

# Atelier sur le suivi des stocks et flux de carbone forestier dans le Bassin du Congo

*Brazzaville du 02 au 04 Février 2010*



## Satellite Data Access

Landing MANE, OSFAC  
Michael BRADY, Executive Director GOFC-GOLD

# What are the difficulties with satellite data access?

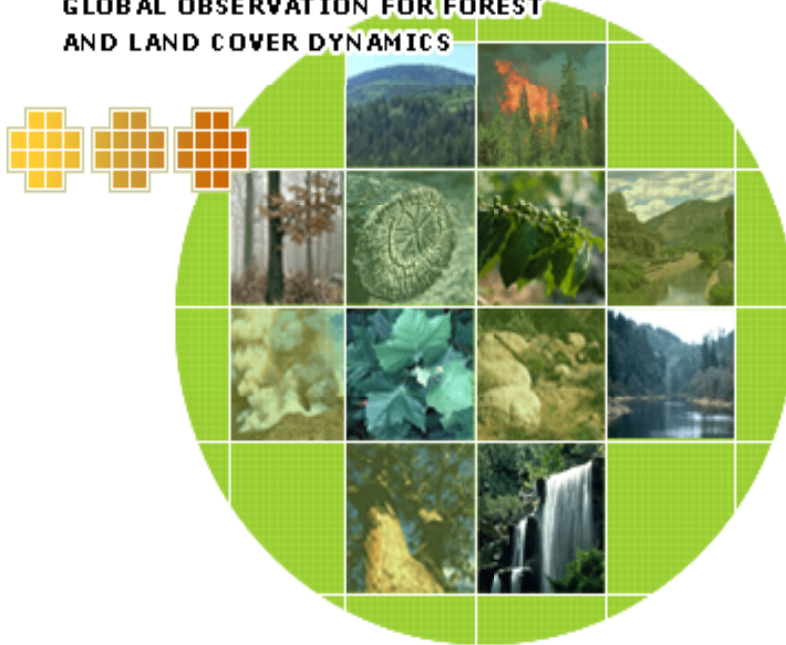
- High cost of Earth Observation data,
- Lack of satellite receiving stations in many regions,
- Limited access to internet...



# GOFC - GOLD contributes to data accessibility by partnering with regional networks

## GOFC-GOLD

GLOBAL OBSERVATION FOR FOREST  
AND LAND COVER DYNAMICS



Global Observation of Forest  
Cover (GOFC)  
+  
Global Observation of Land cover  
Dynamics (GOLD)  
=

**GOFC-GOLD**

A science panel of the  
Global Terrestrial Observing System



# GOFC GOLD tries to improve satellite data accessibility and quality

⇒ By creating eight regional networks in : South America, Asia and Africa

- **Africa Zone** : Miombo, SAFNet, OSFAC and WARN
- **Asia Zone** : NERIN, SEARIN, CARIN
- **South America Zone** : RedLaTIF

⇒ By collaborating closely with the US Geological Survey in the Regional Network Data Initiative to improve Earth Observation Data access around the world.

# GOFC-GOLD Regional Network Data Initiative

(1)

- **Goals**

- Disseminate earth observation data in regions where available distribution methods are not effective
- Compile regional and in country data sets relevant to land cover and fire observations and make them freely available to the international community
- Engage regional expertise in global data set development, evaluation and validation

- **Opportunity**

- USGS to complete the orthorectified GLS 2005 data set and provide free access to Landsat 4–7 archive at EDC
- New LC and LCC products using GLS data
- Use of Landsat data for validating global science results
- Growing MODIS record and availability of MODIS-based fire and LC/change products

- **Approach** -- GOFC-GOLD regional network structure will be used to establish regional nodes within the networks to:

- disseminate data on media (DVD, Disk)
- encourage regional products to be developed using the data
- collect and document information on regional data sets and their availability within GOFC-GOLD thematic domain

# GOFC-GOLD Regional Network Data Initiative

(2)

