

Miombo Network meeting

Maputo, July 23-25, 2013

*Central Africa Forest Satellite Observatory
(OSFAC) activities and fields of cooperation
with Miombo network*

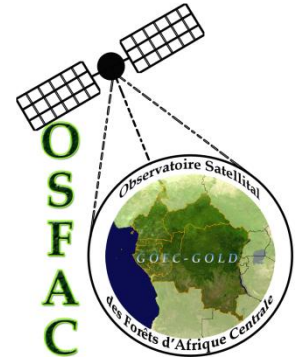
Presented by Dr Landing MANE



USAID
FROM THE AMERICAN PEOPLE



What is OSFAC?



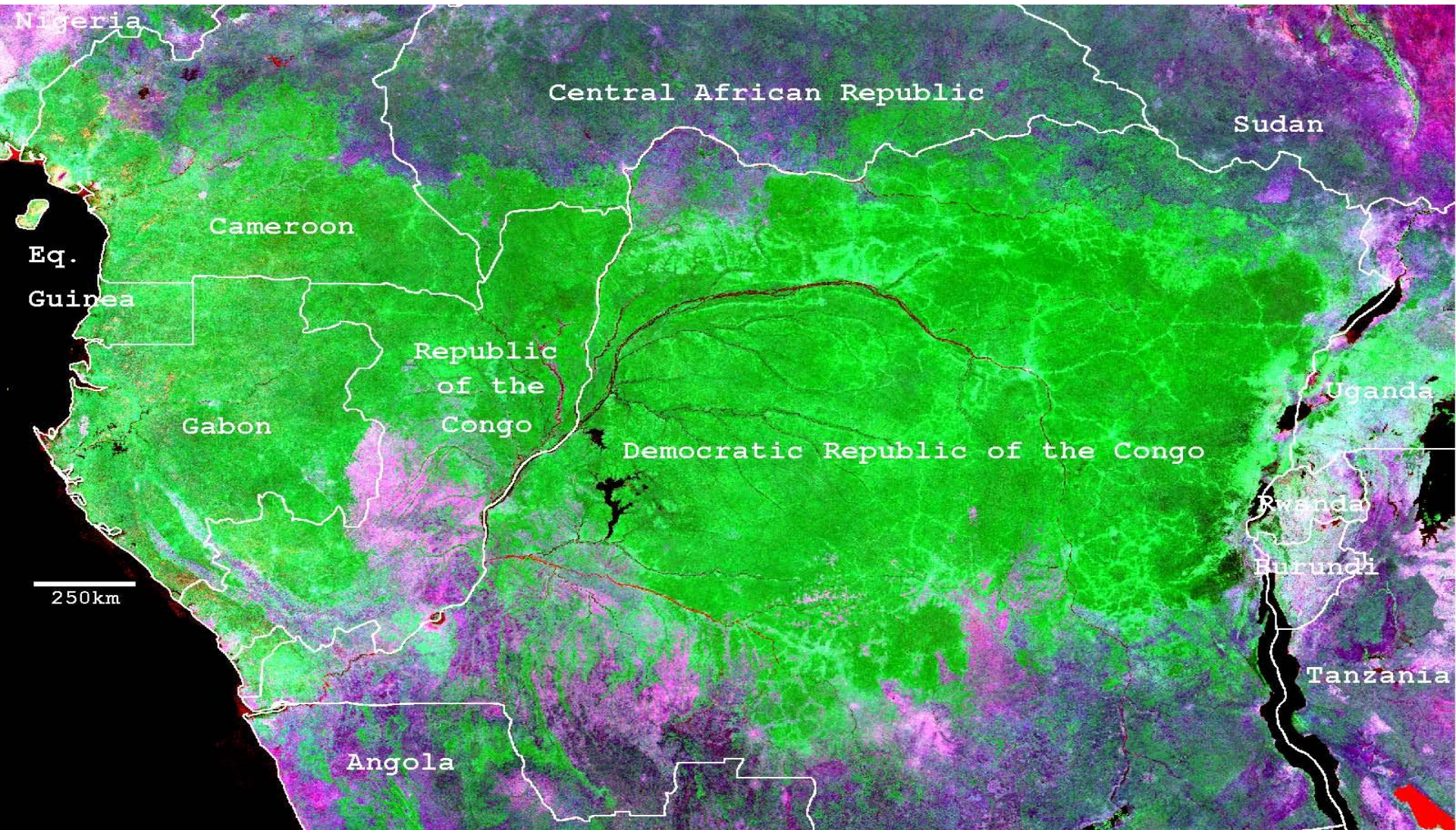
- Observatoire Satellital des Forêts d'Afrique Centrale
- Created in 2000 at Libreville
- Regional GOFC-GOLD network for Central Africa
- Legally recognized NGO in the DRC (2005)
- OSFAC's mission is to raise awareness and promote the use of satellite information through:
 - Distribution of freely accessible satellite data and products
 - Technical training in GIS and remote sensing
 - Mapping services using GIS and remote sensing
- Partners with government institutions, international and local NGOs, academic institutions and projects

OSFAC Support

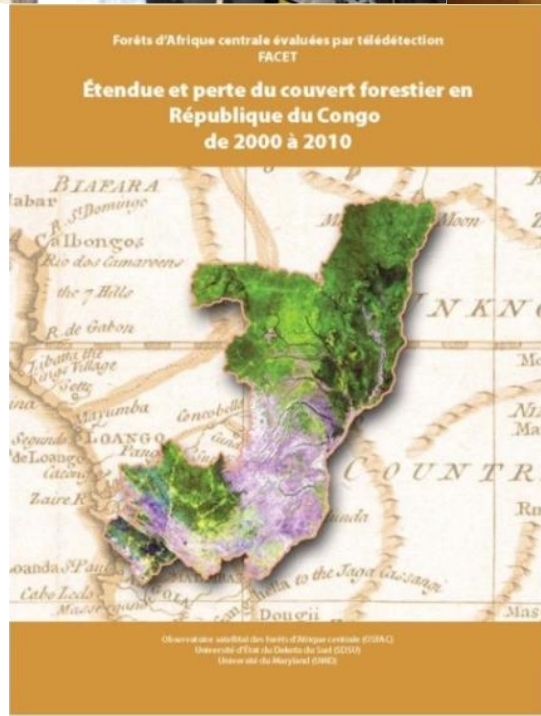
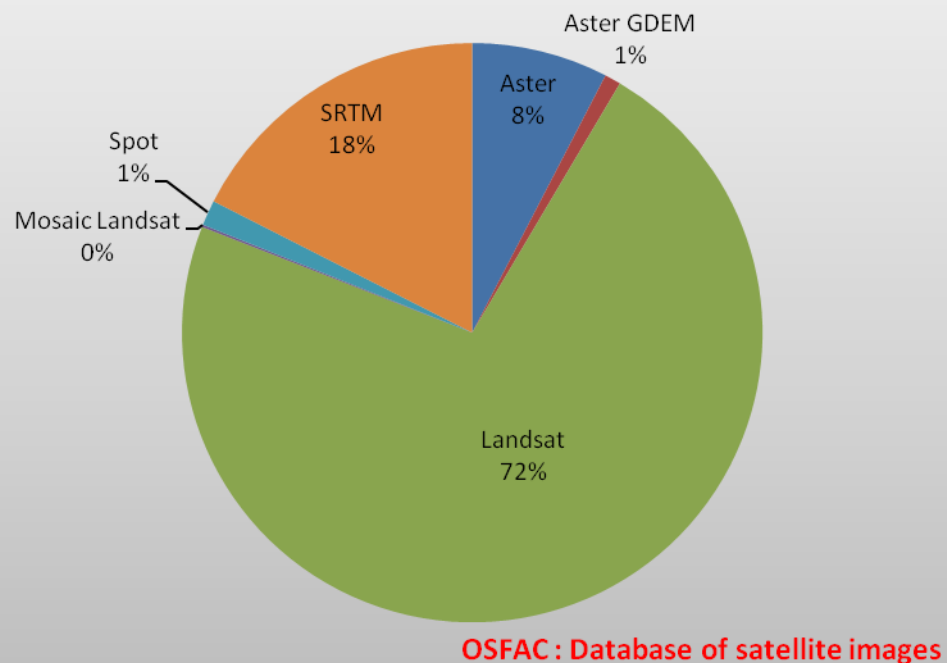
Financial Support : [USAID/CARPE](#), [EU](#)

