isolated trees	-	5%	5%
Rubber plantations	-	1%	7%
Palm oil plantations	-	-	1%
Fallow, secondary vegetation	1%	2%	2%
Degraded forests, secondary forests	1%	2%	1%
Forest	97%	4%	1%
Stretches of water, lakes	1%	-	5%
Total	**100%**	**100%**	**100%**

4 DESCRIPTION OF ACTIONS AND INTERVENTIONS TO BE IMPLEMENTED UNDER THE PROPOSED PROGRAMME

4.1 Analysis of drivers and causes underlying of deforestation and forest degradation, and existing activities that can lead to the conservation or enhancement of forest carbon stocks

Forest cover, estimated at 37% of the national territory in 1960, is estimated in 2010 at less than 14% (AFD, 2013[15]). The average rate of deforestation increased from 1.5% p.a. between 1900 and 1980 to about 4.3% p.a. between 1990 and 2015 (BNETD (National bureau of technical studies and development), 2016), becoming the highest in the world at that time. Between 2000 and 2008, during the political crisis, the deforestation rate reached 25% in the classified forest reserves (SOFRECO, 2009). According to SODEFOR (2014), the encroachment rate of classified forests increased from 18% of the total area in 1996 to about 50% in 2014.

The main direct causes of deforestation and forest degradation, both for classified Forests and for the forests of the Rural Domain are: (i) the massive expansion of extensive slash-and-burn agriculture; (ii) the uncontrolled exploitation of forests, including for fuelwood (estimated at 20 million m^3 per year now), still increasing due to insufficient protection of classified forests and, to a lesser extent, protected areas, as well as significant gaps in the management of forest resources; (iii) bushfires (accidental or intentional, often related to agriculture or hunting); and (iv) mining, including illegal gold panning.

This subsection is based on a study of the drivers of deforestation and forest degradation carried out during the UN-REDD preparation phase by the organization, Nitidae and the National Bureau of Technical Studies and Development (BNETD) based in Côte d'Ivoire, for the national estimates (Côte d'Ivoire) and regional estimates (in the southwest, west and east of the country), for ranking the main drivers of deforestation and forest degradation in the ER-P area in particular.

The participatory analysis of drivers that follows builds on the study (Etc. Terra, 2016[16]) with the following groups of stakeholders:

Table 5: Stakeholder groups

Group 1	**SEP-REDD+, Expert Consultants, Technical and Financial Partners**
Group 2	Local communities represented by their local representatives
Group 3	Vulnerable or marginalized groups (women, young people, etc.)
Group 4	Civil society and traditional authorities
Group 5	Private Sector
Group 6	Opinion leaders, media
Group 7	Government and public administration, public and private institutions (umbrella organizations, ministries, political parties, local state representatives, research and training bodies)
Group 8	Whole population

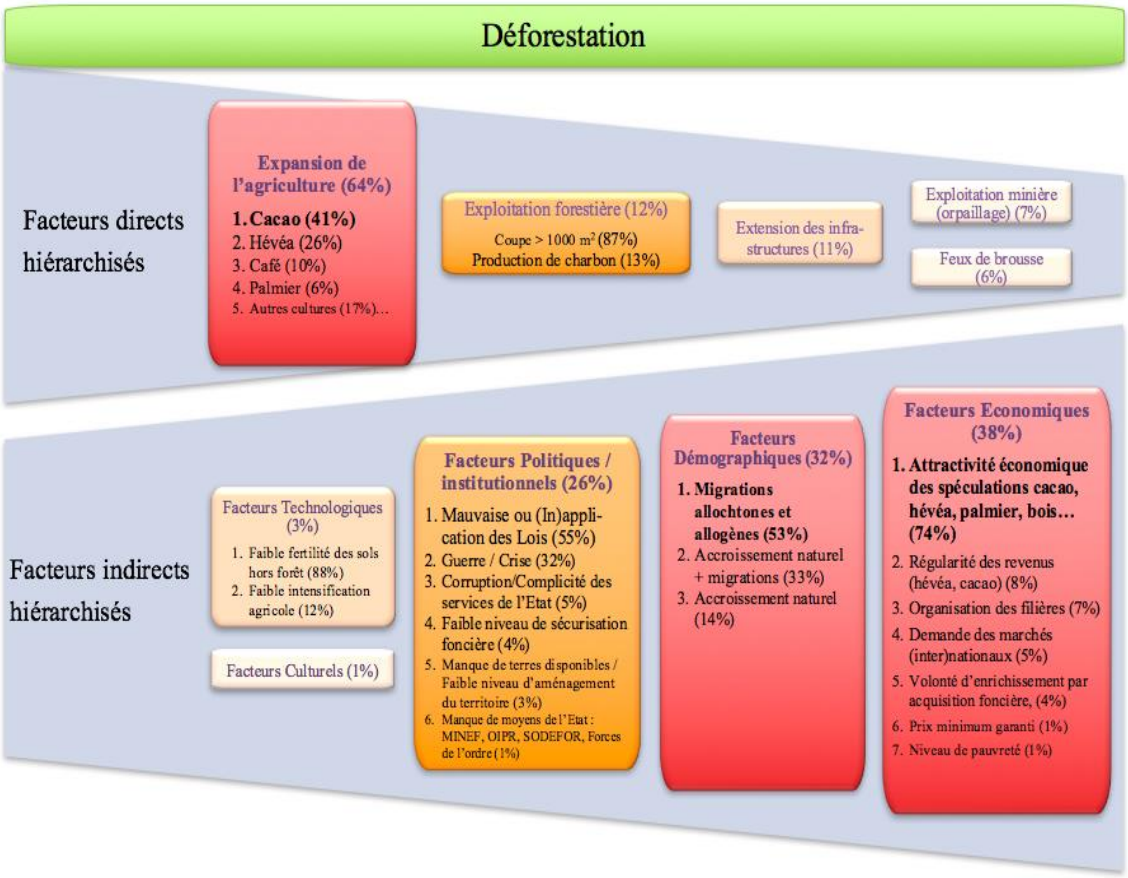
[15] French Development Agency

[16] https://www.nitidae.org/files/b24e760c/161216081210_161214_analyse_facteurs_def_deg_ci_rapport_final.pdf

The database created during this study was reworked to extract the information collected in the two agro-ecological zones (AEZ), which concern the ER-P area. Two hundred and twenty-six (226) people were consulted, either during individual interviews or at college workshops. In order to genuinely gather feedback from all those consulted at the workshops, the identification and prioritization of direct/indirect drivers of deforestation / forest degradation was done in a fully participatory manner. For deforestation as for forest degradation, the direct or indirect drivers were first listed in full (no proposal was rejected in principle), projected directly on the big screen before each of them became the subject of voting by a show of hands ultimately allowing them to be prioritized. The results could then be quantified and summarized as follows:

DEFORESTATION DRIVERS

Figure 4: Direct and indirect deforestation drivers[17]



Direct drivers for deforestation

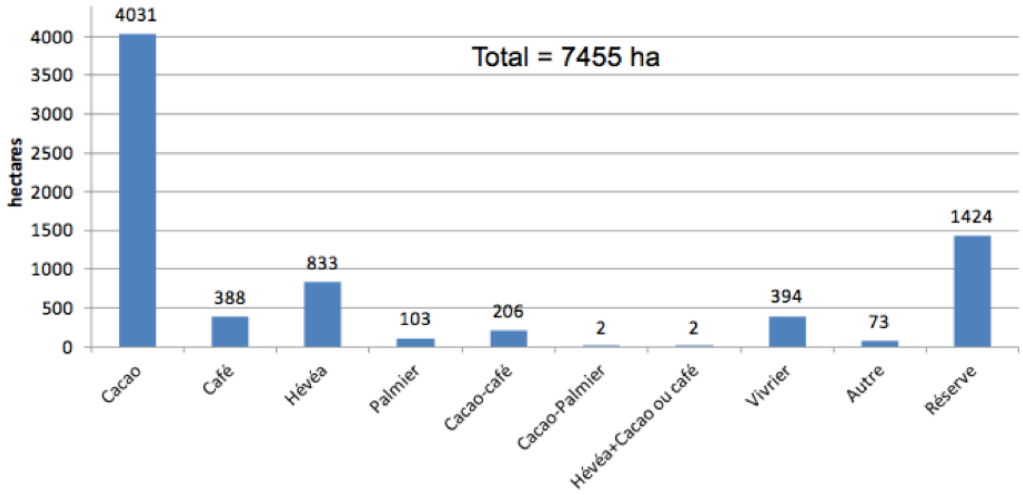
In terms of direct drivers, the present analysis unsurprisingly confirms the very significant influence of the expansion of agriculture in the deforestation process over the last twenty-five (25) years, the period under study. This phenomenon is cited 64% by the people surveyed in the ER-P area, cocoa farming and rubber growing being cited in proportions very substantially equivalent to national trends.

[17] Percentages represent the results of an opinion survey of the order of importance of the direct and indirect drivers of deforestation

Among these two crops, cocoa is far the main direct driver of deforestation in the country which was confirmed (i) by working on photo-interpretation of very high-resolution satellite images (available via Google Earth) led by the SEP-REDD+ and FAO based on 1990-2000-2015 mapping of deforestation (FAO & SEP-REDD+, 2017[18]), and (ii) by certain studies having locally measured the dominant influence of cocoa: ICRAF (2015) thus puts forward the figure of 65% over five localities studied in the Nawa region while Varlet (2013) specifies that cocoa occupies 52% of the surface area of the Taï National Park's peripheral zone although the previous crops are not known (see figure below).

The study carried out from collect earth on the program area revealed that the areas lost were replaced respectively by cocoa (79.44%), rubber (4.36%), and palm oil (1, 22%)[19].

Figure 5 : Aggregate area of all plots surveyed by Varlet et al. (2013)



To explain this influence of cocoa farming, it developed on the model of a family farm exploiting a "differential rent", that is to say, essentially based on the increase of the surface areas in the forest zone in order to exploit the natural fertility. The sector has also developed historically on the basis of an influx of labor from the interior of the country (non-native / indigenous populations) and from outside (non-indigenous populations from Burkina Faso and Mali). Finally, cocoa cultivation is carried out extensively, with very little use of inputs (fertilizers and phytosanitary) and improved varieties, meaning the crop very much consumes forest areas known for their fertility.

With regard to rubber growing, as at the national level, it should be emphasized that it is overrepresented as regards its responsibility for deforestation. The clearings of mature forest linked to this crop seem indeed to be very minor compared to the renewal of fallow land and old coffee/cocoa plantations as confirmed by various studies (*Ruf, 2012 - Koulibaly, 2014*).

Admittedly, it is likely that much fallow land and old plantations meet the criteria of the current definition of forest in the new forest code (i.e.: Surface area > 1000 m^2, Covered > 30%, Height > 5m) but the impact of this "deforestation" compared to that which affects mature forests is tiny when we consider greenhouse gas emissions or corresponding losses of biodiversity.

It is then coffee growing that stands out quite singularly compared to the rest of the country being quoted at the rate of 10% against 5% nationally. However, its impact on deforestation is judged by the people who were surveyed as decreasing, which is confirmed by the sharp drop in tonnage exported by the country between 1992 and 2012, from 275,000 to 100,000 tones p.a. (*Etc. Terra, 2016*).

[18] http://reddplus.ci/download/rapport-de-la-cartographie-de-la-dynamique-des-forets-en-cote-divoire/?wpdmdl=812
[19] Cf Annex on DA

Indirect drivers of deforestation

The indirect drivers that may explain this deforestation are economic drivers (cited at 38%) and demographic drivers (32%) that are put forward by the people surveyed, before political and institutional drivers (26%). All categories combined, the first three drivers quoted are: (i) the economic attractiveness of activities leading to deforestation (28%), (ii) non-native and non-indigenous migrations (18%), and (iii) poor or non-compliance with laws (14%).

In terms of economic drivers, there appears to be a clear correlation in the ER-P area between the mapping of historical deforestation (*BNETD, 2016*), the 2011 Multidimensional Poverty Index (UNDP, 2013), and the rate of prevalence of food insecurity (*WFP, 2009*).

Figure 6 : IPM 2011 mapping (UNDP, 2013)

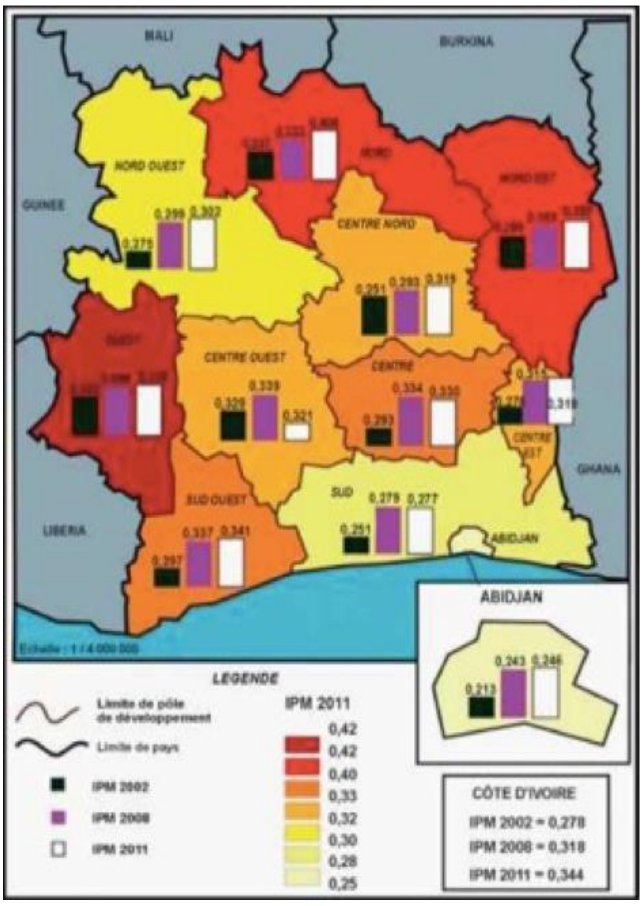
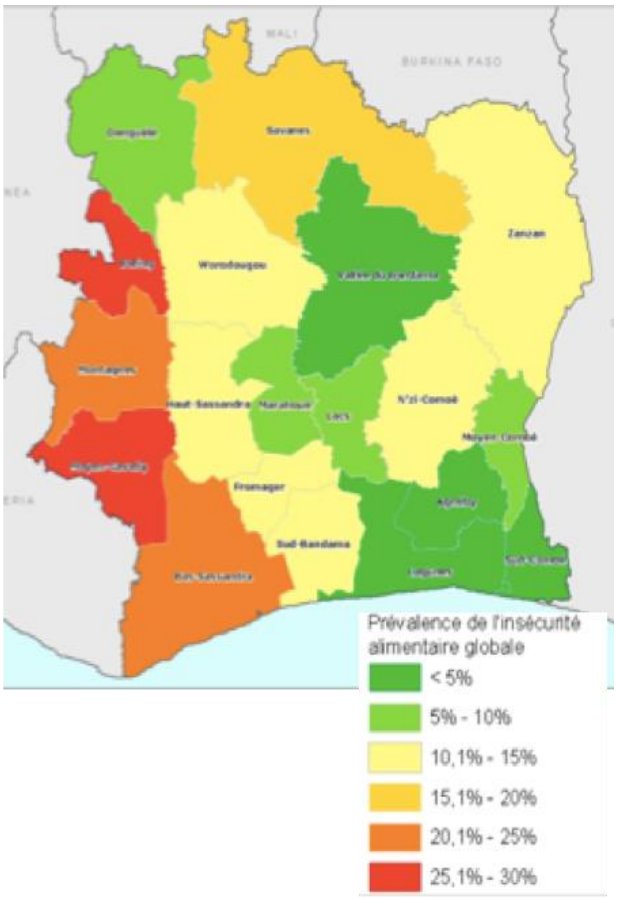


Figure 7 : Prevalence of food insecurity (WFP, 2009)

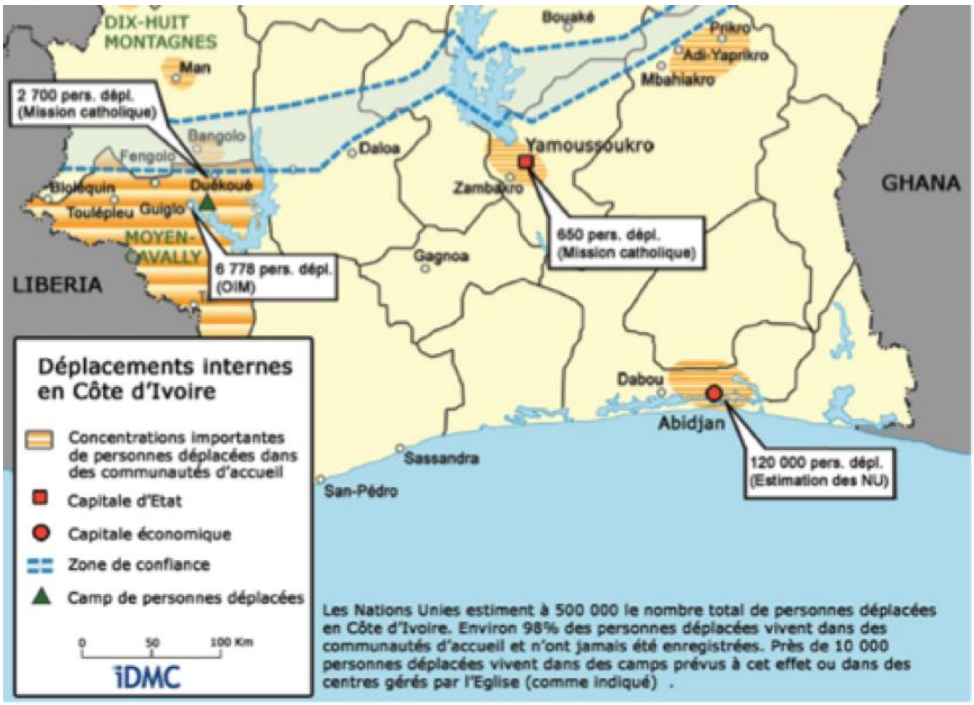


Compared to the rest of the country, it is necessary to underline here the important influence of the demographic drivers, migrations non-indigenous and non-native at the forefront, this category being quoted at a level of 32% compared with 24% nationally.

This highlights the considerable impact of migration in the ER-P area, as there is obviously some levels of increase (4.3% p.a. in the Guémon region versus 2.5% p.a. nationally - *INS, 2014*) could not be achieved without significant population movements resulting from historical migrations that originated in colonization. Starting with the development of the territory of the colony of the Ivory Coast, migration has survived over time thanks to a proactive policy of the post-independence Ivorian authorities to make agriculture the pillar of the economic development of the country. Since the exhaustion of the forest and the depletion of the central and eastern soils, migrants have opened the western front in stages: first, the center-west (1950s and 1960s), then the south-west (1970s and 1980s), and finally the west (1980s), culminating in 2001 at 35% and 43% immigrant rates in the former regions of Bas Sassandra and Moyen Cavally (*ENSEA, 2001*).

These population movements were then strongly accentuated by the crisis of the 2000s that from the fighting areas may have displaced more than 500,000 people according to the United Nations (*IDMC, 2005*).

Figure 8 : Map of the zone of confidence and the displaced (IDMC 2005)



In connection with these particularly important demographic and migratory drivers in the ER-P area, it is still rather surprising to note the low occurrence in the land driver database, which can certainly be explained in part by a sense of land security (yet unfounded from a legal point of view) for the vast majority of planters who have "enhanced" forests. Although partially obscured, these issues seem to play an eminently important role in the deforestation process.

Particularly exacerbated in the ER-P zone are inter-community tensions that could lead to deforestation. These are, according to the Internal Displacement Monitoring Center (*IDMC, 2009*), the result of land policies aimed at facilitating access to land for migrants, to encourage them to exploit the resources of the western forest and develop export crops (IDMC, 2009). A 2013 study in the zone neighboring the Taï National Park thus established that out of six hundred and twenty-two (622) planters surveyed, 10% were indigenous, 52% non-native, mostly Baoulés, and 38% non-indigenous, mostly Burkinabe (*Varlet, 2013*).

According to this same author, these informal practices of land sales, contrary to custom as well as to the law, have led to more or less voluntary misunderstandings as to the nature (temporary or definitive) of land transfers: "*The non-native/non-indigenous people thought that they had acquired the land definitively while the natives considered that they had sold only a right of use. For many non-native/non-indigenous people, property is acquired when a financial transaction has been concluded, the land has been developed or a government document certifies it, while the scarcity of land encourages indigenous people to claim ownership of the land arguing that they have only granted a right of use*" This phenomenon is exacerbated by changes in generation (*Varlet, 2013*).

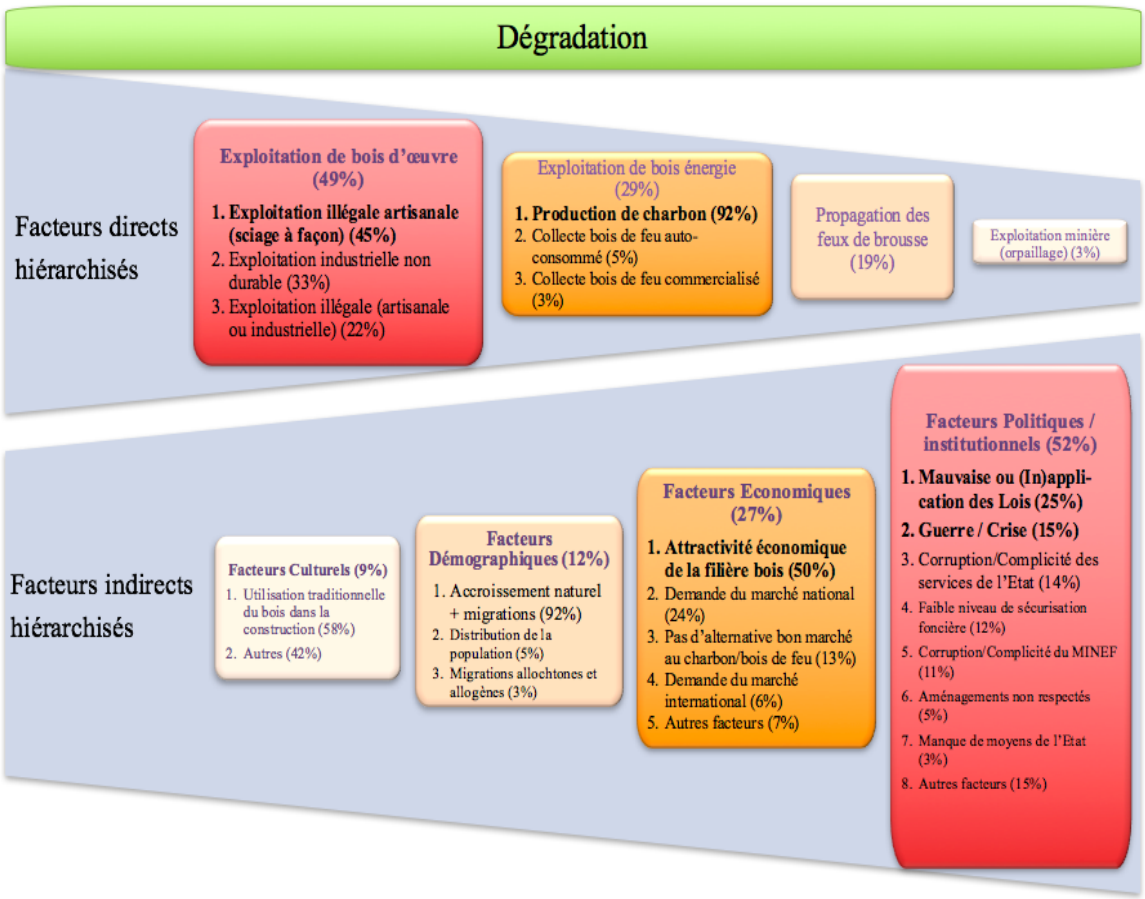
The armed conflict, the displacement of the populations it has generated and, now, the return of these populations has exacerbated pre-existing land disputes in this area. During the displacement period, much land owned by displaced people has been sold or leased which complicates their return by depriving those who are returning of their main livelihood, and amplifies inter-community feuds (*IDMC, 2009*).

Finally, in addition to the lesser influence of political and institutional drivers (26% in the area, compared with 35% for the whole country), it should be noted the very low influence cited by the respondents to technological

drivers (3%), with the notable exception of representatives of the private agricultural sector who have largely emphasized the low level of agricultural intensification to explain deforestation, this point being further developed in chapter 4.2.

DEGRADATION DRIVERS

Figure 9: Degradation drivers[20]



Direct drivers of degradation

In the process of forest degradation from 1990 to 2015 and all areas combined (Permanent State Domain and Rural Land Domain), the analysis makes it possible to highlight the predominant influence of timber exploitation (49% occurrence), mainly custom sawing. Next are fuelwood operations (29%), bush fires (19%) and gold panning (3%).

These results confirm the custom sawing boom, namely illegal small-scale logging defined by *Cerruti (2015)* as follows: sawing raw wood into semi-finished products, by means of a chainsaw or mobile saw directly on the felling site. Although it is not the subject of official statistics, and for good reason, custom sawing may at a national level be the source of the exploitation of nearly 3 million m^3 p.a., i.e. 40 times more than the 75,000

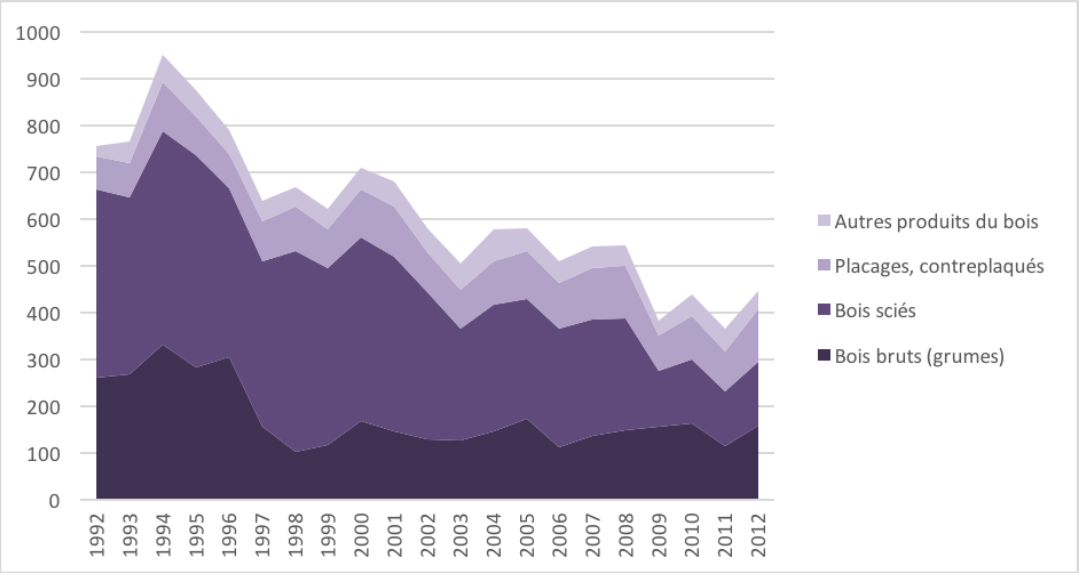
[20] Percentages represent the results of an opinion survey of the order of importance of the direct and indirect drivers of forest degradation

m^3 put on the domestic market every year by the industrial sector which sells only a small part of its wood (*Louppe, 2013*).

According to an FAO study (quoted by *Louppe, 2013*), in 1991 the annual consumption of lumber (logs) in Côte d'Ivoire per inhabitant (i.e. 0.13 m^3 / inhabitant p.a.), and assuming that these needs have remained stable since that date, the progression of timber exploitation would thus have passed between the two censuses of 1998 and 2014 from 2m to 3m m^3 p.a., from 0.39 to 0.88 m^3 p.a. and per hectare of residual forest, since over a substantially similar period (2000-2015), the forest area of Côte d'Ivoire decreased from 5m to 3.4m ha (BNETD, 2016). In the end, the impact of custom sawing on forest degradation has therefore increased by more than 8% p.a.

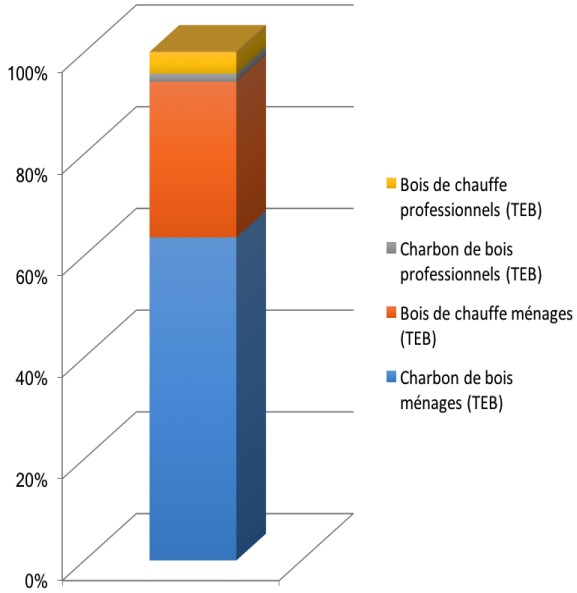
Concerning industrial exploitation, whereas it had quintupled between 1960 and 1980, going from 1.04m to 5.32m m^3 p.a., this exploitation has fallen heavily since and in 2013 was around 1.14m m^3 *(MINEF 2014, Cerruti, 2015),* this wood coming mainly from the Rural domain which supplies 90% of the wood harvested by industrialists according to *Kadio (2009).*

Figure 10 : Evolution of the tonnage of forest exports from Côte d'Ivoire (1992-2012, thousands of tons)



Source: INS - National Accounts Division

Figure 11 : Distribution of uses per ton of wood equivalent consumed



However, this decline in industrial exploitation is not necessarily synonymous with the equivalent reduction in degradation, since over a roughly similar period (1990-2015), Côte d'Ivoire's legally exploitable forest area (i.e. south of 8th parallel) decreased from 6.9m to 2.8m ha (BNETD, 2016). Thus, with a constant forest area south of this 8th parallel, exports have increased, from all products, from 108 to 157 kg/ha of forest between 1992 and 2012, an increase of 2.25% per year. To underline the influence of charcoal production in the degradation process, it should be noted beforehand that the average annual consumption in the two agro-ecological zones concerned in the ER-P has been evaluated at 1.34 tons of wood equivalent, all uses combined (*SAPPHYRE RD, 2016*), and that this consumption is distributed according to figure 9 opposite.

Indirect drivers for degradation

With all direct drivers taken into account, the considerable influence of political and institutional drivers (52%) which, according to the people surveyed in the ER-P area, therefore have much more influence on degradation than on deforestation (26%), far ahead of economic (27%) or demographic (12%) drivers, these proportions being very close to national proportions.

As probably one of the most important barriers to the implementation of REDD+ projects, this influence of political and institutional drivers will be more widely developed in Chapter 4.2. However, it is important to underline here that certain fundamentals of forestry are not respected, whether in the Permanent State Domain or in the Rural Land Domain, which would inevitably lead to the degradation of Côte d'Ivoire's forests. The country's logging was carried out without a regular estimate of the resource and without cutting bases, including after the 1995 forestry reform, which aimed to control how much wood was taken, previously deemed excessive. This is despite ten years of forest management efforts in classified forests. In the Rural Land Domain, although this reform has transformed the Temporary Exploitation Permits (Permis Temporaires d'Exploitation - PTE) into Logging permits (Permis d'Exploitation Forestière PEF), with areas granted > 25,000 ha over 10-20 years, quotas are allocated with reference to the total area conceded (0.25 m^3/ha) without discrimination between forest and agricultural areas.

In terms of the economic drivers that are now responsible for the deterioration, particularly in terms of custom sawing, the influence of the economic recovery and the construction boom that goes hand in hand with it must first be highlighted. Custom sawing occupies an increasingly important place in the Côte d'Ivoire timber industry, in connection with the low level of sales by industrialists in the domestic market. Two main reasons may explain the latter phenomenon: exports are clearly more remunerative than the local market and only a small part of the Ivorian population has sufficient financial means to buy industrially processed wood, having paid all taxes and fees due (*Louppe, 2013*).

On the other hand, it is also because only second and third choice products are delivered on the domestic market by the industrial sector (*Cerruti, 2015*). Custom sawing has developed to meet the growing national demand, an indirect driver cited at 24% among the economic drivers.

In terms of economic influence, the value of this informal timber market (over 1.2 million m^3 of finished products) would thus be located, according to two recent studies, at between 74 billion CFA F (by estimating the price of the final product at 60,000 CFA F / m^3, LOUPPE, 2013) and 189 billion CFA F (*Lolo, 2013*).

Lastly, in terms of jobs, custom-sawing services would provide more than 200,000 direct or indirect jobs (4 times more than the formal sector) and would support more than 1,600,000 people, or 7.2% of the population of Côte d'Ivoire in 2014 (*Lolo, 2013*).

Other economic drivers are at play with regard to the indirect drivers related to fuelwood and notably the lack of a cheap alternative to firewood or charcoal. Several studies have demonstrated in recent years (*Djezou, 2009 - SAPPHYRE RD, 2016*) the link between income levels and the consumption of charcoal (or firewood): in short, the higher the economic status of the household, the less wood it consumes. Indeed, the use of so-called modern fuels such as butane gas requires a significant prior investment in kitchen equipment (gas cylinder, gas stove, and appropriate kitchen utensils), which is not within the reach of all households. (*Djezou, 2009*).

EXISTING ACTIVITIES THAT COULD LEAD TO THE PRESERVATION AND ENHANCEMENT OF EXISTING CARBON STOCKS

The REDD+ national strategy aims to strengthen forest carbon stocks through (i) reforestation and restoration of degraded lands, and (ii) the development of a national PES system. In the ER-P area, there are already some pilot activities or projets that are being implemented for the conservation and enhancement of existing carbon stocks, some of which use PES. These pilot activities and projects need to be extended, renewed, and scaled up by the program. These activities serve as test activities/projects for the program in terms of their effectiveness in combating deforestation and forest degradation.

The following table lists the set of current initiatives, projects, and programs operating in the ERP area leading to the conservation and enhancement of existing carbon stocks:

Table 6 : Initiatives, projects and programs in the ER-P area

Project/Program *Organizations*	**Duration** *Budget*	**Objective** *Activities*
PROFIAB II *GIZ:* **(PROFIAB I)** *(GIZ)*	**2016-2019** *17 million USD* **(2013-2016)** *(13 million USD)*	***Support the rural populations of the Taï and Comoé areas in using the economic potential of available natural resources, while strengthening the protection of parks and maintaining biodiversity.*** *The program has two objectives:* *(i) increase the income of the population in the park environment through greater added value for agricultural products; and* *(ii) promote the sustainable management and protection of both parks and the natural resources around them.* *The activities carried out are:* • *At a micro level: support to agricultural enterprises, agro-industrial companies and processors to develop fair trade models, increase producers' incomes, and ensure sustainable access to natural resources and means of production.* • *At mid-range (producer organizations, service providers, decentralized state structures, inter-professional organizations, etc.), and at a macro level (public regulatory services and ministries): dedicated supports to help them better fulfill their mandate.* • *At the specific level of the OIPR (Ivorian office for parks and reserves), the strengthening of the abilities of park agents and a better consideration of the needs of local populations in the periphery of the parks and other stakeholders, the collective development of concepts of protection and upgrading of the two parks.*
TGS-FL *GIZ:*	**2017-2020** 1 million USD ***2015 - 2017*** *(6 million USD)*	***Strengthen ecological connectivity in the Taï-Grebo-Sapo forest complex between Côte d'Ivoire and Liberia*** *The objectives are:* *(i) the installation of an ecological corridor and connectivity zones between the Taï National Park and the Cavally River bordering the Grebo Forest in Liberia;* *(ii) The conditions for strengthening connectivity and sustainable natural resource management techniques are being developed in the project area;* *(iii) local players are supported for their capacity to manage protected areas and ecological corridors, and*

		(iv) enhance opportunities for biodiversity exchange between Tai National Park and the proposed Grebo National Park. *The following activities have been carried out:* • *Population information and awareness before any intervention.* • *Identification of the framework conditions that are favorable for biodiversity conservation through ecosystem connectivity.* • *Technical and organizational capacity building to locally enable joint and transboundary management of the protected areas and corridors.* • *Community capacity building in the field of agroforestry.* • *Preparation of the process to classify the Grebo Forest in the National Park (Liberia).* • *Land use analysis, socio-economic and spatial analysis.*
CAZ *GIZ:*	**2016-2018** *1 million USD*	***Promote the development of cocoa, palm oil, and rubber supply chains with zero net cash deforestation**.* *The objectives are:* *(i) the implementation of the National Zero Deforestation Policy at the jurisdictional level of the San Pedro Region; and* *(ii) the development of 4 Zero deforestation action models in collaboration with planters and various industrialists, including in the wood industry.* *The activities carried out are:* • *<u>Sustainable production of cocoa farming under shade</u>:* *- establishment of tripartite contracts Grower-SACO-WoodIvoire in the rural field.* *- Contracts dedicated to the renewal of old cocoa plantations with 100% investments made by SACO and WoodIvoire.* *- Reconversion of abandoned plantations in classified forest.* • *<u>Recovery and security of reforestation in agreement with the private sector</u>:* *- reforestation with cedrela and acacia mangium of old plots planted with paper-producing species in the Rapides-Grah CF.* *- SODEFOR-WoodIvoire partnership, WoodIvoire fully financing the operation subject to being assured of harvesting at the end of the cycle.* • *<u>Intensification of cocoa production in rural land and progressive reforestation of forest-oriented areas:</u>* *- model for growers with plots in the interior and exterior of classified forests.* *- Intensification proposed externally in return for a gradual abandonment in the interior, under the effect of complantation.* *- Planters identified through ECOKIM, the cooperative partner of the model.*

		• <u>*Respect for biodiversity in the production of rubber and palm oil*</u>*:* *- Collaboration with SOGB that has a rubber and oil palm concession where portions are put in protection after mapping HCV & HCS forests.* *- Complementary activities with partner growers to protect residual forest patches in the peripheral rural area of the concession.*
Vision for Change (V4C) *MARS/ICRAF/WAC*	**2013-2020** *30 million USD*	***Improvement of yields, development of agroforestry in cocoa farms in the region of Soubré, and community development*** *The objectives are:* *(i) the rehabilitation of old cocoa farms and to increase their productivity,* *(ii) limit the expansion of agricultural activities to the detriment of forests,* *(iii) promote agroforestry and diversify farm income.* *The activities carried out by ICRAF are:* • Promotion of improved plant material and grafts, • Sustainable cocoa production • Cocoa innovation platform • Agricultural advice to Producers • Community development • Institutional support • Monitoring of activities
ISLA (Initiative for sustainable land) *HDI*	**2016-2020** *5.65 million USD*	***Develop a balance between the forest, agriculture and the people. In doing so, ISLA will support the implementation of public and private sector commitments towards zero net deforestation and green field growth in the area of the Tai National Park.*** *The objectives are:* *(i) Restoration of forest cover;* *(ii) land use planning;* *(iii) steps toward a sustainable livelihood;* *(iv) the development of financial incentives; and* *(v) the creation of a public-private investment mechanism for the sustainable and ecological subdivision of land.* *The activities carried out:* • Provide approaches combining agricultural production and forest protection. • Facilitate collaboration between public and private sectors for agreements on protection and production. • Coordinate planning and monitoring approaches. • Information and spreading the concept of cocoa agroforestry. • Promote the diversification of producers' activities.

		• Mobilize public and private investment to scale up.
IDH/ISLA ***Barry Callebaut/WCF***	**2016-2018** *350,000 USD*	***Prevention of deforestation and landscape-scale rehabilitation in southern Goin-Débé and Cavally CF and surrounding cocoa production****.* *The objectives are:* *(i) to improve the productivity of cocoa producers,* *(ii) to prevent farmers from expanding their activities in protected forest areas; and* *(iii) joint work with communities on the importance of forest protection and local authorities to strengthen their forest encroachment detection capabilities.* *The activities carried out are:* • Restoration of forest cover. • Awareness campaign for local communities. • Capacity building for SODEFOR.
FAO-EU-FLEGT *WCF/SODEFOR*	**2016 - 2018** *215,580 USD*	***WCF/SODEFOR partnership agreement for the Independent Mandated Observation of 3 classified Forests, in the first phase in the Cavally Forest and then in two other classified forests to be determined.*** *The objectives are:* *(i) To improve the monitoring of forestry activities and ensure the proper application of the prescriptions of the forest development and management plan; and* *(ii) capacity building of SODEFOR agents to ensure sustainable management of the forest.* *The activities are:* • *National CSO training at the IO in the CFs* • *Implementation of IOM in 3 classified forests with national CSOs and those local to classified forests.* • *The revision of the SODEFOR rules of cultivation and exploitation.* • *The development of a manual on forest control procedures.* • *The performance of SODEFOR control and monitoring missions.* • *A study on the traceability of wood leaving classified forests.*
EU - Regional Indicative Program 11 European Development Fund	**2019-2025** **€3 million**	***RIP- 11 EDF West Africa*** *- Priority Area 3: Resilience, Food and Nutrition Security and Natural Resources - Support for Tai National Park* *The pillars of intervention envisaged are:* - *Protection and conservation of the park* - *Spatial planning on the outskirts of Tai National Park* - *Local development support on the outskirts of Tai NP*
Bengo / BMZ / WWF *WCF*	**2016-2019** *1 million USD*	***Support for community law enforcement and alternative community initiatives to mitigate major anthropogenic threats to the largest remaining forest block in West Africa, the Taï-Grebo-Sapo forest complex (Côte d'Ivoire/Liberia)*** *The objectives are:* *(i) the involvement of communities in alternative activities; and* *(ii) protection of biodiversity and natural habitat.*

		The activities carried out are: • *Development of eco-guard programs in the forests of Cavally (Ivory Coast) and Grebo-Krahn (Liberia).* • *Conduct a community awareness campaign (Liberia and Ivory Coast) in the Taï/Grebo-Krahn corridor.* • *Training of local NGOs in investigations against natural resource trafficking* • *Train communities in community ecotourism.* • *Conduct socio-economic studies around Grebo-Krahn (Liberia)* • *Develop a benefit sharing arrangement with the private sector (Wood, Cocoa).*
Mondelez (Impactum/TFT/Care, ECOM, etc.) ***Life Cocoa Program***	**2017-2020** *1.5 million USD p.a.*	***Transforming the Cocoa Supply Chain in Ivory Coast: zero net deforestation approach / Nawa pilot project*** *PES pilot project in the scope of the Cacao Life program intervening in the four departments (Méagui, Soubré, Buyo and Gueyo) of the Nawa region* *Project involved in the agreement signed between Côte d'Ivoire and Costa Rica (=> 1 international/national communication foreseen in this framework)* *The objectives are:* *(i) to eliminate deforestation in the supply chain; and* *(ii) to contribute to the objective of restoring Ivorian forest cover through a PES-type incentive.* *The activities carried out are:* • *Preparatory phase:* *- Awareness raising (land legislation, ITK, etc.)* *- HCS mapping (TFT method)* *- Participatory development of local land use plans* • *PES deployment according to the four methods of the PES practical guide:* *- <u>Agroforestry</u>: payment from 3 ha minimum and 30 trees/ha minimum (forest or fruit) around or scattered in the plot / Duration of payment: 3 years* *- <u>Assisted Natural Reforestation / Regeneration</u>: 0.5 ha minimum / 10 years* *- <u>Conservation</u>: Collective PES in the case of community forests or individual in the case of individual forests / 10 years* • *Overall, throughout the region:* *- 700,000 trees to be planted including akpi (Ricinodendron sp.), citrus, idigbo and limba from four community nurseries (target of 50,000 plants p.a. / nursery)* *- 5100 contracts to sign: 75% agroforestry, 20% reforestation/RNA, 5% conservation* *- 6000 ha to be covered: 5100 ha of agroforestry, 600 ha of reforestation, 300 ha of conservation.*
Creation of a voluntary nature reserve of the Dodo	**2017- 2020** *222,000 USD Phase 1*	***The goal is to create a community nature reserve for the preservation of the ecosystem of the mouth of the Dodo River*** *2 phases:* *- Phase 1: creation of a 5,000-ha community nature reserve including lagoons, mangroves, coastal forests and nesting beaches for green marine turtles.*

River delta *Conservation of Marine Species (CMS) Rainforest Trust / GIZ*		*- Phase 2: Addition of 18,478 ha for a total reserve of 24,000 ha of coastal forests, mangroves, marshes, and beaches that provide habitat for marine turtles in others.* *The activities carried out are:* • *Forest monitoring to prevent poaching and other illegal activities;* • *Raise awareness in local human populations to strengthen their agreement to conserve and protect the land;* • *Assist landowners in developing and submitting an application request to the Ministry of the Environment declaring the site as a Voluntary Natural Reserve (CNR) and preparing the CNR's technical creation dossier;* • *Define the ecological, management and socioeconomic objectives of the CNR;* • *Undertake appropriate administrative procedures to define boundaries and physically delimit the protected area;* • *Obtain for the villagers the title deeds of the land in the form of a collective title;* • *Conduct a preliminary biodiversity study of the future marine protected area of Phase II; and* • *Reforestation with native species of 3 ha and an area of 30 ha.*
Cocoa and Forests Initiative *Public-private platform (*Côte d'Ivoire *Government, Cocoa Coffee Council, SEP-REDD+, OIPR, SODEFOR, World Cacao Foundation, Barry Callebaut, Blommer, Cemoi, Cargill, Ecom, Hersheys, Mars, Nestlé, Olam, Touton)*	**1st phase: 2018 – 2020** **2nd phase 2020 - 2030**	***The overall objective of the Initiative is to preserve and rehabilitate the forests of Côte d'Ivoire in connection with the sustainable production of cocoa and the improvement of producers' sources of income.*** *It will be implemented in two phases: (i) a start-up phase from 2018 to 2020, and (ii) an expansion phase at the national level from 2021 to 2030.* *Governance bodies have been formalized: Steering Committee, Technical Committee, Permanent Secretariat (MINEF-HDI) and Thematic Groups (see objectives below).* *Five (5) regions for the start-up phase have been identified: Guémon, Cavally, Nawa, San Pedro, and the Mé.* *The objectives are:* *(i) Protection and rehabilitation of forests;* *(ii) Agroforestry and sustainable production;* *(iii) Community engagement and social inclusion,* *(iv) Traceability of cocoa production;* *(v) Financing, and monitoring, and evaluation.* *For the start-up phase the specific objectives are:* • *Publication & application of the new forest code & implementing decrees to prevent deforestation & degradation in protected areas by the end of 2018;* • *Establishment of a National Forest Preservation and Rehabilitation Fund to co-finance activities in 2018-2020 and beyond, by the end of June 2019;* • *Develop & implement the national traceability system by 2019,* • *Develop a monitoring and evaluation system by the end of 2018;* • *Implement pilot projects in priority regions by October 2018;* • *Development of agroforestry systems and promotion of sustainable and diversified sources of income for cocoa farmers by the end of 2020;*

		• *Empowerment of farmers and local communities; and* • *Evaluate the start-up phase and develop the plan for the expansion phase.*
Forest Investment Program (FIP) *World Bank / African Development Bank*	**2018 – 2023** 25 million USD	***The objective is to conserve and increase the forest stock and to improve access for the communities of the targeted zones (central and south-west Côte d'Ivoire zone) to the sources of income induced by sustainable forest management.*** *The objectives are:* *(i) Restoration of forest cover in classified forests and neighboring areas;* *(ii) Sustainable management of the Taï National Park;* *The activities carried out are:* • *Participatory development and implementation of development plans for classified forests;* • *Implementation of an incentive system for reducing pressure on forest resources;* • *Support for the voluntary return initiative from Southwest to Central;* • *Strengthening the OIPR's monitoring capacity;* • *Support to improve the livelihoods of park communities;* • *Rationalization of gold panning.*

4.2 Assessment of the main barriers to REDD+

The barriers to implementing REDD+ are political, financial, institutional, and land-based. At the local level, with regard to deforestation agents, the main barriers are poverty, lack of sources of income other than cocoa farming, and lack of capacity in other drivers.

4.2.1 Institutional and political barriers to REDD+

The Forest Policy and Strategic Implementation Plan 2010-2015 (MINEF, 2010) provide a lucid assessment of the situation, and describe in particular how the 1988-2015 Forest Master Plan largely failed in achieving its objectives. The same document also gives a long list of the reasons that led Côte d'Ivoire not to implement the various previous strategic documents and to apply only very partially the laws and regulations relating to forest management, among which are:

- **Institutional instability**: "In fifty years of independence from Côte d'Ivoire, the Water and Forestry Administration has had eighteen ministerial umbrella organizations and twenty-six ministers, which is a change of trusteeship every two and a half years. The year 2000 was the most remarkable with four Ministers".
- **The loss of state authority**: "Chronic nonobservance of the basic rules of social life inevitably detracts from the flagrant disregard of regulatory provisions in the management of natural resources".
- **The dysfunction of the general administration:** "Administrative authorities proceed with subdivisions and the erection of illegal camps in the classified forests. Authorities with the assignment of state employees often formalize schools established in classified forests. The granting of a gold exploitation permit in the Goin-Débé classified forest should also be noted".
- **Problems with the judicial administration:** "Shortcomings in the knowledge of the regulatory texts governing the forest sector, or the few cases that certain magistrates make during court decisions, have a negative impact on the respect for forest resources".
- **Non-application of law and regulations:** enacted in 2014, the new Forest Code aims to address some of these difficulties, but many important implementing decrees are still under preparation within MINEF and are still subject to consultation with other ministries.
- **Poor governance**, structural corruption that affects the forest sector and the failure of the fight against it. The creation of the special intervention unit to fight against corruption put in place under its leadership (*Dacoury Tabley, 2016*) and now dissolved after only one year of existence.
- **Regulations that are too restrictive**, the management of forestry plantations strictly governed by the MINEEF/DPIF Order No. 480 of 16 March 2007 on the organization of the exploitation of teak and other exotic forest species planted in the rural area. For teak plot owners who simply wish to clarify their planting and value the small pieces of wood resulting from this operation, they must submit a file consisting of 13 component parts to a Local Technical Committee which transmits the file and its opinion to the National Technical Committee in Abidjan for approval of the operation, with an administrative cost for handling the discouraging file.

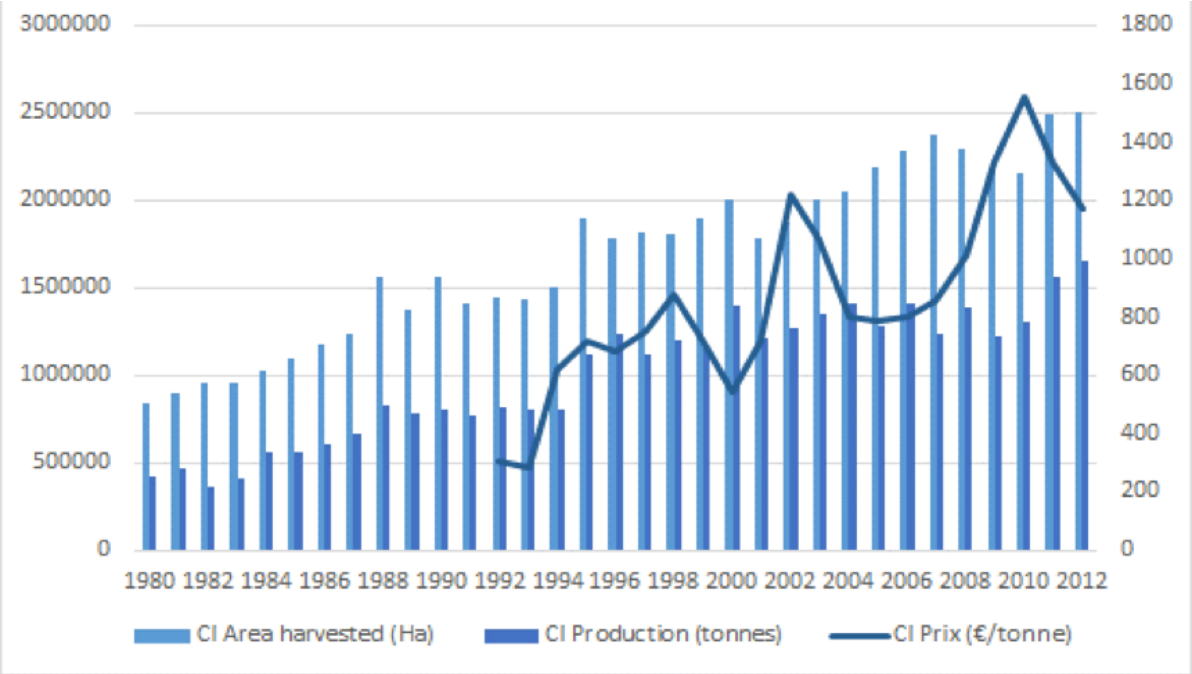
4.2.2 Economic barriers

- **Economic attractiveness of cocoa farming at the expense of the forest and forestry.**

All private sector operators surveyed by Etc. Terra et al. (2016) recognized that higher relative cocoa prices supported by the "supply management" policy defended by the Conseil du Café Cacao (Coffee Cocoa Council), with the aim of maintaining high prices for producers, are a strong motivating factor for producers to create

new plantations, and therefore they promote deforestation[21].

Figure 12: Change in cocoa production, areas and prices



Source: Etc. Terra-Rongead 2016

This graph shows the effect of price peaks on the global market which stimulate plantation dynamics. In 2002/2003, at the height of the Ivorian crisis, the market saw a significant increase in the price of a ton of cocoa. This elevated price led to a significant change in land areas between 2002 and 2006, despite (or because of) the socio-political crisis and a price drop over several years. Prices going back up in the period between 2006 and 2010 and the substantial increase in areas from 2010 explain the logical shift between the incentive effect and the results in areas harvested.

Another consequence, related to the cocoa and rubber trees which went into production after 2 and 7 years respectively, the revenue generated by a forest plantation can barely compete when most of this revenue will come after 20-25 years, depending on the species.

- **Poverty and lack of investment**

Plantation are aging and consequently results in lower yields, and in revenue erosion in the end. Rural families are not able to take risks or to take advantage of existing initiatives to improve agricultural and production practices. In addition, the suffer lack of credit access, and limited access to capital. Without external solutions and support (in particular, external revenue which would allow them to invest in inputs, for example), producers are therefore confronted with intensification based on deforestation and overexploitation of fertility. The work that is required to regenerate a cocoa plantation is more significant, for lower yields: the productivity of the work quickly diminishes.

[21] This is repeated in the comparative analyses of economic results in village-based plantations, where cocoa is the leading option (far ahead of subsistence farming, for example) both in terms of added value per ha and the value of the workday. According to the "Technical manual for sustainable cocoa cultivation" ("Manuel technique de cacaoculture durable") (CCC, 2015), the gross profit/ha is between FCFA 250,000 and 926,000, with the workday valued at FCFA 5,545. For comparison purposes, manioc, the main food crop in forest areas, generating up to FCFA 150,000/ha gross profit, with the work day valued at between FCFA 1,000 and 2,000.

- **The lack of opportunities for timber**

The industrial wood processing tool for wood from felling that is 40-50cm in diameter has for a long time been unsuitable due to a lack of sufficiently profitable opportunities to cover the costs associated with thinning, which only produces small wood (poles, etc.) with low added value.

4.2.3 Land-related barriers

- **Land pressure**

In the ER-P area, it is important to recognize that the land available for reforestation is becoming increasingly rare, on account of the strong demographic growth and the corresponding food needs. Therefore, the only candidates for reforestation in rural areas are the small number of growers who have large enough surfaces to dedicate part of them to reforestation and "non-resident" landowners seeking to claim their right on the land.

- **Land conflicts**

In the west of the country, the crisis led to domino effect displacements among groups of populations that were opposed with regard to land issues. These tensions are one of the consequences of the national policy to develop the forested west, under which framework these two regions have received substantial migratory flows, in particular since the 1960s and 70s. The armed conflict, displacement, and now the return of people, have all exacerbated preexisting land disputes in this area. In fact, during the displacement period, many pieces of land owned by displaced persons were sold or rented, complicating return since those coming back are deprived of their main means of subsistence. Consequently, communal tensions have been amplified. The return of urban youth to villages following the economic crisis has increased land pressure and generated intergenerational conflict, with young people disputing land transfers for the benefit of migrants. This intra-community tension has in turn poisoned the relations between the native and the migrant when, under the pressure of the young, the old ones were sometimes led to question the disposals they had made for the benefit of the migrants. People death is an opportunity for tutors to question the terms of exploitation agreements or the boundaries of the related parcels. There are therefore fears that land disputes will multiply with the return of the displaced persons[22]. Land tenure insecurity, which not only jeopardizes investment and sustainable land management in the long term, but also encourages the rapid and short-term exploitation of resources. These land conflicts can have an impact on the program with the implementation of PES in the rural area. PES cannot be implemented once land titles on land are clarified. The analysis made by the Ivorian Government is that the legal insecurity surrounding customary transactions is at the origin of land conflicts and that the recognition followed by the formalization of existing customary rights in private property rights will make it possible to resolve land disputes. In 1998, Côte d'Ivoire introduced legislation aimed at transforming traditional land rights into state-regulated private property rights. For non-Ivorians, they have access to land through leases or an emphyteutic lease. This means that a foreigner who has bought land in a traditional way will not be able to see this purchase converted into title. He may at best obtain a long-term lease on conditions that are certainly favorable, but which still require the payment of rent for land he considers his own. A foreign national who is the beneficiary of a customary assignment may benefit from an emphyteutic lease if, in the context of a land certificate application procedure, a "finding of continued and peaceful existence of traditional rights" is made, and if non-Ivorian occupier is considered in good faith by his guardian. To overcome the shortcomings and difficulties of law 98-750 of December 23, 1998 on rural land,

[22] "Whose Land is This? Land Disputes and Displacements in the Western Forest Area of Côte d'Ivoire" "A qui sont ces terres? Conflits fonciers et déplacement des populations dans l'Ouest forestier de la Côte d'Ivoire") Barbara McCallin and Marzia Montemurro 2009, available at www.internal-displacement.org

the Ivorian government adopted the PFR.

Given the country's existing land potential and the country's development prospects, the Ivorian government has included the development of the rural land sector as a national priority in its National Agricultural Investment Plan (PNIA) and consequently settles land conflicts. Côte d'Ivoire has adopted (i) a land policy on January 18, 2017, which sets out the objectives and orientations of the government in rural land and proposes to extend the duration of land certificate of 3 to 10 years; (ii) a National Rural Land Security Program (PNSFR), supported by the new Constitution of November 2016, confirming the condition of nationality to gain ownership of rural land and (iii) a Rural Land Agency (AFOR) established on August 3rd, 2016 to implement the PNSFR for a ten (10) year period (2017-2027), with the aim of clarifying rural land rights, and ensuring sustainable land conflict management in the rural area (see section 2.2).

With regard to classified forest conflicts, most of the migrant workers in the study areas knew only from the 1990s that these were classified areas. During the 2002 crisis, the displacement and abandonment of plantations in classified forests became widespread. In some cases, other displaced people have occupied these plantations. In others, local communities have established agreements with newcomers to work on plantations. At the same time, the slash and burn and exploitation of new areas of classified forests have been extended. Considering the special status of the parcels in the classified forests and the fact that they have been the object of longstanding recriminations by the local communities, the return of the displaced to their plantations in these areas has raised many objections from the local populations and has led to ad hoc arrangements. SODEFOR in charge of classified forests since 1993, has reached an agreement to share parcels including 2/3 of parcels to foreigner and non-native and the remaining third going to young people who will organize as a group for farming. Plantations made during the crisis have been excluded from the agreement. Both young people and migrants paid SODEFOR a sum of CFAF 12,500 per hectare per year for the gradual rehabilitation of forests. After ten (10) years, the forests will have to be evacuated. However, imposing the sharing of plantations in classified forests is a compromise that makes little sense from a legal point of view and is questionable from the point of view of equity. At the legal level, plantations in classified forests are illegal and therefore not subject to return or compensation.

This approach is facilitated by the absence of legally recognized rights to plantations in classified forests. Beyond this ad hoc approach, it is planned to resolve land disputes based on the factual reality rather than the legal situation, as the 1998 law did in recognizing customary transfers. Recognizing the limits of the ad hoc agreements, SODEFOR has planned a census of returnees who held plantations in the forest before the war. This operation will serve as a basis for the establishment of contracts with returnees in which the area of the plantations would be specified to avoid abuses. Currently, SODEFOR following the validation of the new forest policy (see section 2.2) and as part of the program, will put in place a pragmatic policy of contactualization and concessions taking into account the state of degradation of each classified forest (see section 4.3, activity H3)

- **Uncertainty around tree ownership**

Despite the recognition of collective or individual property for the village or the landowner through the forest code (Art. 21), uncertainty remains surrounding land law with regard to field and land boundaries for unregistered land which will be transferred to the private domain of the state under the ownerless land (terra nullius) regime. Ownership of trees planted will not necessarily be retained in the case of villages or individual owners who do not possess land titles. This risk is an impediment for tree planting among communities and individuals, who fear they will not be able to enjoy the fruits and profits from planted trees.

4.2.4 The lack of technical capacity and equipment

- **The lack of capacity**

Small cocoa producers have a limited knowledge of modern farming techniques and farm management skills: selecting the tree variety; planning farming operations; using rehabilitation techniques such as grafting;

managing shade and size; correct use of fertilizers, understanding parasites and diseases; and correctly applying pesticides and fungicides, all require a higher level of technical knowledge than many smallholder farmers currently have[23]. Without technical skills, smallholder farmers are less likely to try renovation and rehabilitation techniques or to implement interventions sustainably and effectively.

- **The lack of inputs and planting equipment**

Smallholder farmers do not have access to the quantity and quality of cocoa plants that is required for the renovation and rehabilitation of their plantation. Many smallholder farmers do not receive seedlings, or they do not receive them during optimal planting periods. Nurseries have difficulties responding to the demands of smallholder farmers and have few improved varieties with low genetic diversity[24].

Table 7 :Barriers to REDD+ and activities to overcome them

ER-P planned activities	Deforestation/degradation factors and barriers
• In rural areaDans le domaine rural: • Agroforestry development, agricultural intensification and support for zero deforestation agriculture (AS1) • Tenure security in rural areas to remove obstacles to planting trees on agricultural plots, including formalizing land status (H1)	- Extension of agricultural land for cocoa, palm oil and rubber. - Negative perception of the effect of shading on cocoa yields. - Land tenure conflict - Population growth and migration flows. - Poverty of the population and economic attractiveness of cocoa farming.
In classified forests : • Development of agroforests (AS2) with: (i) agroforestry industrial concessions and (ii) cooperative agroforestry concessions	- Conflicts between SODEFOR officials and infiltrated populations.
In rural area: • Development of community and individual plantations of wood energy (ES1) • Development of alternatives to wood energy using agricultural residues (ES3)	- Poor organization of operators and lack of a formal sector. - Poor carbonization methods. - Absence of alternative energies & prohibitive cost of butagaz.
In classified forests: • Development of the Taungya system of community agroforestry (women and young people): concessions for the development of food agricultural activities associated with wood energy plantations (ES2)	-lack of yield and inputs
In rural area : • Development of small timber plantations and preservation of private and community forest relics through the PES system (FS1) • Tenure security in rural areas to remove	- unclear tree ownersip

[23] See study: "Forest- and Climate-Smart Cocoa in Côte d'Ivoire and Ghana – Aligning Stakeholders to Support Smallholders in deforestation-free Cocoa" PROFOR/Climate Focus, Charlotte Streck, Alan Kroeger, Simon Koenig, Ashley Thomson, 2017.
[24] Ibid.

obstacles to planting trees on agricultural plots, including formalizing land status (H1)	- land title conflict
• Development of afforestation activities of classified forests (FS2), through: (i) sustanble industrial forestry concessions, and (ii) forest conservation concession	- No involvement of communities in forest management. - Poor forest management - Development and management plan of unsuitable classified forests. - Illegal and unsustainable logging. - Lack of surveillance means - Lack of forest conservation incentives for local communities.
In Protected areas : • Natural restauration of MP of Mont-Péko (FS3).	
• Rationalization of artisanal gold mining and site restoration (MS1)	- weak law enforcement - Lack of willingness to manage and supervise mining activities.
• Use of payments for environmental services foar activities ES1 et FS1.	- Compensate cacao economic attractiness - lack of capital and low income
In rural area • Land tenure security in rural area to incentive tree plantation on agricultural plots (H1). • Regional Land Use and Development Planning - SRADT (H2). In Classified forests : • Development of the concessions system (H3) with agribusiness (AS2), logging companies (FS2), agriculture cooperatives (AS2) and women and young associations (ES2).	- access to land for women - Scare or no land use plans - Absence of regional land use planning - Land insecurity & conflicts - Lack of inputs and planting materials

4.3 Description and justification of the planned actions and interventions planned under the ER Programme that will lead to emission reductions and/or the removals

STRATEGIC VISION

The ER-P is made up of a dozen projects and programs carried out by the World Bank, GIZ, and public/private initiatives (see table 6), whose activities are aligned with the national REDD+ strategy, to obtain emission reductions, enhance the carbon stock, and reverse deforestation. The activities undertaken must be extended, renewed, and developed on a larger scale by the program. These activities serve as test activities for the program in terms of their effectiveness in combating deforestation and forest degradation. The ER-P, by coordinating and aligning national and international investments, will reconcile poverty reduction, economic development, and the preservation of the last forest areas, through an integrated approach for a transition towards a green economy.

In addition, over time and with the lessons learned from pilot projects, the ER-P will make it possible for the activities undertaken in the ER-P area to be sustained and developed on a larger scale, which will fight against deforestation by: (i) promoting zero-deforestation agriculture, (ii) creating local sustainable energy sources, (iii) supporting the sustainable management of forests and protected areas, (iv) restoring and reforesting degraded forests, (v) clarifying certain land rights, and (vi) rationalizing mining exploitation with less destructive practices and measures to restore forest cover.

As soon as the first revenues from the sale of emission reductions are collected, the ER-P aims to double the objectives (see key sectorial activity tables below) of the projects and programs present in its ER-P accounting area in terms of hectares dedicated to agroforestry, farmers trained in agroforestry techniques and agricultural intensification in rural areas, agroforestry and agro-industrial concessions, and agricultural cooperatives in classified forests. SEP REDD+ as program manager, will contractualise with project and program holders in the ER-P area, and / or will use third party operators, when in the classified forests these objectives will be implemented with SODEFOR.

These activities spread across the five (5) regions of the ER-P are funded (see table 6). While not all activities are directly aimed at achieving emission reductions, all involve a change in behavior and development within the ER-P area; since these are the cause of deforestation and degradation, they will therefore bring about emissions reduction. In this regard, the ER-P strategy will lead to a land use planning process, based on the sustainable development of cocoa farming in particular, and of natural resources in general, and to the clarification and protection of the rights of all stakeholders, in particular those of small-scale producers.

This will involve: (i) directing agricultural practices towards practices that are more intensive and less land-consuming, such as zero-deforestation cultivation and agroforestry, (ii) offsetting the demand for unsustainable wood products and fuelwood in the region with reforestation and restoration activities on degraded and community land, (iii) incentives for the conservation and sustainable management of forests, and (iv) bringing about emission reductions.

APPROACHES AND STRUCTURE OF THE ER-P

Table 8: Approaches and expected effects

APPROACHES
➢ **A multi-sector strategy** combining direct investments and enabling activities**.** ➢ **A program of performance incentives** designed to encourage sustainable practices among local communities, producers and the private sector in rural areas, in particular (i), zero-deforestation agriculture, (ii) reforestation and, (iii) the conservation and sustainable management of forests. ➢ **A rationalization of the management of classified forest** by the generalization of concessions scheme and setting goals compatible with REDD+ for concessions holders. ➢ **An innovative financing framework.** Public financing creates enabling conditions for the rollout and sustainability of emission reduction activities among private stakeholders and communities. These activities generate carbon and non-carbon revenues, which help to encourage the participation of new stakeholders and investors.
EXPECTED TRANSFORMATIONAL EFFECTS
1. Thanks to the financial and technical support that is supported by the ER-P, public forest management and protection bodies will rationalize land use and improve the conservation and monitoring of forests. Moreover, land disputes will be more easily arbitrated through the launch of the activities of the Agency for Rural Land Management (AFOR) (see the Côte d'Ivoire Project for the improvement and implementation of the land policy (PAMPF)), which has a pilot project in the south-western area, supported by consultation and by the participatory approach with regard to land use. 2. Cocoa producers and intermediaries (buyers, processors) will be interested in entering the production and purchasing logic of zero-forestation cocoa. In fact, this rationale will produce direct revenue (investment in cultivation techniques and choices) and will make payments conditional upon performance, and compensate revenue losses when occur. 3. Farmers will benefit from support, enabling them to make long-term efficiency improvements to their agricultural practices, to steer their activities toward agroforestry and thus to more readily accept the restrictions that will be imposed upon them regarding use of the forests. 4. Formalization of raw materials sectors (cocoa, charcoal, lumber, etc.) and income diversification will make it possible to better control their legality and their impact on forest cover, while guaranteeing populations and farmers an opportunity for their products at stable prices, as well as additional income, enabling an increase in their standard of living.

The ER-P will implement this approach by combining a set of enabling and sectorial activities adapted to local causes of deforestation and aligned with the national REDD+ strategy.

Sectorial activities are defined as types of activity aiming to address the direct causes of deforestation and to generate measurable and verifiable emission reductions.

- Within the framework of the ER-P, these activities seek to introduce and re-direct cocoa cultivation towards a more intensive and sustainable cultivation, to counter the lack of investment in the sector, and to encourage incentives and knowledge transfer in order to develop alternative farming activities such as agroforestry, as well as alternative energy and forestry activities. (*Eliminating barriers **b** & **d** with regard to the points listed above*).

- Sectorial activities, as the priority and the more relevant activities in terms of responding to drivers of deforestation and forest degradation, are proposed by the ER-P, although other activities may be introduced during the course of the program, according to the experience acquired.

- Sectorial activities will be carried out through direct investment, on the basis of payments for performance (proxy/PES factors) and will be implemented by operators, which may be communities, companies, NGO associations, or farmers' organizations. (*See the PES section below*)

Enabling activities are those activities that aim to create conditions favorable for the implementation of sectorial options, but which also offer a means of addressing certain underlying causes of deforestation and contribute to the sustainability of sectorial activities. They do not necessarily generate emission reductions (except on the basis of estimates relying on assumptions which must be clearly established and argued).

- Within the framework of the ER-P, these activities will seek (i) to create a contractual formalization framework to alleviate land insecurity, (ii) to strengthen the tools for action within the services of OIPR and SODEFOR, and other decentralized services, in order to ensure regulatory compliance; (iii) to facilitate the development of the economic sectors concerned through support for operators in the agriculture and lumber sectors and (iv) to apply incentives for populations that have recently arrived in the region to resettle in the center of Côte d'Ivoire. (*Removing barriers, points **a**, **b**, **c,** and **d***.)
- The enabling activities will be realized through public and private investment in partnership and implemented by local executing agencies, NGOs and interested state services.

Although this structure of the strategy divides the activities into enabling and sectorial effects, it will maintain an integrated approach within the framework of the ER-P.

Table 9 : Structure of the program and key activities

Strategic options	**Sectorial activities**	**Enabling activities**
Zero deforestation Agriculture	AS1. Commodity Agroforestry and agricultural intensification (in classified forest and through PSE in rural areas) AS2.Agroforest (in classified forest)	AH1. Land security. AH2. Technical support and information.
Sustainable domestic energy	ES1. Fuelwood plantation (PSE-Rural areas). ES2. Community agroforestry: Food plantation and fuelwood associations (Taungya in classified forests) ES3. Alternatives to wood energy - utilization of agricultural residues and timber	EH1. Land security.
Sustainable forests management	FS1.Small-scale timber plantation and protection of private and community forests (PSE-Rural areas) FS2. Restoration and protection of the natural tree cover in classified forests (classified forests) FS3. Strengthening the protection of protected areas (in NP and NR)	FH1. Strengthening local communities in forest management. FH3. Technical support for SODEFOR. FH3. Management of support for protected areas.
Mines	MS1. Rationalization of artisanal gold mining	MH1. Strengthening the application of the mining code.
Enabling ***Planning*** ***Governance*** ***Population*** ***Capacity***	H1. Land tenure security. H2. Territorial development and Land use planning. H3. Improved and participatory management of classified forests. H4. Capacity building among local communities.	

Sectorial activities

Specific sectorial investments designed to reduce deforestation and forest degradation are deployed in the five (5) regions of the ER-P area covering 4.6 million hectares. These investments will be made as part of the implementation of the different REDD + strategic options in the specific context of the ER-P area with the involvement of all territory stakeholders y as detailed below:

AS1: Commodity Agroforestry and agricultural intensification. This activity seeks to support agriculture without deforestation by increasing (i) the productivity of small-scale producers and local communities, in particular by improving access to seeds, grafts and improved planting material, organic and mineral fertilizers and integrated pest management, (ii) crop diversification and agroforestry, (iii) nursery creation (developing the initiative of small nurseries managed by women and youths) and the distribution of fruit trees, (iv) technical support and consulting for agricultural intensification and agroforestry, the introduction of environmentally-friendly and intensified cultivation practices. The implementation of this component will include (i) the development of simple practical training documents (information sheets, illustrations) as well as, (ii) the organization of local training workshops and, eventually, the selection of pilot sites for demonstration. The program will provide financial support through leveraging existing private initiatives in public-private partnerships.

AS2. Agroforest (Development of agroforestry in classified forest**s)** This activity will be implemented in the classified forests, it aims at addressing the problem of the cocoa producers established in the classified forests, to organize and to standardize these activities. The program will make it possible to implement the concept of "agroforest" introduced in the new sectorial policy and which refers to classified areas in which the practice of agroforestry is allowed, i.e. degraded classified forests (more than 75%. Degradation). In these areas, under strict conditions, it is planned to have supervised and environmentally friendly agricultural activities (in particular cocoa-under shade crops, rubber trees in association with forest trees). The activity aims at (i) the establishment of agroforestry industrial concessions in some of the classified forests of the ER-P area for the development and / or organization of large-scale agroforestry plantations and (ii) the grouping of smallholders in cooperatives and the granting of concessions to these cooperatives. Agricultural agroforestry standards will be established and enacted into standards in these concessions. The actions described in AS1 Agroforestry and Agricultural Intensification will also be implemented in these concessions.

ES1. Fuelwood plantations. This activity will be implemented in the rural area, it aims to address the problem of the availability of wood energy by promoting the development of individual or community fuelwood plantations in the rural area. This activity will allow the development of wood energy plantations in full planting or agroforestry-food associations on individual or collective initiatives in rural areas of the ER-P area as part of the PES program.

ES2. Community agroforestry: Food plantation and fuelwood associations (Taungya in classified forests) . This activity will be implemented in classified forests; it aims to develop Food plantations of fuelwood while increasing access to agricultural land for the development of food crops. The Taungya system is already used by SODEFOR in several classified forests of the country, it consists of assigning concessions in areas of highly degraded classified forests to Women and Young associations and NGOs through conventions allowing the development of food crops in association with fast growing fuelwood plantations.

ES3. Alternatives to wood energy - utilization of agricultural residues and timber. This activity will be implemented in rural areas and in classified forests; it aims to promote innovative initiatives undertaken by associations and NGOs in the ER-P area to use agricultural residues (cocoa pods, coffee husks and rice residues, old plantations of oil palm and rubber woods). The Affery's Natural and planted Forests Owners Association (APFNP) is already using this innovation in southeastern Côte d'Ivoire. The program, based on this innovation, will highlight the huge biomass potential of the program area.

FS1. Small-scale timber plantations and protection of private and community forests. This activity will be implemented in rural areas, it aims at reconstituting natural forest areas and tree planting in the rural area

through individual and community initiatives that will ultimately increase the availability of timber and the presence of natural forests. The Program will enable (i) the development of timber plantations and (ii) the protection and restoration of forest relics as part of individual or collective initiatives in rural areas under the PES program.

FS2. Restoration and protection of the natural tree cover in classified forests. This activity will be implemented in the classified forests, it aims at reconstituting natural forest areas and tree planting in the classified forests, and it is based on the enabling conditions developed in the H3 activity. The program will rely on several different stakeholders and actions to implement this activity: (i) SODEFOR will implement its own reforestation program in the classified forests, (ii) the existing industrial logging concessions in the classified forests will be updated and new ones will be allocated allowing sustainable management of the concessions and renewal of timber resource, and (iii) following the identification of forest relics in the classified forests (see H3), conservation and restoration areas will be defined and concession agreements for these areas will be established with NGOs or conservation associations.

FS3. Strengthening the protection of protected areas. This activity will be implemented in the national parks of Taï and Mont-Peko, the N'Zo reserve and any classified forests in the ER-P area that would have been upgraded into PA under the classification resulting from the guidelines of the new sectorial policy. This activity should prevent deforestation in ER-P's protected areas and restore the forest cover of their degraded areas. Strengthening the protection of protected areas reinforcement of the intervention capacities of the Ivorian Office of Parks and Reserves (OIPR) in the ER-P area in terms of surveillance and protection through increased infrastructures, and logistical support (remote sensing, drones, mobile units, vehicles), targeted training sessions, and the strengthening of the sustainable financing mechanism. The Program may also support environmental NGOs and environmental protection associations that may be involved in specific activities related to strengthening the management of these protected areas.

MS1. Rationalization of artisanal gold mining. This activity will be implemented in rural areas, it aims to restructure the artisanal gold mining sector in the ER-P area. The ER-P will allow the practical implementation of the national program for the rationalization of gold panning in its area. The approach is to identify gold miners and help them turn to other income generating activities or operate in accordance with the new mining code (March 2014), and according to sustainable practices. The objective in the program area is to restore the old gold mining sites by reforestation, to define gold mining corridors and to assist the organization of gold miners in cooperatives. The feasibility of implementation of gold certification scheme from these cooperatives will be evaluated to eventually move in this direction to increase the environmental standards as well as the mining revenues. The government has committed $ 400,000 a year for four years ($ 1.2 million) to implement the national program of artisanal gold mining rationalization. These activities consolidate those planned and ongoing at the Ministry level in charge of mines. These include: (i) the creation and official installation of the Mining Code Infringement Brigade (BRI CM) to enforce the mining code and address the illegal miners; (ii) search for mineralized corridors in collaboration with SODEMI underway for the installation of legal miners, (iii) revitalization of local technical committees that were dormant by training and provide operating resources, and (iv) supervision of legal miners with with regard to the environmental management of their activities.

