RAPPORT ANNUEL DES PROGRAMMES FINANCES PAR L'INITIATIVE POUR LA FORET DE L'AFRIQUE CENTRALE (CAFI)

Période du 1 Janvier 2022 au 31 Décembre, 2022

Titre du Programme & Référence	Localité, Secteur/Thème(s) du Programme
Titre du Programme REDD+: Estimation de la déforestation et de la dégradation des forêts et des facteurs directs actuels et historiques associés à ces processus à l'aide de SEPAL Réf. du Programme: UNJP/GLO/103/UNJ Numéro de référence du Programme/MPTF Office:[2] 00123542	République du Congo, Guinée Equatoriale, Cameroun, République Centrafricaine, République Démocratique du Congo, Gabon Secteur/Thème(s) : La gestion et la gouvernance des forêts sont améliorées grâce à l'application des connaissances pour atténuer le changement climatique, dans le but de réduire la pauvreté et de contribuer au développement durable.

Organisations participantes	Partenaires de mise en œuvre
FAO	Partenaires nationaux (Gouvernements, secteur privé, ONGs et autres) et autres organisations internationales.

Budget du Programme (US$)	Durée du Programme (mois)
Contribution du Fonds: *USD 1,200,000* **Contribution de(s) agence(s):** **Contribution du Gouvernement:** **Autres Contributions [donateur(s)]:** **TOTAL: USD 1,200,000**	Durée totale (mois): 24 mois Date de démarrage[3]: 17/08/2020 Date de clôture originale *:* 22/02/2022 Date de clôture actuelle 31/10/2023

Evaluation du Programme	Soumis par:
Evaluation – *(à joindre le cas échéant)* ☐Oui ☐ Non Date : dd.mm.yyyy) Evaluation à mi-parcours – *(à joindre le cas échéant)* ☐ Oui ☐ Non Date: _ dd.mm.yyyy):	o Nom: Tiina Vahanen o Titre: Deputy Director, NFO o Organisation participante: FAO o Addresse e-mail: tiina.vahanen@fao.org

List of Abbreviations

COTECH – technical committee
COPIL – Steering committee
FGD – Focus Group Discussions
SBAE – Sample Based Area Estimation
SEPAL - System for earth observation, data access, processing, analysis for land monitoring

Table des matières

1. Données clés du programme

Titre du Programme & Référence	Assessment of deforestation and forest degradation and related direct drivers using SEPAL UNJP/GLO/103/UNJ
Numéro de référence du Programme/MPTF	00123542
Localité, Secteur/Thème(s) du Programme	All countries in CAFI programme, application of global knowledge to mitigate climate change
Partenaires de mise en œuvre	Republic of Congo, Democratic Republic of Congo, Gabon, Cameroon, Equatorial Guinea, Central African Republic
Organisations participantes	FAO
Budget du Programme (USD)	1,200,000
Durée totale programme (mois):	18 months (+ 6 months extension)
Date d'approbation du programme par le Conseil d'administration de CAFI (dd.mm.yyyy):	23.06.2020
Date de transfert de fonds par MPTF (dd.mm.yyyy):	27.08.2020
Date de lancement officiel/Démarrage effectif (dd.mm.yyyy):	17.08.2020
Date de clôture originale (dd.mm.yyyy)	22.02.2020
Date de clôture actuelle (dd.mm.yyyy)	31.08.2022
Décaissements au 31 décembre pour les rapports annuels au 30 juin pour les rapports semestriels	1,200,000
Dépenses globales (USD) au 31 décembre 2022	986,966 USD
Taux de consommation de la 1ère tranche	82%
Date de l''évaluation à mi-parcours le cas échéant	NA
Contact:	Tiina Vähänen, Deputy Director NFO, FAO, Tiina.Vahanen@fao.org

2. Résumé exécutif (maximum 1 page)

The Central African Forest Initiative (CAFI) project "Assessment of deforestation and forest degradation and related direct drivers using SEPAL" aims to develop a global, standard, large-scale methodology to assess forest dynamics and quantify direct drivers of deforestation and forest degradation. The Food and Agriculture Organization of the United Nations (FAO) implements the project.

The CAFI-FAO project "Assessment of deforestation and forest degradation and related direct drivers using SEPAL" aims to develop a global, standard, large-scale methodology to assess forest dynamics, using cloud-computing solutions and open-source tools to map disturbances and quantify direct drivers of deforestation and forest degradation. This methodology will be initially tested in six Central Africa countries to assess deforestation and forest degradation trends and their associated current and historical direct drivers.

The project is aligned with the CAFI objective "to recognize and preserve the value of the forests in the region to mitigating climate change, reduce poverty, and contribute to sustainable development". It will provide to CAFI Partner Countries an enhanced, updated, and common understanding of the direct drivers of deforestation and forest degradation at both regional, national and local scales.

The methodology is implemented through a collaborative approach, in which national experts, global research institutes and civil society will work together and join resources and data to provide technical evidence and reach a common view on the direct drivers of forest disturbances.

2.1 pour la période de rapportage

The current report presents the main progress achieved during the period covering January to December 2022, namely:

- The assessment of forest cover change, including deforestation and degradation for the 6 countries of the CAFI region from 2015-2020
- Sample Based Area Estimates (SBAE) of deforestation and degradation area for the entire region, with statistically determined confidence intervals
- Estimates of relative contributions of drivers, groupings of multiple drivers and trends over time (2015-2020)
- The assessment of drivers in different forest types, fragmentation classes
- Design of a replicable methodology to collect relevant socio-economic information and perspectives through discussion group and household surveys
- Survey data collection in 2 selected pilot sites
- Development of a machine learning model to identify risk of degradation and deforestation from direct drivers (for input into GEO4LUP land use planning support)
- The drafting of a scientific paper from the drivers analysis for peer-review

2.2 en cumulatif depuis le début du programme

Since the start of the programme the following results have been achieved :

- Design and pilot of a global methodology to assess forest cover change over time, and the associated direct drivers
- Development of a robust approach to visually interpret deforestation, degradation and associated drivers using open-source tools (Collect Earth Online)
- Development of a comprehensive online database with results, interactive dashboards and presentations accessible to project stakeholders
- Dissemination of the methodology, results, accessible data and bibliography online
- Sharing of regional data and methods for use in other applications and landscapes as requested

3. Brève présentation du programme

3.1. Objectif Général

The main objective of the project is to contribute to mitigate climate change, reduce poverty and support sustainable development by making publicly available cloud-computing and open-source solutions for forest monitoring, data analysis and applying global knowledge and tools.

Programme objective: Forest management and governance is improved thanks to the application of global knowledge to mitigate climate change, with a focus on reducing poverty and contributing to sustainable development.

3.2. Objectifs spécifiques et résultats attendus du programme

1. Methodology to assess deforestation and forest degradation trends and direct drivers is developed with broad consensus among international, regional and national partners
2. Forest change map of Central Africa (2015-2020) produced and shared, providing harmonized and updated regional information on forests and forest changes
3. Current and historical direct drivers of deforestation and forest degradation in Central Africa identified, quantified, discussed and agreed on with the different partners
4. Geospatial module to inform land use planning developed in SEPAL and tested in two pilot areas
5. Project results and lessons learnt disseminated for global knowledge, and potential for scaling up at global level defined

The relevant activities for the reporting period include :

Product 3 - Quantification of direct drivers of deforestation and degradation (2015-2020)

Product 4 - Collection of socio-economic information in pilot sites

Product 5 - Communication and dissemination of project methods, results

3.3. Contexte du rapport

This report covers annual activities realized in 2022, which featured the completion of spatial analyses including forest cover change analyses, fragmentation, area estimates and analyses of trends in associated direct drivers. The results of forest change and drivers assessment were presented at the 19th Meeting of Parties of the Congo Basin Forest Partnership and compiled into a scientific publication submitted to peer review. Furthermore, the socio-economic information in two pilot sites in DRC and Cameroun (selected by the COPIL) were assessed. First, a methodology to collect socio-economic data in pilot sites was developed with consultants; and next, socio-economic data were collected in Cameroun and DRC which are being used to develop the GEO4LUP module in SEPAL to evaluate risk of forest disturbance from specific drivers.