Technical Support : [UMD](#), [SDSU](#), [NASA](#), [GOFC-GOLD](#)

Congo Basin countries : Cameroon, Gabon, Central Africa Republic, Equatorial Guinea, Republic of Congo, DR Congo... **contact with Angola and Tchad**

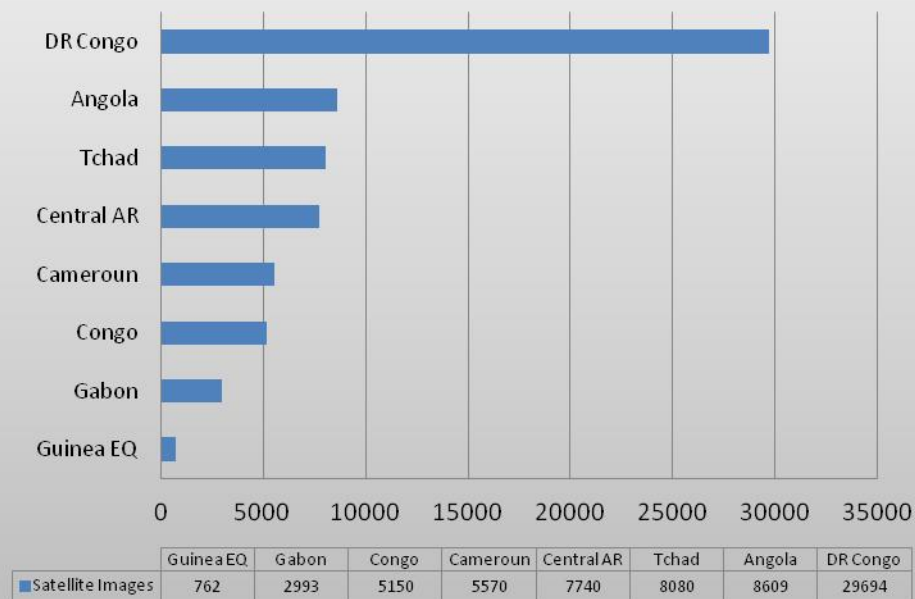


GIS, Remote sensing and GPS trainings in OSAFC's Labs.



FACET :
Monitoring the
forests of
Central Africa
using Remote
Sensing Data
set

OSFAC : Satellite images distributed by country

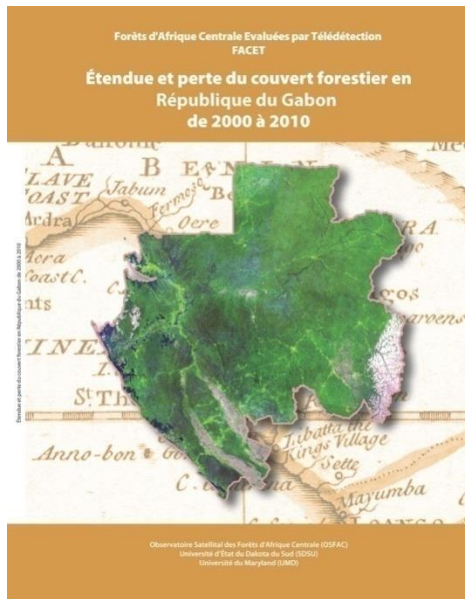


OSFAC's Products

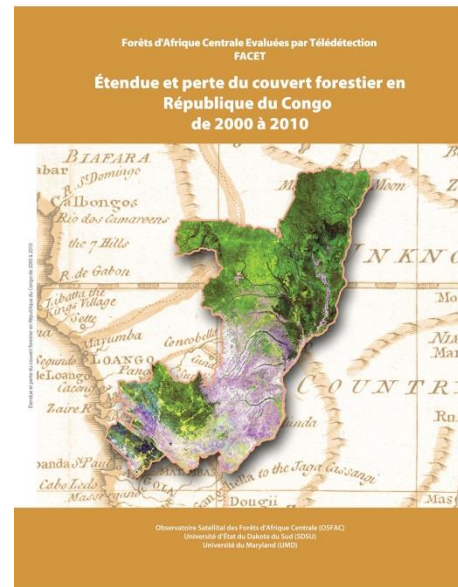
- ✓ National scale maps of forest cover type, extent and change.
- ✓ Data sets are packaged into atlases and made available through our website to facilitate access to a broad range of users.
- ✓ An automated mapping method developed by UMD/SDSU
- ✓ Classification tree algorithms applied to map primary forest, secondary forest, swamp forest, woodlands and corresponding forest cover loss for 2000 to 2005 and 2005 to 2010.

FACET: Monitoring the forests of Central Africa using remotely sensed data sets

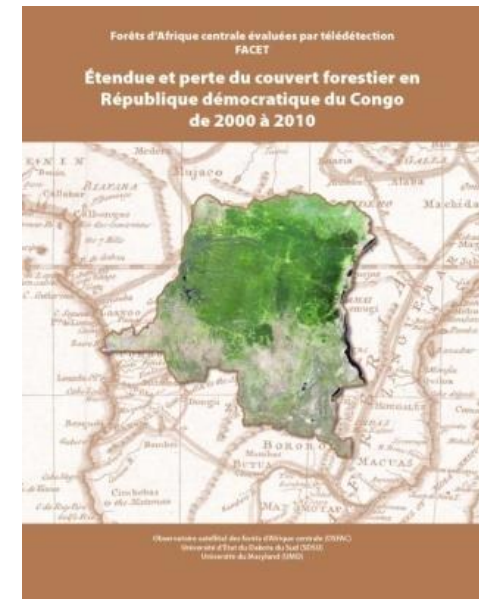
Mapping the extent of forest cover and change in the countries of the Congo Basin, 2000 – 2010.