Enabling activities

The activities presented are planned and funded in the regions that constitute the area of the ER-P, and may be extended with the implementation of the ER-P. The objective of the actions carried out in this area is to significantly strengthen institutions and the governance of natural resources, the technical capacities of cocoa growers, and to respond to the obstacles of green growth. Great importance in terms of institutional reforms and monitoring and evaluation will be attached to these activities in order to guarantee the sustainability of the ER-P. Enabling activities will be carried out in the following areas:

H1. Land tenure security. This activity is a prerequisite for investment in and development of small-scale

plantations, industrial plantations, and agroforestry (guaranteeing the return that can be made from the tree for the growers or owners, as applicable). This activity will be facilitated by land reform already initiated to facilitate the granting of land title in rural areas, particularly through the Rural Land Agency (AFOR). Support for land security will be carried out in several stages: (i) development of complete maps of land cover and land status (forest boundaries, overview of the situation, clarification of the legal status of forests), (ii) an assessment of titles in rural areas, based either on the local land register if possible, or on other titles (usage rights, customary rights), will be carried out to determine the best land security method, then (iii) depending on the case, registration of existing titles, formalizing de facto occupation, or formalizing usage and/or customary rights with the land certificate, while clarifying land boundaries.

H2. Territorial development and land use planning. The purpose of this activity is the development of Territorial development and land use plans (SRADT) integrating the REDD+ strategy and proposing local implementation pillars for these strategic options at the jurisdictional level for each of the five (5) Program regions.The program will support the development of Regional Land Management and Development Schemes (Schémas Régionaux d'Aménagement et Développement du Territoire) (SRADT) and green growth plans to develop a regional land management policy based on: (i) the development of economic opportunities, (ii) the preservation of remaining natural resources, and (iii) the restoration of the forest cover. Prior to the drafting of the SRADTs, in collaboration with the competent authorities: (i) an initial study of the area will be carried out in order to assess the social, economic and environmental situation, as well as the underlying social and economic dynamics, and (ii) localized pilot projects will be designed to follow the approaches adapted to the local socioeconomic and physical conditions. The drafting of the SRADTs will be carried out in accordance with the procedure established by the Manual for SRADT implementation procedures, integrating the REDD+ mechanism from the Directorate General of Land-use Planning and Regional Development (Direction Générale de l'Aménagement du Territoire et du Développement Régionale) from March 2016. Pilot experiences from the development of the Nawa and the Mé region's SRADT will be capitalized.

H3. Improved management of classified forests. The purpose of this activity is to create the appropriate framework for the establishment of participatory sustainable management of classified forests with multiple realistic objectives in accordance with the objectives of the national forest policy of preservation, rehabilitation and extension of forests. The implementation of the program will be based on the new orientations of the forest policy: (i) participatory management, (ii) independent observation, (iii) classification and typology of classified forests and the determination of specific objectives according to their conservation status, (iv) the development of the concept of agroforest opening the process of formalization of agricultural activities in classified forests under agroforestry standards. The program will make it possible to set up the appropriate framework for the implementation of participatory sustainable management of classified forests, in accordance with the objectives of the national forest policy for the preservation, rehabilitation and extension of forests in the area. from the program. The envisaged actions are: (i) the realization of the basic studies allowing to have the adequate knowledge for planning of these classified forests with notably the realization of a national forest inventory and specific studies of inventories and management, (i) the establishment of the management framework for the main classified forests with the development of participatory management plans for classified forests, precise zonings, the development of local participatory management committees of classified forests and the establishment of an independent observer of the implementation of the reform in the classified forests; (ii) the revision of the Forest Code and the development of regulations adapted to reflect the new concepts of the sectorial policy; and (iii) the reform of the concessions system in the classified forests for the development of a transparent and organized system of partnership management and management delegation of all or part of classified forests with the development of standard agreements adapted to the objectives and stakeholders (sustainable logging concession agreement, industrial agroforestry concession agreement, agroforestry cooperative concession agreement, protection concession agreement) as well as the determination of specific criteria and adapted management standards.

H4. Capacity building in forest management among local communities, this activity is targeted (i) Local community who are native to the region, (ii) Ivorian immigrants who have settled in the region and, (iii) foreign

immigrants. Actions will be undertaken to encourage (i) participation in the program through village and regional organizations. These will be awareness raising and dissemination of information activities, and education campaigns. Local stakeholders, including NGOs, community leaders, traditional chiefs, and any other key people in each area of intervention will be closely involved in order to (i) facilitate access and effective representation for the community; (ii) establish village committees where there are none, for forest management (with the inclusion of different levels: village, municipal, departmental, regional and national) (iii) involve traditional chiefs in activities connected to land tenure, land use and land management, with the establishment of a collaboration platform linking local populations, the private sector and governance bodies, in particular regional, departmental, forest, agricultural and environmental services, (iv) improve acess for women to the land, and (iv) training provided to facilitate participation and ensure autonomy in the management of local organizations.

ZERO DEFORESTATION AGRICULTURE

The agricultural sector, and cocoa cultivation in particular, is the main driver of deforestation, as explained in section 4.1. In order to remedy this significant driver, the government has developed the "Zero-Deforestation agriculture" policy, which promotes intensive agriculture (i) in rural land, (ii) preserves parks and reserves, classified forests, special type of forests such as sacred forests, (iii) contributing to the restoration of forest cover, (iv) resilient to the impacts of climate change and, (v) respecting the rights of local communities while improving their livelihoods.

The zero-deforestation agriculture policy was first translated into the Agricultural orientation Law 2015-537 of July 20th, 2015, in particular Articles 145 and 146 stipulating the objectives of increasing the area of forests, the restoration and protection of forests and stating that "Agricultural development of land is prohibited (...) in protected areas". The zero-deforestation agriculture policy was also reaffirmed, and its implementation modalities specified in the ''2018 forest policy declaration'' currently being formalized through the integration of its guidelines in the revision of the forest code.

This policy is built around two complementary approaches: (i) a supply chain approach (vertical approach) which involves the different links of the supply chains (producers, commercial buyers, interprofessional), and (ii) a territorial approach (horizontal approach) which aims to support the emergence of sustainable territories including involvement of all stakeholders of village territories, including those that are not necessarily integrated into organized agricultural sectors.

Main pillars are:

(i) protect the remaining primary or secondary forests by developing agriculture exclusively in the non-forested lands (productivity improvement), and outside protected areas and classified forests (except for the special case of SODEFOR's complantations aimed at to restore these classified forests through the contractualization of illegal occupants or the development of agroforest);

(ii) contribute to the national forest restoration effort in rural areas, partly to offset historical deforestation and the restoration of classified forests and degraded protected areas following various infiltrations for agricultural purposes (mapping of high carbon stock forests (HCS) and ecologically and culturally relevant forests (HCV));

(iii) guarantee rights over the use of farmers' lands through the clarification and securing of land; and;

(iv) improve the livelihoods of producers and their communities.

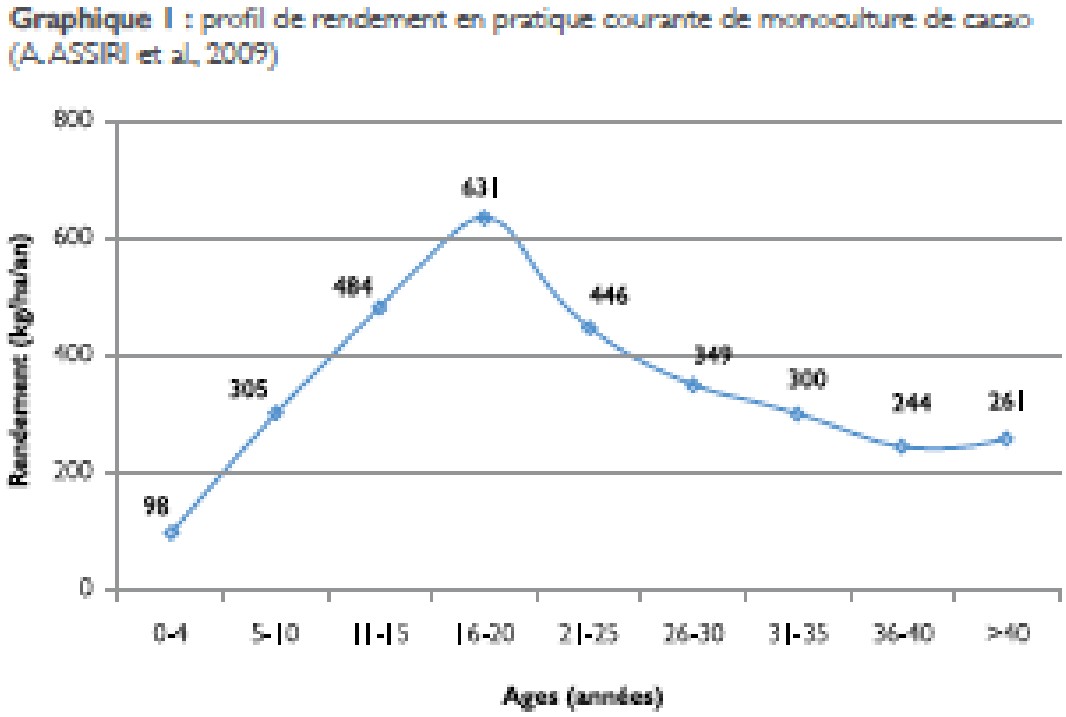
The strategy of the program is part of this policy, it consists of decoupling cocoa culture and deforestation in rural areas through the identification and geolocation of cocoa small-holders and their plots for traceability, securing land, increased productivity, the practice of agroforestry (tree planting, cocoa farming under shade and hedgerow), HCS and HCV forest mapping, forest cover restoration, and rationalization and sustainable management in classified forests, and the traceability of products resulting from this zero deforestation agriculture.

This strategy will make it possible (i) to diversify and to generate higher revenues for households and small-scale producers, and (ii) to reduce the area farmed and thereby reduce the associated deforestation. These objectives will be pursued by a variety of means, such as: (i) various forms of technical training, (ii) initial investment in and supply of inputs, and (iii) payments for results. Support downstream in the value chain will be a determining factor for ensuring stable income for the various households and farmers concerned. In order to achieve this objective, the program will seek to work with public organizations such as OIPR and SODEFOR for protected areas and classified forests, private operators (farmers, cooperatives, exporters and processors) in rural areas, and to establish co-financing agreements with them. The program will also make it possible to establish a partnership with the institutional or private organization interested in supporting the initiative of producing a sustainable landscape, such as the Cocoa and Forests Initiative (CFI) and Cocoa Life to combine the sectorial and territorial approaches.

Thanks to a combination of investment and payments based on results, the program will encourage households and small-scale producers to cultivate outside forests and to reduce the number of fields in forest areas. Non-carbon revenues generated through agricultural diversification will provide an incentive for maintaining these sustainable agricultural practices in the medium and long term. Investment in value-chain facilities and traceability will make it possible to attract professional operators who will be responsible for maintaining price stability, high product quality, and compliance with the strict specifications relating to the reduction of deforestation and forest degradation. The SEP-REDD + will be responsible for coordinating with the different stakeholders and for monitoring & evaluation both for the ER-P and within the framework of the CFI as a member of the CFI Technical Committee in charge of monitoring & evaluation.

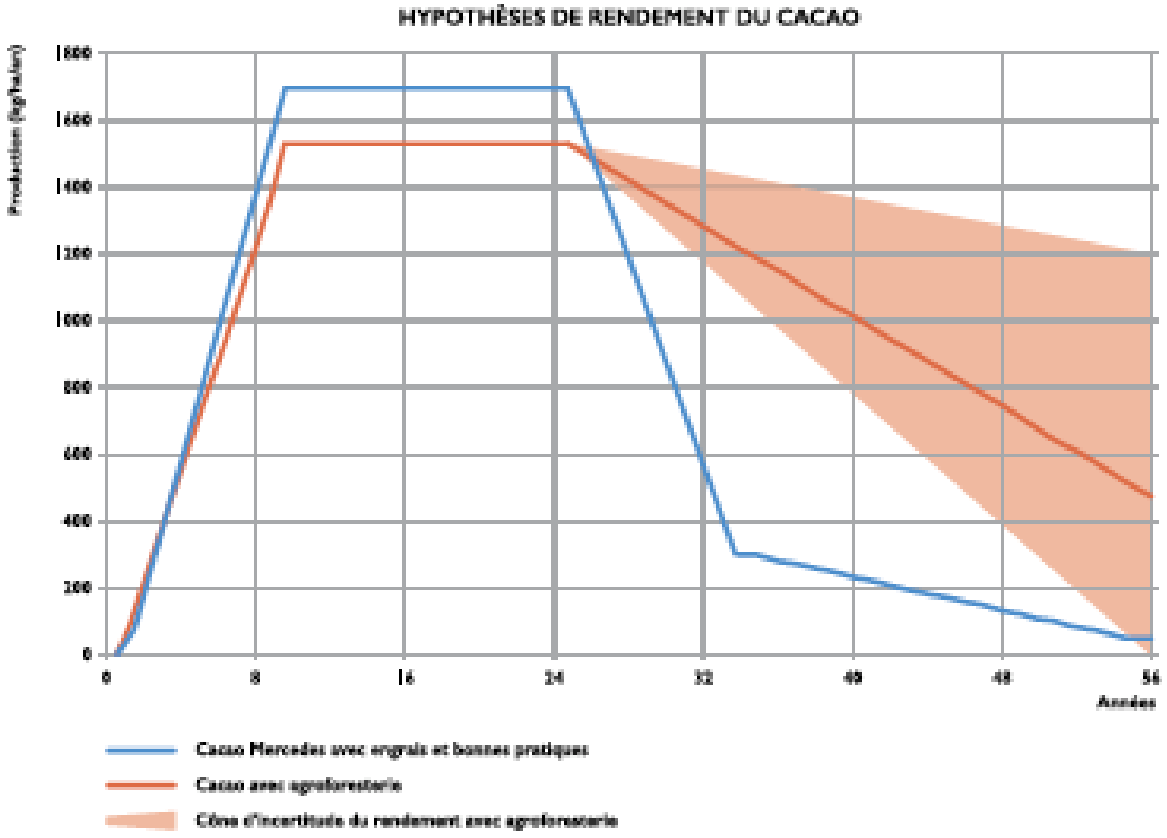
Studies[25] show that, that investing for cocoa smallholders in new more productive cocoa plants and trees is impossible without external support, and cocoa und tree shadow results in slower yield at the beginning before the full productive potential of agroforestry cocoa starts, and in consequence it has an impact small holders revenues. Figure 13 below shows the current cocoa monoculture yield with a peak of production yield around year 16-20, when figure 14 below takes the hypothesis of figure 13 (blue line) and compares to a hypothetical cocoa agriculture under agroforestry conditions. Agroforestry cocoa show a slower peak of yield and maturity (and a lower yield peak that the cocoa monoculture) but, it shows a slower decline in yield with time, which results in a much better yield over time compare to cocoa monoculture. When promoting agroforestry cocoa, one must take into consideration to provide the smallholders with alternative productive agriculture (fruit trees, subsistence crops), non-carbon benefits, and alternative revenues such as Payment for Environmental Services (PES) (see section on PSE below) at the beginning of the activities over a certain period of time.

Figure 13: Yield profile in current practice of cocoa monoculture (A.ASSIRI & al, 2009)



[25] Se study : « Étude coûts-bénéfices de la REDD+ en Côte d'Ivoire et mobilisation des acteurs des grandes filières agricoles et forestières" (2014, UE-EFI).

Figure 14: Comarison of yield between too different cocoa agriculture practices: Monoculture vs. Agroforestry



Key sectorial activities:

AS1. Commodity Agroforestry and agricultural intensification.	
Description	In rural areas, the program will develop small-scale agroforestry farming models to support zero-deforestation agriculture, which will allow rural populations to make use of the economic possibilities of the natural resources available in order to significantly increase their income from agriculture, while also focusing, in particular, on environmental sustainability. A combination of energy wood - fruit trees - timber and food crops (diversification) is recommended. It allows an increase in the income of the planter. This model is therefore attractive for all planters. In addition, it is women who are involved in the production of food crops and who sell products on the markets. This pilot would therefore contribute to gender equality and ensure the livelihoods of families[26]. The program will set up incentives to provide income for households before trees are exploited. The program will develop: (i) the preparation of a data repository with technical and economic data on agroforestry, (ii) guidance and information services (the development of simple practical training documents: information sheets, illustrations) as well as the organization of local training workshops and, eventually, the selection of pilot sites for demonstration, and (iii) intensified agriculture and environmentally-friendly practices. Since the principles of agroforestry are not widely known, technical documentation will be drafted, as well as training in the principles and benefits of agroforestry plantations, which will be imparted to target populations in the regions concerned. Training may be offered at the sub-regional or village level, in order to maximize impact and to facilitate exchanges between trainers and farmers. To contribute to improving the effectiveness and sustainability of farming techniques (inputs, technical procedures), the farming component of this action will include: (i) explanation and promotion of a more effective and sustainable agriculture in terms of: pest management, rational use of pesticides, individual protection measures; (ii) fertilizers (improvement of soil and microbiology depending on the soil type and cultivation needs); and (iii) mechanization of exploitation and the principles of soil protection. The establishment of nurseries and subsidies for tree seedlings and cuttings. This will involve introducing 50 trees/ha on half of the areas, based on an average cost of USD 0.50 per plant. This activity will particularly include women and youth to train them on seedlings and manage nurseries. Initial investment in vegetation material will eliminate one of the main obstacles to the development of plantations. The supply of plants will help to control the genetic quality of the vegetation material, which is essential for the success of the development of plantations and the fight against diseases (swollen shoot). The production of plants in nurseries will be subject to strict specifications, in particular with regard to the genotypes used (species, varieties, improved material) and qualitative specifications for deliverable seedlings (size, root development, health status). thanks to the training received by women and youth on selection techniques and management of nurseries Several species of fruit and forest trees will be proposed depending on the local climate conditions and possibilities. The technical documents produced for the training component

[26] Voir étude : « Production durable de Cacao en côte d'Ivoire : besoins et solutions de financement pour les petits producteurs », ONU-Environnement (UNEP FI) et la Facilité REDD de l'Union européenne 2018.

	will help to determine the suitability of planting sites for each species suggested in order to ensure the best chances of success. Moreover, opportunities will be documented for each species in order to guide farmers in their choices. Technical supervision will ensure the supply of seedlings in order to guarantee that farmers understand the technical conditions required at each stage of preparation, planting, monitoring and cutting. At the micro level, agricultural companies such as commercial and processing agro-industrial companies will be supported in the development of fair trade and traceability models, in increasing revenue for producers and ensuring sustainable access to natural resources, as well as to production means. Policy-makers and information sources at the meso level (Producer organizations, service providers, decentralized and deconcentrated state structures, joint-trade organizations and interest groups) and at the macro level (public regulatory services and ministries) will be supported to better carry out their mandates, and to support the implementation of zero-deforestation supply chains. The program will support the development of traceability tools linked tot he national forest monitoring system so that cocoa purchasers and the end consumers are assured that the cocoa they buy comes from legal areas and not from High Conservation Value Forest (HCV) areas and High Carbon Stock Value areas (HCS). Using PES to bear part of the investment costs required to carry out the activities in rural areas. Establishment of a monitoring system aimed at controlling the extension of cocoa plantations in forest areas (monograph, monitoring). The program will pilot a performance-based incentive mechanism (PES) in villages adjacent to selected classified forests to provide alternative income to local communities in order to reduce the human pressure on natural resources. The program will finance PES agroforestry and forestation sub-projects. Pilot project: The Cocoa Life[27] project led by Mondelez, as part of a public-private partnership with the SEP-REDD+ which oversees the project, and implemented by Impactum and The Forest Trust (TNT) in the Nawa region has been initiated to: (i) inform 5,000 cocoa farmers about climate change with the goal of raising awareness of 36 communities in the region, (ii) identifying and mapping HCS forests in the region, (iii) planting 7,000 economically valuable trees (mostly fruit trees), (iv) the creation of 5,100 hectares of cocoa under shade in agroforestry involving 2,550 producers, (v) the planting of 600 hectares of forest for wood energy, (vi) contribute to the conservation of 300 hectares of natural forest communal in 10 villages. Implementing partners are: • *The Forest Trust*, which is responsible for HCS forest mapping, socio-economic studies and land use planning. • *Impactum* NGO, which is the operator for PES projects, works with communities and mobilizes cocoa farmers, and collaborates with various government departments. • *OIPR*, which provides technical support and planting materials.

[27] Voir «Pioneering forest protection work in Cote d'Ivoire, A case study on Public – Private Partnership» Mondelez, REDD+, TFT, Impactum Octbore 2018.

	• *Women's associations*, which are responsible for producing and providing seedlings. • *Ecom AgroTrade* provides agroforestry training to growers and cocoa seedlings. • *Producer associations*, which sensitize and mobilize their members to engage in agroforestry and PES projects. • *Care International*, main partner of the CacaoLife project in Côte d'Ivoire for community development. In view of the first positive results of the project, the goal and continue and include the 5,000 cocoa farmers.
Key results targeted after 4 years	✓ 100,000 ha of agroforestry ✓ 50% of vegetation material renewed ✓ 15,000 farmers trained in agroforestry and agricultural intensification techniques ✓ A zero-deforestation traceability system linked to the SNSF in place
Operators / beneficiaries	Cooperatives, households and small producers
Potential partners	GIZ, FIP, CNRA Private sector: Cocoa Life (Mondelez), Cacao Forest Initiative (37 private companies from the cocoa sector), Conseil Cacao-Café, Cemoi, OLAM, Barry-Callebaut, Mondelez, Mars, Cargill NGOs and technical partners: Impactum, TFT, UTZ, Rainforest Alliance, Care International, CNRA, ICRAF and Women's associations.

AS2. Agroforêt	
Description	The recent forest policy develops the concept of ''agroforest'' in highly degraded classified forests. The program will support this reform to develop agroforestry models for cocoa and rubber as agricultural norms in selected classified forests. The program will intervene in several ways in agroforests to achieve this objective: (i) support for the establishment of smallholders cooperative in classified forests and the development of concession agreements for these cooperatives, (ii) the implementation of the SODEFOR system of complantation with cooperatives of small planters and women in classified forests allowing to insert 50 trees per hectare in their plantations and (iii) the agroforestry concession of all or part of selected classified forests as agroindustrial for the development of agroforestry plantations of cocoa and rubber, (iv) development of cocoa certification in classified forests. Small farmers illegally occupy some areas of classified forests. Realism dictates that classified forests heavily colonized by agricultural activities will not be fully reclaimed. Agreements will be signed between SODEFOR and small-scale producers to introduce forest trees into their (cocoa) plantations in exchange for the right to continue harvesting mature trees and to practice agroforestry on these agricultural lands. The idea is to limit the permanent installation of the planters in the classified forests by authorizing the exploitation in production until the revolution of the culture. The activities will be: (i) a survey of the state of classified forests, and their boundaries, (ii) a gap analysis of the current SODEFOR structure will detail the profiles, resources and capacity to mobilize to take on new expanded missions, and (iii) the establishment of a technical support unit, with a permanent in-house team and a set of temporary skills at

	SODEFOR, designed to support a modernized and expanded monitoring system, (modern forest management based on technologies designed for intensive planting and associated with sustainable agriculture and more general skills in management, financial auditing and institutional support), and (iv) the systematic development of concessions contracts with cooperatives and agroindustrial and improve surveillance systems to stabilize and carry out strict control of land use, with the creation of a unit to monitor existing farmers and land use (field monitoring, remote sensing). The program will support (i) the establishment of local committees for the co-management of classified forests (CLCG), with women participation, and the development and implementation of participatory management plans for classified forests, (ii) the restoration activities of natural forests and degraded classified forests, (iii) reforestation activities for the renewal and expansion of old tree plantations, (iv) the demarcation of classified forests, (v) the legal expertise to establish concessions contracts with cooperatives and agroindustrial.
Key results targeted after 4 years	✓ 2 agroforestry concessions with agroindustrial are developed in classified forest ✓ 10 cocoa cooperatives are established in classified forests ✓ 3,000 smallholders benefit from the complantation programme. ✓ 15,000 ha of agroforestry developed in classified forests
Operators / beneficiaries	Cooperatives, households and small producers, agroindustrial firms
Implementation partners	SODEFOR, OLAM, SIAT, Women NGOs.

Key enabling activity:

H1. Land security	
Description	The sustainable development of agroforestry can only be achieved by clarifying and securing land rights, conflict resolution and tree ownership. Land tenure security is the set of processes, actions and measures of all kinds, aimed at enabling the user and the holder of rural land to effectively carry out their productive activities, protecting them against any contestation. The program will support the National Rural Land Tenure Security Program (PNSFR), in particular the process of obtaining land certificates conducted by AFOR, which is an act of the administration that finds that a person or group is the holder of traditional rights over a rural land occupies it permanently and without conflict, or the registration of land (registered in the land register). The land security process supported by the program will be done in several steps: (i) land cover mapping (delimitation of the forests, diagnosis, clarification of the legal status of the forests), (ii) delimitation of the villages territories taking into account classified forests (iii) further delineation of land parcels for the issuance of land certificates, (iv) the issuance of land certificates to holders of traditional rural land rights: land titles to beneficiaries of land certificates which are authorized by law and emphyteutic leases to holders of land certificates not admitted to obtaining land title (foreigners and women), (v) the registration of existing titles, then (vi) Formal contractualization of relationships through rural leases between landowners and non-farmers owners, formalize de facto occupancy if possible, and (vii) the establishment of a rural land register, all the land information collected during the operations of delimitation of village territories and the issuance of land certificates will allow to implement and operate the rural land register. This information will be integrated

	into the Rural Land Information System (SIF)[28], which is an informational tool for assisting rural land management. This process will be conducted by AFOR with the support of the relevant ministry departments in the rural area until 2027. The monitoring is carried out by the Monitoring and Analysis Unit of the Premature and by a platform CSOs related to rural land reforms as independent observers, and in the ER-P area with support of SEP-REDD+. The issue of tree ownership has always been a barrier to community and producer involvement in tree planting activities. Even though the 2014 Forest Code recognizes the ownership of the tree by the landowner or the person who planted it, the absence of an implementing text still places the producer in a situation of insecurity. In this context, the program intends to sensitize the beneficiaries with NGOs (Impactum and UTZ) on the forest code and assist them in the declaration of the trees planted with the forestry administration in the classified forests. Pilot project: AFOR, with the financial support of the World Bank and the European Union (EU), after delimitation of village lands in the San Pedro region, has (i) set up sixty-four (64) Villages Committees for rural land management (Comités villageois de gestion foncière rurale-CVGFR) in the ER-P area, (ii) conducted official surveys for issuing land certificates, and (iii) computerized the archives of the Rural Land and Rural Cadastre Department.
Key results targeted after 4 years	✓ Acquisition of land certificates and registration of land for program beneficiaries. ✓ At least 500 women having access to land for agroforestry ✓ Computerized rural cadastre for the 5 ER-P regions
Operators / beneficiaries	Producers, planters, women associations, and communities.
Implementation partners	• AFOR with support of Ministry of Agriculture, Ministry of the Interior, Directorate of Rural Land Tenure and its land agents, Prefects and sub-Prefects, the Directorate of Land Tenure Conservation and Registration and of the Conservation Stamp, in collaboration with the Directorate of Land Registry. • Technical and financial partners: specialized NGOs (Impactum and UTZ-RA), World bank and the EU

[28] The Land Information System (SIF) is software for setting up and managing the rural land register. It operates in networks and involves all stakeholders in the management of rural land, including the Ministry of Agriculture (MINAGRI) as manager of rural land, the Directorate General of Taxes (DGI) of the Ministry of Economy and Finance (MEF) for Land Registration and Land Titles, BNETD and Approved Technical Operators for Boundary Plans, ANADER and other development agencies for information on the rural areas.

SUSTAINABLE DOMESTIC ENERGY

More than 70% of energy consumption comes from biomass from the forest. This means that the forest surface area and productivity continue to diminish over the years. The forest balance sheet, which is already in the negative in several districts within the country, will become negative throughout the country in the near future if a proper reforestation policy is not established and implemented. Thus, the fuelwood needs will be satisfied at the cost of overexploitation of the forests[29]. In fact, operators are poorly organized and there is a lack of organization in the fuelwood sector, with poor performance in current charcoal-making techniques, and a lack of alternatives in terms of energy supply.

In order to counter the ever-increasing demand from the population for fuelwood and the undeniable attraction charcoal production holds for the populations in the area, the energy strategy of the program will consist in developing a structured and sustainable fuelwood supply channel, in particular by supporting reforestation and regeneration for energy purposes in order to rapidly grow a sustainable fuelwood offer for sustainable consumption at the local level and in urban centers, and to reduce pressure on forest spaces (this also constitutes a key leakage reduction strategy).

Indirect fuelwood production initiatives are being undertaken in the ER-P area, including: (i) as part of the Nawa Mondelez PES pilot project with the use of fuelwood in agroforestry plots of cocoa and, (ii) under the Taunya system used by SODEFOR in degraded classified forests to develop agroforestry plots that associate food crops and firewood associations with women's associations. It is planned to reinforce these two initiatives and to structure the wood energy supply chains through the development of the Regional Planning and Development Plans of the Territory (SRADT) foreseen in the PIF project.

After an initial production cycle, the communities and private stakeholders will draw significant revenues from their charcoal production and will be encouraged to maintain this activity in combination with agriculture. Furthermore, the formalization of the sector will help to disseminate good practices and standards among the various stakeholders. In the medium term, a "sustainable charcoal" value chain will be established. Development of a regulatory framework, where one is lacking and required, particularly with regard to the taxation of charcoal depending on areas of origin (the establishment of differentiated taxation / formalization of taxation).

Key sectorial activities:

ES1. Fuelwood plantations	
Description	The activity is led by Mondelez (Cacao Life) and GIZ, through PES projects to develop community and private plantations of fast-growing trees for fuelwood to supply the local market. In the rural area, land identification with local communities is being conducted for intensive wood and fuel wood plantation projects through the establishment of plantations in rural areas with fast-growing trees. Improving charcoal-making techniques to achieve efficient and sustainable charcoal and briquette production (raising awareness, training, incentives). Organizing and structuring the fuelwood industry. These measures will be supported with information campaigns among the populations to promote efficiency and sustainable usage of domestic energy, and renewable

[29] "Evaluation of the supply and demand of domestic combustible, and the associated trends in terms of agro-ecological areas defined by REDD+" ("Evaluation de l'offre et de la demande en combustibles domestiques et leur tendances au niveau des zones agroécologiques définies par la REDD+"), Provisional report – Sapphyre RD, MEDD- World Bank, 2016.

	energies (solar energy, biomass plants). Pilot project: See Mondelez project and planting 600 hectares of fast-growing trees for wood energy, table above activity AS1. Agroforestry and agricultural intensification.
Key results targeted after 4 years	✓ 20,000 ha of plantations dedicated to fuelwood and charcoal ✓ USD 700 generated in non-carbon revenues per ha (USD 2,200 after 10 years)
Operators/beneficiaries	Households, small-scale producers, specialized NGOs and private professional operators
Implementation partners	GIZ, PROCarbo project and Mondelez - CacaoLife project

***ES2.* Community agroforestry: Food plantation and fuelwood associations (Taungya in classified forests)**	
Description	SODEFOR has the experience of implementing concessions contracts with local communities and women asoociations especialy for agricultural production (cassava, firewood, banana) in association with fast-growing fuelwood plantations that will allow to supply the communities involved in fuelwood The project will develop conventions with women's and youth associations in classified forests near villages.
Key results targeted after 4 years	✓ 20,000 ha of plantations dedicated to fuelwood and charcoal ✓ USD 700 generated in non-carbon revenues per ha (USD 2,200 after 10 years)
Operators/beneficiaries	Households, small-scale producers, specialized NGO, women associations
Implementation partners	GIZ, PROCarbo project and Mondelez - CacaoLife project

ES3. Alternatives to wood energy - utilization of agricultural residues and timber	
Description	This activity will be implemented in rural areas and in classified forests; it aims to promote innovative initiatives undertaken by associations and NGOs in the ER-P area to use agricultural residues (cocoa pods, coffee husks and rice residues, old plantations of oil palm and rubber woods). The Affery's Natural and planted Forests Owners Association (APFNP) is already using this innovation in southeastern Côte d'Ivoire. The program, based on this innovation, will highlight the huge biomass potential of the program area.
Key results targeted after 4 years	
Operators / beneficiaries	Specialized NGOs
Implementation partners	SODEFOR and NGOs (Affery's Natural and planted Forests Owners Association - APFNP)

SUSTAINABLE MANAGEMENT OF FORESTS AND CONSERVATION OF PROTECTED AREAS

Of 16 million hectares of forests at the start of the 20th century, residual forest areas now only cover around 3.4 million hectares, i.e. an average rate of disappearance of over 200,000 hectares per year. In terms of the ER-P area, 278,407.20 ha of forest were lost between 2003 and 2013, an average of 27,840.72 ha/year[30]. On the periphery of the Taï national park, non-anthropogenic ecosystems (those not altered by human activity) have disappeared on more than 99% of areas, as a result of agricultural activity, in particular cocoa cultivation[31]. In the areas surrounding the Taï national park, between 2003/4 and 2010, primary forest and degraded forest surface areas went from 10.5% to 0.6% and from 15.5% to 6.1% respectively, the latter also having suffered infiltration of illegal cocoa cultivation.

The program strategy in the forest sector focuses on two complementary areas: production and conservation. Firstly, in order to reduce deforestation and degradation caused by industrial and small-scale logging and, at the same time, to satisfy the demand for lumber in national and international markets, the program will provide support to: (i) industrial logging companies, to sustainable forest exploitation in classified forests; (ii) professional and community organizations working on the reforestation of local species in rural areas in order to counter the local demand for lumber and fuelwood in the medium term. The goal of this combination of performance incentives and co-financing is to recreate industrial and semi-industrial production following sustainable management standards. Then, in order to promote the conservation of forest carbon stocks, the program will provide its support (i) to the sustainable management of classified forests, and (ii) to the management of protected areas.

The program will offer the possibility to create an environment that is conducive to facilitating concessions with the private sector for the production of wood in classified forests and with little producers and associations in rural areas. In parallel, the monitoring of parks and classified forests by OIPR and SODEFOR will be strengthened, and sanctions will be applied to concessions that do not make progress in terms of legal obligations. The participatory aspect of nearby populations, transparency and monitoring will constitute the key elements of this strategy to bring the forestry sector towards the sustainable management of forests and the conservation of protected areas.

All classified forests recover forest cover, either through forestation activities, natural assisted regeneration, or agroforestry, through participatory management plans. Nearby local populations are included and integrated in agroforestry, making income diversification possible. With regard to logging, new logging concessions contracts containing provisions for sustainable logging are signed; these activities are traceable within the framework of FLEGT and monitored by independent observers. This progressive spread of sustainable practices will bring considerable opportunities for the logging sector, especially commercially since participation in the program will help to foster greater trust among commercial export partners, especially thanks to certification.

The development of contracts implementing "agroforests" in certain more degraded classified forests makes it possible to recover the forest cover, they secure the presence of farmers over a given period and the exploitation conditions and the returns from the trees planted. It also includes long-term planning for the end of these agricultural activities in classified forests with support activities.

The management capacities of SODEFOR are strengthened and expanded to new management activities. The establishment of boundaries for classified forests; the renewal and formalization of logging and agroforestry contracts make it possible for SODEFOR to secure resources in the long term. Support for OIPR enables better monitoring and control of the Taï national park area.

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[30] Côte d'Ivoire ER-PIN.

[31] "Study of cocoa production in the area surrounding the Taï national park" ("Etude de la production de cacao en zone riveraine du parc national de Taï"), Taï national park – World Heritage site –Biosphere Reserve – Côte d'Ivoire, GIZ - Final report, February 2013.

Key sectorial activities:

***FS1.* Small-scale timber plantations and protection of private and community forests**	
Description	This activity will be implemented in rural areas, it aims at reconstituting natural forest areas and tree planting in the rural area through individual and community initiatives that will ultimately increase the availability of timber and the presence of natural forests. The Program will enable (i) the development of timber plantations and (ii) the protection and restoration of forest relics as part of individual or collective initiatives in rural areas under the PES program. These restoration and regeneration activities will be accompanied by the enabling activity AH1. Securing the land of complete cartography of the land cover of forest delimitation, state of play, clarification of the legal status of forests. The objective of this component is the promotion of an incentive system to reduce anthropogenic pressure on classified forests in the Southwest and the promotion of forest landscape restoration in the center of the country. The project will support the implementation of a memorandum of understanding with the prefectural authority, through which the operational costs related to this activity (mainly travel expenses and meetings between the two regions to coordinate potential movements) will be supported by the FIP project.
Key results in 4 years	
Operators / beneficiaries	Impactum- PES operator
Implementation partners	GIZ, specialised ONG spécialisées and Communities

FS2. Restoration and protection of the natural forest cover in classified forests	
Description	This activity consists in reforesting and restoring the forest cover of classified forests in degraded and adjacent areas, and in rehabilitating old plantations through (i) the restoration of degraded areas through replanting local species where possible; and (ii) reforestation. This will be carried out in partnership with SODEFOR within the framework of the forestry policy, for identified forests that are more than 75% conserved or a little degraded. Reforestation with indigenous species will be carried out together with natural regeneration. This will be done to support the possible restoration of the economic value of the natural forests, which has until now been severely neglected. While it is potentially costly, the FIP could support the development of technical and economic guidelines by carrying out two test operations in sectors totaling a few hundred hectares in two classified forests. These reforestation operations may also give socioeconomic benefits by supporting action at the village level and through the creation of alternative income for communities and target groups (for example women, young people, etc.). This activity will be implemented in the classified forests, it aims at reconstituting natural forest areas and tree planting in the classified forests, and it is based on the enabling conditions developed in the H3 activity. The program will rely on several different stakeholders and actions to implement this activity: (i) SODEFOR will implement its own reforestation program in the classified forests, (ii) the existing industrial logging concessions in the classified forests will be updated and new ones will be allocated allowing sustainable management of the concessions and renewal of timber resource, and (iii) following the identification of forest relics and HCV in the

	classified forests (see H3), conservation and restoration areas will be defined and concession agreements for these areas will be established with NGOs or conservation associations.
Key results in 4 years	✓ 114,000 ha natural forests and former plantations processed for restoration and natural assisted regeneration and plantations. ✓ Application of silvicultural treatments depending on the categories of natural forests and secondary to all the forests covered by the program ✓ Sustainable exploitation of classified forests by loggers ✓ Forestry plantings are essential to supply for logging and wood processing
Operators / beneficiaries	CEM, GIZ, MINEF, MINADER, SODEFOR, Ministry of the interior, local populations
Potential partners	Loggers, WCF, specialized NGOs, SODEFOR

FS3. **Strengthening the protection of protected areas**	
Description	This activity will be implemented in the national parks of Taï and Mont-Peko, the N'Zo reserve and any classified forests in the ER-P area that would have been upgraded into PA under the classification resulting from the guidelines of the new sectorial policy. This activity should prevent deforestation in ER-P's protected areas and restore the forest cover of their degraded areas. Strengthening the protection of protected areas reinforcement of the intervention capacities of the Ivorian Office of Parks and Reserves (OIPR) in the ER-P area in terms of surveillance and protection through increased infrastructures, and logistical support (remote sensing, drones, mobile units, vehicles), targeted training sessions, and the strengthening of the sustainable financing mechanism. The Program may also support environmental NGOs and environmental protection associations that may be involved in specific activities related to strengthening the management of these protected areas. It also aims to conserve Taï National Park from farmers' incursions through (i) strengthening the OIPR's capacity to monitor and protect the park through increased infrastructure and logistical support; and (ii) the restructuring of artisanal gold mining through the local implementation of the National Gold Mining Rationalization Program (see MS1). The objective is to improve the OIPR's monitoring capacity in the NTP to reduce pressure on the park and maintain its integrity. The FIP project will finance the acquisition of surveillance vehicles and remote sensing equipment. The component will also finance minor roadway rehabilitation works to facilitate forest park patrols. The operating costs of the monitoring missions will also be supported by the project and monitored with the use of the Spatial Monitoring and Reporting Tool (SMART)[32]. The program will support awareness raising campaigns, building the capacity of local communities to engage in alternative activities such as market gardening, agroforestry, and reforestation with fruit trees. Seedlings are provided free of charge to interested farmers, including technical assistance to increase agricultural productivity. In addition to these initiatives, surveillance will be particularly enhanced

[32] http://smartconservationtools.org/

	in areas around the park and exposed to illegal Artisanal gold mining activities. The program will also finance the rehabilitation of degraded wetlands through assisted natural regeneration with the provision of seedlings and the establishment of agreements with local communities for the monitoring of degraded lands.
Key results in 4 years	✓ Increasing forest cover and better conservation of biodiversity ✓ Better park surveillance operations (patrol) ✓ Threat reduction (poaching, gold panning, clearing, forest fires) on conservation targets ✓ Improvement of the livelihoods of the populations bordering the Park ✓ Restoration of gold panning sites (soil, vegetation) through assisted natural regeneration in park buffer zone ✓ Reports of Independent observers are available
Operators / beneficiaries	GIZ, PIF, households, small producers, specialized NGOs, OIPR, Ministry of Industry and Mines
Implementing partners	OIPR

Key enabling activities:

H3. Improved management of classified forests	
Description	Small-scale farmers illegally occupy some areas of classified forests. In terms of pragmatics, it must be concluded that classified forests that have been heavily colonized by agricultural activities will not be completely restored. The idea is to implement the **Agroforest** idea (which refers to classified spaces in which the practice of agroforestry is permitted) in significantly degraded classified forests, as a result of the new declaration on forestry policy. Agreements will be signed between SODEFOR and small-scale producers to introduce forest trees in their (cocoa) plantations in exchange for the right to continue harvesting mature trees and practicing agroforestry on this agricultural land. The idea is to limit the permanent establishment of growers in classified forests by authorizing the exploitation of groves that are in production until the cultivation revolution. The government, wants to set up different types of concessions in classified forests: (i) agroforestry agroindustrial exploitation concessions in specific classified forests (AS2), (ii) Agroforestry concessions with cocoa cooperatives (AS2), in accordance with agroforestry agriculture standards which will be established and issued in the form of guidelines and norms for the implementation of agroforestry (AS1); (iii) industrial logging concession (FS2), in accordance with sustainable logging management, (iv) Local community/Women and Youth associations' concessions for fuelwood / Food production (ES2) and (v) Conservation concessions to NGOs in HCV areas of classified forests. The initial activities to be carried out will be: (i) a survey on the state of the classified forests, and of their limits, (ii) an analysis of the gaps in the current structure will determine, in detail, the profiles, the resources and the capacities to mobilize in order to undertake the new broader missions, and (iii) technical support, with a technical support unit, with a permanent internal team and a set of temporary skills, will be implemented at SODEFOR, designed to support new, modernized and broader surveillance (modern forest management based on technologies designed for intensive plantations and linked to sustainable agriculture, and more general skills

	relating to management, financial audit and institutional support), and (iv) contractually formalizing the presence of farmers and improving monitoring systems to stabilize and carry out a strict inspection of land use, with the creation of a unit set up to monitor existing farmers and land use (field surveillance, remote sensing). The program will support (i) the setting up of local committees for co-management of classified forests (CLCG) and the development and implementation of participatory management plans for classified forests, (ii) activities relating to the reforestation of natural forests and degraded classified forests, (iii) activities of reforestation for renewal and expansion of old plantations of trees, (iv) the demarcation of classified forests. Participatory management project of the Cavally classified forest: The Wild Chimpanzee Foundation (WCF) has an Independent Mandated Observer (IOM) role by an agreement signed on April 22, 2016 with SODEFOR to control forest activity in the Cavally Forest Reserve, which is part of the a project funded by the EU FAO FLEGT program to "Consolidate the achievements of communities in the Cavally classified Forest and demonstrate the benefits of this approach in forest governance in Côte d'Ivoire". This project includes capacity building for SODEFOR officers to ensure sustainable forest management, and support for monitoring missions and monitoring missions conducted by SODEFOR to ensure compliance with the rules and transparent and controlled management of Côte d'Ivoire's forests. In addition to this activity, the WCF is pursuing a process of consultation with communities bordering forests classified as part of the benefit sharing of the Cavally classified forest as part of the implementation of the development plan of the forest. the Cavally participatory forest.
Key results in 4 years	✓ The limits of classified forests are established and respected ✓ 2 agroindustrial agroforestry concessions ✓ 10 agroforestry cooperative concessions ✓ 4 participatory management plans for classified forest are adopted and implemented. ✓ 15 Local Committees for Co-Management of classified Forests (CLCG) are in place. ✓ The management skills of the SODEFOR is extended and effective
Operators / beneficiaries	GIZ, FIP, small producers, specialized NGOs, SODEFOR, MINADER, SEP-REDD+, industrial concessions holders
Potential partners	WCF, OI-REN, OLAM, SIAT, Cooperatives, Société de Transformation du Bois du Cavally (STBC)

PAYMENTS FOR ENVIRONMENTAL SERVICES (PES) APPROACH

The financing of the ER-P requires significant initial investments in order to launch the enabling activities that are essential to the success of the program, but also to invest in sectorial activities until they start to generate carbon and non-carbon benefits. These investments exist in order to implement, on a pilot basis, PES (PROFIAB, Mondelez and the FIP provide for such an approach), of which the experimentation, lessons learned and best practice should contribute to ER-P, in order to fine-tune and continue, and thus recognize, the value of the efforts made by the community (and other stakeholders) to safeguard and improve primary and natural forests and create a new forest cover. A guide for implementation of PES in Republic of Côte d'Ivoire is in the process of being updated and will contribute to the introduction of PES by the program[33]. It upholds the application of PES in rural areas only, and the clarification, formalization and registration of land titles of beneficiaries as a prerequisite for their implementation.

Thus, the PES procedures are established by the guide for (i) reforestation, (ii) agroforestry (trees in cocoa tree systems and hedges), (iii) forest conservation and (iv) supported natural regeneration. The sectorial activities presented above aim to generate emission reductions. Some of these activities will be included in a Payment for Environmental Services Contract signed with certain operators, local communities, cooperatives and individuals who will be selected, for example, cocoa producers. Other contracts arising from previous projects may be extended. These contracts will be paid for based on carbon performance according to simplified indicators approximating carbon performance (approximation indicators, abbreviated to "proxy indicators"). A methodology and an approach which can attract the interest of the most vulnerable actors will contribute to obtaining their support and effective involvement in: (i) small-scale and industrial reforestation, (ii) agricultural intensification and agroforestry and (iii) timber wood and fuelwood planting in rural areas.

Thus, in the framework of the program, the use of PES is towfolds: (i) to create financial incentives to obtain emission reductions, which will be based on performance, and (ii) to compensate the initial investment costs of zero-deforestation activities for cocoa farmers, until they can be offset by additional income, which is in line with national guidelines.

The promotion and implementation of this new approach will rely on the evaluation of the various eligible services, including protected planting, the choice and combination of species (special habitats, biological corridors) and the various service-providers and their beneficiaries in the broadest sense of the term. This will happen once sustainable agricultural, agroforestry, practices and industrial and small-scale planting have been implemented.

Classified forest zones are excluded on account of the uncertain legal situation (illegal today, perhaps formalized tomorrow through contracts on existing plantations - see previous point) and the precarious situation of occupants of classified forests (current policy envisaged is to accept, under conditions, existing plantations in certain classified forests for a determined period). This is in conflict with the rationale of PES, which entails prior recognition of exclusive land ownership rights on various spaces and resources. **Whilst this situation continues, it will only be possible to roll out PES in rural areas.**

The PES system will be used for the implementation of AS1 activities (development of agroforestry in rural domain by small-holders), ES1 activities - Wood energy plantation in rural areas and FS1 activities small timber plantations and preservation of private and community forest relics.

[33] Practical Guide to Payment for Environmental Services (PES) in Côte d'Ivoire (UNDP-EFI 2015)

A national system for managing PES

A system for the technical management of PES on a national scale is being considered[34], run by a management structure to be identified. It will have responsibility for defining the policy directions and objectives by region. As a national management body, this structure will be responsible for follow-up and verification, as well as audit. On a regional level, a non-governmental organization (regional PES operator) will be recruited for implementation of PES. It will be responsible for developing selection procedures, legal analysis of cases, awareness-raising, support to the introduction and management of tree nurseries, promotion of the PES program, recruitment, technical assistance, contract agreement along with administrative management of databases relating to participants and contracts for correct supervision of the program.

Technical governance of the national PES system

- PES payments management system: Mobile Banking

PES payments will be made using mobile financial services, or bank accounts or micro-finance institutions in the beneficiary's name. Therefore, after verification, the list of beneficiaries and the sums due will be calculated by the national operator then sent to the national PES manager for verification and approval. After approval, the list of beneficiaries will be sent to a mobile banking structure for payments. Financing will be managed by a financial structure that will transfer the payments directly to the beneficiaries based on a list approved by the structure responsible for management.

- Management of payments under collective PES contracts

The collective PES is a contract signed between the regional PES operator and the body representing the region, that is, the Village Group (VG) that must have legal existence. The contract will be signed at an official ceremony in the presence of the village chief and the prefect (VG, which exists in all villages). Payments under collective PES will be used exclusively to build basic social infrastructures and may be managed by this same organization or directly transferred to an operation that will be recruited by the village organization for building of infrastructures.

Technical governance of the ER-P for PES

Whilst waiting for this system to be set up, in terms of the ER-P, the operators in charge of projects and programs within the ER-P are responsible for managing PES contracts, others third-party organizations could be used in the future to manage PES contracts. These contracts will be honored in the first few years through the initial investments, such as those of the Forest Investment Program, and thereafter by the redistribution of REDD+ revenues when carbon emissions are measured and audited, and Carbon Fund payments can be accessed. Training in simple accounting will be integrated into capacity reinforcement within communities and subgroups. The ER-P will also look at the use of mobile fund transfer, which is increasingly used in the region, and will conform to the system of technical governance of the national PES system. Payments received are profits earned by the beneficiaries for services rendered in the context of the program, and whose activities allow a change of scale and their continuity.

The monitoring system that will be put in place will be an articulated as following (i) the PES field operator who will monitor a series of field criteria (social and environmental and non-carbon benefits) and, (ii) the SEP-REDD+ MRV Unit that will integrate these date, completed by monitoring based on satellite observation.

[34] National REDD+ Strategy.

The CocoaLife pilot project in Mondelez

The CocoaLife project of Mondelez in the Nawa region, as part of a public-private partnership with the Permanent Executive Secretary of REDD + in Côte d'Ivoire, is implementing a payment of environmental services -PES pilot project in its main cocoa production areas. Payments for Environmental Services (PES) combine two approaches: (i) at the level of cocoa producers with the aim of helping small cocoa producers to invest in productive, environmentally and forest-friendly farming practices, such as than agroforestry. This allows them to diversify their sources of income and strengthen their resilience to climate change, and (ii) at the territorial level, which involves cocoa-producing communities in a collective dynamic of conservation and reforestation, through a plan of use lands. It begins by mapping the cocoa producing areas, while including the concepts of high conservation value (HCV) and high carbon stock (HCS).

Three specific PES projects were used: agroforestry, reforestation and conservation. Contracts differ for each project, as shown below:

Activity	Agroforestry	Reforestation	Conservation
Contract type	Individual contracts with cocoa small-holders	Individual and collective contracts	Individual and collective contracts
Period	3 years	5 years	5 years
Amount of payments	€1 per local tree specie et €0,75 EUR par exotic species	€450/ha	€300/ha

The implementation of PES projects, both at the level of the small-holders and the territories, was done in five (5) steps: (i) to sensitize and inform the producers and the local communities by presenting the project and by promoting a "Zero deforestation" model; (ii) identify PES candidates (There are currently 1,043 cocoa farmers and community members involved in the three PES projects types, and five autonomous villages have indicated their intention to sign PES conservation and reforestation with collective contracts agreements; (iii) develop entrepreneurship in communities with the creation of three (3) forest nurseries. These nurseries are maintained and managed by seven Village Credit and Savings Associations (VSLAs) (105,669 economic shade trees, such as fruit trees, rubber and timber, were produced in these nurseries); (iv) to train candidates for PES methods (20 farmers from ECAM and COVIMEA co-operatives, trained in agroforestry, as trainer to other small-holders, and as a result more than 507 farmers received training and are ready to implement agroforestry practices in their plots); and (v) the signing of PES contracts with producers and community members.

In the framework of this PES program, Impactum NGO sets up local organizational management committees (the Community Development Committees - CDCOM), which are adapted to the context of each community within the framework of the Cocoa Life program. These committees are responsible for the strategic orientation of the project as well as the definition, implementation, coordination and monitoring of on-site activities. Leaders of the community, cooperatives, agricultural engineers of ECO, TFT, CARE and CDCOM Presidents are members of these committees. All committee members meet monthly to discuss current and future activities and receive regular training on PES, agroforestry, forestry and property codes. as well as on the new forest restoration and extension policy.

Lessons learned: the remuneration offered to the communities concerned in the collective agreements should be reviewed and increased, if possible. Currently, the amounts donated are not considered sufficient to

convince communities and their members to change their practices. Ideally, the compensation offered should be competitive with the potential revenue generated by the new cocoa harvest in deforested areas.

Based on this experience and study to assess needs and financing solutions for small producers, PES will be established to be attractive enough with the view to offset initial investment costs and income shortfall, before the full productive potential of agroforestry catch up. The planned PES system is based on (i) experience of pilot projects in Nawa and Mé, and (ii) the financial analyzes from the feasibility study relative to technical and economic/financial aspects of agroforestry alternatives. Thes analysis will allow a more precise calibration of the needs in the next PSE phases, in particular those that will be financed with the carbon benefits generated by the ER-P.

APPROACH IN LINE WITH THE NATIONAL REDD+ STRATEGY

The program approach is fully in line with the national REDD+ strategy of Côte d'Ivoire, which seeks to promote integrated cross-disciplinary interventions to reduce the carbon emissions associated with cocoa farming and deforestation, adhering to the principles of sustainable management of forests.

Table 10: Summary of options of the national REDD+ strategy and activities planned by the ER-P

Strategic options of the national REDD+ strategy	Activities planned by the ER-P	Factors of deforestation/degradation and barriers
Option 1: Zero deforestation agriculture	In rural areas: • Agroforestry development, agricultural intensification and support for zero deforestation agriculture (AS1)	- Extension of farming land for cocoa, palm oil and rubber. - Negative perception of the effect of shade on cocoa yield. - Demographic growth and migration movements. - Poverty of populations and economic appeal of growing cocoa. - Conflicts between managers of the SODEFOR and infiltrated populations.
	In classified forests: • •Development of agroforests (AS2) with: (i) agroforestry industrial concessions and (ii) cooperative agroforestry concessions	
Option 2: Sustainable domestic energy with agricultural biomass	In the rural areas: • Development of community and individual plantations of wood energy (ES1) • Development of alternatives to wood energy using agricultural residues (ES3)	- Poor organization of operators and lack of a formal sector. - Inefficient carbonization methods. - Absence of alternative energies & prohibitive cost of butane gas.
	In classified forests: • Development of the Taungya system of community agroforestry (women and young people) for the development of food agricultural activities associated with wood energy plantations (ES2)	
Option 3: Sustainable management of forests and conservation of protected areas	In rural areas: • Development of small timber plantations and preservation of private and community forest relics through the PES system (FS1)	- Poor forest management - Unsuitable plans for development and management of classified forests. - Illegal & unsustainable forest management. - Lack of surveillance resources - Non-involvement of communities in forest management.
	Development of reforestation activities and sustainable management of classified forests through (FS2): • Development of sustainable industrial forest concessions with renewal of the resource; • The restoration and protection of forest relics through the development of conservation concessions.	

	Strengthening protection of protected areas, Tai and Peko Mountains National Parks, N'Zo Nature Reserve and possible other protected areas (FS3) through: • Strengthening the OIPR's intervention capacities for NP and NR management; • Strengthening intervention capacities of NGO supporting PA management and environmental protection	
Option 4: Afforestation/reforestation, restoration of forests and degraded land	In the rural areas: • Development of small timber plantations and preservation of private and community forest relics through the PES system (FS1) • Agroforestry development, agricultural intensification and support for zero deforestation agriculture (AS1)	- No strategy for reforestation in logging zones - No forest conservation incentives for local communities.
	In classified forests: • Development of afforestation activities of classified forests (FS2), through the implementation of the reforestation program by SODEFOR; • Development of agroforestry in classified forests: Agroforests (AS2)	
	In protected areas: • Natural restoration of the Peko Mountains NP (FS3)	
Option 5: Mining respectful of the environment	• Rationalization of artisanal gold mining and site restoration (MS1)	- Low-level application of the law - Lack of will to manage and supervise mining activities.
Option 6: Payments for environmental services (PES) type incentive system	• Use of PES in rural areas for AS1, ES1 and FS1 activities	- Offsetting the economic appeal of cocoa
Option 7: Regional planning and land reform	In the rural domain • Tenure security in rural areas to remove obstacles to planting trees on agricultural plots, including formalizing land status (H1) • Development of Regional development and Land use plans (SRADT) (H2)	- Few or no planning schemes - No regional land use planning - Lack of land reform & conflicts
	In classified forests: • Development of the concession system (H3) with agricultural (AS2) and forestry (FS2) and with agricultural cooperatives (AS2) and women's and youth associations (ES2)	
Option 8: National planning and structural reforms for the transition to a green economy	–	–

THE FINANCING APPROACH

As regards financing and the estimation of expected results, **all investments in the region planned for the ER-P are already being financed** (see Table 6 above) by the PROFIAB, ISLA, Cacao Life, Initiative Cacao et Forêts (ICC) projects and the Forest Investment Program (FIP), as explained in section 6.2 of the ERPD. **They should be responsible for all of the projected results in terms of the program's emission reductions**. The EP-P will rely on the public-private forest preservation and restoration fund of the ICC, which will provide the financing for the preservation and restoration of high conservation value forest zones.

REDD+ advantages and benefits shall be shared between the players acting directly on the REDD+ through specific mechanisms such as PES and will contribute to financing the management arrangements of REDD+. Consequently, the carbon benefits generated by the sale of emission reductions will not be used to finance all interventions of the EP-P or land investments, but will be used in accordance with the benefit sharing plan being developed (see section 15), probably in order to finance supplementary community projects in the ER-P zone, and/or to allow the work of the program to be intensified in the future, depending on the lessons learned from these pilot projects.

An advance on payments of approximately US $ 1.4 million is planned to cover the costs of: (i) external monitoring and evaluation of the program by the independent civil society observatory; (ii) the coordination of the SNSF and the MRV system by the SEP-REDD + MRV unit; (iii) set up and support the operation of the GRM; (iv) the operation of the Safeguards Information System (SIS) and the execution and supervision of the environmental and social management provisions and measures of the program; (v) regular meetings of the National REDD + Commission bodies in RCI and functioning of the SEP-REDD + to ensure, particularly in the Program Area; (v) Monitoring the overall implementation of the ER-P; (vi) implementation of the REDD+ communication strategy and stakeholder engagement; (vii) the management of the national register of REDD+ projects and initiatives.

THE STARTUP STRATEGY

In its conception, the program identified a certain number of priorities whilst taking into account the need to respond to all the drivers of deforestation and degradation of forests in a coordinated way. The various items of financing were allocated to secure sufficient resources for pilot activities generating emission reductions and encouraging the various stakeholders to respect the principles and strategic framework of the program. The various implementation risks and potential benefits have been taken into account throughout the phases of activity design and allocation of the associated budgets. The program will therefore seek to respect the following startup principles:

- The program will give priority to its efforts and investments situated in zones in which initiatives are already present and/or where there is a high risk of reduction of forest cover, throughout Taï National Park, and classified forests.
- The program will rely on the platform and governance bodies of the public-private cocoa-coffee partnership, of which the 2018-2020 startup and investment phase is currently underway in regions identified by the initiative in the program zone: Cavally, Guémon, Nawa, and San Pedro.
- In order to guarantee that industrial timber planting is not developed to the detriment of the populations and cultures, an in-depth study (land, technical and economic) is under way to identify the most suitable zones for the development of industrial planting.
- In late 2017/early 2018, the program rolled out a breaking-in phase for the development of Regional Planning and Development Schemes (SRADT) integrating the issues of preservation of natural resources and the objectives of REDD+ in the region of Nawa. The lessons learned will contribute to the development and implementation of SRADT throughout the program zone.

- Iteratively, the program will ensure (through internal quality controls) that the level and quality of the upstream enabling activities are of the requisite standard to achieve the objectives of the downstream sectorial mitigation activities.
- From the outset, the program will place emphasis on strengthening forest control so as to put a significant brake on illegal logging operations, thus increasing confidence among the various actors and guaranteeing that the efforts of some are not in vain due to the illegal actions of others.
- From the outset, the purpose of sectorial activities will be to generate revenue for populations, which will increase confidence and expansion of the distribution of these techniques. With this aim, the program has already forged partnerships with the academic and research world in order to refine the various agroforestry and agro-ecological models that are adapted to environmental conditions and to local and regional market opportunities.
- The program will ensure the availability of sufficient resources and appropriate conditions to strengthen the resources for action of the various stakeholders, from communities through to national and regional authorities, in order to guarantee their participation, transparency and the effectiveness of the program activities.
- Provision of an advance on payments to launch all REDD+ tools and monitoring systems (MRV, monitoring-evaluation, MGPR, SIS etc.), the management of the ER-P, and the implementation of the communication and information strategy on the ER-P to stakeholders in the ER-P area.

4.4 Assessment of of land and resource tenure in the Accounting Area

4.4.1 Applicable Land and forest rights

4.4.1.1 Rights of any individual to excersice ownership on customary rights of use

- ***Who can be an owner?***

Land tenure in Côte d'Ivoire is based above all on Law no. 98-750 of 23 December 1998 on rural land ownership, amended on two occasions by Law no. 2004-412 of 14 August 2004 (amendment of Article 26) and by Law no. 2013-655 of 13 September 2013 on the time frame granted for the establishing of customary rights on land in the customary sector (amendment of Article 6). There are also four implementing decrees for this law, which set in place the institutions necessary to its implementation.

The Ivorian rural land ownership system is defined in Article 1 of the said Law and is made up of all land in Côte d'Ivoire except for land in the public domain, urban perimeters, State reserved land and classified forests.

Ivorian law furthermore, differentiates between the rural land ownership system and the customary rural land ownership system, which has different legal systems (Art. 2 and 3 Law 23 December 1998).

The Constitution, the Civil Code and the Forest Code (notably Articles 19 to 21) regulate the question of land title law, and Rural land title law is guaranteed by the State, the public authorities, and to individuals of Ivorian nationality (Article 12 of the Constitution; Article 1 Law of 23 December 1998). Thus, access to the rural land sector is conditional to Ivorian nationality, with the exception of property rights on land in the rural land sector acquired before the Law of 23 December 1998, which are maintained or may be transferred (Article 26 of the aforementioned law). This exclusion from land title ownership by non-Ivorians is also valid for the forest sector (Articles 19 and 73 of the Forest Code). Whilst it is no longer possible to orally declare oneself as owner, the exception raised in Article 26 shows that the law agrees to recognize, temporarily, customary rights before transforming them into official civil rights at the end of a procedure detailed below.

Foreigners (or non-native populations) may not become owners but may nevertheless have rights of use on the land.

Furthermore, it should be noted that this Law is trying to protect holders of customary rights via its Article 26; an initiative strengthened by Article 60 of Law no. 2015-537 of 20 July 2015.

- ***Two types of owner***

The rural land sector is made up of two major types of ownership: **permanent ownership** and **temporary ownership.** Whilst the former refers to land held in perpetuity which may belong to the State (or to local authorities), to individuals or be land without owners (under the conditions laid down in Article 6), the latter has provisional status and concerns in particular, the land on which customary rights are exercised as well as land granted by the State to local authorities or to individuals.

Furthermore, it should be noted that all '*lands belonging to no one'* or "*Terra nullius*" belongs de facto to the State (Article 713 of the Civil Code, Article 6 of the Law of 23 December 1998). Article 6 of the Law of 23 December 1998 lists three scenarios in which land may be declared *belonging to no one.*

(i) Lands subject to inheritance that have not been claimed for more than three (3) years,

(ii) Customary law lands on which customary rights are exercised peacefully and continuously, and on which there is no legal claim ten years after the publication of Law 98-750,

(iii) Leased lands on which the concessionaire's rights could not be consolidated three years after the deadline for carrying out the development required by the concession agreement;

The default of land master is declared by an administrative act.

The State public domain is excluded from the Ivorian rural land sector (Article 2 of the Law of 23 December

1998) and it may not be assigned or seized and is imprescriptible. (Article 4 Order no. 2016-588 of 3 August 2016 on rights of occupancy of the public domain) and its occupancy by legal entities under public or private law may only be temporary (Article 7 Order no. 2016-588) since it is linked to execution of a mandate (Article 22). The public domain may also form the subject of an application for a declassification order to the Directorate of the State Public Domain so as to become a private, therefore alienable domain.

- ***How does a person become an owner?***

Chapter III of the Civil Code entitled "Different ways in which ownership is acquired" regulates the acquisition of land title ownership. Traditionally, ownership is acquired through the effect of an obligation, succession or gift (Article 711 of the Civil Code) as well as by accession, incorporation or prescription (Article 712 of the Civil Code). These provisions comply with Article 5 of the Law of 23 December 1998 on land ownership.

- ***Rights of the owner or lessee or transferee***
    - *Land rights*

Title II of the Civil Code establishes the rules in terms of ownership. Ownership is thus defined as "the right to **enjoy** and to **dispose** of things in the **most absolute** manner, provided that there is no use thereof which is prohibited by the law and regulations" (Article 544 of the Civil Code and notably, the public interest (Article 10 of the Environment Code).

The absolute nature of the right of ownership is also reflected in the impossibility of forcing an individual to sell their property, except for a cause in the public interest. Expropriation is thus subject to fair and foreseeable compensation (Article 545 of the Civil Code, Article 11 of the Constitution).

In forestry matters, the State (Article 29) and local authorities (Art. 33), natural persons (Article 36) or legal entities under private law (Article 37) and rural communities (Art. 4) may also be owners of forests of which the methods of acquisition are specified in each of the aforementioned articles. The owner or lessee status of natural persons, legal entities under private law or rural communities may be established by the possession of a deed of ownership, a lease or the enjoyment of customary rights.

Côte d'Ivoire law makes a distinction between classified forests and protected forests (Article 22 Forest Code). The classified forest sector includes: forests under protection, production forests, forests for recreation and forests for experimentation. This may also include forests created or maintained for the protection of water, soil or other (Articles 23-24). The protected forest sector includes: non-classified forests of the State, private forests (on registered land and property of natural persons or legal entities), and forests situated on land without an owner (Article 27).

Following the example of land ownership law, Côte d'Ivoire law also makes a distinction between forests in the public domain and forests in the private domain (Article 57).

- *Legal ownership of forests*

Article 29 of the 2014 Forest Code states that the State Forest Estate is composed of a public forest estate and a private forest estate comprising:

- Classified forests in its name;

- Protected forests on non-registered land;

- Protected forests on *lands belonging to no one'*.

On the (i) State public land forest, protection, recreation and experimentation forests, and classified forest in its name can be found (Article 30), while on (ii) the State private land forest, production forests includes the protected forests located on non-registered lands and protected forests located on *lands belonging to no one'*

Article 31).

Ivorian law makes a distinction between classified forests and protected forests (Article 22 of the Forest Code).

The "classified" forest estate includes: protection forests, production forests, recreational forests and experimental forests. This may also include man planted forests or maintained in their state for the protection of water, soil, or other (Article 23-24). Classified forests are part of the State public land forest, except for the so-called production forests that are part of the State private land forest (which are protected because they are located on unregistered land where the presumption of State land ownership applies or on *lands belonging to no one'*). For example, classified forests fall under both the State public and private land ownership regimes.

The "protected" forest estate includes: non-classified forests of the State, private forests (on registered land owned by private individual or legal entity), and forests on *lands belonging to no one'* (Article 27).

The following legal entity and private individuals may therefore own forests (classified or protected), subject to hold Ivorian nationality (Article 19): the State (Article 29) and Territorial Communities (Article 33), private individuals (Article 36) or private legal entities (Article 37) and, rural communities (Article 40) (see the method of acquisition specified in each of the above-mentioned articles). The status of owner or lessee for private individuals, legal entities, or for rural communities may be established by the possession of a title deed, a lease or customary rights of use.

Forest rights of use, defined by the Forest Code, are: harvesting rights recognized to people who live nearby the forests or to people living traditionally inside the forests. These forest rights of use may be exercise individually or collectively with the view to satisfy their domestic needs.

Like land law, the Ivorian forest law as stated by the 2014 Forest Code distinguishes rights of use according to the applicable land ownership regime. Forests in the public domain of the State and local authorities are excluded from any right of use relating to the forest soil. Clearing is strictly forbidden (Article 47). In the private forest domain of the State and of the local territorial authorities, the rights of use relating to the forest soil are exerted under the conditions fixed by decree taken in Council of the Ministers.

In classified forests that are part of the State private forest estate, it is the classification act that determines the name of the forest concerned, its location, its exact boundaries, its area, its vocation, its land title ownership, restrictions and rights of use to which it is subject. However, these rights of use are defined and limited by law to the following rights of use:

(i) Collecting dead wood and straw;

(ii) Picking fruits, food or medicinal plants, roots and leaves;

(iii) Harvesting honey, gums, resins, mushrooms and other forest products;

(iv) Logging timber for the construction of traditional habitats and non-profit craft;

(v) Use of drinking water and consumption;

(vi) Rangeland for domestic animals provided that they do not present any harm to forest stands, and forest regeneration;

(vii) Removal of unprotected animals and insects for consumption and not for commercial purposes; and

(viii) Access to sacred sites.

- *Resource rights on land that does not fall within the public or private estate of the State:*

The owner of a plot of land, categorized as real estate in Côte d'Ivoire law (Article 518 Civil Code), has **free access to the fruits of the land** and to anything relating thereto (Article 546 of the Civil Code) as well as the trees situated on the plot of land that they own (Article 21 Forest Code). This last point is reinforced by Article 32: "Forestry products not situated in the national forestry sector, notably trees outside forests, belong to the

natural persons or legal entities in respect of whom property and land ownership legislation recognizes a right of ownership or customary rights on the land". These trees may be sold by their owner (whether this is a village or an individual) (Article 32).

Private owners, i.e. any natural person or legal entity, owner or lessee, exercise their right of ownership **on products of any kind from their forest**, to the exclusion of mining products and protected species of flora and fauna (Article 73). The exclusion of mining products and protected species also extends to rural communities that are owners of forests (Article 77). Furthermore, private owners also benefit from a right of pre-emption in the case of assignment of rights on natural resources other than forest resources (Article 74). In addition, products from forests on land duly conceded under land ownership legislation belong to their concession holders (Article 20).

Reconstituted forests belong to the owners in question, but forestry concession holders who have carried out development operations benefit from a right of pre-emption on the ownership of the forest (Article 38).

Forest rights of use do not extend to the sub-soil and do not apply to forests of rural communities, forests of natural persons and forests of legal entities under private law that may establish their own rules of use, which includes suspending rights of use (Article 43-44). As regards sacred forests, these form the subject of forest rights of use accepted by practice and customs (Article 48 and 75).

Forests in the public domain of the State and regional authorities are free from any right of use concerning forest soil. Clearing is officially prohibited (Article 47).

- ***Obligations of the owner or lessee or transferee***

Although land ownership law is absolute, possession of a plot of land entails the obligation to **develop it** (Article 20 of the Law of 23 December 1998) by resorting to the operations mentioned in Article 18 with the exception of land belonging to the State.

Ownership also entails the payment of **rural land tax** for owners, or of rent for lessees (Articles 24 and 23), failure to fulfill this obligation possibly resulting in criminal proceedings (Article 25).

Furthermore, the owner or the operator of a plot of land is required, under Article 12 of the Environment Code, to submit for **prior authorization** any project relating to planning and allocation of land for farming, industrial or urban purposes.

Forests belonging to natural persons or legal entities under private law must form the subject of a **simplified forest planning scheme**, and rural communities may draw up simplified planning schemes and call on the forest administration to realize these (Articles 72, 74, 75, and 76).

Any forest must form the subject of **registration** with the forest administration (Article 39) or of listing in a register for sacred forests of rural communities (Article 41).

In the event of failure to comply with the provisions of the Forest Code, proceedings may be brought before the relevant courts by the Public Prosecutor's Office (Article 112) after infringements have been established by a sworn technical employee of the Water and Forest Department (Article 110).

- ***Procedure to render rights enforceable/obtain owner status***

The Law of 23 December 1998 thus establishes a procedure to be followed in order to be recognized as owner - and to render enforceable the rights and obligations mentioned above - of a plot of land and distinguishes between the rural land sector and the customary rural land sector. Regarding land in the customary sector, this requires the obtaining of a Land Ownership Certificate, a mandatory prerequisite for registration of the plot in the land register and therefore obtaining a deed of ownership.

The land ownership certificate (Article 4)

This is a document from the administration which records that a person or group stating that they have

customary rights over a rural plot of land are occupying that plot on a permanent basis and without conflict. The procedure for having the certificate drawn up is described in Article 7 of the Law and is concluded at the end of an inquiry conducted by the administrative authorities in order to certify the "continuous and peaceful existence of customary rights". It should be noted that the person owning a plot of land belonging to the customary sector used to have only ten years after publication of the law in which to have recorded the peaceful and continuous exercise of their rights, at the risk of seeing their land being declared belonging to no-one and reverting to the State (Article 6 of the Law of 23 December 1998).

The land ownership certificate phase shows, in reality, that the individual claiming to be the owner is not a usurper since they have the agreement of the community in which they live. The deed of ownership shall be **final** only if the holder of the land ownership certificate registers it within three years of its issue, that is, registers its land with a land registry (Article 8 of the Law of 23 December 1998). The land ownership certificate may also be transferred to any person mentioned in Article 1 of the said law.

Registration (Article 8)

Land in the Rural Land Sector must also be registered, that is, registered with the land registry.

The registration application is not finalized until the end of the land registry formalities (and notably an inquiry) and in the absence of any challenge (Article 12). Only at the end of this procedure is it possible to draw up a **deed of ownership**.

This procedure is completed at the **expense** of the lessee, the concession holder or the alleged owner of the plot of land (Articles 6 and 12).

4.4.1.2 Land rights in the ER-P accounting area

ER-P areas	Land titles	Land interventions actions
Rural areas	Rural land tenure right Customary land tenure right Permanent properties and transitional properties (Land certificate) Leases and amphyteotic leases	H1. Land security (including implementation of rural land reform with AFOR) H2. Territorial development and land use planning
Classified forests	State owned land	H3. Improved management of classified forest (including various types of concessions contracts/agreements)
Protected areas	State owned land	FS3. Strengthening the protection of protected areas

4.4.1.3 Process of recognition of traditional customary rights and land title regularization to improve tenure security for the implementation of the national REDD+ strategy, including in the national forest estates

With the view to elaborate the program, several legal studies have been carried out on the links between land tenure and land use planning reform, the process of recognition of customary and traditional rights, and the national REDD+ process (See bibliography list[35] annexed to the SE-REDD+ document for the FCPC dated August 24, 2018, for Component 2). Some recommendations stated by these studies have been followed to carry on with the reforms undertaken, while integrating coherently the requirements of REDD+.

Law 98-750 of December 23, 1998 on rural land in Côte d'Ivoire had already transformed customary rights into so-called modern property rights to provide tenure security in rural areas. This law recognizes customary rights and confers broad powers on village Rural Land Management Committees (CVGFR) composed mainly of local communities (Decree No. 99-593 of 13 October 1999 concerning the organization and powers of Rural Land Management Committees).

More recently, a participatory process for the delimitation of village territories was ratified by Decree No. 2013-296 of May 2nd, 2013. This procedure takes into account the history of the constitution of the village territory, uses participatory mapping methods and valid the results during public meetings bringing together the inhabitants of the targeted villages.

In order to accelerate the implementation of the rural land reform and strengthen land governance, Côte d'Ivoire created the Rural Land Agency (AFOR) on August 3rd, 2016. To strengthen the transparency of the process, the consultations for the establishment of an Independent Rural Land Observatory have been initiated and should allow its formalization in 2019.

The procedures and measures taken to secure land tenure clarify several potential land conflict cases mentioned in section 4.2.

In 2017, the Land Policy Statement accurately identified the gaps and weaknesses of the regulatory and

[35] https://www.forestcarbonpartnership.org/sites/fcp/files/CDI-R-Package%20RCI-FR%20-%20VF.pdf

institutional framework and (see point 4.5.3 below), with the following objectives:

- Clarify rural land rights;
- Establish the security of rural land ownership;
- Encourage and facilitate the acquisition of title deeds;
- Secure sustainable management of land conflicts;
- Give a market value to the rural property;
- Contribute to the modernization of farms;
- Secure investment in rural land; and
- Promote climate smart agriculture.

The rural land policy aims to establish the territorial boundaries of all villages in Côte d'Ivoire.

All these measures and procedures for land tenure security help in clarifying a certain number of potential land conflict cases mentioned in section 4.2, for example (i) in classified forests and (ii) in rural land:

- ***In classified and protected forests:***

These are part of the State's public or private forest estate, **there is no land dispute in the sense of claim based on customary ownership rights by local populations**, as there is no recognized customary rights to the exception for rights of use (limited to individual needs) in accordance with the provisions of the Forest Code (see above). However, there are cases of illegal occupation, which must be treated in accordance with the procedures envisaged to regularize their situation, by relocation if necessary.

For plots occupied by non-natives or migrants at the time of the crisis in the classified forests, SODEFOR set up a payment system for the gradual rehabilitation of degraded forests (CFAF 12,000 per hectare / year). This has no impact on the real estate law, as the occupants cannot claim customary rights as the land occupation is a lease that has been granted by contract. Given that this rehabilitation program has come to an end, it is important to note that the State has provided for accompanying measures for the resettlement population, notably by proposing to participate in reforestation activities (community agroforestry, e.g. cocoa cultivation under cover (see Chapter 4 for details).