## Pilot for Africa

- Involves 5 regional networks
- Network representatives received data and training over 3 weeks at USGS EDC and South Dakota State University (SDSU) in early 2009
- Support provided by NASA, START, USGS, UNEP, SDSU and CFS



# GOFC-GOLD Regional Network Data Initiative

(3)

Availability of Africa Scenes in EDC Landsat Archive

Sensor	Archive Total	African Scenes	Percent	CC > 80%
MSS 1-3	288,874	10,580	3.66%	~1600
MSS 4-5	225,432	18,099	8.03%	~4000
TM 4-5	795,711	47,519	5.97%	~4500
ETM	930,271	117,247	12.60%	~9500
<b>sum</b>	<b>2,240,288</b>	<b>193,445</b>	<b>8.63%</b>	



# GOFC-GOLD Regional Network Data Initiative

(3)

## Future Initiatives

to be undertaken for the other GOFC-GOLD networks, including NERIN (Northern Eurasia), SEARIN (Southeast Asia), REDLATIF (Latin America) and emerging networks in Amazon and East Asia

## Other sponsors

Canadian Forest Service

Canadian Space Agency

European Commission

European Space Agency

Global Terrestrial Observing System (FAO, WMO, UNEP, UNESCO, ICSU)

US NASA



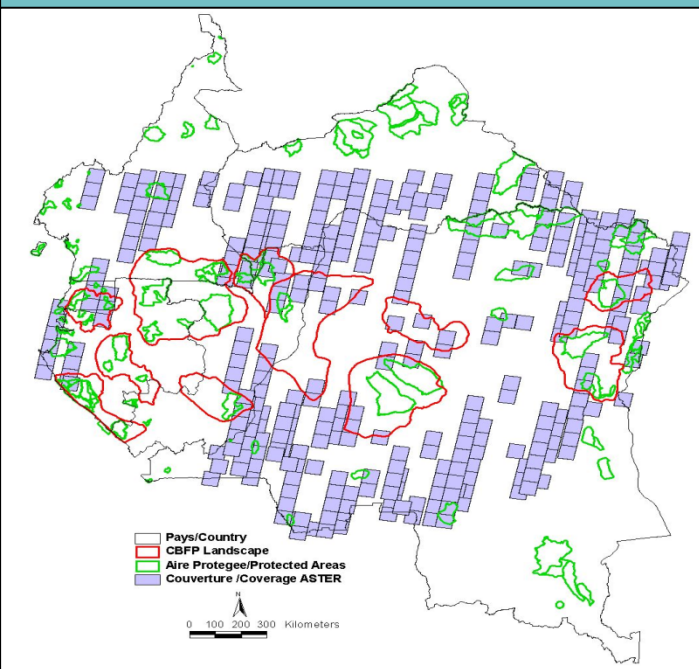
# Data sharing and distribution in Congo Basin

⇒ Mandating Observatory of Central African Forests (OSFAC) which represents GOFC GOLD network in Central Africa to distribute free satellite images and derived products (mosaic, map, etc.).

⇒ START supports OSFAC to have Focal Points for satellite data sharing and distribution in Congo Basin, mainly in : Gabon, DRC, RoC, Cameroon, CAR and Equatorial Guinea.



