

Presentation given at the

**WCS Workshop on Land Change Modeling for REDD**

October 25– 29, 2010

Wildlife Conservation Society - Bronx Zoo  
Bronx, New York, USA

Hosted by

Clark Labs and the Wildlife Conservation Society



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# Ituri Landscape, DR Congo: Report from the field

**Joel Masselink**

Bronx, NY

27 October 2010



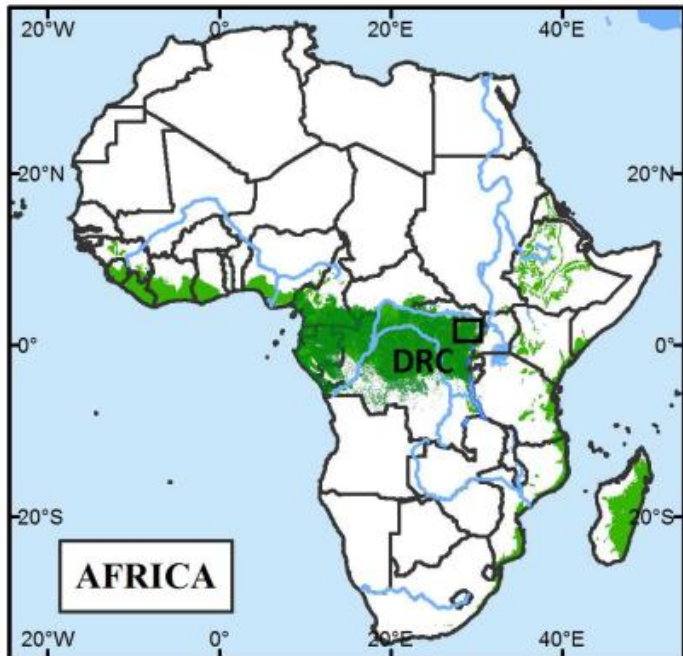
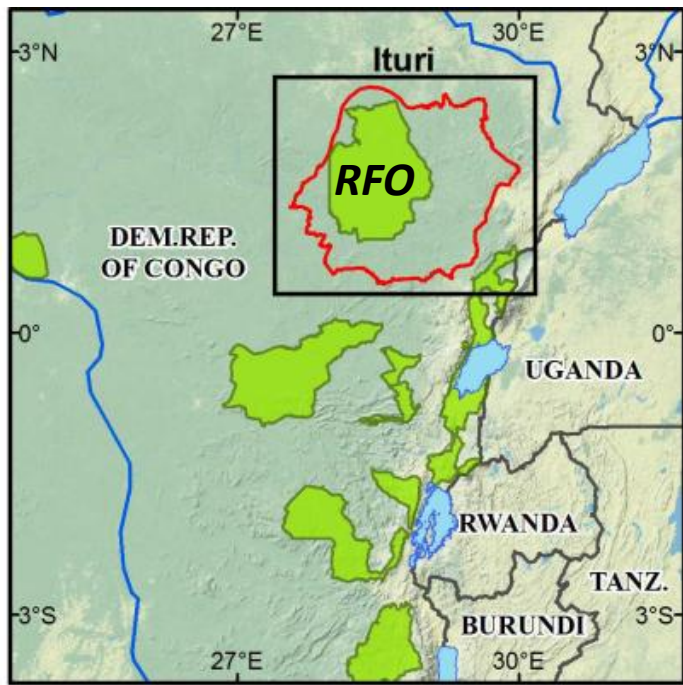
# Presentation Layout



- Ituri Landscape
  - Natural resources and physical characteristics
  - Progress in landscape planning
- Conservation Issues
  - Pressures on flora & fauna
  - Immigration & resource access
  - Evaluation of deforestation: REDD+
- Future for WCS-DRC
  - REDD projects for forest conservation