Gabon



Republic of Congo



Democratic Republic of
Congo

Presentation of results to country Officials

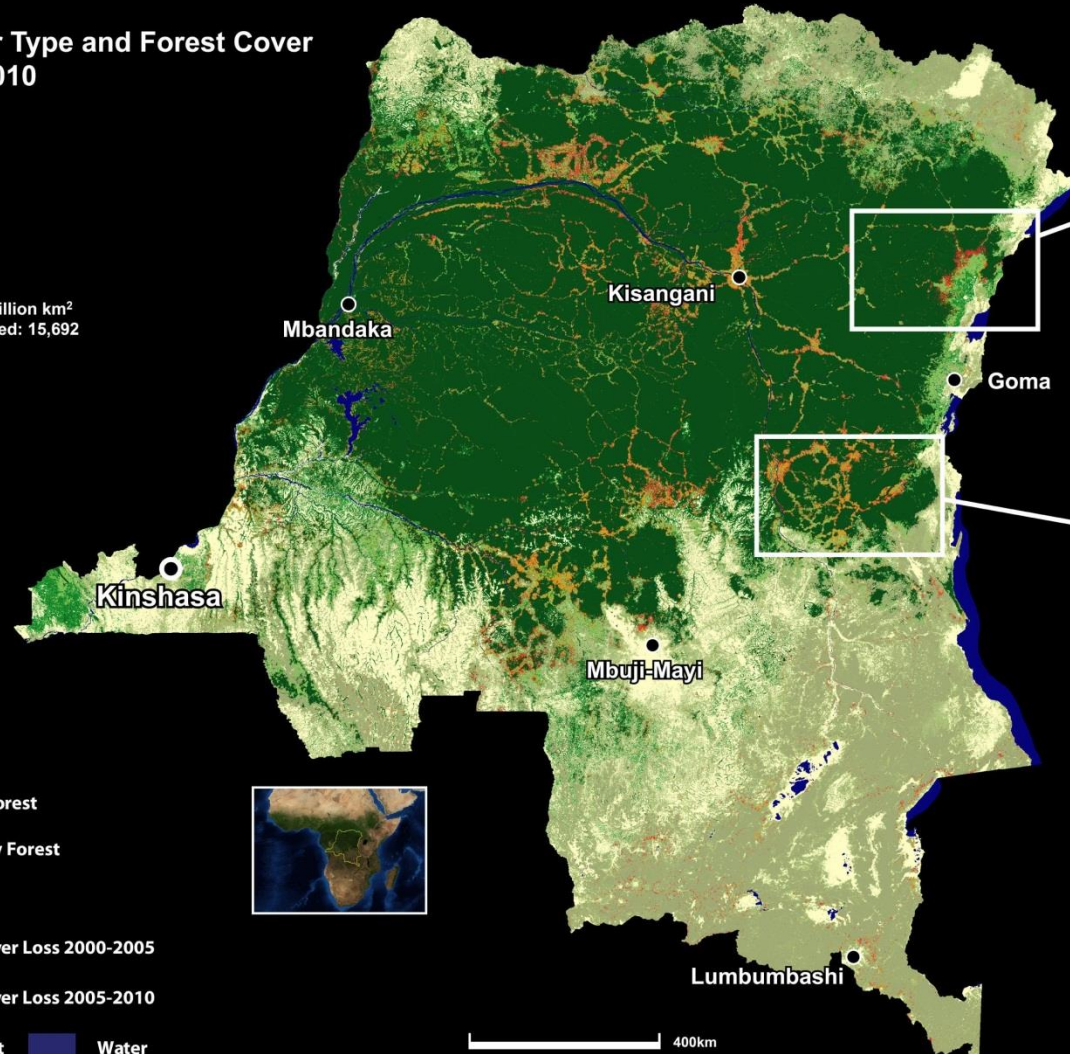




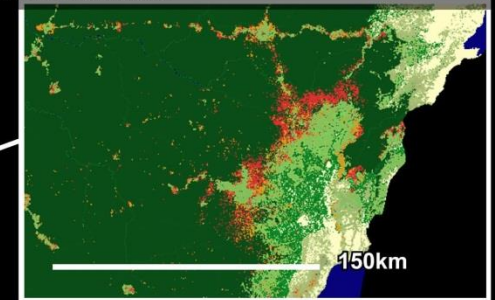
Democratic Republic of the Congo

Forest Cover Type and Forest Cover Loss 2000-2010

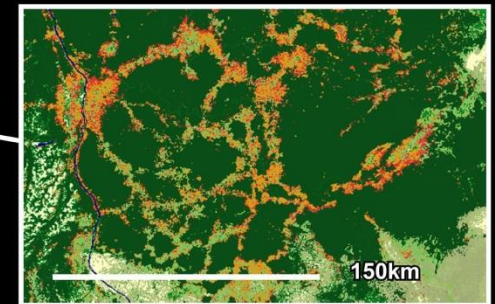
Area analyzed: 1.8 million km²
Total images processed: 15,692



Front of forest clearing in North Kivu province within a region of persistent conflict and internally displaced populations.



Lattice of trunk roads and associated agricultural clearings in Maniema and South Kivu



Legend

- Primary Forest
- Secondary Forest
- Woodland
- Forest Cover Loss 2000-2005
- Forest Cover Loss 2005-2010
- Non-forest
- Water

Reference:

Reference: Potapov P.V., Turubanova S.A., Hansen M.C., Adusei B., Broich M., Altstatt A., Mane L., and Justice C.O. (2011) Quantifying forest cover loss in Democratic Republic of the Congo, 2000-2010. Remote Sensing of Environment (accepted)

Data and images: <http://congo.iluci.org/carpemapper/>



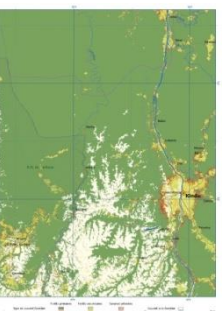
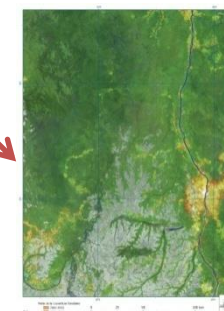
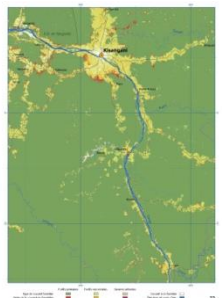
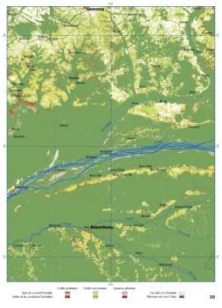
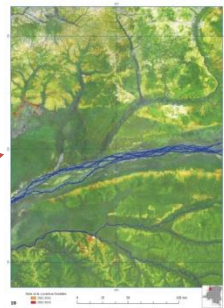
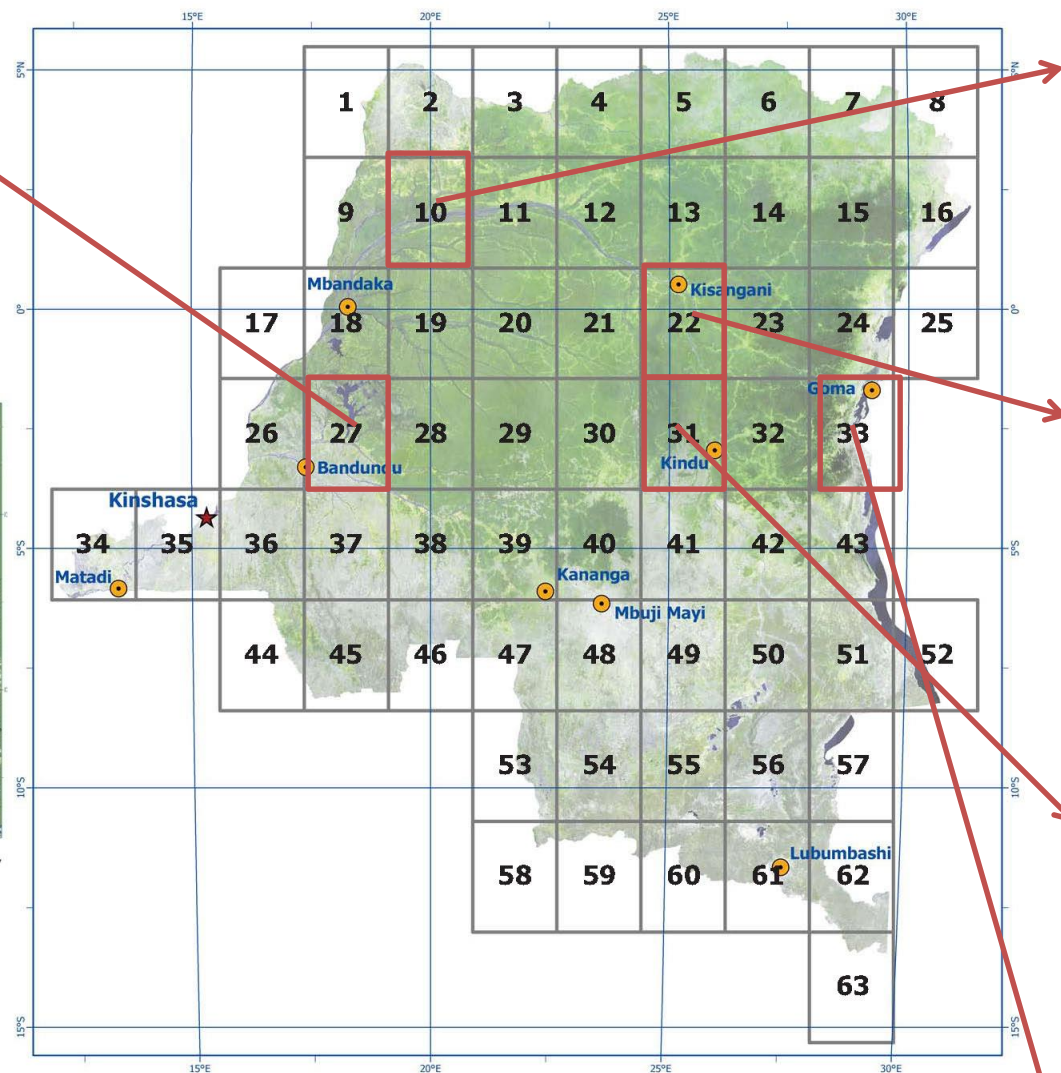
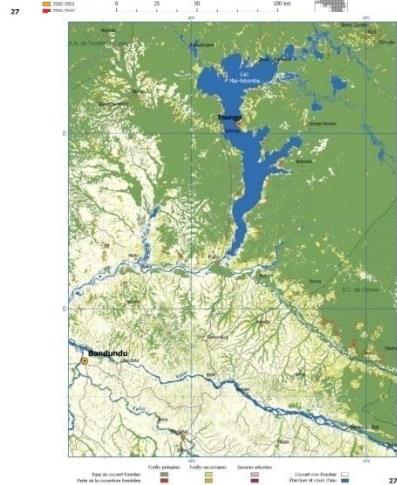
- The national year 2000 forest cover was estimated to be 1.59 million km², with gross forest cover loss for the last decade totaling 2.3% of forest area.

