



THE FORESTS OF THE CONGO BASIN

State of the Forest 2013

The Forests of the Congo Basin – State of the Forest 2013

Editors: de Wasseige C., Flynn J., Louppe D., Hiol Hiol F., Mayaux Ph.

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ACRONYMS

ADB	African development bank	CDC	Cameroon Development Cooperation
AFD	French Development Agency	CDF	Forest Data Center
AGDRF	Agency for the sustainable management of forestry resources	CEFDHAC	Conference on Central African Moist Forest Ecosystems
AGEDUFOR	Appui à la Gestion Durable des Forêts de la RDC	CESBIO	Center for the study of the biosphere from space
AGEOS	Gabonese Spatial Study and Observation Agency	CFA	African Financial Community Franc (CFA franc)
ALUFR	Albert-Ludwigs-Universität Freiburg	CFAD	Forest Concession under Sustainable Management
ANAFOR	National Agency for the Support of the Development of the Forest	CGIAR	Consultative Group on International Agricultural Research
ANPN	National Parks Agency	CGIS	Geographic Information Systems & Remote Sensing Research and Training Center
ANR	Assisted Natural Regeneration	CIB	Congolaise industrielle des Bois
APT _s	Trans-boundary protected areas	CICOS	International Commission for the Congo-Oubangui-Sangha Basin
ATIBT	Association technique internationale des Bois tropicaux	CIEDD	Centre d'information Environnementale et de Développement Durable
AWF	African Wildlife Foundation	CIFOR	Center for International Forestry Research
AWG-LCA	Ad Hoc Working Group on Long-term Cooperative Action under the Convention	CIRAD	Center for International Agricultural research for development
AZE	Alliance for Zero Extinction	CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
BAU	Business-as-usual	CNIAF	Centre national d'Inventaire et d'Aménagement des Ressources forestières et fauniques
BMU	German Federal Ministry for the Environment	CO2M&M	Carbon Map and Model project
BTC	Belgian Technical Cooperation	COBAM	Climate Change and Forests in the Congo Basin
CAR	Central African Republic	CoC	Chain of Custody
CARPE	Central African Regional Program for the Environment	CoFCCA	Congo Basin Forests and Climate Change Adaptation
CAT	Management and processing agreement	COI	Canopy Opening Indicators
CBD	Convention on Biological Diversity	COMIFAC	Central African Forests Commission
CBFF	Congo Basin Forest Fund	COP	Conference of the Parties
CBFP	Congo Basin Forest Partnership	COVAREF	Committees for the Valorization of Wildlife Resources
CBNRM	Community-Managed Natural Resource Management	CPAET	Provisional Convention of Management, Exploitation and Processing
CCBA	The Climate, Community and Biodiversity Alliance	CR	Critically Endangered
CCC	Congo Conservation Company		
CCN	National Coordination Unit		
CCPM	The coordinating circle of MINFOF/ MINEPDED partners		
CDAE	Convention définitive d'aménagement et d'exploitation		

