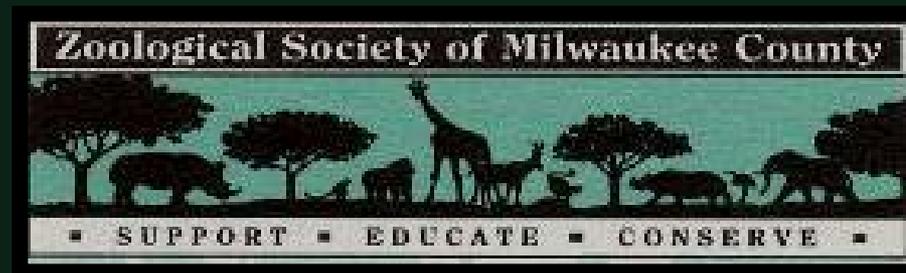


# Salonga: Too Big to Fail

## A 15 year Perspective



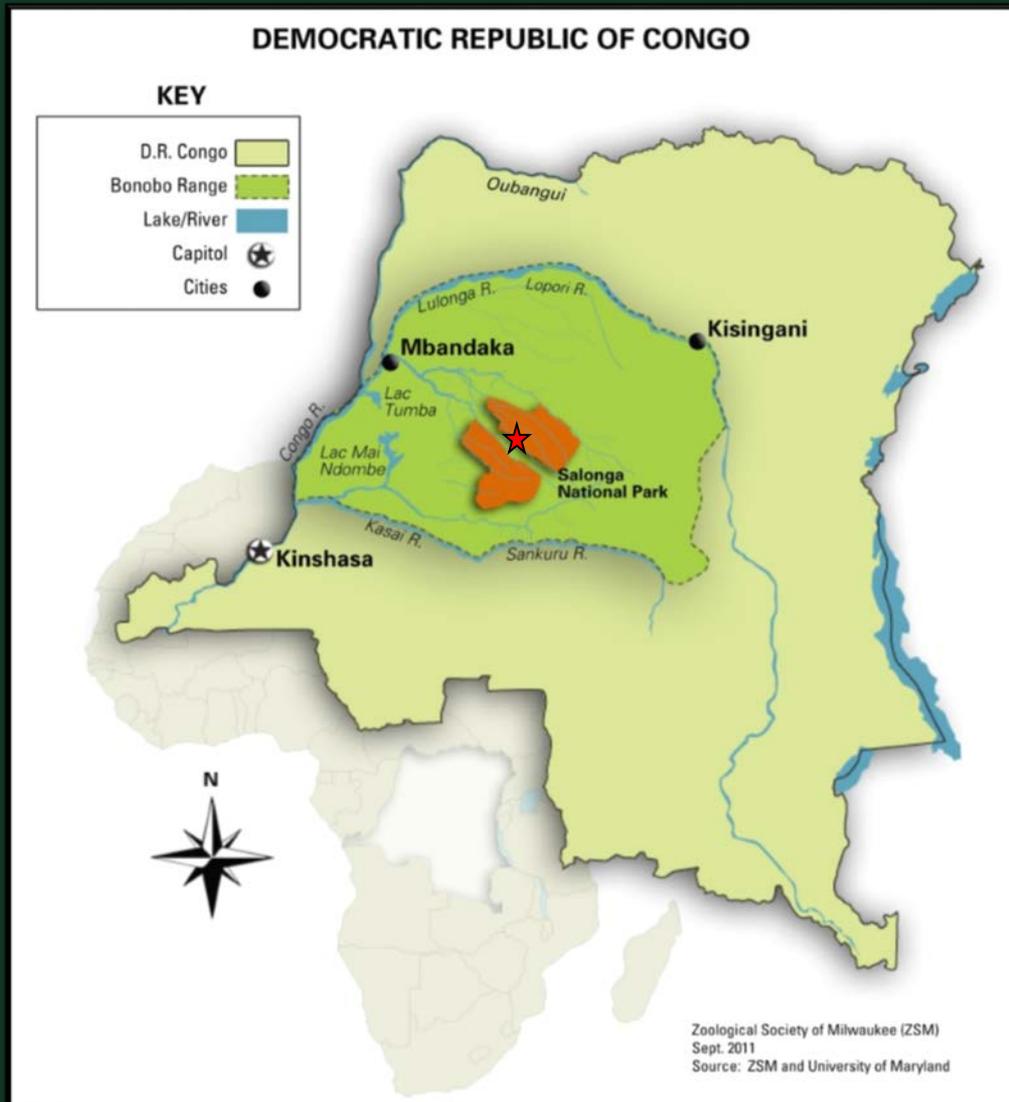
Estate Bonobo 2015, Dan Wundrock



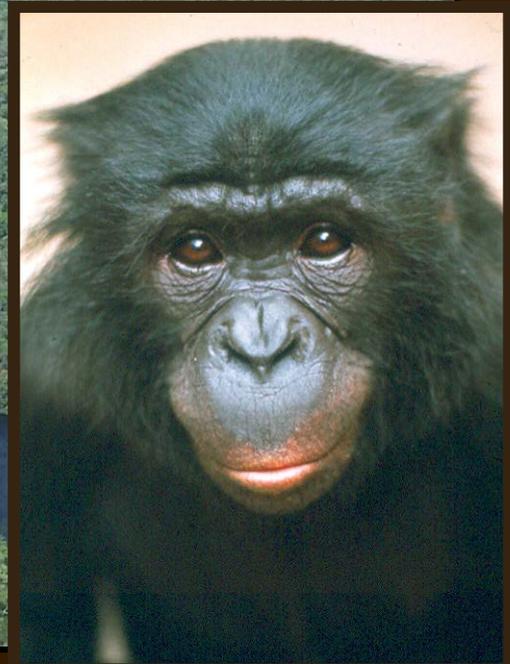
*In memory of Bokitsi Bunda  
Salonga National Park Guard 1st Class  
1958-2015*



Recipient of the Abraham Foundation Award, 2011



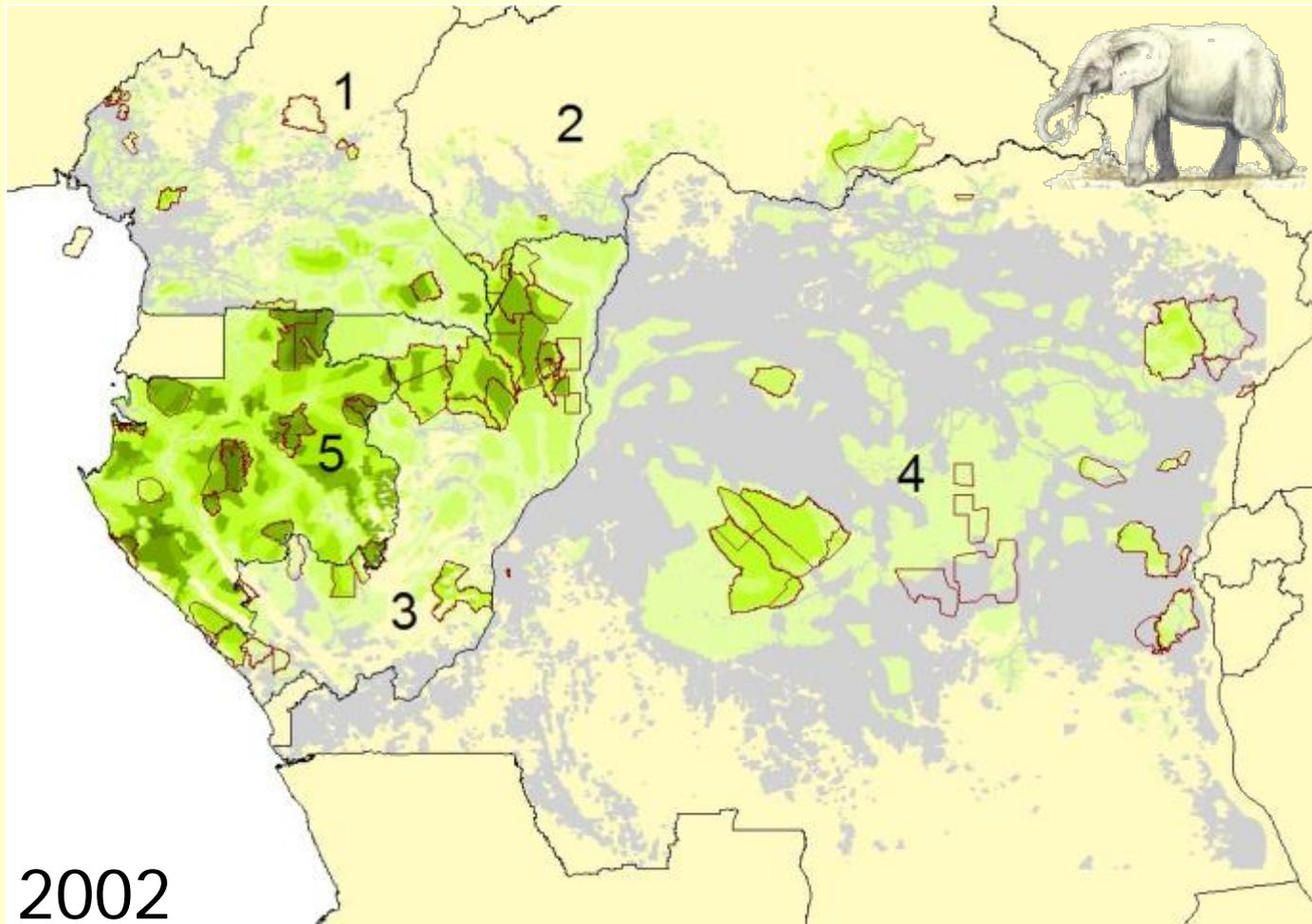
**Salonga National Park, 33,317 Km<sup>2</sup>**  
**Created 1970 to protect the bonobo and forest elephant**