- Forest cover loss increased by 14% between the 2000-2005 to 2005-2010 intervals, with the greatest increase occurring within primary humid tropical forests.

- Gross forest cover loss within protected areas increased by 64% between the two intervals.

- Results illustrate an accelerating rate of forest cover loss during the past 10 years.

Index



- Lieux habités**
- ★ **Kinshasa** Capitale
 - **Matadi** Chef-lieu de province
 - **Tshela** Chef-lieu de district
 - **Songololo** Chef-lieu de territoire
 - **Bandakani** Autre ville

Source des données: Référentiel géographique commun, 2008

- Infrastructure**
- Route nationale
 - Route provinciale
 - Route locale
 - Piste d'exploitation
 - Limite de province
 - ▭ Aire protégée :
 - P.N. - Parc national
 - R.B. - Réserve de biosphère
 - R.N. - Réserve naturelle
 - D.C. - Domaine de chasse
 - R.I.C. - Réserve intégrale de chasse

Source des données: Atlas forestier interactif de la République démocratique du Congo. World Resources Institute, 2010

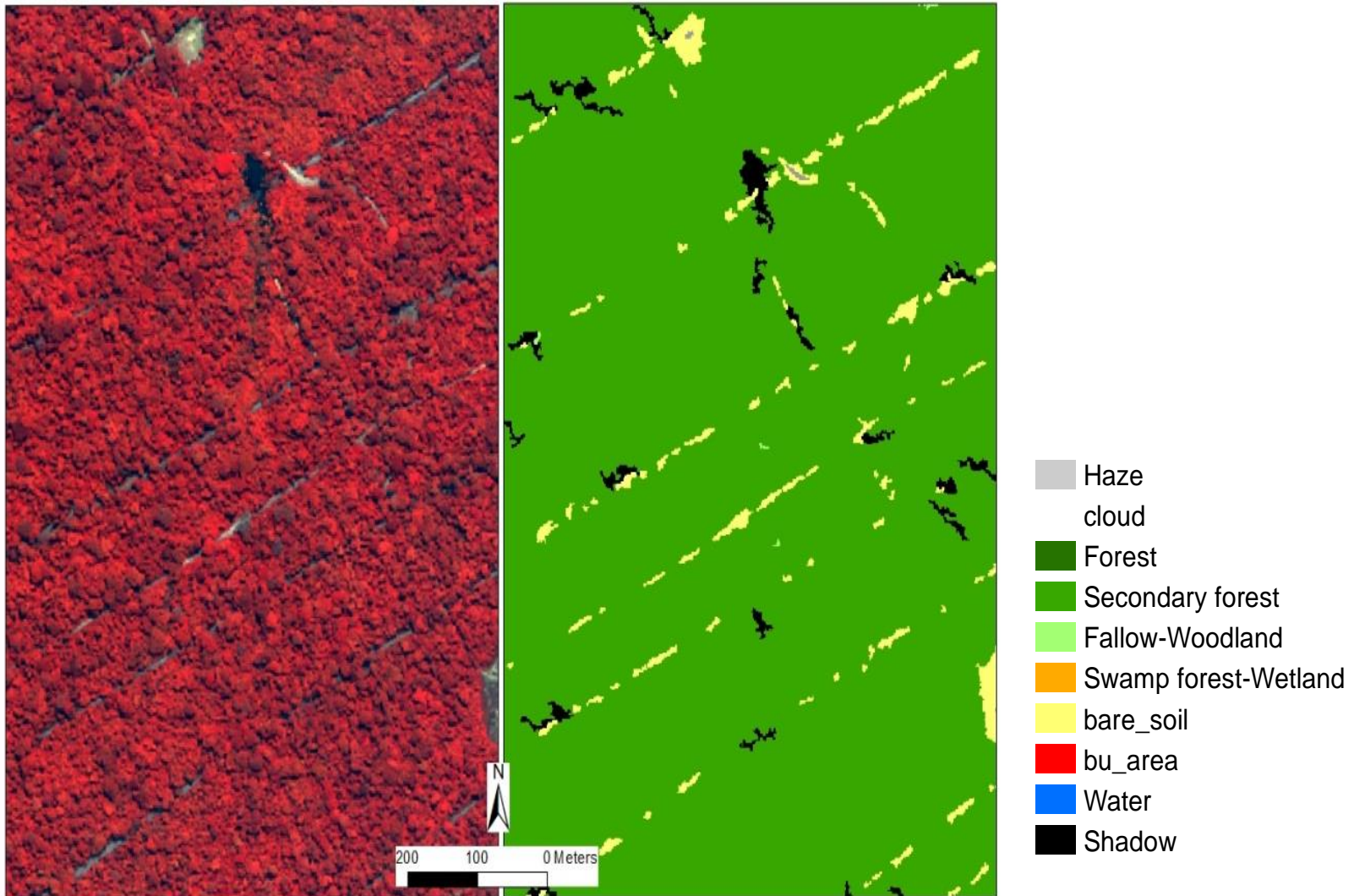
Forest Loss in DRC Provinces

	Taux Provinces (%)		
	2000-2010	2000-2005	2005-2010
Bandundu	2,41	1,25	1,17
Bas-Congo	2,73	1,53	1,22
Equateur	2,26	1,07	1,20
Kasaï-Occidental	4,79	2,34	2,51
Kasaï-Oriental	3,19	1,50	1,71
Katanga	1,45	0,55	0,91
Kinshasa	11,43	4,80	6,97
Maniema	2,85	1,43	1,44
Nord-Kivu	1,88	0,83	1,06
Province Orientale	1,91	0,87	1,05
Sud-Kivu	3,48	1,64	1,86
TOTAL RDC	2,33	1,09	1,25

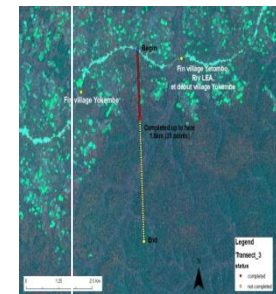
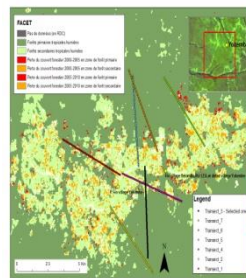
FOREST LOSS IN DRC

	Rate		
	2000- 2010	2000-2005	2005-2010
RDC	2,33	1,09	1,25
Aires Protected Areas	0,70	0,32	0,38
Outside Protected Areas	2,55	1,19	1,37
Landscapes	1,40	0,63	0,78
Outside Landscapes	2,61	1,23	1,40
Forests Concessions	2,71	1,17	1,56
Outside Forests Concessions	2,30	1,08	1,23