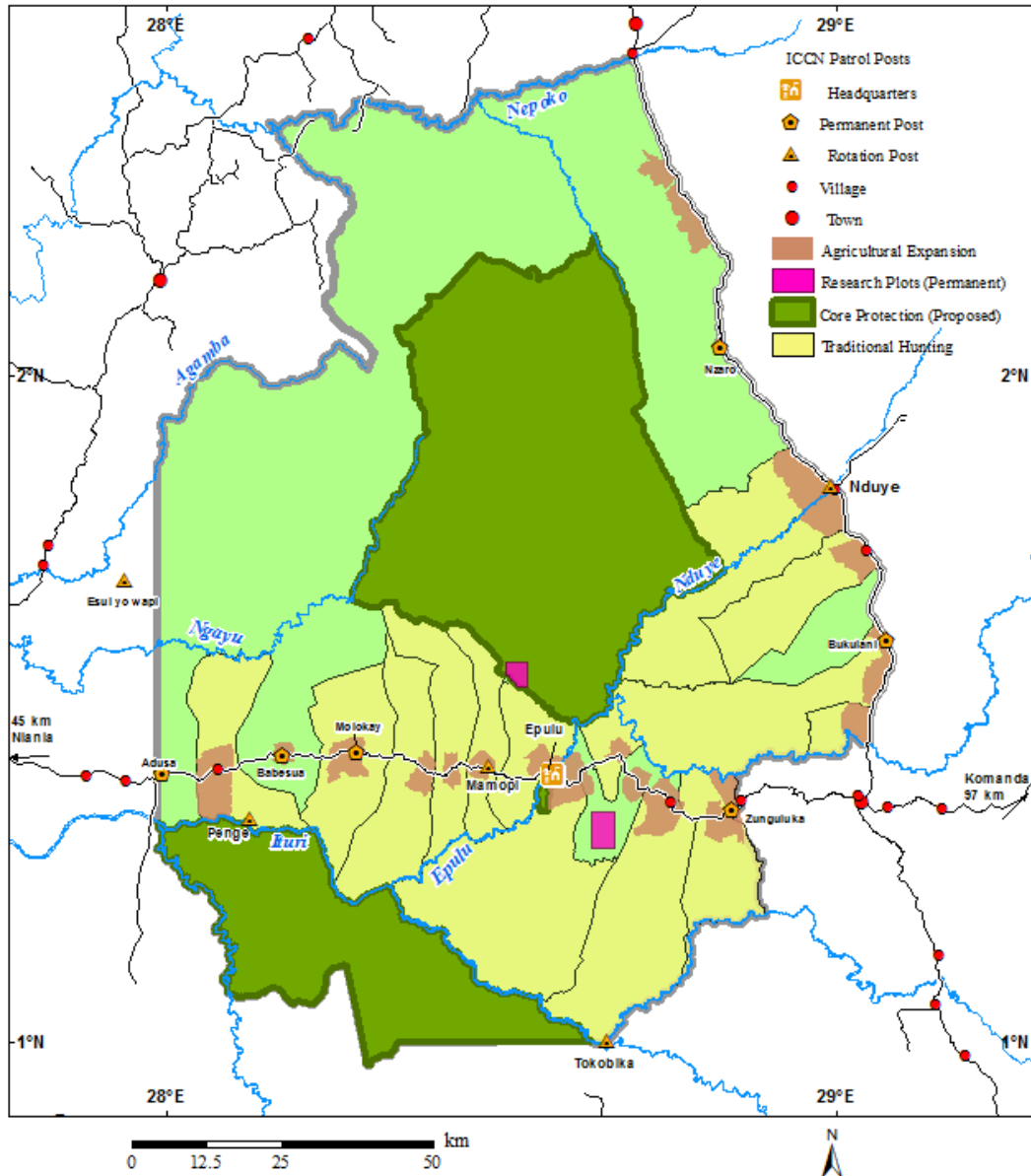


# Ituri Landscape



- ~40,000 km<sup>2</sup> (size of Holland or Switzerland)
- 300,000 people
  - including 30,000 Mbuti pygmies
- Natural resources
  - Timber
  - Minerals
  - Ecosystem services
- Since 1985, WCS active in Ituri
- Work expanded to landscape in 2003
  - Data collection –
    - Socioeconomic
    - Biological
  - Land use planning with diverse stakeholders

# Okapi Wildlife Reserve



- Size of Connecticut (14,000 km<sup>2</sup>)
- 20,000 people <15 km radius
- Best protected park in DRC
  - Only 90 park guards

## Long-term data available

- Demographic
- Phenological
- Climatological
- Biological
- Forest dynamics



# Okapi Wildlife Reserve



- Stronghold for okapis
  - 2000-3000
- DRC's largest pop of forest elephants
  - 3000-4000
- Largest pop of eastern chimps
  - 6000-7000
- 13 sp of diurnal primates
  - most of any African protected area



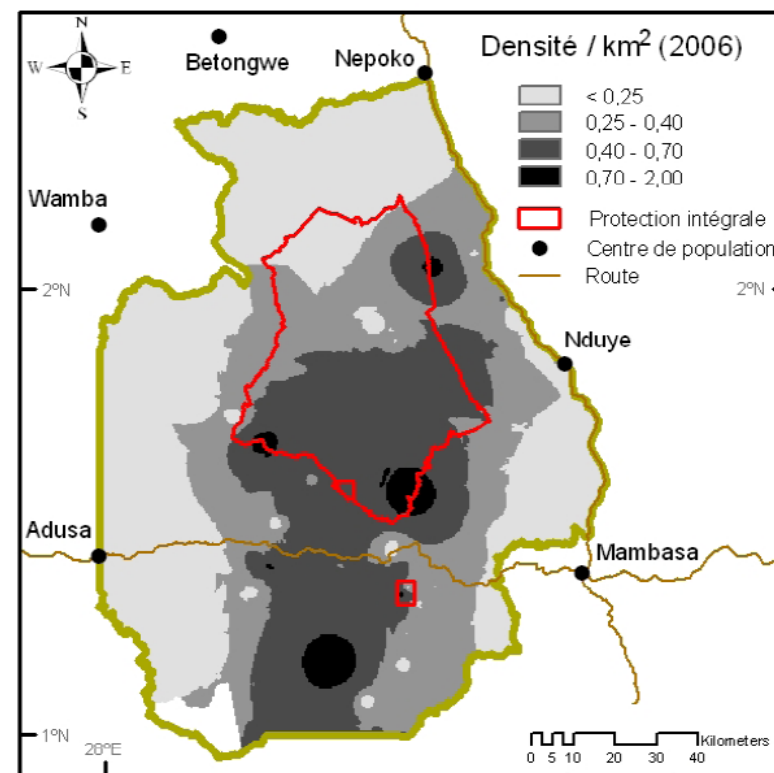
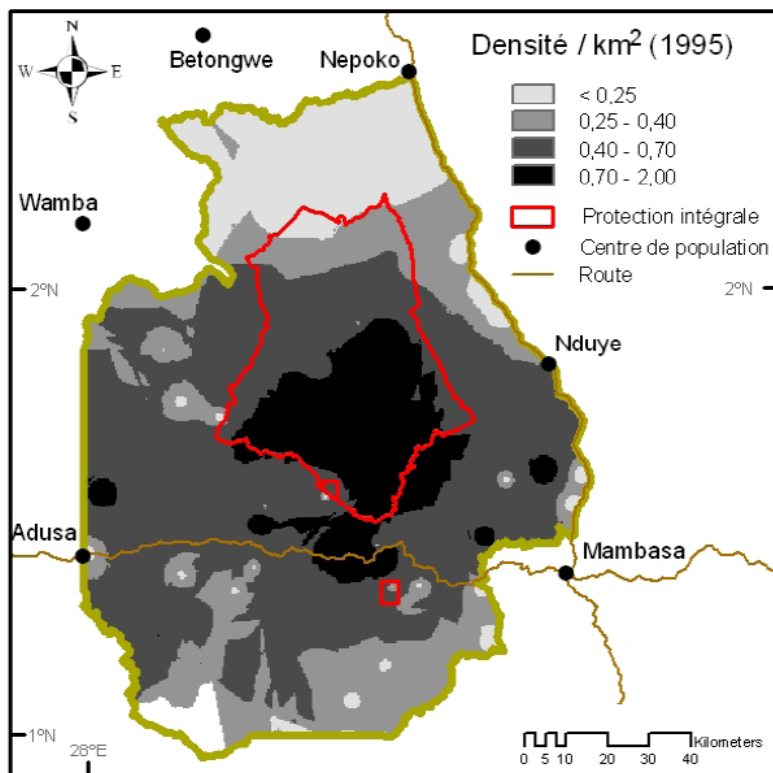
- 
- 1500 plant species
  - Inselberg micro-environments
  - High biomass monodominant forest
    - *Gilbertodendron dewevrei*
  - Edos – clearings maintained by large mammals