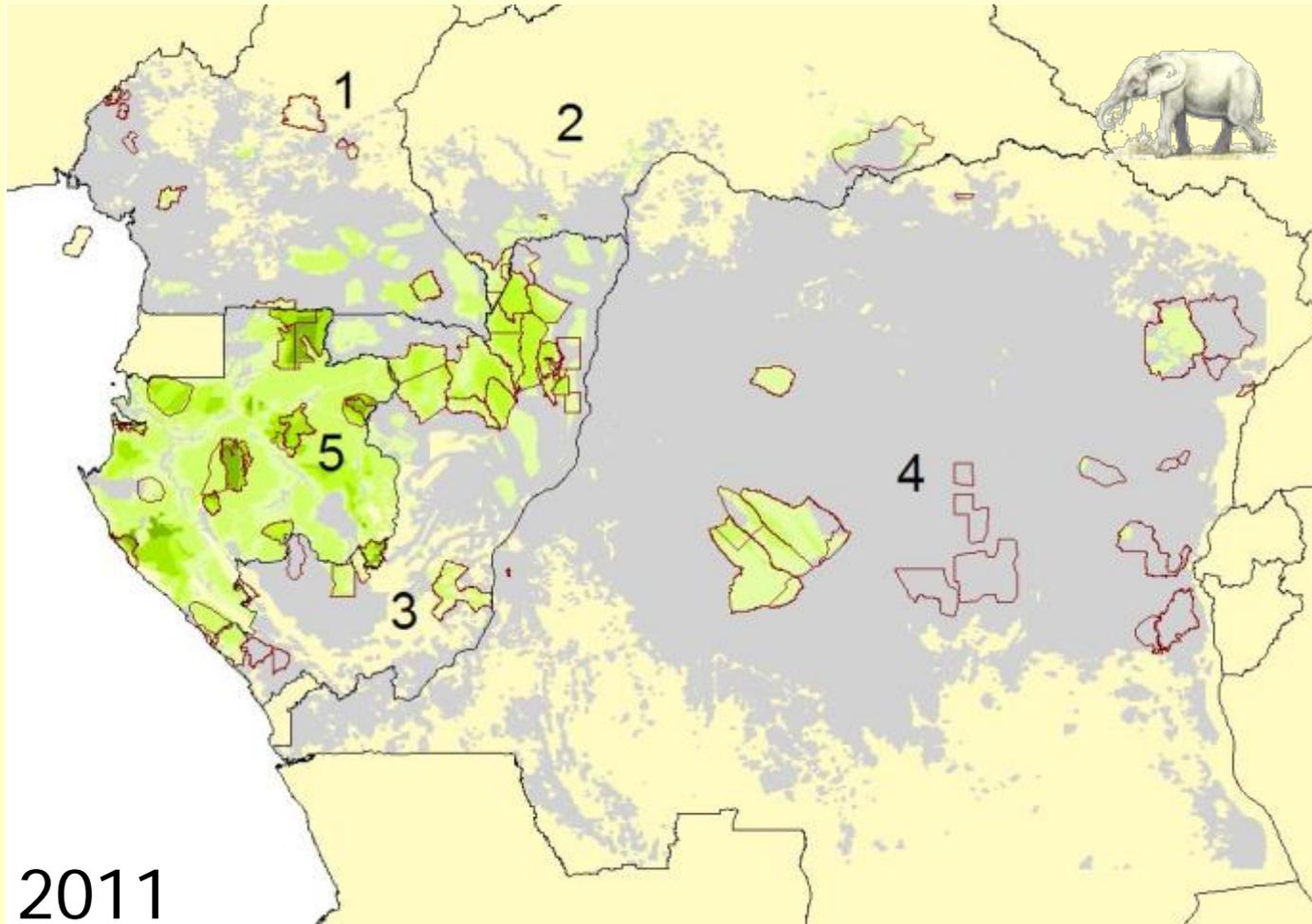
**Salonga is the largest, continuous expanse of protected bonobo habitat in the world.**

# Elephants collapse



Maisels, Strindberg, Blake *et al.* 2013. Devastating Decline of Forest Elephants in Central Africa. PLoS One 8, e59469.

# Elephants collapse



Maisels, Strindberg, Blake *et al.* 2013. Devastating Decline of Forest Elephants in Central Africa. PLoS One 8, e59469.



Habitat ideal for forest elephants



Greatest Threat:  
Hunting or bushmeat trade

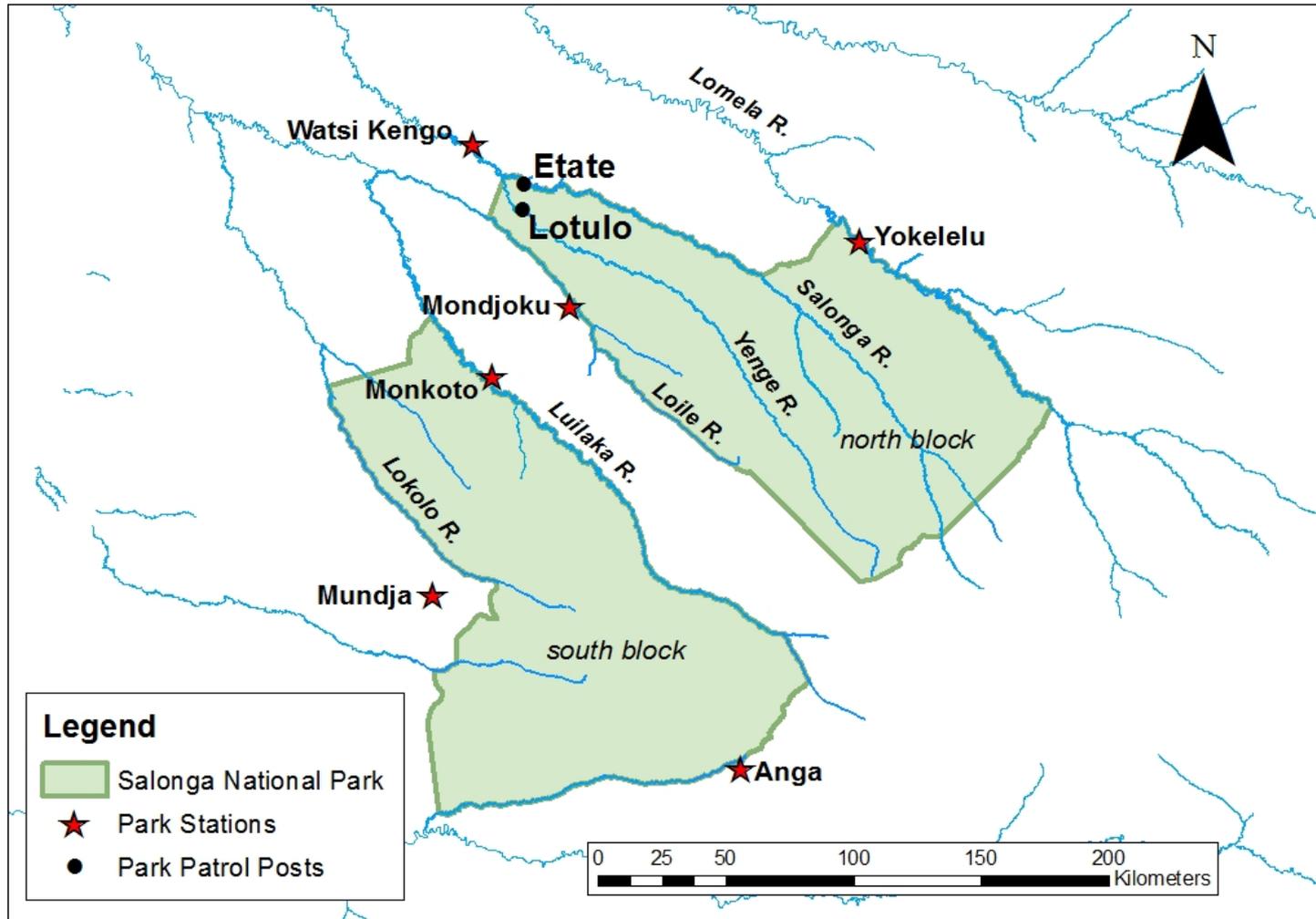


Bonobo and elephant  
morsels





# Salonga National Park



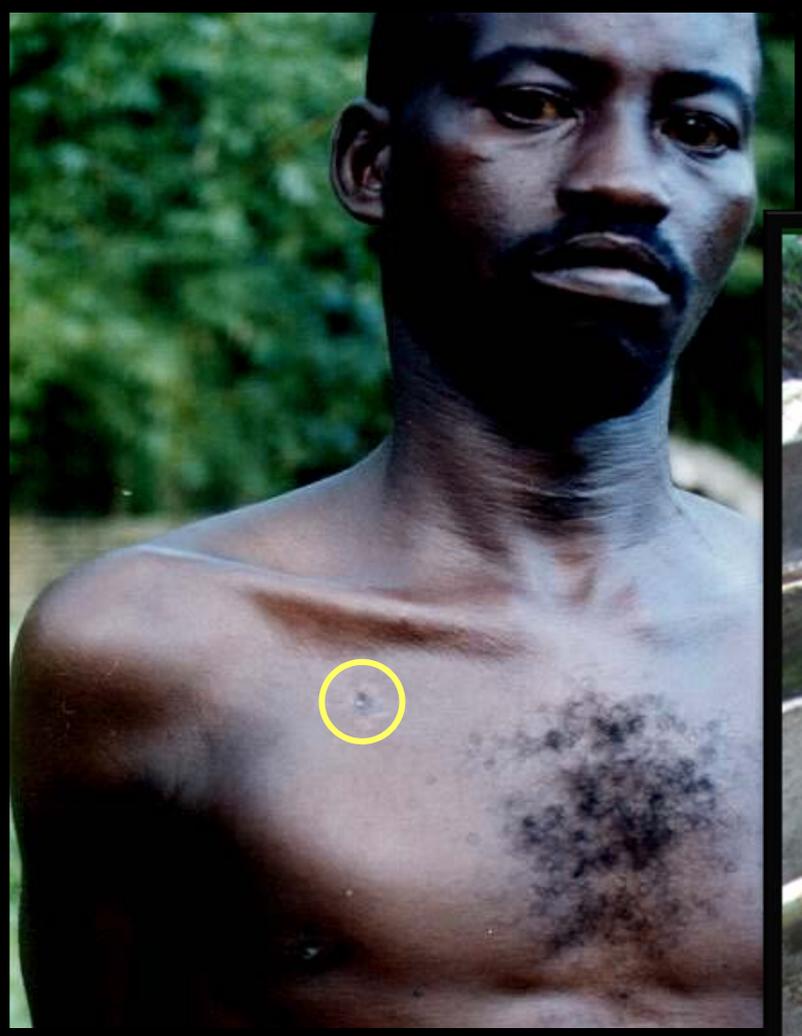
Institute Congolais pour la Conservation de la Nature  
(ICCN)