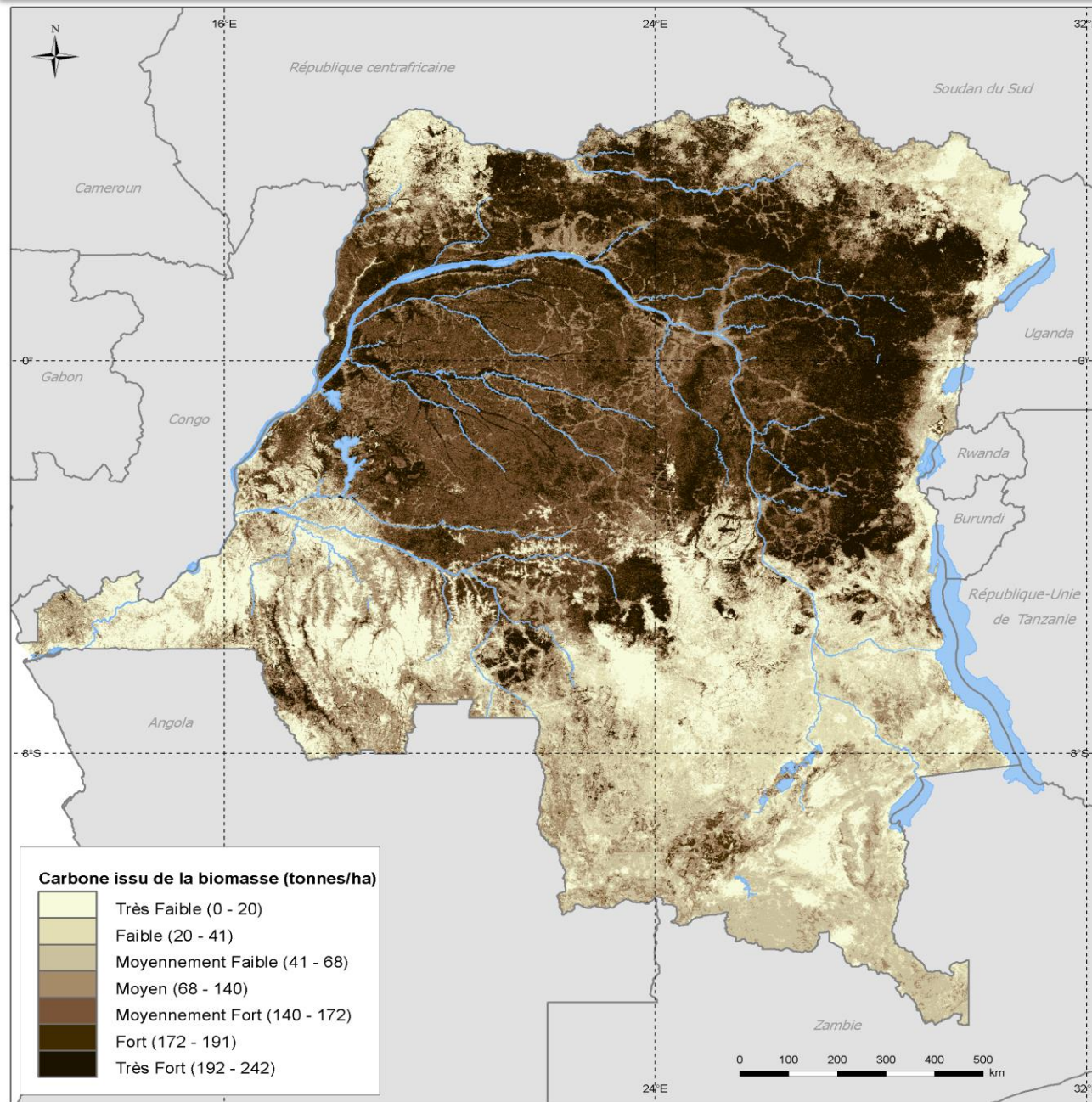
Degradation monitoring: Detection of narrow logging roads from the Worldview image



FIELD VALIDATION MISSIONS



Biomass and Carbon mapping



Data sources:

Baccini, A., Laporte, N., Goetz, S.J., Sun, M., Dong, H. 2008. A first map of tropical Africa's above-ground biomass derived from satellite imagery. *Environmental Research Letters* 3, 045011.

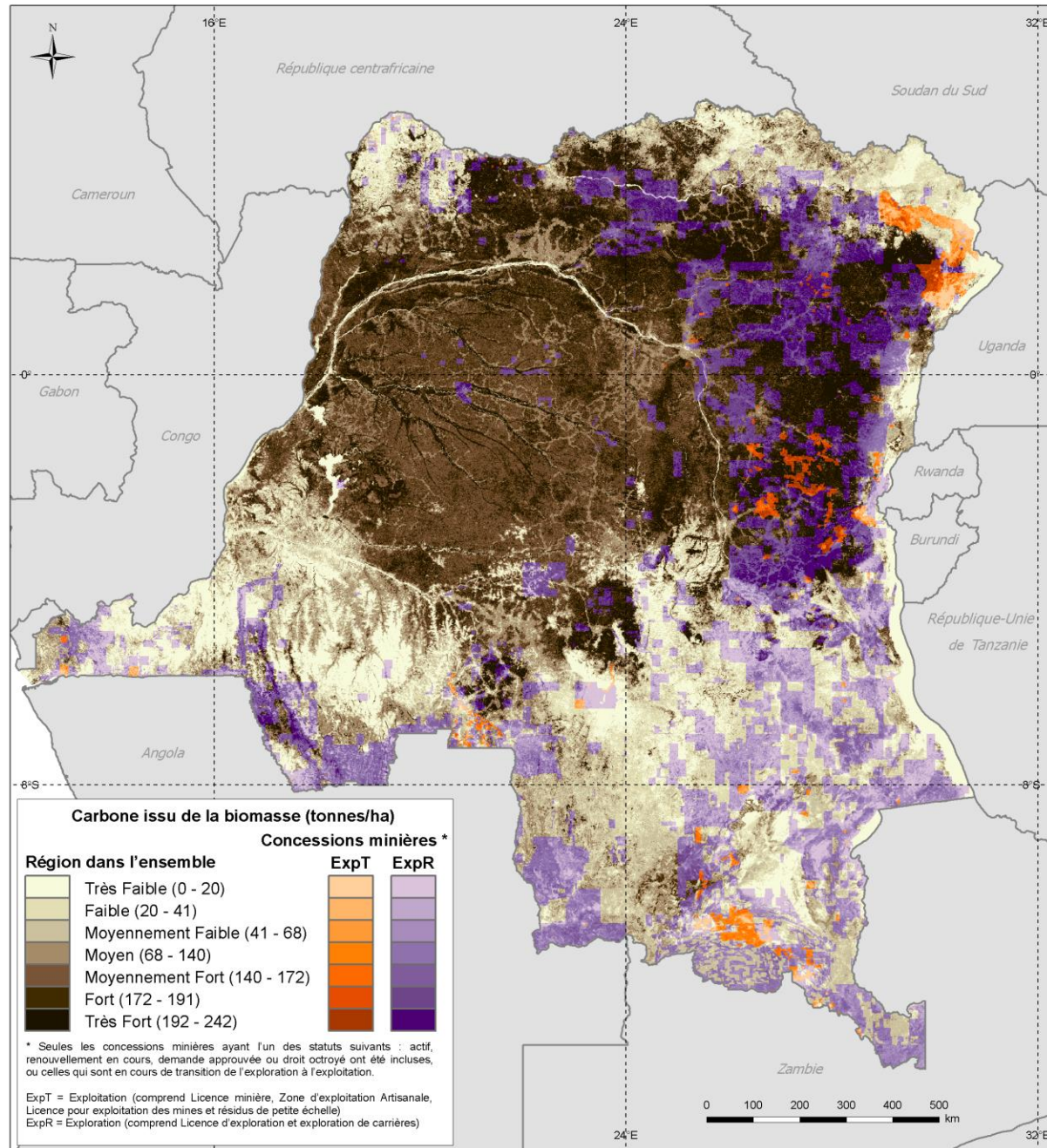
FAO 2001. Global Forest Resources Assessment 2000. FAO Forestry Paper 140. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

FAO 2006. Global Forest Resources Assessment 2005. Progress towards sustainable forest management. FAO Forestry Paper 147. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

Gibbs, H.K., Brown, S. 2007. Geographical Distribution of Woody Biomass Carbon in Tropical Africa: An Updated Database for 2000, NDP-055b. Available from <http://cdiac.ornl.gov/epubs/ndp/ndp055/ndp055b.html>, Carbon Dioxide Information Center, Oak Ridge National Laboratory, Oak Ridge, Tennessee, USA. doi: 10.3334/CDIAC/lue.ndp055.2007.