C-R	Capture-recapture	ESMF	Environmental and Social Management Frameworks
CRDPI	Centre de Recherche sur la Durabilité et la Productivité des Plantations industrielles	ESMP	Environmental and Social Management Plan
CSC	Climate Service center	ETIS	Elephant Trade Information System
CSO	Civil society organizations	ETM	Enhanced Thematic Mapper
CTFC	Technical Centre for Communal Forests in Cameroon	EU	European Union
CTFT	Centre technique forestier tropical	EUTR	European Union Timber Regulation
CTI	Industrial processing agreement	F/NF	Forest/non forest
DACEFI	Development of community alternative to illegal forest exploitation	FACET	Forêts d'Afrique centrale évaluées par Télédétection
DCESP	Domestic Cannabis Eradication/Suppression Program	FAN	Fundacion Amigos de la Naturaleza
DFGFI	Dian Fossey Gorilla Fund International.	FAO	Food and Agriculture Organization
DFID	Department for International Development	FAOSTAT	FAO Statistics Division
DFS	Deutsche Forstservice GmbH	FCCC	Framework Convention on Climate Change
DGEF	Direction générale des Eaux et Forêts	FCPF	Forest Carbon Partnership Facility
DGIS	Dutch Ministry of Foreign Affairs	FFEM	French Fund for World Environment
DHR	Horticulture and Reforestation Authority	FIP	Forest Investment Program
DIAF	Direction des Inventaires et Aménagements Forestiers	FLEGT	Forest Law Enforcement, Governance and Trade
DMC (Chap 1)	Disaster Monitoring Constellation	FMI	International monetary fund
DNA	DesoxyriboNucleic Acid	FOB	Free On Board
DPGT	Peasant development and land management	FPIC	Free Prior and Informed Consents
DRC	Democratic Republic of Congo	FRA	Forest Resources Assessment
EBA	Ecosystem-Based Adaptation	FRM	Forêt Ressources Management
ECCAS	Economic Community of Central African States	FSC	Forest Stewardship Council
ECOFACT	Conservation and Sustainable Use of the Central Africa Forest Program	FUNCATE	Brazilian foundation charged with the technical development of methods and tools for the Amazon forest monitoring system
ECOFORAF	Eco-certification of forest concessions in central Africa	GCM	Global Climate Models
EDF	European Development Fund	GDP	Gross domestic product
EF	Emission factors	GEF	Global Environment Facility
EFC	Eucalyptus and Fibres of Congo	GHG	Greenhouse Gas
EFI	European Forest Institute	GIC	Guaranteed Investment Certificate
EIA	Environmental impact assessment	GIS	Geographic information system
EITI	Extractive Industries Transparency Initiative	GIS	Geographic Information System
EN	Endangered	GIZ	German Agency for International Cooperation
ENI	Italian national oil company	GLAS	Geoscience Laser Altimeter System
ESA (Chap 1)	European Space Agency	GLOBE	Global Legislators Organisation for a Balanced Environment
		GLOBIOM	Global Biosphere Management Model

GMG	Global Manufacturing Group	INECN	The National Environment and Nature Conservation Institute
GPS	Global Positioning System		
GRASP	Great Apes Survival Partnership	INERA	National Institute for the Agronomic study and research
GRUMCAM	Company logs from Cameroon	INPE	National Institute for Space Research
GSEaf	Group of African elephant specialists	INTERPOL	International Criminal Police Organization
GSE-FM	GMES Service Elements - Forest Monitoring	IP	Indigenous peoples
GSPC	Global Strategy for Plant Conservation	IPC	Inter-Prefectorial committees
GTBAC	Groupe de travail biodiversité d'Afrique centrale	IPCC	Intergovernmental Panel on Climate Change
GTCR	Climate and REDD+ Working Group	IRAD	Institute of Agricultural Research for Development
GTG	Geospatial Technology Group SARL (Cameroun)	IRD	Institute of research for development
GTI	Global Taxonomy Initiative	IRST	Institute of Scientific and Technological Research
GVTC	Great Virunga Transboundary Collaboration	ITC	Faculty of Geo-Information Science and Earth Observation
HH	Horizontal horizontal polarization	ITTO	International Tropical Timber Organization
HIMO	High-intensity Labor	IUCN	International Union for Conservation of Nature
HIV	Human immunodeficiency virus		
HV	Horizontal vertical polarization	IUFRO	International Union of Forest Research Organisation
HVC	High conservation value	JCU	James Cook University
ICA	International Consultation and Analysis	JR	Joanneum Resarch
ICCN	Congo Institute for the Conservation of Nature	JRC	Joint Research Centre
ICCWC	International Consortium on Combating Wildlife Crime	KfW	German Development Bank
ICESat	Ice, Cloud, and land Elevation Satellite	KIT	Royal Tropical Institute
ICRAF	International Centre for Research in Agroforestry	LACCEG	Climatology, Mapping, and Geographic Studies Laboratory
IEC	Information, education and communication	LAGA	Last Great Ape Organization
IEEE	Institute of Electrical and Electronics Engineers	LAMEPA	Laboratory for Environmental Modelling and Atmospheric Physics
IFAD	International Fund for Agricultural Development	LCBC	Lake chad basin commission
IFB	Forest industries of batalimo	LEDS	Low Emissions Development Strategy
IFDC	International Fertilizer Development Center	LEM	Law Enforcement Monitoring
IFO	Forest industries of Ouessou	LIDAR	Light Detection and Ranging
IGNFI	National Geographic Institute France International	LULUCF	Land Use, Land Use Change and Forestry
IIASA	International Institute for Applied Systems Analysis	MAAF	Ministère de l'agriculture, de l'agroalimentaire et de la forêt
INDEFOR-AP	National Institute of Forestry Development and Protected Areas	MAB	Man and the Biosphere
		MDDEFE	Ministère du Développement durable, de l'Économie forestière et de l'Environnement
		MDP	Clean Development Mechanism