**Salonga National Park Guards  
2001**



Well-armed Poachers, SNP



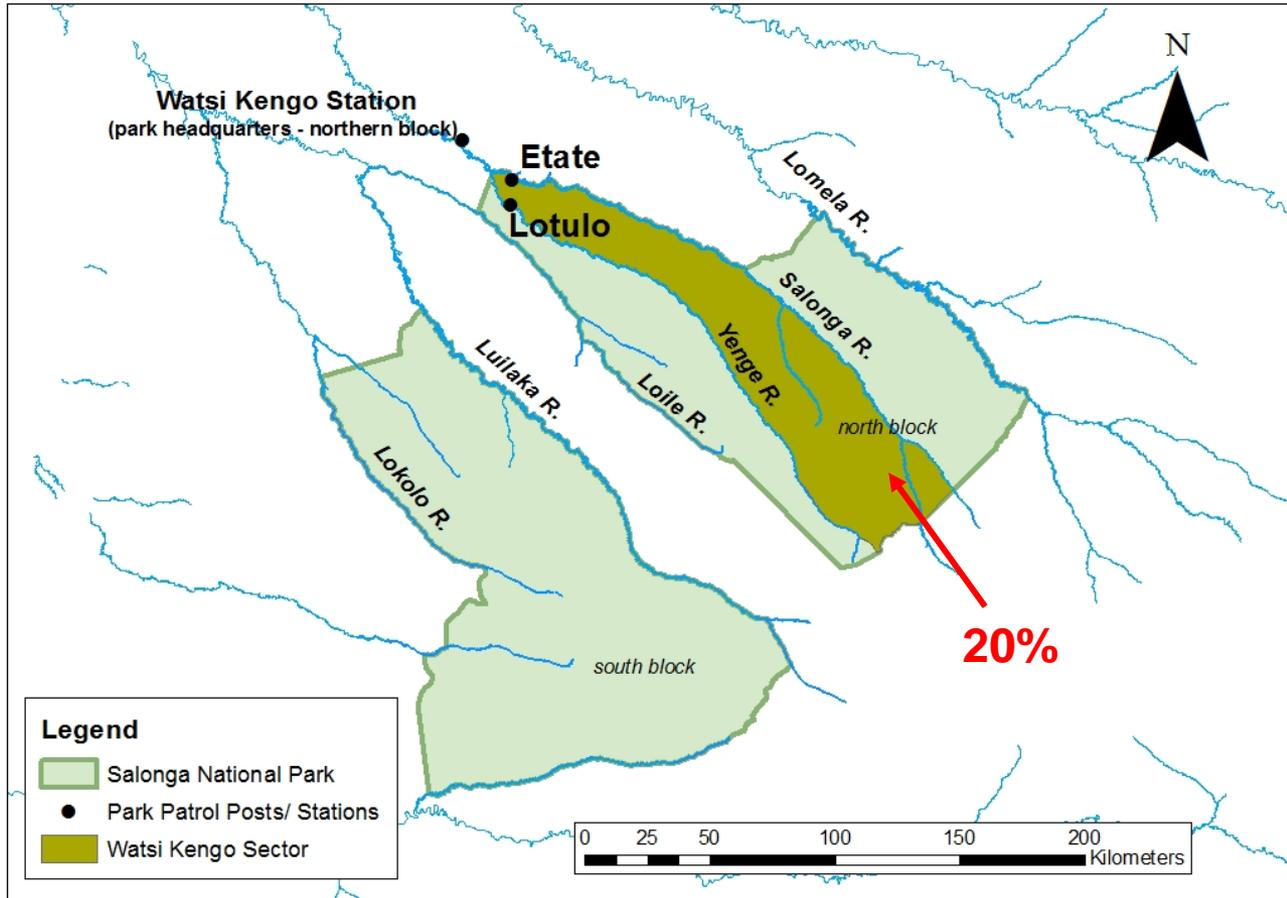


Estate Research Station & Patrol Post



Estate Patrol Post and Research Station

# Salonga National Park



Fast Forward to 2016: Present Situation

# ZSM 2015-2016

Support for Strategic Patrol Posts in the Salonga National Park

Long-Distance Anti-poaching Patrols

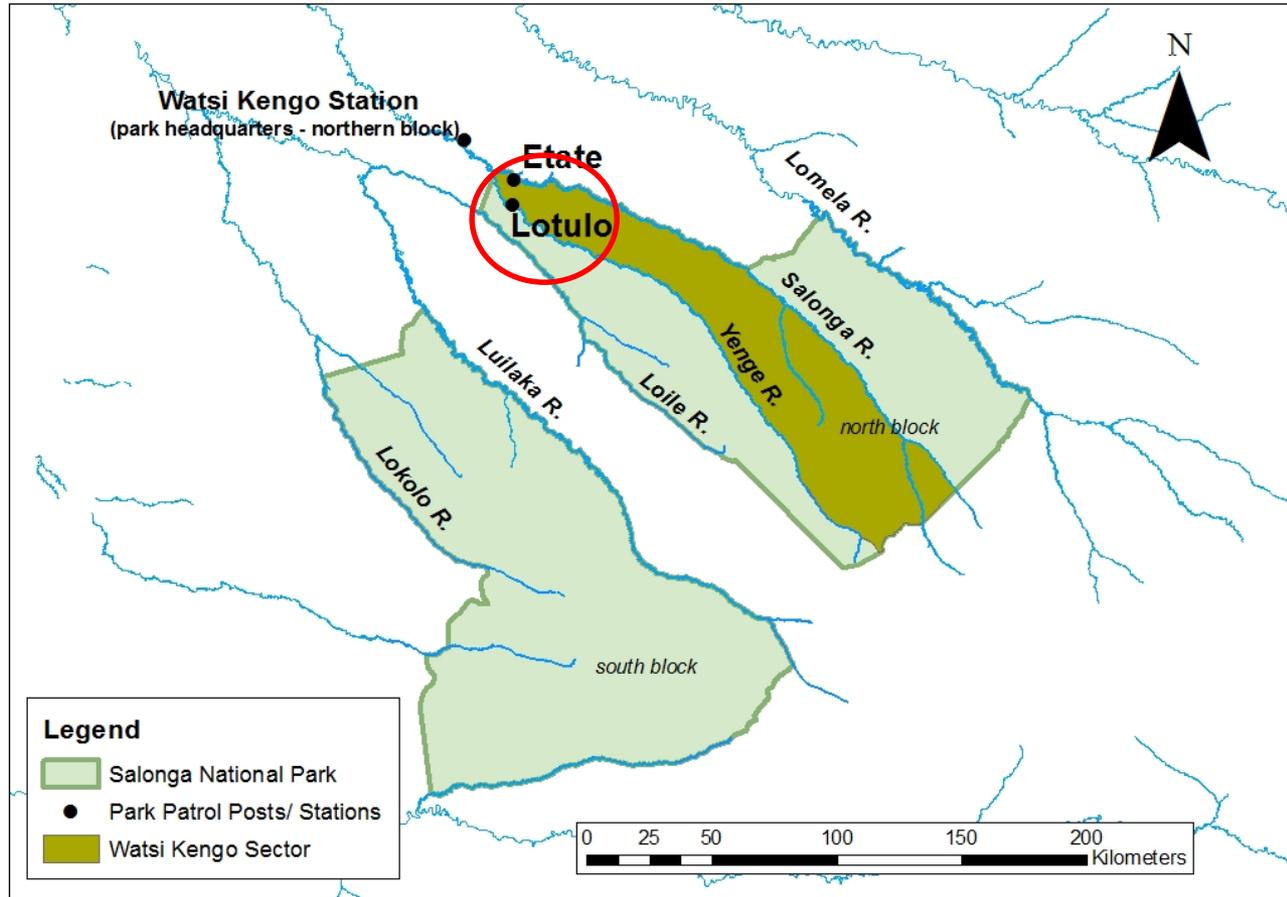
Bonobo and Elephant Surveys: Bio-monitoring & Research

Community Outreach

Supported by Central Africa Forest Ecosystem Conservation  
(CAFEC)



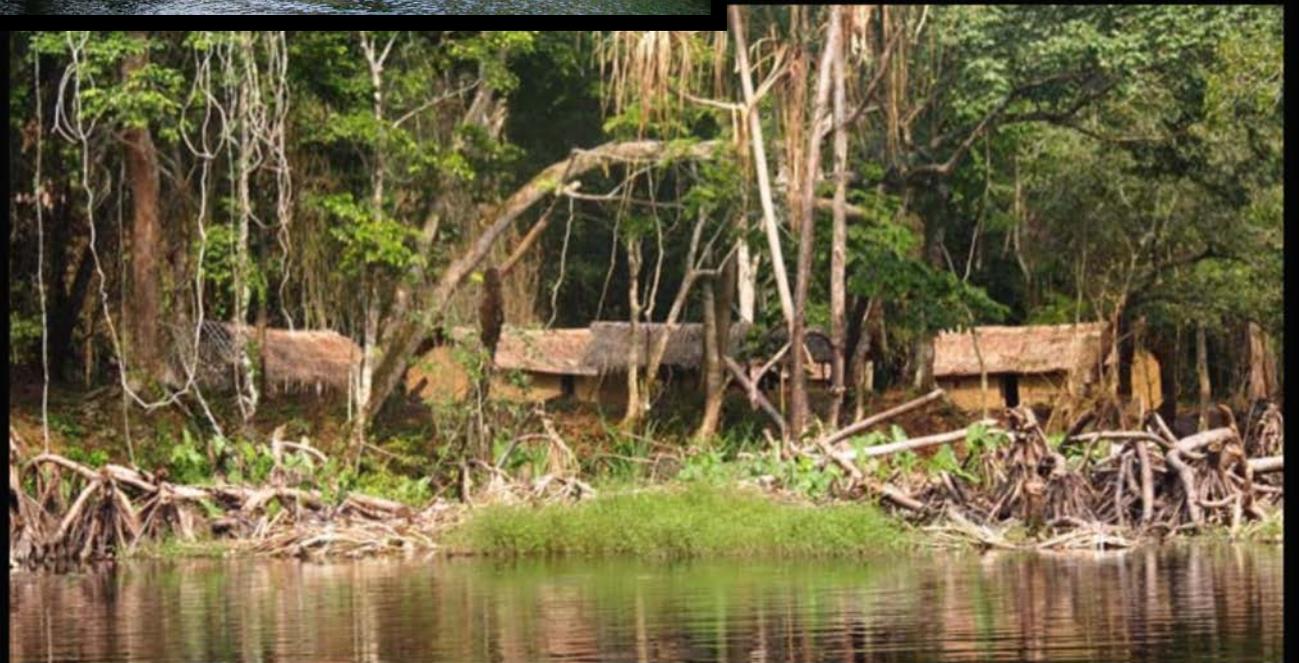
# Salonga National Park



Full support to 2 strategic patrol posts in the park's interior: Etate, Lotulo



Etate



Lotulo



**Estate Patrol Post  
&  
Research Station**





Salary supplements, medical stipends, and research bonuses

# Equipment and Food Rations





- 5 2-Way Radios
- 5 Solar Power Setup
- 3 Outboard Motors 8 HP



~ 42 Barrels fuel/yr.



GPS/Navigation  
Wildlife Monitoring



## Guard Adult Literacy at Etate

Full-time teacher  
All guards participate



Utata 11-10-2004

Madawal Matina.

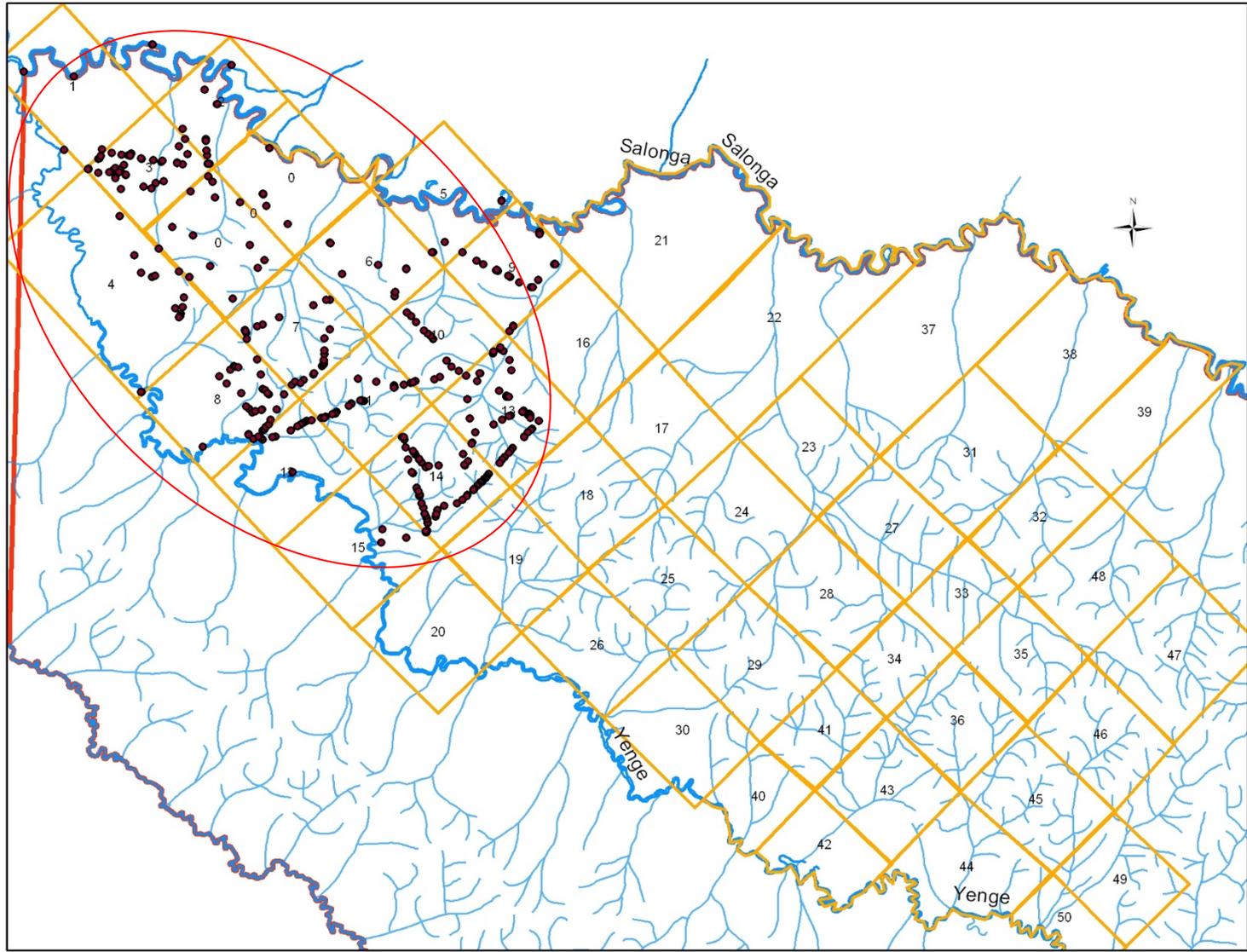
Mbate.