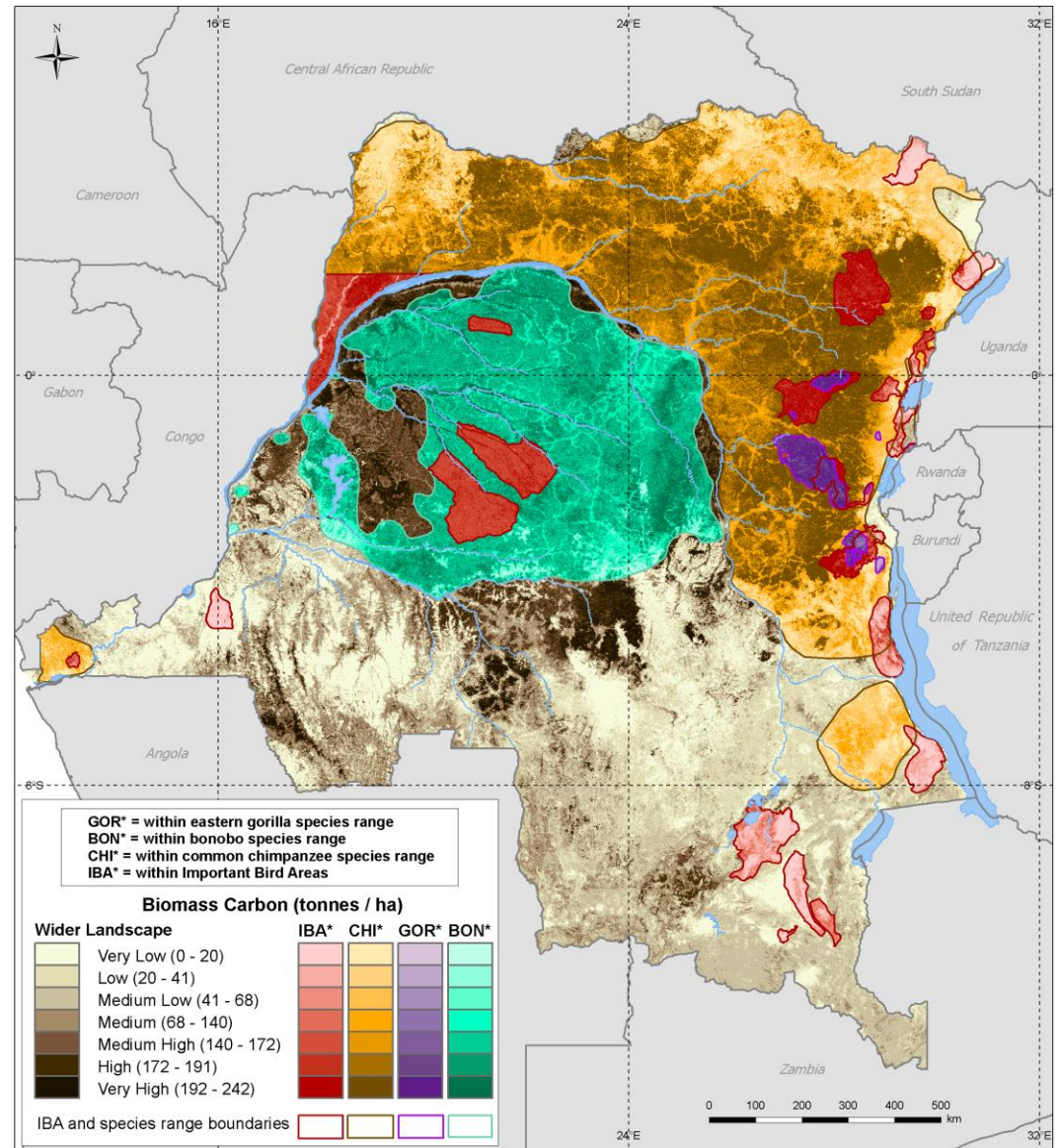
Vancutsem, C., Pekel, J.F., Evrard, C., Malaisse, F., Defourny, P. 2009. Mapping and characterizing the vegetation types of the Democratic Republic of Congo using SPOT VEGETATION time series. *International Journal of Applied Earth Observation and Geoinformation* 11, 62-76.

DRC's Miombo: mining concessions Problems

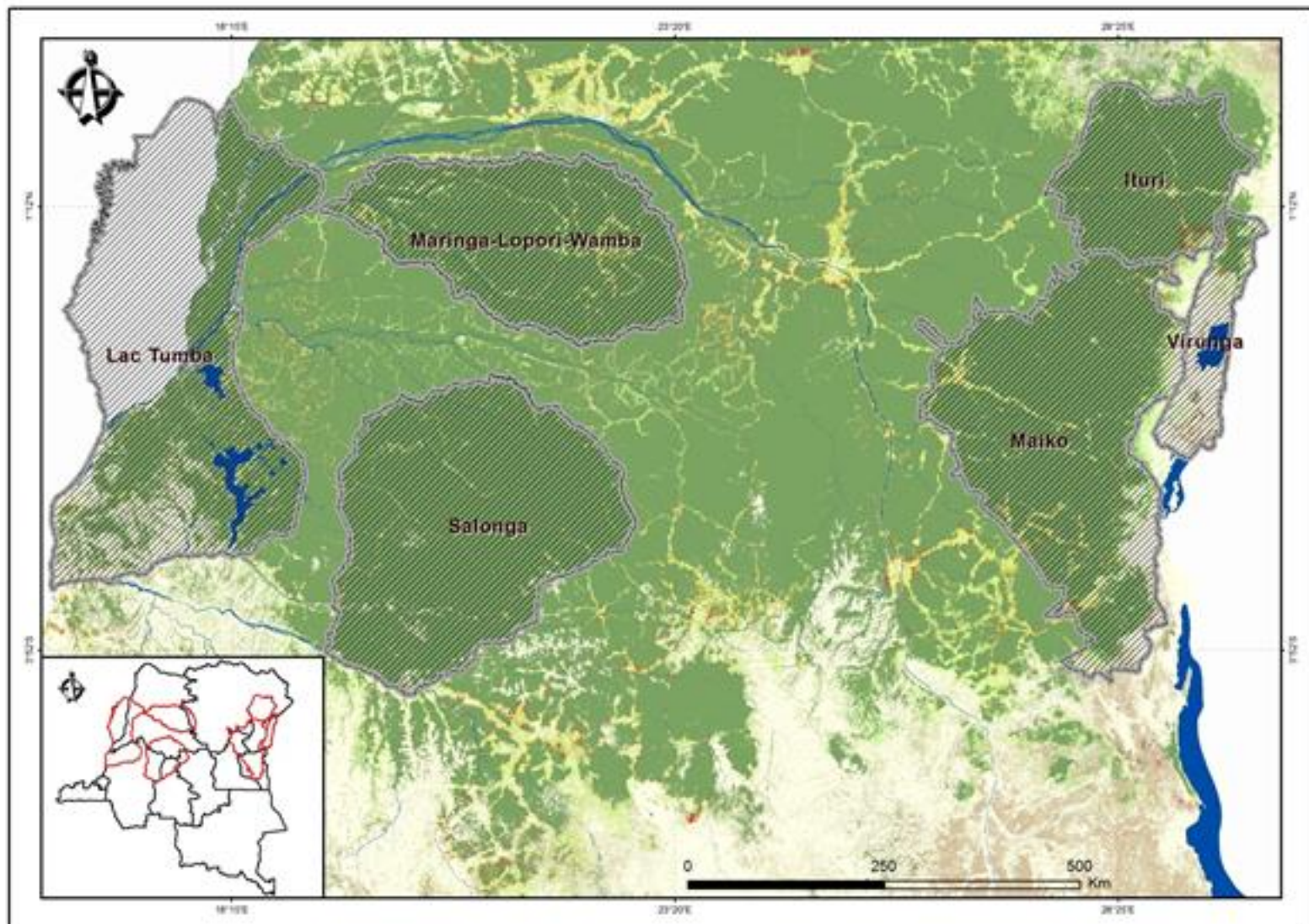


Biomass carbon, occurrence range of eastern gorilla, common chimpanzee and bonobo and Important Bird Areas