4. Etat d'avancement des activités prévues dans le Plan de travail annuel (PTA) du programme, pour la période de rapportage (semestre 1 ou année entière)

Tableau 1 - Activités prévues et réalisées, résultats attendus et atteints au bout de la période sous examen.

Activities proposed in the PTBA	Activities achieved	Expected Results	Achieved Results	% towards completion	Sources of verification	Comments
1. Methodology and institutional setup	Establishment of LOAs Description of methodology	Signed LOAs with each country Agreed methodology	6 LOAs in place and technicians from partner ministries participating in COTECH	100	All documents available and validated by COTECH	
2. Forest Change Map	Time series analysis of satellite imagery for the entire region	Map of deforestation and degradation	Wall-to-wall map of deforestation and degradation for 2015-2020	100	Maps and metadata available online	
3. Drivers and data analysis	Development of methodology and drivers characterization leading to cross-validation of 12,260 data plots with Collect Earth Online (independently validated 3x)	Publication on drivers Full database publicly available	Operational methods for validating change and drivers Results presented at COP26, submitted for peer-review	100	Complete validation dataset available on website	
4. Geospatial module to inform land use planning developed in SEPAL and tested in two pilot areas	Signature of LOA with University of Pennsylvania	GEO4LUP Module in SEPAL Socioeconomic survey	NA	80	Prototype developed integrating outputs from project and	Final product expected in 2023

	Recruitment of the consultant in charge of the methodology	methodology developed Feedback from test in pilot sites			information from socio-economic surveys	
5. Project results and lessons learnt disseminated for global knowledge, and potential for scaling up at global level defined	Updated website with methods and results Presentation at COP26	Publicly available geospatial database Publication on methods (FAO Forestry paper) Peer-reviewed article on regional results	Two dashboards with map and sampling results available	90	Website hits Publication Wider use of datasets	Drivers article submitted for peer review

5. Résultats du Programme

5.1 Contribution aux impacts du cadre de résultats de CAFI

The project is aligned with the CAFI objective "to recognize and preserve the value of the forests in the region to mitigating climate change, reduce poverty, and contribute to sustainable development". It provides to CAFI Partner Countries an enhanced, updated and common framework to understand the direct drivers of deforestation and forest degradation at both regional, national and local scales.

The methodology is implemented through a collaborative approach, in which national experts, global research institutes and civil society will work together and join resources and data to provide technical evidence and reach a common view on the direct drivers of forest disturbances. The methodology is being adopted by other FAO efforts, and other partners (WRI) as well as generating interest for monitoring sustainable cocoa production in Cameroun to meet new EU import regulations.

5.2 Progrès par effet et produits du programme

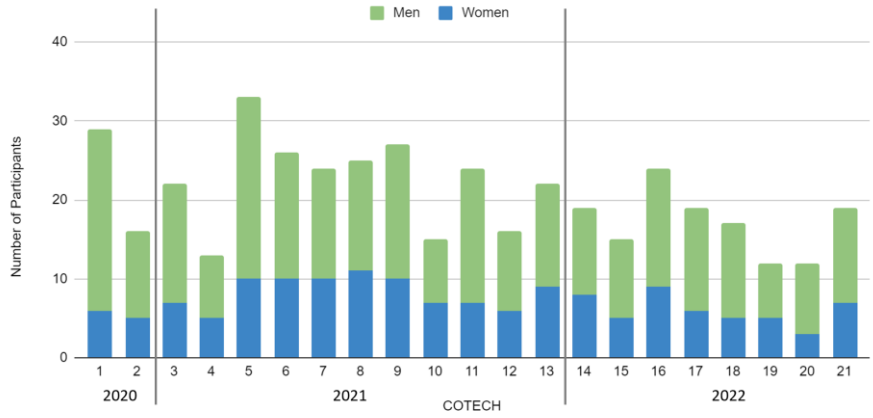
Outcome: Standardized methodology agreed, tested and applied to assess the trends of deforestation and forest degradation and quantify current and historical direct drivers using cloud-computing solutions and free and open-source tools for forest monitoring

Overview of progress:
The methodology has been developed and piloted, through a technical consultative on-going process, with 8 technical committee meetings held in 2021. The products related to output 1 to 4 have been finalized and are publicly available on the project website. The methodology has been repeatedly adapted and improved and will be further amended during the next phase in 2023, building upon lessons learned and responses from peer review. This results in constant improvements and improvements in time and cost, and the development of a state-of-the-art approach for accurate estimates of forest cover disturbances.

Output 1: Methodology to assess deforestation and forest degradation trends and direct drivers developed, with broad consensus among international, regional and national partners

Overview of progress:
The project methodology has been developed and approved by the technical committee and is available online.

The regular meetings of the technical committee (COTECH) have taken place nearly monthly for the entire duration of the project, and are the foundation of programme communications, capacity building, knowledge sharing. While there are smaller national meetings and workshops, the COTECH brings together a large number of participants from various partner institutions in the region and beyond for lively discussion, debates and decisions.



Since the project inception until the end of this reporting period, there have been **21 COTECHs** with a total participation of **87 individuals**, **(37% women)**, from **33 institutions**:

AGEOS
CAFI Secretariat
CBFP
CIFOR
CIRAD
CLS
CNIAF
CNIAF
COMIFAC
DIAF
FAO
FONAREDD
GIZ
INDEFOR-AP
IRD
JRC
MEF
MINFOF
Ministère des Eaux, Forêts, Chasse et Pêche
NICFI
NMBU
OFAC
RFUK
UCL
Université de Kisangani
Université de Yaoundé 1
Université Laval
Université Officielle de Mbujimayi
University of Cambridge
USFS
WCS
WRI
WWF

The full attendance of all COTECHs is here. The COTECHs have also featured 3 entertaining Kahoot ! quizzes to engage participation and understanding on methodological approaches: drivers identification, program results, the interpretation of trends of deforestation and degradation.

LOAs were established with each country's National Ministries to embed activities and develop capacity at the national level to participate in the development and execution of the methodology. Reports on the LOA activities of each country are listed below:

- Gabon Open Foris Workshop 1 and 2
- Central African Republic activities report
- Republic of Congo first report and final report
- Democratic Republic of the Congo LOA report
- Cameroun SEPAL training report
- Equatorial Guinea technical report

Output 2: Forest change map of Central Africa (2015-2020) produced and shared, providing harmonized and updated regional information on forests and forest changes

Overview of progress:
A forest change map representing annual type of change, both deforestation and degradation for all forest types was developed, validated and shared online. The data are open and available as a Google Earth Engine Assets and geotiff, as well as being searchable and downloadable from ArcGIS Online. During the reporting period, there were 661 requests (these include views, clicks, also on pages where the data are embedded in maps and dashboards) for the change map via ArcGIS Online. Furthermore, all intermediate products derived to create this map are also available. A land cover map for 2015 was creating assessing 19 unique land cover classes, and a forest mask identifying forest extent based on national definitions, and a percent tree cover map and fragmentation class layer were developed for the entire study area, and all are available in the online database as Google Earth Engine assets, geotiffs and ArcGIS online tile layers. They are also visible in interactive maps. The land cover map was posted online first and has received 8,824 requests. The fragmentation map had 7,231 requests during this period.
Area-based sampling approaches were used to estimate change statistics with confidence intervals from the map strata at the regional scale. A total of 12,260 validation points were visually interpreted by the COTECH in Collect Earth Online, and indicate a decrease in deforestation and degradation rates since 2017. Change types by fragmentation class and forest type were quantified to determine which forest ecosystems are most affected by deforestation and degradation.