balobelaki ngai malaba ya  
bata syo bazimbi ngai na  
mbongo bazela nakaya naka-  
ngeli bango libate nayali ko  
ya samedi labela bango  
bakitiga mitima na bango  
na nakaya kuma lyika liba-  
ta na ngai lyali maman  
keli bango mitima kaka  
mokalo syo nakemelaki ya  
na mokanda N.B: natindeli  
ya mbizi mitano tanga bali  
nga talingsnaki kaniza  
bolingo ya ngai nazalika  
kokanisa keli ngai ya

Eddy

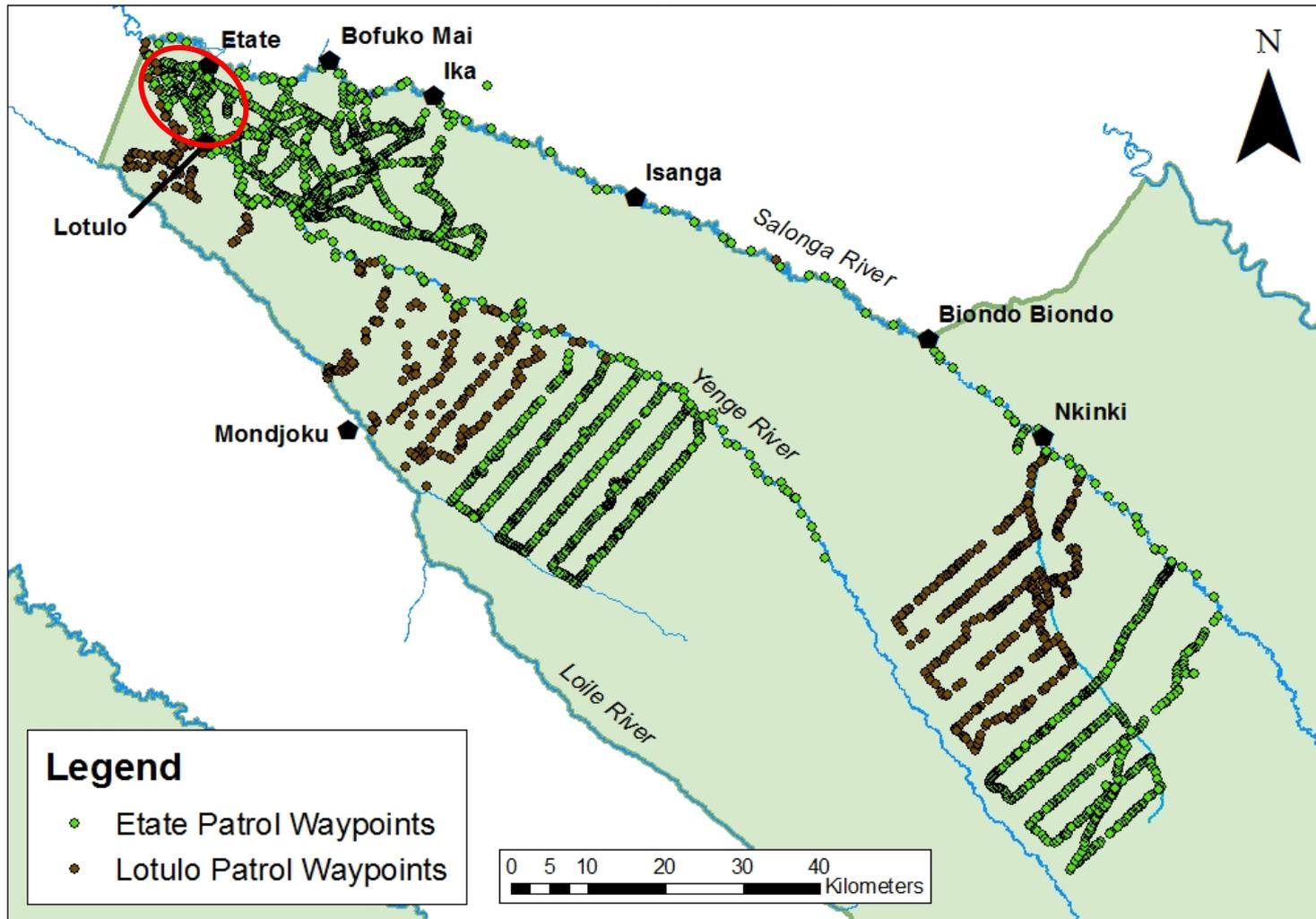




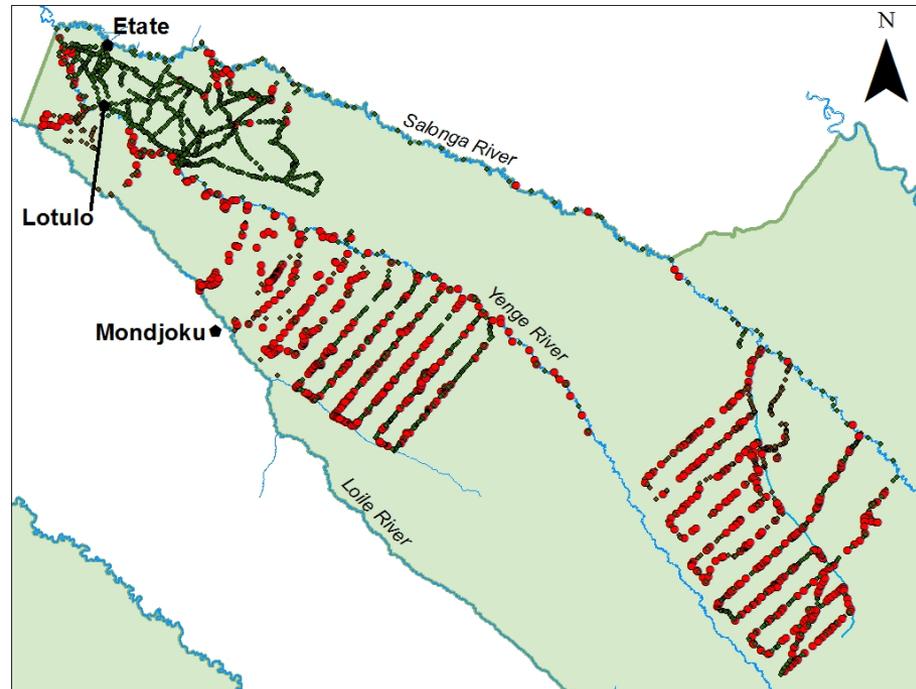
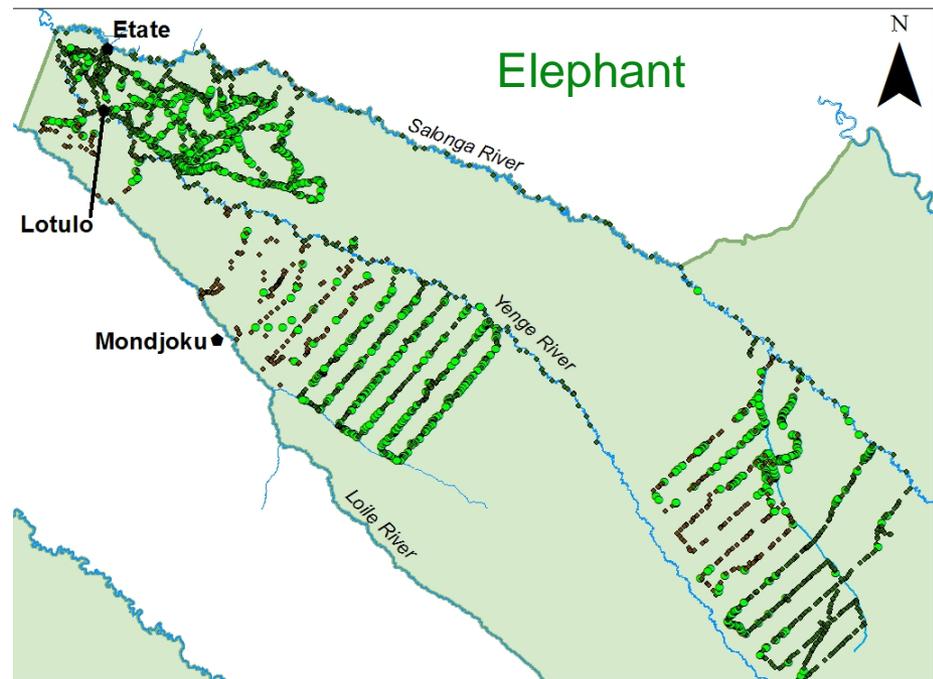
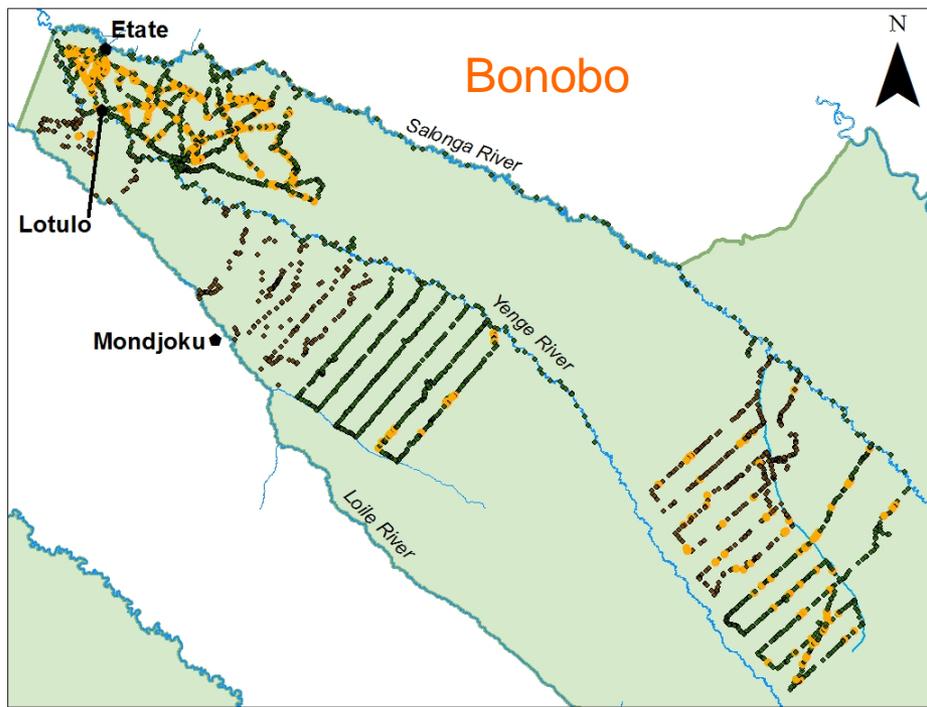