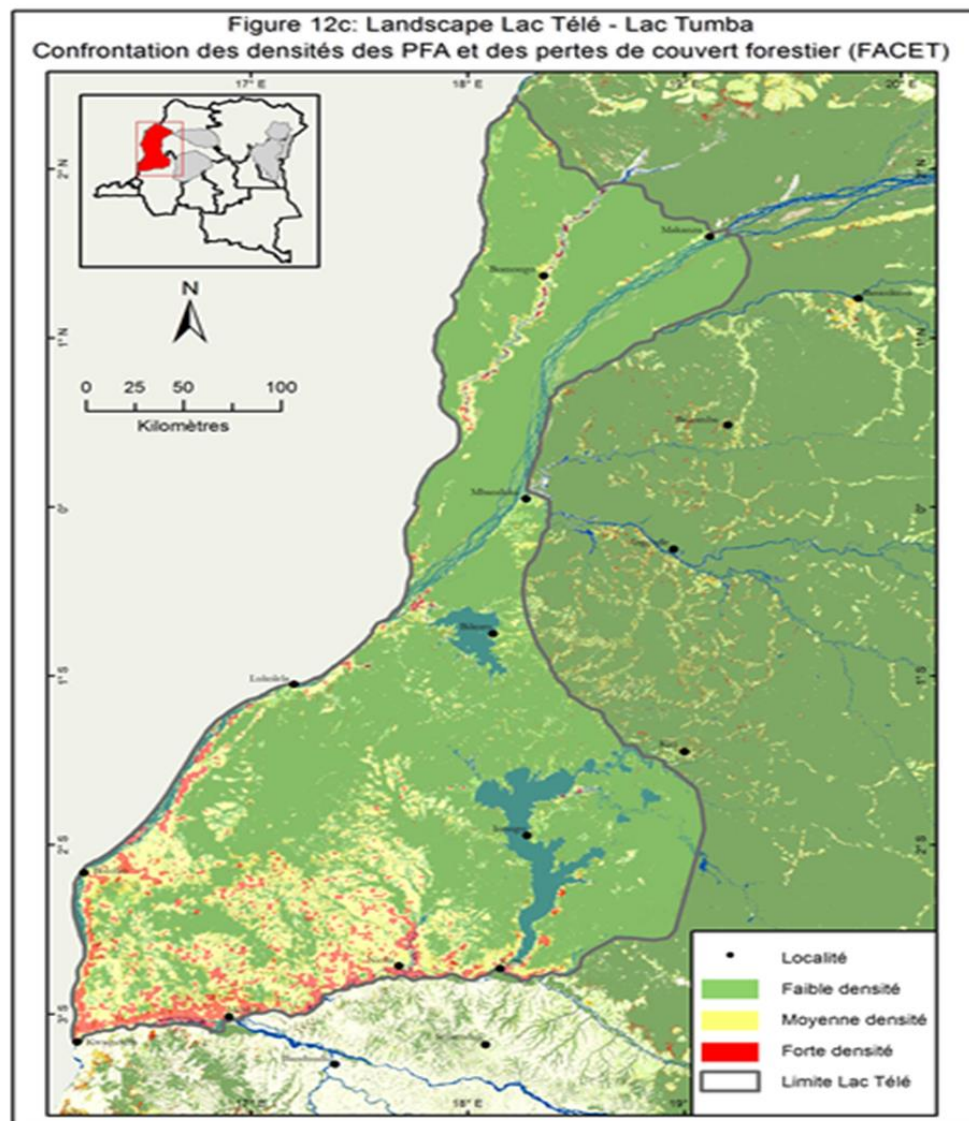
Biodiversity benefits
from REDD+



Fire monitoring in CARPE's Landscapes

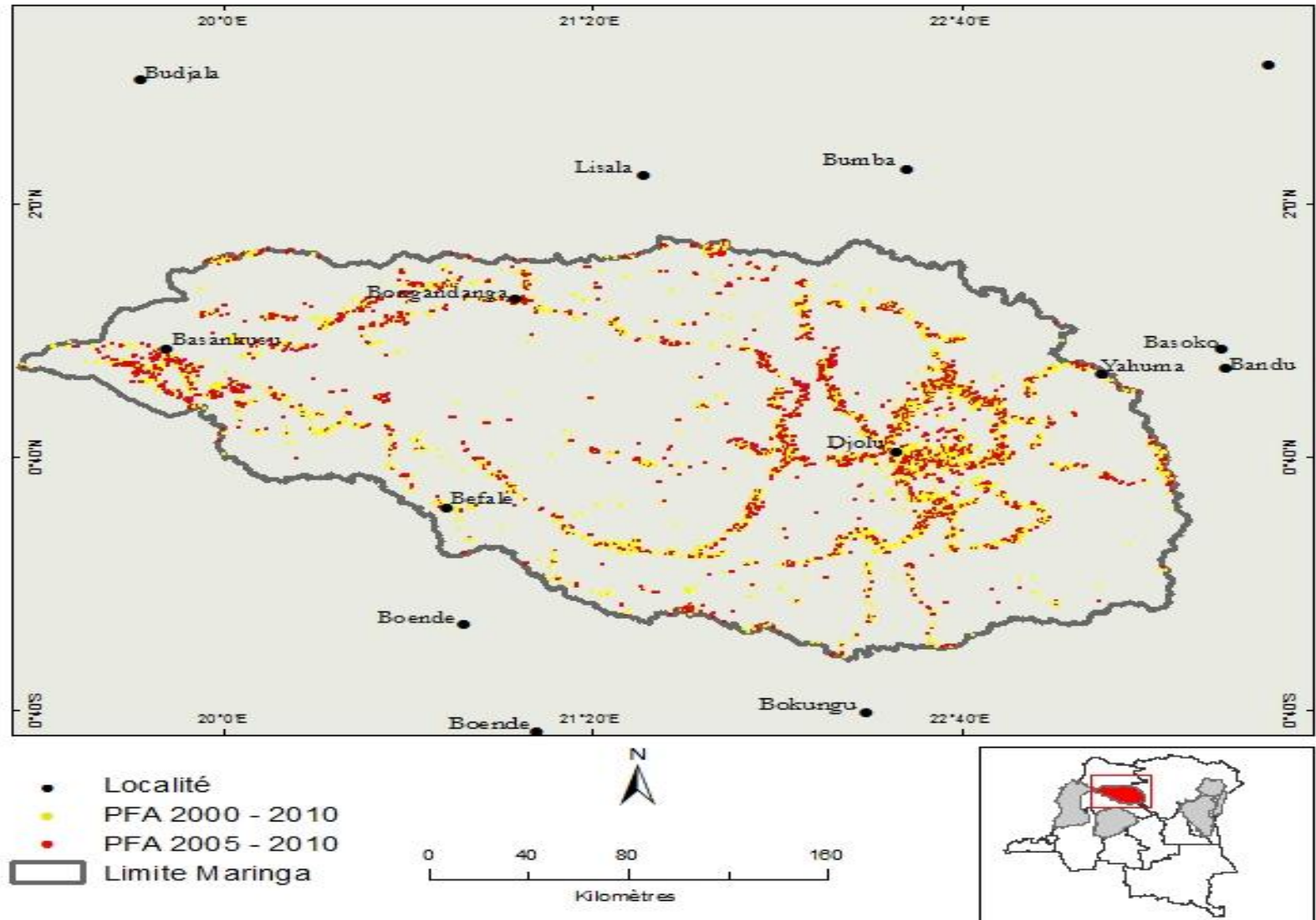


Fire in Lac Tumba Landscape (RDC)



Fire in Lac Maringa Lopori Wamba Landscape

Landscape Maringa-Lopori-Wamba
Présentation spatiotemporelle des PFA (2000 - 2010)