# Impact of war on Fauna

	Pop – 1995	Pop - 2006	# lost	% decline
<i>Okapis</i>	4428	2507	2000	-43%
<i>Elephants</i>	6803	3539	3260	-48%

Réserve de Faune à Okapis - Eléphant



# Post-war impacts

- War kept forest mostly intact
  - Illegal poaching, mining & logging
- Peace-time in Ituri, DRC
  - improved national road thru landscape
  - illegal/artisanal logging
  - commercialization of bushmeat hunting
  - industrial mining
  - Immigration







Superficie du paysage (km <sup>2</sup> )	Superficie de la forêt			Déforestation			
	1990 (km <sup>2</sup> )	2000 (km <sup>2</sup> )	2005 (km <sup>2</sup> )	1990-2000 (km <sup>2</sup> )	1990-2000 (%)	2000-2005 (km <sup>2</sup> )	2000-2005 (%)
40.862	39.663	39.449	39.310	214	0,54	139	0,35

# Ituri Landscape Activities

- Reinforcement of the Okapi Reserve management
  - Zoning & directives for NR use
  - Seeds / tools & promoting friendlier farm techniques
- Creation of CBNRMs
  - Development of stakeholder groups
  - Biological & human impact surveys
  - Assessment of natural resource use
  - Microzoning
- Livelihoods activities



# Agrizones

- Follow a participatory process
- Define limits for agricultural expansion
- Propose green zones where forest is intact
- Community-managed
- Should be regulated by park mgmt.