About tree ownership located either in a village or in its immediate environment, or in a collective or individual field, Article 21 of the Forest Code provides that trees are collectively owned by the village or by the person who owns the field on which trees are planted whom it belongs. The question is whether they can exercise these collective or individual ownership rights, especially with regards to enjoying the fruits of trees, when the surrounding lands are not delimited or registered, or if land title rights have not been regularized. In this case, these lands can be described as "*lands belonging to no one"* that are considered part of the State's estate. In fact, "*lands belonging to no one"* are part of the State's private forest estate, particularly with the status of protected forest located "on *lands belonging to no one"* (see Articles 27 and 31 of the Forest Code). In any case, the Ministry of Water and Forests can manage these trees located in "*lands belonging to no one"*.

The following remarks will be made concerning the risks of potential land conflicts: firstly, it should be recalled that, in principle, the program does not encompass "*lands belonging to no one'* " within its accounting area. Secondly, the demarcation of the villages is well known to the local populations, and it is currently being on the process of formal delimitation, which is being carried out and recorded by the SRADT (see below). Thirdly, even if Article 21 (2) provides that "*these trees may be transferred to third parties*", the transfer may only relate to the fruits provided by the tree, and not to relate to the tree itself, which is owned by the State. Fourthly, trees under by Article 21 will account for the program if they represent or form part of a massif that represents high carbon storage potential (HCV). Village populations will be compensated with PES for their activities to enhance carbon stock. All of these measures must be recorded in a Decree implementing Article

21 of the Forest Code that will be adopted when the ER-P program is validated.

- ***In rural areas:***

It is important to note that the Rural Land Policy, which was adopted in January 2017, is intended to revise, in order to further modernize, the legislation on rural lands.

Indeed, rural land tenure security is a prerequisite for investment and development of REDD+ eligible activities. The reform initiated to facilitate the granting of land titles in the rural area, including through AFOR contributes to securing land tenure that will be done in several steps in the following sequence:

1. Development of complete land cover maps and land status maps,
2. Assessment of land titles in the rural area based on the local land register (cadaster) if possible, or based on other titles (rights of use, customary law, collective rights), will be carried out to determine the best method of securing land, and
3. The registration of existing titles when possible, formalize the de facto land occupation, or the formalization of the rights of use and/or customary rights with land certificate, and clarifying the land (field, plots,) boundaries.

The National REDD+ Commission is strongly involved in the various land and spatial planning reforms, in close consultation with AFOR, which is systematically involved in all its meetings, as well as in the National Planning Policy (PNAT) development process since 2016 and which should lead to the adoption of the Land Use Planning and Development Law (LOAT). In addition, the strong involvement of the National REDD+ Commission allows the integration of SN-REDD+ guidelines into all the documents relating to the land security and land-use planning policy.

As concrete implementation of these reforms is a priority for the REDD+ process in Côte d'Ivoire, the National REDD+ Commission supports the following initiatives to make this integrated approach fully effective on the ground:

- the land use study conducted jointly by the SEP-REDD+ and the Ministry of Planning and Development has made it possible to explicitly integrate natural resource conservation issues, the objectives of REDD+ national strategy, and the identification and recognition of village territories in the Regional land use planning and development Plans (SRADT) guidelines.
- the new rural land security approach following the sequence "clarification-certification-delimitation of territories-contracting" must be tested within the framework of the Rural Land Policy Implementation Support Project (PAMPFR) financed by the World Bank and will be monitored by the National REDD+ Commission.

4.4.1.4 Procedures for setting land disputes

Land conflicts can have an impact on the program with the implementation of PES in the rural area: PES can only be implemented once land title rights are clearly recognized and established. Notwithstanding the reforms and processes to promote land tenure security, the risk of being confronted with land conflicts (see section 4.2, c) nevertheless exist, and it should be noted that a number of conflict resolution methods have been set up in Côte d'Ivoire, with customary, administrative and judicial procedures, which also help to secure land ownership. They can be briefly recalled as follows:

- ***Customary mechanisms***

Land title conflicts are still, for the most part, settled by customary bodies, given their proximity, effectiveness and low cost, even if their legitimacy is gradually being called into question. Given the diversity of peoples and

customs existing in Côte d'Ivoire, the conflict settlement methods of these bodies very often vary from one community to another.

The **land chief** investigates the case and must determine the applicable customary rights, although the decision usually falls to the village chief (however, the village chief is often the land chief). The solutions provided to these disputes are usually the result of compromise and negotiations between the parties to the dispute in order to maintain social cohesion within the community. Seeking a solution favoring both parties is recommended.

In the case of disagreement with the decision taken, the parties may refer either to the village chief (if he is not also the land chief) or to the district chief, so that the case can be judged a second time.

- ***Administrative mechanisms***

There are various administrative mechanisms for land ownership conflict management. Leading these mechanisms are the **prefects** (who manage the department) **and sub-prefects** (who manage the administrative district and are intermediaries between department and village) responsible for implementation of the Law of 23 December 1998. They are thus responsible for investigating disputes arising as a result of publication of an application for registration of a plot of land.

Alongside these prefect and sub-prefect authorities, the population also has recourse to the **gendarmerie** or the **combined units**[36] for management of land ownership conflicts, although they have no land ownership jurisdiction. As parties responsible for maintaining order, they may also claim enforcement of a decision of an administrative, customary or judicial institution. The effectiveness of recourse to the gendarmerie obviously depends on the existing balance of power and the goodwill of the parties in fulfillment of their obligations.

Moreover, there are **peace committees** created under the aegis of the Ministry for Reconciliation after the conflict, whose mission is peaceful management of any land ownership conflict and of cohabitation. Various NGOs are responsible for monitoring these committees, which unquestionably explains the differences in naming and functioning. These committees have facilitated the conclusion of peace agreements between various community groups, which establish the conditions relating to cohabitation and procedures for buying and selling property.

And finally, although still inoperative, the monitoring of implementation of the Law of 23 December 1998 is incumbent on the **Rural Land Commission** set up with the order of 11 July 2003. It represents an intersectoral body for monitoring the rural land ownership situation and think-tank concerning the conditions of optimization of land management.

- ***Legal mechanisms***

The **judicial authorities** may hear and settle land ownership disputes and have jurisdiction in criminal matters (Article 15 Penal Code) and in civil matters (Article 522 et seq. of the Civil Code).

The **administrative courts** are called upon for the compensation and/or reparation of the loss caused by the administration, notably in the event of expropriation.

The **notary** also hears and settles land ownership disputes by acting as mediator when they see parties to disputed contracts. If their decision is declared enforceable due to the authority of notaries, the decision has binding force and must be imposed on the parties.

On account of the numerous existing land ownership conflicts, the courts have to hear and settle a large

[36] Formerly known as international forces, they are made up of loyalist soldiers and rebels whose task is to patrol the Zone of Confidence in order to secure it.

number of land ownership disputes, particularly in the West of Côte d'Ivoire, a particularly fertile region. Recourse to judicial mechanisms depends on the proximity of the institutions, their cost and their effectiveness.

And lastly, it should be pointed out that it is not unusual for the same conflict to be settled by several bodies, which demonstrates the complete lack of coordination between these various bodies and the difficulty in enforcing the decisions they hand down.

4.4.2 Carbon rights in Côte d'Ivoire

There is no internationally recognized legal definition of "carbon rights", either in the context of the UNFCCC or for the application of international standards used on the voluntary carbon market. The legal description and establishment of carbon rights are very specific to each country and depend on a certain number of factors, which may vary from one country to another, depending on the objectives sought by the national REDD+ strategy and the procedures envisaged for its implementation.

Although there is abundant literature on what carbon rights might be from a conceptual and legal point of view and why they are important for implementation of REDD+ activities, this question is always considered problematic by eligible countries, not only because this is an instrument sui generis which is difficult to categorize in the light of existing national law, but also because it may create rights for their holders. In fact, the establishment of carbon rights is linked directly or indirectly to the rights on the benefits arising from REDD+ activities.

In Ivorian legislation, there is no explicit reference to carbon rights. Studies have raised the question of the legal nature of carbon credits in Côte d'Ivoire. This is notably the case of the final version of the "*REDD+ RPP*" produced in May 2014 for the Forest Carbon Partnership Facility (FCPF), but without providing a clear response. A legal categorization is however useful and necessary in order to identify those persons who might receive part of the benefits resulting from carbon rights. The only relevant provision which makes mention of carbon storage is Article 10 of the Forest Code, which states "*the State takes all measures necessary to promote the creation of carbon sinks, with a view to reducing greenhouse gases*".

In the absence of any legal categorization, the question is raised of ascertaining whether we can reconcile them with other existing instruments and reasoning by analogy, that is, extrapolating from existing positive law, or whether this categorization should be defined arbitrarily, by applying the description making it possible to achieve the objectives set as effectively as possible by creating the appropriate incentives to ensure the effectiveness and sustainability of measures of prevention of deforestation and degradation of forests, targeting those actors who might have direct and indirect positive impacts for implementation of the national REDD+ strategy. It shall be for the Ivorian government to decide whether the most appropriate categorization should be officially established in national law, or not.

Conceptually, the notion of "carbon rights" refers to rights on greenhouse gas emission absorptions or reductions realized by the REDD+ activities. To define "carbon rights" as an object of ownership (public or private), whether in terms of rights and/or obligations attached to carbon or on carbon itself, legal writings consider that a distinction should be made between two elements:

- The rights of ownership on carbon avoided, reduced or stored as truly identifiable (namely, Verified Emission Reductions); and/or
- The right to obtain all of part of the benefits arising from transfer of the rights of ownership on emission reductions or the right to payment of all or part of the benefits arising from realization of emission reductions. In the latter case, the right to payment is tantamount to the remuneration for a service rendered in order to realize emission reductions.

Ownership of stored or avoided carbon does not generate a great deal of value as such, especially since this carbon is not tangible or physical. It is its use in order to demonstrate compliance with emission reduction commitments that makes it possible to increase its value.

On account of this recognition as a means of fulfilling an obligation of reduction, stored or avoided carbon acquires a financial value and creates subjective rights in favor of the person who has made possible its realization.

Whilst the validity of such an instrument to attest to emission reduction is recognized interchangeably (fungible) by different frameworks or systems of exchange, the possibility of negotiating it and transferring it in order to be used by a third party, necessarily affects its financial value on account of the de facto existence of a market, even unregulated, depending on supply and demand.

In the context of an ERPD program, such as the Carbon Fund program, purchase, sale and transfer concern only the "emission reductions" (ER) which each represent one ton of equivalent CO2 absorbed, avoided or reduced thanks to REDD+ activities.

Under the provisions of the contract signed between the members of the FCPF and the country eligible to the REDD+, the latter undertakes to realize a certain volume of ER in connection with its ERPD program and transferred the deed attesting to this realization for each of them, so as to obtain in return, financing aimed at paying the results obtained.

From the point of view of the result obtained and notwithstanding any legal categorization, the carbon stored or avoided by the REDD+ activities may be considered as:

- Either the natural result of a biological process of storage in the biomass, which is understood as an ecological function. It may then be categorized as a "natural resource" and, depending on the circumstances, form the subject of specific protection under the law;
- Or the "fruit" of the tree, accessory to planting or activities. If man planted the tree, it may be considered that this is an industrial fruit. If we are talking about primary forests, it may be considered that this is a natural fruit. We can compare these notions of "fruit" with the notion of ecosystem services, which refer to the result of ecological functions.
- Or the result of an action by man aimed at this carbon not being emitted. It may then, be categorized as a service rendered.

In the context of REDD+, it seems relevant initially to address stored or avoided carbon as a fruit. Traditionally, fruits are harvested by the owner of the property that produces them, in accordance with the right of use that constitutes one of the three elements of the right of ownership (fructus).

But they may also be harvested by those who enjoy rights in rem on the trees in the scope of the project. This will be the case of a holder of a right of usufruct, a surface area right, a right of silviculture or of a lessee, potentially a concession holder.

However, the recognition of carbon rights based on land ownership rights may raise certain challenges, as rights of ownership are complex and multidimensional.

Moreover, rights of property on land and resources may come under public law or private law. Although the distribution of rights between Government and local authority is envisaged differently in almost all countries, it is very common for Governments to almost always keep rights of access and of management on public land, as is the case in Côte d'Ivoire.

In addition, when real estate may not be claimed (based on formal or customary rights) or recognized (by a land title), land and resources belong to the Government by virtue of a legal presumption of ownership. The law may apply this presumption in general terms to the whole of the territory or may limit its application to abandoned or unoccupied land.

And finally, land ownership rights may be formal or considered as customary rights, sometimes without any

official recognition by the State, or which have not been put in due order, which may raise problems of land ownership uncertainty and conflicts relating to usage.

In Côte d'Ivoire, and despite the strong links existing between carbon rights and land rights or rights on resources, we can envisage two scenarios to legally categorize carbon rights:

- Either we consider that carbon tenure is not separate from ecosystems or the biomass in which it is stored, or avoided carbon is linked to the positive impact of the activities which enabled its realization and belongs to the owner of the land, soil or sub-soil, or trees, but it may not be a transferable product.
- Or we consider, on the contrary, that carbon tenure may not be separate from ecosystems or the biomass, while stored or avoided carbon may be dissociated from natural resources. In this case, the owner of the land, soil or sub-soil or trees may be (or not, as the legislature intends) the owner of the carbon purchased as a transferable product.

In Côte d'Ivoire, carbon rights are not defined explicitly or by a rule of general application. They seem to present the same characteristics as an intangible movable asset in connection with exercise of rights in rem and personal rights on the land and/or for the use of natural resources making it possible to make emission reductions.

However, the following observations are made:

- In a concern for equality of rights but also their enforceability in legal terms, the recommendation is to categorize carbon rights explicitly in Ivorian law, so as to have the same legal definition for all actors involved in REDD+ with the creation of the same rights for everyone, whether rights in rem or personal rights.
- In a concern for the effectiveness of the program, the recommendation is to adopt an approach that makes it possible to separate ownership of carbon from the ecosystems or the biomass that stored it, or which has made it possible to avoid it, in order to be able to perceive emission reductions as a transferable product.
- In the interests of legal certainty, it is advisable to adopt an approach which provides all requisite guarantees for the transfer of legal title to emission reductions, leaving no possibility of challenge or objection, where applicable, by persons holding a claim in respect of the persons recognized as the beneficiaries of the carbon rights.

Conclusion: With regards to the discussion above and the proposed conditions for the implementation of REDD+ activities, it is envisaged to explicitly qualify the carbon rights of "personal right" in the Ivorian law, and to specify that they entitle the rights to be paid or compensated for providing environmental services only. The carbon rights would therefore not relate to the emission reductions as such, which would be the full ownership of the State, and the State would therefore have an exclusive right to sell them to a third party.

This approach takes full account of the Ivorian Ministry of Environment's announcement of the Government's intention to establish a national carbon market. It requires further validation after consultation of stakeholders concerning the implications of this approach; in order to secure that the carbon rights have the desired incentive effect in fighting against deforestation and forest degradation. Once this approach is validated, it will be consecrated by regulatory means, in the form of a ministerial Decree that will include the Profit Sharing Plan (see Chapter 15).

4.5 Analysis of laws, statutes and other regulatory frameworks

4.5.1 National legal texts

For a more detailed analysis of the implications of the land ownership law, reference should be made to Chapter 4.4 above. The attached table merely summarizes the main provisions of the land ownership law.

Legal text	Implementing acts	Relevance in Ivorian land ownership law
Constitution (2016)	*Texts below*	- The State is the owner of the public land holding and of the national forest holding, in addition to all land known as *terra nullius*; - Recognition of the right of ownership as an absolute right - Recognition of the enjoyment of property rights on the part of: The State, local authorities, physical persons and communities of Ivorian nationality. Exclusion of the right of ownership for foreign nationals; - Recognition of customs and practices as promoted by traditional chiefdoms; - Lays down the duty incumbent upon the Community and upon physical persons and legal entities to protect the environment.
Law of 23 December 1998	Four (4) implementing decrees to create the required institutions	- Takes account of customary rights and seeks, through a procedure, to formalize them in order to increase security of tenure and limit conflicts; - Recalls the obligations/duties attached to the enjoyment of a property right.
Civil Code		- Recalls the absolute character of property rights; - Sets out the methods of acquisition of property and the categorization of land as an immovable asset; - Obligation to develop land.
Forest Code (2014)		- Lays down the rights and duties of forest landowners; - Sets out the various types of forest and the associated forest use rights; - Recalls the free use of resources deriving from trees other than the exploitation of protected species of fauna and flora; - Obligation for physical persons and communities to adopt a simplified forest development plan.
Mining Code (2014)		- Ban on the exploitation of the subsurface (owned by the State).
Environment Code (1996) Law 2002-102 of February 11, 2002		- Priorauthorization procedure for all development and land-use projects for agricultural, industrial or urban purposes; - Conduct of an impact study for certain plans and projects. - Provides that national parks and nature reserves are part of the inalienable public domain of the State; and - Determines the conditions and modalities for the population that live in the parks and reserves peripheral areas to organize themselves in association to tparticipate in the management of the national parks and natural reserves.

4.5.2 International legal texts

Côte d'Ivoire is party to numerous international conventions and agreements on environmental protection, in particular:

- The Convention Relative to the Preservation of Fauna and Flora in Their Natural State;
- The International Convention for the Prevention of Pollution of the Sea by Oil;
- Convention Concerning the Use of White Lead in Painting;
- The African Convention on the Conservation of Nature and Natural Resources;
- The Treaty on the prohibition of the emplacement of nuclear weapons and other weapons of mass destruction on the sea-bed and ocean floor and in the subsoil thereof;
- The Amendment to the International Convention for the Prevention of Pollution of the Sea by Oil, concerning Tank Arrangements and Limitation of Tank Size;
- The International Convention for the Conservation of Atlantic Tunas;
- The Convention Concerning Protection Against Hazards of Poisoning Arising from Benzene;
- The Convention Concerning the Protection of the World's Cultural and Natural Heritage;
- The International Convention on Civil Liability for Oil Pollution Damage (and subsequent amendments);
- The Convention on Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region (or Abidjan Convention);
- The Protocol Concerning Co-operation in Combating Pollution in Cases of Emergency;
- Convention Creating the Niger Basin Authority and Protocol Relating to the Development Fund of the Niger Basin;
- The Convention concerning conditions of employment of plantation workers;
- The United Nations Convention on the Law of the Sea;
- The Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships;
- The International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties;
- The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter;
- The International Convention on the Establishment of an International Fund of Compensation for Oil Pollution Damage;
- The Vienna Convention for the Protection of the Ozone Layer;
- The Montreal Protocol on Substances that Deplete the Ozone Layer;
- The Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar Convention);
- The Convention on International Trade in Endangered Species;
- The Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa;
- The Basel Convention the Control of the Transboundary Movements of Hazardous Wastes and Their Disposal;

- The United Nations Convention on Biological Diversity;
- United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol (1997);
- The Convention to Combat Desertification adopted in Paris in 1994;
- Paris Agreement adopted at the 21st Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change.

Various conventions relating to the environment are also in the process of ratification and signature, namely:

- International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC);
- The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade;
- The 2001 Stockholm Convention on Persistent Organic Pollutants (POPs);
- The Cartagena Protocol on Biosafety relating to the Convention on Biological Diversity;
- The Basel Convention on the Conservation of Migratory Species of Wild Animals.

4.5.3 Gaps and obstacles to effective implementation of Ivorian land law

The 2017 Land Policy Statement has highlighted several obstacles to be overcome, including contradictions between the provisions of the amended law of December 23rd, 1998 on rural land, and the obsolete nature of certain regulations. In particular, the transitory nature of the land certificate is unequivocal. The law recognizes the customary rights transferred to third parties, without any distinction, the land certificate, which establishes these customary rights, is likely to be issued to any person, eligible or not to the ownership of the rural lands, provided that it is holder customary rights.

However, Article 4 of the law tends to make it a title deed when it states "the ownership of a land of the Rural Land Domain is established from the registration of this land in the land register opened for this purpose by the Administration and in respect of the customary lands by the Land Certificate ". Section 17 of the Law prescribes the non-transferability of the land certificate to any person who is not likely to gain ownership of rural land.

All the relevant proposals of the review committee of the procedures put in place by MINADER for the rationalization of the legal framework have been considered. Thus, it is planned to adopt new regulatory texts in the near future to improve the regulation of land and the proper functioning of the organizational and administrative framework of rural land management.

As an indication, it will be:

- to bring the text of the law into harmony with its spirit, by removing the ambiguities introduced by Articles 4 and 17;
- to clarify that the land certificate is a transitional administrative act that recognizes the existence of customary rights, a first step before the registration of rural lands;
- to fix at 10 years, the time allowed to the holders of land certificates for the registration of their property;
- to reduce the advertising period to one month as part of the procedure for issuing the land certificate;
- to combine the certification and registration procedures;
- to harmonize the provisions of the 1932 decree and those of the 1999 decrees relating to the registration of land in rural land, and
- to clarify certain vague or undefined notions in the law of 23 December 1998, such as "continuous and peaceful use of land".

In addition to the improvements that will be made to the 1998 law, it is planned to fill the following regulatory and institutional gaps, considering the program:

- Adoption of implementing decrees for the effective and coherent implementation of the Law of 23 December 1998 and the Forest Code of 2014.

- Establishment of the land management bodies necessary for the land regularization, in particular to respond to requests for land certificates (to conduct the investigation procedure) and allow the recruitment of surveyors-geometers (for the delimitation of plots claimed).

4.5.4 Analysis of the relevant regulatory provisions supporting or running counter to key drivers of deforestation and degradation, the various policy instruments as well as a critical review of compliance and enforcement.

Key drivers of deforestation and degradation – in the ER-P area are mainly: (i) forest encroachment by cocoa and rubber producers, and (ii) timber and fuelwood extraction.

In order to assess key drivers, t is important to distinguish between the different zones (protected areas, classified forests and rural area) that are governed by specific laws and regulations (see above section 4.4).

In the public and private forest estate of the State, such encroachments are either prohibited or subject to authorization: Chapter 3 (Articles 127 et seq.) of the 2014 Forest Code provides precises a number of offenses that target the identified factors of deforestation and forest degradation, including the encroachment of forests for the extraction of timber or firewood, with the possibility of applying relatively dissuasive sanctions, such as:

- Article 127 prohibits any activities in violation of the traditional rights of use and the forest management plan;
- Article 128 punishes the exploitation of wood other than timber without authorization in the protected forest estate, or whoever violates the regulatory provisions relating to the exploitation of charcoal or who circulates cutting products firewood, firewood or charcoal without official documents;
- Section 129 punishes anyone who uses timber by substituting one forest unit for another, or a species for another, or who is operating outside the limits allocated for exploitation;
- Article 130 penalizes the unauthorized cutting or grubbing of trees planted, or which cuts, mutilates or destroys in any way protected forest species, or which exploits timber without authorization in the classified forest area.

In addition, the draft revision of the Forest Code (version September 2018) provides for the introduction of a new article 49, which states that "*Any project or activity likely to result in the deforestation of part of the forests of the national forest estate is subject to prior authorization of the forest administration* ", which will allow the forest administration to control agricultural activities, if not to prevent or prohibit them, on the forest (public and private) estate of the State.

In rural land, it is worth noting the provisions of Law No. 2015-537 of July 20, 2015 of agricultural orientation which, in addition to the establishment of a policy of securing the rights of customary landowners and landowners, on occupants on an identified property and for the delimitation of the territories of the villages, aims to promote the contractualization of the relationship between landowners and non-owner operators, as well as to resolve conflicts related to logging.

This legislative framework is an initial response to degradation factors resulting from encroachments by small cocoa and rubber producers. Article 53 of this law provides that the State encourages farmers to establish carbon sinks in their areas of operation, bearing in mind that any farm (including a family farm) must be registered and registered with the Chamber of Commerce. (Article 10), and that the operation must necessarily be in accordance with the regional management plan (Article 35), each plan being compatible with the Regional Land Use Plan (SRADT).

An articulation with the SRADT established by the local authorities is provided by the article 63 of this law,

which stipulates well that these plans must specify the Land uses, which necessarily includes those where will be developed the activities of reduction of emissions from the program. Finally, this law insists on the settlement of land use conflicts, in particular to improve the cohabitation of farmers and loggers. This law is yet to be operationalized through regulatory measures, which will take into account the PES approach on rural land for sectoral activities involving cocoa and rubber producers as well as measures to manage timber harvesting, or firewood, including regulatory measures that will be adopted to implement the Benefit Sharing Plan.

4.5.5 Regulatory context for ER Program measures in support of timber plantations and a switch from classic timber concessions to a more sustainable type

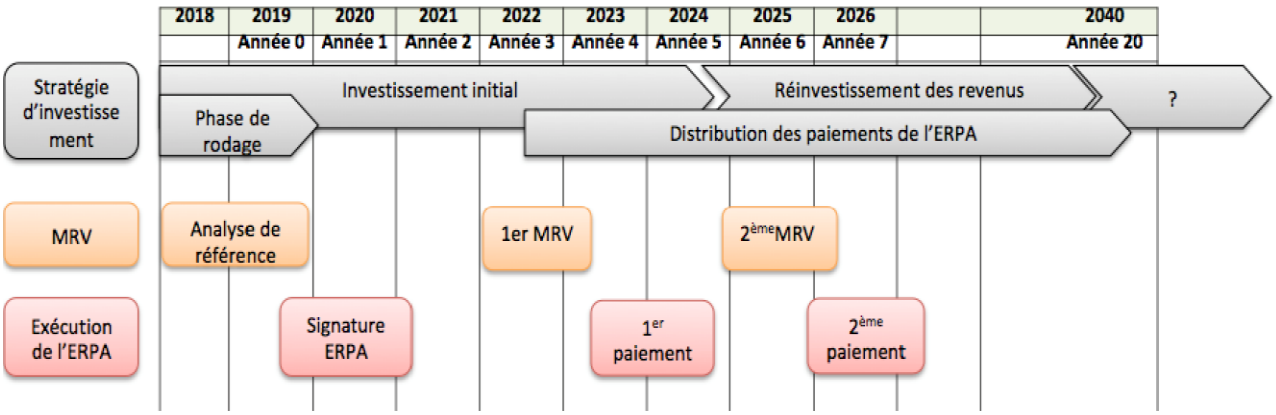
The draft revision of the 2014 Forest Code (April 2018 version) will specify the rules for the sustainable management of logging operations, in particular by drawing up forest management plans for forests in the public or private state and local authorities. Local authorities (Article 55), may request forest owners of more than 20 ha in one piece, to also draw up a forest management plan (Article 56). A new Title VI will specify the conditions for logging, with the obligation for any logger to obtain an approval issued by the Minister of Forests, prior to the exercise of his profession (Article 58).

4.6 Expected lifetime of the proposed ER Programme

The ER-P implementation phase will follow the signature of the ERPA between 2020 and 2024. The anticipated outcome of the program is a reduction in emissions over a period of at least 20 years up to 2040.

The first Emission Reduction verification is proposed for 2022, followed by a second verification of the Reference Emission Level (REL) in 2024. If this monitoring activity demonstrates solid performance, two payments will be made for the emission reduction generated during the period.

Figure 15: Schedule for the ER-P in Côte d'Ivoire



5 STAKEHOLDERS CONSULTATION, AND PARTICIPATION

5.1 Description of the stakeholder consultation process

INFORMATION AND CONSULTATION DURING THE DESIGN PHASE

Consultations and information dissemination as part of the design phase of the Taï National Park ER-P took place at multiple levels and with multiple actors. There has been very active consultation with the various Abidjan based stakeholders, as part of the REDD+ readiness phase, and it has mobilized a large number of organizations on a variety of themes, through numerous working groups, led by the National REDD+ Committee. In addition, significant efforts have been made since the submission of the Emissions Reduction Program Idea Note (ER-PIN) in order to inform and consult local stakeholders in the southwestern region around the Taï National Park (local communities, civil society and the local administration). Annex 3 summarizes the various consultation and workshops organized in the Regions and in Abidjan as part of the ER-P.

The design phase was based on various levels and frameworks of participation and consultation:

As of the initiation of the REDD+ readiness process, the participation of all stakeholders has been at the center of the approach of Côte d'Ivoire, with involvement boosted by the National REDD+ Committee for each of the activities, reflection processes and decisions. With a view to ensuring the effective participation and commitment of stakeholders, a stakeholder engagement plan was drawn up in 2015.

The Inter-Ministerial Technical Committee (CTI-REDD+) is tasked with ensuring a participatory approach in the REDD+ process through the involvement of and consultation with the various stakeholders, in particular the forest local communities, in a spirit of cooperation and dialog, and promoting this approach. It is assisted in this mission by the SEP-REDD+ (REDD+ Permanent Executive Secretariat) in order to implement the participatory approach and organize the consultations in the REDD+ process.

Although the participation of civil society in the REDD+ readiness process has formally existed since the establishment of the national institutions, it has gradually evolved and become structured, changing from a contribution by representatives of the NGOs to the creation of an Observatory, representative of Ivorian civil society in the sector, which oversees the effective implementation of all areas of the readiness process. The objectives of the OI-REN (Observatory for the sustainable management of natural resources) as defined in its statutes are "the promotion and coordination of the participation of Ivorian Civil Society Organizations in the implementation of any initiatives relating to natural resources and the rights of populations, in particular the FLEGT/REDD+ processes" (OI-REN Statutes, Article 5).

The stakeholder engagement plan has made it possible to categorize stakeholders and then to orientate and adapt all the information, awareness, consultation and training activities to each of these categories.

The various stakeholder categories identified are as follows:

- *The technical and financial partners*, including the FCPF, the UN-REDD and the AFD (French Development Agency) within the context of C2D, and the EU REDD+ Facility, contribute to the REDD+ readiness process in Côte d'Ivoire through financial support for the development of the REDD+ management arrangements, the participation and engagement of stakeholders, capacity building, the establishment of the reference level, forest monitoring and the implementation of pilot projects.
- *The ministries involved*, the cross-sector structuring and statutory involvement of all the ministries concerned with the process since the establishment of the National REDD+ Committee, have made it possible to ensure real and ongoing participation in the process on the part of the national sectorial institutions. The definition and implementation of sectorial policies in line with the national REDD+ strategy demonstrate this strong institutional commitment.
- *The local communities and traditional authorities* are consulted on all the studies carried out and for the development of the various management arrangements put in place. The participation of rural

communities was provided for as of the initiation of the process, with the statutory presence of two representatives of the rural communities in the National REDD+ Committee bodies. The consultation workshops organized in the rural areas of Côte d'Ivoire have systematically been the subject of general and targeted awareness sessions on the REDD+ mechanisms and arrangements and on the ER-P in the south-west. Furthermore, contact persons and local radio stations have been identified in order to facilitate the dissemination of information.

- *Local elected officials*, in particular, were consulted as part of the analysis of factors of deforestation and forest degradation and the local approaches adapted to the implementation of REDD+, and for the design of the ER-P in the area concerned.
- *The private sector*, having economic activities linked to the factors of deforestation and forest degradation, was involved as of the initiation of the REDD+ process with the statutory presence of a representative of the Wood Industries Federation and a representative of the Federation of Agribusinesses on the CN-REDD+.
- *Civil society organizations from the environment sector*, the sustainable development sector and the human rights sector have been involved as of the initiation of the process, with the statutory presence of two representatives of the NGOs on the CTI-REDD+ (REDD+ Inter-Ministerial Technical Committee).
- *The research institutions* such as the National Center for Agricultural Research (CNRA), the Centre Suisse de Recherches Scientifiques (CSRS - Swiss center for scientific research) and the universities are participating actively in the REDD+ process through their technical assistance and their contribution in the development of the REDD+ management instruments (REDD+ National Strategy, definition of the reference emissions level for the forests, national forest monitoring system and other studies).
- *Youth people and women* constitute very important groups in the REDD+ process, due to their socio-economic activities (fuelwood, gold mining, hunting), which affect the forests. These groups were the target publics for awareness activities and specific information dissemination, and they contribute systematically to the REDD+ activities, in particular through the mobilization of associations of women and young people.

With the REDD+ process, various stakeholder-led initiatives were launched during the REDD+ readiness process in order to unify and strengthen their contributions to the process; they are fully integrated into the ERPD consultation process:

The participation and engagement of the stakeholders have evolved thanks to the emergence of initiatives on the part of civil society, private operators and sectorial interest groups. These initiatives have been incorporated into the readiness arrangements. Numerous working initiatives common to certain categories of stakeholders

- *Ivorian Observatory for the Sustainable Development of Natural Resources (OI-REN)*

In 2014, civil society organizations whose mission is the protection of the environment and the defense of human rights organized themselves into a platform to ensure effective and coordinated participation in the FLEGT process and in REDD+ readiness. The objectives of the OI-REN defined in its statutes are "the promotion and coordination of the participation of the Ivorian Civil Society Organizations (CSOs) in the implementation of any initiative related to natural resources and human rights particularly the FLEGT / REDD+ processes. It participates in (i) the Forest Law Enforcement and Governance Trade Process (FLEGT), (ii) REDD+ readiness and (iii) the preparation of the ERP-D with SEP-REDD+. It has twelve (12) regional delegates including one in Guiglo (Cavally) for the observation of the activities carried out in this area. The OI-REN is involved in conducting community consultations for REDD+ and ERPD in the ERP area.

- *Cocoa & Forests Initiative (CFI)*

The aim of the Cocoa & Forests Initiative (CFI) is to mobilize technically and financially cocoa companies and governments in West Africa to commit jointly to bringing an end to deforestation, reducing the impacts of

climate change and land degradation, while at the same time improving the livelihoods of small farmers in the framework of the "Zero-deforestation agriculture" policy. The World Cocoa Foundation (WCF), the Prince of Wales' Accounting for Sustainability Project and the Sustainable Trade Initiative (IDH), launched it in March 2017. Joint action frameworks for Côte d'Ivoire and Ghana were signed between the participating companies and governments in November 2017 at COP 23. As at mid-May 2018, twenty-seven (27) companies have signed and committed themselves to the Joint Action Frameworks. They represent approximately 80% of global cocoa use. The primary priority of the CFI is to protect and rehabilitate degraded forests. To this end, the government and the companies have undertaken to stop converting forest land for cocoa production, in support of rehabilitation, and have committed gradually to eliminating the illegal production and supply of cocoa in protected areas. CFI participates in the technical and financial development and coordination with its members of the private sector of activities: (i) agroforestry (cocoa under shade), (ii) timber and energy plantation, (iii) training for agroforestry and input technologies; and, (iv) the dissemination of improved cocoa varieties in the ER-P area.

- *Environment and Climate Change Working Group of the public-private partnership platform of the Cocoa and Coffee Board*

The public-private partnership platform of the Coffee and Cocoa industry was set up by the Ivorian government in order to allow all actors in these industries to enter into dialog in order to identify solutions to problems around the sustainable development of the coffee and cocoa industry within the country. Issues relating to climate change have been debated within the "Environment and Climate Change" Working Group, which was chaired by the REDD + Permanent Executive Secretariat until August 2017. Since August 2017, it has been jointly chaired by the REDD + Permanent Executive Secretariat and Sustainable Trade Initiative. It allows sharing of field experiences and techniques related to the CFI in the ER-P area.

The participation mechanisms and subjects for consultation:

Specific consultation and engagement processes for the main stakeholders were implemented for each REDD+ readiness project: (i) preparation of the R-PP, (ii) development of the REDD+ NS, (iii) development of the ER-PIN, (iv) production of the SESA (and the production of the framework documents), (v) development of the Information on Safeguards System (Système d'Information sur les Sauvegardes), (vi) development of the complaints and appeals management mechanism, (vii) the establishment of the reference level and the national forest monitoring system and (viii) the process for drawing up the PES guide.

The main gatherings, meetings, awareness sessions and training sessions held for each of these projects are set out in Annex 3. The specific consultation processes implemented for each of these projects are described below:

- ***Consultations for preparation of the ER-PIN***

Activities	Date	Location
Workshop devoted to drafting the ER-P idea note for Côte d'Ivoire	06/08-11/2015	Bassam
Workshop devoted to feedback of the results of work on the drafting of the conceptual note for the emissions reduction program	07/29/2015	Abidjan
ER-PIN reading session	08/4/2015	Abidjan

- ***Consultations for preparation of the SESA***

Activities	Date	Location
Workshop devoted to the start-up of activities for the Social and Environmental Safeguard Assessment as part of the REDD+ mechanism in Côte d'Ivoire	02/19/2016	Abidjan

Regional Consultations as part of the Social and Environmental Safeguard Assessment of the REDD+ mechanism	from 03/10/2016 to 04/13/2016	24 pref. and 24 villages
Discussion and enrichment workshop o the assessment of the strategic options of the REDD+ mechanism in Côte d'Ivoire	08/04/2016	Abidjan

- ***Consultations for preparation of the SIS***

Activities	**Date**	**Location**
Validation meeting for the first version of Information on Safeguards System (Système d'Information sur les Sauvegardes)	03/22/2018	Abidjan
Information and discussion session on the Information on Safeguards System (Système d'Information sur les Sauvegardes)	03/29/2018	Abidjan
Finalization workshop for the Information on Safeguards System (Système d'Information sur les Sauvegardes)	4/22/2018	Abidjan

- ***Consultations for preparation of the REL/MRV***

Activities	**Date**	**Location**
First meeting of the Technical Group for the drafting of the action plan for the implementation of the NFMS	03/09/2016	Abidjan
Second meeting of the Technical Group for the drafting of the action plan for the implementation of the NFMS	03/24/2016	Abidjan
Third meeting of the Technical Group for the drafting of the action plan for the implementation of the NFMS	06/15/2016	Abidjan
Retreat for finalization of the NFMS action plan	06/24-25/2016	Assinie
Validation workshop for the NFMS Action Plan	09/16/2016	Abidjan
Training workshop on the RLF	06/04-05/2015	Abidjan
Technical Workshop on the representation of the definition of forest as part of the REDD+ mechanism in Côte d'Ivoire	04/27-28/2016	Abidjan/SODEFOR
Workshop devoted to starting the drafting of the FRL/NERF (Reference Emission Level for Forests)	09/07-08/2016	Abidjan
Technical workshop to support the finalization of the FRL and bringing into line with the NGGI of BUR	12/05-09/2016	Rome
National FRL validation workshop as part of REDD+	12/14/2016	Abidjan
Planning meeting for biomass inventory activities	09/30/2016	Abidjan
Workshop devoted to the development of the methodology and training of managers on Biomass	08/11-12/2016	Abidjan
National workshop launching the collection of forest biomass data	10/14/2016	Abidjan
Training workshop on the assessment of forest resources and data analysis	04/03-07/2017	Abidjan
Training workshop for inventory teams on the use of forest biomass data collection tools and instruments	09/20-21/2016	Abidjan
Information and awareness meeting on biomass inventory		Bondoukou
Information and awareness meeting on biomass inventory	10/28/2017	Adzopé
Information and awareness meeting on biomass inventory	10/26/2017	Abengourou & Gagnoa
Information and awareness meeting on biomass inventory	10/27/2017	Bettié & Bangolo

INF SODEFOR project meeting	03/012017	Abidjan
Training workshop on data processing and analysis	09/25-29/2017	Abidjan
Presentation workshop on basic forest data for REDD+	10/12/2017	Abidjan
Workshop devoted to establishing a cooperation framework between national stakeholders for the development of the RLF/NFMS	03/10/2016	Abidjan
Workshop devoted to presenting the result of the study on drivers of deforestation and degradation in Côte d'Ivoire (EMDD).	10/10/2016	Abidjan
Training workshop on GHG inventories	04/27-30/2015	Abidjan
Training workshop on the harmonization of keys in land occupancy mapping/LCCSv3 system	06/30 - 07/03/2015	Abidjan
Training on the MNV	09/16-20/2013	Abidjan
Validation workshop on the harmonized national key with LCCSv3	08/13-14/2015	Abidjan

- ***Consultations for preparation of the PES guide***

Activities	**Date**	**Location**
Workshop devoted to presenting the "Transforming cocoa supply chains in Côte d'Ivoire" pilot project and identification of the themes in terms of information, awareness and environmental education	12/16/2016	REDD+ Permanent Executive Secretariat
Capacity building workshop for national stakeholders on the systems of payment for environmental services	03/12-13/2015	Abidjan

- ***Consultations for ERPD***

Activities	**Date**	**Location**
Consultations with stakeholders, forest department MINEF, independant observer (WCF)	07/04/2016	Abidjan
Consultations industrial timber firms	07/05/2016	Abidjan
Consultations with OIPR	04/06/2016	Abidjan
Consultations with NGOs	04/10/2016	Abidjan
Consultations with UNDP	04/11/2016	Abidjan
Consultations with ICRAF	04/11/2016	Abidjan
Consultations with AFD	04/11/2016	Abidjan
Consultations MDP/DPS and representatives of Cavally and Guémon in the ER-P area	04/12/2016	Abidjan
Consultations ''Conservation des Espèces Marines (CEM) NGO	04/12/2016	Abidjan
Consultations with private sector (Cargill, CEMOI, Mondelez, OLAM, SIFCA)	04/13-17-18-19/2016	Abidjan
Consultations with GIZ	04/13/2016	Abidjan
Consultations with NGOs (Impactum -TFT)	05/23/2016	Abidjan
Workshop for presentation of the first ER-PD draft with NGOs, local administrations, private sector of ER-P area, central administration and OI-REN	07/12/2016	Abidjan
Local workshop on the Draft ER-PD	10/11-13/2018	Guiglo

		Soubré
Meetings during the TAP review mission (EU, AFD, OIPR, SODEFOR, FLEGT, OI-REN…)	10/22-26/2018	Abidjan
Meeting for analysis and validation of the ER-PD with various stakeholders of the National REDD+ Commission.	11/09/2018	Abidjan
Consultations with all local representatives and population on the ER-PD Final version	01/02-04/2019	Duékoué San Pedro
National Consultation on the ER-PD Final Version	01/03-04/2019	Abidjan

- ***Benefit Sharing Plan validation***

Activities	**Date**	**Location**
Framing meeting on the Benefit Sharing Plan	09/25/2018	Abidjan
Workshop for the identification of beneficiaries of the BSP	09/28/2018	Abidjan
ERPD presentation workshops and analysis of the benefit sharing options	09/18-19/2018	Guiglo Soubré
ERPD presentation workshops, analysis and validation of the benefit sharing options	01/02-04/2019	Duékoué San Pedro

- ***ERPD Validation***

Activites	**Date**	**Lieu**
Consultation workshops with local elected representatives, traditional authorities, local communities, cooperatives, local administration, and civil society	01/03-04/2019	Duékoué San-Pedro
National validation workshop (private sector, civil society, TFP, central administration, Universities and research centers, media)	08/01/2019	Abidjan

The methodology and tools for consultations are:

The consultations carried out for each REDD+ readiness area were systematically kicked off with information and awareness sessions on the concept, the readiness process and all its constituent elements. For the integration of comments see section 5.2 below.

The main communication tools used at present have been developed with the aim of ensuring awareness and informing all stakeholders and all categories of actors; they include:

- *The use of new information and communication technologies (NICT)*

A website dedicated to REDD+ in Côte d'Ivoire has been developed and is regularly updated. It allows regular information to be provided on the readiness process and on the main documents and reports drawn up. http://reddplus.ci/

A REDD+ Côte d'Ivoire "YouTube" channel, enabling the distribution and storage of films made about REDD+

in Côte d'Ivoire: https://www.youtube.com/channel/UCMpQE6Hv74n3ssa5XHBBIBg**.**

Social networks have also been used to regularly share information on the process with a "Facebook" page: https://www.facebook.com/REDD-C%C3%B4te-dIvoire-1603079076575939/ and a "Twitter" account: https://twitter.com/sep_redd

Information has also been disseminated by sending messages to mobile telephones.

- *The use of traditional communication methods*

The REDD+ Permanent Executive Secretariat also uses traditional communication methods enabling a large number of people to be reached in Côte d'Ivoire, in rural areas in particular, with: (i) the broadcasting of information spots on national television channels; (ii) the broadcasting of radio programs; (iii) the publication of articles in the written press and (vi) the development and distribution of informative brochures.

Information and awareness campaigns have also been organized in rural areas by Information, Education and Communications technical assistants and by the communication managers of the REDD+ Permanent Executive Secretariat. A network of journalists is currently undergoing training on REDD+ issues and climate change, in order to improve the coverage and quality of press articles on these issues.

- *Consideration of gender aspects in the consultations*

The stakeholder consultations carried out as part of the REDD+ mechanism are conducted without any discrimination; the representatives are designated by their structures, which appoint participants according to their competences. In order to guarantee the contribution of women and young people to the reflection process, particular attention is paid to the mobilization of women's and young people's associations. Specific and adapted frameworks are developed to facilitate the expression of their opinions and their participation. As part of the consultations, specific gender monitoring on participation is routinely carried out by specifying gender on attendance registers.

- *Consultation for the ERPD*

The ER-P is a participatory program for which regional actors have been involved in the development and validation of the different elements of the program by the main stakeholders, in particular:

- The private sector (ICF);
- Regional authorities (which will focus their development around the program);
- Farmers and local communities (who will benefit directly from the program).

Consultation on the ER-PD have been organized bothinthe ER-P area the field and nationally and comments have been integrated in the program document (see below section 5.2):

- April 13th to July 5th, 2016 on the preliminary version at the national level with representatives of Cavally and Guémon regions;
- July 12, 2018 in Abidjan presentation of the draft to NGO, local administration (prefects);
- October 11 to 13 2018: Local workshop in Guiglo and Soubré;
- January 2-4, 2019 on the final version of the ERPD in the field in Duekoué and San Pedro and in Abidjan (see table above)

Various versions of the document (in French version) have been published on the REDD + website in Côte d'Ivoire and the link has been distributed to all stakeholdersLocal and national consultations were held on the different parts of the ER-PD:

- Consultations on activities at the local and national level as part of the preparation of the FIP, November 4-7, 2016, September 2017 and several field missions in 2018;
- At the national level on the Benefit Sharing Plan September 25-27, 2018;

INFORMATION AND CONSULTATION DURING THE IMPLEMENTATION PHASE

The program will devote resources to the dissemination of information to and the regular consultation of stakeholders. The methodology for the deployment of the program activities is based on consultation at village level as part of the development of the land-use map and SRADTs (Regional Planning and Development Scheme of the Territory). A major communication campaign will be launched upon startup of the activities. In particular, the program will make use of community radio and liaison workers who are identified and trained during the design phase.

The ER-P document for Côte d'Ivoire will form the subject of participatory, inclusive and transparent consultations with all stakeholders in the REDD+ mechanism, and in particular those of the ER-P region. With the assistance of World Bank consultants, the advanced draft of the ER-P document, submitted on November 16th, 2018 will serve as the basis for the regional and national consultations to be held over the period December 5 to 13, 2018 in the ER-P regions and in Abidjan.

The categories of stakeholders who will be invited to consultations on the ER-P documents will be from the central services of the administration (ministries with responsibility for agriculture, economy and finance, water and forests, the interior and the plan) and the decentralized services of the administration (from the prefectural corps and regional directorates), traditional authorities, elected local officials (town halls and regional councils), the private sector, research bodies and universities, local communities and civil society. These stakeholders will be selected not only from the ER-P regions but also from across the entire territory.

After stakeholders have been consulted on the advanced draft of the ER-P, a second version which takes their comments into account will be drawn up and submitted for validation to the bodies of the National REDD+ Committee early January 2019.

The final version resulting from the meeting of the National REDD+ Committee, taking the observations of Committee Members into account, and will be submitted to the World Bank on January 4th, 2019.

A list of the various observations and comments by stakeholders will be annexed to the ER-P document prior to submission to the World Bank. Over the lifetime of the program, regular consultations will be carried out at local authority level and at regional level in order to adjust the program activities and the investments of collective interests. The population will also have the opportunity to submit comments or complaints as described in Section 14.

For the activities that will take place during ER-P implementation, the operators will have a Manual on Free Prior Informed Consent (FPIC), this manual which is still under development is a tool that will allow ensure consultation and strong voluntary engagement of people in REDD+ projects based on specific Principles, Criteria and Indicators. A draft version of this manual will be available before the end of 2018 and will be validated nationally in the first quarter of 2019.

5.2 Summary of the comments received and how they were taken into account in the development and implementation of the ER Programme

The results of the consultations carried out in the various areas of REDD+ readiness were routinely used and appropriately incorporated into the management arrangements, supplementing them, and in the documents and mechanisms put in place, in particular through: (i) direct contributions during consultation workshops on key documents; (ii) the use of technical working groups for the development, revision and consolidation of specific sections of the documents, (iii) the adoption of a trial approach on specific aspects (community monitoring of forests, PES) and (vi) the compilation of the results of consultations (campaigns, meetings, interviews) in the reports used subsequently.

- *Incorporation of the results of the consultations in the management arrangements:*

The consultations and surveys carried out as part of the construction of the GRM led to the development of an adapted structure and operating mechanism for the Regional REDD+ Committees, inspired by mechanisms existing in other sectors. Regional REDD+ Committees will support the monitoring of ER-P activities at the local level.

The consultations conducted with the NGOs in the natural resources management and human rights sectors contributed to the development of the OI-REN platform, also involved in the FLEGT process. OI-REN will act as an independent observer of the implementation of the ER-P.

The consultations carried out with the private sector contributed to the development of the public-private initiative, the "Cocoa-Forest Initiative". The CFI PPP will support the implementation of sectorial and enable activities through the implementation of its action plan.

- *Incorporation of the results of the consultations into the development of the strategy:*

Structurally, the REDD+ NS development process has been participatory by creating multi-actor thematic working groups who defined and developed each of the strategic REDD+ options for Côte d'Ivoire, together with the associated policies and measures.

- *Incorporation of the results of the consultations into the definition of the reference levels and the monitoring system:*

As regards the definition of the reference levels, the consultations contributed to the compilation of the data existing within the various data generating structures and to the joint definition of the methodology for establishing the reference levels. A validation workshop was organized for the purpose of validating these reference levels. The forest monitoring system was developed jointly with all the structures concerned and an assessment of the knowledge possessed by these structures on the requirements of the UNFCCC informed the development of a training plan and an action plan.

- *Incorporation of the results of the consultations into the ER-P activity framework*

The consultation process undertaken for the implementation of the ERPD provided a number of observations from various stakeholders. They mainly focused on the description of ER-P activities. The comments allowed restructuring the framework of activities by classifying the activities according to the status of the lands with (i) the implementation of the PES program in rural areas and (ii) the generalization of the management system through concessions in classified forests. New activities have also been integrated, for example Development of alternatives to wood energy using agricultural residues (ES3). The integration of traditional chiefdoms, local land management committees as stakeholders in benefit sharing arrangements came from the consultations hold in the Regions for the ERPD validation.

6 OPERATIONAL AND FINANCIAL PLANNING

6.1 Institutional and implementation arrangements

The aim of the institutional agreements is to operationalize the program, to define responsibilities, to ensure its performance in terms of emission reductions and respect for the safeguards, and to put in place procedures for payment linked to the performance of the program, as defined by the benefit-sharing plan. The ER-P operational planning is carried out at two levels: (i) at the national level, (ii) at the regional level.

Transboundary cooperation is operational between Liberia and Côte d'Ivoire to address cross-border issues regarding ER-P issues.

NATIONAL SUPERVISION

The Government of the Republic of Côte d'Ivoire will be the signatory of the Emissions Reduction Payment Agreement (ERPA). It is the direct contact of the Carbon Fund Administrator and is legally responsible for the program's success. The Prime Minister, or the Ministry of Finance, will sign the ERPA, with the Carbon Fund.

The Ministry of Environment and Sustainable Development (Environnement et Développement Durable) is the ministry responsible for the REDD+ process and it is the focal point vis-à-vis the UNFCCC. It has responsibility for ecology and the protection and conservation of nature, wildlife and sustainable development. It's the Ministry with oversight over the OIPR.

The Ministry of Water and Forests has responsibility for renewing, developing and managing the national forest heritage. It is the focal point for the VPA-FLEGT and is the ministry with oversight over SODEFOR.

To coordinate all of the sectors concerned by REDD+, a National REDD+ Commission has been created. This is a cross-sector analysis, advisory and guidance structure for the implementation of the REDD+ mechanism. It is made up of a National REDD+ Committee (CN-REDD+) in charge of steering the REDD+ mechanism, an Inter-Ministerial Technical REDD+ Committee (CTI REDD+) in charge of cross-sector coordination between Ministries concerned by REDD+, and a REDD+ Permanent Executive Secretariat (SEP-REDD+), which is tasked with the implementation of the REDD+ mechanism.

In this regard, the SEP-REDD+ will have responsibility for the day-to-day management of the ER-P under the supervision of the National REDD+ Committee with the support of the REDD+ Inter-Ministerial Technical Committee. Its capacities have been reinforced to enable it to carry out this mission, with a new structure organized around seven functional units: (i) Administration and finance unit, (ii) Contract award unit, (iii) internal audit and management control unit, (iv) Strategy and partnerships unit, (v) Monitoring, measurement, notification and verification unit, (vi) Planning, monitoring and evaluation and safeguards unit and (vii) Communication unit.

It will constitute the principal agency responsible for the coordination of activities generating emissions reductions in the framework of the programme, and it will be responsible for the national verification of the carbon monitoring and safeguards reports, for the monitoring of complaints and appeals, relying in particular on the services of the MINEDD, MEF, SODEFOR and OIPR, independent observer (OI-REN, WCF) as well as organizations such as GIZ. It will be responsible for the following in particular:

a. Ensuring the consistency of the current and planned initiatives/projects in the ER-P area and their alignment with the objectives of the ER-P;

b. Checking the emissions reduction monitoring reports and the monitoring of safeguards and joint benefits, the complaints and appeals transmitted by the projects/initiatives management units and the project owners, in order to certify that the credits generated by the project/programs meet national standards;

c. Ensuring the correct application of the environmental and social management framework and

specific frameworks, as well as proper handling of complaints;

d. Managing information about projects and programs through the National Registry REDD+/Géoportail Surveillance Spatiale des Terres de la Côte d'Ivoire, and in particular information related to the generation and certification of emission reductions;

e. Informing the National REDD+ Committee, the UNFCC, the FCPC and the international and local partners, in particular the private sector and local communities, on the satisfactory progress of the ER-P.

REGIONAL SUPERVISION

At regional level, the country is organized into a set of state and local structures and project delivery actors.

- *The deconcentrated and decentralized structures*

The prefectures and regional councils constitute the deconcentrated and decentralized structures. As governmental delegates, the regional prefecture represents each of the ministries as well as the national interests and oversees the application of laws and regulations. Within the context of delivery of the program, it monitors compliance with the policies relating to the implementation of REDD+ activities and it plays an essential role in supervising the complaints and appeals mechanism open to recipients. The regional councils are tasked with steering regional development within this context; they play an essential role in local territorial planning and the implementation of REDD+ activities. At the municipal level, they interact with city council that are also key players in local development.

- *The Regional REDD+ Committees*

As provided for by Decree 2012-1049 of 24 October 2012, the regional committees are tasked with implementing the decisions taken by the CN-REDD+ and the SEP-REDD+ at regional level. They have the same composition as the SEP-REDD+, but at regional level. They are made up of technical structures falling within the remit of the key ministries, namely: the ministry with responsibility for agriculture (MINADER), the Ministry of Water and Forests (MINEF), the Ministry of Industry and Mines (MIM) and the Ministry of Environment and Sustainable Development (MINEDD) together with research centers. The primary role of these structures on a day-to-day basis is the technical application of the plan defined by their respective entities. The objective of the regional committees is to ensure the implementation and harmonization of the REDD+ activities at regional level.

- *The project delivery actors*

The principal actors concerned with program delivery are the national institutions, the private sector (agribusinesses, mining operators and the wood industry), agricultural cooperatives, NGOs and local communities. Their role is to develop and implement activities designed to reduce greenhouse gas emissions. In the program area, several projects coexist with specific institutional arrangements.

- *ER-P implementation biannual meetings*

In order to oversee the ER-P at regional level, the SEP-REDD+ will organize six-monthly meetings in the ER-P area, between the various delivery actors, in particular: the prefects and presidents of the regional councils (in their capacity as representatives of the 5 Regional REDD+ Committees concerned), the managers and NGOs involved in REDD+ project delivery, private sector representatives, local representatives of SODEFOR and the OIPR.

The purpose of these meetings is to:

a. Coordinate all the initiatives and projects for delivery of the program;

b. Provide the policy and strategic orientations for the program;

c. Coordinate the implementation of work plans and the program budgets;

d. Review the activities carried out and draw a connection with the results relating to the reduction of emissions and sequestration;

e. Monitor the safeguards, the co-benefits and the operation of the complaints and appeals management mechanism;

f. Inform all actors and local communities on the progress of the activities undertaken and the performance of the program.

TRANSBOUNDARY COOPERATION

There is cross-border cooperation between Côte d'Ivoire and Liberia in the framework of the implementation of the project "Strengthening Ecological Connectivity in the Taï-Grebo-Sapo Forest Complex", financed by KfW, and implemented by GIZ, AHT and CSRS. The project aims to establish and strengthen ecological connectivity between two large national parks, the Tai Park and Sapo in Liberia, and between them the Grebo National Forest that was partially classified in Grebo-Krahn National Park in 2017. This cross-border initiative to strengthen ecological connectivity was launched in 2013 between the two countries and with the cooperation of German cooperation.

A **Bilateral Steering Committee** has been set up with regular annual meetings which held its first meeting in 2013 (Abidjan) followed by others in 2014 (Monrovia), 2015 (Abidjan) and 2017 (Monrovia). The 5th meeting was held in Abidjan, December 2018. The Bilateral Steering Committee is composed as follows:

- Government structures (5 members):
  - 1 representative of the Mano River Union (UFM);
  - 1 representative of MINEDD & OIPR (Côte d'Ivoire);
  - 1 representative of MINEF & SODEFOR (Côte d'Ivoire);
  - 1 representative of the Forest Development Authority (Liberia);
  - 1 representative of the Environmental Protection Agency (Liberia).

- Non-governmental structures (2 members):
  - 1 representative of the Wild Chimpanzee Foundation (WCF) - Liberia & Côte d'Ivoire);
  - 1 representative of Fauna and Flora International (FFI) - (Liberia)

- Donors / Technical and Financial Partners (2 members):
  - 1 representative of the German Ministry of Cooperation (BMZ) - Germany;
  - 1 representative of USAID / WA-BiCC Program [1] - United States Agency for International Development / Biodiversity & Climate Change Program in West Africa - United States

A **National Steering Committee** is established in each country, it meets twice a year (Ministries Environment & OIPR, Water & Forestry & SODEFOR, Agriculture, Plan, Mines, Economy, Research, Territorial Administration, traditional authorities, and NGOs). These committees monitor project activities and their coordination.

The participation of park managers (OIPR and FDA) in joint activities is organized. Thus an FDA delegation came to a workshop to review the Taï national Park development plan, and the OIPR will be invited to work on the development of the 1st development plan for Grebo-Krahn protected area.

Finally, in order to ensure the successful implementation of cross-border cooperation (especially for the surveillance of PAs and the fight against trafficking), a framework agreement between the two countries is being prepared.

Outside the project, a border management commission is operational in Côte d'Ivoire. A boundary project of

the African Union supported by GIZ is under development.

Agreements also exist within the framework of the Mano River Union (Sierra Leone, Liberia, Guinea, Côte d'Ivoire) for the management of natural resources, including water, and security issues.

ER-P MONITORING AND EVALUATION

The ER-P monitoring & evaluation activities will be carried out by the SEP-REDD+' monitoring and evaluation unit in collaboration with the monitoring & evaluation managers of the various project and program implemented in the ER-P area.

At the beginning of the year, based on ongoing projects, programs and initiatives plannification, a global planning meeting will be organized to consolidate action plans and ensure better monitoring of their implementation. Data collection and quality control missions will be carried out by the SEP-REDD+ on each of the projects, programs and initiatives in progress. Quarterly review meetings will be organized to present the different status of ongoing projects, programs and initiatives.

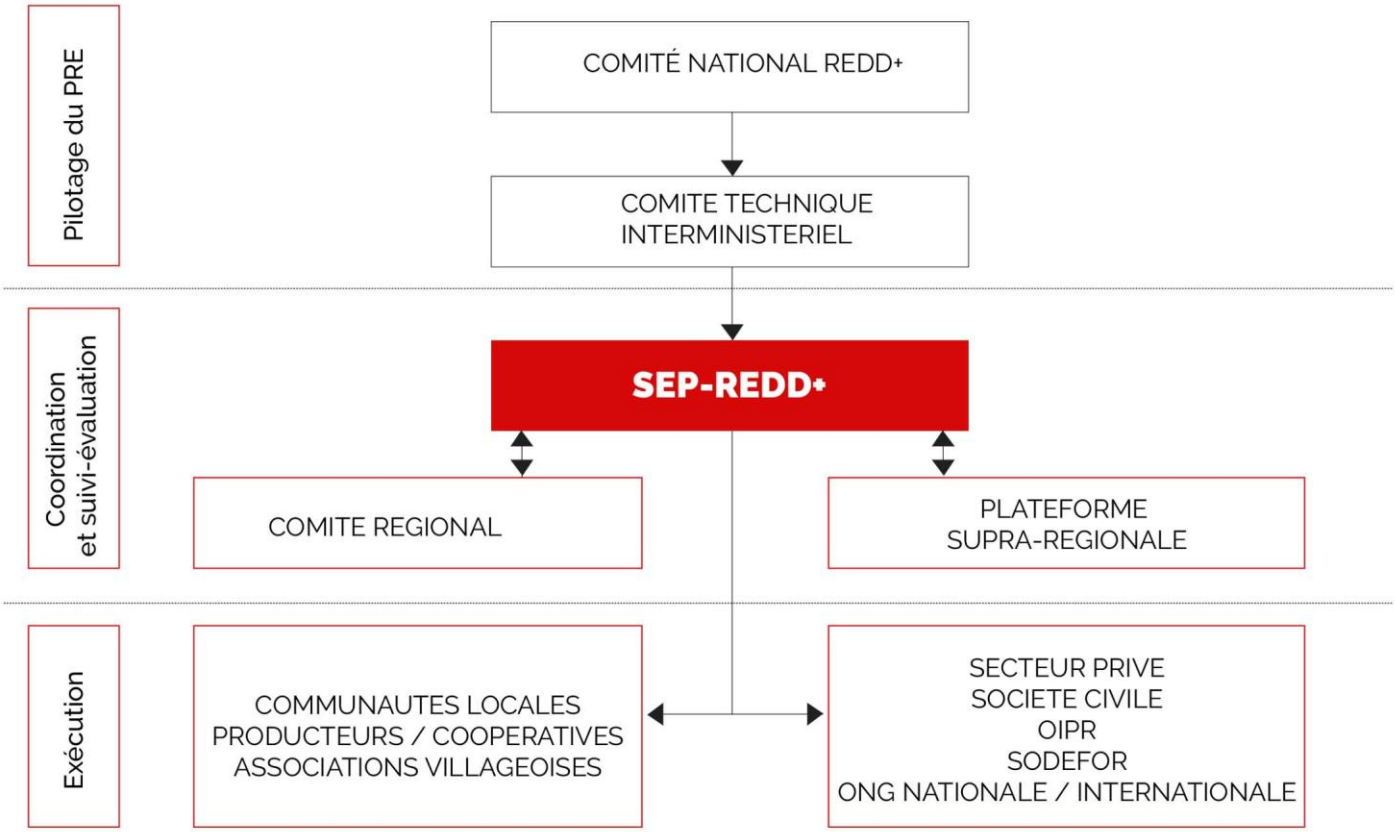
SEP-REDD + will provide in the ER-P area:

- Coordination of the NFMS and the MRV system by the SEP-REDD+' MRV unit;
- Establishment and support of the functioning of the GRM;
- Support for the implementation and supervision of the environmental and social management provisions and measures of the program;
- The functioning of the Safeguards Information System (SIS);
- Management of the national register of REDD+ projects and initiatives;
- Support for external monitoring & evaluation of the program by the independent observatory of civil society (OI-REN).

Currently, the SEP-REDD ensure monitoring & evaluation of various projects: CAZE, PROFIAB, CacaoLife initiative of Mondelez, and SEP-REDD+ is part of the CFI technical committee and ensure with IDH the secretariat of the Working Group Environment and Climate Change of the public-private partnership platform of the Coffee-Cocoa Council.

Income from the sale of ER-P emission reductions will be managed by the Foundation of Parks and Reserves of Côte d'Ivoire (see paragraph below). The management of the funds and the distribution of the profits and their follow-up will be implemented according to the current procedures of the Foundation approved by an agreement and its protocols including the Benefit Sharing Plan signed with the Ministry of Finance, and which will organize independent external audits of the funds allocated to the ERP. The Board of the FPRCI has approved the role for the FRPCI to manage revenue from the sale of program emission reductions in December 2018 (see document annex 11).

Figure 16 : Operational organization of the ER-P



ARRANGEMENTS FOR THE MANAGEMENT OF FINANCIAL FLOWS

Two main types of financial flows will be coordinated as part of the program: first, the various **investments**, be they public (FIP, GIZ, State) or private (V4C, ISLA, Cacao for life, Cocoa & Forests Initiatives and other entrepreneurs); then, according to verifications of the emission reduction certificates, **the Carbon Fund payments**.

The various startup investments above are directly routed to the execution agencies and operators, as defined by the existing financing modalities.

Concerning the management of payments from the Carbon Fund and their redistribution among the beneficiaries, the SEP-REDD+ has initiated discussions with the various stakeholders in order to explore the most appropriate process. The options have been evaluated in the light of the criteria of transparency, efficiency, opportunity (existing vehicles available) and experience in terms of the management of financial flows and payments, and control and monitoring.

Consultations between the various stakeholders (Ministry of Finance, MINED, MINEF, OIPR, SEP-REDD +, and SODEFOR) have determined that the financial way to receive payments from the Carbon Fund is the Foundation for Parks and Reserves of Côte d'Ivoire. This will enable (i) to generate sustainably profit, (ii) provide regular and long-term monetary benefits to beneficiaries and (iii) contribute sustainably to emission reductions in the program area.

The Foundation for les Parks and Reserves of Côte d'Ivoire (FPRCI)

The FPRC is a private non-profit institution created on 20 November 2003 under Law No. 2002-102 of February 11th, 2002 relating to the creation, management and financing of the national parks and nature reserves. Its missions are: (i) to facilitate long-term financing for the conservation of the national parks and nature reserves and buffer zones through a mobilization of funds; (ii) to invest the funds collected in a perpetual fiduciary fund.

The Foundation is organized around three authorities: The General Assembly, the Administration Council and the Executive Directorate. The Foundation has set itself the objective of capitalizing the endowment fund of the Taï National Park in the amount of 20 million Euros, which, at the annual interest rate of 5% would yield one million Euros per year; in the medium term, the object is to capitalize 10 million Euros in 2018.

To ensure the management of revenue from the sale of ER-P emission reductions from the Carbon Fund, and monitoring & evaluation of the use of these funds under the ER-P, a request has been made to the Board of Directors of FPRCI[37] for approval, which will be held in December 2018. Following a positive decision by FPRCI's Board of Directors, a framework collaboration agreement will be signed with protocols with the Ministry of Finance, which must specify the use of funds under the ER-P by including the benefit-sharing plan.

Management of the funds and financial flows:

The external financing received will be channeled through the FPRCI who will hold a dedicated account and has legal personality. Côte d'Ivoire therefore proposes that management of funds and distribution and monitoring of benefits will it be implemented in accordance with the FPRCI procedures approved by a convention and its protocols that will include the benefit-sharing plan signed with the Ministry of Finance. The relationship between parties will be defined will be defined in a transparent manner in a framework agreement of collaboration specifying the use of these funds (see contractual arrangements in section 15.2.6).

A framework collaboration agreement has been signed between FPRCI and the OIPR on July 16th, 2009, the transfer of resources between FPRCI and OIPR are based on an annual work plan, a financing plan as well as a procurement plan agreed between the two parties. The OIPR then carries out the funding according to its own procedures. The Foundation is responsible for the monitoring & evaluation of the project. It has independent external audits of the funds allocated to the project. Such a system can be envisaged with the FPRCI and the SEP-REDD + manager of the ER-P.

[37] The Board of Directors consists of a maximum of twelve (12) members of which: three (3) Directors representing technical and financial partners and International Non-Governmental Organization (NGO), one (1) director representing the Ministry in charge of Economy and Finance, one (1) Director representing the Ministry in charge of the Environment, Seven (7) Directors representing civil society. The Board is responsible for: (i) recruiting the Executive Director, (ii) setting priorities, (iii) approving the Operations Manual, (iv) approving the work program, budgets, funding proposals and investment policy, (v) designate the asset manager, and (vi) control the use of the funds. The administrator functions are free, there are no attendance fees. The French Development Agency (AFD) joined the Board of Directors of the Foundation in 2017 as an observer.

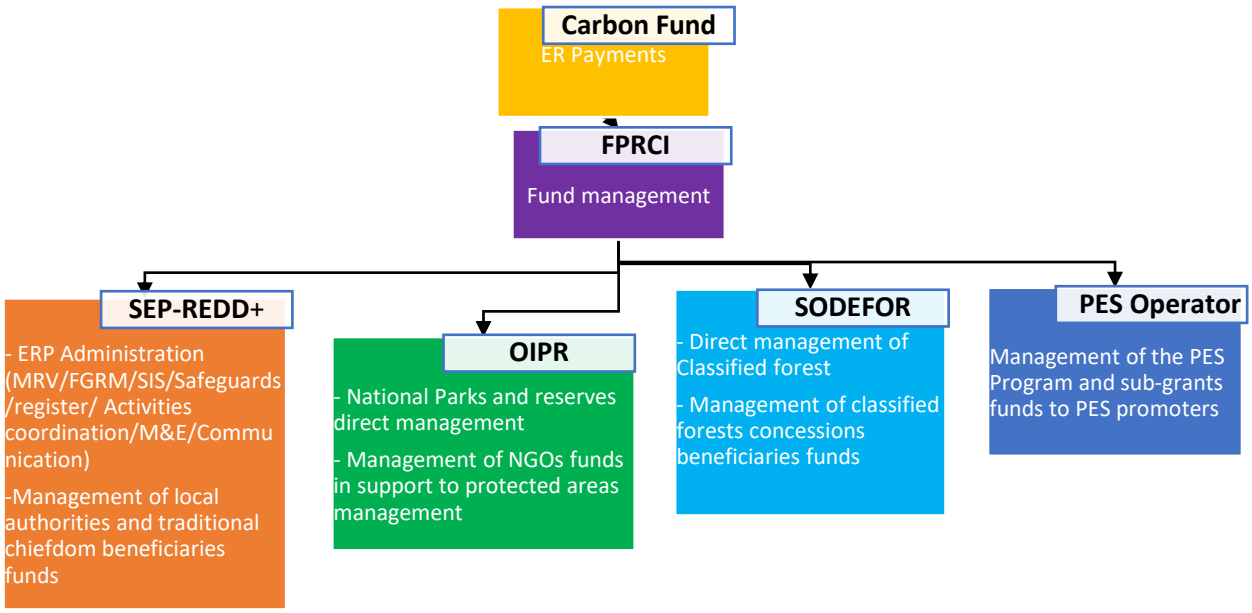


Figure 17: Proposed ER-P financial flux diagram

6.2 ER Programme budget

ER-P startup will primarily draw on available sources of funding. As explained above, this program relies on programs of the World Bank, GIZ and private promoters, which have already been designed and financed, namely: the Côte d'Ivoire FIP, PROFIAB, TGS, Cocoa Life program, V4C.

In this respect, start-up funding for the ER-P comes from various sources: international funds (55.56%), private sector investments (44.23%), and NGOs (0.22%). In the current budget, the combination of funding sources for the start of the ER-P is summarized in Table 10. Annex 1 provides a complete financial plan and budget for the ER-P. The proposed financing plan is based on the program funding plans of the different stakeholders as presented in their investment budget (see table 11 below). Therefore, the Republic of Côte d'Ivoire relies on international cooperation and public-private partnerships to implement its REDD+ development objectives, when being involved financially, technically and with personnals in the REDD+ management bodies of REDD+, especially with the ER-P that will be daily mananged by the SEP-REDD+.

Annex 1 provides a complete financial plan and budget for the ER-P over 10 years. The proposed financing plan is based on the program funding plans of the different stakeholders as presented in their investment budget in Côte d'Ivoire, and in the ER-P area especially when the data have been provided (see Table 11 below).

The contribution of each activity of these projects to the ER-P has been broken down over each project lifetime. The State budget share could not be estimated in the financing plan, except for 2020, because of lack of sufficient information, but a contribution is planned. Since 2012, la State contribution for the REDD+ process and ERPD has been of 90 000USD/year (it is shown in Table 11 below). If some projects end in 2019 and financial contributions are shown in table 11 below, they are important tools for initiating the program, testing field activities, on the basis of which the terms of carbon benefits will be used.

It explains why their budgets have been taken into account in Table 11 below on the current state of pre-financing of the ERP, but they have not been included in the 2020 - 2029 financing plan shown in Annex 1, unless the period of these projects goes beyond 2019. Their budgets figure in proportion per year of the period going beyond 2019. Some of the projects tahat are terminating in 2019 will be renewed (see last paragraph below), but their budgets have not been taken into account in the 2020 - 2029 financing plan, as long as they are not officially approved, and their budgets have not been communicated.

The added value and strategy of the ER-P, is the extension, renewal, and scaling up of ongoing activities with some payments issued from the sale of emission reductions, with the aim of doubling the areas and results of current projects. This scaling up will be implemented through contracting with actors already present in the field or with complementary actors. Activities will be conducted on the basis of feedback and lessons learned from projects being implemented.

A previsional budget for the implementation costs of the ER-P relating to MRV activities, the functioning of the Safeguards Information System (SIS) and monitoring of the overall assessment of the ER-P (semi-annual meetings) and external by the independent observers, set up and support to the operation of the FGRM, information and stakeholder consultations, management of the national registry of REDD+ projects and initiatives and cost of managing the implementation of the Benefit sharing plan, is integrated in the financial plan (see Annex 1).

An advance payment from expected revenues generated by the sale of the emission reductions is included in the forecast financial plan, whose amount will be deducted from the first payments to be made in 2023, after the first verification as shown in the financing planning (see below)

It is estimated that the total cost of setting up and operating the ER-P in its first four (4) years is of 22,5 million USD, when the program is expected to generate approximately 82,5 million USD in revenues from emission reductions. This budget in the financial planning covers the period 2020-2024 assuming that the Republic of Côte d'Ivoire signs an ERPA in 2019.

Table 11: Current situation of ER-P advance financing in USD

Type of funding	Sources of funds	Million USD
	State budget	0,5
Guaranteed grant financing	GIZ- PROFIAB II	17.
	GIZ - Strengthening ecological connectivity in the Taï-Grebo-Sapo forest complex between Côte d'Ivoire and Liberia (TGS)	5.
	GIZ - Deforestation-free supply chain (CAZ)	1.
	GIZ- Support for the implementation of FLEGT	1.
	FIP	24.
	EU - EDF 11 Support to Tai NP	3.4
Guaranteed private funds	Mondelez- Cocoa Life program	4.5.
	Mars - Vision for Change (V4C)	40.
Anticipated private funds	Other potential investors: CEM	0.222.
Grant to be financed (FIP)	FIP - Fund for village communities	4.5.
	Total	**101.1**

This budget is based on financing from GIZ programs and the private sector Mars and Mondelez programs end in 2020. However, GIZ is planning a third phase for the PROFIAB and TGS projects (2020-2023). With regard to the private sector initiatives, these must be incorporated into the Cocoa & Forests Initiative public-private partnership, which envisages 2 phases: 2018-2020 and 2020-2030. Although the FIP is planned for a 5-year period (2018-2023), thus covering the ERPA period of the program, it may be renewed after 2023.

Advance payment from the Carbon Fund

The Republic of Côte d'Ivoire is requesting an advance payment from the Carbon Fund to cover the costs related to the management and monitoring of the ER-P over the first two years of the ERPA period, until the first payment related to the first audit expected in 2022. It is proposed that the advance payment be approximately US $ 2.2 million, or 2.7% of the total amount of ER-P sales through ERPA.

More specifically, the advance obtained from the Carbon Fund will cover the costs of: (i) internal and external monitoring and evaluation of the program by independent observers from civil society; (ii) coordination of the SNSF and the MRV system by the SEP-REDD + MRV cell and community monitoring; (iii) the establishment and operation support of the MGPR; (iv) the functioning of the Safeguard Information System (SIS), (iv) the execution and supervision of the environmental and social management provisions and measures of the program; (v) the good functioning of the SEP-REDD + to ensure in particular the meetings of the Regional Committees in the Program Area; (v) monitoring the overall implementation of the ERP; (vi) implementation of the REDD+ communication strategy and stakeholder engagement; and (vii) the management of the REDD+ national registry for REDD + projects and initiatives.

Table 12: Breakdown of Advance Amounts

Activities	Amount USD
Communication and Stakeholder Engagement	388 000
MRV and Registry	600 000
Social & environmental safeguards, SIS, and FGRM	400 000
Monitoring of the ER-P	520 000
Maangement of the ER-P	330 000
Total	2 238 000

7 CARBON POOLS, SOURCES AND SINKS

7.1 Description of Sources and Sinks selected

Emissions from deforestation	**Included**	**Yes**

Justification: The emissions from deforestation caused by the conversion of forest land (FL) and other land (OL) are factored into the calculation of the reference level and also for the purposes of monitoring, notification and verification (MNV).

In fact, the data necessary for the quantification of such emissions are available at national scale and at program area scale. Deforestation is very significant, as indicated by the study on the drivers of deforestation in Côte d'Ivoire, which provided national forest/non-forest maps for the years 1986-2000-2015 (FAO & SEP-REDD+, 2017) which have been used for the estimation of deforestation, for the calculation of the national reference level and also for the calculation of the NRF of the ER-P area. These made it possible to evaluate total deforestation between 2000 and 2015 in the program area. The losses (deforestation) are estimated at 19,823 ha/year for the rainforest zone and at 7,930.4 ha/year for the mesophilic zone, which is a total loss of 416,301 ha over a fifteen (15) year period; this represents 9% of the total surface of the program area.

In addition, it is noted that these emissions due to deforestation are factored into the national reference level.

Emissions from forest degradation	**Included**	**Yes**

Justification: In accordance with criterion 3 and indicator 3.3, emissions from degradation have been included in the reference level for the program area.

The evaluation of forest degradation, carried out by visual interpretation of samples generated on the forested lands remaining forest during the reference period in Collect earth, made it possible to estimate the areas and to calculate their associated emissions. Forest degradation was considered to be the transition from a forest with a coverage rate higher than 50% in 2000 to a forest with a coverage rate between 30 and 50% in 2015.