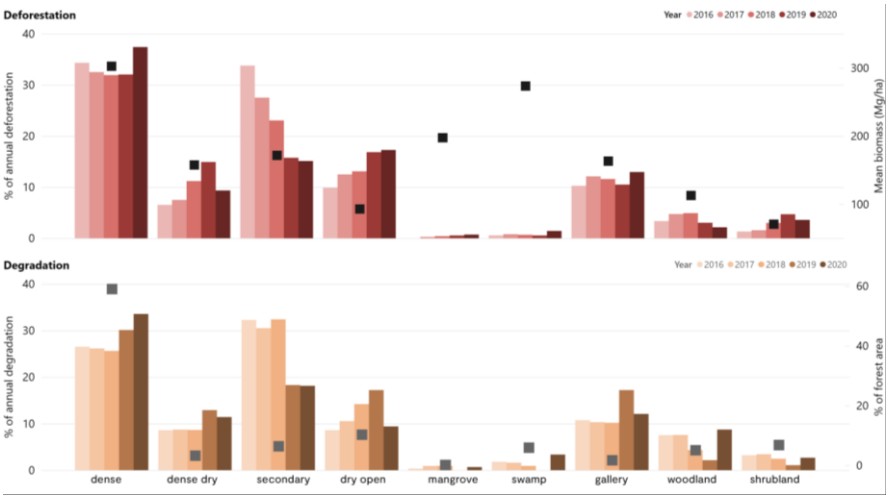


Figure 1. Proportions of change by forest types determined from validated dataset. Secondary axes indicate average above ground biomass per class and the representative area of each forest type. Dense forest is the most common forest type, nearly 60% of forest area with the highest biomass, but only 35% of annual changes occur in these areas. Changes are disproportionately occurring in secondary and dry open forests.

Output 3: Current and historical direct drivers of deforestation and forest degradation in Central Africa identified, quantified, discussed and agreed on with the different partners

Initial results on drivers were shared with technical partners from COTECH as well as at the CBFP Meeting of Parties, accessing a wider group of stakeholders.

The analysis of all drivers was conducted on the complete validation dataset (12,260 points validated in Collect Earth Online) and shared via an interactive online dashboard. Data can be assessed by driver, country, type of change, year, forest type and fragmentation type. Additionally multiple drivers can be selected to determine how overlapping drivers are distributed. This is the first study to distinguish the contribution of different drivers to deforestation and degradation.

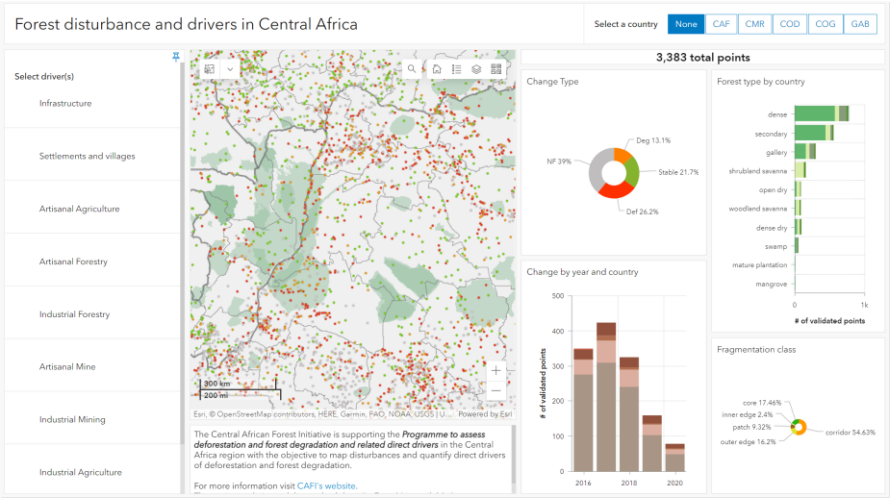


Figure 2. Interactive online dashboard allows users to explore driver validation data by country, year, forest and fragmentation class.

Furthermore, validation data points can be assessed relative to high resolution Planet data in this interactive dashboard.

We determine that the rural complex is by far the most widespread driver, and the annual proportion of points is remaining relatively stable, whereas other drivers such as agriculture related to infrastructure and artisanal forestry appear to be increasing.

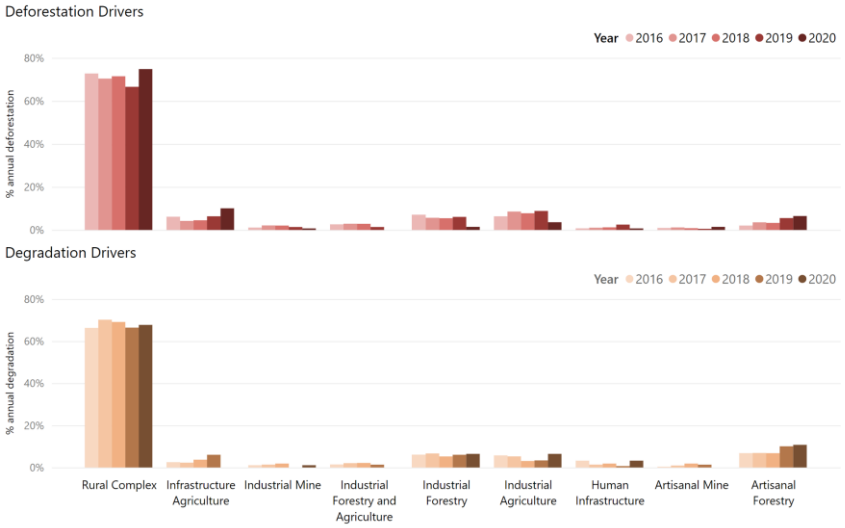


Figure 3. Relative contribution of grouped drivers to deforestation and degradation

Regional validation of methods and results

A regional workshop with all national partners was held in July 2022 at the offices of AGEOS in Nkok, Gabon. Each national participant presented their activities and perspectives while lessons learned, and expectations were discussed for the planned extension phase.

Link to national and regional presentations
Link to photos
Link to report

Output 4: Geospatial module to inform land use planning developed in SEPAL and tested in two pilot areas

Overview of progress:

FAO hired an expert in socio-economic methods and surveys to develop a comprehensive methodology to collect demographic information and local knowledge on drivers, trends and forest use. The methodology was piloted and refined in Cameroun, and later implemented in DRC for a total of 871 respondents. The outputs from the method development and piloting are compiled in this Google Drive folder.

Methodology – the approach was designed by Nick Hogarth, forest and livelihoods social scientist (now with CGIAR in Zambia, his cv and publication list are in the folder) who integrated various existing approaches to create a framework to meet the objectives of the study. He generated the focus group discussion questionnaire, the household survey and village survey along with the mapping exercise which integrated methods from RFUK's Mapping for Rights approach. There are technical guidelines (translated into French) to instruct on the implementation of the surveys.

Reports – inception report, mission reports from the survey implementers for each site and narrative and final reports from RFUK which compiled the information collected by the local NGOs.

Survey Data 2022 – full data set from all villages, which feeds into the interactive dashboards which will be posted on the website as soon as possible.

The questionnaires, guidelines and interactive maps are posted on the project website as sub-pages in the "Sites Pilotes" tab under methodologie and résultats.