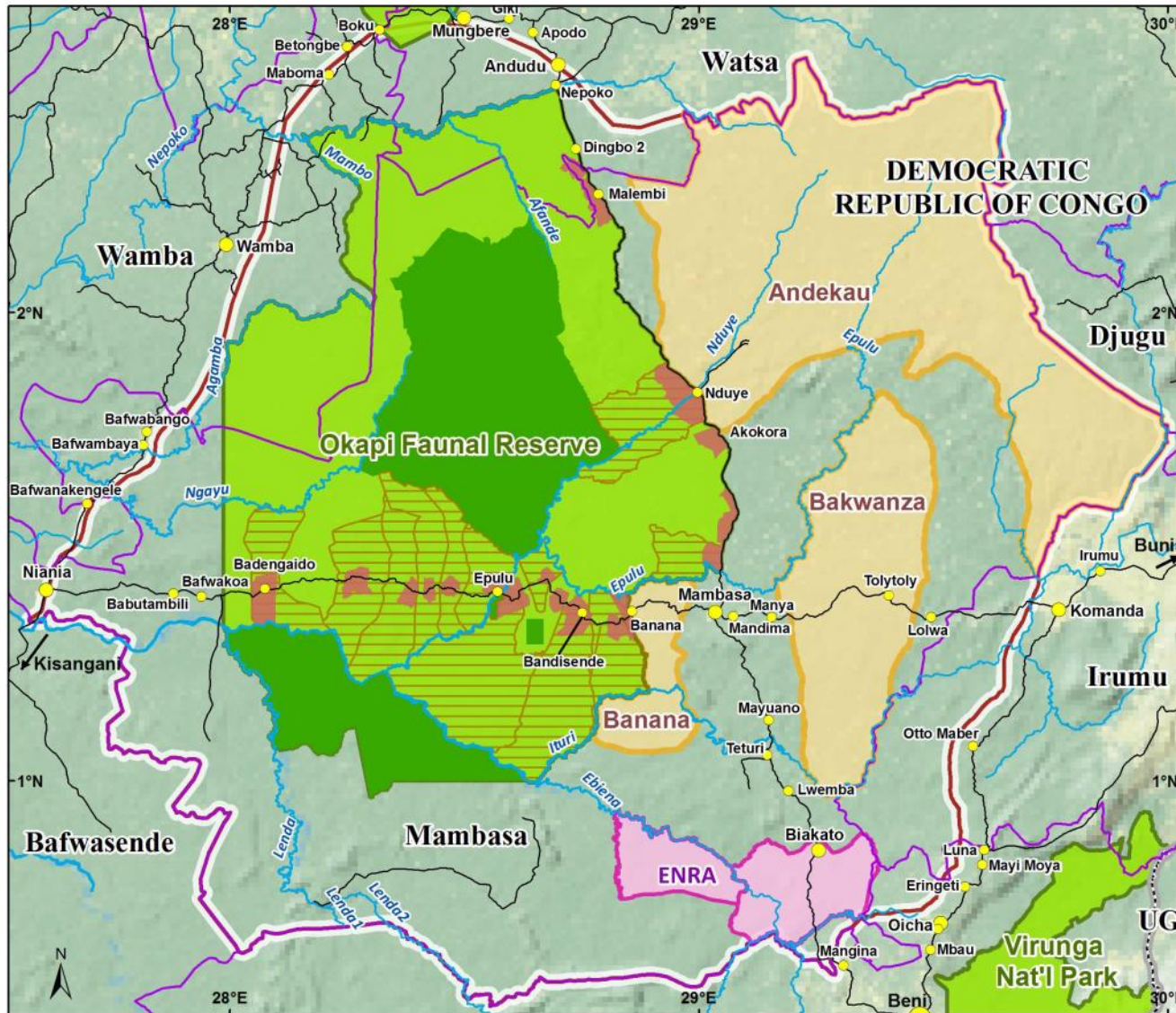
# Hunting Zones



- Traditional hunting territories
- Mapped for recognition by local communities
- Community-managed
- Provide structure for regulation by park management

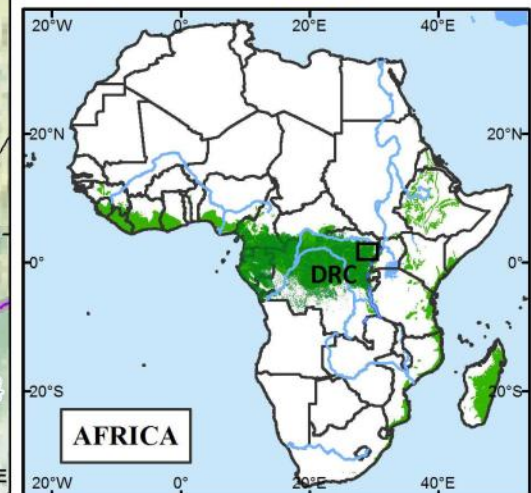
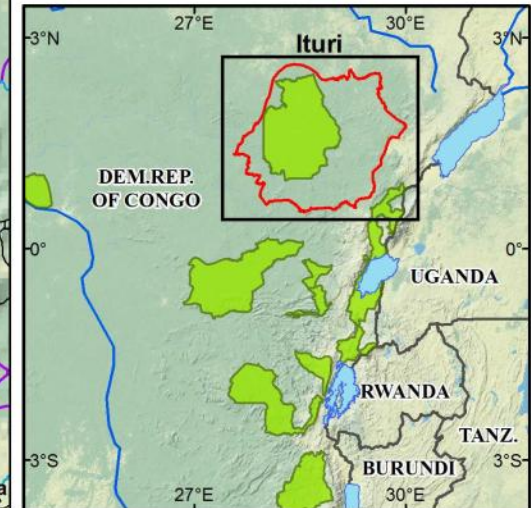


# Ituri-Epulu-Aru Conservation Landscape Congo Basin Forest Partnership



## Landscape Legend

- |                                                                                                                                                       |                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #C0392B; border: 1px solid black;"></span> Agricultural Zones        | <span style="display: inline-block; width: 15px; height: 10px; background-color: #F1C40F; border: 1px solid black;"></span> CBNRM Zones         |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #2ECC71; border: 1px solid black;"></span> Traditional Hunting Zones | <span style="display: inline-block; width: 15px; height: 10px; background-color: #F080F0; border: 1px solid black;"></span> Forestry Concession |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #27AE60; border: 1px solid black;"></span> Protection Zone-proposed  | <span style="display: inline-block; width: 15px; height: 10px; border: 2px solid black;"></span> Landscape limits                               |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #2ECC71; border: 2px solid black;"></span> Protected Area limits     | <span style="display: inline-block; width: 15px; height: 10px; border: 1px dashed black;"></span> Territory limits                              |