MECNT	Ministry of the Environment, Nature Conservation and Tourism	NGO	Non Governmental Organization
MEEATU	Ministère de l'Eau, de l'Environnement, de l'Aménagement du Territoire et de l'Urbanisme	NR	Natural Reserve
MEEDD	Ministère de l'Economie, de l'Emploi, et du Développement Durable	NRF	National Redd+ Fund
MEF	Ministère de l'Économie forestière	NTFP	Non-Timber Forest Product
MEFCPEE	Ministère des Eaux, Forêts, Chasse et Pêche, de l'Environnement et de l'Ecologie (RCA)	NUR	National University of Rwanda
MEFDD	Ministry of Forest Economy and Sustainable Development	ODI	Overseas Development Institute
MERH	Department of Environment and fishery Resources	OFAC	Observatory for the Forests of Central Africa
METEOSAT	Meteorological Satellite	OLB	Origin and Legality of Timber
MIFACIG	Mixed Farming Common Initiative Group	ONFi	Office national des Forêts International
MIKE	Monitoring the Illegal Killing of Elephants	OSFAC	Observatoire satellital des Forêts d'Afrique centrale
MINEF	Ministry of the Environment and Forests	OSFT	Tropical Forest Spatial Observation
MINEP	Ministère de l'Environnement, de la Protection de la Nature	PA	Protected Area
MINEPDED	Ministère de l'Environnement, de la Protection de la Nature et du Développement Durable (Cameroun)	PACEBCo	Congo Basin Ecosystems Conservation Programme
MINFOF	Ministry of Forestry and Wildlife	PACO	West and Central Africa Programme,
MIST	Management Information System	PAGEF	Projet d'Appui à la Gestion durable des Forêts du Congo
MNHN	National Museum of Natural History	PALSAR	Phased Array type L-band Synthetic Aperture Radar
MODIS	Moderate Resolution Imaging Spectroradiometer	PAM	Policies and measures
MPATIEN	Ministry of Planning, Territorial Management, Economic Integration	PAPAFPA	Participatory program to support family farming and artisanal fisheries
MPMA	Ministry of Fisheries and the Environment	PAPECALF	Enforcement of national legislation on wild fauna
MPTF	Multi-partner trust fund services	PAPFFG	Gabonese project for development of small forestry permits
MRV	Measurement, Reporting and Verification	PAR	Paricipatory Action Research
NAMA	Nationally Appropriate Mitigation Actions	PAREF	Programme d'Appui à la Reforestation
NAPA	National adaptation programs of action	PARPAF	Project to support the relization of forest concession management plan
NASA	National Aeronautics and Space Administration	PASR-LCD	Sub-Regional Action Programme to Combat Land Degradation and Desertification
NBGB	National Botanic Garden of Belgium	PBF	Forest and Biodiversity Programme
NCCO	National Climate Change Observatory	PEA	Exploitation and Management Permit
NDVI	Normalzied Difference Vegetation Index	PEI	University of Prince Edward Island Charlottetown
NEPAD	The new partnership for Africa's development	PES	Payment for Environmental Services
NFI	National forest inventory	PEXULAB	Extreme Emergency Anti- Poaching Plan
NFMS	National Forest Monitoring System	PFM	Mvoum Forest Plantation Company
		PHC	Plantations and oil factories of Congo
		PIKE	Proportion of Illegally Killed Elephants