2007

# Estate and Lotulo Patrol Waypoints Apr. 2014 - Mar. 2015



2015 Patrol Evaluation: coverage, frequency, results  
18 guards

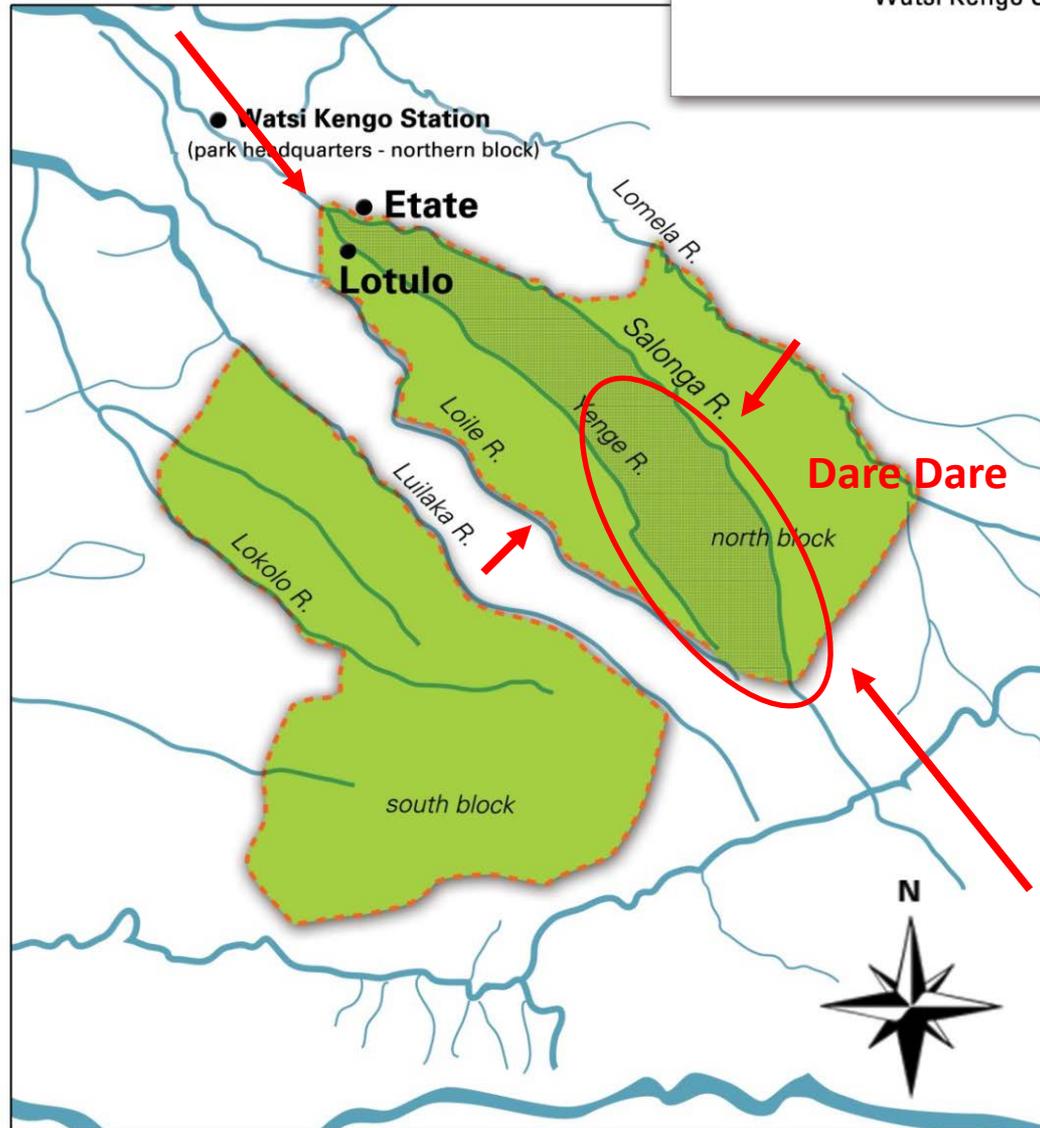


Etate & Lotulo Patrol  
Surveillance Area (1600 km<sup>2</sup>)  
85 hunting camps destroyed  
41 arrests  
(24 arrests during Ebola crisis)

# WATSI KENGO SECTOR Salonga National Park

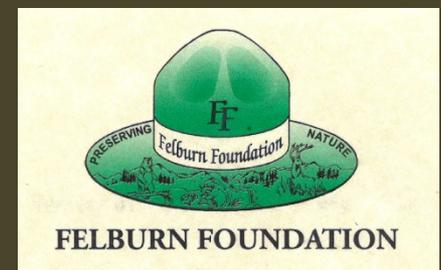
## KEY

- Park Patrol Posts/Stations ●
- Salonga National Park 
- Watsi Kengo Sector 
- River 





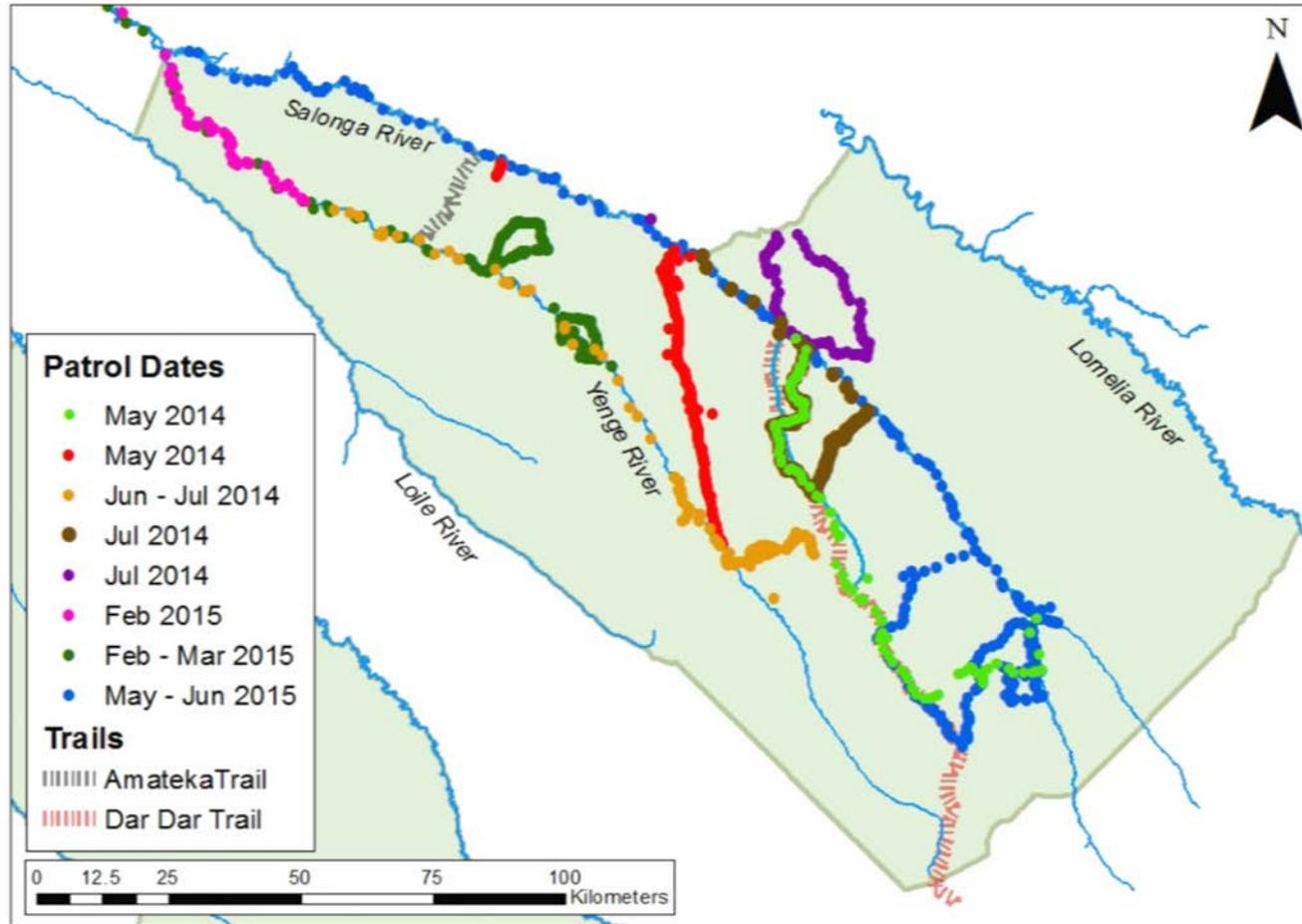
Long Distance Patrols – Watsi Kengo:  
Pirogues, Fuel, Rations, Bonuses