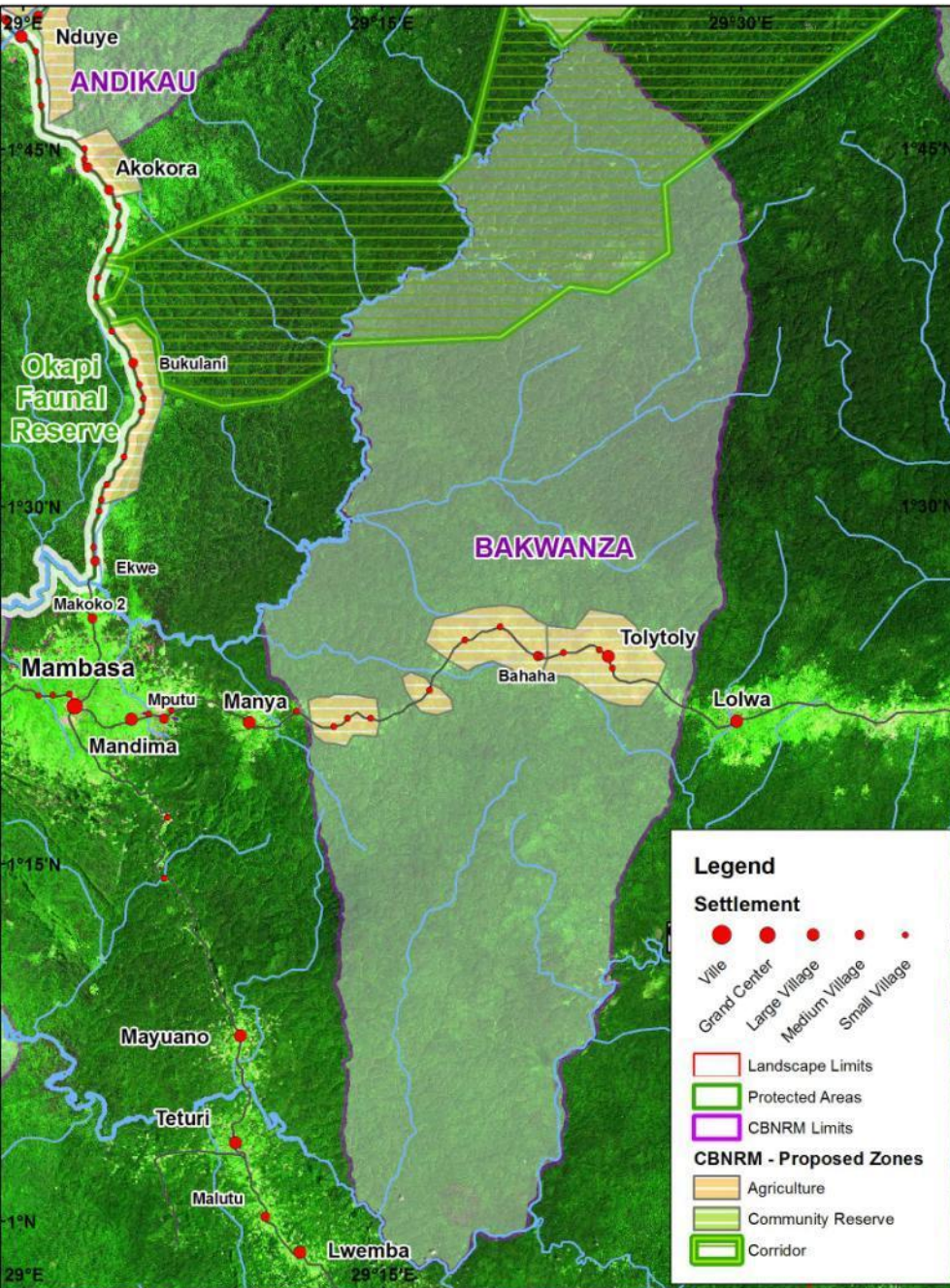


Data Sources: WCS, ICCN, IUCN, CARPE,  
Geographic Referential Common ([www.rgc.cd](http://www.rgc.cd));

Map prepared by WCS-DR Congo; June 2010  
demonstrates CARPE land-use planning progress



# Bakwanza CBNRM



## CBNRM

### landuse planning



#### Current progress

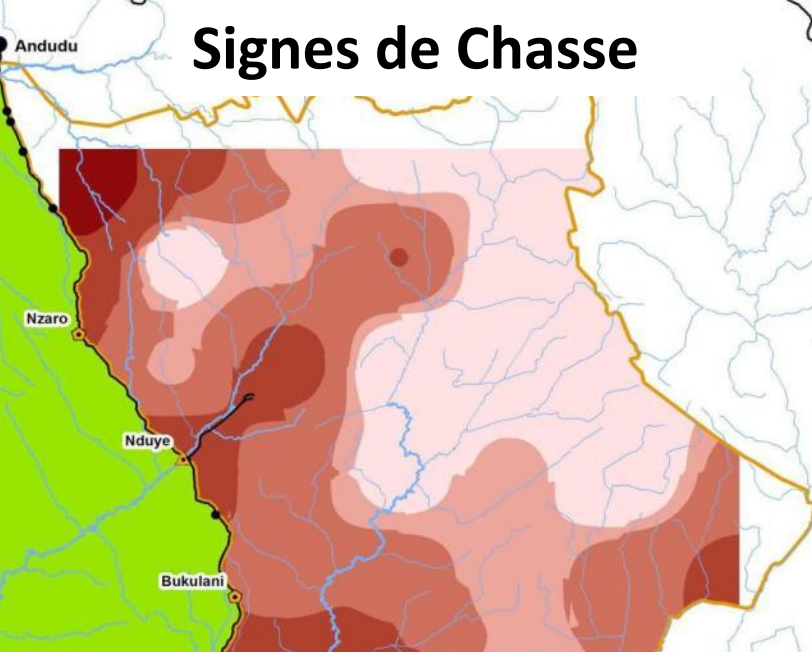
- CBNRMs recognized & mapped
- Mgmt committees formed
- Biological & human impact surveys conducted