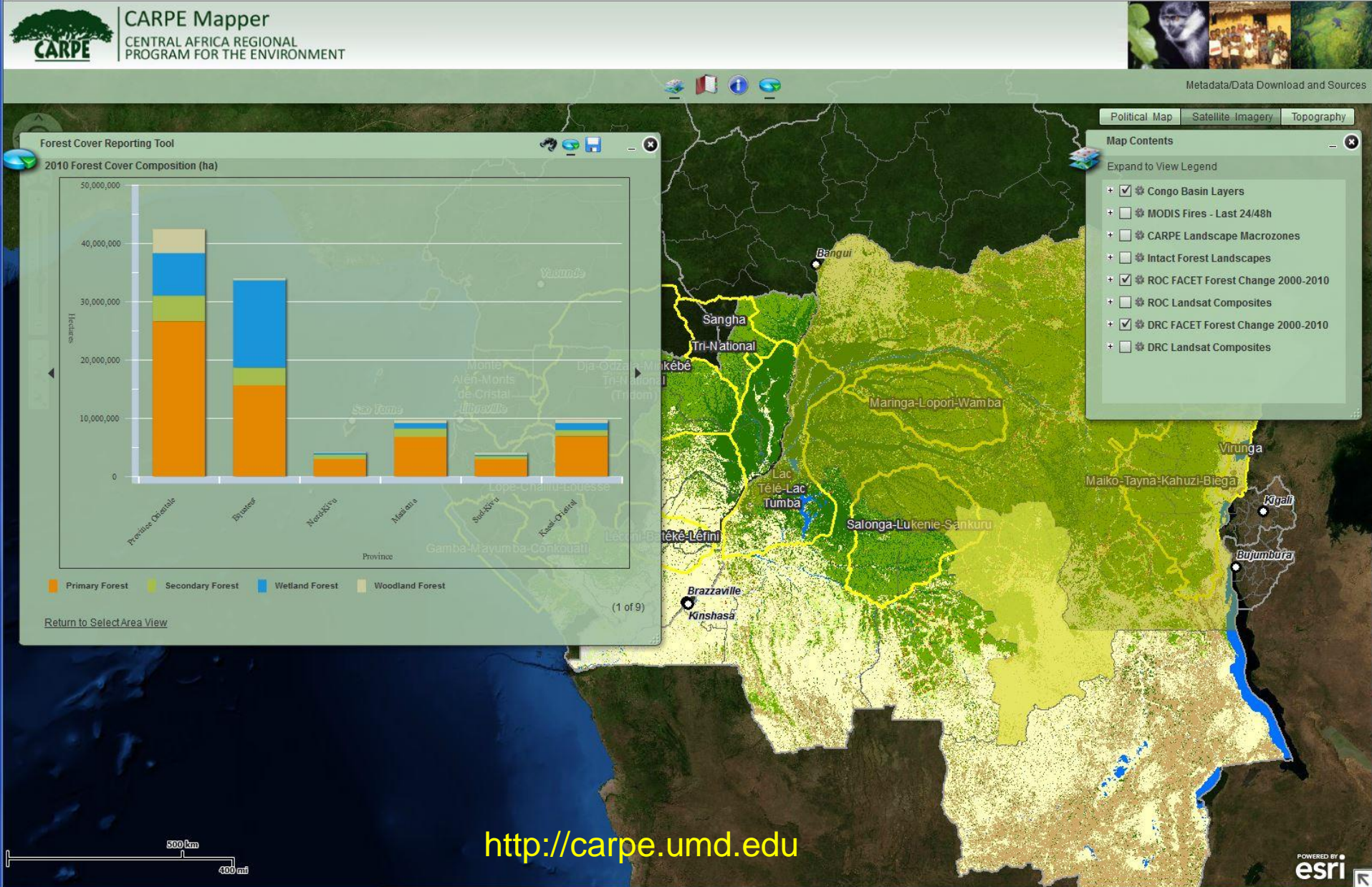


FACET: Data is a primary thematic layer for DRC's NFMS portal



<http://www.rdc-snsf.org>

FACET: Data viewed and queried on CARPE Mapper



OSFAC INVOLVEMENT IN REDD+ PROJECTS

- Quantification of Carbon Stocks and Emissions in the Forest of the Congo (**Leader: WRI**); Location : **Rep. of Congo**
- Support EO-driven forest and carbon monitoring in Central Africa for REDD (*Projet REDDiness*, **Leader: EUROSENSE, BELGIQUE**); Location : **Rep. Congo & Gabon**
- Science Based Remote Sensing Services to Support REDD and Sustainable Forest Management in the Tropical Region (*Projet Recover*, **Leader: VTT / NORUT, NORWAY**); Location : **DRC**
- Projet Pilote REDD intégré autour de la Réserve de Biosphère de Luki (RBL) dans la forêt du Mayombe (**Leader:WWF, BELGIUM**); Location: **DRC**
- Biomass and Carbon mapping by Lidar (**Leader:WWF, GERMANY**), Location : **DRC**

Fields of collaboration OSFAC and Miombo Network / Recommendations

- ✓ Informations, data sharing : Earth Observation Data, geospatial data (Miombo Ecoregion), etc.
- ✓ **Share informations on Institutional sustainability**
- ✓ Capacity building in GIS and RS
- ✓ **Research funding for joint projects on the Miombo Ecoregion**
- ✓ ***Institutional arrangement : Miombo Network as SADC technical service... why not ?***
- ✓ ***... with at least a staff of two persons permanents***

Thank you, visit us at <http://www.osfac.net>

English



Observatoire Satellital des Forêts d'Afrique Centrale

Center of excellence for sustainable management of natural resources

[Home](#) [About Us](#) [Data and Products](#) [Services](#) [Projects](#) [Tools](#) [News](#)

Forêts d'Afrique centrale évaluées par télédétection
FACET

Étendue et perte du couvert forestier en République du Congo de 2000 à 2010



Forest cover and loss in the Central Africa countries from 2000 to 2010

These atlas were produced as a part of the OSFAC (Observatoire Satellital des Forêts d'Afrique Centrale) initiative "Monitoring the forests..."

Forêts d'Afrique centrale évaluées par télédétection
FACET

Étendue et perte du couvert forestier en République démocratique du Congo de 2000 à 2010



Forest cover and loss in the Central Africa countries from 2000 to 2010

These atlas were produced as a part of the OSFAC (Observatoire Satellital des Forêts d'Afrique Centrale) initiative "Monitoring the forests..."

Forest cover and loss in the Central Africa countries from 2000 to 2010

FACET

Satellite Images

LANDSAT, ASTER, SRTM, SPOT, ...

Training

GIS, Remote Sensing, GPS, ...

Quantifying carbon stocks and emissions in the forests of the Republic of Congo

Mapping Services

Featured News

- ⇒ OSFAC at 14th Francophonie ceremony, Kinshasa [October 11, 2012]
- ⇒ United Nations conference on sustainable development, RIO+20 [October 9, 2012]
- ⇒ Do you need Satellite images? Try OSFAC-DMT [April 22, 2012]
- ⇒ Launch Ceremony of the FACET DRC Atlas [April 05, 2011]

Satellite Images available

- ⇒ ASTER 2000 - 2008
- ⇒ ASTER GDEM 2009
- ⇒ LANDSAT 1972 - 2012
- ⇒ LANDSAT MOSAICS 2004 - 2005
- ⇒ RADARSAT MOSAICS
- ⇒ SPOT 2008 - 2011
- ⇒ SRTM 2000

[Learn more...](#)

OSFAC conducts beginner to advanced trainings in **Geographic Information System (GIS)** and basic **Remote Sensing**, using the following software:

- ⇒ ArcView 3.3;
- ⇒ ArcGIS 10.x;
- ⇒ ENVI 4.x;
- ⇒ ERDAS 9.x;

Trainings are adapted to different levels of experience as well as different areas of application, such as natural resource management, participatory mapping, urban infrastructure, etc. [Learn more...](#)



00:00 / 00:00

Copyright © 2012 OSFAC. All Rights Reserved.
Email: contact@osfac.net Phone: +243992783035 | [Contact](#) | [Sitemap](#)
14, Sergeant MOKE Q, SOCIMAT, Commune de NGALIEMA KINSHASA - DR CONGO

Designed by OSFAC Team.