The Collect earth analysis for the estimation of activity data on forest degradation, available in Annex 4, showed that forest degradation accounted for about 10% of the stable forest area over the reference period, i.e. 90,017.59 ha or about 21.7% of the deforested areas. This corresponds to annual GHG emissions of 982,146 tCO2eq / year, which remain greater than 10% of total GHG emissions, i.e. 10.52% of total emissions.

In this context, regarding the recommendations of the Carbon Fund's Methodological framework, emissions from forest degradation have been factored into the calculations of this NRF as significant.

However, a plan to improve the estimation of activity data on forest degradation has been developed and should enable the country to have, by the first half of 2019, a detailed national definition of forest degradation and a methodology for its mapping and estimation with more precise data and methods. A national consultant has been recruited to lead this process since September 2018.

In addition, with an approach using, among other things, mapping activity data, degradation emission factors should be available, which will be improved with the national forest inventory data.

Enhancing the carbon stock	**Included**	**Yes**
Justification: Removals from the conversion of other lands (AT) to forest land (TF) are factored into the NRF for the removals of reforestation, regenerating natural forests and agroforestry plantations. This is in line with the national REDD + strategy[38]. Based on forest/non-forest mapping, forest area gains over the reference period (carbon stock enhancement) were identified and estimated at the program level. The areas involved in the period from 2000 to 2015 are 17,247 ha and the resulting removals are estimated at 139,202.99 tCO2 / ha / year. These removals are factored into in the national NRF and are therefore also factored into the calculation of the ER-P NRF to ensure coherence between the two NRFs.		

Conservation of carbon stocks	**Included**	**No**
Justification: This activity was not considered in the calculation of the NRF because there is no clear national definition of this activity and it is conservative. Moreover, it has not been factored into the calculations of the national NRF.		

Sustainable forest management	**Included**	**No**
Justification: The emissions/absorptions of GHG from sustainable forest management are not included in the ER-P reference level due to the unavailability of consistent, reliable data. Moreover, these emissions/absorptions it has not been factored into the calculations of the national NRF.		

[38] Stratégie nationale REDD+ - http://reddplus.ci/download/strategie-nationale-redd-cote-divoire/?wpdmdl=8410

7.2 Description of Carbon Pools and greenhouse gas selected

Carbon reservoir	**Justification**	**Factor for estimating the emissions/absorptions from:**		
		Deforest.	Forest degrad.	Reforest.
Above ground biomass	The above ground biomass was factored into the calculations of emissions/absorptions of ER-P NRF. The country actually has data collected at national level and this can be used to estimate the GHG emissions associated with the above ground biomass and that have been used for the calculation of the national NRF.. In addition, the estimated emissions from this reservoir indicate that it contributes approximately 60 % of total GHG emissions.	Yes	Yes	Yes
Below ground biomass	The aboveground biomass was factored into the calculation of the GHG emissions / removals of the ER-P' NRF just as it was done for the national NRF. Table 4.4 in section 4 volume 4 "Forested Lands" of the GIEC 2006 guidelines is used to estimate the below ground biomass according to the above ground biomass using the shoot to root ratio (Tx) depending on the phytogeographical zone. Furthermore, The estimated emissions from below ground biomass indicate that they represent approximately 20 % of total CO2 emissions.	Yes	Yes	Yes
Dead wood	This reservoir was factored into the calculation of the GHG emissions of the ER-P' NRF. Data about dead wood is available at national level for natural forests allowing the emission of GHG from dead wood to be estimated and this reservoir has also been factored into the national NRF. Furthermore, the estimates of emissions from the biomass from dead wood indicate that they represent approximately 17 % of total CO2 emissions. However, for reforestation, the data used to estimate reforestation from Wood plantations (table showing production of *Tectona grandis*) and from natural regeneration does not provide any information about dead wood, but only information about thinning of wood plantations areas. In addition, this parameter was not factored into the national NERF.	Yes	No	No
Litter	Emissions from deforestation for this reservoir have been factored into calculating the NRF for this reservoir in the ERP area. Although estimates show that this reservoir contributes about 1% of total CO2 emissions, it has been factored into the calculations to be consistent with the national NRF. Estimates show that this reservoir contributes about 1% of total CO2 emissions. total CO2 emissions. It will thus factored for	Yes	No	No

	calculating emissions from deforestation in order to be consistent with the national NRF. However, the data used to estimate reforestation in forest plantations (*Tectona grandis* production table) and for natural regeneration do not provide litter information that can allow calculations. This parameter was therefore not factored for reforestation in the calculation of the ER-P NRF as it was not factored into the national NERF.			
Soil	Soil carbon was not factored into the calculations of emissions/absorptions. In fact, estimated on the basis of IPCC level 1 (2006), emissions from this reservoir represent less than 1% (i.e. 0.46%) of the total emissions of CO_2. In addition, in the interests of consistency with the national NERF, this reservoir will be excluded from the calculations. In addition, in accordance with indicator 4.2 ii of the methodological framework, the exclusion of the soil carbon reserve is considered a conservative measure, as it underestimates the emission reductions during the period of the ER-P.	No	No	No

Greenhouse Gas	Justification	Factor for estimating the emissions/absorptions from:	
		Deforest.	**Reforest.**
CO_2	The carbon dioxide (CO_2) from deforestation is the only gas taken into account when constructing the NRF. In addition, it is the only gas absorbed in the activity for enhancing carbon stocks.	Yes	Yes
CH_4	CH_4 will not be factored into the reference level as there is insufficient reliable data. Even assuming that all deforestation is the result of burning (deforested area = area burned), the application of IPCC Tier 1 methods and the IPCC default values show that CH_4 emissions account for 2.54% of annual GHGs emissions during the reference period. Details of the calculations are available in Appendix 5. In accordance with indicator 4.2 ii of the methodological framework, the exclusion of CH_4 is considered a conservative measure as it underestimates the emission reductions during the program period.	No	No

N_2O	N_2O will not be considered in the reference level. Even assuming that all deforestation is the result of a burn (deforested area = area burned), application of IPCC Tier 1 methods and default values the IPCC show that N_2O emissions represent 1.12% of annual GHG emissions during the reference period. Details of the calculations are available in Appendix 5. In accordance with indicator 4.2 ii of the methodological framework, the exclusion of N_2O is considered a conservative measure as it underestimates the emission reductions during the program period.	No	No

8 REFERENCE LEVEL

8.1 Reference period

The period from **2000 to 2015**, was considered to be the reference period when constructing the NRF because the ERP change map for assessing the forest/deforestation/afforestation areas is extracted from the national deforestation map for 1986, 2000 and 2015 used for the national reference level.

This period was chosen because of the availability of good quality satellite data to estimate changes in forest areas at the national level as indicated in the map of forest dynamics in Côte d'Ivoire between 1986 and 2015 (FAO & SEP-REDD +, 2017) and in the interests of harmonization with the national reference level[39], submitted to the UNFCCC, which covers the same period.

The aim is to have sub-national reference levels harmonized with the national reference level.

8.2 Forest definition used in the construction of the reference level

The forest definition used to construct the NERF complies with the one sent by the Côte d'Ivoire to the UNFCCC which relates to the Côte d'Ivoire Forest Code of July 2014.

According to the Côte d'Ivoire forest code the term Forest refers to ‘‘any land constituting a dynamic and diverse environment, excluding any plant formations resulting from agricultural activities, of a **minimum surface area of 0.1 hectare** supporting trees whose **crown covers at least 30% of the surface** and which can reach a **minimum height of 5 meters**” when mature. Within the REDD+ national strategy, this concept includes:

- areas covered with young trees which have not yet achieved, but should achieve, a forest cover of at least 30% and a height of at least 5 meters;
- areas which are temporarily unwooded following the clear cutting involved in forest management practices or due to natural causes, and whose regeneration is expected to take place within 5 years;
- forest tracks, fire barriers and other small clearings; forests in national parks, nature reserves and other protected areas of ecological, scientific, historical, cultural or spiritual interest;
- windbreaks, shelterbelts and tree corridors occupying an area of over 0.1 ha with a width of over 20 meters;
- abandoned land used for slash and burn purposes with regenerated trees which reach, or are capable of reaching, forest cover of a minimum area of 0.1 ha, with a coverage rate of at least 30% and a height of at least 5 meters;
- intertidal areas covered with mangroves, whether or not they are classified as lands;
- areas covered with bamboo plantations provided that the use of the land, the height and forest cover comply with set criteria;
- all the woody plantations meeting the technical criteria of size of trees, level of cover of the crown and minimum area; and which, after 2015, have not replaced natural forest land according to the definition of the forest in the country subject to the UNFCCC. At this level, setting up a safeguards information system at local and national level would make the mechanism for monitoring the changes in land allocation more effective.

The country can be divided up as follows depending on the type of forest present:

- in the north, the **Sudanese and sub-Sudanese sector**, characterized by alternating open forests, dry

[39] NRF of the Côte d'Ivoire available here: http://redd.unfccc.int/submissions.html?country=civ

forests, gallery forests and wooded savannas;

- in the center, the **pre-forest sector** which is a transitional zone consisting of open forests and semi-deciduous dense forests and gallery forests;
- in the center, the **mesophilic forest** which consists of dense, semi-deciduous forests;
- in the south, the **ombrophilous sector** characterized by the dense humid evergreen forest.

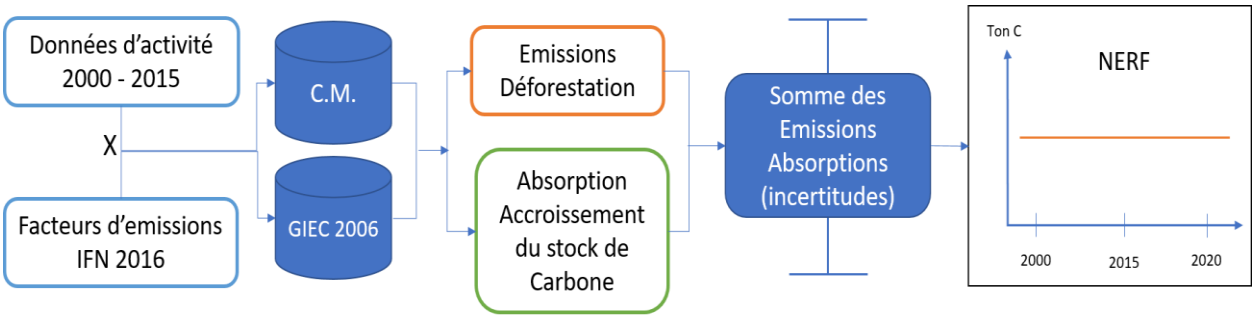
With regard to all forest stratification, the minimum mapping unit considered is **30x30** meters or 0.09 ha. Criteria of physionomy, dynamism (progressive/regressive) and the ecological environment: (relief, soil, climate, etc.) were defined in order to determine forestry stratification. For this NRF, the forestry strata (Annex 4) are grouped into the Forest and Other Lands Use (AT) category in non-forested areas.

8.3 Average annual historical emissions over the Reference Period

8.3.1 Description of the method used to calculate the annual average historical emissions over the reference period

The NRF proposed by the Côte d'Ivoire is based on the average historical emissions over the reference period 2000-2015. This is in full compliance with the first part of indicator 13.2 which stipulates that: "The reference level does not exceed the average annual historical emissions over the reference period, unless the Emissions Reduction Program does not meet the eligibility conditions of indicator 13.2".

The methodology used is summarized in the following diagram:



CM. : Carbon Fund Methodological Framework.

8.3.2 Activity data used to calculate the annual averages for historical emissions over the reference period

8.3.2.1 Description of Activity data

The description of the activity data parameters is presented in the tables below. Table 11 describes the parameters and values for deforestation.

Table 13: Description of the deforestation parameters

Description of the parameter:	Deforestation
Explanation of the sources or sinks for which the parameter is used:	The areas of forested lands converted into other land uses in the ombrophilous and mesophilic areas.
Data unit (for example ha/year):	ha/year
Value of the parameter:	**19,823 ha/year** in the ombrophilous area, **10 447 ha/year** of dense forests and **9 376 ha/year** of degraded forests. **7,930 ha/year** in the mesophilic area, **2 549 ha/year** of dense forests and **5,382 ha/year** of degraded forest
Data source:	The images used for mapping the land use changes within the ER-P area come from the forest-cover change map between 1985 and 2015, which was established wothin the framework of the forest dynamic mapping in Côte d'Ivoire between 1985 and 2015. The imageries used for the mapping of the forest dynamic in Côte d'ivoire between 1986 and 2015 originate from *Landsat* satellite (TM, ETM+ and OLI), with a spwiatial resolution of 30 m. For each period, the images were acquired during the dry season (December to

	March) to minimize cloud coverage, and take into account seasonality. The dates of acquisition of Landsat images are: - From 1985 to 1986 for the 1986 map; - From 2000 to 2002 for the 2000 map; - From 2014 to 2015 for the 2015 map. For each year 1986, 2000 and 2015, a binary map "forest" and "non-forest" was produced. A change map for the period 1986-2015 was obtained by combining these maps. In this way the stable forest, gains (reforestation) and losses (deforestation) could be determined. This national change map was used to extract the ER-P area and for the areas estimation and the confidence intervals were estimated by analyzing stratified samples using the approach defined by *Olofsson et al*. (2014). In practice, using the forest change map between 1986 and 2015 as a stratification map, the ***SAE Design***[40] tool was able randomly generate sampling units (SU) which were visually interpreted using ***Collect Earth***[41] with *Landsat* and *Sentinel 2A* time series being obtained through ***Google Earth Engine*** (see Annex 4). You have: - 1288 SU that were interpreted to estimate areas of forest –cover losses (class 221), forest cover gains (class 112), stable forests (class 222) and stable non-forests (class 111); - 900 SU in the forest cover loss class to identifying the type of forest loss (dense or degraded forest) by phytogeographic area, and the type of alter land use change (cocoa, coffee, rubber, etc.), see Annex 4. Areas of losses and the associated confidence intervals were identified by data analysis using the **SAE Analysis**[42] tool.
Spatial (local, regional, national or international) level :	The ER-P will be implemented in the west and southwest of the Côte d'Ivoire (cf. figure 3: location of the Program area). The data used for the ER-P were extracted from national forest/non-forest maps taken from the forest dynamics study between 1986 and 2015 (FAO & SEP-REDD +, 2017).
Discussion of the main uncertainties relating to this parameter:	The uncertainties associated with the estimate of the areas may be the result of: - the spatial resolution of the 30 m Landsat images being equal to the minimum mapping unit, which may lead to biases in detecting forests whose area is close to this threshold; - classification errors associated with the spectral proximity of training sites in the secondary forest involving crops of cocoa, coffee and rubber trees, etc.; - errors associated with he sampling system used; - the variation in spectral information between the TM, ETM+ and OLI sensors; and - the quality of spectral information available over the area (clouds and SLC-off).
Estimate of the	The analysis of accuracy is based on good practices for estimating areas and

[40] SAE Design: Stratified Area Estimator for generating sampling pointshttps://sepal.io/
[41] Collect Earth is an Open Foris application built by the FAO: www.openforis.org
[42] SAE Analysis: Stratified Area Estimator for analysis https://sepal.io/

accuracy, precision and/or level of confidence, as applicable, and explanation of the hypotheses/methodology used in the estimate:	evaluating the precision of land-use change described by Olofsson et al. (2014) in three stages: (i) definition of the sampling system, (ii) adopting an optimum response system and (iii) the analysis.

Zone	Type forest	2000-2015 reference period [ha]	Annual deforestation [ha]	90% CI [ha]	90% CI [%]
Ombrophile	Dense	156,700.82	10,447	2,586	24.75%
Mesophile	Dense	38,232.46	2,549	1,059	41.57%
Ombrophile	Degraded	140,644.19	9,376	2,321	24.75%
Mesophile	Degraded	80,723.54	5,382	2,237	41.57%
Total		**416,301**	**27,753**		

The estimate of the areas and confidence intervals for forest degradation are summarized in the table below:

Table 14: Description of the parameters for forest degradation

Description of the parameter:	**Forest degradation**
Explanation of the sources or sinks for which the parameter is used:	The area of forest land remaining in the Forest Land category with a decrease in cover and biomass in the sun and mesophilic areas.
Data unit (for example ha/year):	ha/year
Value of the parameter:	**6 045 ha/year,** with **4 420 ha/year** in Ombrophilous area and **1 624 ha/year** in Mesophilic area.
Data source:	Still using the map of land use changes over the period 1986-2015, as indicated in the section on deforestation, a baseline for stratification, a random sampling was carried out in remaining forest land remainin forest class, over the reference period (class 222) (see Annex 4). The forest is defined having a cover rate between 30 and 100%. On this basis, were considered as: - dense forests, forests with a coverage rate between 70 and 100%; - Degraded forests, those with a coverage rate between 30 and 70%. Has been considered as forest degradation: - On the one hand, forest areas with a forest cover rate more than 70% in 2000 which have decreased to a forest cover rate between 30-70% in 2015; and - on the other hand, the forest areas with a forest cover rate between 50 - 70% in 2000, which decrease increased to a forest cover rate between 30 and 50% in 2015. Knowing, that you have several levels of degradation within degraded forests (decrease of forest cover rate). In practice, using the forest change map between 1986 and 2015

<table>
<tr><td></td><td>as a stratification map, the SAE Design tool[43] randomly generated 292 sampling units in the stable forest class over the reference period (see Annex 4). These were interpreted visually using Collect Earth[44] and Landsat and Sentinel 2A time series obtained via Google Earth Engine to estimate for each SU the rate The visual interpretation of these SU based on the evolution of their forest cover rate over the reference period, as indicated in the previous paragraph, made it possible to classify them by forest type (dense and degraded) by phytogeographic area, and to determine areas of forest degradation.).

Analysis of the data by the SAE Analysis tool made it possible to obtain the degraded areas and the associated confidence intervals (Annex 4).</td></tr>
<tr><td>Spatial (local, regional, national or international) level:</td><td>Forest degradation area data were estimated for the ERP area from data based on the national land cover map between 1986 and 2015 (FAO & SEP-REDD +, 2017).</td></tr>
<tr><td>Discussion of the main uncertainties relating to this parameter:</td><td>The uncertainties associated with the estimate of the areas may be the result of:
the spatial resolution of the 30 m Landsat images being equal to the minimum mapping unit, which may lead to biases in detecting forests whose area is close to this threshold;
classification errors associated with the spectral proximity of training sites in the secondary forest involving crops of cocoa, coffee and rubber trees, etc.;
errors associated with he sampling system used;
the variation in spectral information between the TM, ETM+ and OLI sensors; and
the quality of spectral information available over the area (clouds and SLC-off).</td></tr>
<tr><td>Estimate of the accuracy, precision and/or level of confidence, as applicable:</td><td>The analysis of accuracy is based on good practices for estimating areas and evaluating the precision of land-use change described by Olofsson et al. (2014) in three stages: (i) definition of the sampling system, (ii) adopting an optimum response system and (iii) the analysis.

<table>
<tr><th>Zone</th><th>2000-2015 reference period [ha]</th><th>Annual degradation [ha]</th><th>90% CI [ha]</th><th>90% CI [%]</th></tr>
<tr><td>Ombrophile</td><td>66,305.80</td><td>4,420</td><td>1,862</td><td>42.13%</td></tr>
<tr><td>Mesophile</td><td>24,369.71</td><td>1,625</td><td>652</td><td>40.13%</td></tr>
</table>
</td></tr>
</table>

The estimate of the areas and confidence intervals for increases in the carbon stock are summarized in the

[43] SAE Design: Estimateur Stratifié de Superficie pour générer les points d'échantillonnage https://sepal.io/
[44] Collect Earth est une application d'Open Foris construite par la FAO: www.openforis.org

table below:

Table 15 : Description of the parameters for the increase in carbon stock

Description of the parameter:	**Enhancement of the Carbon Stock**
Explanation of the sources or sinks for which the parameter is used:	Areas of non-forested lands converted into forestry lands
Data unit (for example ha/year):	ha/year
Value of the parameter:	Ombrophilous sector: **888.9 ha/year** Mesophilic sector: **260.94 ha/year**
Data source:	The data source is identical to the one used for deforestation. To determine the increase in carbon stocks (reforestation) in the reference period from 2000 to 2015, the forest change map has been used as stratification map to generate 1,406 sampling points stratified in **SAE Design**, visually interpreted using **Collect Earth** and Landsat and Sentinel 2A time series, and analyzed under **SAE Analysis** to obtain areas of gain of forest on the reference period (see Annex 4). The increases are identified by the "112" category of gain between 2000 and 2015 **from non-forested (class 1) to forested area (class 2)** on the map.
Spatial (local, regional, national or international) level:	Idem Table 1: description of deforestation parameters
Discussion of the main uncertainties relating to this parameter:	Idem Table 1: description of deforestation parameters
Estimate of the accuracy, precision and/or level of confidence, as applicable:	

Zone	2000-2015 reference period [ha]	Annual degradation [ha]	90% CI [ha]	90% CI [%]
Ombrophile	13,333.00	889	777.40	87%
Mesophile	3,914.00	261	182.81	70%

8.3.2.2 Detailed methodology for estimating activity data

The following paragraphs present the steps for the estimation of the activity data. Details of the methodology and data are available in Appendix 4.

- **Change map of forest cover**

Three land cover maps were produced from the Landsat image (TM, ETM+ and OLI) for the years 1986, 2000 and 2015[45] each with two classes: forested (**2**) and non-forested (**1**).

The three maps were cross-tabulated (Equation 1: xx) to obtain a change map with 8 categories coded with three figures, where the hundreds figure represents the year 1986, the tens figure represents the year 2000 and the units represent the year 2015 (Figure 1).

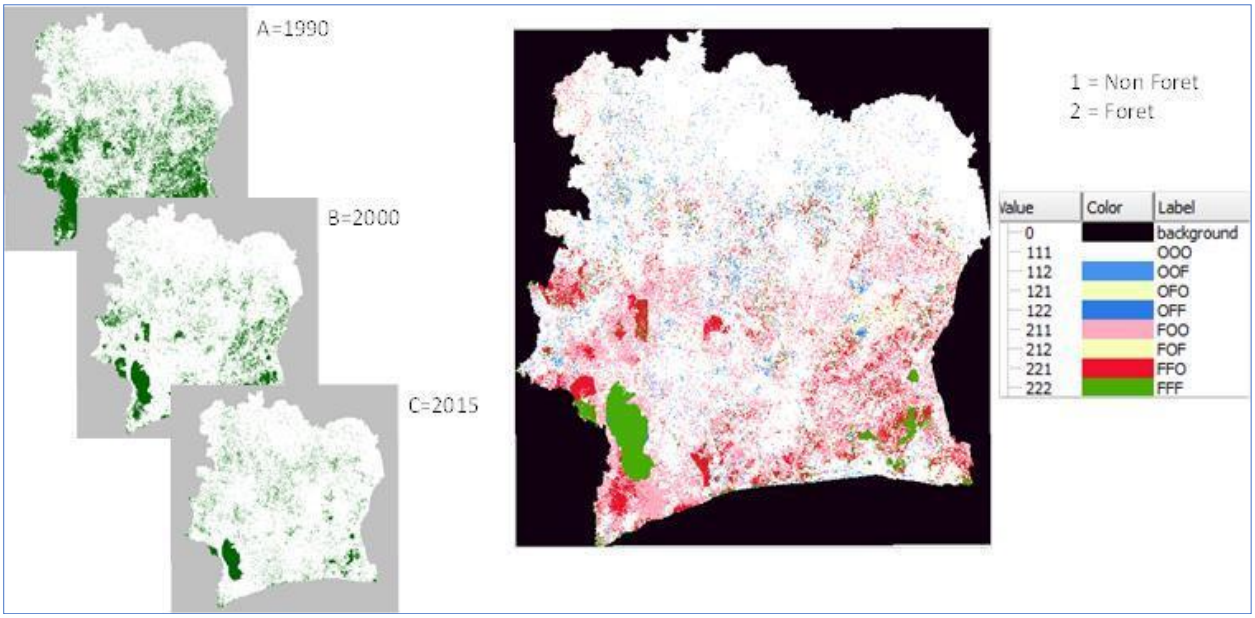
Equation 1:

□□□□□ □□ □*h*□□□□□□□□□=(□□□□□ *1986*∗*100)+(*□□□□□ *2000*∗*10)+*□□*r*□□ *2015*

[45] SEP REDD+ & FAO (2017), Basic forestry data for the REDD+ in Côte d'Ivoire - Mapping of the forestry dynamic from 1986 to 2015

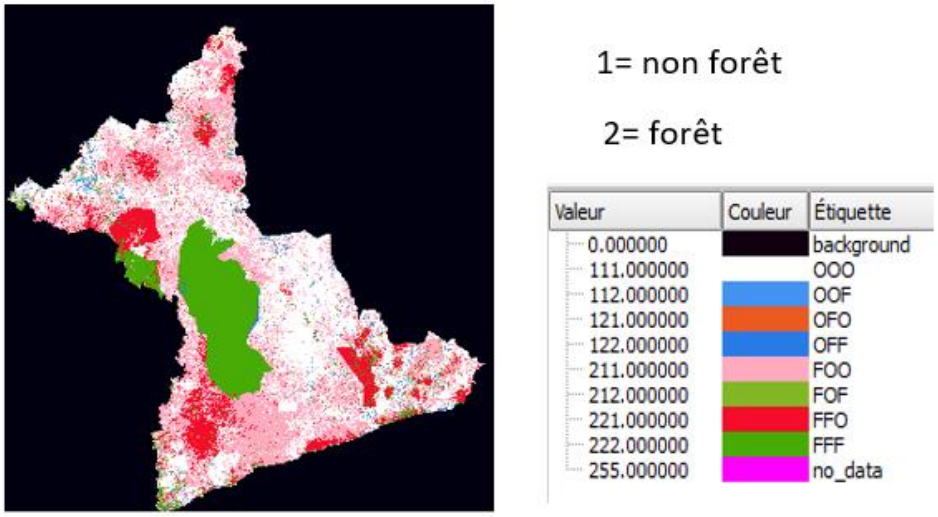
Map code	Category
111.	Stable non-forested area in 1986, 2000 and 2015
112.	Gain between 2000 and 2015
121.	Dynamic classe 1
122.	Gain between 1986 and 2000
211.	Loss between 1986 and 2000
212.	Dynamic classe 1
221.	Loss between 2000 and 2015
222.	Stable forested area in 1986, 2000 and 2015

Figure 18 : national change map 1986-2000-2015



The ERP change map was then extracted from the national map (figure 16).

Figure 19 : Extraction of the ERP area from the national change map.



In order to correctly record the activity data corresponding to the reference period (2000 -2015), the categories have been reclassified as shown in the table below:

Table 16: Reclassification of categories

Categories for the period from 2000 to 2015	**Category codes**
Stable forest area	222, 122
Stable non-forested area	111, 211
Losses	221.
Gains	112.
Others (dynamic category)	121, 212

- **Phytogegraphical areas within the Program area**

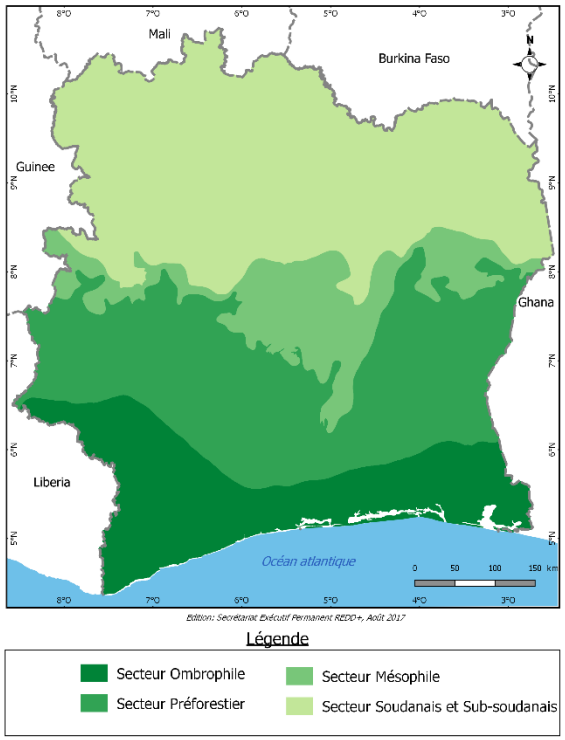
In the interests of consistency with the climatic zones proposed by the IPCC, the national territory was subdivided into four phytogeographical areas (figure 17 - *Guillaumet and Adjanohoun, 1971; Atlas of Côte d'Ivoire, ORSTOM-IGT, 1979*)[46] defined as follows:

- **The ombrophilous sector**: consisting of dense, humid, evergreen forests in the south and south-west of the country;
- **The mesophilic sector**: consisting of dense, humid, semi-deciduous forests;
- **The woodland sector** for the area consisting of semi-deciduous forests and savannas;
- **The Sudanese and sub-Sudanese sector**: consisting of dry forests in the center-north and north.

The program area straddles two phytogeographical areas (**ombrophilous** and **mesophilic**).

[46] http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_6/Mem_cm/16368.pdf

Figure 20 : Map of phytogeographical sectors of the campaign for collecting Ivorian biomass



(Source: Guillaumet and Adjanohoun, 1971, amended)

- **Determination of activity data and associated uncertainties**

The UNFCCC recommends that the country should set up a forest monitoring system, which is credible, reliable, transparent and accurate. This means that the accuracy of the results produced needs to be assessed. The following steps were taken to achieve this:

- **Constructing the sampling system**: this was performed using the **Stratified Area Estimator design** tool (available here). Using the good practices indicated in Olofsson et al. this tool (2014) is able to generate points based on random stratified sampling whose total size is defined by the Cochran formula (1977) (equation XX). Sampling was calibrated using the following parameters: an expected accuracy interval fixed at [70%: 90%]; minimum size of 100 points per stratum and a standard error of overall accuracy of 0.01.

Equation 2:

$$n = \frac{(\sum W_i\, S_i)^2}{[S(\widehat{O})]^2 + (1/N)\sum W_i\, S_i{}^2} \approx \left(\frac{\sum W_i\, S_i}{S(\widehat{O})}\right)^2$$

Where:

n is the number of units in the area (in this case the number of overall pixels as the minimum spatial unit is one pixel);

S (0) is the estimated standard error of overall accuracy we would like to achieve;

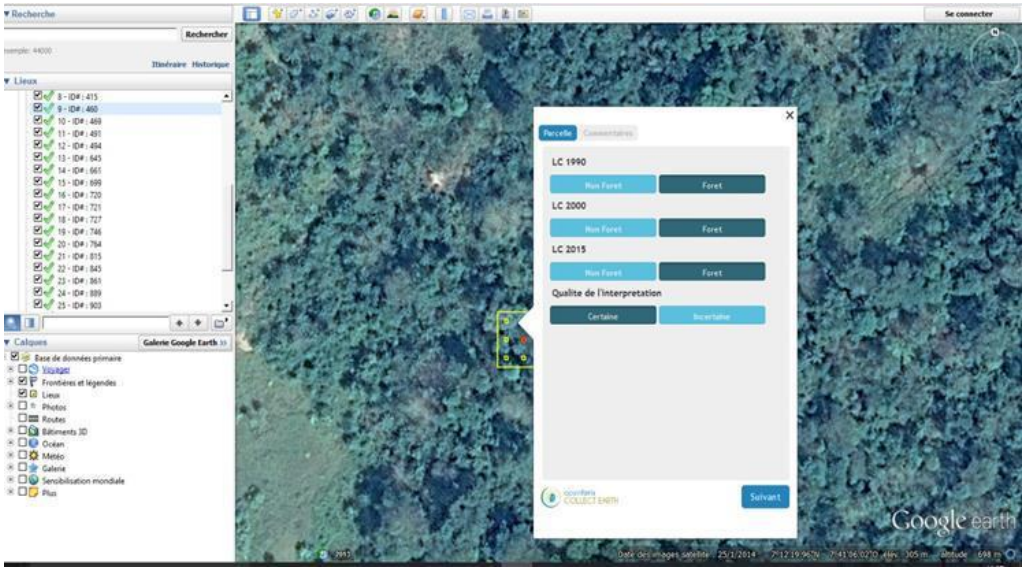
Wi is the mapped proportion of the area in category I;

Si is the standard deviation of stratum i.

- The response **system**: this allows reference data to be collected from a visual interpretation of the

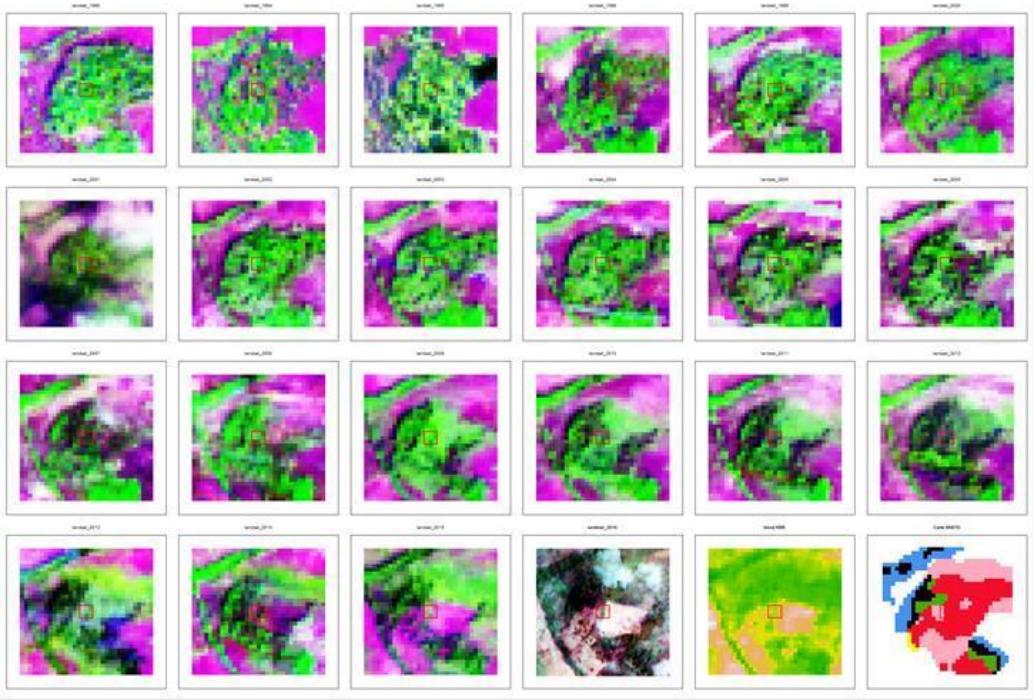
samples in **Collect Earth** (Bey et al., 2016) from the suite of **Open Foris tools.** This tool allows images of very high spatial and temporal resolution available on the *Google Earth*, *Bing Map*, and *Here Maps* platforms to be used.

Figure 21 : Presentation of the Collect Earth interface



In addition to very high-resolution images available in Google earth, composite time series of LANDSAT and SENTINEL 2A images were used so that information going back as far as 1986 has been used (figure 19).

Figure 22 : Overview of a composite time series of satellite images



- The **data analysis**, produced using the **Stratified Estimator Analysis** tool[47], was used to estimate the areas and confidence intervals for each stratum of the change map. All these calculations were carried out in accordance with a confusion matrix comparing the mapping products with the field reality (Olofsson et al., 2014).

8.3.3 Emission/Absorption factors used for the NRF

8.3.3.1 Description of the parameters of the emission and absorption factors

All the data and processing performed as part of estimating the emissions factors is in the table provided below:

Table 17 : Description of the emission factor from deforestation

Description of the parameter, including the forest category if applicable:	**Emission factor from deforestation**
Data unit (for example ha/year):	t CO_2/ha
Value of the parameter:	**Emissions factor in tCO2/ha** The visual interpretation in *collect earth* of nine hundred (900) sampling plots generated in forest losses between 2000 and 2015, revealed that in the ER-P area, deforestation is mainly for the benefit of cocoa farming (79.44%) with lower proportions for food crops (about 8%), other land uses (about 7% represented by bare soils and grasslands), and for rubber crops (4.36%) and palm oil (1.22%) (See Annex 4).

[47] Available here: https://github.com/lecrabe/aa_design_analysis

Therefore, the total biomass lost, due to the change from forest land to cocoa plantations, has been considered as an emission factor for deforestation for the biomass loss from forest land to cacoa plantations. Indeed, to use this hypothesis is conservative insofar as the main driver of deforestation remains the establishment of cocoa farms.

Biomass for cocoa plantations comes from the study of *N'Gbala et al. (2017)* that gives annual growth values for cocoa plantations.

Sector	**Deforestation emission factor (tCO2eq/ha)**	
Ombrophile	Dense forest	426.46
	Degraded forest	295.71
Mésophile	Dense forest	246.64
	Degradated forest	180.46

Data source:

Emission factors

The above-ground biomass and deadwood emission factors were calculated from forest inventory data conducted between October 2016 and February 2017 within one hundred and fifty (150) sampling units (SU) spread across the national territory[48]; and litter and below ground biomass emission factors are estimated from the IPCC default values.

The data used come from the national forest biomass collection campaign carried out from October 2016 to February 2017. This data collection campaign was carried out on 150 sampling units (EU) with 600 plots of 0.5 ha each. The one hundred and fifty (150) SU were distributed over the 4 phytogeographic zones of Côte d'Ivoire.

The emission factors used for the ER-P zone were calculated using the information from the 104 SU established in the phytogeographic areas covering the ER-P area., meaning the ombrophilous and mesophilic areas. The main data collected are:

- For aboveground biomass: DBH and height;
- For dead wood: stumps (height and diameter), lying deadwood (diameter) and standing deadwood (DBH and height).

A visual interpretation in ***Collect earth*** of the SU allowed to classify them in (i) dense forests; (ii) degraded forests; and (iii) non-forest, which allowed using the BIOMASS[49] R script developed by *REJOU-MECHAIN et al. (2017*), which is adapted to the national context, to calculate the biomass for each type of forest (dense and degraded) and by phytogeographic area

[48] Basic forest data for REDD + in Côte d'Ivoire - Inventory of forest biomass for estimation of emission factors:
[49] Le script R de calcul AGB: https://1drv.ms/u/s!AidVnmBDsLiHhCCS6_qDjI1TGD_4

	(mesophilic and ombrophilous) see Annex 10. The emission factor of deforestation was considered as the biomass loss from a forest (degraded or dense) to a non-forest area over the reference period. Litter and below ground biomass emission factors are IPCC default values (*TIER I*).
Spatial (local, regional, national or international) level:	National scale: above ground biomass and dead wood International scale: litter, below ground biomass
Discussion of the main uncertainties relating to this parameter:	Sources of uncertainties concerning emission factors may be: - errors in measuring biometric variables such as the DBH, height, etc.; - errors in predicting the allometric model used or choice of model (for example: uncertainty of model parameters); - sampling errors (for example: sampling plan, spatial heterogeneity of the forest or representative plots sampled); - the shoot to root ratio (Tx or R);
Estimate of the accuracy, precision and/or level of confidence, as applicable, and explanation of hypotheses/methodology used in the estimate:	The evaluation of the uncertainty for estimating emissions factors follows IPCC guidelines (*Chapter 3, IPCC, 2006*). Uncertainties were propagated using method 1 of the IPCC guidelines (*IPCC Chapter 2, Volume 1, 2006*). Propagation errors are estimated by applying the following 4 parameters: (i) the sampling error; (ii) the error of the equation used for estimating the biomass; (iii) the error in converting AGB to BGB and (iv) the measurement error. The sources of errors inherent in the integrated data and measurement methods from deforestation and the enhancement of carbon stock are grouped together in one single estimated uncertainty and notified at the bilateral confidence interval of 90 %.

The parameter of emission factors for forest degradation is described below:

Table 18: Description of the emission factor for forest degradation

Description of the parameter, including the forest category if applicable:	**Emission factor from Forest degradation**
Data unit (for example ha/year):	t CO_2/ha
Value of the parameter:	Emissions factor in tCO2/ha The visual interpretation in *collect earth* of the thirty (30) sampling units, i.e. 120 plots, located in the PRE zone allowed to classify them by type of forest according to their rate of forest cover. Thus three (3) classes were identified: - dense forests; - dégraded forests - non forests. For each of these classes, the biomass was calculated in tC/ha and then converted to tCO2/ha (See Annex 10) for each phytogeographic area (mesophilic and ombrophilous). The emission factor of forest degradation is: - On the one hand, the loss of biomass corresponding to the transition from dense forests to degraded forests, and - On the other hand, to the loss of biomass within the degraded forests over the reference period (forest areas with a coverage rate between [50 - 70%] in 2000, which decrease to a coverage rate of between [30 - 50%] in 2015). Thus, using the same calculation principles described in the previous section on the deforestation emission factors, the emission factors of forest degradation correspond to a loss of: - **179,82 tCO_2/ha** for the ompbrophilic area pour la zone ombrophile ; and - **115,26 tCO2/ha** for the la mesophilic area.
Data source:	The data come from the same sources as for the calculation of the emission factors for deforestation i.e., the national inventory within one hundred and fifty (150) sampling units spread over the whole territory, which allows estimation of the biomass by type of forest, and by phytogeographical zone.
Spatial (local, regional, national or international) level:	Aboveground biomass was estimated for the ER-P area.
Discussion of the main uncertainties relating to this parameter:	Sources of uncertainties concerning emission factors may be: - errors in measuring biometric variables such as the DBH, height, etc.; - errors in predicting the allometric model used or with the choice of model (for example: uncertainty of model parameters); - sampling errors (for example: sampling plan, spatial heterogeneity of the forest or representativity of plots sampled); - the root/stem ratio (Tx or R);
Estimate of the accuracy, precision and/or level of confidence, as applicable, and explanation of	The evaluation of the uncertainty for estimating emissions factors follows IPCC guidelines (*Chapter 3, IPCC, 2006).* Uncertainties were propagated using method 1 of the IPCC guidelines (*IPCC Chapter 2, Volume 1, 2006*).

hypotheses/methodology used in the estimate:	Propagation errors are estimated by applying the following 4 parameters: (i) the sampling error; (ii) the error of the equation used for estimating the biomass; (iii) the error in converting AGB to BGB and (iv) the measurement error. The sources of errors inherent in the integrated data and measurement methods from deforestation and the enhancement of carbon stock are grouped together in one single estimated uncertainty and notified at the bilateral confidence interval of 90 %.

The table below describes the Absorption Factor parameter in relation with enhancement of forest carbon stocks

Table 19: Description of the absorption factor from enhancement of forest carbon stock

Description of the parameter, including the forest category if applicable:	**Absorption factors for reforestation**
Data unit (for example ha/year):	t CO_2/ha
Value of the parameter:	Absorption within the ER-P area zone is mainly the growth and increase of biomass on abandoned non-forest (agricultural or non-agricultural) land that is regenerating (see Annex 4). The annual biomass sequestered due to natural regeneration in the ER-P area during the reference period was calculated using the annual increase of above ground biomass of natural forests (*Table 4.12, IPCC 2006*) tms/ha.year^{-1}. This biomass value was converted to tC/ha.an^{-1} by multiplying it by the carbon fraction of above-ground forest biomass (*IPCC Table 4.3, 2006)* and then to tCO2 /ha.year^{-1} by multiplying the value obtained by the conversion to factor of Carbon in CO2 equivalent which is worth 44/12. Below ground biomass relative to above ground biomass (Tx) *in IPCC Table 4.4 (2006)* was used to calculate below ground sequestered ground biomass each year.

Years	Ombrophile	Mésophile
Year 1	16,54	10,35
Year 2	33,08	20,70
Year 3	49,61	31,05
Year 4	66,15	41,40
Year 5	82,69	51,75
Year 6	99,23	62,10
Year 7	115,76	72,45

<table>
<tr><td></td><td>
<table>
<tr><td>Year 8</td><td>132,30</td><td>82,80</td></tr>
<tr><td>Year 9</td><td>148,84</td><td>93,14</td></tr>
<tr><td>Year 10</td><td>165,38</td><td>103,49</td></tr>
<tr><td>Year 11</td><td>181,92</td><td>113,84</td></tr>
<tr><td>Year 12</td><td>198,45</td><td>124,19</td></tr>
<tr><td>Year 13</td><td>214,99</td><td>134,54</td></tr>
<tr><td>Year 14</td><td>231,53</td><td>144,89</td></tr>
<tr><td>Year 15</td><td>248,07</td><td>155,24</td></tr>
</table>
</td></tr>
<tr><td>Data source:</td><td>Having shown that the forest gains over the reference period are mainly due to natural regeneration (Annex 4), the removals factors over the reference period are calculated from the annual increment values for above ground biomass of forests natural resources (Table 4.12, IPCC 2006) in tms/ha.year^{-1}.</td></tr>
<tr><td>Spatial (local, regional, national or international) level:</td><td>These are international data that have been used</td></tr>
<tr><td>Discussion of the main uncertainties relating to this parameter:</td><td>Sources of uncertainties concerning emission factors may be:
- errors in measuring biometric variables such as the DBH, height, etc.;
- errors in predicting the allometric model used or choice of model (for example: uncertainty of model parameters);
- sampling errors (for example: sampling plan, spatial heterogeneity of the forest or representativity of plots sampled);
- the stem/root ratio (Tx or R);</td></tr>
<tr><td>Estimate of the accuracy, precision and/or level of confidence, as applicable, and explanation of hypotheses / methodology used in the estimate:</td><td>The evaluation of the uncertainty for estimating emissions factors follows IPCC guidelines (Chapter 3, IPCC, 2006).
Uncertainties were propagated using method 1 of the IPCC guidelines (IPCC Chapter 2, Volume 1, 2006).
Propagation errors are estimated by applying the following 4 parameters: (i) the sampling error; (ii) the error of the equation used for estimating the biomass; (iii) the error in converting AGB to BGB and (iv) the measurement error.
The sources of errors inherent in the integrated data and measurement methods from deforestation and the enhancement of carbon stock are grouped together in one single estimated uncertainty and notified at the bilateral confidence interval of 90 %.</td></tr>
</table>

8.3.3.2 Detailed methodology for estimation of emissions factors

In detail, the following paragraphs describe the steps for collecting data and processes for estimating emission factors.

8.3.3.2.1 Forest inventory (measurement of the dendrometric parameters)

The emissions factors were obtained following a campaign for collecting biomass data on a national scale. The inventory took place between October 2016 and February 2017 on 150 sampling units distributed over the whole of the territory.

The selection of sampling sites

The sampling points were selected on the basis of phytogeographical areas and the map of stable forested areas was created using studies on the drivers of deforestation (*SEP-REDD+, 2016*).

A total of one hundred and fifty (150) sampling units (SU) were selected prorata for the surface of stable forested area per phytogeographical area. Table 18 shows the distribution of points per phytogeographical area.

Table 20 : Number of sampling units per phytogeographical area

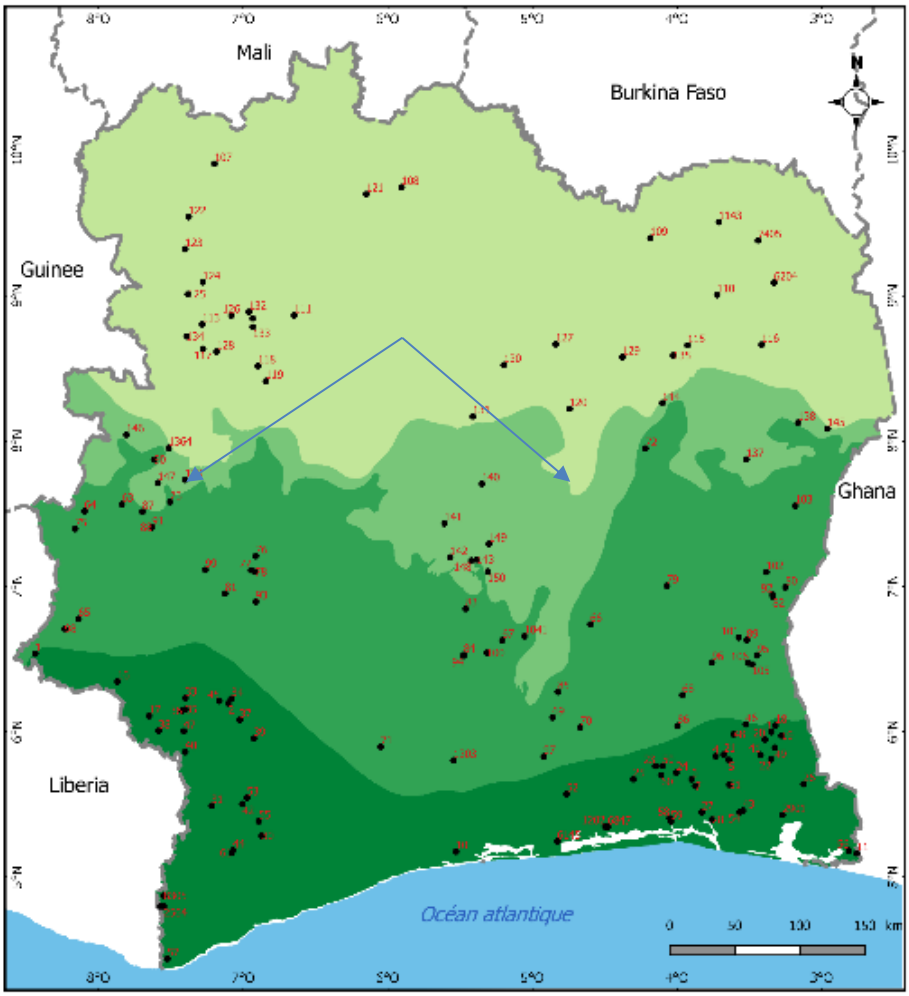
Phytogeographical areas	**Number of sampling units**
Ombrophilous sector	60.
Mesophilic sector	44.
Woodland sector	15.
Sudanese and sub-Sudanese sector	31.
Total	150.

Data collection (sampling unit)

The sampling units (figures 20 and 21) are 500 m x 500 m square (i.e. 25 ha). Three types of device were installed inside each SU. They correspond to three different data collection levels:

- **Level 1** consists of 4 rectangular plots (RP) of 25 m x 200 m each intended for measuring trees of DBH ≤ 10 cm, standing wood, standing dead wood, dead wood lying on the main section (center line of the plot);
- **Level 2** involves establishing a rectangular sub-plot (RSP) measuring 10 m x 50 m located inside each main rectangular plot. It is intended for measuring trees with small diameters (5 cm ≥ DBH < 10 cm);
- **Level 3** consists of a square sub-plot (SSP) of 5 m x 5 m in each plot. The first one ends 50 m away from the starting point of plot 1; the second one ends 100 m away from the starting point of plot 2; the third one ends 150 m away from the starting point of plot 3; and the fourth one ends 200 m away from the starting point of plot 4. They were used for evaluating biodiversity (counting individuals of woody species of DBH < 5 cm and height ≤ 1.30 m).

Figure 23 : Diagram of a sampling unit, plots, sub-plots



Edition: Secrétariat Exécutif Permanent REDD+, Août 2017

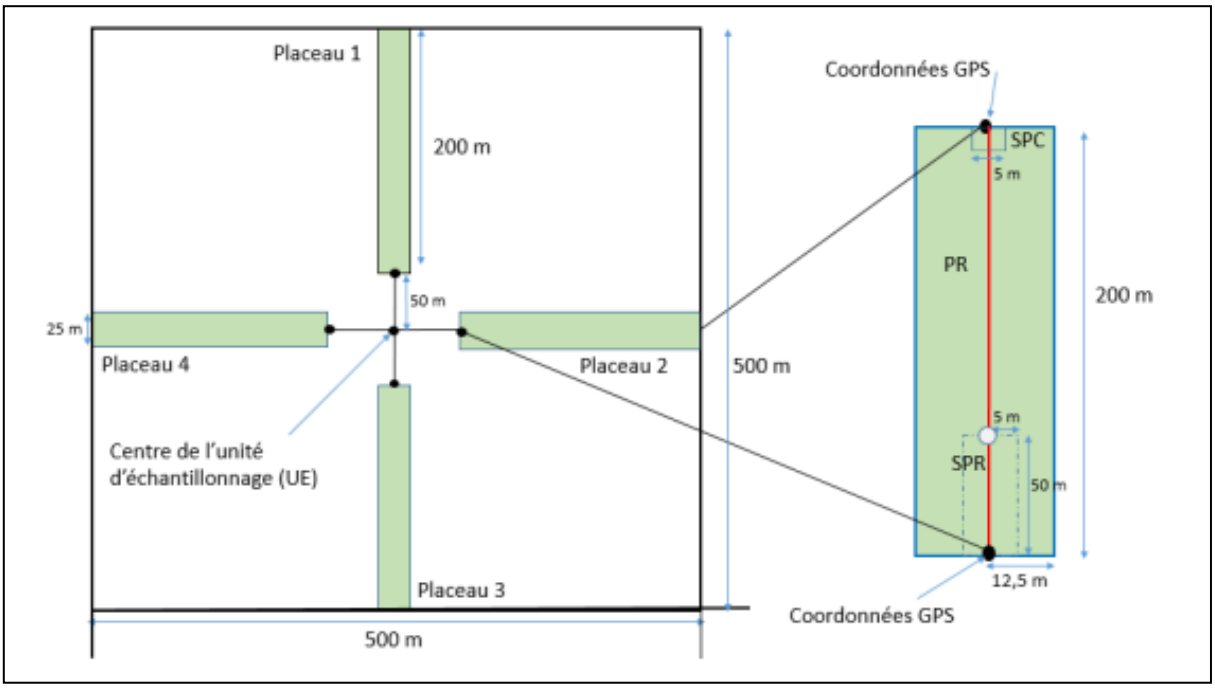
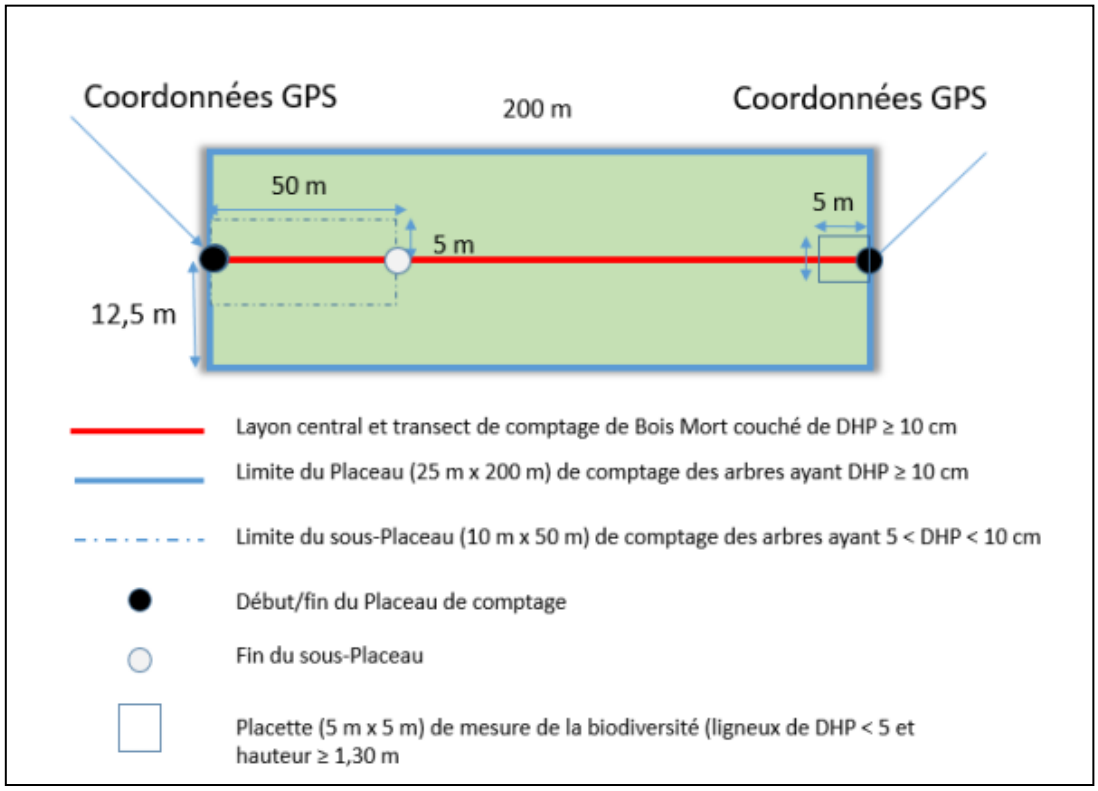


Figure 24 : Description of a plot, sub-plots



For levels 1 and 2, the measurements related to the height, diameter at breast height (DBH=1.30 m) and observations about the tree's health. The diameter of lying dead wood was measured over the 200 m of the main section of the plot (level 1). For level 3, observations related to the presence or absence of woody species whose total height is over 1.30m and whose diameter is less than 5 cm.

Data were collected by SODEOFR from October 2016 to February 2017. This data were registered both on the field sheets and using the *Collect Mobile tool* produced by *OpenForis* on tablets. Two mixed teams formed by technical staff from the SEP-REDD+, Universities and Research Centres (UFHB [*Université Félix Houphouët-Boigny*]/Centre National Floristique [*National Floral Centre*], CSRS [*National Centre of Scientific Research*], CNRA [*National Centre of Agronomic Research*]) were responsible for quality control.

Auditing and archiving data

The field sheets were scanned and archived. Then, cross-referencing between the field sheets and the data in the tablets meant that the data collected could be audited. Auditing consisted of correcting:

- The names of the tree species;
- Typing errors;
- Omissions and commissions when recording data.

These activities meant that a final database was produced and used for calculating biomass.

8.3.3.2.2 Methodology for biomass calculation per pool

Data from the inventory is converted into biomass (tms/ha). It is then converted into emission factors (tCO_2/ha) using conversion factors. The various paragraphs below describe the methodology used to estimate the biomass of each reservoir and calculate the emissions factors.

Estimate of the above ground biomass (AGB)

- **Choice of biomass equation**

The estimate of above ground biomass (AGB) was produced using a pantropical allometric equation. Requests made in the *Globallometree*[50] database showed that at least seventy-three (73) allometric equations are specific to the Côte d'Ivoire. Most of these equations are specific to forestry plantations (Teak, Gmelina, Acacia, etc.) and or certain species used for timber and cabinetwork (Mahogany, Niangon, etc.). However, these equations are not suitable for a general use at national scale, or in all the phytogeographical areas in the country.

In order to represent all forest types in the first phase of the analysis, the pantropical allometric equation (4) developed by *Chave et al. (2014)* was used to convert the measurements in the field into an estimate of the above ground biomass, as it is considered to be more reliable (σ = 0.357; *Akaike Information Criterion* (AIC)=3130 and df = 4002), and recent. It also covers a wide range of plant types, for a total of four thousand and four trees (4 004) trees whose trunk diameter (DBH) varies from 5 cm to 212 cm and includes data from other pantropical equations including the *Brown equation (1997),* the *Chave equation (2005)* and the *Fayolle equation (2013).* This equation includes data about trees in Africa.

Model 4 of the *Chave et al. equation (2014)* was used for estimating the biomass. It is based on the diameter at breast height (DBH), the total height of the tree as well as the basic density of the wood. The mathematical expression of this allometric equation is as follows:

$$AGB_{est} = 0.0673 \times (\rho DHP^2 H)^{0.976}$$

Where:

AGB_{est}: above ground biomass estimated in Kg;

DBH is the diameter at breast height in cm;

H is the total height of the tree (m);

ρ : the specific density of the wood ($g.cm^{-3}$).

- **Determination of the density of the wood**

The allometric equation for predicting biomass involves the specific density of the wood. In the aggregated database containing all the dendrometric measurements, correspondence was established to obtain the densities of the wood from these species. For each species, the *Global Wood Density Database*[51] is consulted to look for correspondence in terms of the species and the average density of the wood is associated with each tree, at the lowest level (species, genus or family).

For all trees whose scientific names do not match or do not have scientific names, unknown names or dead, the script is adapted to assign a default value to the basic wood density of 0.58 gm-3. It should be noted that 0.58 gm-3 is the average value for tropical Africa as reported by *Reyes et al. (1992).*

[50] Globallometree : international database of allometric equations available on http://globallometree.org

[51] Overall database of wood density available from the following address: http://datadryad.org/handle/10255/dryad.235

- **Development of a national diameter-height model from the data collected**

Although the DBH has been measured for all trees in the EU, the total height of the trees has only been measured for one tree sample. Given that the biomass model selected bases the prediction of the biomass on the diameter (DBH) and total height, it is therefore essential to know the total height of all the trees inventoried. A height–diameter model has been developed to estimate the height of the remaining trees using data collected nationally in the course of the inventory. A nonlinear mixed effects model was used to obtain the regression line fit. This was obtained using the software package R, applying the *ImputeHeights* command in the *Imfor*[52] R package, with the data grouped per SU and phytogeographical area. In this way the total height of each tree could be estimated.

A script was able to determine the biomass for each tree inventoried. A spreadsheet was then used to perform a calculation to estimate the total biomass of the plots, the sampling units then the phytogeographical areas.

Estimate of the below ground biomass (BGB)

To calculate the losses of below ground biomass due to deforestation, the default values proposed by *Table 4.4 vol. 4 IPCC (2006)* were used, applying the shoot to root ratio **(T_x)** for tropical forests.

Table 21 : Level of below ground biomass compared with above ground biomass(Tx)

Ecological zone	Above ground biomass	Tx (tone of roots/tone of shoots)	References
Dense tropical forest		0.37.	Fittkau and Klinge, 1973
Humid tropical deciduous forest	AGB < 125 t.ha^{-1}	0.2.	Mokany et al., 2006
	AGB > 125 t.ha^{-1}	0.24.	Mokany et al., 2006
Dry forest	AGB < 20 t.ha^{-1}	0.56.	Mokany et al., 2006
	AGB > 20 t.ha^{-1}	0.28.	Mokany et al., 2006

The below ground biomass was estimated using the following equation:

$$\mathbf{BGB = (T_x) \times AGB}$$

BGB represent the below ground biomass;
T_x, the rate of underground biomass relative to aboveground biomass;
AGB represents the above ground biomass.

Estimation of above ground biomass of dead wood (DW)

The biomass of dead wood is the sum of the biomass of standing dead wood ($DW_{Standing}$), lying dead wood (DW_{Lying}) and stumps (DW_{Stumps}). The methodological tool for estimating the carbon stocks and change in carbon stocks from dead wood and litter in project activities *A/R CDM (UNFCCC, 2013)* was used to calculate the biomass of lying dead wood and stumps. The *Chave et al. equation (4) (2014)* was used for standing dead wood.

$$\mathbf{DW} = \mathrm{DW_{Lying}} + \mathrm{DW_{Standing}} + \mathrm{DW_{Stumps}}$$

For the biomass of standing dead wood, the equation below was applied:

$$AGB_{est} = 0.0673 \times (\rho D H P^2)^{0.976}$$

$$\mathbf{DW_{Standing}} = \mathbf{ABG_{(DWstanding)}} \ \mathbf{x\ Facteur\ de\ réduction\ de\ biomasse}$$

[52] https://cran.r-project.org/web/packages/Imfor/index.html

Where

- The above ground biomass of standing dead wood is obtained using *the Chave 2015 model (4)* referred to above;
- For dead trees which have only lost leaves and twigs, the biomass of the dead wood is equal to the whole biomass multiplied by the reduction factor equal to 0.975 [53];
- For dead trees which have lost leaves and twigs and small branches (diameter <10 cm) the biomass of the dead wood is equal to the whole biomass multiplied by the reduction factor equal to 0.80 [54];

For lying dead wood, the *Harmon and Sexton formula (1996)*[55] was applied, estimating the total volume in m^3 ha^{-1}. This formula requires the length of transect (L) and the diameter of each piece of lying dead wood (*D*) at the transect intersection point.

Biomass of lying dead wood $= \frac{\pi^2}{8L} \times \mathbf{D^2} \times \boldsymbol{\beta} \times \boldsymbol{\rho}$

Where:

$\boldsymbol{D_n}$ = diameter of each piece of wood at the point of intersection of the transect,

L = length of transect (200 m in our study).

$\boldsymbol{\beta}$ = Density reduction factor applicable to the n^{th} piece of lying dead wood cutting a transect line;

Two classes of decay[56] have been recorded for lying dead wood: intact and rotten. If the decay class was missing in the data, it can be assumed that the piece of trunk is healthy. As rotten dead wood contains less biomass than intact dead wood, the biomass of the lying dead wood is reduced as follows:

DW_{Lying} intact = Volume x 0.80 x default densities

DW_{Lying} rotten = Volume x 0.45 x default density

The default value of the density of the wood is equal to 0.58 $g.m^{-3}$ (*Reyes et al., 1992*).

For the stumps, the formula shown below is applied:

$$\boldsymbol{Biomasse\ souche} = \frac{\boldsymbol{\pi}}{\mathbf{4}} \times \boldsymbol{DHS^2} \times \boldsymbol{HS} \times \boldsymbol{\beta} \times \boldsymbol{\rho}$$

Where:

DHS = diameter at the top of the stump (m)

$\boldsymbol{\beta}$ = Reduction factor of density of wood (apply density reduction factor applicable to lying dead wood)

ρ = Default density of wood

HS = height of stump (m)

Estimation of the below ground biomass of dead wood (DWBBS)

The below ground biomass of dead wood is calculated by applying the ration stem to root (*R*) for the tropical

[53] Adapted from the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry (IPCC GPG-LULUCF 2003): p. 4.105, section 4.3.3.5.3 Dead Organic Matter.
[54] Ibid.
[55] Harmon, M. E. and J. Sexton. (1996) Guidelines for Measurements of Woody Detritus in Forest Ecosystems. US LTER Publication No. 20. US LTER Network Office, University of Washington, Seattle, WA, USA.
[56] The stump wood is struck with a machete - if the blade bounces off it is sound; if it enters slightly into the wood, is it intermediate; and if it causes the wood to fall apart, it is rotten. IPCC GPG LULUCF 2003, section 4.3.3.5.3 Dead Organic Matter.

forest registered in *Table 4.A.4 GIEC 2003*.

The value of *R* is calculated from the equation below:

$$R = \exp [-1.085 + 0.9256 \ln (DW)] / DW$$

Where *DW* is the above ground biomass of dead wood (t/ha)

The total Biomass of dead wood is calculated using the formula shown below:

$$\text{Biomass of dead wood} = DW\ (R + 1)$$

Estimate of the biomass of litter (BL)

To calculate the carbon losses from the litter due to deforestation, the default values proposed by table 20 corresponding to *Table 2.2 IPCC (2006)* have been used and converted into the value of carbon equivalent obtained by applying the following equation:

$$\text{FE of litter} = CLFM^* FCC$$

With:

CLFM = Carbon from litter from Mature Forests

FCC = Factor for converting Carbon into CO_2 equivalent = 44/12

For areas of dense evergreen forests, semi-deciduous forests and dry forests, the value of 2.1 tC/ha (litter from mature deciduous forest) was used (Table IX).

So, depending on the phytogeographical areas, the emission factors from litter for the areas of dense tropical forest, deciduous forest and dry tropical forest are **7.7**; **7.7** and **7.7** $TeqCO_2$/ha respectively.

Table 22 : Default value of level 1 for carbon stocks from litter (Table 2.2 of the IPCC 2006)

Climate	Type of forest	Carbon stock from litter (tones C ha^{-1})
Tropical	Evergreen mature forest	2.1.
	Deciduous mature forest	2.1.

8.3.3.2.3 Calculations of emission Factors

Emission factors were calculated for each phytogeographic area. The emission factors for deforestation correspond to the total biomass loss due to the transition from forest land to non-forest land and mainly to cocoa plantations.

It has been calculated from the following formula:

$$\mathbf{FE_{deforestation} = B_{totale}forêt - Biomasse_{moyenne}Cacaoyère}$$

With :

$FE_{deforestation}$: Emission factors from deforestation in **$teqCO_2$/ha;**

B_{totale}forest: total Biomass of forest reservoir in **$teqCO_2$/ha;**

$Biomasse_{moyenne}$Cacaoyère : Average biomass accumulated per hectare of cocoa plantations over the

reference period.

Total forest biomass by phytogeographic zone represents the sum of the biomass of the different reservoirs. It is calculated from the following formula:

$$B_{total}forest = B_{aerial}forest + B_{underground}forest + B_{deadwood}forest + B_{litter}forest$$

Where:

B_{total}forest: total biomass for forests;

B_{aerial}forest: aerial biomass for forests;

$B_{underground}$forest: the underground biomass for forests;

$B_{deadwood}$forest: biomass for the dead wood pool;

B_{litter}forest: the biomass of the litter.

The biomass of cocoa plantations over the reference period is calculated by using the average annual increment of total biomass (above-ground biomass and below-ground biomass) of cocoa plantations[57].

The table 21 below gives the annual values of biomass for a cocoa plantation over the reference period:

Table 21: Annual values of biomass for Cocoa

AGB, BGB and litter in Cocoa plantations				
	AGB	**BGB**	**Litter**	**Total biomass**
Biomass [tdm/ha]	37.2	8.2	9.3	**54.7**

The method used to calculate the emission factors for forest degradation chose *IPCC equation 2.16 (2006*) for the estimation of the conversion ΔC (conversion) and chose *equation 2.8 b* for the estimation of carbon stocks. The change in carbon stock resulted fromt the difference between the initial above-ground biomass (AGBbefore) and the final above-ground biomass (AGBafter).

The initial above-ground biomass was replaced by the average of the dense forest biomasses and the final above-ground biomass by the degraded forests to obtain the degradation emission factors.

The equation is as follows:

$$\mathbf{FE} = \sum_{j,i} \left(AGB_{foretdense,j} x(1+Tx) - AGB_{foretdégradée,i} x(1+Tx) \right) xCFx\frac{44}{12}$$

With

$AGB\ foretdense$: Forest-type aerial biomass before conversion, in tonnes of dry matter per hectare;

$AGB\ foretdégradée$: forest-type aerial biomass after conversion, in tonnes of dry matter per hectare;

CF: Carbon fraction of dry matter in tC per tonne of dry matter. The value used is 0.47 (*IPCC, 2006 - Table*

[57] N'Gbala et al., 2017 - Carbon stocks in selected tree plantations, as compared with semi-deciduous forests in centre-west Côte d'Ivoire.

4.3.S);

44/12: Conversion of C into CO2;

Tx: Underground biomass rate with respect to aboveground biomass (Tx). (*IPCC, 2006 - Table 4.4*)

8.3.3.3 Methodology for estimation of removal factors

The removals in the ERP area are due to carbon sequestration due to natural regeneration as demonstrated by the results of the visual interpretation in Collect earth of the samples generated in the gains class (112) over the reference period (Annex 4).

It is mainly the growth and increase of biomass on abandoned non-forest land (agricultural or non-agricultural), which is regenerating (see Annex 8).

The annual biomass sequestered due to natural regeneration in the ER-P area during the reference period was calculated using the annual increase in above-ground biomass of natural forests (Table 4.12, IPCC 2006) in $tms/ha.an^{-1}$. This biomass value was converted to $tC/ha.an^{-1}$ by multiplying it by the carbon fraction of aboveground forest biomass (IPCC Table 4.3, 2006) and then $tCO_2/ha.an^{-1}$ by multiplying the value obtained by the conversion factor of Carbon in CO_2 equivalent, which is 44/12.

Underground biomass relative to the aboveground biomass (Tx) in IPCC Table 4.4 (2006) has been used to calculate underground sequestered ground biomass each year.

Table below gives the removal factors for natural regeneration over the reference period.

Table 22: Removal factor for the ombrophila area

Year	Annual increase AGB (tms/ha/an)	Annual increase AGB (tCO2/ha/an)	Annual increase BGB (tCO2/ha/an)	Annual increase total (tCO2/ha/an)	Absorption factors (tCO2/ha/an)
1	7	12,07	4,47	16,54	16,54
2	14	24,15	8,93	33,08	33,08
3	21	36,22	13,39	49,61	49,61
4	28	48,30	17,85	66,15	66,15
5	35	60,37	22,32	82,69	82,69
6	42	72,45	26,78	99,23	99,23
7	49	84,52	31,24	115,76	115,76
8	56	96,59	35,71	132,30	132,30
9	63	108,67	40,17	148,84	148,84
10	70	120,74	44,63	165,38	165,38
11	77	132,82	49,10	181,92	181,92
12	84	144,89	53,56	198,45	198,45
13	91	156,97	58,02	214,99	214,99
14	98	169,04	62,49	231,53	231,53
15	105	181,11	66,95	248,07	248,07

Table 22: Removal factor for the mesophile area

Year	Annual increase AGB (tms/ha/an)	Annual increase AGB (tCO2/ha/an)	Annual increase BGB (tCO2/ha/an)	Annual increase total (tCO2/ha/an)	Absorption factors (tCO2/ha/an)
1	5	8.62	1.72	10.35	10.35
2	10	17.25	3.45	20.70	20.70
3	15	25.87	5.17	31.05	31.05
4	20	34.50	6.90	41.40	41.40
5	25	43.12	8.62	51.75	51.75
6	30	51.75	10.35	62.10	62.10
7	35	60.37	12.07	72.45	72.45
8	40	69.00	13.80	82.80	82.80
9	45	77.62	15.52	93.14	93.14
10	50	86.25	17.25	103.49	103.49
11	55	94.87	18.97	113.84	113.84
12	60	103.49	20.70	124.19	124.19
13	65	112.12	22.42	134.54	134.54
14	70	120.74	24.15	144.89	144.89
15	75	129.37	25.87	155.24	155.24

8.3.4 Calculation of historical annual average emissions during the reference period

Net emissions, corresponding to the change in carbon stocks for agriculture, forestry and other land use (AFOLT), were calculated considering gross emissions from deforestation and removals due to afforestation and the conversion from forest land to cropland. Net emissions were calculated from the following equation:

$$E_{net} = E_{gross} - A$$

Where :
E_{net} : net emissions
E_{gross} : gross emissions
A : removal

The gross emissions (E) are calculated with the following equation:

$$E = (FE_{deforestation} * \Delta P_{2000-2015}) + (FE_{degradation} * \Delta D_{2000-2015})$$

With:

$FE_{deforestation}$: Deforestation emission factor per phytogeographic zone and forst type teqCO_2/ha;

$FE_{degradation}$: Degradation emission factor per phytogeographic zone teqCO_2/ha

$\Delta P_{2000-2015}$: annual deforestation area per phytogeographic zone and type of forest during the reference period, ha/year

$\Delta D_{2000-2015}$: annual degradation rate per phytogeographic zone during the reference period; ha/year

The removals are obtained from the following equation:

$$A = FA * \Delta G_{2000-2015}$$

Where:
FA : Removal factor of natural regeneration;
$\Delta G_{2000-2015}$: annual afforestation rate during the reference period (enhancement of carbon stock)

8.4 Upward or downward adjustments to the average annual historical emissions over the Reference Period

Not applicable.

8.5 Estimated Reference level

The table below indicates the reference level of the ER-P final emissions during the reference period on the basis of average historical emissions within the ER-P area over the historical reference period from 2000 to 2015.

Table 23 : Estimated reference level during the reference period

Year *t* of the duration of the ERPA	Historic annual average for emissions due to deforestation (tCO2/year)	If applicable the historical annual average for emissions due to degradation	Historical annual average of absorptions due to the increase in carbon stocks (tCO2/year)	Adjustment (tCO2/year)	Total of reference level (tCO2/year)

		(tCO2/year)			
2000 - 2001	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2001 - 2002	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2002 - 2003	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2003 - 2004	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2004 - 2005	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2005 - 2006	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2006 - 2007	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2007 - 2008	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2008 - 2009	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2009 - 2010	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2010 – 2011	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2011 – 2012	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2012 - 2013	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2013- 2014	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
2014-2015	8 492 519,07	982 145,73	-139 202,99	na	9 613 867,79
TOTAL	**127 387 786,01**	**14 732 186,02**	**-2 088 044,81**		**144 208 016,84**

The table below presents the reference level over the period of the ERPA in the absence of implementation of the ER-P activities:

Table 24: Estimated baseline over the ER-PA period

Year t of the duration of the ERPA	Historic annual average for emissions due to deforestation (tCO2/year)	If applicable the historical annual average for emissions due to degradation (tCO2/year)	Historical annual average of absorptions due to the increase in carbon stocks (tCO2/year)	Adjustment (tCO2/year)	Total of reference level (tCO2/year)
2S 2019	4,246,259.53	491,072.87	-69,601.49	na	4,667,730.91
2020	8,492,519.07	982,145.73	-139,202.99	na	9,335,461.81
2021	8,492,519.07	982,145.73	-139,202.99	na	9,335,461.81
2022	8,492,519.07	982,145.73	-139,202.99	na	9,335,461.81
2023	8,492,519.07	982,145.73	-139,202.99	na	9,335,461.81
2024	8,492,519.07	982,145.73	-139,202.99	na	9,335,461.81
TOTAL	**46,708,854.87**	**5,401,801.54**	**-765,616.43**	**na**	**51,345,039.98**

8.6 Relationship between the Reference Level, the development of a FREL/FRL for the UNFCCC and the country's existing greenhouse gas inventory

There is a significant consistency between the reference levels of the ER-P, the FREL/FRL submitted to the UNFCCC (2017), and the updated Biennial Report (2017). Indeed, the data used are from the same sources, in the same period, and the same processing methods were used.

Paragraph 8 of decision 12/CP.17 of the UNFCCC states that the reference emission levels/reference levels for forests (NERF/NRF) must be consistent with the anthropogenic emissions of greenhouse gases associated with the forests. The Côte d'Ivoire has implemented this consistency as required by the IPCC (*IPCC, 2006*). This is why a technical mission of the Ministry of the Environment consisting of the REDD+ National Executive Secretariat (SEP-REDD+), and the Climate Change National Program (PNCC) was conducted in December 5 to 9 2016 at the FAO head office in Rome. Some information about this consistency between NERF/NRF and BUR are stated below:

- The national classification, after harmonizing the captions for the land cover in the Côte d'Ivoire in the format LCCSv3 used, corresponds to the one used for the forested lands of the FREL and the REDD+ activities (*FAO, 2016*);
- Use of the same forest definition (forestry code of July 2014) for the AFOLU;
- Stratification of the forestry lands into four phytogeographical areas in order to distinguish between emission factors.

It should be noted with regard to the FRL of the PER-P and FREL national, the same institutions, coordinated by the SEP-REDD +, have developed the two reference levels FREL/FRL, with the technical support of the FAO for the determination of activity data and emission factors, which served as basis for their development. Other activities include (i) the BNETD / CIGN that produced the maps, (ii) the SODEFOR that collected the forest inventory data, and (iii) the SEP-REDD + for the determination of areas of change in land use, biomass per stratum, for emission/removal calculations, and associated confidence intervals.