#### Activities to pursue

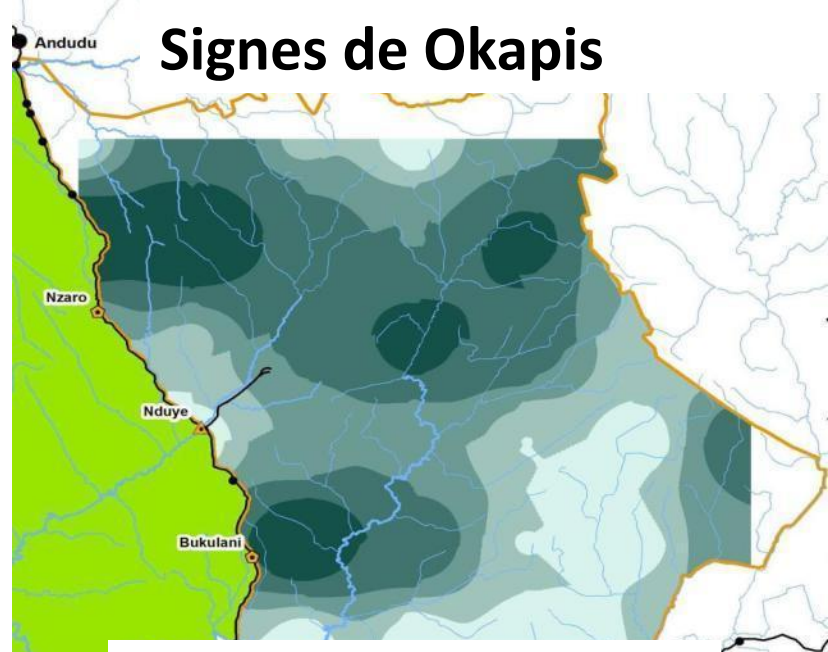
- Establish desired conditions
- Plan landuse & associated directives
- Adopt strategy of participative and adaptive mgmt.