PIN	Project Idea Note	SIRS	Systèmes d'Information à Référence Spatiale
PNOK	National parc of Odzala-Kokoua	SLMS	Satellite land monitoring system
PNS	Salonga National Park	SMART	Spatial Monitoring and Reporting Tool
PNSA	National Food Security Plan	SNAT	National Territorial Management Plan
PNVi	Virunga National Park	SNR	National Reforestation Service
PRM	Périmètre de Reboisement de la Mvoum	SOCAPALM	Cameroonian Palmeraies Company
ProNAR	National Afforestation and Reforestation Development Program	SOF	State of the Forest
PSG	Simple management plans	SOFOKAD	Société Forestière de la Kadéi
PSGE	Emerging Gabon's Strategic Plan	SPOT-VGT	SPOT - Vegetation
PVC	Polyvinyl chloride	SRTM	Shuttle radar topography mission
RAPAC	Central Africa Protected Areas Network	SSC	Species Survival Commission
RARC	Agroforestry Resource Center	STBK	Société de Transformation de Bois de la Kadéy
REDD	Reducing Emissions from Deforestation and Degradation	TC	Teechnical coordination
REDDAF	Reducing Emissions from Deforestation and Degradation in Africa	TLTV	Timber Legality and Traceability Verification
REL	Reference emission levels	TNS	Trinational Sangha Area
RL	Reference levels	TRAFFIC	The wildlife trade monitoring network
RNRA	Rwanda Natural Resources Authority	TRIDOM	Trinational Dja-Odzala-Minkebe Area
R-PIN	Readiness Plan Idea Note	UCL	Catholic University of Louvain
RRC	Rural resource centres	UFA	Forest management unit
RRI	Rights and Resources Initiative	UFE	Forest Exploitation Units
RSPO	Roundtable on Sustainable Palm Oil	UK	United Kingdom
SAR	Synthetic aperture radar	ULB	Brussels Free University
SARIS	Société Agricole et de Raffinage Industriel du Sucre	ULg	University of Liège
SBI	Subsidiary Body for Implementation	UMD	University of Maryland
SBSTA	Subsidiary Body for Scientific and Technological Advice	UN	United Nations
SDSU	South Dakota State University	UNCCD	United Nations Convention to Combat Desertification
SEC	Suitable Environmental Conditions	UNDP	United Nations Development Programme
SECR	Spatially explicit capture-recapture	UNEP	United Nations Environment Programme
SEP	Participative monitoring evaluation system	UNESCO	United Nations Educational, Scientific and Cultural Organization
SES	Socio-ecosystem	UNFCCC	United Nations Framework Convention on Climate Change
SESA	Strategic Environmental and Social Assessment	UNODC	United Nations Office on Drugs and Crime
SFM	Sustainable Forest Management	UN-REDD	United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation
SGSOC	SG Sustainable Oils Cameroon PLC	USA	United States of America
SGTFAP	Sub-Group on Wildlife and Protected Areas	USAID	United States Agency for International Development

USDA	United States Department of Agriculture
USFS	United States Forest Service
VAT	Value Added Tax
VCF	Vegetation Continuous Fields
VCS	Verified Carbon Standard
VHR	Very High Resolution
VICA	Vicwood Centrafrique
VPA	Voluntary Partnership Agreement
VU	Vulnerable
WB	World Bank
WCMC	World Conservation Monitoring Centre
WCO	World Customs Organization
WCS	Wildlife Conservation Society
WIST	Wildlife Incident Support Teams
WRI	World Resources Institute
WWF	World Wide Fund for Nature
ZCV	Community Hunting Zone
ZIC	Zones d'Intérêt cynégétique
ZICGC	Zones d'Intérêt cynégétique à Gestion communautaire

PREFACE

We have said before that Central African forests are of global importance, and this is more true now than ever. Adding to climate change concerns, issues such as increased wildlife trafficking, manifested by devastating elephant poaching and increasingly scarce fauna resources available for local populations, land pressures from new forms of industrial farming and mining concessions, and major infrastructure projects. With the dual pressures of population increase and globalization, pressures on forest ecosystems is growing, while management efforts on the ground cannot always effectively keep pace with change.

Thankfully, global awareness of the plight of tropical forests - and Central African tropical forest issues in particular - is growing. International negotiations are searching for better mechanisms to preserve the forests, agreements for protection have been adopted by States, improved forest management standards are being decreed, regional and national institutions are being strengthened. Powerful examples of progress and success stories, are emerging, such as:

- forest and commodity concessions that are legally certified as sustainably managed,
- community rights agreements are increasingly organized and adopted as policy,
- conservation concessions that are created and protected areas that are strengthened.

The differences among COMIFAC countries are more marked than in the past. Some have committed themselves to ground-breaking and results-oriented policies and reforms while learning from other member States. While in other countries governance shows little sign of improvement, which diminishes their international credibility.

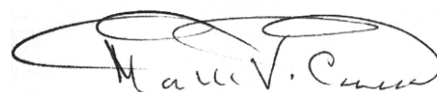
It is therefore too early for celebration, but now more than ever we must pursue efforts among all partners to meet the challenges before us.