From the organization point of view, given the experience gained with the development of the forest reference levels, the MRV REDD+ system will develop GHG inventories for the LULUCF sector, and these data will be transmitted to the NCCP, which will make them available compilation and integration into IGES and BUR for notification to the UNFCCC.

The data sources and methodologies used are the same. However, the experience gained from the ER-PD, particularly with the integration of new activities (forest degradation), will allow updating the national FRL by 2020.

9 APPROACH FOR MEASUREMENT, MONITORING AND REPORTING

9.1 Measurement, monitoring and reporting approach for estimating the emissions occurring under the ER Programme within the Accounting Area

The Measure Notification and Verification (MNV) system of the ER-P in Côte d'Ivoire will allow the country to monitor the results of its REDD+ activities throughout the ER-P area and notify them. These activities are: (i) deforestation, (ii) forest degradation and (iii) enhancement of carbon stock, as elements comprise into the reference level.

A more accurate methodology for estimating forest degradation, estimating emission factors for burning forest biomass, and collecting associated data will be finalized in July 2019. This system, integrated with the SNSF, shares the same methodology basis as the SNSF National Action Plan. In practice, for each accounting year, a land use map for the programme area will be developed from the combination of *Landsat* and *Sentinel* imageries and combined with the previous map to obtain a land use change map in occupancy in the ER-P area.

This land use change map will serve as a stratification basis for the visual interpretation of sample units stratified and randomly generated, following the best practices recommended by *Olofson et al. (2014),* to determine activity data.

Nevertheless, some methods or data may change, as and when. With the view to reduce uncertainties and in an effort to improve data, a data improvement plan has been developed. It integrates among others:

- The determination of a national definition of forest degradation and a methodology for its estimation (available by April 2019);
- Developing a methodology for estimating emission factors for burning forest biomass (available by July 2019);
- The collection of data on reforested plots and timber samples in logging perimeters.

The methodology for estimating forest degradation used for the ER-PD originates from the preliminary works for the methodology development national study for estimating forest degradation, which should be available in 2019. This induces a consistency between the different methodologies for estimating forest degradation, the FREL/FRL, and for the ER-P.

In order to maintain consistency with the national FREL/FRL and the sub-national FRL, it is planned to update the national FREL/FRL by 2020. This will be based on the achievements of the ERPD.

In addition, thanks to its methodology for monitoring forest cover disturbances (defined below), the national MNV developed by Côte d'Ivoire is able to monitor the areas that are temporarily deforested, which are to be found in classified forests only (forest plantations with management plans), and where clear-cutting may occur. This is not the case in the ER-P area, where forest cover lost is definitive. In addition, the monitoring system put in place, has a community-based monitoring component of the forests, which feeds the system with up-to-date field data.

Finally, SODEFOR, which manages the classified forests, in which logging activities occur leading to temporary deforestation, contributes to feed the data tracking system.

Table 25: Description of the approach for estimating emissions/absorbtions in the ER-P

<table>
<tr><td>Parameter:</td><td>Activity data</td></tr>
<tr><td>Description:</td><td>Monitoring of changes in land use in accordance with the directives of the IPCC 2006 in order to estimate the changes in forestry carbon stock after implementing activities indicated in the REDD+ procedure.
<table>
<tr><th>Activities</th><th>IPCC categories</th></tr>
<tr><td>Deforestation</td><td>Conversion of forestry land into non-forestry land (Other Lands)</td></tr>
<tr><td>Forest degradation</td><td>Forest land remaining forest land</td></tr>
<tr><td>Enhancing forest carbon stocks</td><td>Conversion of Other Lands into Forestry Lands</td></tr>
</table></td></tr>
<tr><td>Data unit:</td><td>Ha/year</td></tr>
<tr><td>Data sources or measurement methods/ calculation and procedures to be applied:</td><td>The data sources are:
- Satellite images: Landsat ETM (7) and OLI (8) Sentinel 1 (SAR) 2A and 2B, Spot 6 and 7 (Imageries from the OSFACO program, as available).
- Data available on following platforms; Goggle Earth Engine, Nasa Earth Data and in Sepal[58].
- Land cover maps: national map of changes in forestry cover from 1986-2015 (FAO, 2016), Map showing changes in the Taï national park from 1993-2015 (GIZ, 2017).
- Aerial images from drones (surveillance)
- Operational data from classified forests and forestry perimeters extending into the ER-P area (quantity of wood removed per year),
- Data about wood traceability (coordinates for felled timber),
- Data about reforestation in the area,
- Data from the national forestry inventory,
- Date from universities and research centers.

Methods and procedures
The monitoring of activities implemented under the ERP will follow the same process as for the elaboration of the NRF. That is, by producing biennial land cover maps from the satellite image classification using the same procedures as in the NRF that will be periodically combined to obtain a map of occupation change of the ground.

The changes map will serve as a base map to generate stratified random sampling units following the Olofson et al. (2014). These sampling units will be interpreted visually and analyzed using open foris suite tools to determine the areas of biomass losses (deforestation and forest degradation) and biomass gains (enhancement of forest carbon stocks).

In detail, the following operations will be carried out:</td></tr>
</table>

[58] **Sepal**: platform for downloading and processing data developed by the FAO (www.sepal.io)

	- Based on a reference map, land-use changes related to deforestation, forest degradation, carbon stock enhancement, and other REDD+ activities are detected and mapped according to the following methodology: - Use as a base map that is produced for the reference level from a "wall-to-wall" mapping; - Acquire every two years, during the dry season, a mosaic of satellite images, combining *Landsat* and *Sentinel* sensors, covering the entire country and corrected for all the effects of clouds and the atmosphere; - Collect training data in the various types of land use with the support of structures involved in MRV, including local communities (see section 9.3); Carry out a biennial update of the base map from the biennial satellite image mosaic classification; - Perform a change detection by post classification detection on the mosaics of satellite images at different dates. Loss, gain, non-forest and forest classes will be identified for each analysis period; - Determining statistics on activity data will be based on the methodology of *Olofsson et al. (2014),* using the *Collect earth* platform; - Publication of maps and results. Specific monitoring will also be carried out for high carbon stock (HCS) forests and high conservation value (HCV) forests.
Frequency of controls/monitoring:	Biennial (every two years)
Control equipment:	- Drones for capturing additional image data; - Computers and server for processing, centralization and archiving source data and data generated; - Field equipment: GPS, tablets, compasses, photographic equipment, and vehicles.
Quality assurance procedures/quality control to be applied:	Quality control will be undertaken based on best practice as described by *Oloffson (2014)* together with field missions.
Identification of sources of uncertainty for this parameter:	Same as activity data: Deforestation (see section 8.3)
Procedure for managing and reducing uncertainties associated with this parameter:	Uncertainties will be reduced by increasing the number of samples, and by ensuring strict quality control of data entered prior their use.
Comments:	Forest conservation is an activity that will be monitored, but not considered, for ER-P carbon stocks accounting. Monitoring is justified by the objective of evaluating the policies and measures used within the scope of ER-P.

9.2 Organizational structure for measurement, monitoring and reporting

The Ministry in charge of the environment, through the SEP-REDD+, whose Monitoring & MNV unit has been strengthened and its capacities enhanced from a technical, material, and human perspective as part of the REDD+ readiness phase, **will supervise and coordinate all forest monitoring system** activities at national and ER-P levels.

It will coordinate the biennial production of activity data at national and ER-P scale. Activity data will be produced in collaboration with CNTIG, SODEFOR, OIPR and civil society (as part of the communal monitoring of forests) and the BNETD/CIGN.

Civil society will take an active part in MRV activities as part of the community monitoring of forests. It will be responsible for collecting data at the local level for that are needed for the forest monitoring system. To enable them to take an active part in activities for the forest monitoring system, the capacities of civil society organizations will be enhanced from an organizational and technical perspective. They will therefore receive training on the use of forest monitoring tools and will be provided with these tools to enable them to collect data on activities at a local level (deforested areas, re-forested areas, burnt areas, etc.), which will feed into the central system through an intermediate level represented by regional REDD + committees. This will have the benefit of reducing monitoring costs and increasing measuring frequency. Furthermore, communal monitoring will be able to contribute to the quality control of data generated by the central system.

The collection and generation of data for calculating **emission factors** will be supervised by teams from the **Ministry in charge of forests**, which will be reinforced through the national forest inventories project financed by the C2D Program (the France-Ivory Coast debt conversion agreements)**.** This will involve SODEFOR and OIPR**.**

National universities and research centers, in collaboration, with civil society will undertake the **data quality control** of the data generated. The data collected at the local level are checked (quality control) by the structures involved at the regional level, and then they are forwarded at central level, a final level of control will be carried out before being used for the different estimates.

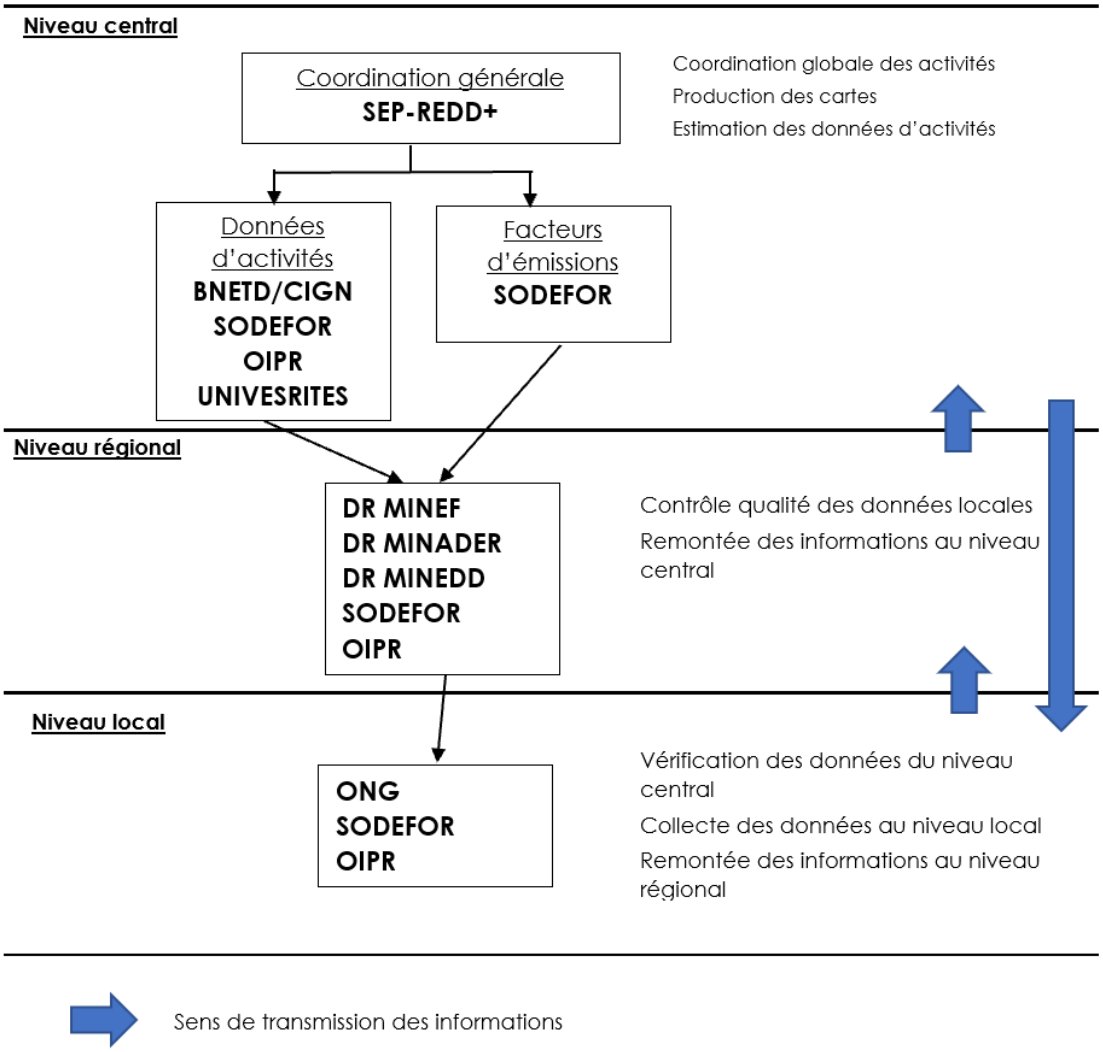
Finally, notification of the various GHG inventories is undertaken respectively by SEP-REDD+ for the Carbon Fund as part of the ER-P, and by the Ministry of Environment's National Program for Climate Change for the purposes of notifying the UNFCCC. It is understood that the SEP-REDD+ teams are responsible for providing information on activity data and emission factors from the LULUCF sector to the National Program for Climate Change, so that the latter may compile reports on Côte d'Ivoire in matters concerning climate change.

The SNSF web portal[59] is managed by the Monitoring & MNV unit of the SEP-REDD+, which ensures that is maintained up-to-date, and feed with the latest data.

The Figure 22 below shows the organization established to ensure forest monitoring activities under the ER-P.

[59] Portail web du SNSF – www.georportailsst.com

Figure 25 : National Forest Monitoring System (SNSF) to be applied as part of the ER-P



9.3 Relation and consistency with the National Forest Monitoring System

The forest monitoring system in the ER-P zone will be developed to ensure it is consistent with what is expected on a national scale within the scope of REDD+. In fact, the people involved in the implementation as provided in the ER-P are the same people as those specified in the action plan for operationalizing the national forest monitoring system. The roles and responsibilities stipulated in the national plan are the same at ER-P level for the various local structures.

Furthermore, the methodologies for mapping and estimating emissions/removals used will be the same in both cases, namely biennial *wall-to-wall* cartography, primarily from a mosaic of *LANDSAT* and *SENTINEL* satellite images (see section 9.1). Similarly, the parameters measured remain the same between the national level and ER-P.

Given that one of the functions of the monitoring system is to evaluate the country's performance in terms of the reduction of emissions due to deforestation and forest degradation, it has been designed to ensure the monitoring of priority activities specified in the REDD+ national strategy at national and ER-P level. Several methodologies have been developed to do this, particularly: (i) the monitoring of high carbon stock (HCS) forests, (ii) the monitoring of high conservation value (HCV) forests and (iii) the monitoring of land use in deforestation hotspots.

10 DISPLACEMENT

10.1 Identification of risk of Displacement

At national level, measures have been taken to minimize displacement in Côte d'Ivoire; these consist of: (i) the adoption of a national approach to avoid the phenomenon of displacement of drivers of deforestation and associated emissions from one area of the country to another, which would cancel out some of the emission reductions or removals generated, (ii) a stronger partnership between the SEP-REDD+ and the Ministry of Planning and Development for policies and measures that support land use planning to tackle the risks of displacement, such as the displacement of a cocoa concessions to a forested zone , and (iii) compliance of REDD+ initiatives with Regional Land Planning Frameworks (SRADT).

However, each REDD+ program or project must evaluate and adopt its own strategy for mitigating the risks of displacement and monitoring. This section discusses the risks of displacement/leakage, specifically, the increase in emissions outside the area covered by the program due to the program's activities. This analysis (including section 10.2) applies the FCPF Methodological Framework. The table below provides a brief summary of the analysis of the drivers and agents detailed in sections 4.1 to 4.4.

Table 26: Assessment of risk of displacement

Drivers of deforestation or degradation	Risk of displacement	Justification of risk assessment
Expansion of cocoa farming	Low	As described in section 4.1, the main driver of deforestation in the ER-P area is agriculture and cocoa in particular (the lost areas were replaced by cocoa farming (79.44%) with lower proportions for food crops (about 8%), other land uses (about 7% represented by bare soils and grasslands), and for rubber crops (4.36%) and palm oil (1.22%), which developed on the model of a family farming exploiting a "differential rent", that is to say essentially based on the increased area in the forest area to exploit its natural fertility. The sector has also developed historically on the basis of an influx of labor from inside the country and from outside (ethnic populations from Burkina Faso, Mali). Finally, cocoa cultivation is carried out extensively, with very little use of inputs (fertilizers and phytosanitary) and improved varieties, making it a very consumptive crop of forest areas known for their fertility. The ERP is not intended to stop this activity both in rural areas and in classified forests, with the consequence of displacing cocoa producers outside the ERP area, but to rationalize land use with land use planning (activity H2). In the classified forests, the program adopts a pragmatic approach in coherence with the national forest policy of maintaining in certain classified forests of the population occupying illegally the lands, and to apply an improved management of the classified forests (activity H3), with the setting up participatory management and contracting of agricultural and forestry activities, within the framework of a system of concessions in transparent classified forests, organized according to a partnership management and management delegation mode of all or part of the classified forests. The development of standard agreements adapted to objectives and stakeholders (sustainable forestry concession agreement, industrial agroforestry concession agreement,

		agroforestry cooperative concession agreement, protection concession agreement), and in particular with the activity of agroforestry agroforestry (AS2 activity), which aims to address the problem of established cocoa producers in the classified forests, by organizing it with agroforestry standards, and by monitoring these activities, and by strengthening the control capacities of SODEFOR and independent observers. In the rural domain, the ER-P aims to (i) clarify the land titles of the current land occupants (activity H1), and (ii) intensify the production of cocoa in agroforestry (activity AS1) to reduce the need for land, and therefore limit the need for cocoa farmers to move out of the ERP area to conquer new woodlands, deforest them with "slash and burn" techniques, and convert them to cocoa production. The temporary decline in income linked to the introduction of new improved varieties of cocoa and the use of inputs will be offset by PES projects, thus limiting the risk of abandoning cultivated lands because of declining income for the next coming years for other forested lands. Agroforestry pilot projects based on Mondelez PES in the ER-P area and in the Mé region, east of the country[60], did not show any movement of the concerned producers outside the areas of these projects. A monitoring system will be set up to control the extension of cocoa plantations in forest areas (monograph, monitoring). In addition, at the national level, a "zero deforestation" policy is implemented, which implements traceability tools linked to the national forest cover monitoring system (SNSF), so that both cocoa buyers and the final consumers are reassured that the cocoa purchased comes from legal areas and not from Conservation Areas, or High Conservation Value (HCV) and High Carbon Stock (HCS) Forests, thus limiting a deadweight effect of cultivating cocoa at the expense of forest in areas outside the ER-P area. The former cocoa belt, in the center of the country, has been progressively abandoned for lack of productivity and declining soil fertility due to deforestation and non-renewal of cocoa plants, for the South-West regions (ER-P area) and for the South-East regions, where the Mé region REDD+ pilot project is limiting the risk of displacement from the South-West to the South-East. With regard to rubber growing, its cultivation in the ER-P area represents 1% of the land use in the classified forests and 7% in the rural area, just the same as at the national level. It is important to underline its overrepresentation as regards its responsibility in deforestation (see section 4.1). The clearings of mature forest linked to this crop seem indeed to be very minor compared to the renewal of fallows and old cocoa and coffee plantations as confirmed by various studies (*Ruf, 2012 - Koulibaly, 2014).* Coffee growing which stands out quite singularly as a deforestation driver, compared to the rest of the country

[60] The REDD + project, financed under the C2D project, is being implemented by the French international firm Etc Terra for a period of three years. This will involve restoring degraded areas through reforestation and teaching farmers new farming techniques to reduce deforestation and thus contribute to the fight against climate change.

		being quoted for 10% for the program area, against 5% nationally. Its impact on deforestation, however, is judged by survey respondents to be declining, which confirms the sharp drop in tonnage exported by the country between 1992 and 2012, from 275,000 to 100,000 tones/year (*Etc. Terra, 2016*). **Thus, the risk of displacement and expansion of cocoa production and other agricultural production outside the ER-P area is estimated to be low**.
Illegal logging for timber and fuelwood.	Medium	The second factor of deforestation is the need for timber and wood energy, and thus the illegal exploitation of forests that results, coupled with the insufficiency of the law-enforcement and capacity on the ground to protect forests. The ER-P in coherence with the national forest policy aims at increasing the capacities of timber and wood energy both in the rural area and classified forests (activities ES1, ES2, FS1, FS2) by individual and community energy wood plantations, and increase alternative solutions to wood energy with enhancement of utilization of timber and agricultural activities residues (activity ES3) limiting the risk of leakage outside the ER-P area. The activity related to land use and territorial development planning (H2 activity) of the ER-P, will develop economic opportunities including the production of wood energy and timber. These activities will be supported at national level, with national forest policy, particularly near urban centers, through reforestation and tree planting activities, and national energy policy with the development of energy efficiency (improved kilns and stoves, alternative to wood (promotion of butane gas and utilization of agro-industrial residues), and an incentive tax policy, to the entire territory of Côte d'Ivoire to meet the energy needs of the population. However, wood energy needs will remain for a long time regardless of the efforts made to develop alternative energy uses or to reduce consumption. According to a trend scenario if nothing is done, (i) the demand for charcoal increases from 1,309,186 tons in 2015 to 2,128,428 tons in 2030, an increase of 63%, (ii) the demand for charcoal from 5,474,523 tons in 2015 to 8,026,804 tons in 2030 an increase of 68%. Wood energy consumption will ultimately be unsustainable in relation not only to forest productivity, but also to forest capital as a whole[61]. Thus, in the framework of a proactive scenario of implementation of public policies, it should allow: (i) a substantial increase in butane gas consumption of 5% per year from 2018 compared to 2015; as a result, gas demand increased by 53% in 2030 compared to 2017; (ii) a deceleration of charcoal consumption thanks to the action of the public authorities and local authorities on the control of supply by 7% per year, which would lead

[61] "Assessment of the supply and demand of domestic fuels and their trends in agro-ecological zones defined by REDD +", Interim Report - Sapphyre RD, MEDD-World Bank, 2016.

		to a decrease of 39% in the demand for charcoal in 2030 compared to 2017; and (iii) a reduction in firewood consumption by 9% per annum, linked on the one hand to the economic growth expected by 2015, thanks in part to the new energy resources of the country, and on the other hand, the sharp drop in the number of poor people. These proactive policies are completed by national management capacities (production, monitoring, regulatory framework, awareness), and law and regulation enforcement. To this end, Decree No. 2018-36 of January 17th, 2018, on the organization of the Ministry of Water and Forests, was adopted to meet this imperative of preservation, rehabilitation and extension of forests, in particular with (i) the creation of a special surveillance and intervention brigade to prevent criminal activities (illegal exploitation) affecting forests and other resources, but especially to intervene quickly in case of infractions; and (ii) the creation of regional directorates, departmental directorates, cantonments and additional forestry posts in order to ensure a better network of the territory, and a better implementation of the national forest policy. The revision of the Forest Code will provide the opportunity to generalize over the entire national territory, the obligations of protection and sustainable management of trees, and clarify the modalities, such as tree ownership, so that each economic stakeholder investing in conservation or planting forest trees, know precisely the benefits the are entitled when trees reach maturity. In this context, sacred forests will also be the subjects of specific protection. The forest policy aims to: 1. strictly protect classified forests conserved more than 75% and outclass in protected areas those that would lend themselves. Some classified forests could be classified as protected areas in the near future or at the expiry of associated logging concession agreements. The National Forest Inventory and subsequent studies will identify other classified forests suitable for upgrading; 2. strictly enforce the logic of classified forests and applicable laws in classified forests with little degradation. The classified forests concerned are those degraded to less than 25% and those whose degradation rate is between 25 and 75%. It is also a question of allowing these populations, to exploit them durably within the framework of traditional sustainable logging concessions, experienced during the execution of the forest sector project in 1990; 3. redeveloping classified forests that are more than 75% degraded into agro-forests in whole or in part, but in no case should they be downgraded to ordinary rural areas, the State remaining in any condition proprietary cause, and 4. identify and make available by contracts, particularly close to cities, which are large consumers of wood energy, spaces suitable for planting "economically useful forests" (timber, wood energy), but also as ecologically useful as possible.

		Due to the time required to achieve an increase in the energy supply and the effective effects over time of the reinforcement of the legislative and regulatory framework, and the effect of an effective repressive policy implementation, the risk of displacement linked to the uncontrolled exploitation of the Lumber and wood energy is considered medium.
Demographic pressures (migration into the ER-P zone)	Medium	Compared to the rest of the country, it is important to stress the importance of demographic factors, especially non-native migrations, as a factor of deforestation in the ER-P area (see section 4.1). Migration in the ER-P area is high compared to the national level, for example an increase of 4.3%/year in the Guémon Region against 2.5%/year nationally (*INS, 2014*). The crisis of the year 2000, led to large population displacements outside and within the ER-P area, resulting in land conflicts in rural areas, with the return of the displaced people who saw their land allocated to the newcomers, and, in particular, to the detriment of classified forests and protected areas that experienced the intrusion and illegal settlement of displaced populations within these forests (see section 4.2). In classified forests, the planned agroforestry concessions (activity AS 2) and improved participatory management of classified forests (activity H3) is not intended to expel settled populations from classified forests, but to maintain their agricultural activities within a legal framework, while respecting norms (under tree cover cultivation), and being better controlled, thus avoiding a displacement effect of these populations outside the ER-P area. Regarding the rural domain, the activity of clarifying and securing land and conflict resolution (H1), could result in the withdrawal of the enjoyment of certain lands to illegal occupants, with the consequence for them to leave the ER-P area, and to reinstall elsewhere. However, the conflict resolution mechanism should provide alternative compensation that satisfies all parties concerned. **In the view of the difficulty of prejudging the impact of displacement because of the ER-P's activities, impacts will be monitored and evaluated, the level of risk is conservatively assessed as a medium.**
Artisanal gold mining	Low	Twenty-four (24) regions out of thirty-one (31) that make up Côte d'Ivoire are affected by gold mining activities[62]. In the ER-P area this activity is low. In 2012, following the national crisis, the OIPR reported that 9% of threats to Tai National Park were due to agricultural encroachment and artisanal mining only. After the expulsion of illegal settlements by the OIPR authorities, mining activities are still active particularly near the park on its southeast borders. The OIPR's surveillance capacities will be strengthened (FS3 activity) to prevent any intrusions and to monitor these nearby activities. The artisanal gold mining mainly concerns landowners

[62] "L'exploitation artisanale de l'or En Côte d'ivoire: La Persistance D'une Activité Illégale", Dr Denis Goh, European Scientific Journal, January 2016 edition vol.12, No.3.

		who have little motivation to move elsewhere. The program is not intended to prohibit gold panning activities but MS1 activity intends to (i) identify artisanal miners, (ii) restructure the sector with the implementation of the mining code, (iii) implementation of social environmental safeguards, such as the implementation of a liability for negative consequences from mining (regulate mercury, limit impacts on water, biodiversity, and health), and (iv) the restoration of sites by assisted natural regeneration. At the national level, the mining policy supports the development of a gold mining certification scheme with cooperatives and, increasing environmental standards and controls, limiting a windfall effect outside the ER-P area. **The risk of moving gold mining activities is rated as low.**

10.2 ER Programme design and features to prevent and minimize potential Displacement

The risk assessments for leakages and associated mitigation strategies result in low risk of leakage for cocoa expansion and artisanal gold mining activities, and a medium risk for illegal exploitation of timber and energy wood and for displacement of populations outside of the ER-P area. The ER-P measures and activities are designed to avoid displacement, adapted to local social and environmental conditions and, they are based on incentives, rationalization of natural resources exploitation, and valorization of the non carbon benefits, rather than being coercive and, as a result, should in any case reduce the appeal of deforestation and forest degradation for deforestation agents, which should prevent the risk of displacement.

Furthermore, the area selected by the program represents the last forested region of Côte d'Ivoire, and currently it is the most attractive in terms of soil fertility, rainfall, and cocoa farming compared with other regions, which reduces the risk of displacement of cocoa farming to other regions of Côte d'Ivoire.

Displacement monitoring will include the current assessments within and beyond the limits of the program area, taking account of: (i) the establishment of the cocoa plantation, (ii) the volume of legal and illegal timber, and (iii) the deforestation associated with artisanal mining.

These mitigation strategies are not comprehensive and should be considered as part of the ER-P, whose holistic approach foresees the overall net benefit of emission reductions. More details are provided in section 4.3 with the description of planned activities.

Displacement of cocoa resulting in deforestation beyond the limits of ER-P:

Displacement as a result of establishing the cocoa plantation outside the accounting area and inside the forests is low, as the program establishes financial incentives and techniques to improve productivity and cocoa intensification techniques. The traceability program developed as part of the cocoa and forests initiative and "Zero-deforestation" policy, will enable the provision of a full and auditable system for monitoring the cocoa supply chain applicable to everyone by 2019. Nevertheless, the main program's partners from the private sector, SODEFOR and OIPR personnel will monitor displacements in the field and the SNSF will be able to identify deforestation and degradation driven by cocoa and other factors outside the accounting area.

Measures to mitigate the risks of displacement:

- AS1. Agroforestry and agricultural intensification
- AS2. Agroforest in classified forests
- H1. Land tenure and conflict resolution
- H3. Improved management of classified forests
- PES projects in support for AS1

Displacement of legal and illegal logging outside the ER-P zone:

The volumes of legal and illegal wood will be controlled outside the accounting zone by enhancing the technical control capacities of the SODEFOR, and the role of WCF as an independent observer will be strengthened by the ER-P and, as well FLEGT will control illegal logging at the national level, when in place. The data acquired at the SODEFOR's offices will provide evidence on the felling of timber outside the ER-P accounting area to verify if the illegal felling of timber has increased in areas where REDD+ activities are implemented. In addition, a production program for firewood and charcoal together with the implementation of a professional charcoal value chain will lead to the creation of jobs and increasing revenues.

Measures to mitigate the risks of displacement:

- ES1. Wood energy plantation support by PES
- ES2. Community food-wood energy agroforestry
- ES3. Alternatives to wood energy - agricultural residues and timber
- H1. Securing land and settling land conflicts.
- H3. Improved management of classified forests.

- FS2. Reforestation and sustainable management of classified forests
- FS3. Strengthening the protection of protected areas.
- H2. Land use planning and territorial development

Displacement of people beyond the limits of the ER-P:

Demographic pressure is more prevalent within the ER-P area; however, some activities may restrict access to land and consequently displace populations outside the ER-P area. All activities are designed to limit this effect.

Measures to mitigate the risks of displacement:

- H1. Securing land and settling land conflicts.
- H2. Planning and development of the territory, through support for the integration of protected area management plans to the SRADT.
- ES2. Community planting - food and fuelwood associations in classified forests.
- H4. Capacity building of local communities in forest management, this activity is aimed at (i) local populations in the region, (ii) Ivorian immigrants settled in the region and, (iii) foreign immigrants. Actions will be undertaken to encourage (i) participation in the program through village and regional organizations. These will be awareness activities, information dissemination and education campaigns.

Displacement of mines outside the ER-P zone:

The SNSF will be able to identify deforestation caused by mining outside the program's area during the course of national monitoring activities; the program aims at rationalization, more sustainable management of this activity and increased monitoring. Greater engagement with the Ministry of Industry and Mines, the General Directorate of Mines and Geology will also enable monitoring of illegal mining activities which could have been displaced outside the program's area. Supports for the sustainable certification of artisanal gold mining in the area will enable an increase in the income of artisanal gold miners with the implementation of sustainable practices and will allow a greater professionalization, and gold traceability.

Measures to mitigate the risks of displacement:

- MS1 Rationalization of artisanal gold mining and support to sustainable certification scheme for artisanal gold mining;
- H2. Planning and development of the territory, through support for the integration of PA management plans to the SRADT.

11 REVERSALS

11.1 Identification of risk of Reversals

Under the ER-P, inversion refers to the non-permanence of emission reductions and stored carbon, i.e. a reversal of the process of reducing emissions. Inversions can result from both natural disturbances and human activities, which can be attributed to a range of internal and external factors of an ER-P. As a result, the sum of the measured and verified emission reductions within the accounting area for a reporting period is less than the overall amount of measured and verified emission reductions within the accounting area for the previous reporting periods.

In accordance with FCPF Indicator 18.1 (*FCPF 2016a*), this section aims to identify anthropogenic and natural reversal risks that could affect emission reductions over the duration of the ER-P and jeopardize its sustainability over a long-term period. These reversal risks can also be considered as potential risks related to the implementation of the ER-P. They have been summarized in the following tables, which also present the mitigation strategies associated with each identified risk, according to FCPF MF criterion 18.2 (*FCPF, 2016a*).

Table 27: Risk of reversal

Risk factors	Justification	% of reserve for reversal risk	Reduction	% of set reserve resulting
Default risk	Not applicable, minimum amount fixed	10%	Not applicable	10%
A. Lack of broad and long-term support from stakeholders	The benefit-sharing arrangements have been elaborated in a participative and transparent manner with the stakeholders (see section 15) Their finalization will lead to further consultations in Regions (January 4 and 5, 2018) and their validation with a national workshop (January 9, 2019). The benefit sharing mechanism will be implemented in a participative and transparent manner as well. The process of developing the benefit-sharing plan is participatory and transparent, as well will be its implementation with beneficiaries. PES experiments are already taking place in the ER-P area with the Mondelez and GIZ projects (see sections 1.1, 2.2 and 4.3), at the national level the SEP-REDD+ is monitoring all REDD+ pilot projects, including Nawa and La Mé pilot projects. There is a validated FGRM that is being tested to assess its effectiveness in the ER-P area (see section 14.3). The instances of the FGRM are installed in some localities as part of the pilot phase and will be definitively in place early January 2019. In the first quarter of 2019, the authorities will benefit from capacity building. Complaints management experiences in pilot areas should be capitalized with the aim of improving the FGRM if necessary for CN-REDD+ to amend the mechanism by the beginning of 2019. Following its establishment, training for Local facilitators of the FGRM bodies should be organized, and an information campaign on the FGRM with local communities is planned in the ER-P area to ensure its good operationalization. As explained in Sections 4.3, 4.4 and 11, land pressures exist, and their resolution is an essential condition for	10%	The risk of reversal is considered medium: 5% reduction	5%

	the success of the ER-P for the long-term modification of unsustainable forest and natural resource exploitation behaviours. The National Rural Land Security Program (PNSFR) led by AFOR, whose goal is to secure land rights and settle land disputes in the ER-P area over a period of 10 years (2017-2027), well beyond the period of the ERPA which is of 4 years. AFOR has already intervened in the San Pedro area (see section 4.3). The PNSR is coupled with the development of Participatory Land Use Plans (SRADT). **The risk of reversal for lack of long-term support is considered as medium: 5% reduction.**			
B. Lack of means of institutional action and / or inoperative vertical / intersectorial coordination	Since 2012, at the national level, the National REDD+ Commission has been created, which is an intersectorial structure for analysis, advice and guidance for the implementation of the REDD+ mechanism nationally (see sections 2.3 and 6.1). It is composed of a National REDD+ Committee (CN-REDD +) in charge of steering the REDD+ mechanism, an Interministerial Technical Committee REDD + (CTI REDD +) in charge of intersectorial coordination, and a Permanent Executive Secretariat REDD+ (SEP-REDD +), which is responsible for implementing the REDD+ mechanism nationally. SEP-REDD+, whose capacity has been strengthened (see section 6.1), will be responsible for the day-to-day management of the ER-P, under the supervision of the National Committee and the Interministerial Technical Committee representing the different concerned ministers. SEP-REDD+ will be responsible for the national audit of carbon monitoring, safeguards reports, and FGRM management and reports will be forwarded to the body. For the implementation of programs, the key institutions are: OIPR for the management of National Parks and N'zo natural reserve, SODEFOR for the management of the twenty-four (24) classified forests, AFOR for land title security and land conflict resolution, and operators for projects/programs with the ICF. They are supported by the various departments of MINEDD, MINEF, MINADER, MEF, Ministry of the Interior, Ministry of Regional Planning, Ministry of Finance, National Agency for Rural Development Support (ANADER), and representatives of sector industries that are all represented on the National REDD+ Commission, and which ensures intersectorial cooperation and at ICF for private sectors. SEP-REDD+ ensures the monitoring & evaluation of REDD+ pilot projects (Mondelez in Nawa Region and La Mé Region REDD+ project), and PROFIAB projects conducted by GIZ in the ER-P area. SEP REDD+ ensures the monitoring & evaluation of the Cacao and Forest Initiative and is part of the ICF Technical Committee. At the regional level, the organization of the country comprises a set of decentralised state and local structures, and project implementation stakeholders. To ensure the regional supervision of the ER-P, the SEP-REDD+ will organize biannual ER-P workshops in the regions of the ER-P area between the various implementing stakeholders in particular: the prefects and presidents of the regional councils (as representatives of the 5 REDD+ regional committees), managers such as GIZ and FIP and NGOs involved in the implementation of projects in the area, representatives of the private sector, local representatives of SODEFOR and OIPR.	10%	The risk of reversal is considered medium: 5% reduction	5%

	The implementation of the FIP project is under the supervision of CN-REDD+. The SEP-REDD + is in charge of carrying out activities in two zones, one of which is the ER-P area. The Cocoa and Forest Initiative (CFI), which is, since 2017, a public-private platform that brings together thirty seven (37) private companies (including Barry Callebaut, Blommer, Cemoi, Cargill, Ecom, Hersheys, Mars, Nestle, Olam) in the cocoa sector, RCI's government, the Coffee Cocoa Council, OIPR, SODEFOR, and the World Cacao Foundation, whose SEP-REDD + is in charge of monitoring & evaluation of ICF's activities and is a member of its Technical Committee. The ICF aims to mobilize cocoa companies to work together to stop deforestation, reduce the impacts of climate change and land degradation, and improve the livelihoods of small farmers. It allows intersectoral engagement in the fight against deforestation. Thus, the ER-P has strong institutional capacities, whose initiatives in the field of the fight against deforestation are coordinated by a single body: SEP-REDD + under the supervision of the CN-REDD +, including intersectoral bodies (CN-REDD+, CFI, Local REDD+ Committees), bringing together various relevant administrations and the private cocoa sector to ensure collaboration at both national and regional levels, with Regional REDD + Committees in each ER-P Region. In terms of program monitoring and monitoring key stakeholders such as SODEFOR, in the context of revenues transfers (generated by the sales of ERs) between the FPRCI and beneficiaries such as OIPR and SODEFOR, a framework collaborative agreement will be signed between the SEP-REDD + and the SODEFOR (OIPR a framework agreement has already been signed) with the FPRCI, disbursements will be made on the basis of an annual work plan, financing plan, and a procurement plan agreed between the parties (SEP- REDD +, SODEFOR, OIPR). Beneficiaries will then execute the funds according to their own procedures but will be held responsible to follow disbursement accordingly to work, financing and procurement plans. Nevertheless, the FPRCI is responsible for the monitoring and evaluation of the execution of the funds allocated for the activities of the program. To this end, it independent external audits of the funds allocated will be undertaken regularly. On the field, the E-P foresees a reinforcement of the financial and technical capacities of the Independent Observers, who will follow the implementation operator's commitments and will report to SEP-REDD+ and measures the performances with respect to the annual work plan and with respect of safeguards. Reports will be transparently published on the Registry website and publicly accessible. Thus, the ER-P has strong institutional capacities, whose initiatives in the field of the fight against deforestation are coordinated by a single body: the SEP-REDD+ under the supervision of the CN-REDD+, including intersectorial bodies (CN-REDD+, ICF, Local REDD+ Committees), bringing together different relevant administrations, implementation organisations, and the private cocoa sector to ensure collaboration both at national and regional level, with Regional REDD+ Committees in each ER-P Region. **Nevertheless, with regards the risks associated with the institutional capacity to implement sustainability will be conservatively listed as a medium.**			

C. Lack of long-term effectiveness in addressing the underlying factors	ER-P interventions focus directly on two of the main drivers and agents of deforestation and degradation in the region (cocoa and unsustainable logging). The ER-P integrates a series of measures that maintain the production levels of the main raw materials causing deforestation and degradation while rationalizing their territorial space, their environmental impact by conforming them to standards, and by controlling them more effectively, with an incentive payment framework on results. These underlying factors are the economic attractiveness of cocoa farming and the migration of non-native populations in the ER-P area, poor forest management, illegal & unsustainable logging, lack of surveillance means, no community involvement in forest management. The following measures are incorporated into the ERP to mitigate the risks of reversal: • As a general principle, mitigation measures to cope with cocoa farming are designed so that they are not limited in number but intensify in a qualitative way. So that communities can continue to live according to their current livelihoods. On the other hand, the project will limit the creation of new fields to the detriment of the forest but will create financial incentives to plant trees (fruit trees, teak, timber or firewood) in the fields and around (draft contracts of conservation and reforestation). • Rehabilitation of plantations of old wood plantations and new plantations for the production of charcoal / firewood. This sustainable production of coal will complement the production of traditional coal, currently devoid of sustainability, which should disappear gradually, so that the entire level of productivity does not change (in the context of PES). • Artisanal logging: The ER-P aims to reduce illegal logging in the program area, through the creation and capacity building of SODEFOR, OIPR, and mandated independent observers. • Forest management: The ER-P will support SODEFOR in developing participatory management plans for classified forests. • Capacity building: OIPR and SODEFOR will benefit from capacity building. With regard to decoupling deforestation and degradation from economic activities, there are experiences of projects aimed at combating deforestation with the Mondelez and GIZ (PROFIAB) projects in cocoa growing under forest cover, and agroforestry since 2016 in the ER-P area (see sections 4.1 & 4.3). Another REDD +pilot project in the South-East of the country aimed at declining the REDD + strategic options defined at national level: • Territorial development: it is a question of registering the project in the dynamics of decentralization and security of the land already in progress in Ivory Coast with the development of the territory and; • land tenure security: issuance of land certificates; • Zero deforestation agriculture: technical support for 2,250 households (over a minimum area of 5,000 ha), • Sustainable forest management and reforestation: sensitization, reforestation of 500 ha including 50	5%	The risk of reversal considered as medium: 2% reduction	3%

ha for fuelwood; and

- Sustainable Energy: diagnosis, training in carbonization techniques and improved stoves.

With respect to the legal and regulatory environment supporting REDD + objectives, there is a relevant legal and regulatory environment conducive to the long-term objectives of REDD+:

(i) at the institutional level with the establishment of the National REDD+ Commission, the CN-REDD+, the Interministerial Technical Committee, and the SEP-REDD + (Decree No. 2012-1049 of October 24th, 2012 on the establishment, organization and functioning of the National REDD + Commission) Order No. 0113 / MINSEDD / CAB of July 19th, 2017 appointing the members of the Interministerial Technical Committee and, Order No. 0114 / MINSEDD / CAB of 19 July 19th 2017 appointing members of the National REDD + Committee). The structures are well defined and anchored in the Ivorian national legal framework to ensure the continuation of the ER-P beyond the ERPA.

(ii) Land tenure law, Law 98-750 of December 23rd, 1998 on the rural land area in Côte d'Ivoire had already transformed customary rights into so-called modern property rights to provide tenure security in rural areas. This law recognizes customary rights and confers broad powers on village Rural Land Management Committees (CVGFR) composed mainly of indigenous people (Decree No. 99-593 of 13 October 1999 concerning the organization and powers of Rural Land Management Committees). More recently, a participatory process for the delimitation of village territories was ratified by Decree No. 2013-296 of May 2nd, 2013. This procedure takes into account the history of the constitution of the village territory, uses participatory and valid mapping methods the results during public meetings bringing together the inhabitants of the village concerned. In order to accelerate the implementation of the rural land reform and strengthen land governance, Côte d'Ivoire created the Rural Land Agency (AFOR) on August 3rd, 2016. To strengthen the transparency of the process, the consultations for the establishment of an Independent Rural Land Observatory have been initiated and should allow its formalization in 2019. In addition, the Rural Land Policy adopted in January 2017 should allow modernizing legislation relating to rural land. Land tenure security in rural areas is a prerequisite for investment and development of REDD + eligible activities. The reform initiated to facilitate the granting of land titles in the rural area, including through AFOR, over a period of ten (10) years, thus contributes to securing tenure that will be in several stages in the following sequence (i) development of complete maps of the land cover, land status, (ii) assessment of titles in the rural area based on the local land register if possible, or on other titles (user rights, customary law), will be carried out to determine the best method of land security, (iii) depending on the case, the registration or registration of existing titles, formalize the occupation in fact, or the formalization of user rights and / or customary with the land certificate, clarifying land boundaries.

The National REDD + Commission is strongly involved in the various land use and spatial planning reforms, in close consultation with AFOR, which is systematically involved in all its meetings, as well as in the development process. The National Planning Policy (PNAT), which has been in place since 2016 and which should lead to the adoption of the Land Use Planning and Development Law (LOAT).

Conversely, the strong involvement of the National REDD + Commission allows the integration of SN-

	REDD + guidelines into all the documents relating to the land security and land-use planning policy. As concrete implementation of these reforms is a priority for the REDD + process in Côte d'Ivoire, the National REDD + Commission supports the following initiatives to make this integrated approach fully effective on the ground: - The joint SEP-REDD + and the Ministry of Planning and Development's land use analysis study explicitly incorporated natural resource conservation issues, REDD+ objectives and the identification and recognition of village lands in the manual for drawing up Regional Territorial Planning and Development Plans (SRADT). - the new rural land security approach following the sequence "clarification-certification-delimitation of territories-contracting" must be tested within the framework of the Rural Land Policy Implementation Support Project (PAMPFR) financed by the World Bank, will be monitored by the National REDD + Commission. (iii) the rights on emission reductions must be regulated with the reform of the forest code thus clarifying the legal uncertainties on their status. However, for the sake of efficiency, the ER-P retains an approach that dissociates the carbon property of the ecosystems or the biomass that sequestered it, or that made it possible to avoid it, in order to be able to apprehend the reductions in emissions as a transferable product; from an environmental service this does not prevent the identification as beneficiaries of persons who have a real right (of full ownership or for the enjoyment of land), recognized by a land title or in the process of recognition in the context reform to strengthen land tenure security, to ensure that they are in full capacity to implement REDD + activities with the expected performance and associated results under the ERP offset by redistributed benefits according to the sharing plan benefits (see section 15). **The risk of reversal due to lack of long-term effectiveness in dealing with underlying factors is considered medium.**			
D. Exposure and vulnerability to natural disturbances	The ER-P does not perceive significant natural hazards due to fires, drought, extreme weather events or other natural hazards. Forest areas remain wet even during dry periods and therefore pose a low fire risk. For fires, reinforcement of the SODEFOR monitoring means for classified forests and OIPR for National Parks and protected areas, and the establishment of the Special Surveillance and Response Brigade by the Directorate of Water and Forests and the creation of an aircraft squadron for surveillance, intervention and mapping. A pest management plan is available. The risk is considered low.	5%	The risk of reversal considered as low: 5% reduction	0%
Total risk of reversal	**Actual percentage of reserve for risk of reversal: 10 + (Result A 5% + Result B 5% + Result C 3% + Result D) = 23%**			

11.2 ER Programme design features to prevent and mitigate Reversals

The ER-P concept includes risk mitigation strategies to address four (4) of the risk categories. A description of risk mitigation strategies is presented in section 11.1.

In particular, the ER-P provides that payments from the Carbon Fund will be paid to the Foundation for Parks and Reserves of Côte d'Ivoire (FPRCI), which will enable: (i) to generate long-term profits with a 5% interest rate, (ii) to provide regular long-term monetary benefits beyond the ERPA period to the beneficiaries, and thus to interest them in participating throughout the program period; and (iii) to contribute sustainably to the emissions reductions emissions in the program area by financing beyond the ERPA period the emission reduction activities (AS1, AS2, ES2, FS1, and FS2).

The ER-P presents a well-balanced strategy for ensuring the sustainability of ERs that combines mitigation and enabling activities especially in the land area (H1 & H2) to address long-term land conflicts.

Regarding fires, strengthening SODEFOR (FH2) monitoring and surveillance means for classified forests and OIPR for Tai National Park and Protected Areas (FS3), together with the establishment of the Special Monitoring and Surveillance Intervention Brigade by the Directorate of Water and Forests, and the creation of a squadron and the adoption of fire management plans is a long-term strategy to fight against fires.

11.3 Reversal management mechanism

Reversals management mechanism	
Option 1: The ER-P has implemented a reversals management mechanism, the substance of which corresponds to assurances in terms of the mitigation of risk of reversals provided by the buffer approach of the ER-P Carbon Fund.	No
Option 2: The ER-P emission reductions are placed in a specific ER-P buffer, managed by the Carbon Fund (ER-P Carbon Fund buffer), taking account of the assessment of risk reversals.	Yes

Republic of Côte d'Ivoire proposes to use the Carbon Fund buffer reserve for ER buffers to respond to the risks associated with uncertainty, as part of ownership and removal. The way in which the amount of credits resulting from emission reductions will be determined in the buffer reserve is explained in the "ER Buffer Program Guidelines" compiled by the FCPF. More precisely, in the event of reversals, the program will use the re-evaluation tool from the risk assessment tool, which requires a specific amount to be placed in the buffer reserve for each risk factor.

Republic of Côte d'Ivoire will also open an account with the Carbon Fund register for credits associated with emission reductions, in particular to make transfers. This will enable double accounting to be avoided and ensure full transparency of transfers made.

The ER-P's monitoring approach will take account of deforestation in order to verify forest losses by the SNSF system. This system will enable coverage of removals on a medium and large scale due to pests, diseases, forest fires and other potential dangers (natural or anthropogenic).

11.4 Monitoring and reporting of major emissions that could lead to Reversals of ERs

The monitoring approach used by the ER-P will take into account deforestation and forest degradation so as to verify forest losses by the SNSF system. This system will cover medium and large-scale reversals due to pests, diseases, forest fires and other potential hazards (natural or anthroporphic).

12 UNCERTAINTIES OF THE CALCULATION OF EMISSION REDUCTIONS

This section summarizes the approach to identify, assess, minimize and quantify uncertainty following the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (Chapter 3).

The methodology used to estimate average annual GHG emissions in the reference period is based on the provisions of the 2006 IPCC guidelines for national GHG inventories, which is equivalent to the Activity Data x Emission Factor (AD x EF) method indicated in Chapter 3.2.3 of the Global Forest Observation Initiative Methodological Guidance Document version 2 (GFOI MGD 2) as shown in section 8.

Following the identification of uncertainties and an assessment of their relevance and contribution to the overall uncertainty, uncertainties are quantified and then aggregated to a single uncertainty estimate for the RL using error propagation.

12.1 Identifying and assessment of sources of uncertainty

According to Chapter 3, Volume 1 of the 2006 IPCC GL, there are eight broad classes of uncertainty: lack of completeness, Model uncertainty, Lack of data, Lack of representativeness of the data, statistical random sampling error, measurement error, misreporting or misclassification and missing data.

The identified sources applicable to this case are the following:

Sources of uncertainty and their contribution to overall uncertainty		***High / Low***
Activity Data		
Measurement error	The measurement error could be a systematic and random error and is caused by the following: 1. Quality and suitability of the satellite data (spatial, spectral, and temporal resolution, and geo-location). This is usually a source of systematic errors. The accuracy assessment of the land cover change map (2000 to 2015) shows that the map contains substantial errors, especially for the change classes. However, since the map is only used for stratification purposes and the AD is estimated using stratified estimators, these map errors do not need to be considered further. 2. Cartographic and thematic standards (i.e. land category definitions and MMU): As indicated in Section 8.3 labeling procedures were put in place for the accuracy assessment, which reduced the systematic errors related to the stratified estimators to a minimum. 3. Interpretation procedure (i.e. classification algorithm or visual interpretation). This is the largest source of error (systematic error). The existence of SOPs and QC/QA procedures, such as indicating the quality in the reference classification of the accuracy assessment allows to reduce this to a minimum. 4. Post-processing: There is no post-processing apart of the filtering (remove low confidence classification) and the calculations. It is considered that these sources are negligible.	Low
Representativeness	The sampling is spatially balanced (stratification) and random so the sample is representative of the whole population. It is considered that this source is negligible.	Low

Sources of uncertainty and their contribution to overall uncertainty		***High / Low***
Sampling error	This is main source of uncertainty. It is assumed that this is the only source of uncertainty.	High
Emission factors		
DBH measurement error	Systematic errors are assumed to be negligible since the inventory was carried out by experienced inventory teams with a set of standard operating procedures (SOPs) in place. Random errors may still occur, but at large sample size tend to cancel each other out. Picard et al. (2015) assumed the random error of DBH measurements to contribute 2% to the uncertainty of emission factors. This error is considered in the quantification.	High
H measurement error	Random errors related to height measurements are likely to be higher, in particular in dense tropical forests where it is difficult to see the tree top, in particular from a sufficiently long distance (equal or bigger than the tree height). *Chave et al. (2004)* measured the height of approx. 1,000 trees and found the measured value to be within +/- 10% of the actual value. This error is considered in the quantification.	High
Wood density measurement error	The basic wood density or Wood Specific Gravity (WGS) cannot be easily measured during forest inventories, and it is usually sourced from peer-reviewed publications and global databases. Chave et al. (2004) assumed that the error of this predictor was +/- 10% of the actual values. WSG values used in the RL have been sourced from different publications and databases. Research in Madagascar by Ramananantoandro et al. (2015) has shown that WSG values from literature overestimate measured WSG by 16% on average. However, effects on biomass estimates were found to be not significant at the 95% confidence level. This error is considered in the quantification.	High
Root-to-shoot ratio measurement	This error is considered in the quantification as it is high.	High
Biomass allometric equation (Model error)	The allometric model error can be divided in the following sources. a. the error due to the uncertainty of the model's coefficients; b. the error linked to the residual model error; c. the selection of the allometric model. According to *Picard et al. (2015)*[63] the largest uncertainty is due to the selection of the allometric model, which may be 77% of the mean biomass estimate. *Van Breugel et al. (2011)*[64] estimated that the errors linked to the allometric equation could vary from 5 and 35% depending on the model selected. The third error is assumed to be negligible for the woody biomass species as these equations are calibrated with trees measured within the same ecoregion or even the ER program area. The other two errors are usually negligible, but they will be considered in	High

[63] Picard et al. (2015) "Error in the estimation of emission factors for forest degradation in central Africa." J For Res DOI 10.1007/s10310-015-0510-5

[64] Van Breugel et al. (2011) "Estimating carbon stock in secondary forests: Decisions and uncertainties associated with allometric biomass models." Forest Ecology and Management 262 (2011) 1648–1657

Sources of uncertainty and their contribution to overall uncertainty		***High / Low***
	the quantification.	
Sampling error	This error is one of the main sources of errors. It is considered in the quantification of uncertainty.	High
Representativeness error	The lack of representativeness usually causes bias, i.e. if the sample is not representative of the population. In the current case, the source of this error is the following: • Root to shoot ratio: This is sourced from the IPCC and might not be representative. This source is not considered as bias, but a random error of the root-shoot ratio is considered.	High
Calculations		
Model error	The ER-Program uses a simple linear model to calculate annual and then average removals from teak plantations during the reference period. This relies on a model software (CO2FIX) using data from *Dupuy et al. 1998*. Further, it is assumed that Cocoa plantations are the main land use following deforestation, i.e. the carbon stock in Cocoa plantations is used to estimate the residual carbon stock following deforestation. Both assumptions have considerable uncertainties but are deemed to be conservative, as they lead to an underestimation of emission reductions. Teak plantations have higher annual increments than natural forests and the carbon stock value of Cocoa plantations comes from 26-year-old Cocoa plantations. Given this conservative approach, this error is not considered.	High

12.2 Quantification of uncertainty in Reference Level setting

Uncertainties associated with activity data

A detail of the estimation of the uncertainty of activity data is provided in Section 8.3. The uncertainty of activity data is shown in the following tables.

Table 28: Uncertainty of estimates of activity data for deforestation

Zone	Type forest	2000-2015 reference period [ha]	Annual deforestation [ha]	90% CI [ha]	90% CI [%]
Ombrophile	Dense	156,700.82	10,447	2,586	24.75%
Mesophile	Dense	38,232.46	2,549	1,059	41.57%
Ombrophile	Degraded	140,644.19	9,376	2,321	24.75%
Mesophile	Degraded	80,723.54	5,382	2,237	41.57%
Total		**416,301**	**27,753**		

Table 29: Uncertainty of estimates of activity data for forest degradation

Zone	Type forest	2000-2015 reference period [ha]	Annual degradation [ha]	90% CI [ha]	90% CI [%]
Ombrophile	Degraded	66,305.80	4,420	1,862	42.13%
Mesophile	Degraded	24,369.71	1,625	652	40.13%

Table 30: Uncertainty of estimates of activity data of afforestation

Zone	2000-2015 reference period [ha]	Annual degradation [ha]	90% CI [ha]	90% CI [%]
Ombrophile	13,333.00	889	777.40	87%
Mesophile	3,914.00	261	182.81	70%

Uncertainties associated with deforestation emission drivers

The ER-Program uses error propagation to estimate the uncertainty of the EFs.

The application of the Monte Carlo simulation follows the guidance provided in the 2006 IPCC guidelines. Thus, the emission uncertainties are calculated by *equations 3.1 and 3.2 of IPCC 2006*. Depending on the case (addition or product), two rules are proposed for the calculation:

EQUATION 3.1

COMBINAISON DES INCERTITUDES – NIVEAU 1 – MULTIPLICATION

$$I_{totale} = \sqrt{I_1^2 + I_2^2 + \ldots + I_n^2}$$

Where:
I_{totale} = the percentage of uncertainty of the quantities product quantity uncertainty (half of the 90 % confidence interval divided by the total expressed as a percentage);
I_i = the percentage of uncertainty associated with each quantity.

EQUATION 3.2
COMBINAISON DES INCERTITUDES – NIVEAU 1 – ADDITION ET SOUSTRACTION

$$I_{totale} = \frac{\sqrt{(I_1 \bullet x_1)^2 + (I_2 \bullet x_2)^2 + \ldots + (I_n \bullet x_n)^2}}{|x_1 + x_2 + \ldots + x_n|}$$

Where:
x_i et I_i = uncertain quantities and their respective percentages of uncertainty.

The following tables show the uncertainties related to biomass estimates and emission factors for deforestation in dense and degraded forest:

Table 31: Uncertainties related to biomass estimation for deforestation in dense forest

Uncertainties in AGB, BGB and total biomass						
	Above-ground biomass (AGB)		**Below-ground biomass (BGB)**		**Total biomass (AGB+BGB)**	
Parameter	**Ombrophile**	**Mésophile**	**Ombrophile**	**Mésophile**	**Ombrophile**	**Mésophile**
Sampling error [tdm/ha]	18.30	12.70	6.80	3.10	n.a.	n.a.
Sampling error (also of the RSR for BGB) [%]	11.09%	10.74%	11.13%	11.81%	n.a.	n.a.
Chave allometry error [tdm/ha]	**8.77**	**6.28**	n.a.	n.a.	n.a.	n.a.
Chave allometry error [%]	5.31%	5.31%	n.a.	n.a.	n.a.	n.a.
Combined measurement error (DBH, H, WD) [tdm/ha]	**23.58**	**16.89**	n.a.	n.a.	n.a.	n.a.
Combined measurement error [%]	14.28%	14.28%	n.a.	n.a.	n.a.	n.a.
Total error [tdm/ha]	**31.11**	**22.05**	**6.80**	**3.10**	**35.26**	**23.71**
Total error [%]	**18.84%**	**18.64%**	**11.13%**	**11.81%**	**15.59%**	**16.41%**

Table 32: Uncertainties related to biomass estimation for deforestation in degraded forest

Uncertainties in AGB, BGB and total biomass						
	Above-ground biomass (AGB)		**Below-ground biomass (BGB)**		**Total biomass (AGB+BGB)**	
Parameter	**Ombrophile**	**Mésophile**	**Ombrophile**	**Mésophile**	**Ombrophile**	**Mésophile**
Sampling error [tdm/ha]	18.30	12.70	6.80	3.10	n.a.	n.a.
Sampling error (also of the RSR for BGB) [%]	15.92%	17.65%	15.99%	16.63%	n.a.	n.a.
Chave allometry error [tdm/ha]	**6.10**	**3.82**	n.a.	n.a.	n.a.	n.a.
Chave allometry error [%]	5.31%	5.31%	n.a.	n.a.	n.a.	n.a.
Combined measurement error (DBH, H, WD) [tdm/ha]	**16.42**	**10.28**	n.a.	n.a.	n.a.	n.a.

Combined measurement error [%]	14.28%	14.28%	n.a.	n.a.	n.a.	n.a.
Total error [tdm/ha]	**25.33**	**16.78**	**6.80**	**3.10**	**27.87**	**17.99**
Total error [%]	**22.04%**	**23.31%**	**15.99%**	**16.63%**	**17.70%**	**19.85%**

Table 33: Uncertainties in estimating dead organic matter for dense forest

Uncertainties in the Dead Organic Matter pool (DOM)												
Uncertainties	**Standing deadwood**		**Lying deadwood**		**Stumps**		**Litter**		**BGB**		**Total DOM**	
Parameter	Ombro	Méso	Ombro	Méso	Ombro	Méso	Ombro	Méso	Ombro	Méso	Ombro	Méso
Sampling error [tdm/ha]			2.20	5.000	2.700	6.000	0.084	0.156	1.34	1.34	0.69	0.84	n.a.	n.a.
Sampling error [%]			16.96 %	30.21 %	17.46 %	35.50 %	22.11 %	74.29 %	30.00 %	30.00 %	20.00 %	20.00 %	n.a.	n.a.
Chave allometry error [tdm/ha]			0.69	0.88	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Chave allometry error [%]			5.31%	5.31%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Combined measurement error [tdm/ha]			1.85	2.364	2.208	2.414	0.054	0.030	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Combined measurement error [%]			14.28 %	14.28 %	14.28 %	14.28 %	14.28 %	14.28 %	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total error [tdm/ha]			**2.96**	**5.60**	**3.49**	**6.47**	**0.10**	**0.16**	**1.34**	**1.34**	**0.62**	**1.13**	**4.81**	**8.73**
Total error [%]			**22.80 %**	**33.84 %**	**22.56 %**	**38.27 %**	**26.32 %**	**75.65 %**	**30.00 %**	**30.00 %**	**18.11 %**	**27.04 %**	**13.10 %**	**20.64%**

Table 34: Uncertainties in estimating dead organic matter for degraded forest

Uncertainties in the Dead Organic Matter pool (DOM)												
Uncertainties	**Standing deadwood**		**Lying deadwood**		**Stumps**		**Litter**		**BGB**		**Total DOM**	
Parameter	Ombro	Méso	Ombro	Méso	Ombro	Méso	Ombro	Méso	Ombro	Méso	Ombro	Méso

Sampling error [tdm/ha]	2.20	5.000	2.700	6.000	0.084	0.156	1.34	1.34	0.81	0.85	n.a.	n.a.
Sampling error [%]	14.05%	30.43%	14.48%	27.11%	15.27%	28.36%	30.00%	30.00%	20.00%	20.00%	n.a.	n.a.
Chave allometry error [tdm/ha]	0.83	0.87	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Chave allometry error [%]	5.31%	5.31%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Combined measurement error [tdm/ha]	2.24	2.347	2.662	3.161	0.079	0.079	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Combined measurement error [%]	14.28%	14.28%	14.28%	14.28%	14.28%	14.28%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total error [tdm/ha]	**3.25**	**5.59**	**3.79**	**6.78**	**0.12**	**0.17**	**1.34**	**1.34**	**0.67**	**1.13**	**5.21**	**8.96**
Total error [%]	**20.73%**	**34.03%**	**20.34%**	**30.64%**	**20.91%**	**31.76%**	**30.00%**	**30.00%**	**16.51%**	**26.67%**	**12.02%**	**18.75%**

Table 35: Uncertainties related to increased biomass in cocoa plantations

AGB, BGB and litter in Cocoa plantations				
	AGB	**BGB**	**Litter**	**Total biomass**
Biomass [tdm/ha]	37.2	8.2	9.3	**54.7**
Uncertainty				
SE	2.9	0.6	1.1	
90% CI [tdm/ha]	4.96	1.03	1.88	5.38
90% CI [%]	13.34%	12.52%	20.24%	9.84%

Table 36: Uncertainties related to emission factors

Emission Factors & uncertainties			
Land cover change type	**Emission factor [tCO2/ha]**	**90% confidence interval [tCO2/ha]**	**90% confidence interval [%]**
Deforestation Forêt Ombrophile (DF_O)	426.46	62.69	14.70%
Deforestation Forêt Mésophile (DF_M)	295.71	42.79	14.47%
Déforestation Forêt Ombrophile (DF_O) degradée	246.64	39.20	15.89%
Déforestation Forêt Mésophile (DF_M) degradée	180.46	29.58	16.39%
Forest degradation Ombrophile	179.82	62.73	34.88%
Forest degradation Mésophile	115.26	42.84	37.17%

Table 37: Uncertainties related to removal factors

Ombrophile						
		AGB	BGB	Total biomass	Uncertainty	
Age	**tC/ha**	**tCO2eq/ha**	**tCO2eq/ha**	**tCO2eq/ha**	**90% CI [tCO2/ha]**	**90% CI [%]**
1	3,29	12,07	4,47	16,54	5.6	34%
2	6,58	24,15	8,93	33,08	11.2	34%
3	9,87	36,22	13,39	49,61	16.8	34%
4	13,16	48,30	17,85	66,15	22.5	34%
5	16,45	60,37	22,32	82,69	28.1	34%

6	19,74	72,45	26,78	99,23	33.7	34%
7	23,03	84,52	31,24	115,76	39.3	34%
8	26,32	96,59	35,71	132,30	44.9	34%
9	29,61	108,67	40,17	148,84	50.5	34%
10	32,90	120,74	44,63	165,38	56.2	34%
11	36,19	132,82	49,10	181,92	61.8	34%
12	39,48	144,89	53,56	198,45	67.4	34%
13	42,77	156,97	58,02	214,99	73.0	34%
14	46,06	169,04	62,49	231,53	78.6	34%
15	49,35	181,11	66,95	248,07	84.2	34%

Mésophile						
		AGB	BGB	Biomasse totale	Uncertainty	
Age	**tC/ha**	**tCO2eq/ha**	**tCO2eq/ha**	**tCO2eq/ha**	**90% CI [tCO2/ha]**	**90% CI [%]**
1	2,35	8,62	1,72	10,35	3.5	34%
2	4,70	17,25	3,45	20,70	7.0	34%
3	7,05	25,87	5,17	31,05	10.5	34%
4	9,40	34,50	6,90	41,40	14.1	34%
5	11,75	43,12	8,62	51,75	17.6	34%
6	14,10	51,75	10,35	62,10	21.1	34%
7	16,45	60,37	12,07	72,45	24.6	34%
8	18,80	69,00	13,80	82,80	28.1	34%
9	21,15	77,62	15,52	93,14	31.6	34%
10	23,50	86,25	17,25	103,49	35.1	34%
11	25,85	94,87	18,97	113,84	38.7	34%
12	28,20	103,49	20,70	124,19	42.2	34%
13	30,55	112,12	22,42	134,54	45.7	34%
14	32,90	120,74	24,15	144,89	49.2	34%
15	35,25	129,37	25,87	155,24	52.7	34%

Hence, the other sources of errors such as measurement error and modelling error may be neglected.

Uncertainties of FRL/NERF for deforestation

Uncertainty of the reference level was estimated using the Tier 1 approach provided in the 2006 IPCC GL. Confidence intervals were assumed symmetrical in all cases and normally distributed. Two uncertainties were calculated for activity data and emissions factors before assessing global uncertainty related to the REL. The following equations were used for addition or multiplication.

For addition:

$$U_{total} = \frac{\sqrt{(U_1.x_1)^2 + (U_2.x_2)^2 + \cdots + (U_n.x_n)^2}}{|x_1 + x_2 + \cdots + x_n|}$$

Where:

Ui= percentage uncertainty associated with each of the parameters

xi= the value of the parameter

Utotal= the percentage uncertainty in the sum of parameters

For multiplication:

$$U_{total} = \sqrt{{U_1}^2 + {U_2}^2 + \cdots + {U_n}^2}$$

Where:

Ui= percentage uncertainty associated with each of the parameters

xi= the value of the parameter

Utotal= the percentage uncertainty in the sum of parameters

Table 33 Uncertainty of the RL following IPCC Tier 1 method for propagation of uncertainties

Table 38: Uncertainties and spread

Emissions & REL			
Activity	**Annual emissions [tCO2/year]**	**90% confidence interval [tCO2/year]**	**90% confidence interval [%]**
Deforestation zone Ombrophile - dense	4,455,126	1,282,457	28.79%
Deforestation zone Mésophile - dense	753,721	331,730	44.01%
Deforestation zone Ombrophile - degraded	2,312,539	680,184	29.41%
Deforestation zone Mésophile - degraded	971,133	433,911	44.68%
Forest degradation Ombrophile	794,894	434,788	54.70%
Forest degradation Mésophile	187,252	102,421	54.70%
Carbon stock enhancement (natural regeneration)	-139,203	-55,180	39.64%
Forest Reference Level	**9,335,462**	**1,615,007**	**17.30%**

The calculations may be found in the spreadsheet with the calculation of the RL.

A sensitivity analysis was carried out using the error propagation model. The following sources were identified as the most important:

- Reducing the uncertainty of activity data of deforestation to 20% makes uncertainty to reduce from 17.3% to 14.5%, below the threshold of 15%

- Reducing the uncertainty of activity data of forest degradation to 20% makes uncertainty to reduce from 17.3% to 16.83%.
- Reducing the uncertainty of activity data of reforestation to 20%, doesn´t haven any impact.
- Reducing the uncertainty of the AGB+BGB to just 5%, makes uncertainty to be reduced to 15.2%.
- Significantly reducing the uncertainties related to the DOM pool or the carbon stock enhancement estimate does change the uncertainty of the RL by less than 1%.

In conclusion, the uncertainty of the RL can be best be mitigated by reducing the uncertainty of the activity data of deforestation which can be improved through an increase of the sampling intensity and the stratification which in the case of Ivory Coast doesn´t seem to be performing very well.

13 CALCULATION OF EMISSION REDUCTIONS

13.1 Ex-ante estimation of the Emission Reductions

The ER-P aims to achieve a reduction of 27,940,407 tCO_{2-e} over the period of the ERPA, i.e. between 2019 and 2027. In compliance with criteria 22 of the methodological framework, these ex-*ante* estimates are based on a certain number of parameters: the estimated emissions for the scenario with the program, the amount of emission reductions that will be set aside to compensate for the level of estimation uncertainty and the amount of emission reductions that will be set aside as part of the risk of reversals (non-permanence).

Estimated emissions for the ER-P scenario

With the program of activities as has been developed, over 8 years, it is estimated that the ER-P should enable a reduction of emissions due to deforestation by almost 22 $MtCO_{2-e}$ and removal of around 13 $MtCO_{2-e}$ more with respect to the reference scenario. These estimates themselves are based on several hypotheses regarding project effectiveness and removals in carbon stock expansion activities.

- *Program effectiveness*: The ER-P's program of activities has been developed in order to target each of the direct and indirect drivers of deforestation whilst maximizing the reduction of the risk of displacement. In proposing an intervention strategy based on existing initiatives, the ER-P aims to achieve a good level of effectiveness relatively quickly as regards emissions reduction. Furthermore, progressive effectiveness is to be expected. This hypothesis results from an effectiveness of 10% in the first year, gradually increasing to 40% of emissions reduction with respect to the reference scenario from the 16th year, after the sectorial activities capitalization phase. See table 30 below.

Table 39: Rate of effectiveness

Année	Taux d'efficacité *% de réduction des émissions par rapport au scénario de référence*
2019	10%
2020-2021	20%
2022-2024	25%
2025-2028	30%
2029-2033	35%
2034-2039	40%

- *Estimated removals for carbon stock expansion activities*: The program stipulates several activities that will contribute to expanding forestry and agroforestry carbon stocks. These activities are summarized in the table below which also includes the hypotheses made regarding an increasing biomass.

<table>
<tr><td>Sectorial activities</td><td>Description of carbon stock expansion activities</td></tr>
<tr><td>AS1 – Agroforestry</td><td>
Objective: 100,000 ha of agroforestry in the zone after 4 years
Description:
- Model 1 - Planting of new agroforestry fields (shade cocoa, forest trees/natural rubber combination, plantains and food crops in the rows in between, etc.), on bare degraded land – 50,000 ha (n1: 8,000 ha, n2: 12,000 ha, n3 and n4: 15,000 ha)
- Model 2 - Introduction of high added value teak shade trees in cocoa farms already in production at the rate of 50 roots introduced per hectare – 50,000 ha (n1: 8,000 ha, n2: 12,000 ha, n3 and n4: 15,000 ha).
Hypotheses and data sources for ex-ante estimation of removals:
- Model 1 – Average annual growth for complex agroforestry in Cameroon in Palm et al. (2000): 3.55 tC ha^{-1} $year^{-1}$
- Model 2 – Use of the teak productivity table from Dupuy et al. (1999) for fertility classes 1 (ombrophilous sector) and 2 (mesophilic). In the absence of information on the localization of agroforestry fields which will be supplemented, the assumption is that 70% is located in the ombrophilous sector and 30% in the mesophilic sector, which corresponds to the distribution of the two sectors in the ER-P zone.
Removals results: (See the attached calculation sheet)

TOTAL ABSORPTIONS MODELES 1 ET 2
<table>
<tr><th>Années</th><th>Absorptions (tCO2eq)</th></tr>
<tr><td>2019</td><td>211 589,71</td></tr>
<tr><td>2020</td><td>535 639,76</td></tr>
<tr><td>2021</td><td>952 357,21</td></tr>
<tr><td>2022</td><td>1 388 037,01</td></tr>
<tr><td>2023</td><td>1 448 885,33</td></tr>
<tr><td>2024</td><td>1 521 077,42</td></tr>
<tr><td>2025</td><td>1 599 304,29</td></tr>
<tr><td>2026</td><td>1 681 284,70</td></tr>
<tr><td>2027</td><td>1 765 291,54</td></tr>
<tr><td>TOTAL</td><td>11 103 466,97</td></tr>
</table>
</td></tr>
<tr><td>ES1. Growth of industrial firewood and charcoal</td><td>
Objective: 20,000 ha of planting for energy purposes after 4 years

Description and hypothesis:
- These are essentially rapid growth industrial plantations intended for the production of firewood and charcoal.
- The aim is to use and sell this wood to relieve the pressure of degradation due to the harvesting of firewood and carbonization. With rotations, over a term yet to be specified, but in any event less than 20 years, the assumption is that the carbon absorbed in these plantations will be
</td></tr>
</table>

	removed during the project. The removals/emission balance is thus deemed to be zero.

FS2. Restoration and protection of the natural forest cover

Objective: 114,000 ha of natural forest and old restored plantations, whose natural generation has been assisted, and other plantations after 4 years

Description:

- Model 1 – 40,000 ha of industrial timber plantations (2 blocks, each 20,000 ha), 1 block in each sector (ombrophilous and mesophilic);
- Model 2 – Assistance with natural regeneration and the restoration of natural forests that have been degraded or old plantations in classified forests over 84,000 ha. In the absence of information on site localization, it is anticipated that total occupation of the sector will be distributed pro rata with respect to the entire area (70% ombrophilous sector and 30% mesophilic sector).

Hypotheses and data sources for ex-ante estimation of removals:

- Model 1 – Net growth of biomass in tree plantations for the tropical zone, tropical rainforests for the ombrophilous zone – 15 t.m.s. ha-1 and tropical moist deciduous forest for the mesophilic sector – 10 t.m.s. ha-1. IPCC, 2003, table 4.12.
- Model 2 – Net growth of biomass in natural forests for the tropical zone, tropical rain forests for the ombrophilous zone – 7 t.m.s. ha-1 and tropical moist deciduous forest for the mesophilic sector – 5 t.m.s. ha-1. IPCC, 2003, table 4.12.
- For both models: In the absence of data, account has only been taken of living biomass (AGB + BGB). Application of the IPCC default root/shoot ratio according to the type of forest (table 4.4). Application of the conversion factor for the carbon part of dry matter in the living biomass (0.47). Application of the carbon conversion factor to obtain CO2 equivalent (44/12)

Removals results: (*see the attached calculation sheet)*

TOTAL ABSORPTIONS FS2 - MODELES 1 ET 2	
Années	**Absorptions (tCO2eq)**
2019	750 063,60
2020	1 500 127,20
2021	2 250 190,80
2022	2 912 229,98
2023	2 912 229,98
2024	2 912 229,98
2025	2 912 229,98
2026	2 912 229,98
2027	2 912 229,98
TOTAL	21 973 761,48

Amount of emission reductions to be set aside to compensate for the level of estimation uncertainty

As per criterion 22, based on the calculations in section 12, the level of uncertainty associated with estimates of activity data and emission drivers for the reference scenario increases to 17.30%, which enables the emission reductions portion to be fixed at 4% to be set aside to compensate for the level of uncertainty.

Amount of emission reductions to be set aside for the risk of reversals (non-permanence)

Section 11 details the level of risk of reversals associated with the ER-P. This gives a total of 23% of emission reductions to be set aside for the risk of reversals.

The table below summarizes all these hypotheses and enables estimation of the emission reductions anticipated by the project. The total share of emission reductions to be set aside, be it for reasons of uncertainty or risk of reversals, increases to a little over 6 $MtCO_{2-e}$.

The calculation sheets can be obtained by following the link provided in Annex 8.