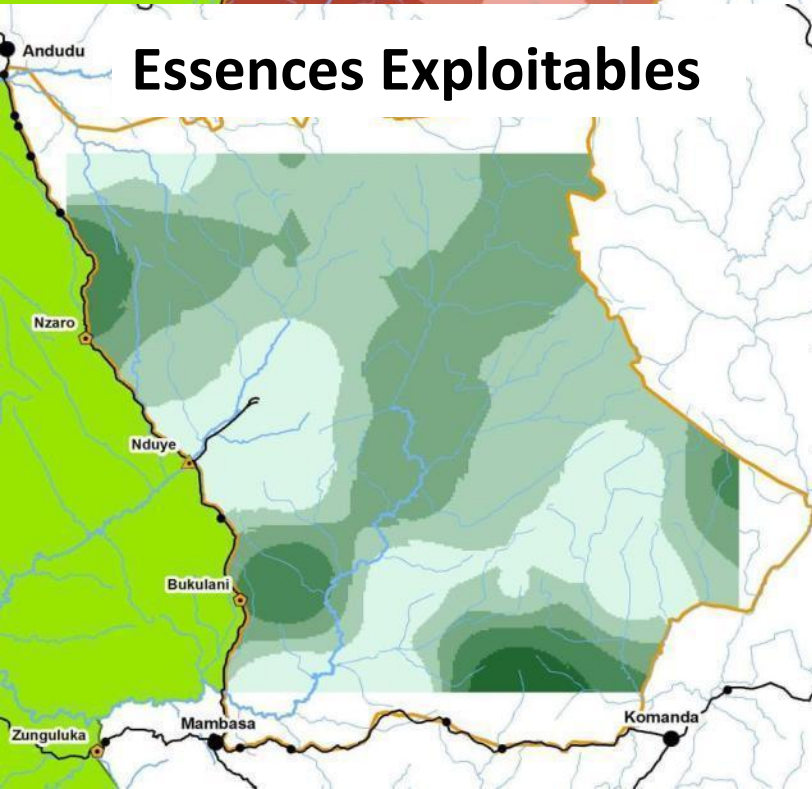
## Signes de Chasse



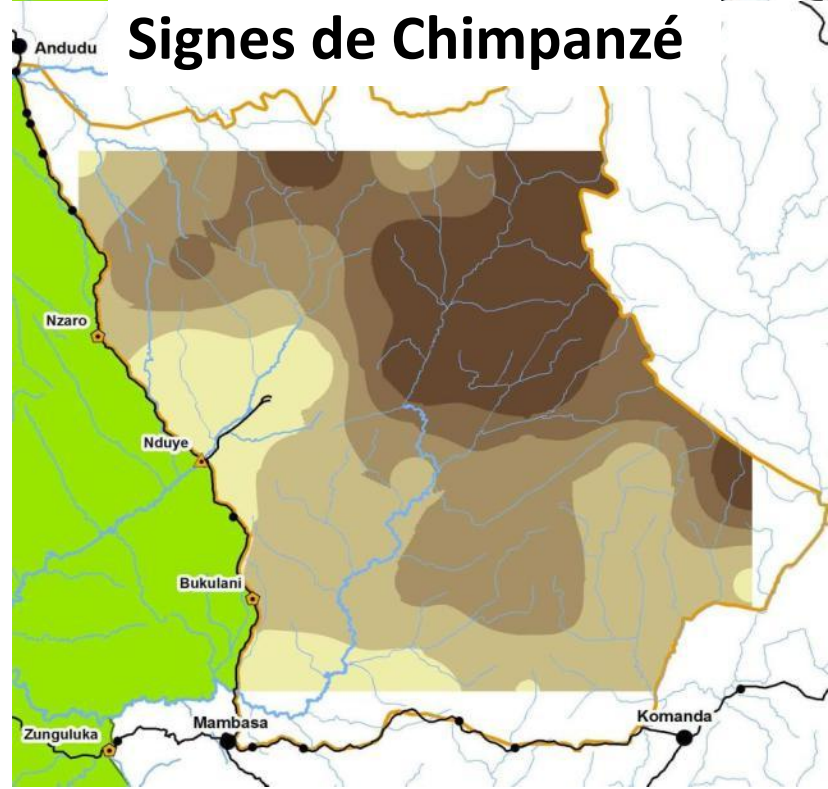
## Signes de Okapis



## Essences Exploitable



## Signes de Chimpanzé



# Natural resource use

- Artisanal logging
  - More volume than commercial logging
    - Mostly illegal → proposed legislation to improve benefits to loggers, gov't & communities
- Charcoal trade
  - Studied dynamics & controls
    - Propose alternative fuel sources



## **Needing study**

- *Bushmeat trade*
- *Impacts of mining*

# “Livelihoods”

- USAID & World Bank funding for “alternative” and “sustainable” livelihood activities
  - Community associations
    - Small grants & technical training
  - Women
    - Promotion of literacy / empowerment
  - Farmers
    - Distribution of improved seeds
    - Training in improved, low-impact techniques
    - Promotion of shade cacao (outside Okapi Res.)

# Ituri & REDD+

- WCS's long-term field presence recognized
- WCS selected to manage national pilot project in Mambasa (CBFF)
- Mambasa (Ituri LS) is gov't pilot region for landuse planning
- WCS provided forest inventory training to National forestry ministry