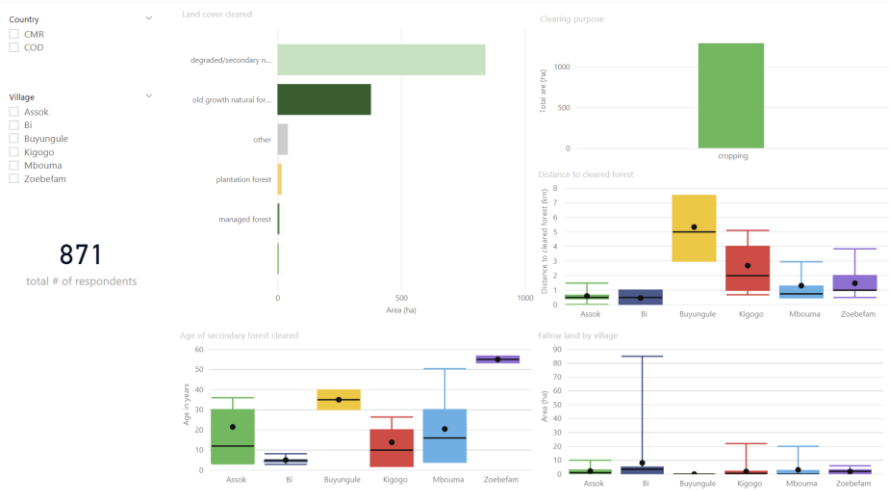


Figure 4. Household survey information on forest clearing, providing information on types of land cover cleared, what distance forests are being used and the fallow period can be viewed in this online dashboard.

The outputs from this data collection are being used to parametrize the spatial model in the GEO4LUP module. This aspect is being developed in collaboration with experts from Penn State University who have specialized experience in socio-economic data, particularly through spatial models. This collaboration is being supported by FAO's global work on drivers (FAO in-kind contribution).

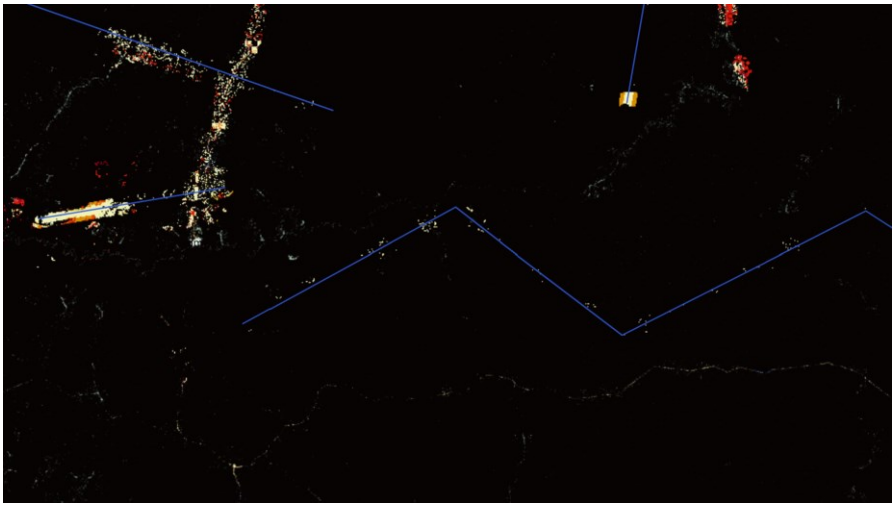


Figure 5. Screenshot of GEO4LUP in development : this maps shows the increased risk from deforestation (yellow,orange,red) from a newly planned infrastructure (input by the user). A machine learning model trained with visually interpreted data is then run with new data to examine increased risk.

Information from the socio-economic surveys (e.g. distance to cleared area) is being used to parametrize the risk maps and help determine the area of risk from various drivers.

Output 5: Project results and lessons learnt disseminated for global knowledge, and potential for scaling up at global level

Overview of progress:

The methodology, results, data outputs are shared online and will be available on a dedicated page on fao.org for greater visibility and access.

The project approach is currently being replicated in Western Africa.

Major presentations of the project results included:

- the World Forestry Congress (WFC) in Korea on May 2nd, 2022 side event entitled "Efficient monitoring for evidence-based decision making and good governance in the forestry sector" entitled "Efficient monitoring for evidence-based decision making and good governance in the forestry sector" including a panel discussion with the Minister of Forests of Gabon (HE Lee White) as well as the representative of Germany for the CAFI board (Tony Baumann, BMU). The secretary general of DRC and other members of the forest administration from DRC attended the side event. GAO
- The Oslo Tropical Forest Forum, held in Oslo on June 20-21, 2022 and featuring a panel discussion with representatives from Gabon.
  With social media presence on twitter from FAO Forestry, and CAFI, as well as the link to video
- Planet NICFI scientific round table #4 on February 17, 2022, and #5 on June 30, 2022.

- GFOI webinar series "NICFI High Res 2.0: progress in the tropics" on September 7, 2022
- CBFP 19th Meeting of Parties Side Event. Link to report
- COP 27 Side Event hosted by RFUK: Community Forests in DRC: a promising IPLC model for sustainable management. November 11, 2022
- Cameroun Cocoa Talks # 4 – Thématique de suivi national des forêts dans le cade de la production durable de cacao. Link to report
- COFO World Forest Week –Rome, Italy. October 7, 2022.
- DRC Pre-Cop 27 Meeting – Kinshasa, Democratic Republic of Congo, October 5, 2022. Presentation by Héritier Kondjo. Link to presentation.

Table 1. National technical workshops on the extraction of sample-based area estimates

Date	Country	Institution
1 March, 2022	Cameroun	MINFOF
8 March, 2022	Dem. Rep. Congo	DIAF
15 March, 2022	Republic of Congo	CNIAF
25 March, 2022	Equatorial Guinea	INDEFOR
5 April, 2022	Gabon	AGEOS
11 April, 2022	Central African Republic	Ministère des eaux et Forêts

In addition, there were four national workshops led by the national consultants:

Central African Republic

A national workshop was held on February 22, 2022 to share the results and status of the project to stakeholders including ministries, NGOs and academia. There were 22 participants, of which 2 were women. Link to workshop report

Equatorial Guinea

A training workshop was held in Bata, Equatorial Guinea with 6 technicians (1 woman) from INDEFOR on 21-26 May, 2022.

Gabon

A national workshop was hosted by AGEOS on August 4, 2022 with 25 attendees (4 women) to address methodologies and definitions for deriving forest cover change data. Link to workshop report

Democratic Republic of the Congo

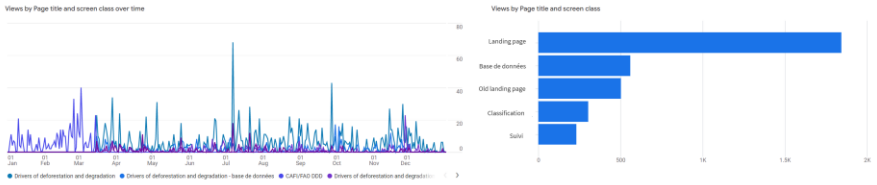
A national workshop (39 participants, 7 women) on the dissemination and validation of project results was held on 29th of July 2022 in Kinshasa which had a lively round of debate and discussion and local media coverage. Link to workshop report and presentations.

We use Google Analytics to analyse the use and visibility of the project website. In July 2022 the website was transferred to its own domain, which is why some of the entries are double (e.g. there

is an old landing page accessed before July and the new one after). Some people may still have bookmarked the old site –the analytics include all sites.