Table 40: Estimated emission reductions during the ERPA term

Year	Reference level for deforestation and forest degradation (tCO2eq)	Reference level for expanding carbon stocks (tCO2eq)	Estimate of emissions in the ER-P scenario (tCO2eq)	Estimates of removals due to stock expansion activities (tCO2eq)	Estimate of the share of emission reductions to be set aside for uncertainty (tCO2eq)	Estimate of the share of emission reductions to be set aside for the risk of reversals (tCO2eq)	Estimate of emission reductions (tCO2eq)
2019.	4,737,332.40	-69,601.49	4,288,152.80	-480,826.65	34,416.19	154,453.15	671,535.42
2020.	9,474,664.80	-139,202.99	7,727,053.70	-2,035,766.96	145,767.00	654,173.87	2,844,234.20
2021.	9,474,664.80	-139,202.99	7,677,946.42	-3,202,548.01	194,402.54	872,440.65	3,793,220.22
2022.	9,474,664.80	-139,202.99	7,253,320.46	-4,300,266.99	255,296.33	1,145,720.13	4,981,391.88
2023.	9,474,664.80	-139,202.99	7,204,213.18	-4,361,115.31	259,694.56	1,165,458.50	5,067,210.89
2024.	9,474,664.80	-139,202.99	7,204,213.18	-4,433,307.40	262,582.24	1,178,417.86	5,123,555.93
2025.	9,474,664.80	-139,202.99	6,730,479.93	-4,511,534.27	284,660.65	1,277,501.44	5,554,354.07
2026.	9,474,664.80	-139,202.99	6,681,372.65	-4,593,514.68	289,904.15	1,301,033.28	5,656,666.42
2027.	9,474,664.80	-139,202.99	6,632,265.36	-4,677,521.52	295,228.72	1,324,928.89	5,760,560.37
TOTAL	52,110,656.41	-765,616.43	41,354,899.73	-18,813,831.32	1,152,158.86	5,170,664.16	22,481,148.54

14 SAFEGUARDS

14.1 Description of how the ER Program meets the World Bank social and environmental safeguards and promotes and supports the safeguards included in UNFCCC guidance related to REDD+

WORLD BANK SOCIAL AND ENVIRONMENTAL SAFEGUARDS AND PROMOTION OF THE SAFEGUARDS INCLUDED IN UNFCCC GUIDANCE

The **Strategic Environmental and Social Assessment** (SESA, ref: The SESA report on the website) of REDD+ in Côte d'Ivoire has been compiled in a very inclusive way with very strong participation by civil society and the other stakeholders involved. The SESA study was conducted throughout 2016 in parallel with the development of the national REDD+ strategy framework to ensure consistency with national strategy and the risks/impacts associated with the implementation of REDD+. The consultations and participatory work completed during the SESA have served as the basis of identifying the eight pillars of REDD+ national strategy and related activities.

This has particularly resulted in the following:

1. A provisional engagement plan, issued on 2/7/16 prior to the study launch workshop.

2. Framework document, issued on 2/25/16 following the launch workshop held in Abidjan on February 19, 2016.

3. A stakeholders' consultation report, issued on 5/13/16 following regional consultations, which took place in the field between March 14, 2016 and April 15, 2016.

4. A preliminary analysis report on the initial environmental, socio-economic and institutional situation issued on July 6, 2016.

5. A preliminary analysis report of options for the REDD+ strategy framework produced by French consultants BRLI in collaboration with a group of 18 stakeholders.

6. A detailed analysis report of the strategic options of REDD+ National Strategy (SN-REDD+ version 2016 and current version adopted in November 2017 by the Ivory Coast Government).

7. The SESA report (including various annexes), the Environmental and Social Management Framework (ESMF), the Resettlement Policy Framework (RPF), the Process Framework (PF), the Physical Cultural Resource Management Framework (PCRMF), and the Pest and Pesticide Management Plan (PPMP), which have been validated by the government through the National Environmental Agency (ANDE) following the following process:

- Holding a stakeholder contributions and enhancement workshop (last workshop before submission for validation by the ANDE) on November 5, 2018;
- Conduct of public meetings by the ANDE on the reports from 10 to 21 December 2018; meeting bringing together stakeholders from 15 administrative regions (in the Center, Southwest and West areas of the country); and
- Technical examination and validation of reports by the ANDE through an interministerial commission (also bringing together stakeholders from various administrative regions, including those in the ER-P area) on 27 and 28 December 2018.

The instruments validated to date are available on the following link: http://reddplus.ci/bibliotheques/rapports/.

In line with the expectations and objectives of national legislation in this area, safeguard policies issued by the World Bank and Cancun safeguards guarantees, the SESA particularly includes:

- A construction of the SN REDD+ strategic options, taking account of populations' opinions and incorporating the objectives and mechanisms oriented to sustainability.
- The identification of the residual potential impacts of the strategic options selected and recommendation of mitigation and improvement principles/measures.
- The definition of specific mechanisms and procedures for managing issues and particular problems including (i) environmental and social aspects of sub projects, (ii) the risk of involuntary displacement (by way of precaution), (iii) the restriction of access to natural resources, (iv) the protection of cultural assets and (v) the prevention and management of risks associated with phytosanitary products.
- The orientations on the institutional arrangements for the management of environmental and social aspects of the mechanism.
- The identification of the needs for reinforcement of the national legal framework with regard to safeguards.

As a supplement to SESA, several safeguard tools have been developed (available at the following link: http://reddplus.ci/bibliotheques/rapports/). These safeguard tools define the guidelines to be adopted, specific studies that will be have to be performed, the expected compensation, the procedures for appeal by populations against the proposed activities, the management procedures for such appeals and finally the monitoring and evaluation needed to verify the implementation of the intended mechanisms, procedures and management measures.

Environmental and Social Management Framework (ESMF) It contains a screening mechanism used for (i) a preliminary assessment of the environmental and social impacts of the different strategic options; (ii) a definition of the mitigation measures, of the political, institutional, legal and regulatory framework, of the implementation; (iii) the elaboration of a monitoring and surveillance environmental program, a capacity reinforcement program, and of an implementation budget.

Resettlement Policy Framework (RPF) It is an instrument of social assessment, elaborated by the principle of precaution (as the strategic options do not anticipate any involuntary displacement, aiming at studying all options in order to minimize involuntary displacements of populations or, otherwise, to restore the living conditions of these populations, at least at the level they had before displacement. It also discusses issues related to the decrease of revenues caused by the activities concerned by the REDD+ mechanism.

Pest and Pesticide Management Plan (PGPP). It is the instrument aiming to identify the potential impacts of using pesticides, and of developing the best practices of product conditioning, transport, use and management, and their packaging, in order to prevent and avoid, or minimize the negative impacts of these products on human and animal health, and on the environment.

Physical Cultural Resource Management Framework (CGRCP). It is the instrument aiming to protect archaeological resources and cultural property belonging or having belonged to the populations.

Process Framework (PF). It is the instrument aiming to define new modes of access to forests and to natural resources for neighboring populations, in a sustainable manner. The Ivory Coast has ratified several international legal instruments, which protect the rights of communities with regard to the exploitation of natural resources on their lands and territories. Several of these conventions recognizing the FPIC as a right for local communities, to give or refuse their consent for any project likely to affect the land owned through custom, their natural resources, their way of life, and their means of subsistence.

The **Information on Safeguards System (Système d'Information sur les Sauvegardes)**: a framework document for implementing the system has been elaborated in line with the UNFCCC directives. This document emphasizes (i) SIS objectives, (ii) the data collection, analysis and management mechanism, (iii) the principles,

criteria and indicators relating to the Cancun safeguards, (iv) the institutional arrangements indispensable for SIS operationalization, and (v) the technological platform for SIS activities. In the present stage, the following has yet to be done: making the institutional arrangements functional, implementing a technological setup, reinforcing the human resources of the SEP-REDD+ in order to begin system operationalization with the collection and analysis of data relating to specific projects, and to the REDD+ mechanism as a whole. Actions in this direction are considered for the year 2019.

As noted above, the safeguards instruments SESA, ESMF, CPR, PF, CGRCP and PGP were the subject of stakeholders' contributions and enhancement workshop on November 5, 2018. As part of the legal process for their validation by the ANDE, public consultations were hold from December 10th to 21st, 2018, and technical and validation examinations took place on December 27th and 28th, 2018. **All these instruments have been validated**.

These safeguards instruments have been developed in line with World Bank safeguard policies and national safeguards, the implementation of the ERP will respond to the World Bank's safeguards guidelines and mechanisms. A functional link is established between the program activities framework program, the World Bank's OPs, the new World Bank ESF framework and the safeguards instruments prepared. The safeguards instruments developed in response to the guidelines of these Ops with in the framework of the REDD+ national strategy, and they will be used when implementating the ER-P.

The finalized safeguard instruments validated December 27-28, 2018 by the **National Environmental Agency (ANDE)**, are available at the following link: http://reddplus.ci/bibliotheques/rapports/.

The table below shows the World Bank's social and environmental policies and standards that apply under the REDD+ National Strategy and the ER-P.

Table 41: Potential World Bank Operational Policies (OP)/Environmental and Social Standards (ESS) potentially triggered under the REDD+ National Strategy and ER-P

REDD+ strategic options	Sectorial activities	Enabling activities	OP/ESS potentially triggered
Zero deforestation Agriculture	AS1. Agroforestry and agricultural intensification AS2.Agroforest	AH1. Land security. AH2. Technical support and information.	OP 4.01; OP 4.12; OP 4.9; OP 4.36/ESS n°1; ESS n°3; ESS n°5; ESSn°10
Sustainable domestic energy	ES1. Fuelwood plantation. ES2. Community agroforestry: Food plantation and fuelwood associations (Taungya) ES3. Alternatives to wood energy - utilization of agricultural residues and timber	EH1. Land security.	OP 4.12; OP 4.36/ESS n°5; ESS n°6
Sustainable forests management	FS1.Small-scale timber plantation and protection of private and community forests FS2. Restoration and protection of the natural tree cover in classified forests FS3. Strengthening the protection of protected areas (in NP and NR)	FH1. Strengthening local communities in forest management. FH3. Technical support for SODEFOR. FH3. Management of support for protected areas.	OP4.01; OP4.12/ESS n°1, ESS n°5

Mines	MS1. Rationalization of artisanal gold mining	MH1. Strengthening the application of the mining code.	OP 4.01; OP 4.12/ESS n°1; ESS n°5
Enabling ***Planning*** ***Governance*** ***Population*** ***Capacity***	H1. Land tenure security. H2. Territorial development and Land use planning. H3. Improved and participatory management of classified forests. H4. Capacity building among local communities.		OP 4.01; OP 4.12; OP 4.11/ESN n°1; ESS n°5; ESS N°8

APPLICATION OF SOCIAL AND ENVIRONMENTAL MANAGEMENT TO ER-P

The ER-P intervention strategy has been developed in line with the safeguard tools of the REDD+ National Strategy Framework.

To this effect, it was planned the following:

- The mechanisms and procedures provided for by ESMF, IRPF, CGRCP, CFARN and the Pest and Pesticide Management Plan shall be followed within the sub-projects and activities framework of the ER-P in its entirety;
- All safeguard instruments will be disseminated to the populations and in particular to the actors who will be involved in the preparation and implementation of the ER-P activities: various stakeholder consultation workshops as well as public meetings held by the ANDE enabled stakeholders to (i) identify the objectives, purposes and content of the safeguards instruments, (ii) their responsibilities in their implementation and (iii) the training they will receive from 2019 onwards;
- All the stakeholders involved in the implementation of the ER-P activities will be trained in January 2019 on the safeguards instruments in order to appropriate them and to take into account their directives in the context of the realization of the activities of the ERP;
- Safeguard instruments are currently being integrated into the Cocoa-Forest Initiative (ICF), which makes it possible to concretely engage the entire cocoa sector, particularly the private sector, in the implementation of safeguards;
- A social and environmental control and monitoring framework for activities and projects: the program implementation stakeholders will be supervised and supported by the SEP-REDD+ Safeguards Unit to manage the environmental and social aspects of their activities. Based on the framework the guidelines of the safeguards instruments, each activity and project of the ER-P will integrate, (i) the indicators, (ii) those responsible for the provision of data on the indicators (will generally be the implementing actors ERP activities and projects), (iii) the tasks to be performed (and those responsible) for achieving the expected results, (iv) the comments on the indicators, (v) the recommendations.
- Technical and financial supports shall be provided in order to make SIS and MRP operational (implementing bodies and training sessions) in the ER-P regions;
- The reinforcement of the technical and material capacities of the Safeguard Cell of SEP-REDD+;
- Technical consulting support and assistance will be granted by SEP-REDD+ to said agencies and stakeholders.

The safeguards management will be organized around:

1. Dissemination of safeguards (including the Safeguards Information System, Complaints Mechanism and FPIC guidelines);

2. Training of implementing agencies and stakeholders on safeguard instruments and mechanisms for their integration into the implementation of ERP activities and projects;

3. Direct accountability of the implementing agencies and PR-E stakeholders in the management of safeguards related to ER-P activities and projects;

4. Coordination, supervision, support, and implementation of the Safeguards Guidelines by SEP-REDD+;

5. Advisory assistance and support to implementing agencies and stakeholders in their implementation of safeguard measures;

6. SIS management by SEP-REDD +.

The management of the SIS by the SEP-REDD+ will be done in collaboration with the actors of execution of the activities and projects of the PR-E and various structures some of which and their functions are known at this stage (structures that provide data, structures that contribute to the data quality analysis, etc.) see paragraph below.

Also, **the data collected within the control and monitoring framework** will be used to feed the SIS, to monitor the compliance status of activities and projects with Cancun guarantees. This framework will be respected, under the supervision and coordination of the National REDD+ Commission, by the implementing agencies and the stakeholders implementing the activities and sub-projects of the ER-P.

In the event of non-compliance with the recommendations made in the context of environmental and social monitoring and monitoring of the ERP by implementing actors:

- The funding of their activities by the program will be suspended until the implementation of the recommendations;
- These can be excluded from benefit sharing payments and PES.

14.2 Description of the agreements to provide information on safeguards during the ER Programme implementation

The **General Objective** of Côte d'Ivoire's SIS is to compile and present relevant information in order to show the UNFCCC and the stakeholders how the Cancun safeguards are taken into account and observed during the implementation of the REDD+ actions. In addition to the Cancun safeguards, information on how the World Bank's safeguards policies are taken into account and adhered to will be taken into account.

For the ER-P, the proper application of safeguards, as well as the creation of non-carbon benefits during the program implementation, will be proven by the following means: (i) regular information posted on the REDD+ National Register/Geoportal, (ii) reports from independent mandated observers, (iii) data collection from the bodies and project leaders concerned, and (iv) the SNSF which can be a key source of information on the compliance with certain guarantees.

For each of these programs and initiatives, monitoring and evaluation systems will be elaborated so as to fill in the overall framework for the ER-P monitoring-assessment. The members of the REDD+ (CN REDD+, CTI REDD+ and SEP-REDD+) National Commission form a solid platform for facilitating the integration of the strategy in the political sector and the monitoring, evaluation and examination of progress and performances of ER-P implementation.

In addition to the overall monitoring and evaluation framework, which will be updated so as to take into account the implementation phase of the REDD+ process, three accessible, transparent tools will be used to monitor ER-P implementation:

- The National Forest Monitoring System;
- The national REDD+ register;
- The Safeguard Information System (SIS).

- ***Overall SIS mechanism****:*

The SEP-REDD+ is responsible for SIS administration and through conventions will commit, along with all institutions concerned, for: (i) providing data informing about including and observing the guarantees, (ii) carrying out data analysis, as a member of the External Cell for Quality Control and Data Processing Support, and (iii) carrying out quality control of analyzed data and analyses via an iterative process between SEP-REDD+ and the External Cell for Quality Control and Data Processing Support

Data collection and management During the implementation of REDD+ activities, SEP-REDD+ shall collect data provided by several sources: (i) REDD+ programs / projects, (ii) protected areas, (iii) decentralized state structures concerned, (iv) focal points of conventions, (v) NGOs working in the field of forest and environmental conservation, (vi) other structures involved in sustainable forest management (agriculture, environment, scientific research, territory administration, labor, hydraulics, energy, mining and oil and gas, etc.), (vii) the National Institute of Statistics, (viii) international cooperation bodies, (ix) the official journal, etc.

Data processing and analysis. The data collected on the application of REDD+ principles, criteria and indicators will be centralized in a database at the SEP-REDD+, and will be subject to processing and analysis so as to emphasize in a clear, transparent and reliable manner, that the guarantees were taken into account and complied with. Thus, the data processing and analysis report will highlight:

- Statistics on the level the Ivory Coast take social-environmental aspects into account within the framework of the REDD+ process;
- Statistics on the level the promoters of REDD+ projects / programs take social-environmental aspects into account;

- Statistics on the impacts of REDD+ projects / programs for the improvement of living conditions for populations (especially local communities and native populations), and environmental conservation;
- REDD+ actions/activities leading to non-compliance with guarantees.

Information quality control. The SEP-REDD+ will carry Quality control will be out at several levels (internal control) and by the Support Cell (independent external control) according to the operating mode, as defined in advance in a transparent process.

Information distribution. The summary of information validated by the CN-REDD+ will be sent to UNFCCC and posted on-line in the SIS portal (register/geoportal) and on the SEP-REDD+ portal. Moreover, validated information contained in the data analysis report, will be published on the SIS web portal. Communication to UNFCCC, on the taking into account and complying with the REDD+ principles, criteria and indicators, will be made every two years by CN-REDD+ starting with December 2018.

Moreover, this information will be included in the general report on the results of the whole REDD+ process, so as to be included in the SEP-REDD+ annual reports and in the national communication of the Ivory Coast to UNFCCC, every four years.

In order to reach the greatest number of stakeholders in the Ivory Coast, information relating to the taking into account and complying with the guarantees, will be included in the strategies and communication plans used and to be developed by SEP-REDD+ and its partners (radio spots, SMS, awareness caravans, radio and telephone shows, partner Internet sites).

- ***Report to UNFCCC**:*

The draft of the first safeguards summary has been submitted to the National REDD+ Committee for validation during the next meeting of the Committee, scheduled for 4 January 2019.

The summary was developed with the support (definition of focus and contents of the summary and contribution to its drafting) of the stakeholders (including CSOs) constituting the SIS Working Group. This approach has had the advantage of directly integrating the information, opinions, suggestions and recommendations of the stakeholders.

- **Linking SIS with safeguard instruments**:

In practice, the SIS is a mechanism that (i) receives data generated by the implementation of activities: principles, criteria and indicators established under the safeguards provided in relation with the guarantees of Cancun (ii) assess the REDD+ compliance level of the REDD+ National Strategy (SN REDD+) with the said safeguards (level of compliance with safeguards) and (iii) serve as a watchdog tool (allows identify the strengths and weaknesses of the safeguarding activities and make recommendations for improvement) to strengthen the consideration and respect of safeguards.

As for the safeguards instruments that are the EESS report, the ESMF, the CPR, the CF, the CGRCP, the PGP, the FPIC, the FGRM, and the specific instruments that will be elaborated for the sub-projects (Environmental Impact Statement and Social, etc.), they generate data to feed the SIS system from the base.

The safeguard instruments implementation highlights:

- Issues, challenges and opportunities for safeguards related to the implementation of the REDD+/SN REDD + mechanism;
- Safeguard guidelines, measures and mechanisms to be adopted and monitored to ensure the sound management of REDD+/SN REDD+ safeguards against national legal texts and World Bank safeguards policies and Cancun safeguard guidelines;

- The REDD+/SN REDD+ institutional safeguards management platform and associated capacity building activities;
- The environmental and social control and monitoring framework of the REDD+/SN REDD+ mechanism.

This framework will provide tangible results including:

- The level of implementation of the planned safeguards directives, measures and mechanisms;
- Opportunities achieved, the issues/problems/constraints and impacts avoided, achieved, mitigated or compensated;
- Evaluating the planned guidelines, measures and safeguards against outcomes on opportunities, issues, issues, constraints and impacts;
- Recommendations for improvement to best meet the expectations of national legal texts and World Bank safeguards policies as well as specific Cancun safeguards guidelines.

Thus, the safeguard instruments are tools whose application will provide safeguard data to the SIS mechanism. The SIS mechanism will evaluate these data in relation to the taking into account and respect of safeguards (principles, criteria and indicators established within the framework of the SIS of Côte d'Ivoire) and will make recommendations on the safeguards instruments for improvement with respect consideration and respect of Cancun safeguards guidelines. The SIS is a feedback instruments relative to safeguards implementation.

- ***Application of SIS to ER-P***

In addition to the general SIS framework, based on the control and monitoring framework that will be established for each program activity, specific data provided by the implementing actors and verified/validated by the SEP-REDD+ (Safeguards Unit) will be used to feed the SIS.

Monitoring and control indicators of the framework will be in line with the principles, criteria and indicators of the SIS Framework Document. The data collected as part of the activities and sub-project monitoring and control will be integrated into the SIS mechanism to assess the compliance levels of the ER-P activities and projects with the Cancun safeguards. Depending on the levels of compliance, program improvement recommendations will be considered in the program's annual reviews to ensure compliance with the guidelines and safeguards provisions.

For this purpose, if necessary, (i) adjustments will be made to program activities and projects, (ii) the safeguards monitoring mechanism will be strengthened (in terms of the responsibilities of each actor, the deadlines for implementation implementation of recommendations on safeguards, etc.) and (iii) management of financial resources related to safeguards (budget allocations, etc.).

Periodic control and monitoring reports will be prepared by the SEP-REDD+ and published on the REDD+ Registry, highlighting (i) levels of compliance with the guidelines of the safeguarding instruments, national legal texts, safeguard policies, environmental and social standards of the World Bank and Cancun Guarantees, (ii) actions undertaken and (iii) recommendations for improvement see financial sanctions such as the exclusion of payments from carbon profits.

SUMMARY OF SAFEGUARDS ELABORATION AND IMPLEMENTATION

Validated documents are available at the following link: http://reddplus.ci/bibliotheques/rapports/

Table 42: Summary of safeguards elaboration and implementation

Key activities	Milestones
COMPLETED ACTIVITIES	
SESA process together with REDD+ National Strategy development +	
Establishment by SEP REDD+, of a Monitoring Activities Committee	August 31, 2015
Meetings of Monitoring Committee and trading session on World Bank safeguard instruments	October 2015
Consultant recruitment for the elaboration of the SESA and of safeguards framework reports (CGES, CPR, CF, CGRCP et PGP)	December 2015
SESA start-up workshop	February 19, 2016
Hand over of the framework note report by the consultant	February 25, 2016
Consultations by the consultant, of stakeholders on the preliminary options of SN REDD+ throughout Côte d'Ivoire	March-April 2016
Hand over by the consultant of the preliminary SESA report analysis	July 2016
SN REDD+ working groups integrate the preliminary SESA report for the consolidation of the preliminary options	August 2016
Detailed analysis of the SN RED+ by the consultant and production of the provisional reports of the EESS, CGES, CPR, CF, CGRCP and PGP	October 2016
Review of interim reports by SEP REDD+ and SN REDD+ SESA Monitoring Committee for completion	November 2017
Contributions and enhancement Workshop to the interim reports with stakeholders	September 2018
Hand over by the consultant of the provisional reports on safeguard instruments (on the basis of contributions)	September 11-13, 2018
Validation process for safeguarding instruments by the National Environment Agency (ANDE)	November 5, 2018
Public Consultations on Safeguard Instruments	December 10-21, 2018
Technical examination and validation of safeguard instruments	December 10-28, 2018
Validation of the documents by the National Environmental Agency (ANDE)	**December 28, 2018**
SIS process	
Process of drafting the Côte d'Ivoire SIS document	December 10-21, 2017
Recruitment of a consultant for the preparation of the SIS document	27 et 28 December 2017
Introductory SIS workshop for Stakeholders (organized by UN-ENVIRONMENT)	January 2017
Start-up workshop on the elaboration of SIS	June 2017
Set up of a working group on SIS	November 2017
Working sessions on the SIS document	December 2017, and February-March 2018

SIS finalization workshop	April 17, 2018
CN REDD+ validation of the SIS document	**July 2018**
PERSPECTIVES	
Safeguard instruments	
World Bank validation of the safeguard instruments, communication and disseminition of final repports	January- February 2019
Dissemination of safeguard instrument (including SIS, FRGM and FPIC mechanisms)	January- December 2019
Training of implementing agencies and stakeholders on safeguard instruments and mechanisms for their integration into the implementation of activities and projects including those of ER-P	February- May 2019 & September -Novembre 2019
Advice and support (from SEP REDD+) to executing agencies and stakeholders to take into account the guidelines and measures of safeguard instruments in their activities related to NS REDD + strategic options	January- Decembre 2019
Coordination, supervision and support to the implementation of the Safeguards Guidelines by SEP REDD+	January- Decembre 2019
Safeguards Information System (SIS)	
Establishment of the SIS technology platform in connection with the existing SNSF	January- March 2019
Establishment of the SIS institutional operating arrangement including capacity building for relevant stakeholders	February- April 2019
Training of key stakeholders in the operationalization of SIS	April-June & Nov. 2019
Coordination (by SEP REDD +) of SIS management	January- December 2019
Feedback and Grieviance Redress Mechanism (FGRM)	
Official establishment of the FGRM committees in the NAWA and N'ZI regions (pilot phase)	January- February 2019
Official establishment of the FGRM committees in the Mé region a (pilot phase)	February 2019
Training of FGRM committee members by SEP REDD+	February –March 2019
Support and supervision of the committees' operations (through SEP-REDD+) and complaint documents management	March- Decembre 2019
Implementation of the safeguard instruments to the ER-P	
Training of ER-P implementing actors on safeguard instruments	January- March 2020
Development of specific safeguards for sub-projects (Environmental and Social Impact Findings, etc.)	January- March 2020
Dissimination of safeguard instruments within the ER-P area	January-December 2020
Establishment of the environmental and social control and monitoring framework of the ER-P with the implementing actors and stakeholders involved in the management of the safeguards	January 2020
Setting up of the SIS institutional platform for the ERP area	January- February 2020
Establishment of FGRM management committees in the ER-P area and training of the members of said committees	January 2020
Support to the functioning of committees, oversight and coordination of complaints management by SEP REDD +	February 2020- all ER-P period
Management of the SIS by the SEP REDD+ in collaboration with the executing actors of the activities and projects of the ER-P and various structures, some of which and their functions are known at this stage (structures to provide data, structures to contribute to	February 2020-all ER-P period

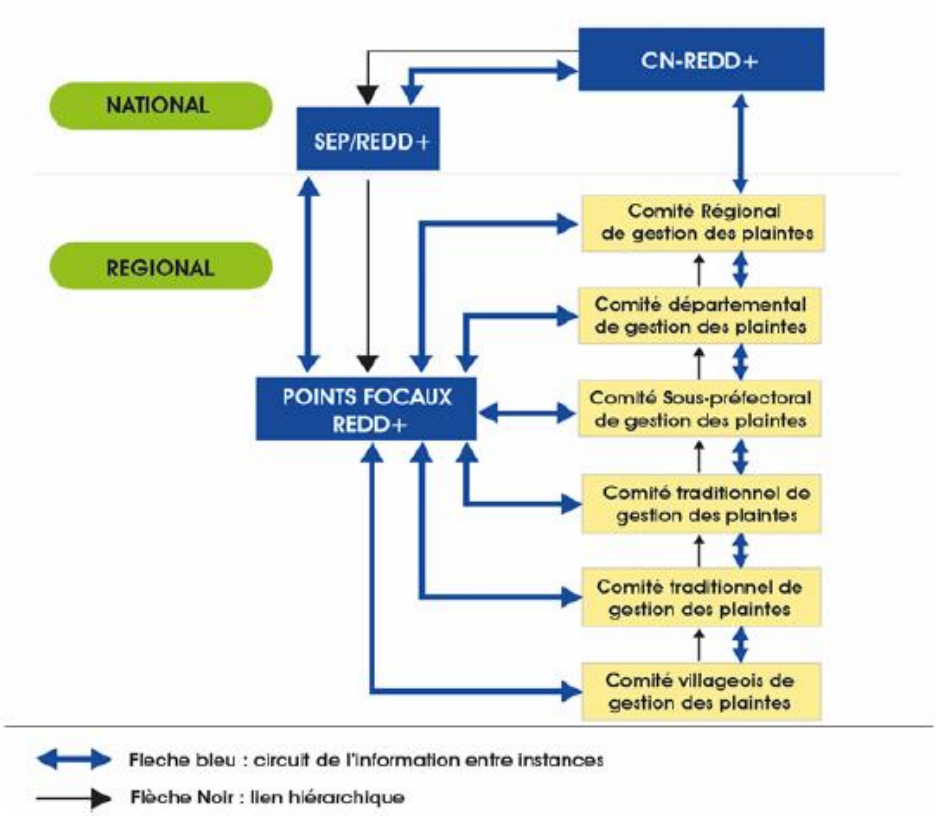
the quality analysis of data, etc.).	
Implementation and monitoring of the environmental and social control and monitoring framework by SEP REDD+ in collaboration with stakeholders	February 2020-all ER-P period
Monitoring by the National REDD+ Commission of the implementation of recommendations stemming from the environmental and social control and monitoring framework of the ER-P	February 2020-all ER-P period

14.3 Description of the Feedback and Grievance and Redress Management Mechanisms (FGRM) in place and possible actions to improve it

FEEDBACK GRIEVIANCE AND REDRESS MANAGEMENT MECHANISM

In 2016, in coordination with the different stakeholders, the REDD+ national commission began a study for implementing an FGRM for preventing and amicably settling possible conflicts concerning natural resource management within the framework of REDD+ and ER-P, due to the diversity of players and possible divergences of interests. This FGRM, designed with the stakeholders, and was validated in July 2018, defines the management bodies which have precise, entangled mandates. It proposes grievance management at a local and national scale, with different territorial entities (FGRM committees) locally and nationally: village - sub-prefectural - departmental - regional - and national with CN REDD+. It is intended to have customary, administrative and legal authorities intervene and to have a mediation authority at each level.

Figure 26: Complaint and appeals mechanism



The composition of committees:

In each region, the composition of the committees is shown in the table 39 below.

Table 43: Composition of the FGRM committees

Committee members				
Rural committee (established by Sub-Prefectural decision)	**Traditional committee (established by Sub-Prefectural decision)**	**Sub-prefectural committee (established by Sub-Prefectural decision)**	**District committee (established by Prefectural decree)**	**Regional committee (established by Prefectural decree)**
Chief of village Chief of land 2 notables Representative of the village committee for rural land use management Women representative Young representative Local communities representatives	Chief of Canton (local King) - Président Members (social representative) nominatied by sub-prefect following president proposition Members renewed 2/3 every 2 years except the president	Prefect of department (Président) Mayor or representative Local Directors of ministries of Environment, Agriculture, Forest, Mines, animal ressources and fisheries Representative of Kings and traditional chiefs assembly (CNRCT) 2 Representative of Departemental Committee on Peace and Land use management Prefectoral officer NGO representative	Prefect of the departemental district - Président Departemental district directors of ministries of Environment, Agriculture, Forest, Mines, animal ressources and fisheries Representative of Kings and traditional chiefs assembly (CNRCT) Représentants (02) du Comité Départemental de Veille et de Paix et du Comité de Gestion du Foncier Prefectoral officer NGO representative	Prefect of the Region - Président Regional Council president or representative Regional directors of ministries of Environment, Agriculture, Forest, Mines, animal ressources and fisheries Representative of directorate of Kings and traditional chiefs assembly (CNRCT) 2 Representative of Regional Committee on Peace and Land use management Prefectoral officer NGO representative

The committees' members, whose majority has already an expertise in prevention and management of complaint, will benefit from complementary capacity building trainings focusing on (i) the REDD+ mechanism (the REDD+ National Strategy, its programs, sub-projects and activities), including the causes and risks of complaints in relation with these RED+ projects and activities, (ii) the FGRM of the REDD+ mechanism, (iii) the functional management of the committees and, (iv) the techniques of conflict prevention, mediation and conflict resolution. SEP-REDD+ and expert consultants will provide these capacity building trainings on prevention, mediation and conflict management.

The overall tasks of the committees are:

1. Receive, record or transcribe complaints;
2. Listen to the parties and receive their memoranda in defence;
3. To appease the parties, initiate the discussions and lead the mediation;
4. Conduct necessary verifications and investigations;
5. Negotiate amicable solutions to the complaint;
6. Ensure the implementation of resolutions and closure of the file;
7. Prepare and transmit periodic reports to higher authorities (including the archiving of any document);
8. Conduct outreach and conflict prevention activities.

In case of non-resolution of a complaint by an organ, the complaint is transmitted to the higher authority for treatment.

In this system, SEP REDD + has the following missions:

1. Secure the establishment of committees and ensure their proper functioning (capacity building, support for inter-coordination, support for the establishment of work plans and annual budgets of committees, monitoring the implementation of work plans, etc.);
2. Analyse and make suggestions to the REDD+ National Committee (NC) regarding the management of sensitive files; and
3. Centralize and produce all documentation and submit the reports to the National REDD+ Committee.

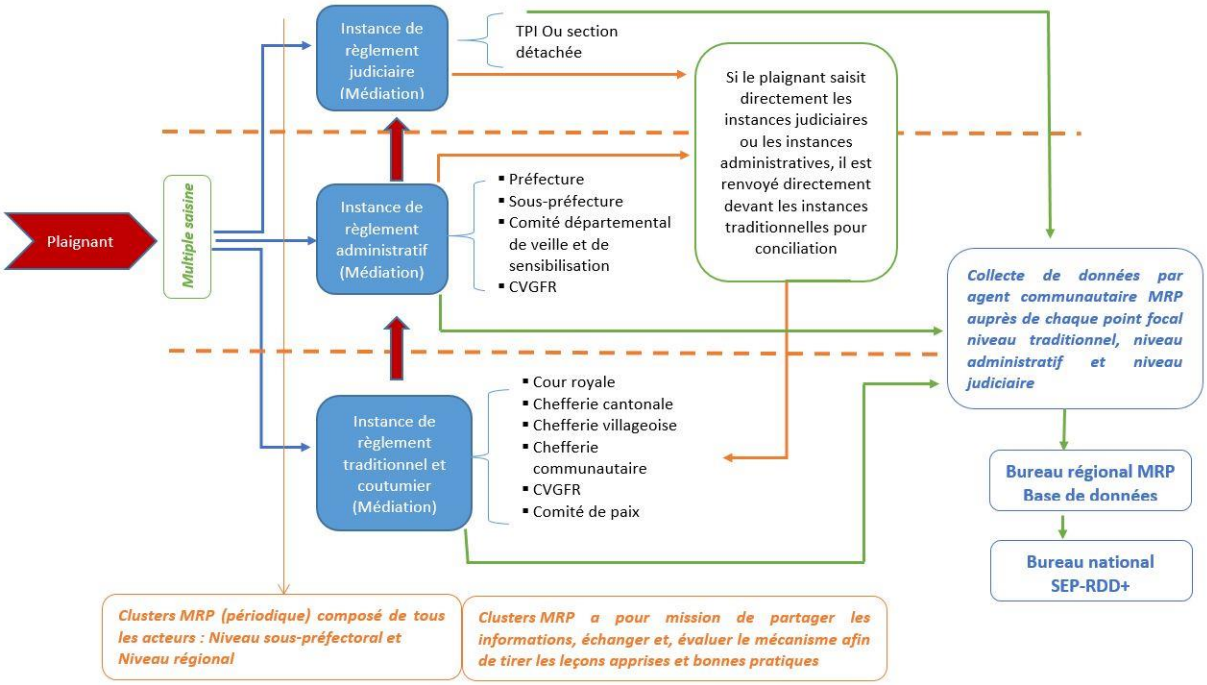
GENERAL APPROACH TO COMPLAINTS MANAGEMENT

In order to make the process efficient, the arrangements proposed rely on committees favouring women and youth and disadvantage groups as members, and existing customary and administrative institutions at different territorial levels (see section 4.3.3.1 pt. D), adding to these institutions specific prerogatives on REDD+. The plaintiff may at any time refer to traditional courts of law at all levels of the procedure:

- The traditional and customary authorities (rural and traditional committees) are the first degree or level for receiving and treating grievances. They are open to all plaintiffs, without any formal requirement.
- Appeals against first level decisions, are received and addressed before the sub-prefectural committee, the basic administrative authority. After the referral, the sub-prefectural committee checks that it was subject to a preliminary treatment at the customary level and retains the right to return the plaintiff to these customary authorities, if needed. When adequate reasons (e. g. conflict of interests) indicate that the case cannot be subject to a treatment at the customary level, the sub-prefectural authority takes it on.
- Decisions of the sub-prefectural committee can be subject to an appeal before the departmental committee when one of the parties is not satisfied;
- The decisions rendered by a departmental authority can be contested before a regional committee;
- The CN-REDD+ intervenes as a last resort for complaints that have not found satisfaction at previous levels.

The figure below shows the circuit proposed for grievance solution:

Figure 27: Diagram of a circuit followed by grievances



The procedure for handling individual complaints received by each committee

The complaint handling procedure follows the following chronological steps:

1. Receipt and registration of the complaint;
2. Acknowledgment of receipt / assessment of eligibility and assignment of responsibility (maximum 3 days);
3. Preparation of a draft reply (15 days maximum):
    - Rejection of the complaint;
    - Complementary assessment;
    - Direct intervention (mediation, conciliation, awareness raising, compensation measures, training, etc.);
4. Information and research agreement with the complainant / protagonists on the draft response;
5. Implementation and monitoring of the settlement agreement;
6. In case of failure, review and new agreement;
7. Closing or referral of the complaint to the higher authority (or another body).

FEEDBACK GRIEVIANCE AND REDRESS MECHANISM OPERATIONALIZATION

Pilot phase:

After validation by CN-REDD+ in July 2018, the FGRM is under operationalization for its pilot phase in the regions of Nawa (region in the south-west of the Côte d'Ivoire) and N'ZI (region in the centre-east of the Côte d'Ivoire) before its final validation by the REDD+ Commission. The specific localities (villages, sub-prefectures and departments) concerned for the establishment of the committees were identified in a participatory and inclusive way by the authorities (administrative, customary and representatives of the populations of said regions). Committees will be established, and their members will benefit from capacity building in the first quarter of 2019.

FGRM test:

2019 will be the experimental year of the FGRM, the committees will be set up in the NAWA and N'ZI regions for the management of FIP complaints (the ME region will also benefit from the setting up of Committees for the management of complaints related to the ME REDD+ Projects). The efficiency test for the FGRM and results will be capitalized, for the purpose of improving the FGRM, if needed. According to test results, committees and their functioning in the areas of the PRE will be improved, revised, or confirmed.

The GRM document makes a diagnosis of the existing mechanisms (actors, strengths and weaknesses, etc.). The link to the document is as follows:

http://reddplus.ci/download/etude-relative-a-lelaboration-dun-mecanisme-de-reglement-des-plaintes-et-des-recours-dans-le-cadre-du-processus-redd/?wpdmdl=9320

Monitoring of the implementation of decisions Resolutions or arbitration pronouncing the solution to grievances and appeals procedure will be published on the register/geoportal. The implementation of decisions will then be subject to monitoring from the national coordination committee, and also, where appropriate, from the sub-prefectural committee, NGOs and independent mandated observers;

Operationalization within the ER-P area:

The process of setting up the FGRM within the ER-P area is as follows:

1. Consultation workshops with local stakeholders (prefecture and administrative authorities, customary authorities and population representatives) for the selection of localities to host the committees;

2. The official installation of committees (availability of prefectural decrees and sub prefectural creation decisions);

3. Training of committee members on the REDD + mechanism, the PRMM and its management;

4. Support to committees in the preparation of annual budgeted activity plans (as their missions cover the conflict prevention component);

5. The material and financial support for the functioning of the committees;

6. Information and public awareness campaigns: following the installation of the organs, campaigns to publicize the organs and to sensitize the populations to resort to them in case of complaints will be organized. Awareness campaigns will be planned taking into account the installation of organs and the implementation of ERP activities and projects in the areas or localities concerned;

7. Supervision, monitoring and evaluation of the functioning of the committees;

8. Follow up on complaints and their resolutions.

The committees will be operational in ER-P area before the signature of the ERPA.

Table 44: Operationalization of the FGRM

Milestones for the FGRM	
July 2018	FGRM validation by REDD+ National Committee.
September 2018	Preparatory meetings at local level for the setup of FGRM committees.
January 2019	Official ceremony for the establishment of the FGRM committees in the NAWA and N'ZI regions (pilot phase).
February – March 2019 March- December 2019	Training program for committees' members Support and monitoring of functioning of committees and complaints management.

For the FGRM operation, the SEP-REDD+ set up a dedicated unit for the management of safeguards and FGRM composed of 3 experts who participated in the entire process of design and validation of the FGRM. These experts have prepared and are implementing a training program on the use of GRM.

The program budget provides:

- A dedicated budget for the operation of the dedicated SEP-REDD + unit to provide supervision and technical assistance for the implementation of the GRM has been provided under the program;
- A dedicated budget for the GRM bodies running costs through REDD + regional committees.

It is planned that these dedicated funds will be used based on the Annual Work Plans and Budget that will be established with the committees (see FGRM budget in Finacial planning annex1).

The organization of committees for the management of all REDD+ programs, projects and initiatives in the ER-P area:

The committees that will be set up will deal with all the complaints related to the project activities of the program, the following elements make it possible to ensure this articulation:

- The FIP project will use the FGRM bodies set up under REDD +;
- Operators of other projects and initiatives of the program participate in the preparatory meetings for the establishment of FGRM bodies and working sessions with them will be conducted for the widespread use of FGRM REDD+ in the framework of their projects;
- A wide dissemination of information on the creation of this mechanism, already carried out at the local level, in particular through community radio channels, will be further emphasized;
- The creation orders of the FGRM bodies will be disseminated to all the actors of the other projects and initiatives of the program.

In a practical way:

- Before the start of project activities in localities or regions with committees, information and exchange meetings with members of committees on program activities will be organized (nature of activities, location of production sites, actors involved, implementation schedule, potential risks of complaints and planned prevention measures, etc.). This provision will allow committees to have the necessary information on the activities for handling complaints before being seized
- The stakeholders implementing the program activities will regularly inform (at most quarterly) the

committees of the evolution of their activities in the localities; and

- When, a complainant will seize the committees or plaintive, the actors implementing the activities of the programs concerned will be informed and heard by the committees as part of the settlement procedure. The resolution decisions of the implementing parties will be respected within the framework of the program concerned without affecting the progress of the activities;

On an annual basis, the program will review complaints and draw lessons from all project managers for subsequent years.

Follow-up on the implementation of FGRM decisions: resolutions or arbitrations settling the complaints and appeal decisions will be published on the Registry/geoportal. The implementation the FGM decisions will subsequently be monitored by the REDD+ National Coordinating Committee, but also, where appropriate, by Sub-Prefectural Committee, NGOs and mandated independent observers.

15 BENEFIT SHARING ARRANGEMENTS

15.1 Description of benefit sharing arrangements

The development of the Benefit Sharing Arrangements (BSA) is conducted by the SEP-REDD+ following a consultative, transparent and participatory process. The BSA will be included in a framework agreement signed between the Minister of Economy and Finance and the FCFRCI, which will be in charge of managing the revenues from the sale of emission reductions to the Carbon Fund. Once validated by the Government, the BSA will be formally adopted by Decree.

The BSA are developed based on a number of guiding principles, including the principle of equity in which local people are the main beneficiaries of the program:

- *Principle of legality:* the BSP reflects and respects all the rules of public order and all other relevant legislative or regulatory provisions applicable in Côte d'Ivoire, including those arising from the international conventions it has ratified.
- *Efficiency Principle:* The distribution of benefits is based on stakeholder engagement and program performance.
- *Principle of equity:* Local populations in the program area are the main beneficiaries.

  Sustainability Principle: Benefits are provided for achieving measurable, verifiable and sustainable emission reductions aimed at effectively and sustainably addressing net emission factors.

The BSA identifie two major groups of beneficiaries following a:

(i) land-status territorial approach, divided into different areas according to the land status of the land on which the program is implemented (protected areas - classified forests - rural area);

(ii) stakeholders in charge of the structural and operational management of the program in the accounting area (constituting the "REDD+ infrastructure"), and

(iii) the stakeholders directly contributing to the emission reductions.

The territorial approach linked to the status of land makes it possible to link the drivers of deforestation and forest degradation in areas of the program, to the strategic options of the program, and to their specific implementation methods in each of the zones having special status.

This chapter provides a detailed description of the sectorial and enabling activities and the share of benefits (see table 42 below) that will be allocated to stakeholders in each type of program area for those directly contributing to emission reductions. The distribution of benefits among the parties, including for the structural and operational management of REDD +, is summarized in a table that distinguishes beneficiaries in the three areas of the program and indicates the distribution keys according to the activities. This chapter also specifies the contractual arrangements that are envisaged to implement BSA.

15.2 Summary of the process of designing the benefit-sharing arrangements

15.2.1 The development of benefit sharing agreements is conducted by SER-RED +

Benefit sharing agreements have been defined through a consultative, transparent and participatory process adapted to the country context, dedicated to the program, in a language that enables relevant stakeholders to become aware of it. They reflect the views expressed by relevant stakeholders, including support from local populations.

The considerations in this chapter result in particular from the stakeholder consultations that were conducted as part of the development of the ERPD to define the content of the benefit-sharing agreements:

Table 45: Consultations for the development of benefit-sharing arrangement

Activities	Date	Location	Participants number
Meeting to determine the orientations of the benefit sharing plan	September 25 2018	Abidjan	14
Workshop on identification of the different beneficiaries from benefit sharing plan	Septembre 28, 2018	Abidjan	17
Workshops for presenting the ERPD and analyzing benefit sharing options	October 18-19, 2018	Guiglo Soubré	32 34
Analysis and validation meeting of the advanced draft ERPD	November 9, 2018	Abidjan	37
Analysis and validation of the Benefit sharing arrangement as part of ER-PD consultations	January 2-4, 2019	Duekoué San Pedro	
Analysis and validation of the Benefit sharing arrangement as part of ER-PD consultations	January 3-4, 2019	Abidjan	

Further consultations will be conducted in the regions and at the national level for the presentation of the final benefit-sharing plan (PPB) in the first half of 2019. The SEP-REDD + will lead the process of finalizing the PPB, its validation will be realized by CN-REDD + before transmission to the government for validation.

15.2.2 Identification of the Beneficiaries

Two groups of beneficiaries are identified according to a territorial approach, distributed in different zones according to the land tenure status (protected areas - classified forests - rural areas) on which the program is implemented:

(i) The stakeholders responsible for the structural and operational management of the ER-P in the accounting area: Chapter 1.2 gives a detailed description of the authorities and organizations involved in the management of REDD + in Côte d'Ivoire, which are brought together under the "REDD + Infrastructure" banner in this document. The description of the operational management activities carried out by the REDD + infrastructure is given below (see section 15.2.5), as well as the details of the management costs (see table 43 under section 15.2.5 below).

(ii) Stakeholders directly contributing to emission reductions: the land-status territorial approach thus links (i) drivers of deforestation and forest degradation in the ER-P area, (ii) strategic options, (iii) their specific implementation modalities in each of the zones with special status, (v) the stakeholder having differentiated intervention modalities according to these zones. The description of the sectorial and enabling activities of the stakeholders is given below (see section 15.2.5), as well as the profit distribution keys according to the activities (see table 43 under section 15.2.5 below).

15.2.3 Allocation of a portion of the benefits to the REDD + infrastructure for ER-P management

Part of the benefits are expected to ensure the functioning of the REDD+ management bodies in Côte d'Ivoire, responsible for policy coordination, technical coherence, coordination and supervision of activities, operation of the national REDD+ infrastructure.

The various activities of the REDD+ infrastructure include:

- The organization of regular meetings of the bodies of the National REDD+ Commission;
- The adequate functioning of SEP-REDD+ to ensure in the program area:
    - Coordination of the NFMS and the MRV system by the SEP-REDD+ MRV unit;
    - Establishment and support to the functioning of the FGRM management bodies;
    - Support for the implementation and supervision of the environmental and social management provisions and measures (safeguards) of the program;
    - The operation of the Safeguards Information System (SIS);
    - Management of the REDD+ National Registry for projects and initiatives;
    - Implementation of the REDD+ communication strategy and stakeholder engagement;
    - Support for external monitoring and evaluation of the program by the independent observers of civil society;
    - Monitoring the overall implementation of the ER-P (semi-annual meeting);
    - Financing the fixed costs of the partnership agreement with the PES operator (s)
- The functioning of the 5 Regional REDD+ Committees as part of the monitoring of the implementation of the program.

The estimate of the costs necessary for the smooth operation of the REDD+ infrastructure in Côte d'Ivoire is currently estimated at 4% of the revenues from the sale of emission reductions (see Table 43 in section 15.2.5).

To ensure effective implementation of the program within the period from the signing of the ERPA and the first payments for ERs achieved, an advance relating to the operational cost requirements for the program will be requested from the Carbon Fund.

15.2.4 ***Identification the Manager Unit of the Revenues generated from the Sale of Emission Reductions***

The Foundation for Parks and Reserves of Côte d'Ivoire (FPRCI) has ben identified and being asked to entrust it with the management of revenues from the sale of emission reductions to The FPRCI is a private non-profit institution but recognized of public utility, created by Law No. 2002-102 of 11 February 2002 relative to the creation, management and financing of national parks and nature reserves in Côte d'Ivoire.

Its mission is to facilitate the long-term financing of the conservation of national parks and nature reserves through the mobilization of funds, and to place the funds collected in a trust fund in perpetuity. It can act as a trust fund, acquire or finance the acquisition of private lands that will become parks or reserves, and intervene in the conversion of unnatural debts.

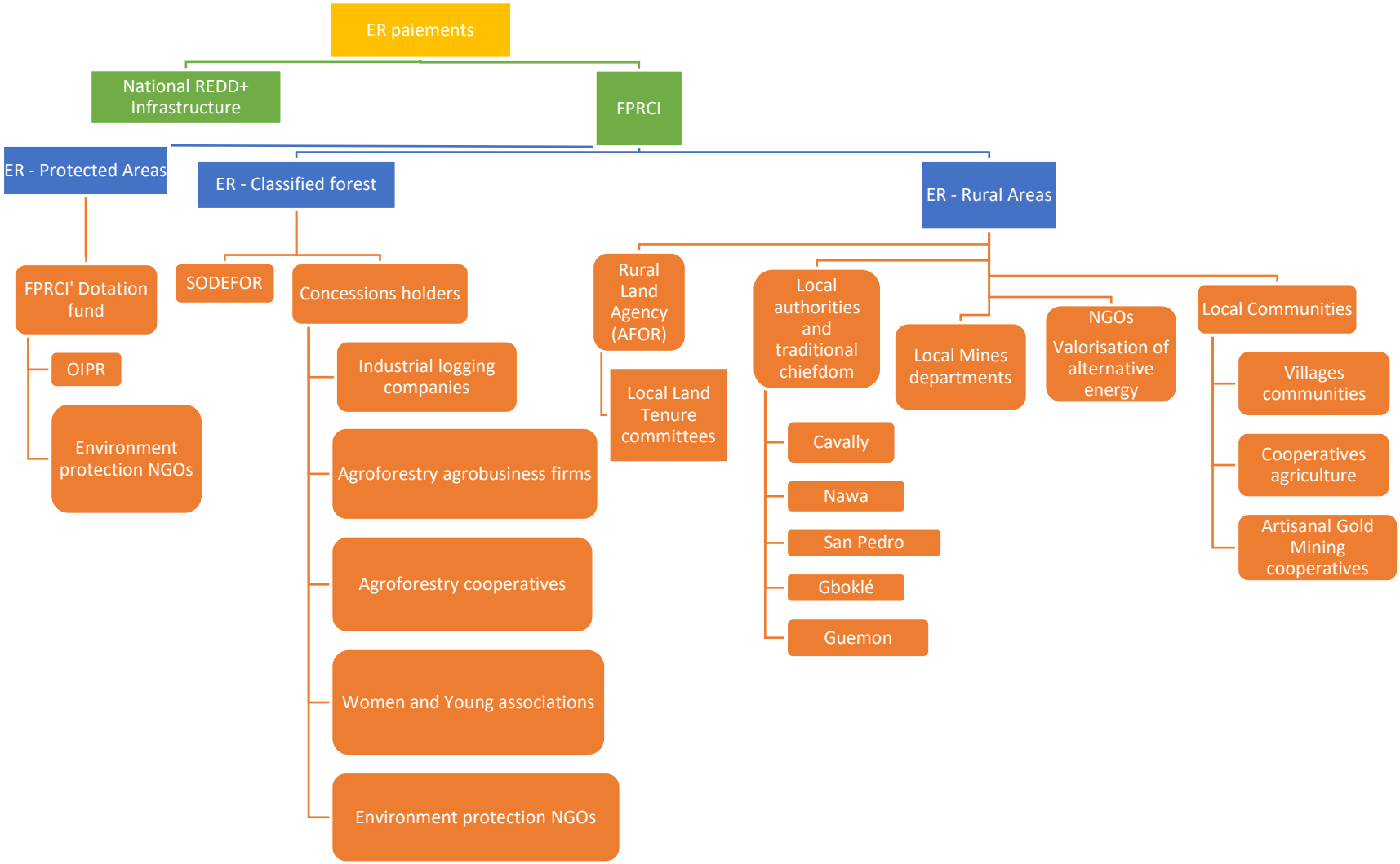
To this end, the Foundation administers 3 funds (the endowment fund, whose capital is invested in perpetuity, only the revenues generated are used to finance the conservation of national parks and reserves, the sinking fund, the capital and the interest generated, and the blended fund a portion of the interest generated by the redeemable fund is used to fund the endowment fund). Revenues from the sale of emission reductions could be used to fund the endowment fund.

By letter dated December 24, 2018, the Executive Board of FPRCI confirmed in writing to the Ministry of the Environment that its Board of Directors formally agreed on December 13, 2018 for the use of the FPRCI as "financial vehicle first resources under the Emissions Reduction Program (see Annex 11). The contractual arrangements envisaged for the management of financial flows from the trust fund managed by FPRCI are described below (see section 15.2.6 below).

15.2.5 Schematic description of the structural and operational management of the program in relation to the identified beneficiaries.

The diagram below shows the different beneficiaries identified in each of the program areas:

Figure 28: Diagram of ER-P identified beneficiaries



Chapter 17 of the ERPD specifies the contractual arrangements that are made to ensure distribution in accordance with the benefit-sharing agreements detailed in this Chapter.

15.2.6 Preliminary description of Beneficiaries and associated mechanisms

15.2.6.1 Stakeholders directly contributing to emission reductions

- ***Reduction of emissions in protected areas in the Program Area***
    - *Protected area context of the Program Area*

Protected areas currently account for almost 12% of the program area, i.e. 560,700 ha including Tai national park (454,000 ha), Mount Peko National Park (34,000 ha) and the N'zo Nature Reserve (72,700 ha). This proportion could increase to more than 13% if the new forest policy were applied with regard to the enhancement of the protected status of protected forests and hence the integration of the Cavally classified forest (64 200 ha) into within the network of protected areas.

In the ER-P area, these areas are essential: if they represent less than 15% of the total area, it comprise 20% of the forest area of the area currently and could increase to 23% with the integration of the Cavally classified forest to this network of protected areas.

- *Objective to be achieved in protected areas*

(i) Prevent deforestation in the program area from permanently affecting these protected areas.

(ii) Fight against deforestation, maintain and strengthen the forest cover of these areas.

- *Identified beneficiaries*

(i) The Ivorian Office of Parks and Reserves (OIPR);

(ii) The environmental protection NGO partners who will be directly involved in the management of protected areas located in the program area.

- *Activities expected to obtain carbon benefits*

It is expected that the identified beneficiaries will be the main contributors to the implementation of the FS3 sectorial activity "Strengthening protection of protected areas".

They will also contribute to the implementation of the activities:

- AS1. Agroforestry and agricultural intensification, in protected areas buffer zones;
- ES1. Wood energy plantation, in the immediate periphery of protected areas;
- FS1. Small timber plantations and preservation of private and community forest relics;
- MS1. Rationalization of artisanal gold mining;
- H2. Planning and development of the territory, through support for the integration of management plans and protected area management to the SRADT.

- *Terms of participation and payments*

The payments will be used to feed the FPRCI dotation fund, notably the "Park Tai '" specific window, which will allow (i) to generate sustainable profits, (ii) to provide regular monetary benefits to beneficiaries and (iii) contribute sustainably to emission reductions in the program area.

The FPRCI has its own procedures for financing the operational activities of the OIPR and NGOs and associated environmental associations that contribute to the objectives of its mission. More precisely:

- The funding received will be managed in accordance with the procedures set out in the framework agreement of 16 July 2009 between the Foundation and the OIPR.

- FPRCI payments to OIPR will be made through protocols that must specify the use of funds. It also provides for the OIPR to open a dedicated account in a commercial bank for each park or reserve receiving funding from the Foundation.
- Resource transfers between FPRCI and OIPR will be based on an annual work plan, a financing plan and a procurement plan agreed between the two parties. The OIPR then executes the funding according to its procedures.
- Money transfers between the FPRCI and NGOs or other operational bodies will be carried out as part of a contractualization process based on an analysis of protected area management and management plans (see Chapter 17).

All carbon benefits will be placed in FPRCI's endowment fund to cover the costs of carrying out the planned activities, which represents 16% of total profits, divided by 14% for OIPR and 2% for environmental NGOs.

Interest will be reinvested regularly and over a long term in the same activities in order to generate additional emission reductions.

- ***Emission reductions from the sustainable from the management of classified forests***
    - *Context of classified forests in the program area*

The 5 program regions comprise 24 classified forests[65] representing 1,179,332 ha or 25.45% of the total area of the program area.

These classified forests are currently very degraded. These parts of the program area are very important for emission reductions where the State has significant levers of action because of the land status of the territories concerned.

    - *Objectives to be achieved in the classified forests*

(i) To maintain and restore the relics of existing forests in the classified forests;

(ii) To reconstruct different types of forest cover in classified forests: a) tree plantations for wood energy purposes, b) timber tree plantations, c) permanent agroforestry areas of cash crop.

    - *Identified Beneficiaries*

(i) The Forestry Development Corporation (SODEFOR), which has been in charge of the management of classified forests since 1992[66];

(ii) The various concessionaires of all or part of these classified forests, in particular:

    - Logging companies;
    - Industrial agroforestry companies;
    - Agroforestry Cooperatives;
    - Community associations (women, youth) engaged in "Taungya" initiatives;
    - Environmental protection NGOs engaged in the protection and restoration of the areas of classified forests still preserved.

Note that it is very difficult to work with individuals in classified forests. It is therefore envisaged to create

[65] See list and map Chapter 3

[66] Cf. Décret n°66-422 du 15 septembre 1966 portant création de la société d'État dénommée Société pour le Développement des plantations Forestières (SODEFOR), et l'arrêté n°033/MINAGRA du 13 février 1992 qui a confié à la SODEFOR la gestion de l'ensemble des forêts classées de la République de Côte d'Ivoire.

cooperatives for the formalization of their activities and their integration into a group of beneficiaries.

- *Contribution to activities and program participation modality, payments and use of benefits*

Under the new forest policy, emission reductions will be generated by various activities implemented in each of the classified forests according to the classification of their degradation rate.

The activities will also be combined, where appropriate, with the zoning carried out following the completion of the inventories and forest management plans.

- *Activities envisaged for each identified beneficiary:*

SODEFOR
Contribution to ER activities
H3. Improved management of classified forests. FS2. Reforestation and sustainable management of classified forests
Program' activities
SODEFOR will contribute to the implementation of the reform of the concession system in the classified forests for the development of a transparent and organized system of partnership management of all or part of classified forests as well as the determination of specific criteria and standards of improved management. SODEFOR will continue to implement its reforestation programs and conduct its reforestation program in degraded and cocoa plantations.
How to participate in the program
As a result of the mission entrusted to it by law, SODEFOR will lead activities related to the implementation of the Program's Classified Forest Management Framework, with the development of participatory management plans, zoning, committee development local participatory management.
Payments terms
SODEFOR will receive 14% of the total amount of benefits. Payments made to SODEFOR will include: a fixed portion that will be paid subject to the implementation of the Program's classified forest management framework and the production of regular implementation reports; - a variable part that will depend on the performance of the emission reductions generated by the activities carried out in the classified forests.
Use of carbon benefits
Profits will be reinvested in similar activities (management capacity building and reforestation activities) to generate additional emission reductions. Some of the payments received by SODEFOR will be shared with local stakeholder communities of Local Committees for Participatory Management of Classified Forests. They will be used for the development of socio-community infrastructures and community projects adapted to the local scale.

Logging companies (concession holders)
Contribution to ER activities
H3. Improved management of classified forests. FS2. Reforestation and sustainable management of classified forests
Program' activities
Logging companies will develop sustainable timber harvesting and renewal practices in selected forested areas and under concession agreements. They will also support the development of management plans for classified forests.
How to participate in the program
Participation in the Program will be conditional on the negotiation and obtaining of a concession agreement within a classified forest. In particular, the agreement will stipulate the reference situation, the objectives to be achieved, and the methods for calculating the performance, the benefits envisaged and the conditions

for using these carbon benefits.
Payments terms
Industrial logging companies will receive 2% of the total amount of benefits. The payments made to the concessionaires will depend on their performance in sustainable exploitation of their concessions (which can be calculated in diverse ways: maintenance or increase of the forest cover in the concession, areas under sustainable forest management or reforested area) Amounts per hectare of diverse types of land use conversion will be determined and will be the basis for calculating payments.
Use of carbon benefits
Payments received by logging companies will have to be reinvested in part in the reforestation operations, allowing the generation of new emission reductions in their field of activity.

Agroforestry Agribusiness companies (concession holders)
Contribution to ER activities
AS2. Agroforest in classified forests
Program' activities
The activity aims at setting up agroforestry industrial concessions within certain classified forests, which are in the program area for the development and/or organization of large-scale agroforestry plantations but also to regroup small farmers involved in forests classified in cooperatives. Through the granting of concessions to these cooperatives, the activities will make it possible to impose agroforestry agriculture standards. The actions described in AS1 Agroforestry and Agricultural Intensification will also be implemented in these concessions.
Conditions to participate in the program
Participation in the program will be conditional on negotiating and obtaining a concession agreement in classified forests. In particular, the convention should stipulate the reference situation, the objectives to be achieved, the methods for calculating performance, the benefits envisaged and the conditions for the use of carbon benefits.
Payments terms
Industrial agroforestry companies will receive 7% of the total amount of benefits. Payments made to industrial will depend on performance (which can be calculated in terms of perennial agroforestry plantation area). Amounts per hectare of diverse types of land use conversion will be determined and will be the basis for calculating payments.
Use of carbon benefits
Payments received by agroforestry industrials will have to be reinvested in new agroforestry plots development or renewal operations, allowing the generation of new emission reductions in their field of activity.
Others benefits
The establishment of industrial agroforestry in classified forests will facilitate long-term sustainable management and agroforestry and agricultural intensification (AS1.). Access to improved agroforestry technics, and with a zero-deforestation certification that might result in increased revenues.

Agroforestry cooperatives (Concession holders)
Contribution to ER activities
AS2. Agroforest in classified forests
Program' activities
Agroforestry cooperatives will be the second model of cash crop production in the classified forests; they will be developed through the regrouping of smallholders operating in classified forests and engaged in initiatives of complantation. These cooperatives will develop agroforestry plantations, especially tree shade

cocoa and rubber trees in association with woody species.
Conditions to participate in the program
Participation in the Program will be conditional on the negotiation and obtaining of a concession agreement within a classified forest. The agreement shall (i) describe precisely the limits of the concession and (ii) shall in particular stipulate the reference situation, the objectives to be achieved, the methods for calculating the performance, the benefits envisaged and the conditions for the use of these conditions carbon benefits.
Payments terms
Cooperatives will receive 7% of the total amount of benefits. Payments made to cooperatives will depend on performance (which can be calculated in terms of perennial agroforestry plantation area). Amounts per hectare of different types of land use conversion will be determined and will be the basis for calculating payments.
Use of carbon benefits
Payments received by agroforestry cooperatives will have to be reinvested in new agroforestry plots development or renewal operations, allowing the generation of new emission reductions in their field of activity.
Others benefits
The establishment of smallholders Cooperatives in classified forests will facilitate their access to technical assistance for agroforestry and agricultural intensification (AS1.).

Women and Youth Associations (Concession holders)
Contribution to ER activities
ES2. Taungya - Community Agroforestry association fuelwood and food crops
Program' activities
Community-based women's and youth associations will lead the Taungya activity, which aims to develop community-based agroforestry plantations (wood energy -food crops) in classified forests under concession agreements.
How to participate in the program
Participation in the Program will be conditional on the negotiation and obtaining of a concession agreement within a classified forest. The agreement shall (i) describe precisely the limits of the concession and (ii) shall in particular stipulate the reference situation, the objectives to be achieved, the methods for calculating the performance, the benefits envisaged and the conditions for the use of these conditions carbon benefits.
Payments terms
Community associations will receive 5% of the total amount of carbon benefits. The payments made to the community associations will depend on the performance (which can be calculated in terms of the area of associated wood energy plantations - agroforestry perennial food crops). Amounts per hectare of different types of land use conversion will be determined and will be the basis for calculating payments.
Use of carbon benefits
Payments received by community associations may be reinvested in new development or renewal of agroforestry parcels but also in community investments to strengthen the functioning of these associations.
Others benefits
The Taungya system makes it possible (i) to make arable land available to community associations to develop the food but also (ii) to ensure future production of wood energy for these communities.

Environmental protection NGO (concession holders)
Contribution to ER activities
FS2. Reforestation and sustainable management of classified forests
Program' activities

Environmental protection NGOs will ensure the protection and restoration of forest relics and HCV areas identified in classified forests following the implementation of forest inventories in the framework of conservation conventions. It will also accompany the development of management plans for classified forests.
How to participate in the program
Participation in the Program will be conditional on the negotiation and obtaining of a concession agreement within a classified forest. The agreement shall (i) describe precisely the limits of the concession and (ii) shall in particular stipulate the reference situation, the objectives to be achieved, the methods for calculating the performance, the benefits envisaged and the conditions for the use of these conditions carbon benefits.
Payments terms
Environmental NGOs will receive 2% of the total amount of carbon benefits. Payments received by environmental NGOs will be based on the area actually conserved.
Use of carbon benefits
Payments received by community associations may be reinvested in new development or renewal of agroforestry parcels but also in community investments to strengthen the operational capacities of these associations.
Others benefits
Environmental protection NGOs will also benefit from the protection of biodiversity in protected areas.

- ***Sharing benefits with ER stakeholders from rural areas***

    - *Context of the Rural Area of the Program Area*

The 5 program regions comprise 2,892,909 hectares, or 62% of the total area of the Program Area.

Forests are currently very degraded on rural land. This zone is very important for the success of the program, indeed if it is very degraded, it is the one that has the greatest emission reduction potential of the entire program.

    - *Objective of beneficiary involvement in rural areas*

(i) The reduction of deforestation with sustainable planning of the territory through the development and implementation of SRADT meeting the objectives of the program including land security;

(ii) The reconstitution of different types of forest cover in the rural area through the implementation of the PES program for activities a) for the protection and restoration of forest relics, b) for the development of community or individual timber plantations energy and wood; and c) agroforestry plots development;

(iii) Reducing the impact of artisanal gold panning on forests by rationalizing the sector.

    - *Beneficiary identification in the rural domain*

(i) Local authorities and traditional chiefdom of the 5 Regions of the Program Area (Nawa, Gboklé, Guémon, San-Pedro and Cavally);

(ii) The Rural Land Agency (AFOR) and local land tenure committees;

(iii) The various promoters of PES initiatives: individuals, local communities and cooperatives;

(iv) Local management of the mines;

(v) Agroforestry cooperatives

(vi) Artisanal mining cooperatives respectful of the environment, (iv) Local Mining Departments for the implementation of the Gold Mining Rationalization Program.

(vii) NGOs promoting alternative energy sources.

- *Contribution to activities and program participation modality, payments and use of benefits*

Local authorities and traditional chiefdom
Contribution to ER activities
H1. Land security. H2. Land Use planning and territory development
Program' activities
The local authorities of Nawa, Gboklé, Guémon, San-Pedro and Cavally are in charge of planning and steering the development activities in their jurisdiction. Traditional chiefdoms (traditional chieftainship plays an important role in land management at village level), and villages' councils are involved in community planting activities. Regional Councils will oversee the development and will contribute to the monitoring of the implementation of Regional land use Planning and Development Plans (SRADT) in line with the national REDD+ strategy and with the planned sectorial activities of the Program.
How to participate in the program
Local authorities including the 5 Regional Councils of the Program Area are de facto stakeholders in the Program (i) as the Regional Development bodies and (ii) as the key stakeholder in the REDD + Regional Committee.
Payments terms
Local authorities and traditional chiefdom will receive 10% of the total amount of profits. Payments made to Local authorities will include: - a fixed amount that will be paid under the condition of developing an SRADT and producing regular reports on the implementation of the SRADT including land security aspects; - a variable amount depending on the performance of ERs in the rural area.
Use of carbon benefits
The carbon benefits will be reinvested in socio-community activities to strengthen the implementation of the SRADT.
Others benefits
Regional Councils will benefit, beyond the carbon benefits, from strengthening their legitimacy in the process of planning and monitoring development.

Rural Land Agency (AFOR) and local land tenure committee
Contribution to ER activities
H1. Land security. H2. Land Use planning and territory development
Program's activities
AFOR and local land tenure committees are responsible for implementing land tenure reform in rural areas. It is central to the enabling activity "H1. Land security ". The process of land security in the Program area should also be included in the planning and development of the territory (H2). AFOR will work closely with local land tenure management committees.
How to participate in the program
AFOR is part of the Program as a national authority for the implementation of land reform in the rural area, including in the Program Area. The local committees are responsible for managing land issues at the village level
Payments terms
AFOR will receive 8% of the total amount of profits. Payments made to AFOR will vary according to the level of land tenure security in the rural area of the 5 regions compared to the planning.
Use of carbon benefits
The carbon benefits will be reinvested to continue the land security activities in the Program area.
Others benefits

Through the implementation of the Program, AFOR benefits from the multi-stakeholder dynamic engaged in the Program area, which should facilitate its intervention.

Promoters of PES initiatives (Individuals, local communities and agricultural cooperatives)
Contribution to ER activities
AS1. Agroforestry and agricultural intensification ES1. Wood energy plantation FS1. Small timber plantations and preservation of private and community forest relics
Program' activities
Promoters of PES initiatives (individuals, local communities and agricultural cooperatives) in the rural area will contribute directly to emission reduction activities through: - the development of timber and wood energy plantations; - the protection of forest relics and support for natural regeneration; - agroforestry plot development. The activities eligible for the PES program are described in detail in the national PES manual.
How to participate in the program
The promoters of PES initiatives will join the ER-P by selecting their activity in the PES program by signing a PES convention with the PES operator mobilized by the SEP-REDD +.
Payments terms
Promoters of PES initiatives will receive 12% of the total amount of benefits. The payments made to the PES promoters will depend on the performance in terms of areas conserved, reforested in plantations of trees for energy wood or timber or developed in perennial agroforestry plantation. Amounts per hectare of different land use conversion types will be determined and will be the basis for calculating payments
Use of carbon benefits
Carbon benefits will reward the efforts of individuals, local communities and agricultural cooperatives.
Others benefits
Individuals and local communities will benefit from the ecological services of reconstituted forests but also from the profits from the sale of timber and fuelwood products. Cooperating smallholder farmers in classified forests will facilitate their access to technical assistance for agroforestry and agricultural intensification. The development of agroforestry may eventually bring them into certification systems allowing an increase in the sale of their products.

Local Mines departments
Contribution to ER activities
MS1. Rationalization of artisanal gold mining
Program' activities
The local mining departments, in collaboration with their various partners, will coordinate the implementation of the gold mining rationalization program in the ER-P area, in particular: support for the restoration of the old gold panning sites, identification of gold panning corridors, support for the organization of artisanal miners in cooperatives and support for the development of sustainable gold certification.
How to participate in the program
Local Mining Departments will be involved in the Program following the development of an action plan for the implementation of the Gold Mining Rationalization Program in the ER-P area, determining their role in its implementation.
Payments terms

The local mining departments will receive 3% of the total benefits Payments made to the local mining directorates will be made according to the progress of the implementation of the action plan of the gold washing rationalization program in the ERP area.
Use of carbon benefits
The carbon benefits will be reinvested in the activities of the local mining directorates to monitor gold mining activities and develop a sustainable gold mining model in the ERP area.
Others benefits
The local mining directorates will benefit, through the implementation of the Program, from an integration of their activities with the multi-stakeholder dynamic engaged in the Program area, which will facilitate their implementation.

Artisanal gold mining cooperatives
Contribution to ER activities
MS1. Rationalization of artisanal gold mining
Program' activities
Artisanal gold mining cooperatives will contribute to ER activities by implementing their gold panning activities in the context of environmental and social standards reducing their impacts on forests.
How to participate in the program
Mining cooperatives established in the Program Area and engaging in the Gold Mining Rationalization Program will be part of the ER-P.
Payments terms
The artisanal mining cooperatives will receive 5% of the total benefits. Payments made to artisanal mining cooperatives will be based on their commitment to the national Gold Mining Rationalization Program and their commitment to a sustainable gold certification process.
Use of carbon benefits
Part of the carbon benefits will be shared among the members of the cooperative and another part will be invested in activities that fulfil the certification criteria and reinforce the consideration of the social and environmental aspects of production.
Others benefits
Mining cooperatives and their members will benefit from recognition and support of their activities. In addition, the sustainable gold certification process that could be initiated could, in time, allow these cooperatives to sell their gold at a price higher than the market price.

NGO valorisation alternative energy sources
Contribution to ER activities
ES3. Alternatives to wood energy - agricultural and timber residues
Program' activities
NGOs promoting alternative energy sources from agricultural residues and residues from small-scale logging can reduce deforestation due to the demand for fuelwood by providing alternative local products.
How to participate in the program
NGOs promoting alternative energy sources may participate in the Program subject to the development and validation of a program of activities with the Program Manager.
Payments terms
The NGOs involved will receive 2% of the total amount of the profits. Payments will be made according to the level of progress of the activity program.
Use of carbon benefits
Carbon profits will be reinvested in the development of NGO activities in the context of the valorisation of alternative energy sources.

Table 46: Summary of distribution of benefits, including for REDD+ operational management in Côte d'Ivoire, with a breakdown of beneficiaries for the three program areas

Program area	Beneficiaries	Proportion of Carbon Benefits per beneficiary	Proportion Carbon Benefits per area	Maximum Carbon benefits (US$) (16.5MT Carbon / 5US$/T)
REDD+ Management bodies to ensure program management		7%	7%	5,775,000
Protected areas 560,700 ha - 12% including Tai National Park (454,000 ha), Mount Peko National Park (34,000 ha) and the N'zo Nature Reserve (72,700 ha).	OIPR	14%	16%	11,550,000
	Environmental protection NGO	2%		1,650,000
Classified forests 24 classified forests representing 1,179,332 ha or 25.45% of the total area of the program area	SODEFOR	14%	37%	11,550,000
	Industrial logging companies (concession holders)	2%		1,650,000
	Agroforestry agribusiness companies (concession holders)	7%		5,775,000
	Agroforestry cooperatives (concession holders)	7%		5,775,000
	Women and Young Association (concession holders)	5%		4,125,000
	Environmental protection NGO (concession holders)	2%		1,650,000
Rural areas 5 program regions comprise 2,892,909 hectares, or 62% of the total area of the Program Area	Local authorities and traditional chiefdom	10%	40%	8,250,000
	Rural Land Agency (AFOR) and local land tenure comittee	8%		6,600,000
	PES Initiatives Coordination	12%		9,900,000
	Local Mines departments	3%		2,475,000
	Artisanal gold mining cooperatives	5%		4,125,000
	NGO valorisation alternative energy sources	2%		1,650,000
		100%	**100%**	**82,500,000**

15.2.7 Contractual arrangements for the financial flows management

The future Profit Sharing Plan Decree will specify the contractual arrangements to be used to distribute the benefits to program participants.

On the instructions of the Prime Minister in charge of the Budget, it is planned to transfer the full revenue from the sale of emission reductions less the management costs of the program assumed by the SEP-REDD +, including those paid in advance for initiate its implementation, from the FPRCI endowment fund (see section 15.2.3 above).

The concluded fund manager concludes a multi-stakeholder framework agreement with SEP-REDD +, OIPR, SODEFOR and a designated operator to oversee the PES program at the national level for the definition of the activities of each and the organization of the management of associated financial flows.

On the basis of this multi-party agreement, the fund manager concludes specific agreements with the following partners, specifying the rights and obligations of each:

- SODEFOR will be responsible for the administration of the funds allocated to the classified forests: the specific agreement between the fund and SODEFOR must include the obligation for SODEFOR to negotiate and sign contracts with the concessionaires, including in the forests Community, by imposing the technical specifications for AS2, ES2, FS2, FS3 and related enabling activities through concession contracts, and remunerating them for services rendered in accordance with the Profit Sharing Plan.

- The OIPR, which will be responsible for administering the funds allocated to the parks and reserves for activities FS1 to FS3: the specific agreement between the fund and the OIPR must include the obligation for the latter to conclude contracts with public (SODEFOR, Mines) or private stakeholders (NGOs, small producers, local populations...), referring as far as possible to the existing provisions governing the OIPR's relations with other entities, particularly with the Foundation on the Parks and Reserves of Côte d'Ivoire which are set by a 2009 convention.

- A PES operator designated at the national level for the distribution of PES, in charge of defining the political orientations and the objectives to be attained by the implementation of the sectorial and enabling activities in the field of rural land; the designated national operator establishes a framework agreement with 5 operators designated by SEP-REDD + on the proposal of the Regional REDD + Committee at regional level (1 for each region covered by the program), which defines the modalities for implementing sectorial activities and the conditions for distributing profits in the form of PES to the actors involved; it is these PES operators designated at the regional level who negotiate and sign, in the presence of the national operator and under the supervision of the REDD+ Regional Committee with the support of the SEP-REDD+, the contracts with the representatives of the village groups which specify the criteria, the performance, and results of each activity, the modalities of payments for environmental services rendered and the monitoring and communication obligations of the actors, as well as their commitment not to claim rights to emission reductions or to create any rights or title to them (see Chapter 17.2 of the ERPD).

Each specific agreement concluded between the dedicated fund managed by the FPRCI and the OIPR, SODEFOR and the national operator PSE, must provide for the budget allocated to each to execute the payments in accordance with the payment orders issued on the basis of the monitoring report of the Reduction of emissions and implementation of investment plans carried out in each zone, which must be validated by the SEP-REDD + under the conditions specified by the "multi-party agreement" mentioned above.

15.3 Description of the legal context of the benefit sharing agreements

ERPD arrangements relative to benefit sharing reflect and are in line with the national legal context of Côte d'Ivoire, as per the applicable laws, in particular the national legislation and the legal obligations imposed upon the country by relevant international laws.

The BSP will be included in the framework agreement signed between the Ministry in charge of the Budget, the Minister of Economy and Finance and the FCFRCI, the later will be in charge of managing the revenues from the sale of emission reductions from of the Carbon Fund.

Once validated by the Government, the BSP will be formally adopted by Decree, in order to integrate the BSP into the national legal order, and to make rights and obligation resulting from profit-sharing agreements opposable to third party.