PLANET A

Spot the impacts, en

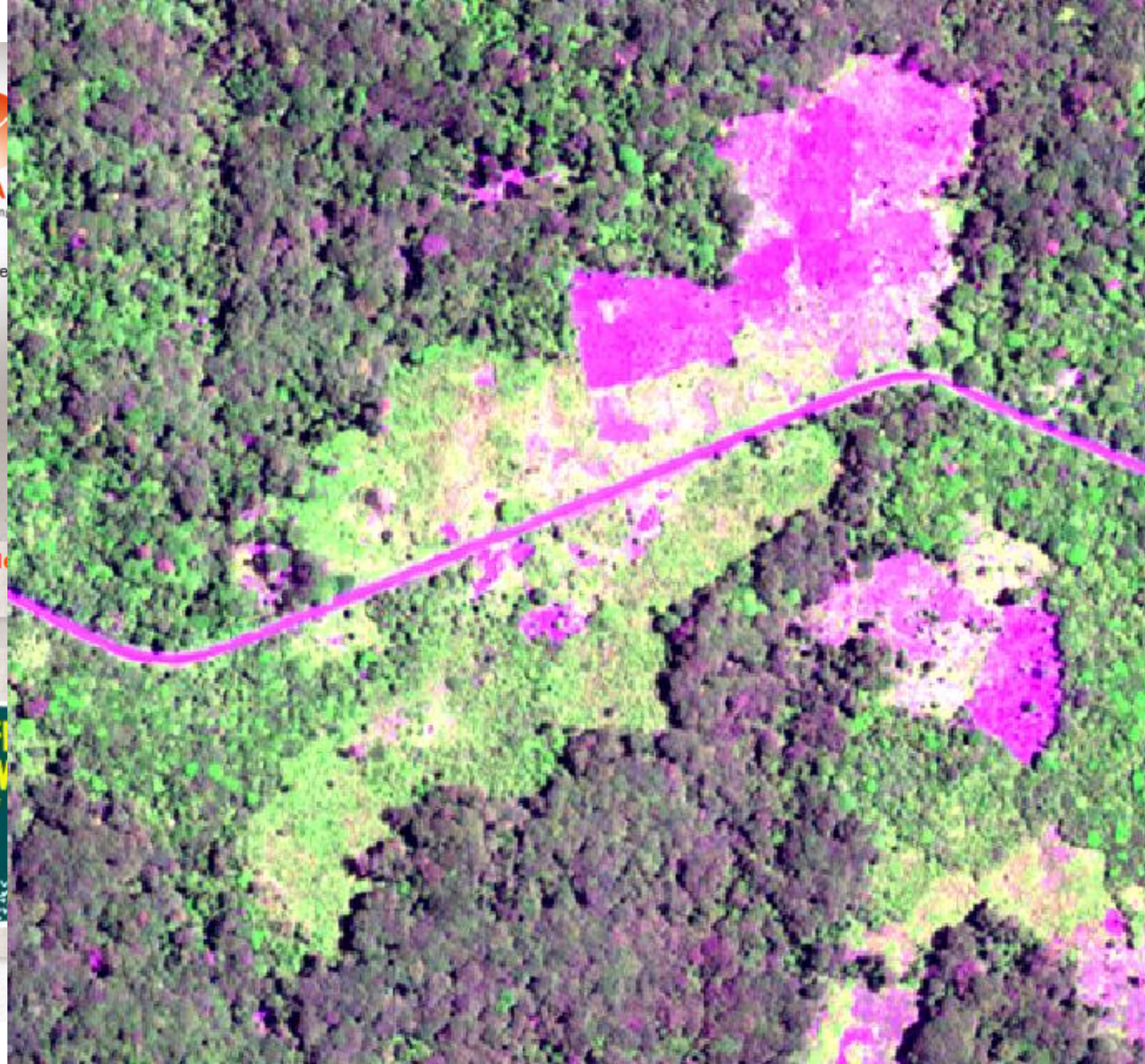
A Spot Image

Project Lead

Joel Masselink

Logo

WILDLIFE  
CONSERVATION  
SOCIETY



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## Ituri Landscape

### Landuse Planning Progress

#### Agglomerations

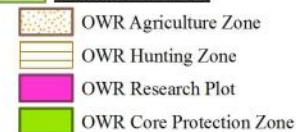


#### ICCN



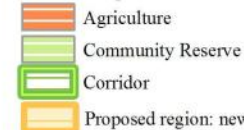
#### Ituri Landscape Limits

#### Protected Areas

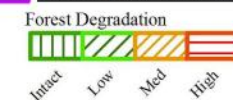


#### CBNRMs

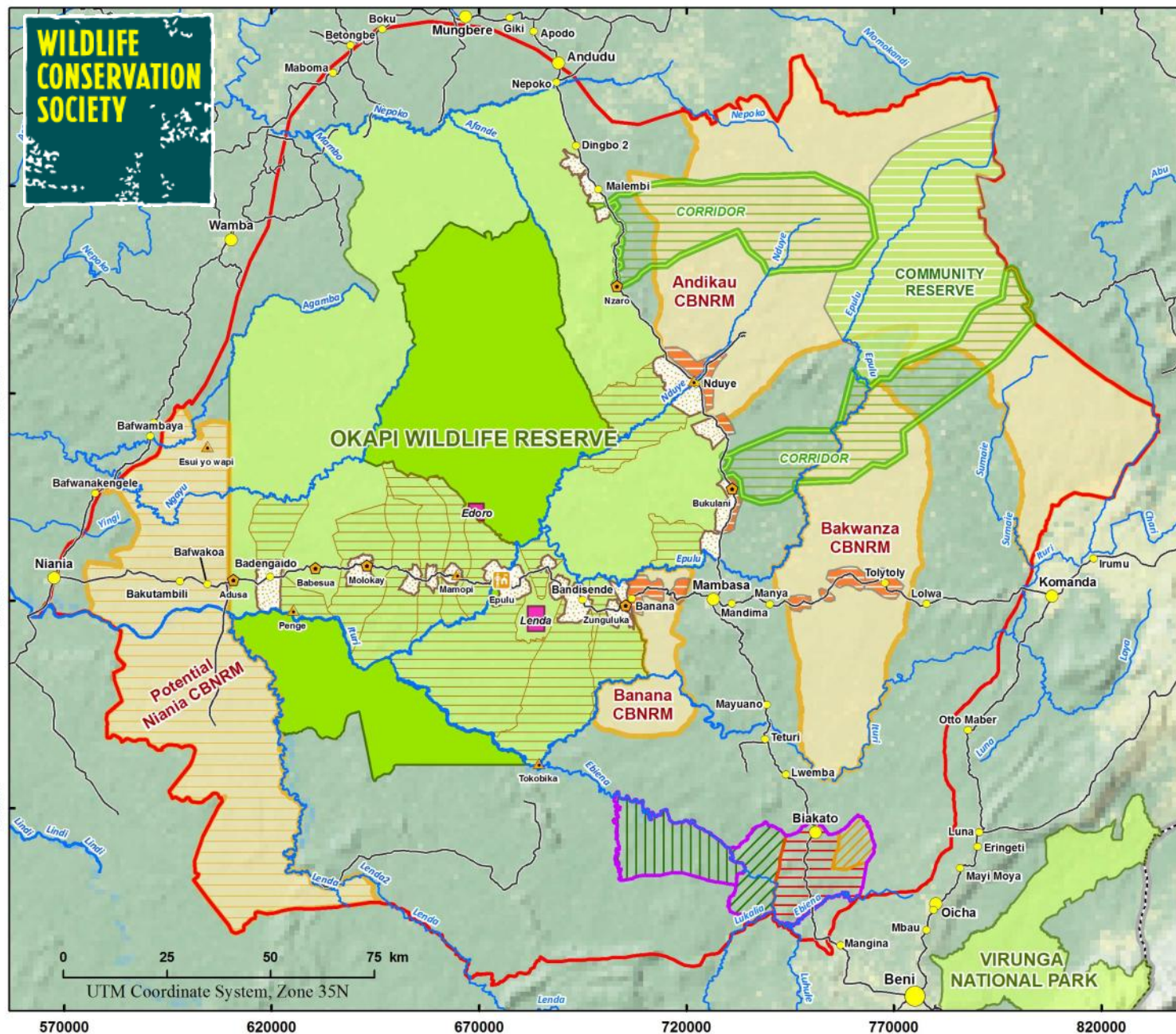
CBNRM - Proposed Zones



#### ERZ - ENRA Concession



#### Current LS Map - May 2010





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Merci Beaucoup  
Asante Sana

Questions?