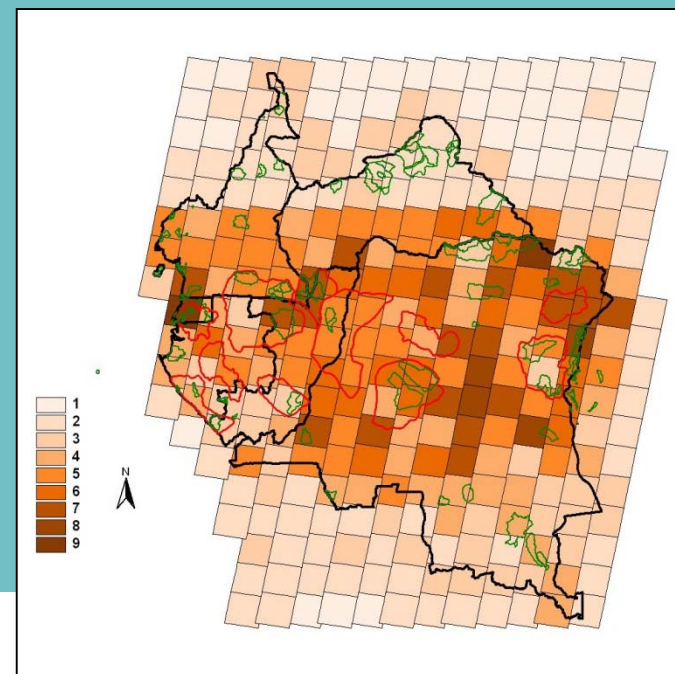
# Data available through OSFAC



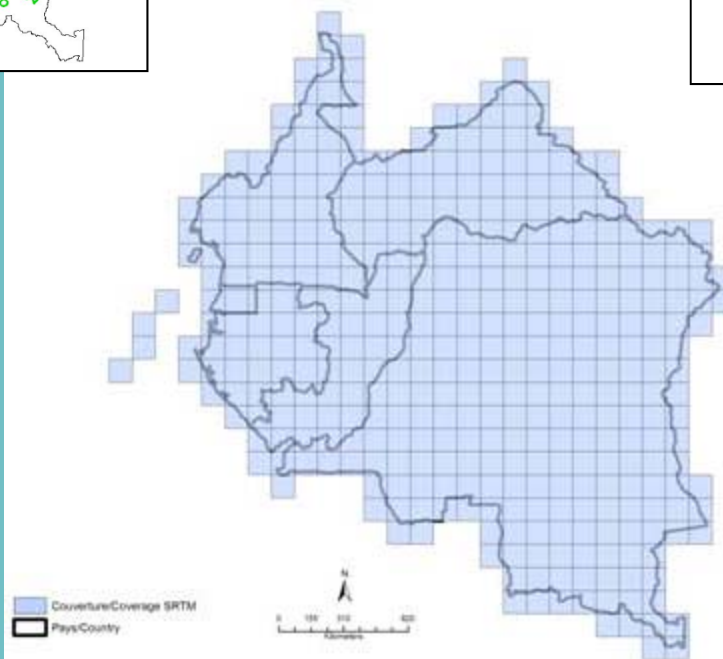
ASTER 2000-2008  
Around 2600 granules

## Others :

- MODIS Data
- LANDCOVER maps
- Etc.



LANDSAT 1984-2008  
Around 5000 scenes



SRTM 2000  
Around 600 granules

# Conditions to improve the accessibility of satellite data (1)

- Data providers agree to facilitate satellite data access in advantageous conditions for users, particularly, those in developing countries
- GOFC GOLD regional networks create an appropriate system for satellite data dissemination in the region where they are located
- In addition to optical data, Radar data should be made available, especially in areas with persistent cloud cover
- Establish satellite receiving stations in areas with high demand for Earth Observation Data, such as the Congo Basin

# Conditions to improve the accessibility of satellite data (2)

- Focus international attention on this critical region and encourage international space agencies to bring this region under continuous monitoring
- Encourage the agencies to consider free and open sharing of data for this region and seek solutions to the current obstacles to data access with special consideration of African internet limitations
- Encourage donors to coordinate their various satellite monitoring activities

# Follow up activities from Africa Data Initiative with proposed GOFC-GOLD support

1. WARN (West African Regional Network) - LANDSAT data dissemination within West Africa
2. OSFAC - Enhance the regional network and capability for data dissemination by creating sub-regional data nodes in central Africa
3. East Africa (Sudan, Ethiopia, Eretria, Chad) - Seminar to teach participants how to use the web sites of USGS to download the satellite images they need
4. MIOMBO (Southern Africa) - Ensure that traditional and potential new users of RS data in the region are aware of the newly available regional Landsat archive and other data resources

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# Thank You