COUNTRY	USERS
United States	322
France	140
Finland	127
Netherlands	118
Germany	110
United Kingdom	103
Czechia	83

CITY	USERS
Helsinki	127
Amsterdam	96
Paris	82
Vienna	72
Berlin	68
Rome	59
Libreville	58



	Page title and screen class	Views	Users	Views per user	Average engagement time
		6,883 100% of total	1,623 100% of total	4.24 Avg 0%	1m 42s Avg 0%
1	Drivers of deforestation and degradation	1,844	1,106	1.67	0m 29s
2	Drivers of deforestation and degradation - base de données	559	194	2.88	1m 38s
3	CAFI/FAO DDD	503	189	2.66	0m 28s
4	Drivers of deforestation and degradation - Classification	304	119	2.55	1m 16s
5	Drivers of deforestation and degradation - Suivi	232	151	1.54	0m 34s
6	Drivers of deforestation and degradation - MÉTHODES	221	150	1.47	0m 55s
7	CAFI/FAO DDD - BASE DE DONNÉES	208	71	2.93	1m 34s
8	Drivers of deforestation and degradation - SITES PILOTES	208	113	1.84	0m 26s
9	Drivers of deforestation and degradation - données validation	199	64	3.11	1m 06s
10	Drivers of deforestation and degradation - NEWS	189	58	3.26	0m 49s

5.3 Evaluation de la performance du programme sur base des indicateurs du cadre des résultats

*En utilisant le **Cadre de Résultats du Document du Programme**, veuillez faire le point sur la réalisation des indicateurs au niveau des effets et résultats dans le tableau 2. Lorsqu'il n'a pas été possible de recueillir des données ou des lignes de base sur les indicateurs, expliquez pourquoi, et apportez des clarifications sur comment et quand ces lignes de base et/ou données seront recueillies.*

Tableau 2 - Cadre de résultats du programme

Results Chain	Indicators	Baseline	End of program target	Current indicator progress	Reasons for delays or changes	Target adjustment (if any)	Are GPS data available?
Impact: Forest management and governance is improved thanks to the application of global knowledge to mitigate climate change, with a focus on reducing poverty and contributing to sustainable development.	Alignment of the information related to forest management and land use planning included in country governance documents	Land use planning is often disconnected from Forest Management Plans	Forest Management plans are in-line with Land Use Plans				
Outcome: Standardized methodology agreed, tested and applied to assess the trends of deforestation and forest degradation and quantify current and historical direct drivers using cloud-computing solutions and free and open-source tools for forest monitoring	Methodology agreed on to produce information on direct drivers	0 (No standard methodology is agreed on)	1 (A standard methodology is available and agreed on)	The methodology has been developed and piloted			
	Systematized information available to facilitate strategic planning and decision making of institutions	No information available for 2015-2020	Information is available	All components related to output 1 to 3 are available on the project website, including interactive maps and downloadable datasets			accessible on website

Output 1. Methodology to assess deforestation and forest degradation trends and direct drivers developed, with broad consensus among international, regional and national partners	**Indicator 1.1:** A review of the existing knowledge, national definitions and approaches on deforestation and forest degradation trends and current and historical direct and underlying drivers in Central Africa is published	0 (Such recent review does not exist)	1 (The review is published)	1 (The review is published on the website)		The review will be included in the forestry paper in 2023	
	Indicator 1.2: The scope, objective and methodolody, and the contributions of each stakeholder are validated by the Technical Commitee	0 (There is no common and formal consensus on the topic)	1 (The stakeholder share the same vision of the project)	1 (COTECH validated 8 technical reports with methodological orientations)			
Output 2. Forest change map of Central Africa (2015-2020) produced and shared, providing harmonized and updated regional information on forests and forest changes	**Indicator 2.1:** Number of dense time series analysis conducted by national administrations and institutions to monitor forest changes between 2015 and 2020 at national scale	0	6	6 (all countries finalized their mapping tsaks)			
	Indicator 2.2: Percentage of women actively participating in each national working sessions on forest disturbance mapping	0 (no national working session held on this topic so far)	At least 30%	66% of the national consultants are female, while The gender ratio for the technical teams in the partner structures is 32% (12 out of 37)			

	Indicator 2.3: A forest change map (2015-2020) at national scale is produced by each recipient country	0 (Such maps do not exist)	6 (forest change maps are produced)	6 (forest change maps are produced and available)			
Output 3. Current and historical direct drivers of deforestation and forest degradation in Central Africa identified, quantified, discussed and agreed on with the different partners	**Indicator 3.1:** Number of sets of Standards Operating Procedures (SOP) ensuring the quality of the assessments of forest changes and direct drivers of deforestation and forest degradation developed by national administrations and institutions	0	6	1 set of interpretation keys for interpretation available on the website	The SOP are the same for the different countries and have been published on the project web site	The full SOP is also part of the methodological document	
	Indicator 3.2: Percentage of women actively participating in each national workshops on drivers assessment	0 (no national workshop held on this topic so far)	At least30%	The gender ratio for the interpretation teams for drivers is 32% (12 out of 37)			
	Indicator 3.3: A report on forest changes and current and historical direct drivers of deforestation and degradation is published and validated by each member of the Technical Commitee	0 (Such report does not exist)	1 (A report is validated by the Technical committee)	1 draft article produced and online as pre-print	article was rejected by Nature Communications - validation approach is being adapted to respond to comments	will be included in FAO Forest Paper	

Output 4. Geospatial module to inform land use planning developed in SEPAL and tested in two pilot areas	**Indicator 4.1:** Number of socio-economic field surveys conducted in the pilot areas to collect additional information to that provided by technical partners	0	2	2 - methodology piloted in Cameroun and DRC			results are available on website dashboards
	Indicator 4.2: Percentage of women actively participating in each team in charge of a field survey	NA	At least 30%	30% - in DRC 1 out of 3 team members were women; in CMR the gender ratio of the team was 25% (1/4)			
	Indicator 4.3: A module in SEPAL (Geo4LUP) generating geospatial information to support land use planning is developed and tested in the pilot areas	0 (Such module does not exist)	2 field tests conducted	1 - Module in development	the selection of pilot sites delayed the pilot site missions		
	Indicator 4.4: Number of assessments of the impacts of past land use policies and plans using Geo4LUP conducted	0	2 (at least one per pilot zone)	0	the selection of pilot sites delayed the pilot site missions	the analysis will be part of the production of a peer-review paper in 2023	
Output 5. Project results and lessons learnt disseminated for global knowledge, and potential for scaling up at global level defined	**Indicator 5.1:** Number of regional consultations where the multi-stakeholder audience will receive additional information on the use of spatial data in the process of designing land use planning	0	At least 1	0	selection of pilot site took longer than expected and incurred delays in data collection	expected in 2023 with delivery of GEO4LUP and site studies	

	Indicator 5.2: Number of presentation of the project's outputs in fora and in Global and South-South exchanges	0	At least 3	5 (CBFP, GFOI, pre-COP DRC, COP26, COP27, Cocoa Talks # 5)			
	Indicator 5.3: Number of knowledge materials presenting the projects findings, results and best practices published	0	At least 6	2 (drivers article sent for peer-review and CAFI fact sheet)			
	Indicator 5.4: Percentage of best practice case studies focusing on achievements of women published	NA	At least 50%	0		communications material will be produced in 2023 with FAO Forestry Report	

5.4 Contribution du programme à l'atteinte des Indicateurs du cadre de résultats de CAFI

NA

5.5 Contribution du programme à l'atteinte des jalons de la Lettre d'intention

NA

6. Exécution financière

6.1 Décaissements

As of December 31, 2022, the project has spent 82% of the overall budget.