Voyages up to 300+ Km upriver  
~15 guards x 15-20 days

## Long Distance Patrol Waypoints May 2014 - Jun 2015



8 Long-Distance Patrols on the Salonga and Yenge River  
(Fuel, Rations, Field Equipment)



Hunting camps occupied by 10-25 persons



>5000 Metallic Snares  
Confiscated by Long Distance  
Patrols





~ 1 ton bushmeat in one campsite  
Dare Dare 2015









Results:  
140 Hunting Camps Destroyed



~40 Arrests in one year

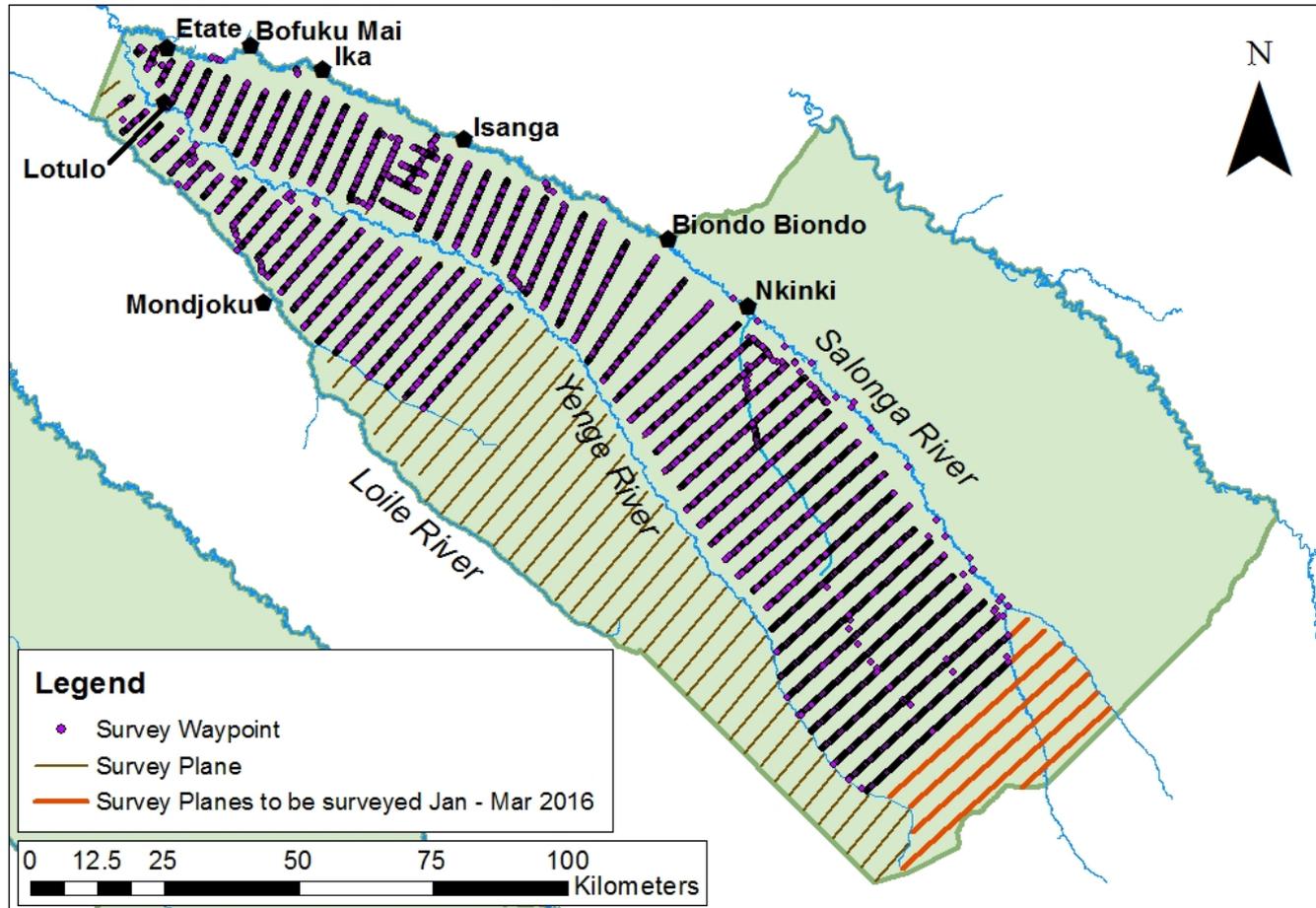


Elephant Poachers

# Bonobo and Elephant Surveys

Wasti Kengo  
and  
Mondjoku Sectors

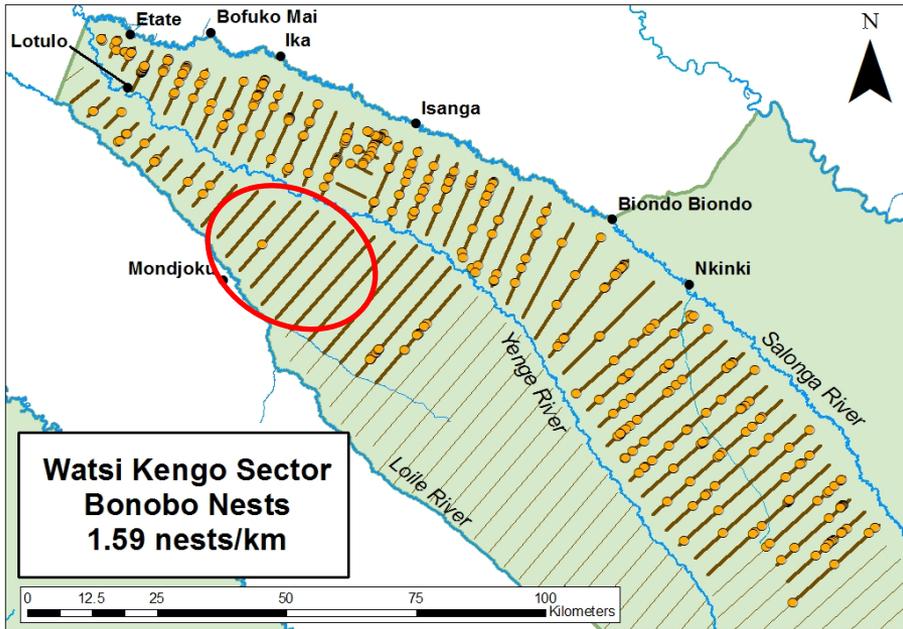
## ZSM Survey Data as of Jan 2016



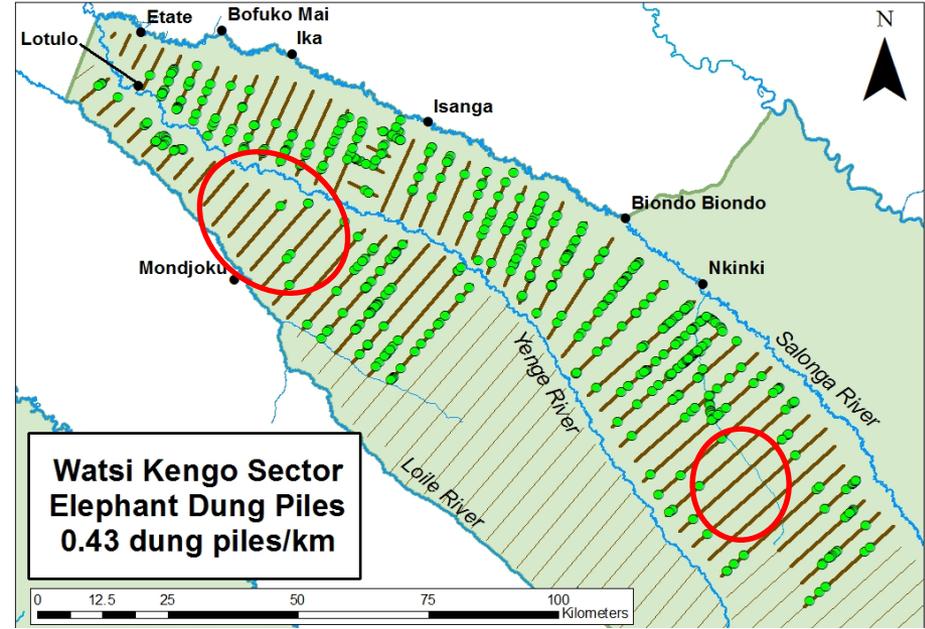
Surveyed  $\sim 7,500 \text{ km}^2$  to date



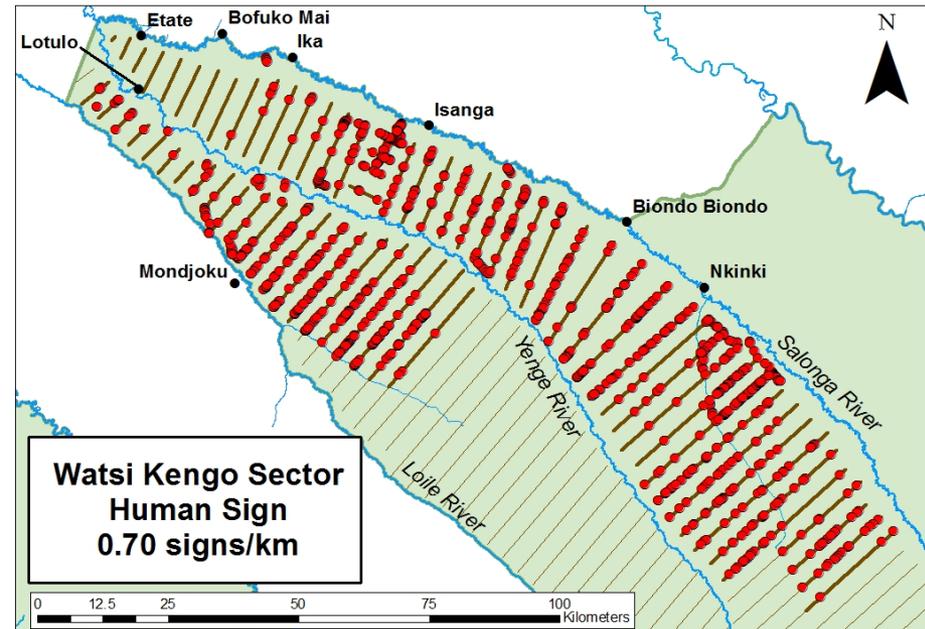
### ZSM Survey Results - Bonobo Nest Sites