16 NON-CARBON BENEFITS

16.1 Outline the potential Non-Carbon Benefits and Identification of Priority Non-Carbon Benefits

The non-carbon benefits of REDD+ in Côte d'Ivoire have been the subject of a multi-benefit mapping study[67], the results of which are expected: (i) to facilitate the consideration of multiple benefits in REDD+ planning in Côte d'Ivoire, and (ii) provide indicators and data to support the development of a National Information System on Social and Environmental Guarantees. As part of this study, a consultation workshop was hold in July 2015 with the participation of national stakeholders to identify the multiple priority benefits of REDD+ in Côte d'Ivoire. The topics that were proposed included two main areas: (i) assessment of some key benefits provided by forests in terms of biodiversity conservation, local livelihoods and building resilience to climate change, and (ii) identifying areas where there are opportunities to restore some of the lost benefits from deforestation and forest degradation. Then, since non-carbon benefits are part of the country's social and environmental REDD+ standards, indicators that will be monitored by the Safeguards Information System (SIS) were established during the consultations held for SESA and SIS.

Table 47: Consultation hold to identify and establish indicators for non-carbon benefits

Activities	Date	Location
Non-carbon benefits identification workshop.	July 2015	Abidjan
Start-up Workshop on Strategic Environmental and Social Assessment. Activities under the REDD+ Mechanism in Côte d'Ivoire.	February 2016	Abidjan
Regional Consultations as part of the Strategic Environmental and Social Assessment of the REDD+ Mechanism.	March-April 2016	24 prefectures et 24 villages
Consultations and contributions enhancement workshop on the evaluation of the REDD+ mechanism's strategic options in Côte d'Ivoire.	April 2016	Abidjan
Validation meeting of the first version of the Safeguards Information System.	March 2018	Abidjan
Information and Exchange Session on the Safeguards Information System.	March 2018	Abidjan
Finalization of the Safeguards Information System.	March 2018	Abidjan

Within the framework of ER-P, the priority non-carbon benefits are the following:

Increase of incomes for households and the private sector

The creation of supplementary incomes due to greater outputs with intensification practices, the use of improved cocoa improved varieties and use of fertilizers (inputs), and to the diversification of farm incomes, is at the core of the program strategy. Its objective is to use agroforestry for diversifying the income sources for farmers through fruit tree plantations, increasing soil fertility and its protection, and the profitability of cultivations independently of incomes from carbon (cacao cultivation based on better varieties, combined with energy coming from wood, or with fruits, rice and subsistence agriculture in the lowlands). Moreover, it is aimed at the refurbishment of old plantations in order to discourage slash-and-burn farming (coffee and cacao in forest zones). Planting trees with high economic value, and fast-growing trees for producing firewood. If, investments in improved varieties of cocoa to renew the old plants, the use of inputs, planting trees as a cost and, during first years results in temporary income decrease for small producers, before after few years to see an increasing in their income, when new cocoa plants and fruit trees are in full production potential. The loss of income will initially be offset by calibrated PES, and the increase in income will be followed by

[67] See "Cartographie des Bénéfices multiples de la REDD+ en Côte d'Ivoire" SEP-REDD+, CSRS, PNUE and WCMC 2017.

socio-economic studies in the ER-P area.

Adopting long-term sustainable land management

This non-carbon advantage relates to the number of people having adopted sustainable practices for using land and land management through the emissions reduction program. The areas subject to an improved management are taken into account during a successful change of behaviours and practices with people from the ER-P zone and the sustainability of their land management practices. Important environmental advantages are related to these practices (better cultivation techniques, diversification used to prevent soil depletion, introduction of hedgerows to retain water and prevent erosion), introduction of sustainable management methods for logging, allowing for the renewal of tree cover. The users adopting sustainable land management practices include: (i) forest owners within the framework of the subsidy program for forests planted in line with their forest management plans, (ii) holders of agroforestry systems, (iii) producers of charcoal, (iii) forest contract-holders whose concessions are certified according to the national forest certification standard.

Clarification of land tenure

As explained in sections 4.3, 4.4 and 11, secured land rights (mission of AFOR) is an essential condition for the participation of stakeholders in the program, PSE projects in rural areas, and the long-term modification of non-viable behaviours in logging and natural resource exploitation. As a necessary basis for most of the other advantages not related to carbon and depending upon the success of the implementation of the ER-P on emissions, this is thus a priority non-carbon advantage. It has to be combined with territory development plans (SRADT) in order to make possible, in the end, the agreement of local populations on the limits of farming and conservation activities and a more efficient control over these activities (see below).

Governance and forest transparency improvement

This non-carbon advantage relates to the improvement of the environment, favourable to a transparent, efficient governance in the forest sector, in particular due to (i) adopting the SRADT, land use planning, the decisions about land use relying on transparent information and an advisory process on the priorities of land use; (ii) adopting inclusive management plans for classified forests; and (iii) the operationalization of the National information system on forests, which should improve information availability, accessibility and transparency, contributing to efficient forest monitoring and control. This, along with an improvement in the capacity of the forest administration and of the authorities in charge of applying forest laws in terms of control, regulations application, and promoting the sustainable use of forest resources and the improvement of forest management practices. The compliance of foresters with the management plans and the other legal and fundamental requirements of sustainability (fiscal obligations, social security, qualified forest guards, concession contracts, availability of statistical data, industrial plans, technical capacities, delimitation of crop zones and blocks, etc.) And the capacities for reinforced long-term control for the conservation and protection of the tree cover of the PNT.

Environmental cobenefits

The main environmental co-benefits should be drawn from research on the reinforcement of climate service on carbon sequestration in forests. The above-mentioned benefits are related to maintaining the tree cover, with the consequence of biodiversity protection and enhancement, and the role plays by forest in soil protection (against erosion), forest slows down the flow of water and protects the topsoil thus maintaining soil and soil fertility. Loss of forest cover also leads to a reduction in evapotranspiration, which is one of the drivers of the hydrological cycle and may influence climate at the local and regional scales, and some research suggests that even localized current forest cover loss may occur would be likely in some cases shift the entire basin into a more arid system. These activities, such as tree planting, natural regeneration of degraded forests, will be monitored to evaluate their impact on the above environmental cobenefits.

The program offers the possibility of a sustainable management of resources, creating the bases on which the dynamics of the territorial planning at different levels will rely (local, decentralized territorial entity, decentralized administrative entity). The program was used to launch the movement thanks to a multi-party

platform and the promoting of intersectorial planning of investments required for long-term protection of the tree cover.

The program will also strengthen the dynamics of planning not only in production forests that are conceded but also in protected forests with a support provided to SODEFOR and OIPR. At the level of concessions such as the territories involved in REDD+ activities, a strengthening of the application of the legislation on flora and fauna is expected.

Table 48: Program activities generating non-carbon benefits

Activities planned by the ER-P	Non-carbon benefits
In rural areas: • Agroforestry development, agricultural intensification and support for zero deforestation agriculture (AS1) • Development of small timber plantations and preservation of private and community forest relics through the PES system (FS1) • Development of community and individual plantations of wood energy (ES1) • Development of alternatives to wood energy using agricultural residues (ES3)	- Increase in income - Fight against soil erosion - Increased soil fertility - Adoption of sustainable land use practices - Clarification of land tenure - Increase in forest cover
In classified forests: • Development of agroforests (AS2) with: (i) agroforestry industrial concessions and (ii) cooperative agroforestry concessions • Development of the Taungya system of community agroforestry (women and young people): Concessions for the development of food agricultural activities associated with wood energy plantations (ES2) • Development of afforestation activities of classified forests (FS2), through the implementation of the reforestation program by SODEFOR;	- Improving transparency & forest management - Increased soil fertility - Improvement of the hydraulic cycle & fight against soil erosion - Increase in women's incomes - Adoption of sustainable land use practices
Rationalization of artisanal gold mining and site restoration (MS1)	- Adoption of sustainable land use practices
In the rural domain • Tenure security in rural areas to remove obstacles to planting trees on agricultural plots, including formalizing land status (H1) • Development of Regional development and Land use plans (SRADT) (H2)	- Land Clarification - Adoption of sustainable land use practices - Improving transparency & forest management - Increase in forest cover - Increased soil fertility
In classified forests: • Development of the concession system (H3) with agricultural (AS2) and forestry (FS2) and with agricultural cooperatives (AS2) and women's and youth associations (ES2)	

16.2 Approach for providing Information on Priority Non-Carbon Benefits

This subsection has been discussed in subsection 14.2, since the program adopted an integrated approach to monitoring and evaluation of safeguards and non-carbon benefits (co-benefits are part of the REDD+ social and environmental standards of the Republic of Côte d'Ivoire).

For the ER-P, the correct application of safeguards, as well as the creation of non-carbon benefits during the implementation of the program, will be demonstrated by the following means: (i) regular information published on the Geoportal/National REDD+ Registry, (ii) the reports of the mandated independent observers; (iii) the collection of data from the relevant project-related and activities bodies; and (iv) the SNSF, which can be a source of key information on compliance with certain safeguards.

For each of these programs and initiatives, monitoring and evaluation systems are or will be developed to inform the overall ER-P monitoring and evaluation framework. Members of the National REDD+ Commission

(CN REDD+, CTI REDD+ and SEP-REDD+) provide a strong platform to facilitate the integration of the strategy into sectorial policies and the monitoring, evaluation and review of progress and performance the implementation of the ER-P.

In addition, from the overall monitoring-evaluation framework will be updated to take into account the implementation phase of the REDD+ process, three (3) accessible and transparent tools will be used to monitor the implementation of the ER-P and non-carbon benefits:

- The National Forest Monitoring System;
- The REDD+ National Registry;
- The information system on backups (SIS).

The general device of the SIS:

The SEP-REDD+ is responsible for the administration of the SIS and will engage through agreements, with all relevant institutions to: (i) provide data to inform how socio-environmental guarantees and non-carbon benefits, (ii) perform data analysis as a member of the External Quality Control and Data Processing Support Unit, and (iii) perform quality control of data analysed and analyses performed in an iterative process between SEP-REDD+ and the External Unit of Quality Control and Data Processing Support.

Collection and management of data. During the implementation of REDD+ activities, SEP-REDD+ will collect data from several sources: (i) REDD+ program / project operators, (ii) protected area managers, (iii) relevant decentralized state structures (iv) focal points of conventions, (v) NGOs working in the field of forest and environmental conservation, and agriculture, (vi) other structures involved in sustainable forest management (agriculture, environment, scientific research, territorial administration, labour conditions, hydraulics, energy, mines and hydrocarbons ...), (vii) the National Institute of Statistics, (viii) international cooperation agencies, and (ix) the official journal, etc.

Data processing and analysis. Data collected on the implementation of REDD+ principles, criteria and indicators will be centralized in a database at SEP-REDD+ level and will be processed and analysed to highlight in a clear, transparent and reliable way, how socio-environmental guarantees and non-carbon benefits are taking into account and respected. Thus, the report of data processing and analysis will highlight:

- Statistics of the level of the taking into account of the socio-environmental aspects, and of co-benefits by Côte d'Ivoire within the framework of the PR-E;

- Statistics on the level of consideration of socio-environmental aspects and non-carbon benefits by promoters of REDD + projects / programs;

- Statistics of the impacts of REDD+ projects/programs in improving the living conditions of the population, increasing incomes (especially local communities), and preserving the environment and biodiversity;

- REDD+ actions / activities resulting in non-compliance with safeguards.

17 TITLE TO EMISSION REDUCTION

17.1 Authorization of the ER Programme

Name of entity	Ministry of Economy and Finances
Type and description of the organization	Fundraising and financial management of the program
Main contact person	Elie Gnanzou
Title/Role	Analyst at the MEF
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The Government of Côte d'Ivoire, represented by the Prime Minister, as Minister of the Budget and State Portfolio, will be the signatory of the ERPA.

The Prime Minister is authorized to sign the ERPA in the name and on behalf of the Government under the prerogatives conferred upon him by Article 1 of Decree No. 2017-596 of 27 September 2017 on the attributions of the members of the Government, to the by which he has the initiative and responsibility to participate "in the negotiation and signing of agreements and conventions of an economic and financial nature, in particular those relating to all external financial assistance, loan contracts, loans and deferred payment agreements" including securitisations, contracted by the State and the decentralized authorities, in liaison with the Minister of the Economy and Finance ". In accordance with Article 6 of the said Decree, the Secretary of State to the Prime Minister, in charge of the Budget and State Portfolio, exercises, by delegation of the Prime Minister, Minister of Budget and State Portfolio, of the latter relating to the State Budget and Portfolio.

This regulatory text expressly authorizes the Prime Minister in his capacity as Budget Minister to sign the ERPA. Minister of Finance will be designated by Prime Minister to sign the ERPA.

17.2 Transfer of Title to ERs

As specified in Chapter 15, the State's exclusive title ownership of emission reductions and the legal qualification of carbon rights will be enacted by a Decree adopted on the basis of Article 150 of the Forest Code for establish the Profit Sharing Plan. The Government before the signing of the ERPA will adopt this Decree.

The Government of Côte d'Ivoire, represented by the Prime Minister in his capacity as Minister Budget, will therefore have the quality and the capacity to transfer ownership title of the emission reductions generated by the program. It will be rendered possible, with a regulation stating that the State has exclusive ownership of emission reductions, and because of the legal characterization of carbon rights as envisaged for the application of the program in rural land, in the form of entitlement to benefits from payments for environmental services (see section 4.4 for more details).

The Government will be legally liable to ensure the implementation of the contractual obligation, and to transfer the legal title of emission reductions according to the signed ERPA, including the application of the exclusivity guarantee which is, that no rights will be given to a third parties, to sell or to transfer emission reductions generated by the activities within the ER-P (see section 17.3 below).

This commitment legally binds the Government to third parties in the respect that it will not allow a REDD+ project or activities within the program boundaries, unless the program itself addresses that activities/projects and complies with the requirements of the ERPA.

In this regard, the Benefit-sharing Plan Decree will make the emission reductions' exclusive ownership of the State legally enforceable, and the legal qualification of carbon rights that enshrine the right to payments for

environmental services (PES) in the area of the program located on the rural land area.

As noted in section 4.4, all potential holders of the newly created "carbon rights" will be recognized as holders of a "personal" (debt) right for environmental services only, that would enable them to obtain payment for environmental services (PES) that they will have provided for the effective implementation of REDD+ activities. This right of payment would only be recognized and exercised by their holders after they have carried out activities in accordance with the program, in accordance with expected and verified performances.

The operationalization of the PSE approach, as well as the guarantee to not allocate any right or title to emission reductions to third parties, is based on the setting up of a chain of contracts allowing to legally bind stakeholders, specifying their obligations, and the methods of allocating benefits in return for their performance (see section 17.3 below).

The contracts to be concluded with village groups in rural land will contain specific clauses: (i) compelling persons with land title rights, including customary land tenants rights, to renounce to claim any title on ERs and to recognize and accept the exclusive title of the State on emission reductions and, (ii) not to create any personal right or title of any kind on the emission reductions resulting from the activities of the program they carry out, to the benefit of third parties. The person designated to contract with the village groups will be responsible for ensuring compliance with this contractual obligation, under the supervision of the Regional REDD+ Committee and with the support of SEP-REDD+ as the operating entity managing the entire program. Each contract will also include non-negotiable clauses relating to the information of the stakeholders on the authorization given to the Minister in charge of the Budget to cede the emission reductions under the ERPA and, on the formal recognition a personal right for the environmental services they have rendered.

17.3 Contractual Arrangements for Implementation

The Benefit Sharing Decree will specify the contractual arrangements to be used to allocate benefits to program participants.

On the instructions of the Prime Minister in charge of the Budget, it is planned to transfer the total income from the sale of emission reductions to a dedicated fund (see Chapter 15), less the management costs of the program and the advance allowance allocated to the SEP-REDD+ for the later to start with et ER-P implementation).

The fund manager concludes a multi-party framework agreement with the SEP-REDD+, OIPR, SODEFOR, and a designated operator to oversee the PES program at national level that states the activities of each and the organization and management of related financial flows.

On the basis of this multi-party agreement, the fund manager concludes specific agreements with the following partners, specifying the rights and obligations of each:

- SODEFOR, which is responsible for the administration of the funds allocated to the classified forests: the specific agreement between the fund and SODEFOR must include the obligation for SODEFOR to negotiate and sign contracts with the concessionaires, including in the forests Community, by imposing the technical specifications for AS2, ES2, FS2, FS3 and related enabling activities through concession contracts, and remunerating them for services rendered in accordance with the Profit Sharing Plan.

- The OIPR, which is responsible for the administration of the funds allocated to the parks and reserves for activities FS1 to FS3: the specific agreement between the fund and the OIPR must include the obligation for the later to conclude contracts with public (SODEFOR, Mines) or private stakeholders (NGOs, small producers, local populations...), referring as far as possible to the existing provisions governing the OIPR's relations with other entities, particularly with the Foundation on the Parks and Reserves of Côte d'Ivoire which are set by a 2009 convention.

- A PES operator designated at the national level for the distribution of PES, in charge of defining the political orientations and the objectives to be achieved by the implementation of the sectorial and enabling activities

in the field of rural land; the designated national operator establishes a framework agreement with five (5) operators designated by SEP-REDD + on the proposal of the Regional REDD+ Committee at regional level (1 for each region covered by the program), which defines the modalities for implementing sectorial activities and the conditions for distributing profits in the form of PES to the actors involved. The PES operators designated at the regional level negotiate and sign, in the presence of the national operator and under the supervision of the REDD+ Regional Committee with the support of the SEP-REDD+, the contracts with the representatives of the village groups which specify the criteria, the performance, and results of each activity, the modalities of payments for environmental services rendered, and the monitoring and communication obligations of the actors, as well as their commitment not to claim rights to emission reductions or to create any rights or title to them (see above section 17.2).

Each specific agreement concluded between the dedicated fund and the OIPR, SODEFOR and the national operator, provides the budget allocated to each to execute the payments in accordance with the payment orders issued on the basis of the monitoring report of Reduction of Emissions and Realization investment plans carried out in each zone, which must be validated by SEP-REDD+.

18 DATA MANAGEMENT AND REGISTER SYSTEMS

18.1 Participation under other GHG initiatives

ER-P and the activities composing it have not transferred and do not plan to transfer emission reductions to another GHG initiative other than the Carbon Fund. No surface area has been recorded or is being recorded with another standard of project level such as VCS or CDM. There is no competing need for the emission reductions that will be generated by the ERP, no transactions other than those that will be concluded with the Carbon Fund during the ERPA period. Future emission reductions are therefore free of any rights, thus avoiding the double counting of its emission reductions. Potential investors will participate as beneficiaries in the Benefit sharing plan.

18.2 Data management systems and Registry systems to avoid multiple claims to ERs

Within the framework of its preparation of the REDD+, according to the Decision 9/CP.19 of the Warsaw Framework, the Republic of Côte d'Ivoire has planned to have a detailed register of REDD+ projects and initiatives deployed over its territory, accounting and transfer of emission reductions, and a System of Information on Safeguards.

This register should be available by the second quarter of 2019. To this effect, ToRs have been developed (see annex 11). Several strategic points can already be emphasized. They are included in the reference terms of the study, and are used to anticipate the compliance of this national register with criteria 37 and 38 of the FCPF-CF Methodological Framework

Criterion 37: Depending upon the needs and the country situation, the Emission Reduction Program works with the host country for defining suitable arrangements intended to prevent the multiplication of claims over the rights to emission reductions and to removals.

The register considered by the Republic of Côte d'Ivoire is a national register (criterion 37.1). It shall be used:

- To collect all basic information relating to the REDD+ program, including ER-P: which is the owner of emission reduction, such as the exact geographic borders (with geolocation), such as the expected activities, etc. It should also specify the technical elements of the project (retained carbon pools, reference scenario, etc.) - Indicator 37.2
- To make available, in a clear, centralized and free manner, all information relating to REDD+ and to the projects and initiatives in progress over the territory. The Republic of Côte d'Ivoire objective is to add this register to the platform already installed within the framework of the National System for Forest Surveillance (Geoportal - https://www.geoportailsst.com/). The information will be there under free access, in the official language f the country (French) - Indicator 37.3
- The reference terms which have been developed for this register provide for the elaboration of administrative procedures, and standard operational procedures (SOPs) which will be used for data management and integration - Indicator 37.4

Awaiting this registry, SEP-REDD+ has already started to list all REDD+ initiatives in the country. The new register should make it possible to associate very accurately, an emission reduction with an initiative, a project, or a program within the ER-P, and to identify very clearly, the rights associated with emission reductions and removals. Thus, it will prevent the same emission reduction or removal from being able to be claimed by several individuals/entities (criterion 37).

According to indicator 37.4, an audit will be carried out on the procedures associated with this register. How this audit will precede, remains to be discussed and jointly validated with the FCPF within the framework of ERPA.

Criterion 38: Depending upon the needs and its situation, the host country of the Emission Reduction Program takes suitable measures so as to ensure that the Emission reductions or Removals resulting from

the REDD+ activities of the program are not declared several times, and that once sold or transferred to the Carbon Fund, they cannot be used by any other entity for the purpose of selling, public relations, of bringing into compliance or for any other purpose.

The national register mentioned above has to make it possible to monitor and share all information relating to projects, and also to their performances and to the associated transactions. Thus, the register will be used to clearly identify, for a given project or program, the number of credits that it has generated, how many credits were put in reserve, were canceled, transmitted, sold, etc.

However, the national register is not yet intended to manage transactions (serialize credits, record transactions, etc.). To fulfill this function, the ER-P shall rely on a centralized transaction register, in this case during the whole period of the ERPA, the transaction register of the FCPF-CF (Indicator 38.1).

Using this transaction register of FCPF-CF makes it possible to observe *de facto,* the indicators 38.2 to 38.

Annex 1: Summary of financial plan

Utilisation des fonds	Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
		year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8	year 9	year 10	0
Coûts liés à la gestion administrative du PRE	10%	551 000	598 000	523 000	517 000	685 000	649 500	629 500	600 000	580 000	580 000	5 913 000
AS1. Agroforesterie et intensification agricole		1 000 000	1 000 000	1 000 000	1 000 000	1 500 000	1 500 000	1 500 000	1 500 000	1 500 000	1 500 000	13 000 000
AS2. Agroforêt		530 000	600 000	600 000	600 000	600 000	600 000	400 000	400 000	300 000	300 000	4 930 000
ES1. Plantation de bois énergie		400 000	340 000	240 000	400 000	350 000	350 000	350 000	350 000	250 000	250 000	3 280 000
ES2. Agroforesterie communautaire vivrière - bois énergie		200 000	200 000	340 000	200 000	300 000	300 000	300 000	300 000	300 000	300 000	2 740 000
ES3. Alternative au bois énergie - résidus agricoles et bois d'oeuvre		200 000	200 000	200 000	200 000	200 000	200 000	200 000	200 000	200 000	200 000	2 000 000
FS1. Petites plantations de bois d'œuvre et préservation		200 000	200 000	200 000	200 000	200 000	200 000	100 000	100 000	100 000	100 000	1 600 000
FS2. Reboisement et restauration des forêts classées		300 000	300 000	300 000	400 000	400 000	400 000	450 000	450 000	450 000	450 000	3 900 000
FS3. Renforcement de la protection des aires protégées		70 000	320 000	70 000	70 000	400 000	400 000	400 000	400 000	400 000	400 000	2 930 000
MS1. Réhabiliter les sites d'orpaillage + activités génératrices de revenus		300 000	300 000	50 000	50 000	50 000	50 000	50 000	50 000	50 000	50 000	1 000 000
H1. Sécurisation foncière		900 000	900 000	900 000	900 000	900 000	900 000	900 000	600 000	0	0	6 900 000
H2.Planification de l'aménagement et du développement du territoire		100 000	100 000	100 000	100 000	100 000	0	0	0	0	0	500 000

H3. Gestion améliorée des forêts classées		245 000	145 000	70 000	70 000	100 000	100 000	100 000	100 000	100 000	100 000	1 130 000
H4. Renforcement des capacités des communautés locales en agroforesterie, gestion communautaire	545 000	530 000	230 000	230 000	230 000	230 000	230 000	230 000	230 000	230 000	230 000	2 915 000
Coûts financiers	n/a											0
Coûts relatifs au MRV et registre		300 000	300 000	300 000	310 000	310 000	310 000	320 000	320 000	320 000	3.100 000	
Coût de gestion de mise en oeuvre des sauvegardes sociales et environnementales et SIS		100 000	100 000	100 000	100 000	100 000	110 000	110 000	110 000	110 000	110 000	1.050 000
Coûts relatifs au MGPR		70 000	35000	35 000	40 000	40 000	45 000	45 000	50 000	50 000	55 000	465 000
Coûts relatifs au suivi-évaluation		260 000	260 000	260 000	260 000	260 000	260 000	260 000	270 000	270 000	270 000	2.630 000
Coûts relatifs à la communication		194 000	194 000	194 000	194 000	194 000	200 000	200 000	200 000	200 000	200 000	1.970 000
Coûts totaux		**5 914 000**	**6 024 000**	**5 189 000**	**5.324 000**	**6 234 000**	**6 155 000**	**5 905 000**	**5 630 000**	**4 830.000**	**4.835.000**	**56.040 000**
Avance		750 000	750 000	737 250								2 237 350
Budget gouvernemental		1 100 811										1 100 811
FPRCI		590 000	590 000	590 000	590 000	590 000						2 950 000
GIZ- TGS		330 000										330 000
V4C privé		4 300 000										4 300 000
IDH - ISLA		1 130 000										1 130 000
Mondelez-Programme Cacao-Life		1 500 000										1 500 000
CEM		74 000										74 000
EU		82 000	82 000	82 000	82 000							328 000
EU – 11ème FED		500 000	500 000	500 000	500 000	500 000	500 000					3 000 000

PIF	4 800 000	4 800 000	4 800 000	4 800 000							19 200 000
PIF- Fonds pour les communautés locales	900 000	900 000	900 000	900 000							3 600 000
Revenus de la vente des réductions d'émissions contractées - (avance en 2023)				37 762 750		42 500 000					80 262 750
Revenus totaux (avant taxe)	**16 056 811**	**7 622 000**	**7 609 250**	**44 634 750**	**40 400 750**	**77 166 750**	**71 011 750**	**65 106 750**	**59 476 750**	**54 646 750**	443 732 311
Revenu net avant taxe (=revenus totaux – coûts totaux)	**10 142 811**	**1 598 000**	**2 420 250**	**39 310 750**	**34 166 750**	**71 011 750**	**65 106 750**	**59 476 750**	**54 646 750**	**49 811 750**	387 692 311

Annex 2 : Land and forest law in Côte d'Ivoire

The relevant legislation of the Ivory Coast in terms of land and forestry, has been put together as a list, organized according to the hierarchy of standards and the relevance of texts.

Constitution and Codes

- Decree no. 2016-771 of 12 October 2016 establishing a Constitution for the Ivory Coast, in particular articles 11 and 12.
- Civil code, in particular Book II - On assets and various modifications of property (more particularly title II and title IV - Articles 516, 526, 544, 546, 547etc.) and Book III- On different ways of acquiring property Art 711 – 717.
- Law no. 96-766 of 3 October 1996 on the Environmental Code (in particular article 10).
- Law no. 2014- 427 of 14 July 2014 on the new Ivory Coast Forest Code (in particular articles 19, to 21, 32, 72, 73, 75, 77, 147).
- Law no. 98-755 of 23 December 1998 on the Water Code (in particular the provisions of articles 5, 57, 69, 94 and 95).
- Law no. 2014-138 of 23 March 2014 on the Mining Code (in particular the provisions of articles 2, 42, 43, 140 and 143).
- Decree no. 2014-397 determining the application of the law no. 20 14-138 of 24 March 2014 on the Mining Code.
- Order no. 2012-487 of 07 June 2012 on the Investment Code, in particular the provisions of articles 3, 11, 16 of the present Code.
- Law no. 98-750 of 23 December 1998 on the rural land holding, amended by the amendments to the Law no. 98-750
- Law no. 2013-655 of 13 September 2013 on the time frame granted for finding the customary rights on the lands of the customary holding, and amending article 6 of the law no. 98-750 of 23 December 1998 on the Rural Land Holding.
- Law no. 2004-412 of 14 August 2004 amending article 26 of the law no. 98-750 of 23 December 1998 on the Rural Land Holding. (N.B. Repeals the law no. 71-338 of 12 July 1971 on the rational exploitation of rural lands owned under full property).
- Decrees for the application of law no. 98-750 of 23 December 1998 on rural land holding.
- Decree no. 2013-296 of 02 May 2013 on the definition of the delimiting procedure for village territories.
- Decree no. 99-593 of 13 October 1999 on the organization and granting of Rural Land Management Committees.
- Decree no. 99-594 of 13 October 1999 setting the methods of application of the law no. 98- 750 of 23 December 1999, to the customary Rural Land Holding.
- Decree no. 99-595 of 13 October 1999 setting the consolidation procedure for the rights of temporary contract-holders of the lands of the Rural Land Holding.
- Bylaw for the application of law no. 98-750 of 23 December 1998 on the rural land holding.
- Bylaw no. 55 of 11 July 2003 on the organization of the Rural Land Commission.
- Bylaw no. 032-MINAGRA-MEF of 04 July 2002 setting up a remuneration scale for the delimitation operations for real estate within the Rural Land Holding, and setting the modes of establishing it.
- Bylaw no. 033-MEF-MINAGRA of 04 July 2002 establishing the stamp scales of the Land Certificates and of the registration fees of the real estate of the Land Holding.
- Bylaw no. 034 of 04 July 2002 setting the modes of registration on the list of Technical Operators who can carry out delimitation operations on the real estate within the Rural Land Holding.
- Bylaw no. 37 MIE-CAB of 22 March 2002 on the creation and composition of the Commission in charge

of examining the files relating to the occupancy of the State public Holding and appointing the members thereof.
- Bylaw no. 45 of 20 July 2001 on the reorganization of the Rural Land Commission.
- Bylaw no. 041-MEMID/MINAG of 12 June 2001 on the setting up and functioning of Rural Land Management Committees.
- Bylaw no. 033-MINAGRA of 28 May 2001 defining the report form for closing the advertising for Official Rural Land Investigations.
- -Bylaw no. 030-MINAGRA of 15 May 2001 defining the approval and validation forms of Rural Land Investigations.
- Bylaw no. 112-MINAGRA of 6 September 2000 defining the form reporting on finding a continuous peaceful existence of customary rights over real estate within the Rural Holding.
- Bylaw no. 111-MINAGRA of 6 September 2000 defining the inventory report on customary rights and annexed documents.
- Bylaw no. 139-MINAGRA of 6 September 2000 defining the registration request forms for rural real estate subject to a Land Certificate.
- Bylaw no. 140-MINAGRA of 8 September 2000 defining the emphyteusis request forms over rural real estate subject to a Land Certificate.
- Bylaw no. 85-MINAGRA/MEF of 15 June 2000 setting the modes of drawing and presenting real estate plans within the customary Rural Land Holding.
- Bylaw no. 002-MINAGRA of 8 February 2000 on the official models of individual Land Certificates and Collective Land Certificates.
- Bylaw no. 147-MINAGRA of 9 December 1999 on the official form template for an investigation request aimed at establishing a land holding Certificate, and specifying the competence of sub-prefects.

Other legal instruments pertaining to land holding

- - Law nº 98-489 of 4 September 1998 on the holding regime of regions;
- - Order no. 2015-208 of 24 March 2015 on the creation of an electronic land register.
- - Decree no. 2015-883 of 23 December 2015 determining the application of order 2015-208 of 24 March 2015 on the creation of an electronic land register.
- - Order no. 2013-481 of 2 July 2013 setting the acquisition rules for the property of urban land.
- - Decree no. 2013-482 of 02 July 2013 on the application of the order setting the acquisition rules for the property of urban land.
- - Decree no. 2015-22 of 14 January 2015 on the occupancy procedures and conditions of land intended for industrial use.
- - Decree no. 2013-463 of 19 June 2013 setting the amount and modes of payment for the occupancy tax on industrial land VI.
- - Decree no. 2014-25 of 22 January 2014 amending Decree no. 2013-224 of 22 March 2013 on the regulations on the abrogation of customary rights over the land, in the general interest.
- - Decree no. 2013-224 of 22 March 2013 on the regulations on the abrogation of customary rights over the land in the general interest Repeals Decree no. 96-884 of 25 October 1996 regulating the abrogation of customary rights over the land in the general interest
- - Bylaw no. 61 MIE-CAB of 28 December 2006 on the creation and composition of the commission on public Holding occupancy.

State organization and relations with territorial collectivities
State/Territorial collectivities

- - Law no. 2014-451 of 05 August 2014 on the orientation of the general organization of Territorial

Administration (in particular the provisions in article 32).

- - Law no. 2012-1128 of 13 December 2012 on the organization of territorial collectivities (in particular the provisions of articles 159 to 161).
- - Decree no. 2013-475 of 2 July 2013 on the assignments, composition, organization and functions of the Regional Environmental, Social and Economic Committee. This Decree is taken as an application of articles 159 to 161 of the Law no. 2012-1128 of 13 December 2012 on the organization of territorial collectivities.
- - Decree no. 2005-268 of 21 July 2005 setting, in terms of environment protection and natural resource management, the application of the Law no. 2003-308 of 07 July 2003 on the transfer and distribution of State competence to Territorial Collectivities (in particular the provisions of articles 2, 7, 10, 12, 14, 16).

State/private persons relations

- - Order no. 2016-588 of 03 August 2016 on the occupancy titles on public land.
- - Decree no. 2016-788 of 12 October 2016 on the application of the order no. 2016-588.

Miscellaneous

- -Law no. 2014-428 of 14 July 2014 on the king and traditional chief status, in particular the provisions of article 9.

Forest and environmental legislation

General information:

- - Law no. 2014-390 of 20 June 2014 on orientation on sustainability.
- - Law no. 2014-427 of 14 July 2014 on the new Ivory Coast Forest Code (aforementioned)
- - Law no. 2015-537 of 20 July 2015 on farming orientation: takes into account the sustainable management of forest within the development of farming activities.
- - Decree no. 2013-41 of 30 January 2013 on the Strategic Environmental Evaluation of Policies, Plans and programs.
- - Decree no. 2012-1047 of 24 October 2012 setting how to apply the principle of the “polluter-payer”.
- - Decree no. 2005-03 of 6 January 2005 on Environmental Audit.
- - Bylaw no. 973 of 14 November 2007 on the application of Decree no. 2005 -03 of 6 January 2005 on Environmental Audit.
- - Decree no. 96-894 of 08 November 1996 establishing the rules and procedures applicable to studies relating to the environmental impact of development projects.
- - Bylaw no. 00972 of 14 November 2007 on the application of Decree no. 96-894 of 08 November 1996.
- - Decree no. 98-43 of 28 January 1998 on classified installations for environment protection.
- - Decree no. 83-743 of 28 July 1983, establishing a tree day in the Ivory Coast.

Institutions:

- - Decree no. 2014-507 of 15 September 2014 on the organization of Ministère de l’Environnement, de la Salubrité Urbaine et of Développement Durable (MINESUDD) [Ministry of Environment, Urban Health and Sustainability].
- - Decree no. 2013-22 of 09 January 2013 on the accreditation, as officers of criminal investigation, of civil servants and agents of national parks and natural reservations, and of waters and forests.
- - Decree no. 2012-1049 of 24 October 2012 on the creation, organization and functioning of the

National Commission for the Reduction of emissions of greenhouse gases due to deforestation and forest degradation.

- - Decree no. 2012-1050 of 24 October 2012 on the creation, assignments, organization and functioning of the Autorité nationale du Mécanisme pour un Développement Propre (AN-MDP) [National Authority of the Mechanism for Clean Development].
- - Decree no. 2012-988 of 10 October 2012 on the creation, assignments, organization and functioning of Plateforme de Réduction des Risques et de gestion des Catastrophes [Platform for Risk Reduction and management of catastrophes].
- - Decree no. 2012-162 of 9 February 2012 on the creation, assignments, organization and functioning of the national commission of the Global Environment Facility.
- - Decree no. 2004-649 of 16 December 2004 on the assignments, organization and functioning of the Commission Nationale of Développement Durable (CNDD) [National sustainability commission].
- - Decree no. 2002-359 of 24 July 2002on the creation of the Office Ivoirien des Parcs et Réserves (OIPR) [Ivory Coast Office for Parks and Reservations].
- - Decree no. 98-19 of 14 January 1998 on the creation and organization of Fonds National de l'Environnement (FNDE) [National Fund for Environment].
- - Decree no. 97-393 of 8 July 1997 on the creation and organization of a public administrative institution called Agence Nationale De l'Environnement (ANDE) de Côte d'Ivoire [National Environment Agency of the Ivory Coast].
- - Bylaw no. 10 MlNEDD-CAB of 5 March 2012 on the assignments, organization and functioning of the regional departments of the Ministry of Environment and Sustainable Development.

Ministry of Waters and Forests

- - Decree no. 2014-521 of 15 September 2014 on the organization of the Ministry of Waters and Forests.
- - Decree no. 2013-483 of 2 July 2013 on the creation, assignment, organization and functioning of the Technical Committee of negotiation for the Voluntary Partnership Agreement.
- - Decree no. 2013-22 of 09 January 2013 on the accreditation, as officers of criminal investigation, of civil servants and agents of national parks and natural reservations, and of waters and forests.
- - Decree no. 2012-962 of 12 October 2012 on the creation, assignments, organization and functioning of the National Committee of Forest Defense and Fighting Bush Fires.
- - Decree no. 2001-381 of 27 June 2001 on the Comité Interministériel de Coordination et de Pilotage de la Politique Forestière (CICPPF) [Interministerial Committee of Coordination and Steering Forest Policy].
- - Interministerial bylaw no. 488 MIA-CAB of 5 November 2012 on the composition, assignment and functioning of the National Committee of the Permanent inter-state committee for fighting drought in the Sahel and West Africa.
- - Bylaw no. 482 MINEEF-CAB of 08 March 2009 on the creation of a forest station in Yakassé-Attobrou.
- - Bylaw no. 483 MINEEF-CAB of 6 April 2009 on the creation of a forest station in N'Zianouan.
- - Bylaw no. 484 MINEEF-CAB of 6 April 2009 on the creation of a forest station in Gbagbame.
- - Bylaw no. 485 MINEEF-CAB of 6 April 2009 on the creation of a Gnamezaria forest station.
- - Bylaw no. 486 MINEEF-CAB of 6 April 2009 on the creation of a forest station in Konefla.
- - Bylaw no. 487 MINEEF-CAB of 6 April 2009 on the creation of a forest station in Kokumbo.
- - Bylaw no. 488 MINEEF-CAB of 6 April 2009 on the creation of a forest station in Gbapleu.
- - Bylaw no. 069 MINEF-MININTER-MINAGRA of 4 May 1995 on the creation of an advisory commission of assignment (repeals the Bylaw no. 055 MINAGRA-INT of 29 March 1995).
- - Decision no. 065 of 29 March 1995 on the monitoring and management committees of logging perimeters.

Société pour le Développement des Plantations Forestières (SODEFOR) **[Company for the development of tree plantation]**

- - Decree no. 93-206 of 3 February 1993 on the transformation of the company for the development of tree plantations (SODEFOR) in a State Company.
- - Decree no. 85-132 of 20 February 1985 on the transformation of the company for the development of tree plantations.
- - Interministerial Bylaw no. 1081 MEFP-lMINAGRA of 11 September 1992 on the creation of regional delegations at SODEFOR.
- - Bylaw no. 33 MINAGRA of 13 February 1992 entrusting SODEFOR with the management of classified forests of the State forestry holding, amended by the Bylaw no. 72 MINAGRA of 13 June 1995 on the management of the Warigué and Kinkéné forests.
- - Bylaw no. 235 MINAGREF of 5 July 1990 on the releasing of classified forests for SODEFOR.
- - Bylaw no. 289 AGREF. DPN of 28 August 1990 on the creation of the cell for the Coordination des Aires protégées de la Côtière (C.A.P.C.) [Coordination of Protected areas on the coast] in Fresco.
- - Bylaw no. 34 MINAGRA of 13 February 1992 on the transfer of the cell for the coordination of protected areas on the coast (CAPC) to SODEFOR.

Non-governmental stakeholders/entities

- - Decree no. 2009-05 on the recognition of the association called *Fondation pour les Parcs et Réserves de Côte* d'Ivoire (FPRCI) [Foundation for the Parks and Reservations of the Ivory Coast] as having public interest..
- - Decree nº72-606 on the creation of civil companies regrouping forest operators.
- - Interministerial Bylaw no. 54 MINAGRA-INT of 3 June 1993 organizing the Peasants-Forests Commission.

Conservation/Protection

- - Decree no. 66-122 of 31 March 1966 determining the so-called protected forest species.
- - Decree no. 66-52 of 8 March 1966 setting the authorized fires.

Protected areas

- - Law no. 2002-102 of 11 February 2002 on the creation, the management and the financing of national parks and natural reservations, amended by the Law no. 2013-864 of 23 December 2013 relating to paragraph 2 of article 9.
- - Decree no. 2012-163 of 9 February 2012 determining the classification procedures for natural parks and natural reservations.

National parks

- - Decision no. 30-MINEF-DPIF of 14 August 2001 on the cancellation of the logging perimeters adjoining the National Parks.
- - Decree no. 81-218 of 2 April 1981 on the creation of the Azagny National Park with a peripheral protection zone.
- - Decree no. 76-125 of 19 February 1976 on the creation of the Mont-Sangbé National Park.
- - Bylaw no. 290 AGREF. DPN of 28 August 1990 on the creation of a Layout Cell for the Mont Sangbé National Park.
- - Decree no. 74-179 on the classification of the Iles Ehotilés National Park.

- - Decree no. 72-544 of 28 August 1972 regarding the creation of Taï National Park.
- - Decree no. 77-348 of 3 June 1977 regarding the redefinition of the boundaries of Taï National Park and the creation of a peripheral protection zone.
- - Decree no. 73-132 of 21 March 1973 regarding the change to the boundary separating Taï National Park from N'Zo Partial Wildlife Reserve.
- - Decree no. 68-81 of 9 February 1968 regarding the creation of Comoé National Park.
- - Decree no. 68-79 of 9 February 1968 regarding the creation of Mont Péko National Park.
- - Decree no. 68-80 of 9 February 1968 regarding the creation of Marahoué National Park.
- - AGREF-DPNN ruling no. 291 regarding the creation of a Planning Unit for Marahoué National Park.
- - Decree no. 31-10-1953 regarding the creation of Banco National Park.

Nature reserves

- - Decree no. 2013-127 of 20 February 2013 regarding the creation of the Nature Reserve for Dahlias. (NB: access to the Nature Reserve for Dahlias and rights of use therein are regulated by article 11 of law no. 2002-102 of 11 February 2002 regarding the creation, management and funding of national parks and nature reserves).
- - MINEEF-CAB ruling no. 497 of 19 March 2007 regarding the Awesse Bo Sacred Forest Voluntary Nature Reserve.
- - Decree no. 93-695 of 19 August 1993 regarding the creation of Abokouamékro Wildlife Reserve.
- - MINEFOR-DDAR ruling no. 452 of 3 July 1975 regarding Divo Botanical Reserve.
- - Decree no. 73-133 of 21 March 1973 regarding the creation of Haut-Bandama Fauna and Flora Reserve.
- Decree no. 73-132 of 21 March 1973 regarding the change to the boundary separating Taï National Park from N'Zo Partial Wildlife Reserve.
- - Decree no. 77-348 of 3 June regarding the redefinition of the boundaries of Taï National Park and the creation of a peripheral protection zone.
- - Decree no. 72-545 of 28 August 1972 regarding the creation of N'Zo Partial Wildlife Reserve.
- - AGRI-DOM ruling no. 857 of 12 July 1968 regarding the creation of Lamto Scientific Reserve.
- - Decree of 5 July 1944 regarding the creation of Mont Nimba Strict Nature Reserve.

Classified forests

- - Decree no. 66-428 of 15 September 1996, establishing the procedures for the classification and declassification of state forests.
- - Decree no. 87-759 of 22 July 1987 regarding the declassification of part of Go-Bodiénou Classified Forest (Sub-Prefecture of Grand-Lahou).
- - Decree no. 86-254 of 9 April 1986 regarding the partial declassification of Yapo Classified Forest, no special remarks.
- - Decree no. 86-379 of 4 June 1986 regarding the partial declassification of Niégré Classified Forest (Department of Sassandra).
- - MINEFOR-DDAR ruling no. 201 of 24 June 1978 regarding the classification of Yapo-Abbé Forest Region (Department of Agboville).
- - MINEFOR-DDAR ruling no. 198 of 24 June 1978 regarding Niégré Classified Forest.
- - MINEFOR-DDAR Ruling no. 202 of 24 June 1978 regarding Go-Bodiénou Classified Forest (Sub-Prefecture of Grand-Lahou).
- - MINEFOR-DDAR ruling no. 197 of 24 June 1978 regarding Goin-Débé Classified Forest.
- - MINEFOR-DDAR ruling no. 199 of 24 June 1978 regarding Koba Classified Forest.
- - MINEFOR-DDAR ruling no. 200 of 24 June 1978 regarding Séguéla Classified Forest.
- - MINEFOR-DDAR ruling no. 450 of 3 July 1975 regarding the classification of Manzan Forest.

- - MINEFOR-DDAR ruling no. 451 of 3 July 1975 regarding the classification of Diambarakrou Forest.
- - MINEFOR-DDAR ruling no. 449 of 3 July 1975 regarding the classification of Krozialé Forest (Department of Danané).
- - MINEFOR-DDAR ruling no. 224 of 3 September 1974 regarding the classification of Bouaflé Forest (Prefectures of Bouaflé and Daloa).
- - MINEFOR-DAM ruling no. 270 of 23 November 1974 regarding the classification of Goulaleu Forest (Department of Guiglo).
- - MINEFOR-DAM ruling no. 275 of 29 November 1974 regarding the classification of Mont Kourabahi Forest.
- - MINEFOR-DAM ruling no. 271 of 23 November 1974 regarding the classification of Davo Forest.
- - MINEFOR-DAM ruling no. 269 of 23 November 1974 regarding the classification of Haut-Sassandra Forest.
- - MINEFOR-DAM ruling no. 225 of 3 September 1974 regarding Dé Classified Forest.
- - MINEFOR-DAM ruling no. 226 of 3 September 1974 regarding the classification of Mené Forest.
- - MINEFOR-DAM ruling no. 227 of 3 September 1974 regarding the classification of Niouniourou Forest.
- - SER-DAM ruling no. 66 of 30 June 1973 regarding the classification of Monogaga Forest, no special remarks.
- - SER-DAM ruling no. 65 of 30 June 1973 regarding the classification of Rapide Grah Forest, no special remarks.
- - SER-DAM ruling no. 68 of 30 June 1973 regarding the classification of Tené Forest.
- - SER-DAM ruling no. 67 of 30 June 1973 regarding the classification of Haute-Dodo Forest.
- - SER-DAM ruling no. 57 of 28 May 1973 regarding the classification of Kohodio Forest.
- - SER-DAM ruling no. 92 of 2 October 1973 regarding the classification of Sangoué Forest.
- - SER-DAM ruling no. 99 of 24 October 1973 regarding the classification of Doka Forest.
- - SER-DAM ruling no. 46 of 27 April 1973 regarding the classification of Laouda Forest.
- - SER-DAM ruling no. 45 of 27 April 1973 regarding the classification of Tankessé Forest, no special remarks.
- - SER-DAM ruling no. 69 of 26 October 1972 regarding the classification of Scio-Ouest Forest.
- - SER-DAM ruling no. 70 of 26 October 1972 regarding the classification of Gouin-Est Forest.
- - AGRI ruling no. 838 of 18 July 1961 regarding the classification of Mont-Niéton Forest Region.
- - SF ruling no. 325 of 14 May 1959 regarding the classification of N'Zi Supérieur Forest.
- - SF ruling no. 416 of 5 June 1959 regarding the classification of the so-called Nougbo Forest Region.

Production

- - Decree no. 78-231 of 23 March 1978, in application of law no. 65-425 of 20 December 1965 regarding the (aforementioned) Forest Code amended by Decree no. 2014-689 of 12 November 2014 concerning the title of annex II.
- - Decree no. 2013-816 of 26 November 2013 regarding the prohibition on the exploitation, cutting, transportation, transformation, sale and export of timber and woodwork from natural forests taken above the 8th parallel.
- - Decree no. 2013-815 of 26 November 2013 regarding the prohibition on custom sawing.
- - Decree no. 2013-508 of 25 July 2013 regarding the prohibition on the exploitation, cutting, transportation, sale and exploitation [sic] of Pterocarpus spp (Pterocarpus erinaceus).
- - Decree no. 95-682 of 6 September 1995 regarding the prohibition on the export of raw or square timber or timber in blocks.
- - Decree no. 2014-179 of 9 April 2014 repealing Article 2 of Decree no. 95-682 of 6 September 1995 prohibiting the export of rough and squared wood, and lumber.
- - Ruling no. 011 of 26 January 1996 laying down the procedures for implementing Decree no. 95-682 of 6 September 1995 prohibiting the export of rough and squared wood, and lumber.

- - Decree no. 94-368 of 1 July 1994 on the reform of logging, modifying Decree no. 66-421 of 15 September 1966 regulating the exploitation of industrial lumber, cabinetwork, timber, firewood and charcoal wood.
- - Decree no. 66-421 of 15 September 1966 regulating the exploitation of industrial lumber, cabinetwork, timber, firewood and charcoal wood.
- - Ruling no. 1399 of 4 November 1966, laying down the procedures for implementing Decree no. 66-421 of 15 September 1966 regulating the exploitation of industrial lumber, cabinetwork, timber, firewood and charcoal wood.
- - Decree no. 83-454 of 27 May 1983 supplementing Decree no. 66-421 of 15 September 1966 regulating the exploitation of industrial lumber, cabinetwork, timber, firewood, charcoal wood and bundled wood.
- - MINEFOR-CAB ruling no. 25 of 26 August 1983, specifying certain provisions of Decrees 66-421 of 15 September 1966 and 83-454 of 27 May 1983 regulating the industrial lumber, cabinetwork, timber, bundled wood, firewood and charcoal wood.
- - Decree no. 90-503 of 20 June 1990 on the processing and export of logs and lumber.
- - Decree no. 83-455 of 27 May 1983, regulating the profession of charcoal burner and grower of firewood and bundled wood.
- - Decree no. 82-70 of 13 January 1982 laying down the conditions for the supply of wood to local industries and the export of wood and wood products.
- - Decree no. 67-576 of 15 December 1967, regulating the profession of timber exporter.
- - AEF Inter-ministerial ruling no. 5085 of 24 January 1968 implementing the provisions of Decree no. 67-576 of 15 December 1967, regulating the profession of timber exporter.
- - Decree no. 66-50 of 8 March 1966 regulating the occupation of logger.
- - Decree no. 66-420 of 15 September 1966 regulating the timber industries.
- - Ruling no. 243 of 1 March 1967 correcting ruling no. 1577 of 5 December 1966, laying down the procedures for implementing Decree no. 66-420 of 15 September 1966 regulating the timber industries.
- - Ruling no. 1577 of 5 December 1966 laying down the procedures for implementing Decree no. 66-420 of 15 September 1966 regulating the timber industries.
- - Ruling no. 00402 of 26 March 2013 reinforcing the measures prohibiting the exploitation of lumber and cabinetmaking above the 8th parallel.
- - Ruling no. 058 of 6 February 2013 prohibiting logging above the 8th parallel.
- - MINEF ruling no. 00623 of 24 November 2011 supplementing MINEF ruling no. 00478 of 07 September 2011 establishing a transport slip for the export of Forest Products by land in Côte d'Ivoire.
- - MINEF ruling no. 1072 of 13 July 2009 clarifying the methods of exploitation, circulation and transfer of logs in Côte d'Ivoire.
- - Special authorization no. 00804 of 17 November 2006 concerning import authorization in Ivory Coast, Logs from Liberia for the benefit of Société Africaine Industries.
- - Ruling no. 529 of 26 October 2003 prohibiting the transport of Teak and Gmelina wood in containers and other enclosures.
- - Inter-ministerial MINAGRA-MDIE-ET ruling no. 36 of 7 April 1997 prohibiting road transport of logs at night.
- - Inter-ministerial MINAGRA-MDlE-ET ruling no. 99 of 8 May 1996 regulating the road transport of logs.
- - MINAGRA-MEFCP ruling no. 91-002 of 2 January 1991 organizing the public sale and the control of quotas and lumber whose export is regulated.
- - MIERFOR-DIF-DCFC ruling no. 911 of 25 June 1983 on the classification of logging permits.
- - AGRI ruling no. 1289 of 6 October 1969, classifying 14 reforestation zones in dense areas of Bandama-Solomougou.
- - Decision no. 0988 of 18 October 2012 on strengthening measures to combat illegal logging above

the 8th parallel.

- - PR decision no. 18 of 6 December 2011 on the ratification and publication of the 2006 International Tropical Timber Agreement, signed on 27 January 2006 in Geneva, Switzerland.
- - MINAGRA-CAB decision no. 136 of 13 October 1994 laying down the terms and conditions for the sale of timber quotas in logs, squared or as lumber and Iroko sawn timber and 'other sawnwood' on 15 and 16 April 1994, 20 and 21 May 1994, and 17 and 18 June 1994.
- - MINEFsOR/DPF decision no. 1505 of 7 September 1982 prohibiting logging in the savanna zone of Côte d'Ivoire.
- - Decision no. 746 of 21 April 1983 supplementing MINEFOR/DPF decision 1505 of 07 September 1982 prohibiting logging in the savanna zone of Côte d'Ivoire.
- - Decision no. 01 of 8 January 1985 supplementing decision 1505 prohibiting logging in the savanna zone of Côte d'Ivoire (not found).
- - MINEFOR decision no. 1284. - DCFC of 28 October 1982 establishing a Journal in the log-export parking facility.
- - MINEFOR-DCF decision no. 22 of 9 December 1981 laying down the conditions for the circulation of logs.

Other:

Forestry taxation

- - Ordinance no. 96-181 of 7 March 1996 amending the tariffs applicable to forest taxation.
- - Law no. 90-441 of 29 May 1990 amending the nomenclature and tariffs of export duties on logs and certain wood products.
- - Ordinance no. 66-626 of 31 December 1966 setting the amount of timber royalties for the export of lumber and cabinetwork and instituting a reforestation tax.

Law enforcement

- - Decree no. 66-362 of 17 November 1966 laying down the methods of representation of the authorities before the criminal courts and the procedure for dealings in forest matters.
- - Decree no. 66-427 of 15 September 1966 allocating the net proceeds of fines, confiscations, restrictions, damages, constraints and transactions under the forest policy.

As a reminder, the regulations prior to Law no. 98-750 of 23 December 1998 relating to rural land domain 121:

- - Law of 25 June 1902 on long-term leases.
- - Law no. 71-338 of 12 July 1971 to promote the rational exploitation of rural land held in full ownership.
- - Decree-Law no. 5-580 of 20 May 1955 reorganizing public and public land in French West Africa and French Equatorial Africa.
- - Decree no. 97-620 implementing Law no. 97-524 of 4 September 1997 establishing a land development concession.
- - Decree no. 96-884 of 25 October 1996 regulating the purge of customary rights on the ground for the general interest.
- - Decree no. 95-817 of 29 September 1995 setting the compensation rules for crop destruction, repeals Decree no. 72-116 of 9 February 1972, setting the scale of compensation for crops.
- - Decree no. 95-14 of 11 January 1995 establishing the Inter-ministerial Committee on Tax Reform and Property Tax.
- - Decree no. 74-136 of 12 April 1974 laying down the procedure and conditions for the allocation of public land intended for tourist promotion.
- - Decree no. 71-339 of 12 July 1971, laying down the procedures for the application of Law no. 71-338 of 12 July 1971 vii.

- - Decree no. 71-74 of 16 February 1971 relating to public and private land procedures.
- - Decree no. 64-164 of 16 April 1964, prohibiting private deeds in real estate matters.
- - Decree of 15 November 1935 regulating public lands in French West Africa.
- - Decree of 26 July 1932 reorganizing the system of land ownership in French West Africa.
- - Decree of 25 November 1930 on expropriation for reasons of public utility and temporary occupation in French West Africa (BOC, 1892).
- - Decree of 29 September 1928 regulating public interest land and public easements (modified by the decrees of 7 September 1935 and 3 June 1952).
- - Decree of 8 October 1925 instituting the method of ascertaining indigenous land rights in French West Africa.
- - Inter-ministerial MINAGRA/MEF ruling no. 28 of 12 March 1996 setting the scale of compensation for destroyed crops 208.
- - MFAEP-CAB Ruling no. 673 of 20 April 1962, creating the land registry service.
- - Ruling of 27 November 1959 setting the regulation of land transactions in Côte d'Ivoire.
- - Ruling no. 73 d. of 10 April 1943 establishing an administrative reserve along tracks and roads.
- - Ruling of 31 January, 1938, no. 83 d. ruling amending local ruling no. 2164 a.g. of 9 July 1936 regulating the disposal of public land.
- - Ruling no. 2164 of July 9th, 1936 concerning the disposal of public lands modified by ruling of January 31st, 193

Annex 3 : Consultations carried out as part of the REDD+ preparation

- *Consultations for preparation of the R-PP*

STRUCTURES ENCOUNTERED BY THE CN-REDD+	DATES
National Agency for Rural Development Support (Agence Nationale d'Appui du Développement Rural, ANADER)	14/9/2012
National Environment Agency (ANDE)	19/9/2012
Cotton and Cashew Nut Regulatory Authority (Autorité de Régulation du Coton et de l'Anacarde) (ARECA)	16/10/2012
National Office for Technical and Development Studies (Bureau National d'Etudes Techniques et de Développement)	
Center of Cartography and Remote Sensing (Centre de Cartographie et de Télédétection (BNETD/CC1))	10/9/2012
Ivorian Center for Economic and Social Research (Centre Ivoirien de Recherche Economique et Sociale (CIRES))	10/9/2012
National Center for Agricultural Research (CNRA) (Centre National de Recherche Agricole (CNRA))	11/9/2012
Swiss Center for Scientific Research in Côte d'Ivoire (Centre Suisse de Recherche Scientifique (CSRS))	11/09, 12/09, 14/09/2012
National Floristic Committee (Comité National Floristique (CNF))	11/9/2012
Coffee and Cocoa Council (Conseil Café Cacao (CCC))	16/10/2012
Convention on Biological Diversity, a focal point (Convention sur la Diversité Biologique (COB), Point Focal)	13/9/2012
National School of Statistics and Applied Economics (Ecole Nationale de Statistiques et d'Economie Appliquée (ENSEA))	12/09, 18/09/2012
National Statistics Institute (INS)	13/09,14/09, 17/09/2012
Jeunes Volontaires pour l'Environnement (JVE)	11/09, 20/09/2012
Department of professional agricultural organizations of the MINAGRI	15/10/2012
Statistics Department of the MINAGRI	16/10/2012
Department of Rural Land and the Rural Land Registry of the MINAGRI (Direction du foncier rural et du cadastre rural du MINAGRI)	18/9/2012
Ministry of Water and Forests (MINEF)	14/9/2012
Department of Forest Production and Industries (DPIF)	19/9/2012
Department of Information, Education, Awareness-raising of IT and Archives	13/09, 19/09/2012
Ministry of Planning and Development	18/9/2012
Office Ivoirien des Parcs et Réserves (OIPR)	13/9/2012
Société de Développement des Forêts (SODEFOR) (Forest Development Corporation)	13/9/2012
Wood Industries Association (SPIB)	15/10, 18/09/2012
Union of partner organizations and beneficiaries of the Global Environment Facility	10/9/2012
World agroforestry center - CGIAR/ ICRAF	11/9/2012

Activities	Dates
National workshop on launch and capacity reinforcement for the International REDD+ mechanism	8 and 9/09/2011
Workshop on capacity reinforcement concerning setting up the institutional framework of REDD+	8 and 9/03/2012
Workshop on capacity reinforcement concerning REDD+ and launch of development of REDD road map approved by the GCCA-ACP	9/5/2012
Workshop on the project to support the REDD+ process in Republic of Côte d'Ivoire through the preparation of introduction of a system of Surveillance and Measuring, Reporting and Verification (S&MRV)	19/10/2012,
Meeting to provide information about progress of the REDD+ road map supported by the GCCA-ACP	23/10/2012,
Workshop on awareness-raising/training of local communities in CC, forests and the REDD+ mechanism	14-17/02/2013
Meeting of civil society and the EFI-EU delegation	2/20/2013
Workshop on training of local communities and civil society in the UN-REDD approach to the Commitment of stakeholders and the principle of free, prior and informed consent (FPIC)	6 and 7/3/2013
Workshop on training of civil society in the REDD+ mechanism, financed by the EFI	16 and 17/04/2013
National campaign for providing information to and raising awareness of stakeholders concerning the REDD+ mechanism, financed by the EFI and the UNDP	23 and 26/04/2013
	20 and 21/06/2013
	21-29/10/2013
Work session between the CN-REDD and civil society	23/10/2013,
Workshop on analysis of the R-PP by civil society	29 and 30/10/2013
Meeting of women's organizations for the provision of information and awareness-raising concerning the REDD+ mechanism	10/31/2013
Meeting of youth organizations for the provision of information about the REDD+ mechanism	31/10/2013,
Validation workshop for the R-PP	6 and 7/11/2013
Second national validation workshop for the R-PP	5/9/2014

- *Consultations for preparation of the SN-REDD+*

Activités	2016			2017											Lieu
	Oct	Nov	Dec	Janv	Fév	Mars	Avril	Mai	Juin	juil	Août	Sept	Oct	Nov	
Atelier de consolidation et d'affinement de la stratégie nationale REDD+ par l'équipe SEP-REDD+															Jacqueville
Ateliers régionaux de consultation, d'analyse et de validation du draft 1 de la stratégie nationale REDD+ avec la participation des présidents des GT															Yamoussoukro, Soubré, Aboisso,
Ateliers sectoriels de haut niveau de validation des politiques et mesures pour chaque groupe thématique puis intégration des commentaires															Abidjan
Atelier de consultation des organisations de la société civile regroupée au sein de l'OIREN sur la stratégie nationale REDD+ à Yamoussoukro															Yamoussoukro
Atelier de consultations des organisations de jeunesses sur la stratégie nationale REDD+ en préparation à la COP22 au Maroc															Abidjan
Mini atelier de consultation des différents ministères sur la stratégie nationale REDD+															Abidjan
Présentation du draft 1 de la stratégie nationale REDD+ de la Côte d'Ivoire lors de la COP22															Marrackech, Maroc
Consultations sur le Plan d'investissement de la SN REDD+															Abidjan et en Régions
1ère reunion statutaire du Secrétaraiat Exécutif Permanent REDD+_Analyse du document de stratégie nationale REDD+															Abidjan
1ère reunion statutaire du Secrétaraiat Exécutif Permanent REDD+_Analyse du document de stratégie nationale REDD+															Abidjan
1ère reunion du Comité Technique et du Comité National REDD+_Analyse stratégie nationale REDD+															Abidjan
Réunion du Comité Technique pour examen du document de stratégie nationale REDD+															Abidjan
Réunion du Comité Technique pour examen du document de stratégie nationale REDD+															Abidjan
Validation de la SN REDD+ par le Comité National REDD+															Abidjan
Communication en conseil des ministres															Abidjan
Revue et prise en compte des commentaires additionnelles des parties prenantes institutionnelles par le SEP REDD															Abidjan
Présentation à la COP 23															Allemagne

- *Consultations for preparation of the R-PIN*

Activities	Date	Location
Workshop devoted to drafting the ER-P idea note for Côte d'Ivoire	08-11/06/2015	Bassam
Workshop devoted to feedback of the results of work on the drafting of the conceptual note for the emissions reduction program	7/29/2015	Abidjan
ER-PIN reading session	8/4/2015	Abidjan

- *Consultations for preparation of the SESA*

Activities	Date	Location
Workshop devoted to the start-up of activities for the Social and Environmental Safeguard Assessment as part of the REDD+ mechanism in Côte d'Ivoire	19/02/2016	Abidjan
Regional Consultations as part of the Social and Environmental Safeguard Assessment of the REDD+ mechanism	from 10/03/2016 to 13/04/2016	24 pref. and 24 villages
Discussion and enrichment workshop o the assessment of the strategic options of the REDD+ mechanism in Côte d'Ivoire	4/8/2016	Abidjan
Validation workshops	02-04/01/2019	Dokoué San-Pedro
	03-04/01/2019	Abidjan

- *Consultations for preparation of the SIS*

Activities	Date	Location
Validation meeting for the first version of Information on Safeguards System (Système d'Information sur les Sauvegardes)	3/22/2018	Abidjan
Information and discussion session on the Information on Safeguards System (Système d'Information sur les Sauvegardes)	3/29/2018	Abidjan
Finalization workshop for the Information on Safeguards System (Système d'Information sur les Sauvegardes)	4/22/2018	Abidjan

- *Consultations for preparation of the REL/MRV*

ACTIVITIES	DATE	LOCATION
First meeting of the Technical Group for the drafting of the action plan for the implementation of the NFMS	9/3/2016	Abidjan
Second meeting of the Technical Group for the drafting of the action plan for the implementation of the NFMS	24/03/2016	Abidjan
Third meeting of the Technical Group for the drafting of the action plan for the implementation of the NFMS	15/06/2016	Abidjan
Retreat for finalization of the NFMS action plan	06/2425/2016	Assinie
Validation workshop for the NFMS Action Plan	16/9/2016	Abidjan
Training workshop on the RLF	04-05/06/2015	Abidjan
Technical Workshop on the representation of the	27-28/04/2016	Abidjan/SODEFOR

definition of forest as part of the REDD+ mechanism in Côte d'Ivoire		
Workshop devoted to starting the drafting of the FRL/NERF (Reference Emission Level for Forests)	07-08/09/2016	Abidjan
Technical workshop to support the finalization of the FRL and bringing into line with the NGGI of BUR	05-09/12/ 2016	Rome
National FRL validation workshop as part of REDD+	14/12/2016	Abidjan
Planning meeting for biomass inventory activities	30/9/2016	Abidjan
Workshop devoted to the development of the methodology and training of managers on Biomass	11-12/08/2016	Abidjan
National workshop launching the collection of forest biomass data	14/10/2016	Abidjan
Training workshop on the assessment of forest resources and data analysis	3-7/04/2017	Abidjan
Training workshop for inventory teams on the use of forest biomass data collection tools and instruments	20-21/09/2016	Abidjan
Information and awareness meeting on biomass inventory		Bondoukou
Information and awareness meeting on biomass inventory	28/10/2017	Adzopé
Information and awareness meeting on biomass inventory	26/10/2017	Abengourou & Gagnoa
Information and awareness meeting on biomass inventory	27/10/2017	Bettié & Bangolo
INF SODEFOR project meeting	1/3/2017	Abidjan
Training workshop on data processing and analysis	25-29/09/2017	Abidjan
Presentation workshop on basic forest data for REDD+	12/10/2017	Abidjan
Workshop devoted to establishing a cooperation framework between national stakeholders for the development of the RLF/NFMS	10/3/2016	Abidjan
Workshop devoted to presenting the result of the study on drivers of deforestation and degradation in Côte d'Ivoire (EMDD)	Monday, October 10, 2016	Abidjan
Training workshop on GHG inventories	27-30 April 2015	Abidjan
Training workshop on the harmonization of keys in land occupancy mapping/LCCSv3 system	30/06 - 03/07/2015	Abidjan
Training on the MNV	16-20/09/2013	Abidjan
Validation workshop on the harmonized national key with LCCSv3	13-14/08/2015	Abidjan

- *Consultations for preparation of the PES guide*

Activities	Date	Location
Workshop devoted to presenting the "Transforming cocoa supply chains in Côte d'Ivoire" pilot project and identification of the themes in terms of information, awareness and environmental education	Friday, December 16, 2016	REDD+ Permanent Executive Secretariat
Capacity building workshop for national stakeholders on the systems of payment for environmental services	12-13 March 2015	Abidjan

Annex 4 : Estimation of changes

I. INTRODUCTION

In accordance with the requirements of the United Nations Framework Convention on Climate Change (UNFCCC), countries engaged in the process of reducing emissions from deforestation, forest degradation, and the role of conservation, sustainable management of Forests and forest carbon stock enhancement (REDD +) are expected to demonstrate in a transparent and quantifiable way the impact of REDD + activities on the level of greenhouse gas (GHG) emissions.

This requires information on changes in forest area (activity data) and carbon stocks associated with each forest layer (emission factors). The UNFCCC recommends that building a credible and robust national REDD + strategy first requires a detailed analysis of the causes of deforestation and forest degradation.

In accordance with this requirement, a mapping study of forest dynamics between 1986 and 2015 (FAO & SEP-REDD +, 2017) yielded three national forest and non-forest binary maps for 1986, 2000 and 2015 which were combined into a map of change and an assessment of the accuracy of this national map was conducted to determine the areas of different classes.

In addition to this study and with technical support from FAO, an assessment of the accuracy of land use maps for 1986, 2000 and 2015 in the Emission Reduction Program (ERP) area (Nawa, San -Pedro, Cavally, Guémon and Gboklè) was carried out in order to estimate the level of accuracy of the maps with confidence intervals specific to said zone.

This annex describes the different steps for evaluating the accuracy of the maps: the sampling system, the analysis system and the response system, as well as the analyzes that were made to estimate deforestation, forest degradation , forest carbon stock enhancements, etc.

II. METHODOLOGY

The detailed methodology for estimating areas of different classes of land-use change between 1986 and 2015 is described in this section of the document.*II-1 Extraction of the ERP Area from the product of the BNETD Combined maps*

Tree binary maps Forest (Code = 1) / Non Forest (code = 2), obtained as part of the Forest Dynamics Study between 1986 and 2015, for the pivot years 1986, 2000 and 2015[68] were combined (pixel by pixel) to produce a land-use change map.

Individual F/NF maps were combined using the Open Foris Geospatial Toolkit tools (http://www.openforis.org/tools/geospatial-toolkit.html).

The change map from this combination has a 3-digit code, representing Forest (Code 2) or Non-Forest (Code 1) for each of the three (3) dates (1986, 2000 and 2015). Thus, a pixel with the code 211 corresponds to a situation of Forest in 1986 and Non-Forest in 2000 and 2015.

Then, using the QGIS software, the ERP area vector boundary was superimposed on the raster map of the land cover changes between 1986, 2000, and 2015 to retrieve data from the ERP in raster format.

The change map is composed of 8 classes as shown in Table 1 below

[68] Cartographie de la synamique forestière entre 1986 et 2015 en Côte d'Ivoire - http://reddplus.ci/download/rapport-de-la-cartographie-de-la-dynamique-des-forets-en-cote-divoire/?wpdmdl=8121

Table1 :Change map classes

Code	Classe
111	Non Foret Stable
112	Gain 2000-2015
121	Classe dynamique1
122	Gain 1986-2000
211	Perte 1986-2000
212	Classe dynamique 2
221	Perte 2000-2015
222	Foret Stable 86-00-15

Figure 1 shows the extraction of the ERP zone from the national land-use change map

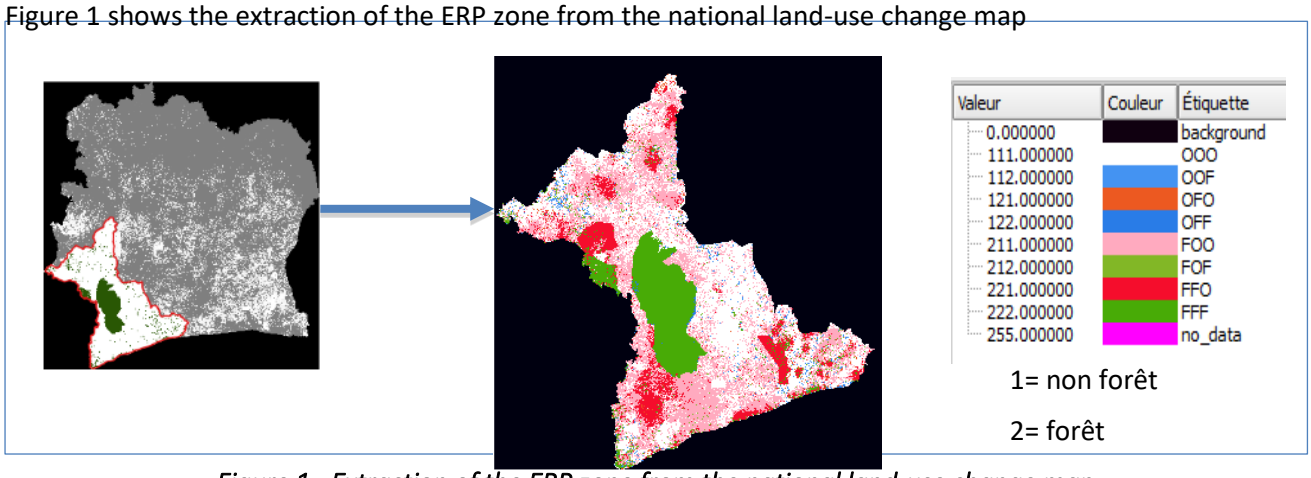

Figure 1 : Extraction of the ERP zone from the national land-use change map

II-2 Stratified estimation of areas

For the determination of the Activity Data (AD), an analysis of the accuracy, based on the good practices described by Olofsson et al. (2014) in three stages, was adopted. These steps are (i) the definition of the sampling system, (ii) the adoption of an optimal response system; and (iii) the analysis

Pour la détermination des Données d'Activités (DA), une analyse de la précision, basée sur les bonnes pratiques décrites par Olofsson et al. (2014) en trois étapes, a été adoptée. Ces étapes sont (i) la définition du système d'échantillonnage, (ii) l'adoption d'un système de réponse optimal ; et (iii) l'analyse.

II-2.1 Sampling system

A stratified random sampling according to good practice reported in Olofsson et al. (2014) was performed with a random distribution of points in each existing stratum.

The sampling points were generated randomly and distributed between classes using a tool developed by the FAO Forestry Department (graphical interface in R[69]) set to an expected accuracy of between 0.7 and 0.9 with a minimum sample size of 100 points per class.

In the sampling plan, the sample size for each class of the map is chosen to ensure that it is large enough to produce sufficiently accurate estimates (GFOI, 2013).

Majority class sampling was done by randomly selecting points in a random grid. The sampling of the rare classes was done by first transforming the raster into a table of points, then randomly choosing the number

[69] https://github.com/lecrabe/aa_design_analysis

of points desired in each class concerned. The details of the procedure are described in FAO (2016) [70].

Finally, in order to respect the minimum mapping unit used in the individual maps produced by the BNETD, a buffer zone of 0.5 ha was then defined around each point and then interpreted visually. Figure 2 below shows the sample units.

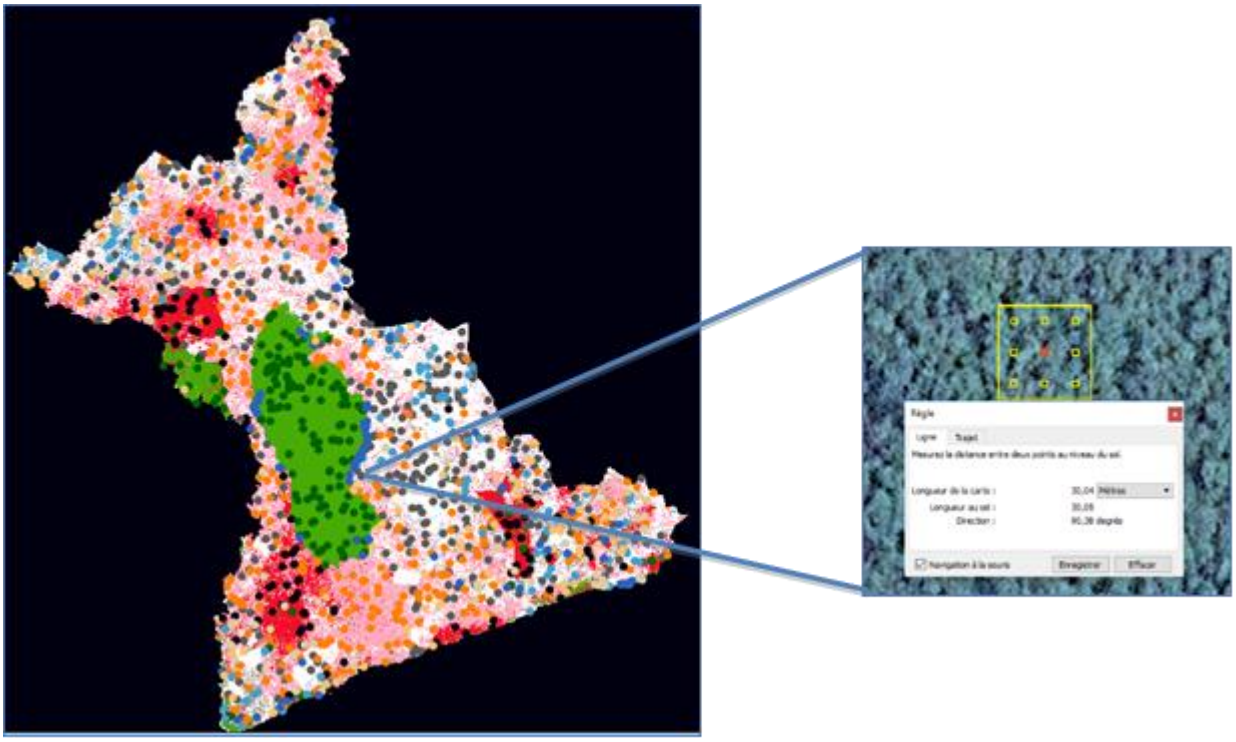

Figure 2: ERP area total sample

II-2.2 Response system

According to Olofsson et al. (2014) the data used to assess the accuracy of a map must be of at least the same quality and resolution as the data used in the map development.

The response system used here is composed of:

- The Collect Earth tool (Figure 3) where the points are visually interpreted using Google Earth, Bing map, and Here maps images, which allows to use very high spatial resolution images

Time series of annual composites of Landsat and Sentinel images for the whole period from 1986 to 2016 (Figure 4) which allows to use very high temporal resolution information Both of these tools are part of the Open Foris Open Source software suite developed by the FAO Forestry Department to facilitate the collection, analysis, reporting and exchange of forest data.

This visual interpretation of the samples from the available images was done over three years: 1986, 2000 and 2015.

Each operator had to identify for each year the type of land use (forest or non-forest (Figure 4) and to determine the canopy coverage rate of the forest class for each of these three years. and validate the response using a self-assessment criterion (certainty or uncertainty).