Further communication concerning Table 5.1 will be provided.

a) Tableau 5.2

Further communication concerning Table 5.2 will be provided.

b) Tableau 6 – Cout efficacité : Tableau des progrès et décaissements par effets et par produits

Food and Agriculture Organization of the United Nations

Statement of income and expenditure
For FAO Project UNJP/GLO/103/UNJ cumulative through 31 December 2022
(United States dollars)

Project Title: Assessment of recent trends of deforestation and forest degradation and related drivers using SEPAL (CAFI)

Project Start and End dates: from 17/08/2020 to 31/10/2023

Income	Prior Year	Current Year	Total
Contributions	1,200,000	0	1,200,000
Interest	2,684	3,936	6,621
Refund	0	0	0
Other income	0	0	0
Total income	1,202,684	**3,936**	**1,206,621**
Expenditure			
Staff and Personnel Costs	371,386	191,373	562,759
Supplies, Commodities, Materials	842	1,165	2,007
Equipment	1,225	2,072	3,297
Contractual Services	10,800	0	10,800
Travel	3,749	46,031	49,780
Transfers and Grants to Counterparts	121,837	73,961	195,798
General Operating and Other Direct Costs	50,265	47,692	97,957
Total direct Expenditure	**560,104**	362,294	**922,398**
Indirect program support costs	39,207	25,361	64,568
Total Expenditure	599,312	**387,655**	**986,966**
Balance (deficit)			**219,655**

6.2 Contrats

NA

6.3 Gestion financière, approvisionnement et ressources humaines

Commented [SA(1]: @Petrucci, Alessandro (NFO) a little help please 😊

Commented [P(2R1]: wrote something! :) let me know if it's okay, feel free to edit.

The financial execution of the project is in line with the current workplan. All the key human resources as described in the project document are on duty, all country offices hold authorizations to spend according to approved local budgets, and LoAs with each country's ministry were signed and established – the main delay in expenditure (apart from closure expenses which have been moved to 2023 due to the project's extension) are related to the field collection as the activity was delayed due to the selection of the pilot sites as described in this report.

The funds related to the project have been received in full by FAO (1.2M USD original contribution plus 1.24M USD with cost extension received in 2023 and therefore outside of the scope of this report). The account related to this project in FAO has so far accrued 6,621 USD in interest income which will be returned to the Administrative Agent as per standard MoU upon financial closure of the project.

6.4 Mobilisation de ressources

FAO has been working with Penn State University to review the socio-economic data methodology and support the interpretation of socio-economic data for the development of the GEO4LUP module. Additionally, PSU completed a systematic literature review on the analysis of multiscale direct drivers of deforestation; and has been testing parameters and implementation of the models. This has been done using 40,000USD of FAO funds from another project (Turning the Tide on Deforestation).

6.5 Audits

N/A

6.6 Révisions budgétaires

In 2022 it was agreed to extend the project with the following budget amendments.

Produits	Catégorie GNUD	Les années précédentes	Année 2022	Année 2023	Total
1. Méthodologie et mise en place institutionnelle	1 Frais de personnel et autres dépenses liées	7,265	68,531	38,825	114,622
	5 Voyage	-	-	-	-
	6 Contreparties des transferts et des subventions	-	-	48,000	48,000
	7 Frais généraux d'exploitation et autres coûts directs	573	5,472	3,340	9,385
	Sous-total Produit 1	7,838	74,003	90,165	172,007
2. Carte des changements dans les forêts	1 Frais de personnel et autres dépenses liées	79,962	38,207	23,663	141,833
	2 Fournitures, produits et matériaux	86	-	-	86
	3 Équipement, véhicules et mobilier	1,225	-	-	1,225
	4 Prestations Contractuelles	10,800	-	-	10,800
	5 Voyage	3,749	-	-	3,749
	6 Contreparties des transferts et des subventions	121,837	52,897	48,000	222,734
	7 Frais généraux d'exploitation et autres coûts directs	8,173	3,228	2,218	13,619
	Sous-total Produit 2	225,833	94,332	73,881	394,046
3. Analyse des données et des moteurs	1 Frais de personnel et autres dépenses liées	42,944	47,533	38,176	128,653
	2 Fournitures, produits et matériaux	328	-	-	328
	3 Équipement, véhicules et mobilier	-	-	-	-
	5 Voyage	-	-	39,006	39,006
	6 Contreparties des transferts et des subventions	-	-	48,000	48,000
	7 Frais généraux d'exploitation et autres coûts directs	5,400	7,488	7,051	19,939
	Sous-total Produit 3	48,673	55,021	132,233	235,927
4. Enquête socio-économique Zones pilotes	1 Frais de personnel et autres dépenses liées	19,946	70,205	64,598	154,749
	2 Fournitures, produits et matériaux	390	-	-	390
	3 Équipement, véhicules et mobilier	-	7,088	-	7,088
	5 Voyage	-	-	-	-
	6 Contreparties des transferts et des subventions	-	174,400	198,600	373,000
	7 Frais généraux d'exploitation et autres coûts directs	2,678	4,155	3,523	10,356
	Sous-total Produit 4	23,014	255,848	266,721	545,583
5. Gestion des connaissances et sensibilisation	1 Frais de personnel et autres dépenses liées	4,580	87,516	75,922	168,018
	5 Voyage	-	6,000	-	6,000
	6 Contreparties des transferts et des subventions	-	-	48,000	48,000
	7 Frais généraux d'exploitation et autres coûts directs	465	5,731	4,955	11,151
	Sous-total Produit 5	5,045	99,247	128,877	233,169
Gestion de projet	1 Frais de personnel et autres dépenses liées	216,688	210,928	153,024	580,640
	2 Fournitures, produits et matériaux	37	-	-	37
	3 Équipement, véhicules et mobilier	-	-	-	-
	5 Voyage	-	-	-	-
	7 Frais généraux d'exploitation et autres coûts directs	32,977	66,980	20,877	120,834
	Sous-total Gestion de projet	249,701	277,908	173,902	701,511
Coûts indirects de soutien	8 Coûts indirects	39,207	59,945	60,605	159,757
	Total général USD	599,312	916,305	926,383	2,442,000

6.7 Analyses des coûts

Fournir une analyse du coût du programme de l'exercice suivant le tableau 7, afin d'apprécier le ratio des coûts des structures et des coûts opérationnels relatif à la période sous examen.

Tableau 8 - Répartition des coûts du programme.

N°	Description	Amount USD	%	Comments
1.	Activities	536,614	45%	
2.	Equipment	51,288	4%	
3.	Functioning	612,098	51%	
Total USD		1,200,000	100%	

7. Gestion participative

Each of the six CAFI countries took part in the methodology discussions, data collection and analysis, through the discussions in 8 COTECH meetings which took place in 2022. New members are added regularly including civil society organizations.

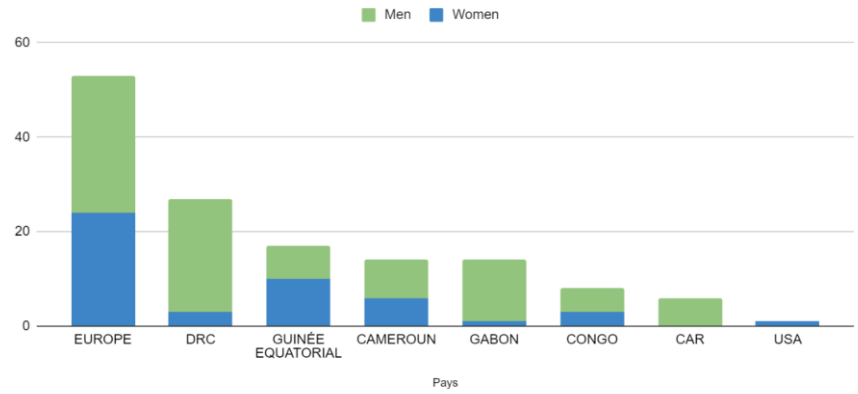


Figure 6. Participation in 2022 COTECHs (8 meetings)

There are 6 national whatsapp channels which connect the national technicians and include active discussions, promotion of meetings, events, scholarships and fellowships. In the pilot sites new local NGOs were engaged in the data collection and were exposed to the project, including data and technical resources.