### ZSM Survey Results - Elephant Dung Piles

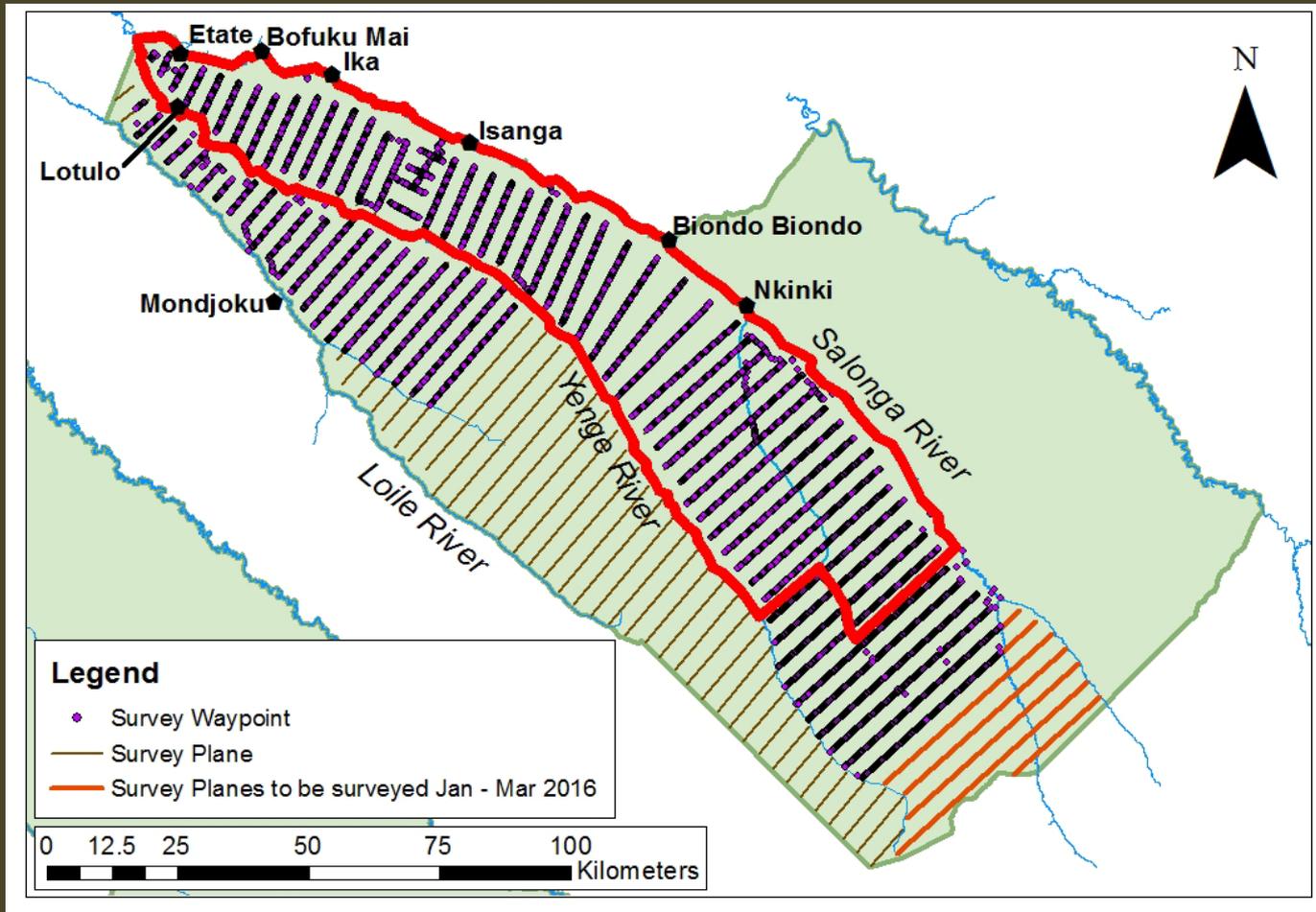


### ZSM Survey Results - Human Sign



Watsi Kengo Sector:  
very rich but heavily  
poached region

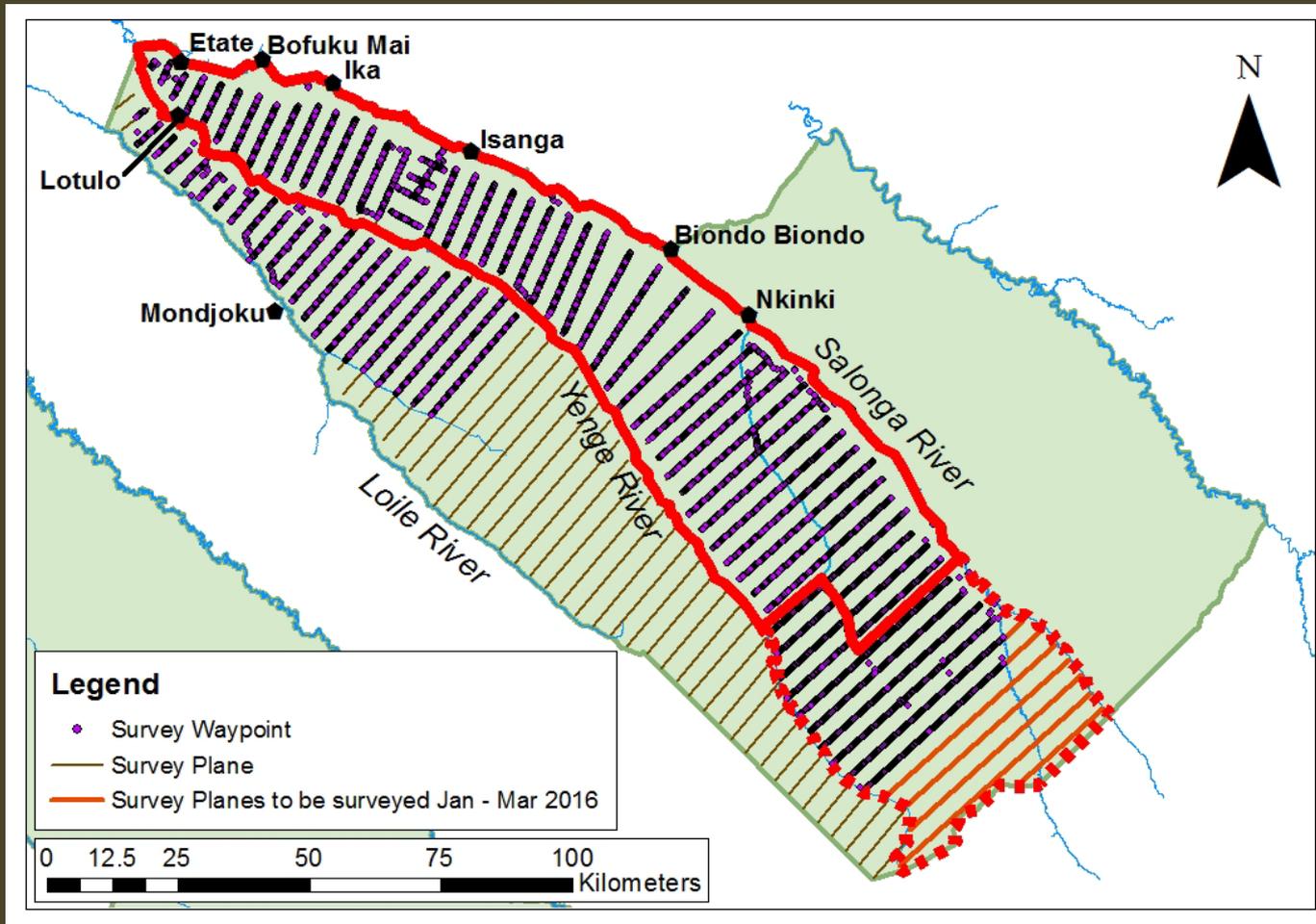
# Bonobo Population



Area analyzed = 4,715 km<sup>2</sup>

$$D_{\text{bonobo}} = (68.7 \text{ nest/km}^2) / (1.37 \text{ prod/d} \times 78\text{d}) = 0.643/\text{km}^2$$

3031 nest-building bonobos (cv 12.8%)

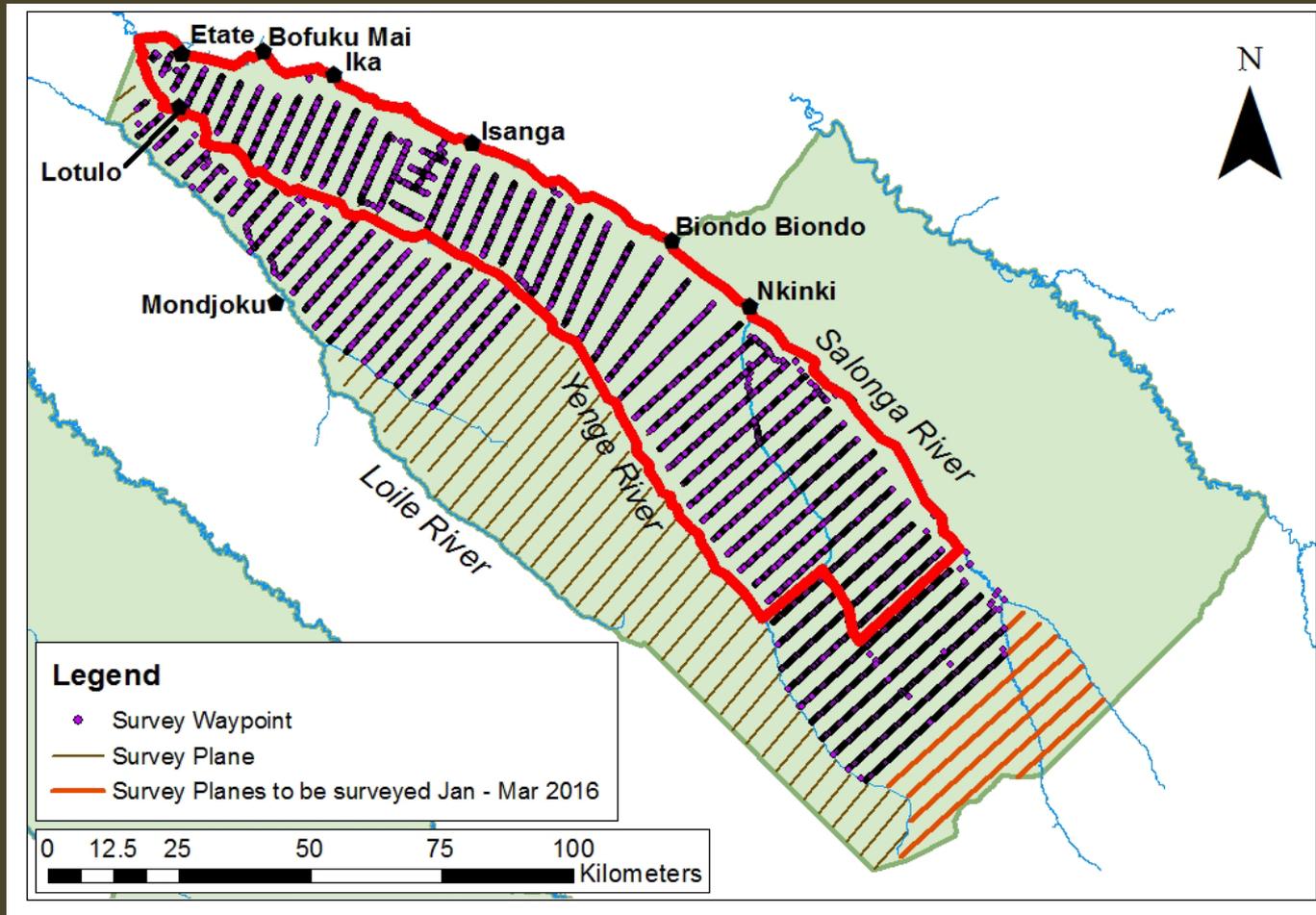


Extrapolate: 4285 adult bonobos for sector (6664 km<sup>2</sup>)



~1000 bonobos in the Etate surveillance area  
~4,285 bonobos Watsi Kengo Sector

# Elephant Population



Area analyzed = 4,715 km<sup>2</sup>

$$D_{\text{elephants}} = (110.4 \text{ piles/km}^2) / (19 \text{ piles/d} \times 90 \text{ d longevity}) = 0.065/\text{km}^2$$

304 elephants (cv = 15%)

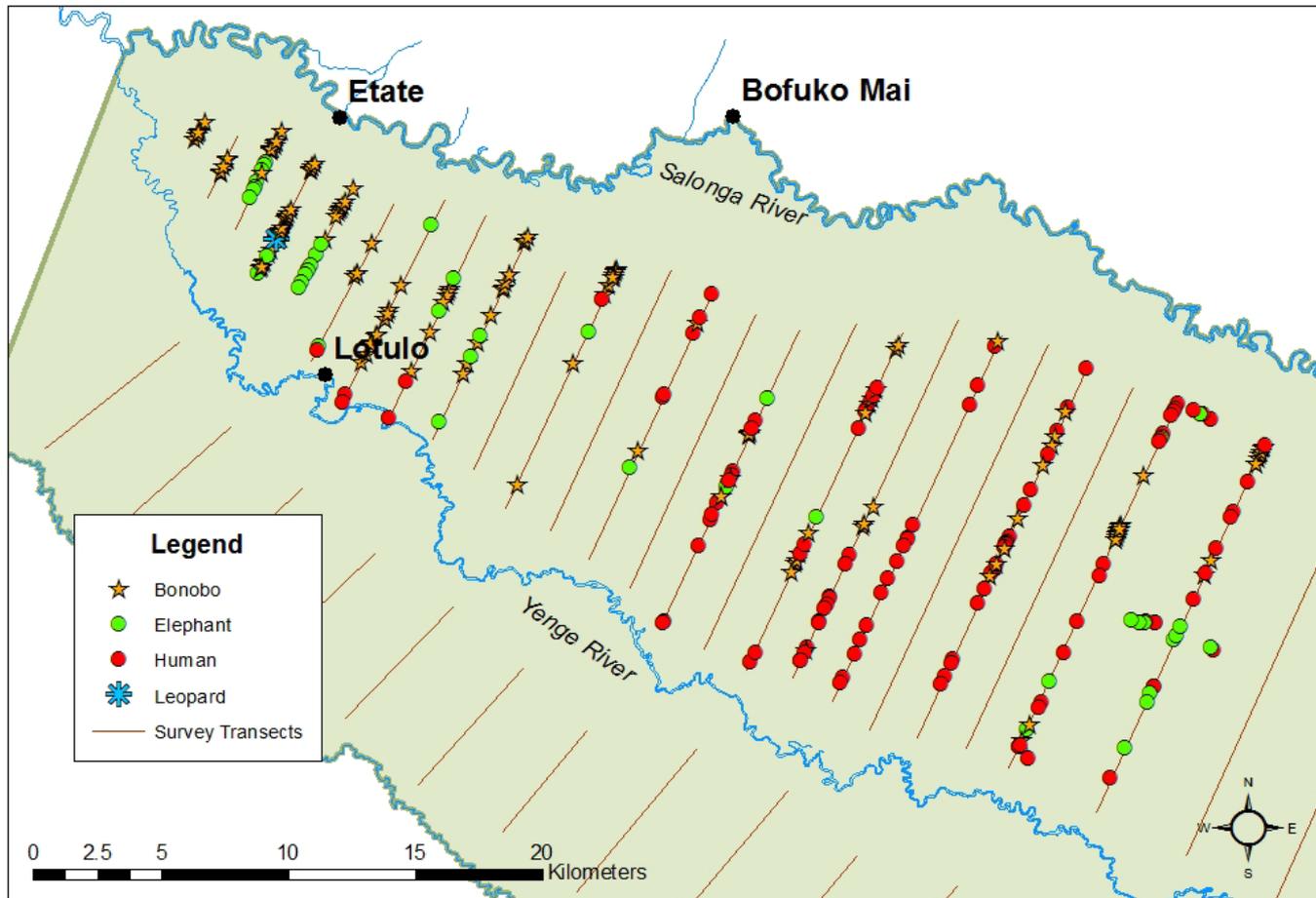
Elephants at night in the elephant bai  
Yenge River, November 2012