Indeed, the interpretation of these images is not always conclusive because of (i) the presence of clouds, (ii) the unavailability of Landsat images for certain years, (iii) the absence of high spatial resolution images in

[70] Map accuracy assessment and area estimation: a practical guide - http://www.fao.org/3/a-i5601e.pdf

Google Earth, and (iv) the presence of artifacts (ie SLC-off on Landsat 7).

In cases where the visual interpretation of the points was not possible for the reasons mentioned above, the certainty label "no" was awarded, and those points were removed from the analysis. The chosen sampling system (stratified random) allows to take into account not all the points, as long as the minimum number of points per stratum of the initial map is respected.

The information provided by the various operators in the form (Figure 5) feeds a global database in CSV format that will be used later for analysis. This database traces:

- The type of land cover (Forest - Non-forest);
- Forest cover rate (30 to 100%);
- the level of certainty (yes);
- Drivers of deforestation (cocoa, hevea, palm, human settlements, etc.)

Figure 3 below shows the visual interface of collect earth.

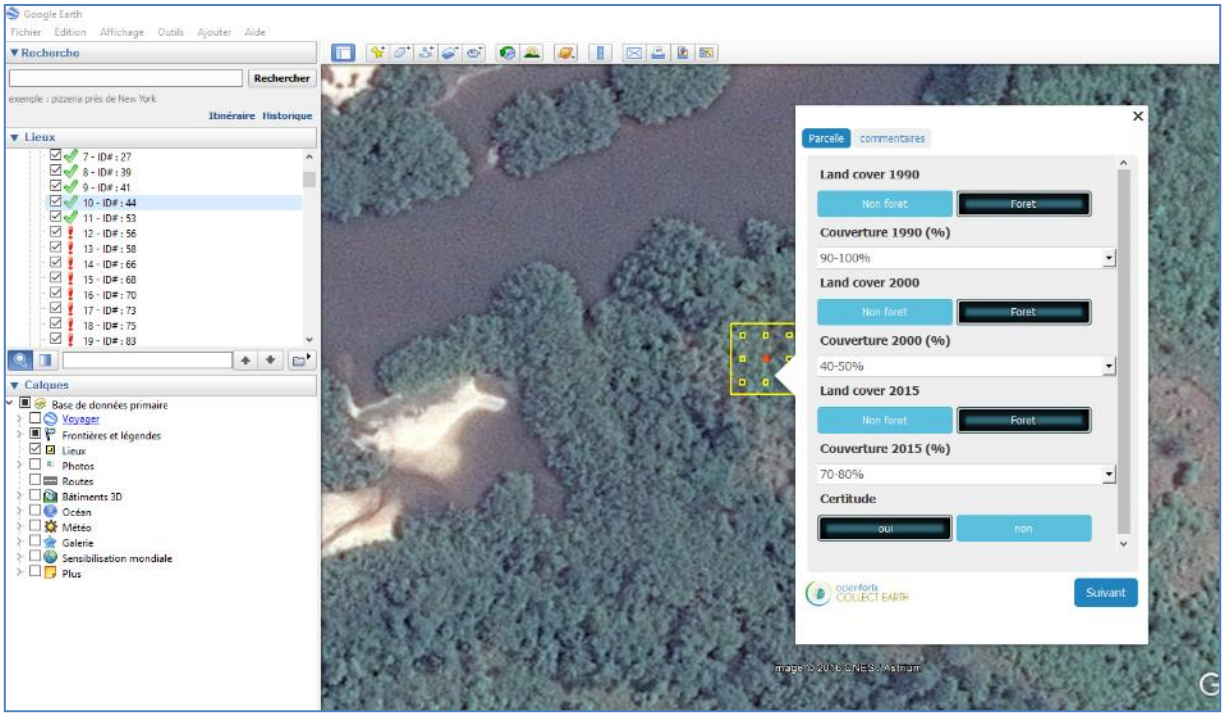

Figure 3 : Interface Collect Earth utilised for response system and data collection

Figure 4 below is a time series of LANDSAT and SENTINEL 2A composite images on a sample unit.

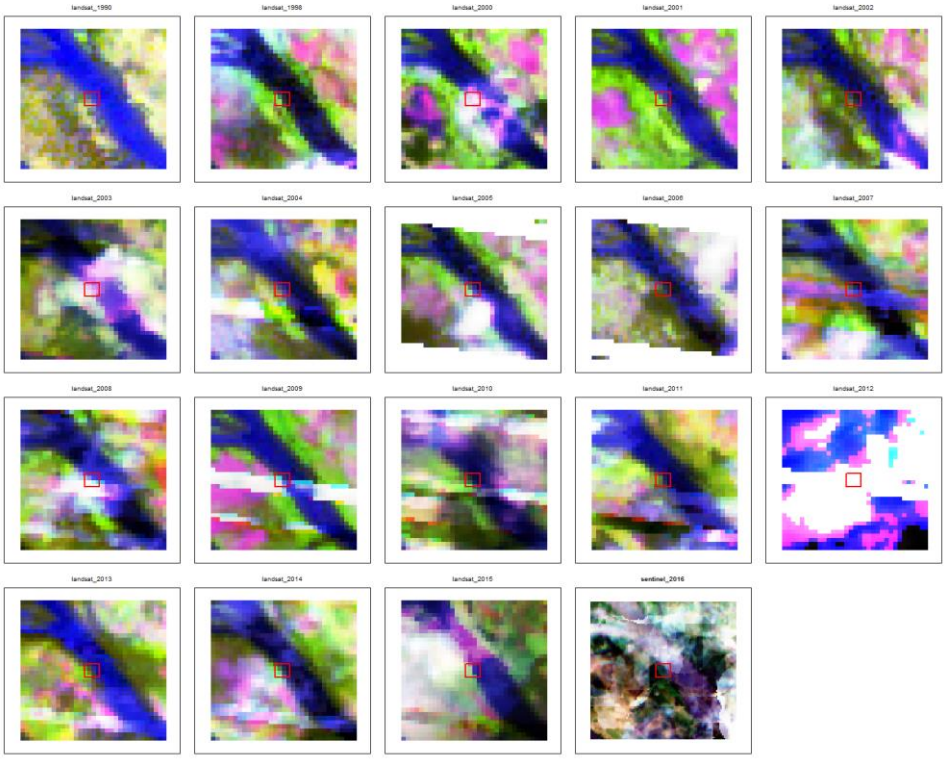

Figure 4 : time serie of LANDSAT images from 1986 to 2015 and 2016' SENTINEL images

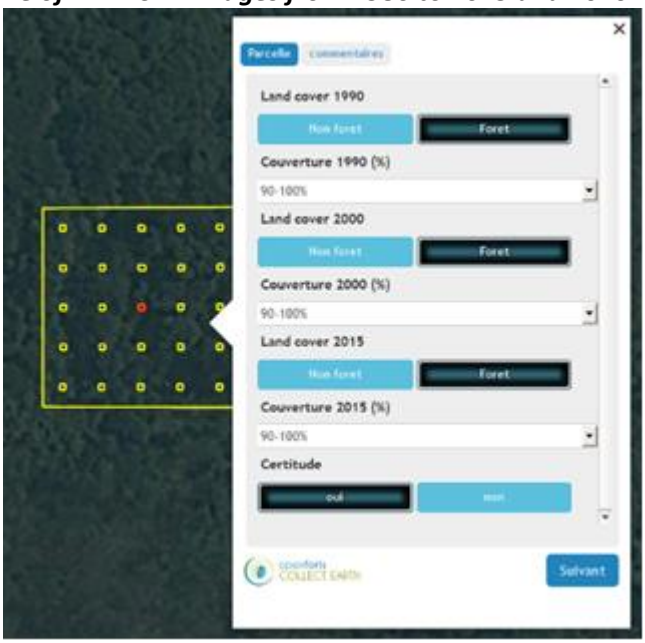

Figure 5 : Forms for visual interpretation

The total number of sampling units obtained for the estimation of the areas of the various REDD + activities, the causes of deforestation, the type of reforestation and the extent of the forest degradation is recorded in Table 2 below.

Le nombre total d'unités d'échantillonnage obteunes pour l'estimation des superficies des différentes activités REDD+, des causes de la déforestation, du type de reforestation en présence et de la superfice de la dégradtion forestière est consigné dans le tableau 2 ci-après.

Table 2 : Number of SU used for each analysis

Activity data	Number of sampling units	Sampled classes
Deforestation area, reforestation, stable forest, etc.	**1288**	**111 ; 112 ; 121 ; 122 ; 211 ; 212 ; 221 ; 222**
Composition of reforestation areas	**225**	**112**
Areas of forest degradation	**292**	**222**
Deforestation factors	**900**	**221**

II-2.3 Analyse system

The analysis system is the protocol for producing all the statistics associated with the processing chain. This protocol uses a set of operations including bias correction, calculation of confidence intervals and areas. All these calculations were made on the basis of a confusion matrix or error matrix that compares the mapping products to the reality of the field (reference).

For the particular case of estimating forest degradation, a categorization based on the variation of the forest cover rate in the remaining forest forests over the reference period (2000-2015) was used to identify forest degradation. This categorization is shown in Table 3.

Table 1 : Forest Classification des forêts par rapport au taux de couverture relative to the cover rate

Class	Cover Rate (CR)
Dense forest	CR ≥ 70 %
Degraded forest	30 % ≤ CR < 70 %

A first level of sorting made it possible to select the sampling units whose CR in 2000 was greater than or equal to 70% and which rose to less than 70% in 2015. A second level of sorting made it possible to select the SU whose CR in 2000 was between 50% and 70% and rose to less than 50% in 2015.

III. RESULTS

The following results were obtained from the analyzes.

III-1 Estimation of overfills of land-use change classes

The class-specific accuracy of the map is shown in Table 4 and 5 respectively for the mesophilic and the ombrophilous zones.

The user precision (indicates the probability of a class on the map to be correctly assigned) has differences between classes: it is higher for stable classes (> 84%), low for losses (30 to 55%) and very low for gains and dynamic classes (about 10%).

Adjusted producer precision (probability that a class in the reference dataset is represented on the map) is better for stable classes and losses because they have low omission errors compared to other classes.

Table 4 : Producer and user precision, areas (ha) and confidence intervals of the Mesophilic Zone

Classe	area	Confidence intervals	Coefficient of variation	Producer précision	User precision
Stable non-forest	734 324	52 607	7%	63%	84%
Gain 2000-2015	3 914	2 742	70%	100%	11%
Dynamic Classe 1	5 201	8 555	165%	0%	0%
Gain 1986-2000	1 471	1 714	117%	0%	0%
Loss 1986-2000	199 748	42 648	21%	80%	36%
Dynamic Classe 2	688	1 131	165%	100%	3%
Loss 2000-2015	118 956	37 124	31%	24%	33%
Stable forest 86-00-15	95 101	24 699	26%	14%	100%
Total area	**1 159 401**				

Table 5 : Producer and user precision, areas (ha) and confidence intervals of the Ombrophilious Zone

Classe	area	Confidence intervals	Coefficient of variation	Producer précision	User precision
Stable non-forest	1 648 011	78 302	5%	50%	89%
Gain 2000-2015	13 333	11 661	87%	71%	8%
Dynamic Classe 1	474	780	165%	100%	2%
Gain 1986-2000	9 825	10 955	111%	50%	3%
Loss 1986-2000	693 130	70 740	10%	72%	54%
Dynamic Classe 2	0	0	0%	0%	0%
Loss 2000-2015	297 345	51 827	17%	51%	45%
Stable forest 86-00-15	811 420	49 178	6%	57%	95%
Total area	**3 473 540**				

Tables 4 and 5 generally show that forests are in a state of regression over the entire study period (Figures 6 and 7) in both areas.

Indeed, a loss of forest areas is recorded between 2000 and 2015 when they vary from 220 728 ha (+/- 22 662 ha) to 101 173 ha (+/- 23 217 ha), ie an annual loss rate of 5, 20% for the mesophilic zone.

Also, this regressive trend of forest areas is similar in the ombrophilious zone during the same period, going from 1,119,065 ha (+/- 38,225 ha) to 834,579 (+/- 47,814 ha), ie an annual rate of loss. of 1.96%.

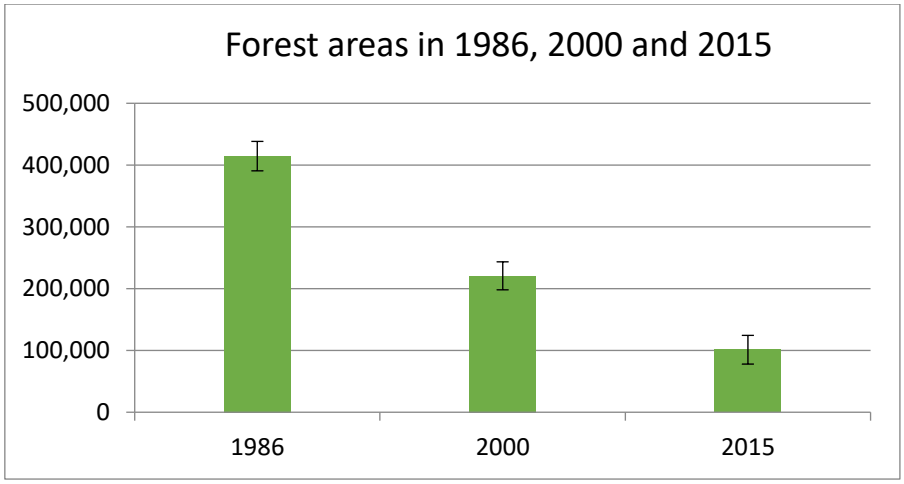

Figure 6 : Forest areas in 1986, 2000 and 2015 (ha) for the mesophilic zone

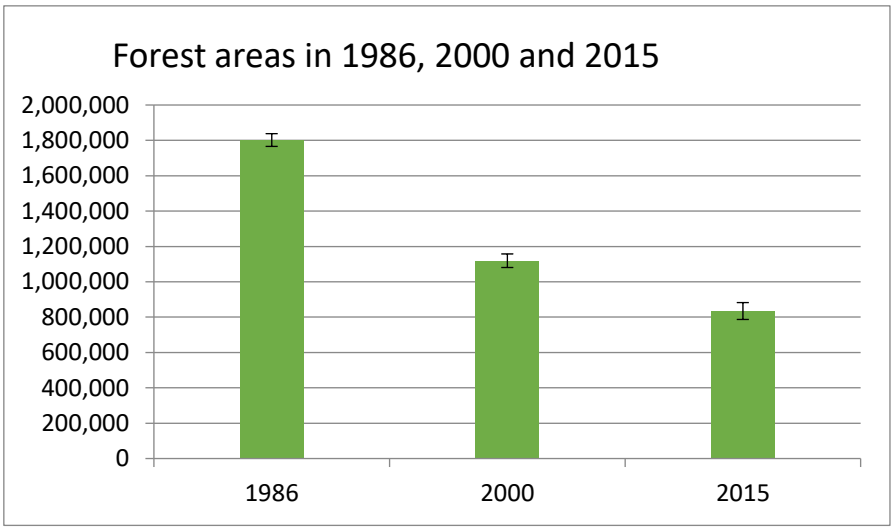

Figure 7 : Forest areas in 1986, 2000 and 2015 (ha) for the ombrophilious zone

Figures 8 and 9 show the situation of classes of change over the same periods of study.

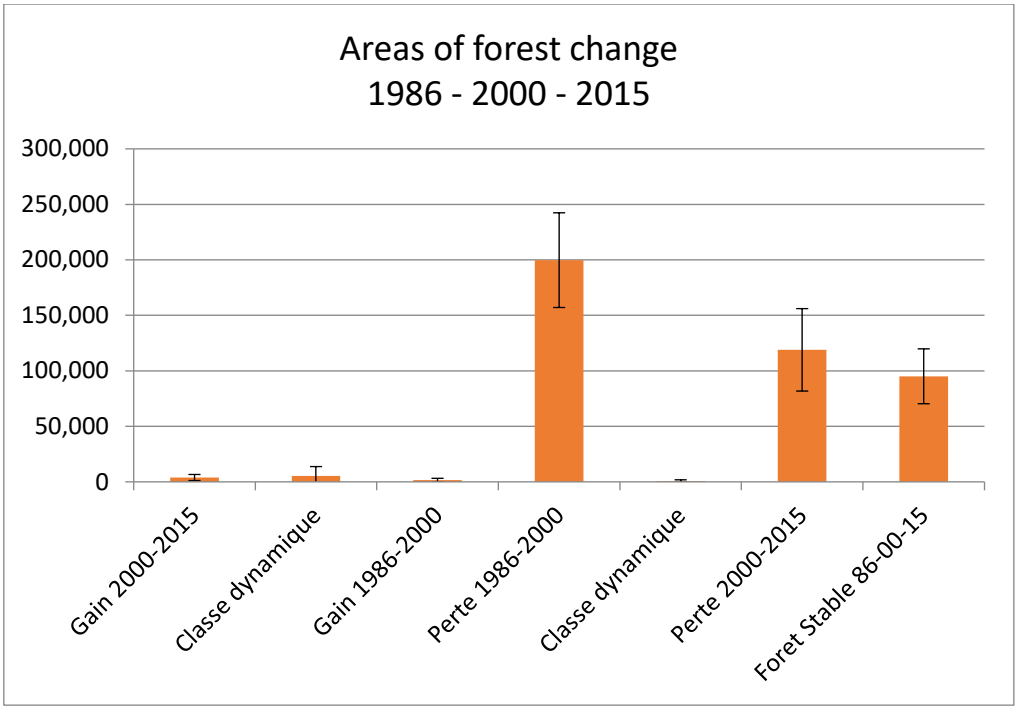

Figure 8 : Areas of forest change for 1986, 2000 and 2015 (ha) for mesophilic zone

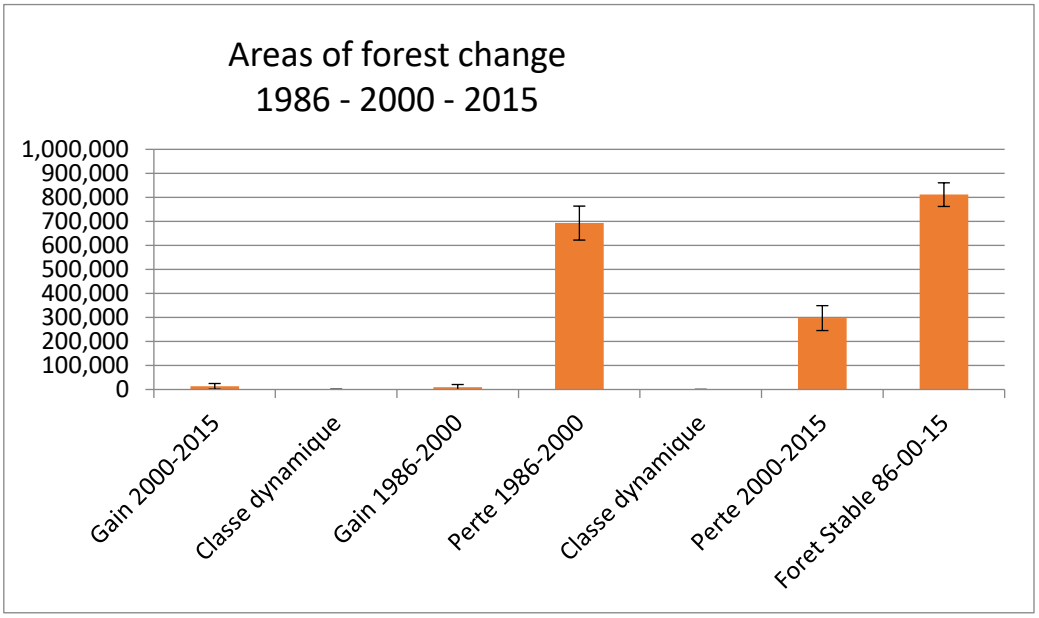

Figure 9: Areas of forest change for 1986, 2000 and 2015 (ha) for ombrophilious zone

III-2 Identification of deforestation drivers

Analysis of the samples interpreted in the class of losses between 2000 and 2015 (221) shows that the main driver of deforestation is agriculture with about 93% of deforested areas. This high score is due to the culture of Cocoa which occupies the first place with a rate of 80%.

This means that most of the lost forest in the ERP area, over the reference period, is essentially replaced by cocoa. Food crops rank second behind cocoa at 8%.

Also, rubber and oil palm plantations have a relatively small share compared to the first two. Indeed, they represent respectively 4% and 1%.

As for the other drivers of deforestation, they are grouped under the "Other Land" class and include human settlements, bare soil and grasslands. They correspond to 7% of forest replacement areas in the ERP area between 2000 and 2015.

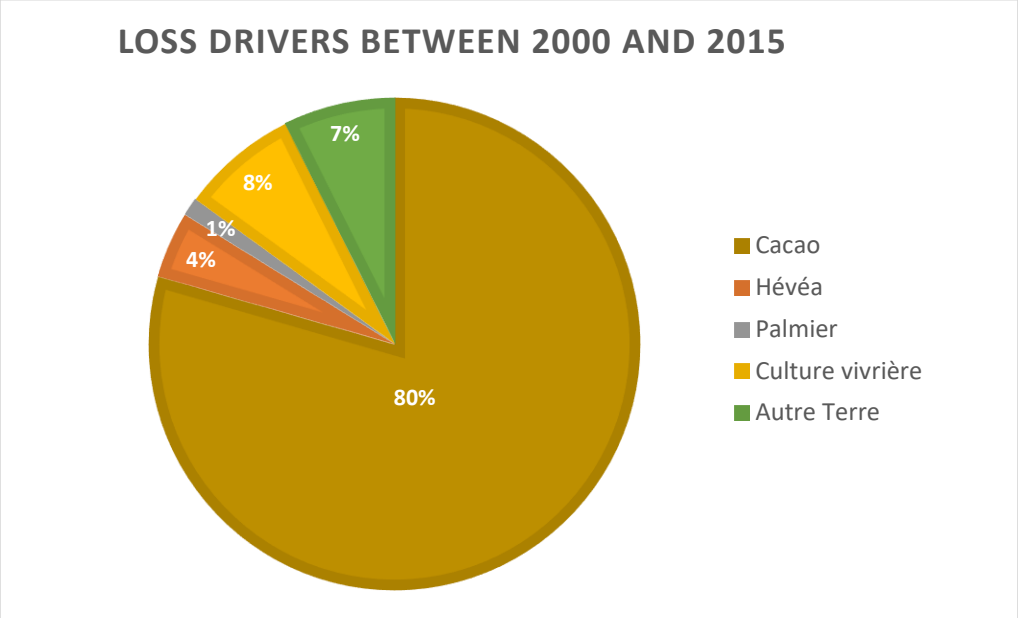

Figure 10 : Main drivers of deforestation in ER-P area

III-3 Losse of forest per strata

The analysis in collect earth of forest losses between 2000 and 2015 on 900 sampling units in class 221 was carried out in order to determine, according to the phytogeographical zones, the areas lost by forest type (dense or degraded).

This analysis showed that:

- For the ombrophilious zone, 52.70% of the forest areas lost are dense forests, ie 156,700.82 ha, as against 47.30% for degraded forests, ie approximately 140,644.19 ha;

- For the mesophilic zone, 32.14% of forest losses correspond to dense forests and 67.86% to degraded forests, corresponding respectively to 38,232.46 ha and 80,723.54 ha.

III-4 Estimation of degraded areas

The analysis of the 292 sampling units in the stable forest class (222) has a forest cover rate that has been declining between 2000 and 2015.

The visual interpretation of these SUs based on the evolution of their forest cover rate over the reference period allowed them to be classified by forest type (dense and degraded) by phytogeographic zone and to determine areas of forest degradation. The forest is defined as having a cover rate of between 30 and 100%. On this basis, were considered as:

- Dense forests, forests with a coverage rate between 70 and 100%
- Degraded forests, those with a coverage rate between 30 and 70%

Has been considered as forest degradation:

- On the one hand, forest areas with a coverage rate of more than 70% in 2000 which decreased to a coverage rate of between 30 and 70% in 2015;
- and on the other hand, forest areas with a coverage rate of between 50 and 70% in 2000 which

decreased to a coverage rate of between 30 to 50% in 2015.

There may be several levels of degradation within degraded forests (decrease in cover rate).

Analysis of the data by the SAE Analysis tool made it possible to obtain the degraded areas and the associated confidence intervals.

Indeed, although they remain forest they lose part of their capital (degradation). This degradation therefore represents 6,045.03 ha / year over the reference period with

- 4,420.39 ha / year in the ombrophilious zone;
- And 1,624.65 ha / year in the mesophilic zone.

III-5 Composition of reforestation areas

The analysis of the samples interpreted in collect earth indicates that all the Gains identified represent natural regeneration. No forest plantation was observed in all sampling units.

IV. CONCLUSION

The assessment of the accuracy of the ERP area from national forest change maps shows high precision for stable classes and losses [50 to 80%], but relatively low for gain classes [less than 50].

Overall, in 2015, the ERP area had 101,173 ha (+/- 23,217 ha) of forests in its mesophilic part and 834,579 +/- 47,814 ha in its Ombrophile part. The analysis also showed that the main driver of deforestation is agriculture at 93%, with cocoa being represented at about 80%, but forest gains were mainly identified in the category of natural regeneration.

Finally, the degraded forest area corresponds to about 6,045.03 ha / year over the reference period

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Annex 5: Calculating a reference level

Activity data

	Ombrophilous sector					
		Area (ha)	Confidence interval	Variation coefficient	User accuracy	User accuracy
111.	Non-forest stable	1.648.011,20.	90.298.			
112.	Gain of forest areas 2000-2015	13.333,47.	12.582.			
121.	Mosaic cultivation-forest	474.15.	8.773.			
122.	Gain of forest areas 1986-2000	9.825,21.	15.091.			
211.	Loss of forest area 1986-2000	693.129,84.	79.758.			
212.	Mosaic forest-cultivation	0.00.	1.424.			
221.	Loss of forest area 2000-2015	297.345,47.	57.561.			
222.	Forest stable 86-00-15	811.420,49.	54.718.			
	Total ERP	3.473.539,83.				
	Mesophilic sector					
		Area (ha)	Confidence interval	Variation coefficient	User accuracy	User accuracy
111.	Non-forest stable	734.324.	61.610.			
112.	Gain of forest areas 2000-2015	3.914.	9.270.			
121.	Mosaic cultivation-forest	5.201.	9.913.			
122.	Gain of forest areas 1986-2000	1.471.	1.911.			
211.	Loss of forest area 1986-2000	199.748.	49.108.			
212.	Mosaic forest-cultivation	688.	1.261.			
221.	Loss of forest area 2000-2015	118.956.	42.777.			
222.	Forest stable 86-00-15	95.101.	30.500.			
	Total ERP	1.159.400,79.				

Ecological zone	Deforested areas (ha)	Reforested areas (ha)
Ombrophilous sector	297.345,47.	13.333,47.
Mesophilic sector	118.955,63.	3.914,14.
Woodland sector	0.00.	0.00.
Sudanese sector	0.00.	0.00.
total	416.301,10.	17.247,61.

Conversion factors

$FCFC_{MSBV}$	0.47.	0.49.
FCCeq	3.67.	
T. grandis density	0.67.	

Emission factors

Above ground biomass		
Ecological zone	AGB (tms/ha)	FE (tCO2/ha)
Ombrophilous sector	144.00.	248.160000.
Mesophilic sector	87.80.	151.308667.
Woodland sector	63.80.	109.948667.
Sudanese sector	82.20.	141.658000.

Litter		
Ecological zone	tC/ha	FE (tCO2/ha)
Ombrophilous sector	2.10.	7.700000.
Mesophilic sector	2.10.	7.700000.
Woodland sector	2.10.	7.700000.
Sudanese sector	2.10.	7.700000.
Table 2.2, GIEC 2006 (*) Guitet S. et al. 2005.		

Below ground biomass		
Ecological zone	Tx (Troot/Tshoot)	FE (tCO2/ha)
Ombrophilous sector	0.37.	91.819200.
Mesophilic sector	0.20.	30.261733.
Woodland sector	0.20.	21.989733.
Sudanese sector	0.28.	39.664240.
Table 4.4, GIEC 2006		

Dead wood (BA+BS)		
Ecological zone	tms/ha	FE (tCO2/ha)
Ombrophilous sector	34.40.	61.810000.
Mesophilic sector	41.70.	74.920000.
Woodland sector	15.90.	28.570000.
Sudanese sector	13.50.	24.260000.

Removal factors

Annual increase POST DEFORESTATION CULTIVATION			
Hypothesis: 100% of the converted forests are intended for the growth of perennial crops			
Type of crop / region	% of cultivation compared to deforestation	C stock of biomass after one year (tC/ha)	C stock of biomass after one year (tCO2/ha)
Annual cultivation, humid tropical area		5.	18.33.
Annual cultivation, dry tropical area		5.	18.33.
Perennial crop, tropical humid area		2.6.	9.53.
Perennial crop, dry tropical area		1.8.	6.60.
Table 5.9, GIEC 2006 P. 5.32			

Gross Emissions

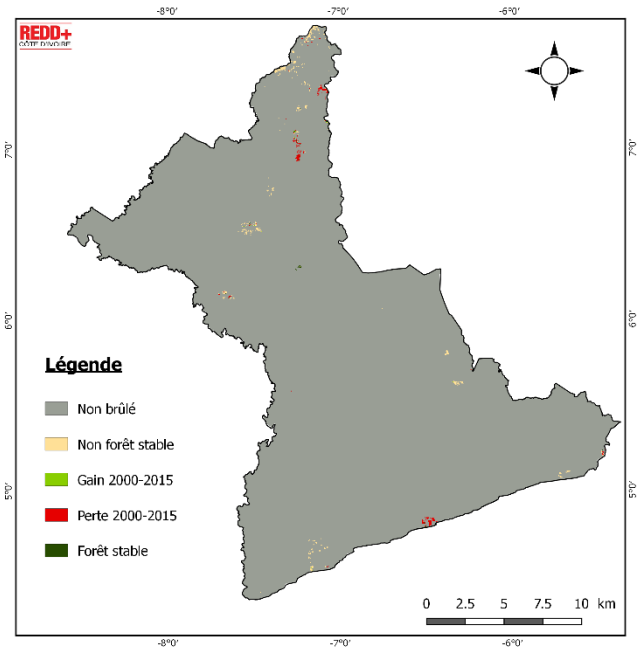
	Ombrophilous sector	Mesophilic sector	Total Emissions
2000-2001	8.117.317,25.	2.095.129,01.	10.212.446,26.
2001-2002	8.117.317,25.	2.095.129,01.	10.212.446,26.
2002-2003	8.117.317,25.	2.095.129,01.	10.212.446,26.
2003-2004	8.117.317,25.	2.095.129,01.	10.212.446,26.
2004-2005	8.117.317,25.	2.095.129,01.	10.212.446,26.
2005-2006	8.117.317,25.	2.095.129,01.	10.212.446,26.
2006-2007	8.117.317,25.	2.095.129,01.	10.212.446,26.
2007-2008	8.117.317,25.	2.095.129,01.	10.212.446,26.
2008-2009	8.117.317,25.	2.095.129,01.	10.212.446,26.
2009-2010	8.117.317,25.	2.095.129,01.	10.212.446,26.
2010-2011	8.117.317,25.	2.095.129,01.	10.212.446,26.
2011-2012	8.117.317,25.	2.095.129,01.	10.212.446,26.
2012-2013	8.117.317,25.	2.095.129,01.	10.212.446,26.
2013-2014	8.117.317,25.	2.095.129,01.	10.212.446,26.
2014-2015	8.117.317,25.	2.095.129,01.	10.212.446,26.
TOTAL	**121.759.758,69.**	**31.426.935,17.**	**153.186.693,87.**

Net emissions

Year	Emissions (tCO2/ha)	Absorptions (tCO2/ha)	Net emissions (tCO2/ha)
2000-2001	10.212.446,26.	-43.001,13.	10.169.445,13.
2001-2002	10.212.446,26.	-331.994,18.	9.880.452,08.
2002-2003	10.212.446,26.	-623.090,97.	9.589.355,29.
2003-2004	10.212.446,26.	-916.202,22.	9.296.244,04.
2004-2005	10.212.446,26.	-1.209.485,68.	9.002.960,57.
2005-2006	10.212.446,26.	-1.502.908,20.	8.709.538,06.
2006-2007	10.212.446,26.	-1.796.263,10.	8.416.183,15.
2007-2008	10.212.446,26.	-2.089.618,01.	8.122.828,25.
2008-2009	10.212.446,26.	-2.382.759,86.	7.829.686,40.
2009-2010	10.212.446,26.	-2.675.767,75.	7.536.678,51.
2010-2011	10.212.446,26.	-2.968.607,24.	7.243.839,02.
2011-2012	10.212.446,26.	-3.261.233,68.	6.951.212,58.
2012-2013	10.212.446,26.	-3.553.691,71.	6.658.754,54.
2013-2014	10.212.446,26.	-3.845.936,70.	6.366.509,56.
2014-2015	10.212.446,26.	-4.137.980,11.	6.074.466,15.
TOTAL	**153.186.693,87.**	**-31.338.540,54.**	**121.848.153,33.**

Annex 6 : Deforestation due to fires

The fire data together with the map of changes (1990-2000 and 2015) in QGIS identified forest losses in areas exposed by fires during the reference period (2000 - 2015). The location of these areas is seen in the figure below.



Map of changes in the places affected by fires between 2000 and 2015 in the ERP area

A statistical analysis carried out on the above combined product has led to results that are considered significant when including or excluding emissions linked to the path followed by fires in the ER Program zone. As indicated in the below table, the losses (221) considered for the reference period in the burned areas with respect to the total losses are very feeble - even negligible. Only 245 pixels are affected - that is, less than 1%.

Table: Comparison of surface areas burned with respect to those on the map of changes.

Category	Burned (pixels)	Change (pixels)
111.	594.	71354.
112.	13.	3237.
121.	32.	1642.
122.	6.	700.
211.	344.	60093.
212.	13.	2896.
221.	245.	19954.
222.	42.	26039.

Emission factors

For the forested areas that have been converted towards another purpose, the organic material burned comes from both recently-cut down vegetation and from dead standing organic material, and the CO2 emissions must be notified. In this case, the estimates of the total combustible material may be used in order to estimate the CO2 and other greenhouse gas emissions (carbon monoxide, nitrogen dioxide and nitrogen oxides). Care should nevertheless be taken to ensure that the carbon losses from the dead organic material during the conversion of land usage are not double-counted as losses due to burning as well as losses due to decomposition.

http://www.ipcc-nggip.iges.or.jp/public/2006gl/french/pdf/4_Volume4/V4_02_Ch2_Generic.pdf

A generic estimation methodology for individual greenhouse gas emissions for any kind of fire can be summarised in the equation: Pfeu = S * MB * Cf * Gfe * 10-3
Or:

Pfeu = Quantity of greenhouse gas emissions due to the fire, in tonnes per greenhouse gas,
S = Surface area burned, ha
MB = Amount of combustible material available for combustion, in tonnes ha-1. This includes biomass, organic material in upper soil layers (litter), and dead wood. When level 1 methods are used, we assume that the pools of litter and dead wood are null, except when there is a change in land usage.
Cf = Combustion factor, non-dimensional
Gfe = Emission factor, g kg-1 of burned dry material

NB: N.B.: When no data is available for MB and Cf, a default value corresponding to that quantity of combustible material actually burned (the product of MB and Cf) can be used.

Gas	Surface Area	MB	Cf	Gfe	10-3	Results
CO2	6125.	119.6.	0.36.	1580.	0.001.	416674.44.
CO	6125.	119.6.	0.36.	104.	0.001.	27426.672.
CH4	6125.	119.6.	0.36.	6.8.	0.001.	1793.2824.
N2O	6125.	119.6.	0.36.	0.2.	0.001.	52.7436.
NOX	6125.	119.6.	0.36.	1.6.	0.001.	421.9488.

In order to allow all greenhouse gas emissions to be accounted for, we use the carbon (C) or carbon dioxide (CO2) as a pivot format. We therefore refer to CO2 equivalent or carbon equivalent.

CO2 Equivalent

Thanks to the global warming potential (GWP) we are able to express the impact of each gas through the use of a common unit: the kilo or tonne of CO2-equivalent. GWP is the unit of measurement for the greenhouse effect of a gas on climate change with respect to that of CO2 (GWP of CO2 = 1) over a period of 100 years. The GWP of a greenhouse gas should be multiplied by the quantity of these greenhouse gases emitted in order to find out its emission in tonnes of CO2-equivalent.

Tonnes of CO2-equivalent for a gas = tonnes of the gas * GWP of the gas

GAS	GWP
CO2	1.
CO	3.
CH4	21.
N2O	310.
NOX	40.

For example, methane has a GWP of 21, which means that it has a global warming potential 21 times that of CO2

GAS	EMISSIONS	GWP	TeqCO2
CO2	416674.44.	1.	416674.44.
CO	27426.672.	3.	82280.02.
CH4	1793.2824.	21.	37658.93.
N2O	52.7436.	310.	16350.52.
NOX	421.9488.	40.	16877.95.

Total emission = 569,841.86 tCO2eq

Annex 7 : Emission factors origins and uncertainties

Dead Biomass

	Fraction of carbon (Feldpausch et al., 2004)
Phyto zone	
Ombrophilous	0.49.
Mesophilic	0.49.
Woodland	0.49.
Sudanese	0.49.

Phyto zone	**R**
Ombrophilous	Eq1. Tab 4.A.4
Mesophilic	Eq1. Tab 4.A.4
Woodland	Eq1. Tab 4.A.4
Sudanese	Eq1. Tab 4.A.4

Phyto zone	**tC to tCO2 conversion**
Ombrophilous	3.666666667.
Mesophilic	3.666666667.
Woodland	3.666666667.
Sudanese	3.666666667.

Area	**Ecological zone**	**Above ground biomass**	**Tx or R**	**SE**	**n**	**z value 90% CI**	**Uncertain quanity (CI)**	**Relative uncertainty (%IC)**	**Source**
Tropical		Necromass	Eq. Tab 4.A.4					20%	Cairns et al., 1997

EQUATION 3.2
COMBINING UNCERTAINTIES – APPROACH 1 – ADDITION AND SUBTRACTION

$$U_{total} = \frac{\sqrt{(U_1 \bullet x_1)^2 + (U_2 \bullet x_2)^2 + \ldots + (U_n \bullet x_n)^2}}{|x_1 + x_2 + \ldots + x_n|}$$

Where:

U_{total} = the percentage uncertainty in the sum of the quantities (half the 95 percent confidence interval divided by the total (i.e., mean) and expressed as a percentage). This term 'uncertainty' is thus based upon the 95 percent confidence interval;

x_i and U_i = the uncertain quantities and the percentage uncertainties associated with them, respectively.

Annex 8 : ER-P emissions reduction calculation

The ER-P worksheets are available in a separate spreadsheet file accessible at the link contained in Appendix 9.

Year	Reference level for deforestation and forest degradation (tCO2eq)	Reference level for expanding carbon stocks (tCO2eq)	Estimate of emissions in the ER-P scenario (tCO2eq)	Estimates of removals due to stock expansion activities (tCO2eq)	Estimate of the share of emission reductions to be set aside for uncertainty (tCO2eq)	Estimate of the share of emission reductions to be set aside for the risk of reversals (tCO2eq)	Estimate of emission reductions (tCO2eq)
2019.	4,737,332	-69,601	4,288,153	-480,827	34,416	154,453	671,535
2020.	9,474,665	-139,203	7,727,054	-2,035,767	145,767	654,174	2,844,234
2021.	9,474,665	-139,203	7,677,946	-3,202,548	194,403	872,441	3,793,220
2022.	9,474,665	-139,203	7,253,320	-4,300,267	255,296	1,145,720	4,981,392
2023.	9,474,665	-139,203	7,204,213	-4,361,115	259,695	1,165,459	5,067,211
2024.	9,474,665	-139,203	7,204,213	-4,433,307	262,582	1,178,418	5,123,556
2025.	9,474,665	-139,203	6,730,480	-4,511,534	284,661	1,277,501	5,554,354
2026.	9,474,665	-139,203	6,681,373	-4,593,515	289,904	1,301,033	5,656,666
2027.	9,474,665	-139,203	6,632,265	-4,677,522	295,229	1,324,929	5,760,560
TOTAL	**80,534,651**	**-1,183,225**	**61,399,018**	**-32,596,402**	**2,021,952**	**9,074,128**	**39,452,729**

Parameters

Name	Definition	Source	Values
Effectiveness of the project	% emissions which the project intends to reduce with respect to the reference scenario by taking account of the risk of leaks	Various	See the 'Effectiveness' worksheet
Absorption	Absorption of carbon allowed through ER-P reforestation activities, expressed in tCO2eq	Various	See 'Absorption' worksheets (AS1 Agro-forestation and FS2 Forest reserves)
Conservativeness factor	Factor evaluated according to the level of uncertainty of the project, as anticipated in Criterion 22 of the FCPF-CF methodological framework: ≥15% -> 0% >15% et ≥30% -> 4% >30% et ≥60% -> 8% >60% et ≥100% -> 12% >100% -> 15%	ERPD-chap.12 + MF-CF	4%
Placed in reserve for risk of reversals	% ER placed in reserve in order to offset the risk of non-permanence or risk of reversal of the ERs [between 10% and 40%]	ERPD-chap. 11 + MF-CF	23%

Effectiveness

The ER-P will be progressively effective in the reduction of emissions, but it is hoped that it is also supported reasonably quickly by activities that are currently being implemented or about to begin, and intends to capitalize on the lessons and experiences learned from these projects. Doing this, we expect the project to become progressively more effective.

Year	Rate of effectiveness *% reduction in emissions with respect to the reference scenario*
2019.	10%
2020-2021	20%
2022-2024	25%
2025-2028	30%
2029-2033	35%
2034-2039	40%

Agro-forestation Absorption

Model 1 - Various agro-forestation plantations on bare soil		
Data	*Sources:*	
Annual increase (tC ha-1 an-1)	Palm *et.al.* 2000 2000.	3.55.
FFCCeq	GIEC, 2003	3.666666667.
Years	**Cumulative surface area (ha)**	**Absorption (tCO2eq)**
2019.	16,000.00	208,266.67
2020.	40,000.00	520,666.67
2021.	70,000.00	911,166.67
2022.	100,000.00	1,301,666.67
2023.	100,000.00	1,301,666.67
2024.	100,000.00	1,301,666.67
2025.	100,000.00	1,301,666.67
2026.	100,000.00	1,301,666.67
2027.	100,000.00	1,301,666.67
2028.	100,000.00	1,301,666.67
2029.	100,000.00	1,301,666.67
2030.	100,000.00	1,301,666.67
2031.	100,000.00	1,301,666.67
2032.	100,000.00	1,301,666.67
2033.	100,000.00	1,301,666.67
2034.	100,000.00	1,301,666.67
2035.	100,000.00	1,301,666.67
2036.	100,000.00	1,301,666.67
2037.	100,000.00	1,301,666.67
2038.	100,000.00	1,301,666.67
2039.	100,000.00	1,301,666.67
TOTAL	**100,000.00**	**24,861,833.33**

Model 2 - Introduction of shaded tree in cocoa in production

In the absence of comparative data Cocoa without trees vs. cocoa with trees, Dupuy et al., 1999
Data calculated for ombrophilic and mesophilic areas with CO2FIX software)

The table of productivity of Dupuy et al. 1999 is estimated for an initial density of 1450 stems / ha. At the rate of 50 stems planted per hectare, we can estimate a surface equivalent which makes it possible to apply this table.

Modèle 2 implanté dans zone de secteur ombrophile																					
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
AGB (tC/ha)	1.36	4.09	8.18	12.68	17.61	22.95	28.29	33.62	38.94	44.26	49.54	54.79	60.01	65.19	70.34	75.45	80.52	85.54	90.52	95.45	100.35
AGB (tCO2eq/ha)	4.99	15.00	29.99	46.49	64.57	84.15	103.73	123.27	142.78	162.29	181.65	200.90	220.04	239.03	257.91	276.65	295.24	313.65	331.91	349.98	367.95
BGB (tCO2eq/ha)	1.85	5.55	11.10	17.20	23.89	31.14	38.38	45.61	52.83	60.05	67.21	74.33	81.41	88.44	95.43	102.36	109.24	116.05	122.81	129.49	136.14
Biomasse totale (tCO2eq/ha)	6.83	20.55	41.09	63.70	88.46	115.29	142.11	168.88	195.61	222.33	248.86	275.23	301.45	327.47	353.34	379.01	404.48	429.70	454.71	479.48	504.09
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Surfaces enrichies (ha)	11200	16800	21000	21000																	
Rapportées à la densité de Dupuy *et.al.* 1999 (ha)	3862.1	579.31	724.14	724.14																	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Absorptions annuelles - Tranche A	2,638.46	7,934.79	15,869.58	24,599.78	34,164.21	44,524.06	54,883.90	65,243.75	75,545.39	85,866.43	96,109.88	106,295.12	116,422.16	126,471.60	136,462.83	146,376.47	156,212.50	165,951.53	175,612.96	185,177.39	194,683.61
Tranche B		3,957.69	11,902.18	23,804.36	36,899.67	51,246.31	66,786.08	82,325.85	97,836.52	113,318.09	128,799.65	144,164.82	159,442.68	174,633.24	189,707.40	204,694.25	219,564.70	234,318.75	248,927.30	263,419.44	277,766.08
Tranche C			4,947.12	14,877.73	29,755.46	46,124.59	64,057.89	83,482.60	102,907.31	122,295.65	141,647.61	160,999.57	180,206.02	199,303.35	218,291.55	237,134.24	255,867.81	274,455.88	292,898.44	311,159.12	329,274.30
Tranche D				4,947.12	14,877.73	29,755.46	46,124.59	64,057.89	83,482.60	102,907.31	122,295.65	141,647.61	160,999.57	180,206.02	199,303.35	218,291.55	237,134.24	255,867.81	274,455.88	292,898.44	311,159.12
Absorptions annuelles total pour le secteur ombrophile	2,638.46	11,892.48	32,718.88	68,228.99	115,697.07	171,650.42	231,852.47	295,090.69	359,771.83	424,387.48	488,852.79	553,107.11	617,070.42	680,614.20	743,765.13	806,496.51	868,779.26	930,593.98	991,894.58	1,052,654.40	1,113,123.12

Modèle 2 implanté dans zone de secteur mésophile																					
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
AGB (tC/ha)	0.94	2.82	5.64	9.40	13.32	17.40	21.63	26.02	30.39	34.76	39.10	43.44	47.75	52.03	56.28	60.50	64.70	68.87	73.02	77.13	81.22
AGB (tCO2eq/ha)	3.45	10.34	20.68	34.47	48.84	63.80	79.31	95.41	111.43	127.45	143.37	159.28	175.08	190.78	206.36	221.83	237.23	252.52	267.74	282.81	297.81
BGB (tCO2eq/ha)	0.69	2.07	4.14	6.89	9.77	12.76	15.86	19.08	22.29	25.49	28.67	31.86	35.02	38.16	41.27	44.37	47.45	50.50	53.55	56.56	59.56
Biomasse totale (tCO2eq/ha)	4.14	12.41	24.82	41.36	58.61	76.56	95.17	114.49	133.72	152.94	172.04	191.14	210.10	228.93	247.63	266.20	284.68	303.03	321.29	339.37	357.37
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039

Surfaces enrichies (ha)	4800	7200	9000	9000																	
Rapportées à la densité de Dupuy *et.al.* 1999 (ha)	165.52	248.28	310.34	310.34																	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Absorptions annuelles - Tranche A	684.58	2,053.74	4,107.48	6,845.79	9,700.63	12,672.00	15,752.61	18,949.74	22,132.30	25,314.87	28,475.59	31,636.30	34,775.17	37,892.19	40,987.37	44,060.69	47,119.45	50,156.36	53,178.70	56,171.92	59,150.57
Tranche B		1,026.87	3,080.61	6,161.21	10,268.69	14,550.95	19,008.00	23,628.91	28,424.61	33,198.46	37,972.30	42,713.38	47,454.46	52,162.76	56,838.29	61,481.05	66,091.03	70,679.17	75,234.54	79,768.06	84,257.88
Tranche C			1,283.59	3,850.76	7,701.52	12,835.86	18,188.69	23,760.00	29,536.14	35,530.76	41,498.07	47,465.38	53,391.72	59,318.07	65,203.45	71,047.86	76,851.31	82,613.79	88,348.97	94,043.17	99,710.07
Tranche D				1,283.59	3,850.76	7,701.52	12,835.86	18,188.69	23,760.00	29,536.14	35,530.76	41,498.07	47,465.38	53,391.72	59,318.07	65,203.45	71,047.86	76,851.31	82,613.79	88,348.97	94,043.17
Absorptions annuelles totales pour le secteur mésophile	684.58	3,080.61	8,471.67	18,141.35	31,521.60	47,760.33	65,785.16	84,527.34	103,853.05	123,058.22	143,476.72	163,313.73	183,086.73	202,764.74	222,347.17	241,793.05	261,109.66	280,300.63	299,376.00	318,332.11	337,161.68
Absorptions annuelles totales pour Modèle 2	3,323.04	14,973.09	41,190.54	86,370.34	147,218.67	219,410.75	297,637.63	379,618.03	463,487.70	547,970.96	632,950.32	716,420.24	800,157.11	883,378.95	966,112.30	1,048,289.56	1,129,889.92	1,210,894.61	1,291,270.58	1,370,986.51	1,450,004.81

TOTAL ABSORPTION - MODELS 1 AND 2

Years	Absorption (tCO2eq)
2019.	211,589.71
2020.	535,639.76
2021.	952,357.21
2022.	1,388,037.01
2023.	1,448,885.33
2024.	1,521,077.42
2025.	1,599,304.29
2026.	1,681,284.70
2027.	1,765,291.54
TOTAL	**11,103,466.97**

Absorption classified forests

Modèle 1 - Industrial logging plantation					
Données	*Sources:*		Tropical rain forest	Tropical moist deciduous forest	
Accroissement annuel (t.m.s. ha-1)	GIEC, 2003		15	10	
Ratio tige sur racine	GIEC, 2006		0,37	0,2	
FCFCMSBV		0,47			
FFCCeq		3,666666667	70%	30%	100%
	TOTAL Accroissement biomasse vivante (tC ha-1)		9,66	5,64	
		Secteur ombrophile		Secteur mésophile	

Years	Cumulative surface area (ha)	Absorption (tCO2eq)	Cumulative surface area (ha)	Absorption (tCO2eq)	TOTAL Absorption FS2-model 2 (tCO2eq)
2019	7,000.00	247,901.50	3,000.00	62,040.00	309,941.50
2020	14,000.00	495,803.00	6,000.00	124,080.00	619,883.00
2021	21,000.00	743,704.50	9,000.00	186,120.00	929,824.50
2022	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2023	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2024	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2025	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2026	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2027	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2028	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2029	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2030	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2031	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2032	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2033	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2034	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2035	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2036	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2037	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2038	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
2039	28,000.00	991,606.00	12,000.00	248,160.00	1,239,766.00
TOTAL	**28,000.00**	**19,088,415.50**	**12,000.00**	**4,839,120.00**	**23,927,535.50**

Model 2 - Assistance for natural regeneration, restoration				
Data	*Sources:*	Tropical rainforest	Tropical moist deciduous forest	
Annual increase (t.m.s. ha-1)	GIEC, 2003	7.	5.	
Stem-to-root ratio	GIEC, 2006	0.37.	0.2.	
FCFCMSBV	0.47.			
FFCCeq	3.666666667.	70%	30%	100%
	TOTAL increase in living biomass (tC ha-1)	4.51.	2.82.	

	Ombrophilous sector		Mesophilic sector		Total
Years	**Cumulative surface area (ha)**	**Absorption (tCO2eq)**	**Cumulative surface area (ha)**	**Absorption (tCO2eq)**	**TOTAL Absorption FS2-model 2 (tCO2eq)**
2019.	21,000.00	347,062.10	9,000.00	93,060.00	440,122.10
2020.	42,000.00	694,124.20	18,000.00	186,120.00	880,244.20
2021.	63,000.00	1,041,186.30	27,000.00	279,180.00	1,320,366.30
2022.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2023.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2024.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2025.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98

2026.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2027.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2028.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2029.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2030.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2031.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2032.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2033.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2034.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2035.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2036.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2037.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2038.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
2039.	79,800.00	1,318,835.98	34,200.00	353,628.00	1,672,463.98
TOTAL	**79,800.00**	**25,474,358.14**	**34,200.00**	**6,923,664.00**	**32,398,022.14**

TOTAL ABSORPTION FS2 - MODELS 1 AND 2	
Years	**Absorption (tCO2eq)**
2019.	750,063.60
2020.	1,500,127.20
2021.	2,250,190.80
2022.	2,912,229.98
2023.	2,912,229.98
2024.	2,912,229.98
2025.	2,912,229.98
2026.	2,912,229.98
2027.	2,912,229.98
TOTAL	**21,973,761.48**

Annex 9 : Links to ER-PD documents and references

http://reddplus.ci/bibliotheques/

https://drive.google.com/drive/folders/1Uu-1mEa2odLQkmj5UiSPF8siKKZDSgUj?usp=sharing

Annex 10 Estimation of emission factors for deforestation and forest degradation in the ombrophilious and mesophilic zones

The estimation of emission factors for forest degradation was based on national forest inventory data from 150 sampling units (SU) between September 2016 and February 2017.

Only the ombrophilic and mesophilic zones that characterize the ERP zone were used for this phase of the calculations. They were interpreted visually in collect earth and classified into three groups (dense forest, degraded forest and non-forest). For each of these classes, biomass was calculated and used to estimate the biomass lost due to the transition from a type A forest to a type B forest.

It should be noted that this work will be done for the other phytogeographic zones (Sudanese and pre-forest) as part of the updating of the national reference level for forests.

The methodology for estimating EFs from mesophilic and ombrophilous zones is detailed below.

1.SELECTION OF SAMPLES

In total, one hundred and four (104) SUs in the ER-P area, 44 for the mesophilic zone and 60 for the ombrophilious zone, were used to determine the emission factors of deforestation and forest degradation in the ER-P area. Each of these SUs has four (4) plots, making a total of 416 plots.

These 104 SU were extracted from the 150 SU of the forest biomass inventory used for biomass quantification by phytogeographic zone at national level.

Figure 1 below shows the SUs in the ER-P area.

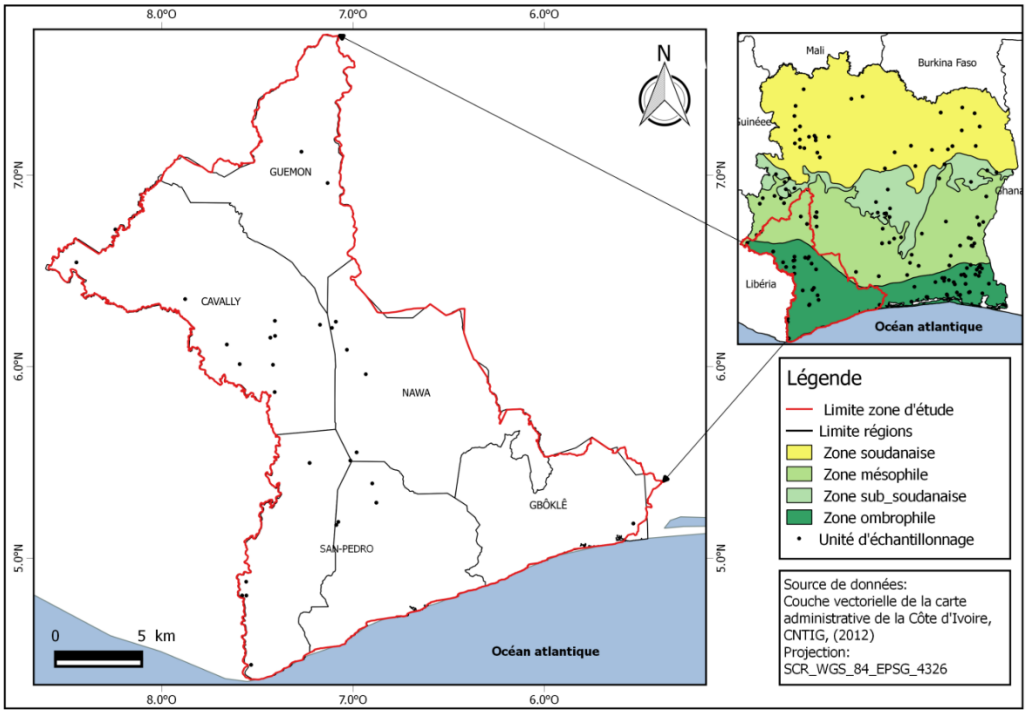


Figure 1 : Samples units in the ER-P area

1.VISUAL INTERPRETATION AND CHARACTERIZATION OF SUs

The Collect Earth tool, developed by FAO, was used to characterize the vegetation of the EU by visually interpreting in Google Earth very high spatial resolution images covering their spatial extent. This visual

interpretation classifies the SU according to the rate of forest cover (see Annex 4). Thus we distinguish:

- dense forests: 70% ≤ tc ≤ 100%
- Degraded forests: 30% ≤ tc <70%
- Non-forests: tc <30%

A survey form allows the operator to enter information about the SU which is subsequently stored in a database that has been exploited to define different land uses.

Figure 2 shows the design of a sampling unit

Figure 2 : Sample Unit in Collect Earth

2.ESTIMATION OF ABOVEGROUND BIOMASS

Aboveground biomass was estimated using the following methodology.

2.1.Choice of the model and the allometric equation

Model 4 of Chave et al. (2014) for biomass estimates was used. It is based on the diameter at breast height (DBH), the height of the tree and the basic density of the wood. The mathematical expression of this allometric equation is as follows:

$$AGB_{est} = 0.0673 \times (\rho\ DHP^2\ H)^{0.976}$$

Où
AGB is the aboveground biomass estimated in Kg ;
DHP : is the diameter at breast height in cm ;
H : is the total hight of the tree in m;
ρ: wood specific density (g.cm-3)

2.2.Choice of wood density

The allometric equation for the prediction of biomass involves the specific density of wood. In the aggregated database containing all the dendrometric measurements, a correspondence to obtain the wood densities of these species has been established. For each species, a species-level match is searched for in the Global Wood Density Database 3 and a mean wood density is associated with each tree at the lowest level (species, genus or family).

For all trees whose scientific names do not match, a default value of the basic wood density of 0.58 $g.m^{-3}$ is assigned.

2.3.Developpement of a national diameter-height model from collected data

At the national level, a total of 93,236 trees and strains combined were inventoried during the data collection campaign.

While DBH was measured for all trees in the SU, total tree height was measured only for a subset of 11,573 trees. Since the chosen biomass model predicts biomass from both diameter and height, it is therefore essential to know the total height of all inventoried trees. To estimate the height of the remaining trees, a height-diameter model was developed from data collected nationally during the inventory. The regression fit was achieved using a nonlinear mixed-effect model, and was obtained with the R software, by the ImputeHeights command of the R package lmfor5, with the SU-grouped data and phytogeographic area. This operation has been used to estimate the total height of each tree.

2.4.Estimation of belowground biomass

Belowground biomass is calculated by applying the stem-to-root ratio (Tx) for tropical forest and as reported in Table 4.4 IPCC 2006 Vol 4 (IPCC, 2006).

The equation below has been used to estimate the underground biomass.

Belowground biomass = (T_x) x Aboveground biomass

2.5.Estimation of aboveground biomass of deadwood

Deadwood biomass is derived from the sum of standing deadwood biomass, dead deadwood and stumps.

The methodological tool for estimating carbon stocks and changing deadwood and litter carbon stocks in Afforestation / Reforestation Project Activities of the Clean Development Mechanism (R / D CDM) (UNFCCC, 2013) was used to the calculation of dead wood biomass and stump. As for standing deadwood, Equation 4 of Chave et al. (2014) was used.

Aboveground of deadwood= standing deadwood biomass + lying deadwood biomass + stump biomass

For Standing Deadwood Biomass, the equation below was applied

standing deadwood biomass= Tree biomass X biomass reduction factor

Where :

the aboveground biomass of dead standing wood is obtained by model 4 from Chave et al. (2014);

For dead trees that have lost only leaves and twigs, the dead wood biomass is equal to the whole biomass multiplied by the reduction factor equal to 0.975;

For dead trees that have lost leaves, twigs and small branches (DBH <10 cm), the dead wood biomass is equal to the whole biomass multiplied by the reduction factor equal to 0.80 7.

For dead dead wood, the formula of Harmon and Sexton (1996) was applied, estimating the total volume in m3.ha-1. This formula requires the length of the transect (L = 200 m) and the diameter of each dead wood lying (D) at the point of intersection of the transect.

$$\textbf{Biomasse du bois mort couché} = \frac{\pi^2 \times D^2 \times \beta \times \rho}{8L}$$

Où:

D = diameter of the dead wood lying at the point of intersection of the transect,

L = length of the transect (200 m in the case of our study),

b = Density reduction factor for dead lying wood cutting a transect line,

ρ = basic density of wood is 0.58 g.cm-3 (Reyes et al., 1992).

Two decomposition classes8 were recorded for the lying wood: intact and rotten. If the decomposition class was missing in the data, the drum piece is considered healthy. Since rotten wood contains less biomass than intact wood, dead wood biomass is reduced as follows:

Intact lying deadwood biomass=lying deadwood biomass x 0.80

Rotten lying deadwood biomass=lying deadwood biomass x 0.45

For stump biomass above formula is applied :

$$\textbf{Biomasse souche} = \frac{\pi}{4} \times DHS^2 \times HS \times \beta \times \rho$$

Où:

DHS = diameter at the height of the stump (m)

b = Wood density reduction factor (confers Density reduction factor applicable to dead wood lying down)

ρ = Default wood density (0.58 g.cm-3)

HS = height of the stump

2.6.Estimation of belowground od dead wood

Belowground biomass of deadwood is calculated by applying the ratio of stem to root (R) for tropical forest (Cairns et al., 1997), as reported in Table 4.A.4 IPCC 2003.

The value of R is calculated from the following equation:

$$R = \exp[-1{,}085 + 0{,}9256 \ln(A)] / A$$

Where A is the above-ground biomass of dead wood (t / ha)

Biomass of dead wood is calculated from the formula below:

Dead wood biomass = A (R+1)

2.7.Calculation of the emission factors of degradation

The method used to calculate the emission factors is that of Madagascar, which considered IPCC equation 2.16 (2006) for the estimation of the conversion ΔC (conversion) and considered equation 2.8b for the estimation. carbon stocks. The change in carbon stock was expressed as the difference between the initial aerial biomass (AGB_{before}) and the final aerial biomass (AGB_{after}).

The initial aerial biomass was replaced by the average of the dense forest biomasses and the final aerial biomass by that of the degraded forests to obtain the emission factors of degradation.

The equation retained is as follows:

$$FE = \sum_{j,i} \left(AGB_{foretdense,j} x(1+Tx) - AGB_{foretdégradée,i} x(1+Tx) \right) xCFx\frac{44}{12}$$

With

$AGB_{foretdense}$: Forest-type aboveground biomass before conversion, in tonnes of dry matter per hectare;
$AGB_{foretdégradée}$: Forest-type Aboveground biomass after conversion, in tonnes of dry matter per hectare;
CF : Carbon fraction of dry matter in tC per tonne of dry matter. The value used is 0.47 (IPCC, 2006 - Table 4.3.S);
44/12 : Conversion of C en CO_2 ;
Tx : Below ground biomass rate relative to the aboveground biomass (Tx). (IPCC, 2006 - table 4.4).

3.RESULTS

First results concern the characterization of vegetation and the second is the estimation of living biomass by type of land use. They was both used to estimate emission factors in tonnes of CO2 equivalent (tCO2).

Les premiers résultats concernent la caractérisation de la végétation et le second est l'estimation de la biomasse vivante par type d'occupation du sol. Ils permettent tous deux, d'estimer les facteurs d'émission en tonne équivalent CO_2 (tCO_2).

3.1.Characterization of végétation

As a result of the SU interpretation from Collect Earth, it was observed that of the 104 SUs, 51 correspond to dense forests, 48 to degraded forests and 5 to non-forest classes.

3.2.Estimations of biomass

The aboveground and belowground biomasses by land cover types with a 95% confidence interval are presented in the table below:

Land Use	**Living aboveground Biomass (AGB)** **(t/ha)**	**Living Belowground Biomasse (BGB) (t/ha)**	**Total Biomass (t/ha)**
Ombrophilious sector			
Dense Forest	165,07	61,07	226,14
Degraded forest	114,95	42,53	157,48
Mesophilic sector			
Dense Forest	118,28	26,24	144,52
Degraded forest	71,97	18,64	90,61

3.3.Emission factor

Emission factors were estimated from biomass. This was calculated in tC / ha and then converted to tCO2 / ha as shown below.

3.3.1.Estimation of biomass in tC/ha

The carbon stocks by land cover type are presented in the table below:d

Land Use	Living aboveground Biomass (tC/ha)	Living belowground Biomass (tC/ha)	Total Biomasse (tC/ha)
Ombrophilious sector			
Dense Forest	77,58	28,70	106,29
Degraded forest	54,03	19,99	74,02
Mesophilic sector			
Dense Forest	55,59	12,33	67,92
Degraded forest	33,83	8,76	42,59

All values in the table represent average carbon stocks for each type of land use.

Emission factors (EFs) represent the difference between average carbon stocks of dense and degraded forests. This difference has been used to obtain EFs from degradation.

3.3.2.Estimation of biomass in tCO2/ha

Emission factor values from the conversion of carbon stocks to carbon dioxide (CO2) are shown in the table below.

Land Use	Living aboveground Biomass (tCO_2/ha)	Living belowground Biomass (tCO_2/ha)	Total Biomasse (tCO_2/ha)
Ombrophilious sector			
Dense Forest	284,73	105,34	390,07
Degraded forest	198,28	73,36	271,64
Mesophilic sector			
Dense Forest	204,02	45,26	249,28
Degraded forest	124,14	32,15	156,29

Annex 11 : ToRs for development of the national REDD+ projects register

RÉPUBLIQUE DE COTE D'IVOIRE
Union – Discipline – Travail

MINISTERE DE L'ENVIRONNEMENT ET DU

MINEDD
Ministère de l'Environnement et du Développement Durable

REDD+
CÔTE D'IVOIRE
Réduction des Emissions de gaz à effet de Serre issues de la Déforestation, et de la Dégradation des Forets

TERMS OF REFERENCE

FOR THE DESIGN OF THE NATIONAL REGISTER OF REDD + PROJECTS AND INITIATIVES

I. Background and rationale

As part of the fight against climate change and especially for the restoration of its highly degraded forest cover, Côte d'Ivoire joined in June 2011, the international mechanism for reducing greenhouse gas emissions from the Deforestation and Forest Degradation (REDD+).

The country, during the preparatory phase of this mechanism, has, in accordance with the requirements and recommendations of the United Nations Framework Convention on Climate Change (UNFCCC), instruments for the effective implementation of REDD+. In 2017, a national REDD+ strategy was adopted in government advice and a forest reference level was developed and submitted to the UNFCCC. Similarly, an action plan for the National Forest Monitoring System (NFMS) and for the Safeguards Information System was developed.

These significant results are the result of the support of the technical and financial partners, notably the World Bank, the collaborative platform of the United Nations Agencies for REDD+ (FAO, UN-Environment and UNDP), the REDD + Facility of the Union. European Union, the Private Sector and Civil Society Organizations.

In order to ensure better monitoring and success of REDD+ implementation actions, the country is considering, in addition to the existing National Forest Monitoring System, the design of (i) a national registry of REDD+ projects and initiatives in accordance with Decision 9 / CP.19 of the Warsaw Framework for REDD+ and (ii) a Safeguards Information System.

The registry is a crucial part of the infrastructure needed to achieve and consolidate REDD +.

Thus, it needs to be comprehensively and transparently designed to ensure that all relevant REDD + data and information is captured, processed and stored in a centralized repository accessible to the different categories of stakeholders and end-users. It will provide a data management platform integrating technology, policies, and operational procedures to document, approve, and track the development, compliance, and performance of REDD + investments.

The national REDD+ registry aims to serve as a repository of reliable and easily accessible information, to ensure accurate accounting of emission reductions from projects or programs, and to promote compliance with established regulations and standards.

As such, a REDD+ registry will enable the country to be fully informed of all REDD+ activities taking place within its borders, to ensure the quality, value and impact of REDD+ emission reductions. REDD+ credits / units and performance-based payments, regardless of where the units trade in a market environment.

Similarly, the geo-referencing of REDD + projects and initiatives should be carried out in order to avoid a double counting in transactions of Certified Emission Reduction Units (CERs) or carbon credits. This transparency improvement tool aims ultimately to monitor all public and private REDD + financing and their performance.

In the context of Spatial Monitoring, a tool has been developed to store and share information on forest data and all REDD + activities in the country. Thus, the registry that will be developed should be a module (application) of this platform.

These terms of reference concern the recruitment of a firm that will be responsible for designing the architecture, developing and making operational the National REDD + Registry.

II. Goal

This mission is to develop and implement a National Register of REDD + projects and initiatives in Côte d'Ivoire.

III. Results

Two (2) major results are expected from this mission, namely (i) the development of a registry adapted to the

national context and (ii) the operationalization of the registry.

• Development of the register

The development of the register will consist in building an architecture allowing to:

- register, approve, monitor and validate REDD + investments (REDD + programs, REDD + projects and initiatives) in accordance with REDD + certification procedures;
- Develop clear and concise standard operating procedures (SOPs);
- Describe all feasible operations in the national REDD + registry for REDD + transactions;
- Structure a web interface capable of publishing information on projects and initiatives aimed at all types of public.
- Ensure clarity about the nature and appropriation of REDD + assets to enable efficient and confident transaction performance payments.
- Promote transparency, credibility and guarantee legality.
- Promote environmental integrity (avoid double counting, manage leakage and forest reference emission level parameters (NERF) etc.).
- Ensure compliance with social and environmental standards and guarantees.
- Provide input to the national readiness process (information sharing and capacity building).
- Registration of REDD + projects and initiatives.
- Monitoring and evaluation of REDD + investment performance (both carbon and non-carbon).
- The information system on safeguards (SIS) and the monitoring of national REDD + standards.
- The mechanism for monitoring complaints and appeals and their treatment.
- The integration of information on benefit sharing.
- Consolidation of information to report to the UNFCCC.

• Operationalization of the register

In order to make the National REDD+ Registry functional by capitalizing the achievements already made, it will have to be integrated in software designed for this purpose. It will be integrated into the geoportal web platform of the Earth Spatial Surveillance System. It is a collaborative platform for disseminating and sharing data and information on REDD + activities. Following its integration, it will be fed by the information and data concerning REDD + investments made or in progress. Finally, tests will have to be made to verify that it actually works before deployment.

IV. Methodology

The selected firm will provide for review, discussion and approval a detailed description of the work plan it intends to implement for the conduct of the mission. This work plan will describe the methods of carrying out the study, the methodology that will be used for data collection, analysis and reporting.

In addition, the provider will be responsible for the development of the register:

- Task 1: Analysis of the existing

It will be for the provider to identify the necessary information that would contribute to the development of the national REDD + registry. The cabinet should align with the requirements of the UNFCCC in relation to national and international REDD + standards, such as the National Forest Monitoring System (SNSF), the

Safeguards Information System (SIS), monitoring indicators for the implementation of the National REDD + Strategy, the monitoring and evaluation frameworks of the Forest Investment Program, the strategic documents of the National REDD + Fund.

- Task 2: Proposal of the institutional arrangement

Following its analysis, the provider will have to propose institutional arrangements for the implementation of the register.

To this end, it will be necessary to identify the actors and their roles in the administration and use of the register; among others:

- the decision-making body which administers the coordination, analysis, monitoring and general operations of the register on a daily basis;
- the data collection devices for supplying the register;
- etc ...

- Task 3: Registry design

The cabinet will have to produce a document informing the technical specificities of the register to know:

- The registry architecture;
- The proposal of the registry interface;
- The different features;
- The types of data feeding the register;
- Hosting settings;
- The development agenda.

With regard to the operationalization of the register the provider will have to perform the following tasks:

- Task 4: Realization of the register

Based on the previously defined registry criteria and the pre-approved design document, the firm will need to develop the application and thereby materialize the registry.
The registry application will need to be tested and approved prior to the completion of the following steps.

- Task 5: Training of actors in administration and use

Once the registry is functional, training sessions will be organized to strengthen the capacities of the actors, both administrators and users of the tool.

The firm should propose a training plan, adapted to the administrators and to each type of user. This plan will be implemented through practice. The benefits of using this tool will only be felt if end users manage to transition smoothly.

- Task 6: Deployment

In order to make the National REDD Registry functional by capitalizing the achievements already made, it will have to be integrated in a computer environment designed for this purpose. It will be integrated into the geoportal web platform of the Earth Spatial Surveillance System. It is a collaborative platform for disseminating and sharing data and information on REDD + activities. Following its integration, it will be fed by the information and data concerning REDD + investments made or in progress. Finally, tests will have to be made to verify that it actually works.

V. Delivrable

At the end of this study the firm will have to provide the following deliverables, in physical and digital form:

- A national REDD + registry design dossier including the institutional arrangement;
- Provision of the source code;
- A technical training manual for the user;
- A technical training manual for administrators;

A national REDD + registry developed and functional.

VI. Supervision of the study

The study will be conducted by a cabinet under the supervision of the Permanent Executive Secretariat of REDD +.

A technical analysis committee will review the study tools, analyze and pre-validate / validate the various reports before their approval in the national workshop.

VII. Compétences nécessaires pour la réalisation de la mission

Experts profile :

Project Manager, Expert 1 : Geomatics

- BAC+4/5 en SIG, informatique ou domaine connexe (ou diplôme équivalent)
- Expérience d'au moins 7 ans dans la conception et le développement des systèmes d'information ayant une composante spatiale dans le domaine du développement en Afrique subsaharienne ;
- Maîtrise de langages de développement des applications web en environnements opensource ;
- Maîtrise des systèmes d'information à l'échelle nationale et avoir au moins six années d'expérience ;
- Connaissance approfondies des bases de données géographiques open-source et web GIS;
- Connaissance du domaine forestier et des processus REDD+ en Afrique subsaharienne voire en Afrique de l'Ouest et possiblement en Côte d'Ivoire ;
- Maitrise des normes internationales en matière de gestion des données SIG ;
- Avoir déjà conçu un système national d'information sur la REDD+ de type registre national REDD+ et Système d'Information sur les sauvegardes dans le cadre de la REDD+.

Expert 2 : Environement/ Forestry

- BAC+4/5 ou équivalent dans le domaine du développement, de l'environnement, de l'agronomie, de la gestion de projet ou domaines équivalents.
- Expérience d'au moins 10 ans en suivi-évaluation des politiques, programmes, projets, avec une expérience avérée dans les projets REDD+ et /ou forestier;
- Connaissance des aspects du développement durable et des concepts du REDD+ ;
- Maîtrise des aspects liés aux indicateurs environnementaux et sociaux ;
- Connaissance des divers secteurs de la vie nationale congolaise est un atout majeur ;
- Bonne connaissance des exigences et processus de notification à la CCNUCC est souhaitable.

Expert 3 : Lawyer

- BAC+ 4/5 en Droit, Droit de l'environnement, Sciences politiques, Politique de l'environnement, Changement climatique, ou domaine connexe (ou diplôme équivalent) ;
- Minimum 8 ans d'expérience professionnelle ;
- Avoir réalisé 2 expériences relatives au développement d'un cadre juridique en matière d'élaboration de politiques, lois et/ou règlements relatifs à l'environnement, la gestion des ressources naturelles, le changement climatique, et/ou autres domaines pertinents du point de vue du développement durable

- dont au moins.

VIII. DURATION OF THE MISSION

The mission will run for 40 working days from October 1 to December 31, 2018 and includes the following indicative steps.

ACTIVITIES	DURATION (Days)
Analysis of the existing situation, exchange with key stakeholders and produce a mini report on the state of play and clarification of needs and evaluating the REDD + approval procedure	**4**
Develop the design of the national REDD + registry	**10**
Take into account observations on the design	1
Validate the design of the national REDD + registry	1
Develop the computer application of the national REDD + registry	15
Integrate observations from the registry computer application test	2
Validate the computer application of the national REDD + registry	1
Implement the national REDD + registry (Document the national REDD + registry (technical file, ...) document the operation of the registry (guides and supports)	3
Train technical staff on the register	2
Formally launch the national REDD + registry	1

IX. APPLICATION

Applications should include:

- Certificate of good execution of the missions carried out
- CV and Diploma of Consultants

Applications must be submitted in a physical copy five copies to the SEP-REDD + office, sis à Cocody Angré, 7ème tranche or by email à l'adresse: info@reddplus.ci; Phone : 22 50 30 97.

Annex 12: FPRCI agreement to serve as fund for ERs payments

FONDATION
PARCS ET RESERVES DE CÔTE D'IVOIRE

Abidjan, le 24 DEC. 2018

N°...504...../FPRCI/CA/DE

A **Monsieur le Ministre de l'Environnement et du Développement Durable**

Abidjan

Objet : Confirmation de l'utilisation de la Fondation pour les Parcs et Réserves de Côte d'Ivoire comme véhicule financier

Monsieur le Ministre,

J'accuse réception de votre lettre N°1163/MINEDD/CAB-1/SEP-REDD+/18 du 05 Décembre 2018, relative à l'utilisation de la Fondation pour les Parcs et Réserves de Côte d'Ivoire (FPRCI) comme véhicule financier des premières ressources dans le cadre du Programme de Réduction des Emissions. Je vous en remercie bien vivement.

La FPRCI est un fond fiduciaire qui dispose de plusieurs guichets de fonds dédiés et son mécanisme de financement se prête à ce type de ressources. Vu l'importance de ce programme pour la Côte d'Ivoire, c'est donc avec beaucoup d'intérêt que le Conseil d'Administration de la FPRCI, lors de sa session du 13 Décembre 2018 et après délibération, a marqué son accord pour l'utilisation de la Fondation comme véhicule financier des premières ressources dans le cadre du Programme de Réduction des Emissions.

En conséquence, la Direction Exécutive de la FPRCI se mettra en rapport avec vos services afin de vous proposer dans les meilleurs délais, un projet d'accord entre la Fondation et le Ministère de l'Environnement.

Je vous prie d'agréer, Monsieur le Ministre, l'assurance de ma haute considération.

Le Président du Conseil d'Administration

N'DOUMI Bernard

Fondation reconnue d'utilité publique
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Email: fondationparc@fondationparc.ci •06 BP 2362 Abidjan 06• Site web: www.fondationparc.ci