8. Thèmes transversaux

8.1. Gouvernance

The Steering Committee meeting of the project met in February 2022 (report available here) , while the COTECH met 8 times through online modalities. Additionally, all focal points with the exception of DRC (attended virtually) met in Libreville for the regional workshop in August 2022.

All reports of the COTECH and COPIL are available and shared with all project stakeholders. Both bodies enable to discuss and improve the methodology as well as make proposals and suggestions for the project extension in 2022 and 2023.

8.2. Genre

The project implementation team is composed of 1 international chief technical advisor (female), and 4 national consultants (1 female). The gender ratio for the technical teams in the partner structures in charge of data production and validation is 32% (12 out of 37[1]). Out of the 87 participants to the different technical committee meetings, 32 were female (37% gender ratio, see breakdown of attendance by country and gender). For the socio-economic field survey teams the gender ratio was 30% in DRC and 25% in Cameroun.

For the targets of the socio-economic surveys, 52% of respondents in the household surveys were women.

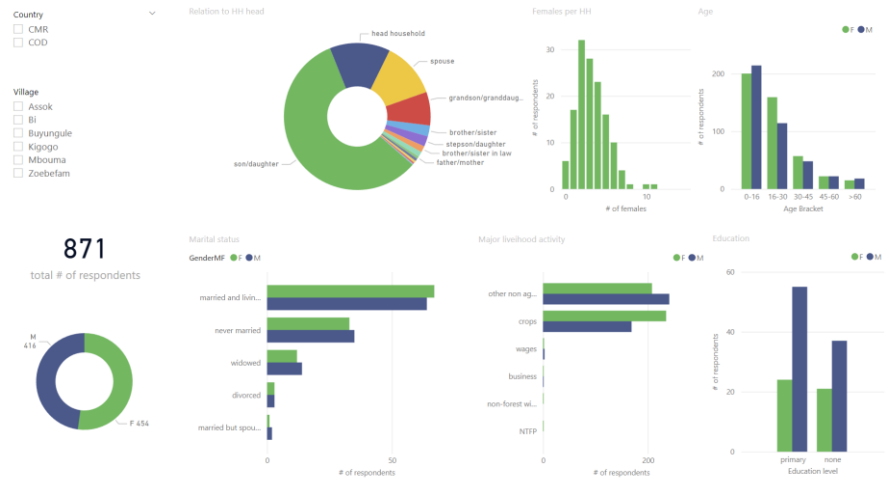


Figure 7. Household survey demographics

Gender equality was an objective in the focus group discussions as well.

[1] Composition of the validation team

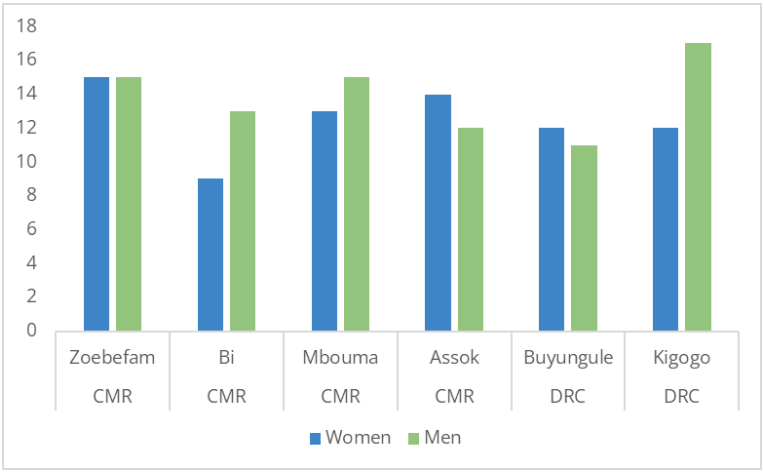


Figure 8. Gender representation in FGD sessions in Cameroun and DRC.

Table 2 - Suivi des aspects Genre.

Critère	Actions prises pour intégrer l'aspect genre	Résultats	Coût en USD	Défis affrontés
Mise en œuvre/Activités	Consideration of gender aspects in the recruitment of the project implementation team Encouragement for female participation in training and technical committee meetings Gender aspects in the composition of field teams	40% gender ratio in the project team 32% gender ratio achieved in technical meetings and training events 25% gender ratio in field survey teams in Cameroun, 30% in DRC 50% gender ratio achieved in the socio-economic surveys	0	NA
Suivi-évaluation				

8.3. Peuples Autochtones

NA

8.4. Autres groupes sociaux (Jeunes, mineurs, etc.)

NA

8.5. Respect de normes environnementale et sociale

The methodology for socio-economic surveys specifically includes a section for facilitators to ensure that interviewees understand the objectives of the survey and consent to the interview. In all trainings there was a requirement to ensure all facilitators have free, prior and informed consent of all participants, and they can end the interview or session at any moment or ask that their information not be shared with the project. In both countries, facilitators were selected for their previous experience and ties to the communities involved in order to be sensitive to local needs and sensitivities.

a. Etude d'impact environnementale et sociale

NON

b. Mesures prises afin d'assurer le respect des sauvegardes

NA

c. Gestion des plaintes et recours

NA

9. Gestion des risques

9.1 Matrice de gestion des risques sur la base de l'analyse effectuée.

Tableau 10 - Gestion des risques

Risk identification			**Risk management**			
Description	Period	Category	Evolution	Action(s)	Resp.	Deadline
Presidential elections are planned in Central African Republic and Republic of Congo during the implementation of the project. This might lead to a government turnover.	2020-2021	Unlikely	Stable	LOA with the ministries and new focal point have occurred after the transition		
Agreement between partners is not found on the definitions (forest, deforestation and degradation), the methodology to detect and characterize disturbances and/or assess the associated current and historical drivers	2021-2022	Unlikely	Stable	A large number of technical meetings and consultations were held to ensure inclusivity and consensus		

Decrease of the staffing of the national administrations and institutions involved in the project for the implementation and monitoring of the planned activities, resulting in the internal re-organisation of the institution and the loss	2021 - 2022	Unlikely	Stable	LoA with country administrations allow to cover national experts expenses and ensure increased ownership; technical focal points have been nominated at each institution and replaced as necessary		

9.2 Évaluation de la transparence et de l'intégrité

Fraud, misuse of funds	Yes (how many and a brief description of each)	No	Please detail the training provided to staff, consultants and sub-contractors on Fraud, misuse of funds and corruption
Allegations		X	NA
Investigations		X	NA
Sanctions (including if any recovery made and amount)		X	NA
Sexual Abuse and exploitation	Yes (how many and a brief description of each)	No	Please detail the training provided to staff, consultants and sub-contractors on exploitation, abuse and sexual harassment
Allegations		X	NA
Investigations		X	NA
Sanctions (including if any recovery made and amount)		X	NA

Fraude, mauvaise utilisation de fonds et corruption : Formation : Veuillez détailler les formations fournies aux staffs, consultants et sous-contractants sur Fraude, la mauvaise utilisation de fonds et la corruption depuis le début du programme		
	Pour la période de rapportage	Depuis le début du programme
Nombre de staffs formés /nombre de staff total	0	0
Nombre de consultants formés / nombre total	0	0
Nombre de sous-contractants formés / nombre total	0	0
Exploitation, abus et harcèlement sexuels		

Veuillez détailler les formations fournies aux staffs, consultants et sous contractants sur l'exploitation, les abus et le harcèlement sexuel	Pour la période de rapportage	Depuis le début du programme
Nombre de staffs formés /nombre de staff total	0	0
Nombre de consultants formés / nombre total Nombre de sous-contractants formés / nombre total	0	0

10. Illustration narrative spécifique

In 2022, the DRC used provincial-level deforestation and degradation data for the period 2015-2020 from the regional drivers project to update its jurisdictional submission to the Art-TREES Secretariat under the LEAF coalition.