This new edition of the “State of the Forest” could not have seen the light of day without the contributions of numerous authors and readers who have devoted considerable time and energy to refining it. We thank them immensely. Our sincere thanks also go to the countries and institutions which have supported publication of this work: the European Union, Norway, the United States of America, Germany, France, Canada and the FAO.



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INTRODUCTION

2013 STATE OF THE FOREST: An important participatory undertaking in Central Africa



Participants at the Validation Workshop on the “2013 State of the Forest – 21-22 March 2013”

The 2013 State of the Forest Report is the fruit of a long participatory process of information gathering, exchanges between experts, debates and the building of consensus to provide elements for the improved management of the Central African ecosystems. This vital undertaking responds to a groundswell request from diverse stakeholders for consolidated information in a joint report. The process of creating the report comprises many stages, wherein many actors are involved over a period of more than two years. The production of this new edition began in March 2011 on the occasion of the closure of the workshop to validate the 2010 Report, which was attended by about 65 participants.

As with previous editions, participants were asked to suggest topics of interest for the Report. More than 40 topics were proposed for the 2013 Report. A discussion then began on the prioritization of the various topics. This process resulted in certain topics being reorganized, culminating in the proposal for 10 chapters, which now constitute the bulk of this “State of the Forests”.

At the editors’ request, the drafting of each chapter is led by a “chapter coordinator”. He/she:

- (i) Proposes a structure for the chapter, based on the topics proposed,
- (ii) Stimulates the group of co-authors to generate their respective contributions,
- (iii) Formats the various contributions as well as possible, and
- (iv) Prepares the first version of the chapter for the validation

workshop and the final chapter based on feedback received from the workshop.

The validation workshop held in Douala on 21st and 22nd March 2013 constituted a key step in the production of this publication. The principal goal of the workshop was to encourage the actors and partners of the Congo Basin forest sector to examine, amend and validate the texts proposed for publication. In total, around 100 persons participated in this meeting, including public administration officials and representatives of environmental NGOs, the private sector and development projects. First, each draft chapter, including its themes and key elements, was presented, thus enabling each participant to identify the topics to which they could best contribute. Secondly, the participants were divided into working groups so as to make suggestions and contributions towards improving chapter content. During these discussions, there was a high degree of participation, and participants helped to make available to the authors better and more accessible information. The authors then proceeded to work on these texts. This work can take several months depending on the information and new analyses proposed at the validation workshop.

Once the texts – often drafted partly in French and partly in English – have been finalized, a proofreading committee works on improving their coherence and presentation in order to reach as wide an audience as possible. The translation, formatting, proofreading, printing and dissemination of the document are the final stages in this adventure, but they are nonetheless intensive and time-consuming and involve substantial human resources.

In terms of content, this new edition pays primary attention to forests other than dense rainforests. Hence three out of the ten chapters are devoted to (i) the forest areas of savannas and steppes, (ii) agroforestry and domestication of trees in Central Africa, and (iii) forest plantations.

Two chapters focus on topics related to climate. The first analyzes the Central African climate, concentrating in particular on (i) the way in which this climate could change in years to come, (ii) the changing impacts and (iii) possibilities of adaptation. The second reviews international negotiations and progress of REDD+ in the region.

Two other chapters address the important issue of allocation and utilization of forest land. The first addresses it from the standpoint of past trends leading to current problems and prospects at a time when the potential of Central African soil and subsoil is being prospected in many ways. Contrary to this first chapter with a somewhat “macro” perspective and a survey of new economic operators, the second chapter tackles the same subject, but from the standpoint of rural societies facing current and foreseeable impacts from emerging multiple land uses.

Finally, three chapters address recurring topics: the changes in forest cover, the forestry industry value chain and biodiversity status. Compared with previous editions, we note a multiplication of research projects on forest cover change using increasingly numerous and detailed satellite data. These studies all demonstrate a faster regional forest cover loss than natural regrowth of the canopy.

Biodiversity is also constantly diminishing. Fauna is under more pressure than ever. In addition to traditional hunting and commercial hunting of bush meat for towns and urban markets, we have witnessed for some years now large-scale poaching and trafficking in species of all kinds. Strengthening the law - the leitmotif of the action plans - is not yet producing the desired results. Among flora or fauna, the only species which expand are the invasive species, and among the keystone species, the mountain gorilla. The logging industry is also experiencing changes; new regulations and new markets (mainly Asian), changing production methods and, here again, differences between the courses followed by the various countries, notably concerning the implementation of sustainable management procedures.