The data was highlighted in exchanges with Emergent experts to strengthen the credibility of the HFLD criterion for Tshuapa Province.

Link to the submission :
https://leafcoalition.org/wp-content/uploads/2021/12/Province-of-Tshuapa_CFP.pdf

Mémorandum of understanding
https://leafcoalition.org/wp-content/uploads/2023/02/MoU_Emergent_RDC-Signed.pdf

Social media visibility :
https://www.facebook.com/tshuapamaprovince/posts/4557450767641264/

LEAF brochure for RDC
https://leafcoalition.org/wp-content/uploads/2022/08/LEAF-country-brochure-DRC.pdf

11. Modalités de suivi

Tableau 11 - Etat d'avancement du plan de suivi du programme.

Activity and evaluation	Number expected	Number held	Level of completition	Costs in USD/Budget	Results and lessons learned
Field Missions	2	2	100%	2,702	Recommendations for improvement in methodology
Meetings	8 COTECH	8	100%	0 - online	
Reports	8 technical reports	8	100%		
Technical reviews	0				
External evaluations	0				
Data collection	2 pilot sites Collect Earth Validation Points	2 pilot sites 12,260 validated points	100% 100%	278,533	Online database to be integrated into FAO Hand-in-Hand

COPIL sessions	1	1 + attendance at regional workshop	100%	30,818	A regional workshop was held with country focal points (DRC participated online)
Integration of recommendations of COPIL	1	1 – selection of pilot sites and recommendations on comprehensive comparative methodology		17,684	Development of a robust socio-economic methodology for pilot sites
Different platform meetings	5	5 GFOI, COFO, CBFP, COP 27 and Planet Webinars	100%	0 - online	

12. Révisions programmatiques (le cas échéant)

Indiquer toute modification importante dans les stratégies, les objectifs, les cibles ou les résultats clés en présentant la justification ainsi que les approbations obtenues en structure de gouvernance (eg COPIL de programme, CT du FONAREDD) le cas échéant.

NA

13. Communication and promotion

Fournir un bref descriptif des efforts entrepris pour promouvoir CAFI (et le FONAREDD en RDC) y compris via l'utilisation de logos dans les publications finales du programme, sur le site du programme, et dans les ateliers avec les partenaires et parties prenantes, photos à l'appui.

The project website (https://congo.dddafrica.info/) has been widely accessed (see section 5.2 output 5) and shared with different technical partners, promoting the actions of CAFI with international audiences (COP27, COFO, GFOI, CBFP and PLANET information exchanges). This content will be migrated to an official FAO.org page and SEPAL documents for wider visibility.

The activities of the project and CAFI support has been advertised through different channels, including the FAO's website and national media, LinkedIn, twitter, public webinars as well as during discussions with partner organizations and national, regional and/or local government structures.

14. Auto-évaluation du programme

NA

15. Difficultés rencontrées et mesures prises et leçons apprises

Difficulty	Lesson learned
There were frequent problems with the LOAs which expired, needed to be extended which disrupted some of the project activities	We now are experienced in the process of developing and implementing LOAs. And we will make them valid for the entire length of the project to avoid gaps
The online meetings of the COTECH and webinars were very useful and appreciated. These activities also reduced travel costs and emissions. The regional workshop did however enable more cohesion between partners and to align strategies	The next phase of the project will continue online meetings to meet the needs of partners, and a regional workshop is planned.
The ministries would like to be more involved in the socio-economic surveys and to work together with the NGOs and academics. It was communicated that the selection of partners for work in the pilot sites was not transparent.	The technical partners at the ministries will be engaged in the pilot site work and invited to trainings. The selection of NGOs will be done by a more transparent call for proposals.
The countries wish to have more capacity development support to extract national data from the regional information, for sample-based area estimations and to better understand the results	A new activity was proposed in the next phase that is more tailored to national needs, there will be more trainings on emissions calculations and area estimations and specific requests from countries. We also intend to support each country to develop their own sub-page on the website.
Underlying drivers, notably the international demand for timber have direct effects on production and are pertinent to the study	We will ensure that the global drivers work by FAO can address this, otherwise we can find a consultant
We were often asked to extract data at the national or provincial level, which was not included in the project design or work plan	In the next phase we will re-assess the number of validation points needed to meet these requests in order to be able to statistically evaluate trends at different scales
The cross validation with so many points took much longer than expected and delayed many activities of the project. Some people did most of the work, others did less with lots of variation in quality.	In the next phase we will not do cross validation with repetition which will enable us to do more points overall in less time. We will also improve the quality by assigning part of the task to a dedicated, trained team (or organization), and the rest done by a combination of the project partners and partly through automated means. We have new tools to help select the points that are best assessed through visual interpretation or automated approaches.

There seems to be a bias in the BFAST algorithm that detect changes earlier than the validation data.	We are implementing an ensemble approach that combines multiple methodologies to reduce these biases.
The scientific article on deforestation trends and drivers was rejected by Nature Communications	We have taken the recommendations of the reviewers and split the drivers component of the article into a new submission. The automated approach to validation was the primary source of criticism, and is too new to be accepted by those who have maintained a traditional approach. This has motivated new efforts to test approaches in other countries, organize a "Sample Summit" and document the methodological approach and paper upon which we can base the methods of the next phase

16. Conclusion and recommendations

Overall, the project has achieved positive results in terms of capacity development and team building within the COTECH, while providing comprehensive and robust results on the trends of forest cover, disturbance and associated drivers. While the trend of decreasing rates of disturbance seem surprising, they actually echo the trends observed by other global studies. We have produced the first ever paper on detailed direct and overlapping drivers for the entire Congo Basin, using a demonstrated approach that is already being replicated in West Africa and by other partners. Furthermore, the drivers data are being shared with WRI for integration into their global drivers studies and have acknowledged the value of the project data, the website and interactive dashboards. We also have interest, enthusiasm and momentum from the partner countries to continue the project into 2023 and new projects being proposed based on this research and methods on risks to biodiversity, and connecting deforestation and degradation to wildlife and human health.

17. Récapitulatif des livrables

1. Website with methods, webinars recordings and project outputs, data and interactive dashboards (if access is not possible, please contact aurelie.shapiro@fao.org to be added to the list of approved users): https://congo.dddafrica.info
2. Literature review and accessible project library compiles all the relevant literature and is updated throughout the project
3. Project Methodology Document developed and approved by the COTECH
4. Description of the regional classification scheme with categories described in English, French and Spanish, including the LCML terminology and diagrams
5. Drivers identification manual (SOP for drivers identification)

6. Accessible, continually updated database of relevant regional data from the project and auxiliary sources
7. Page of interactive maps to visualize project and other compiled data
8. Project outputs are visible, searchable and downloadable from ArcGIS Online
9. Interactive dashboard of drivers and associated forest changes from visually interpreted data
10. Interactive dashboard for complete validation dataset with visualization of Planet mosaics and filters
11. Socio-economic methodology and data collected in 2 pilot sites (access to interactive dashboard is limited to specific email addresses)