Bushnell (M) ZSMcam2 28.77In→ 68°F ○ 11-28-2012 20:36

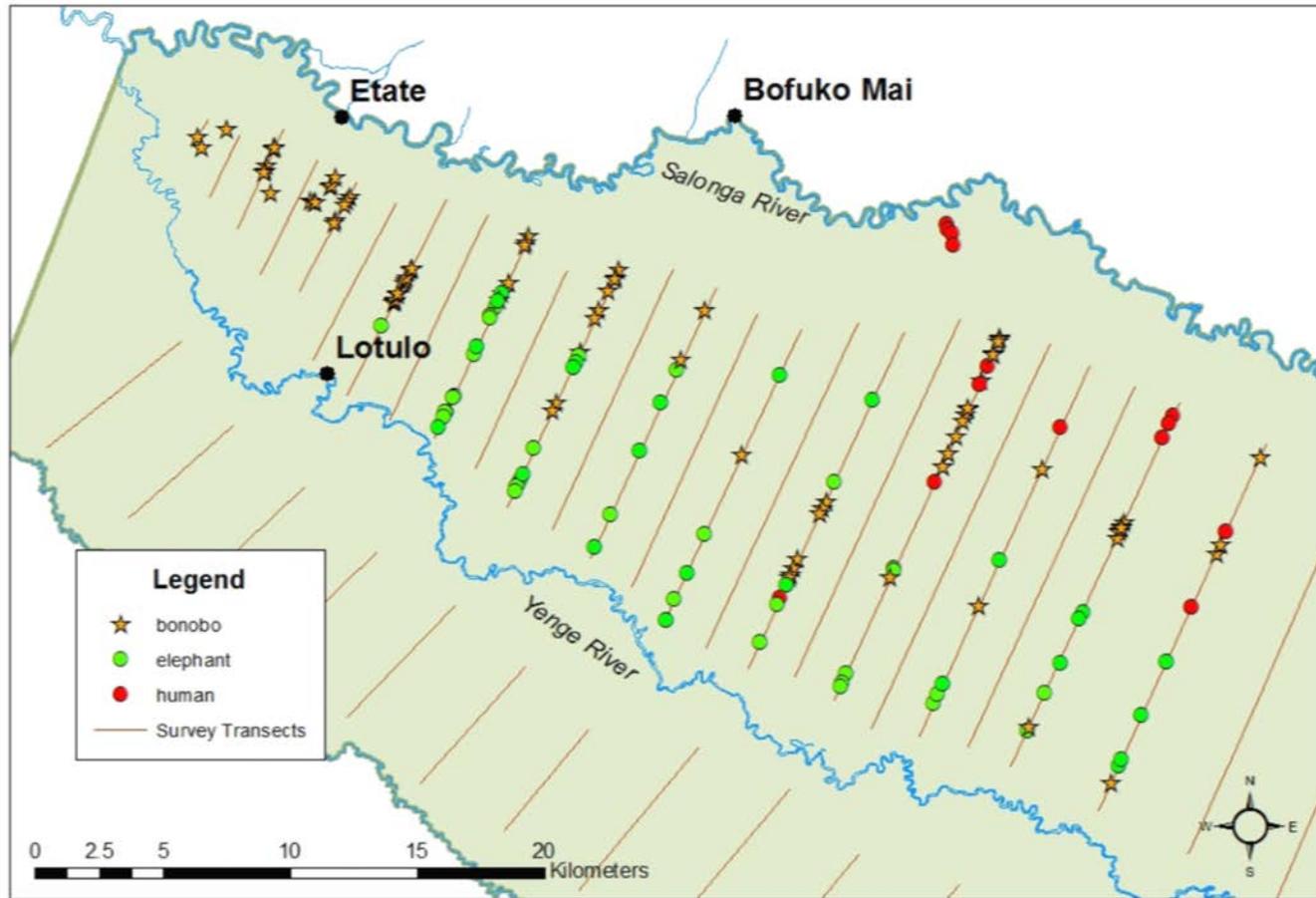
Extrapolate: ~300 elephants for whole sector after corrections

# Survey Data Aug 2010 - Nov 2011



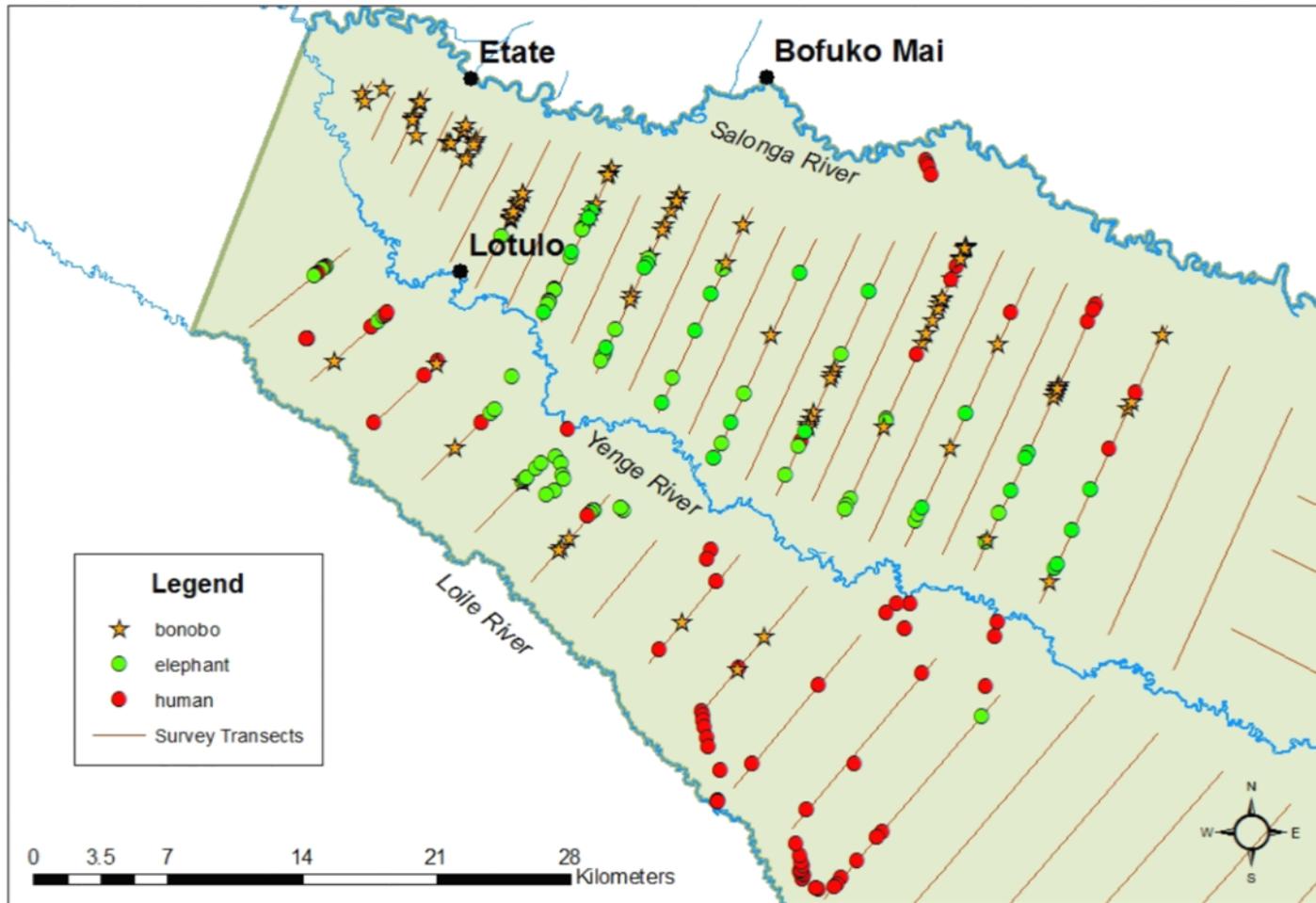
Survey Data BEFORE 2011 Anti-poaching Operation

## Survey Data May - Sep 2013



Survey Data 18 Months AFTER Anti-poaching Operation

# Survey Data FY 2013 - 2014



**Etate**

Bonobo nests= 2.2

Elephant dung= 0.5

Humans= 0.1 signs/km

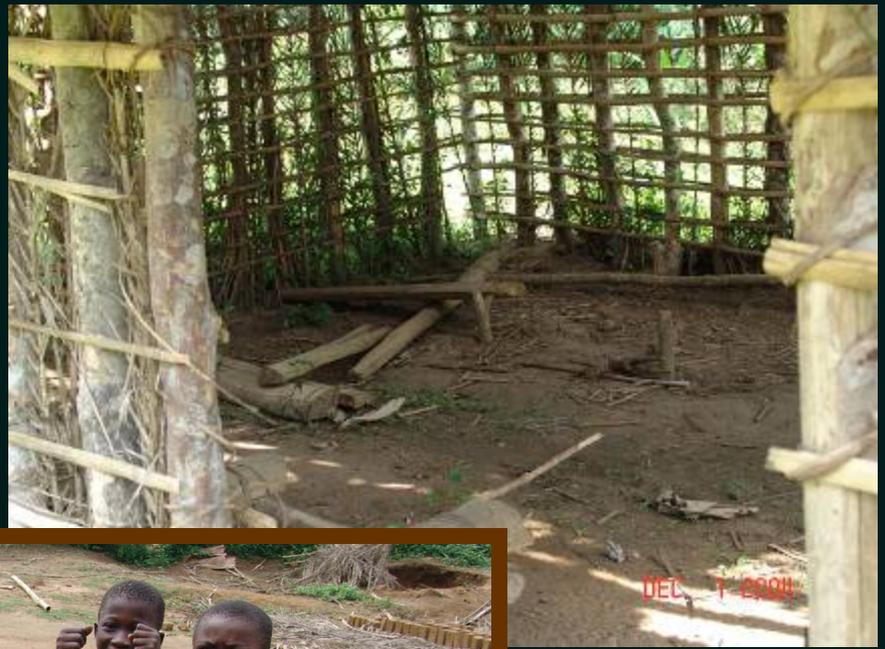
**Enc. Rates**

**Mondjoku**

Bonobo nests=0.6

Elephant dung=0.2

Human=0.4 signs/km

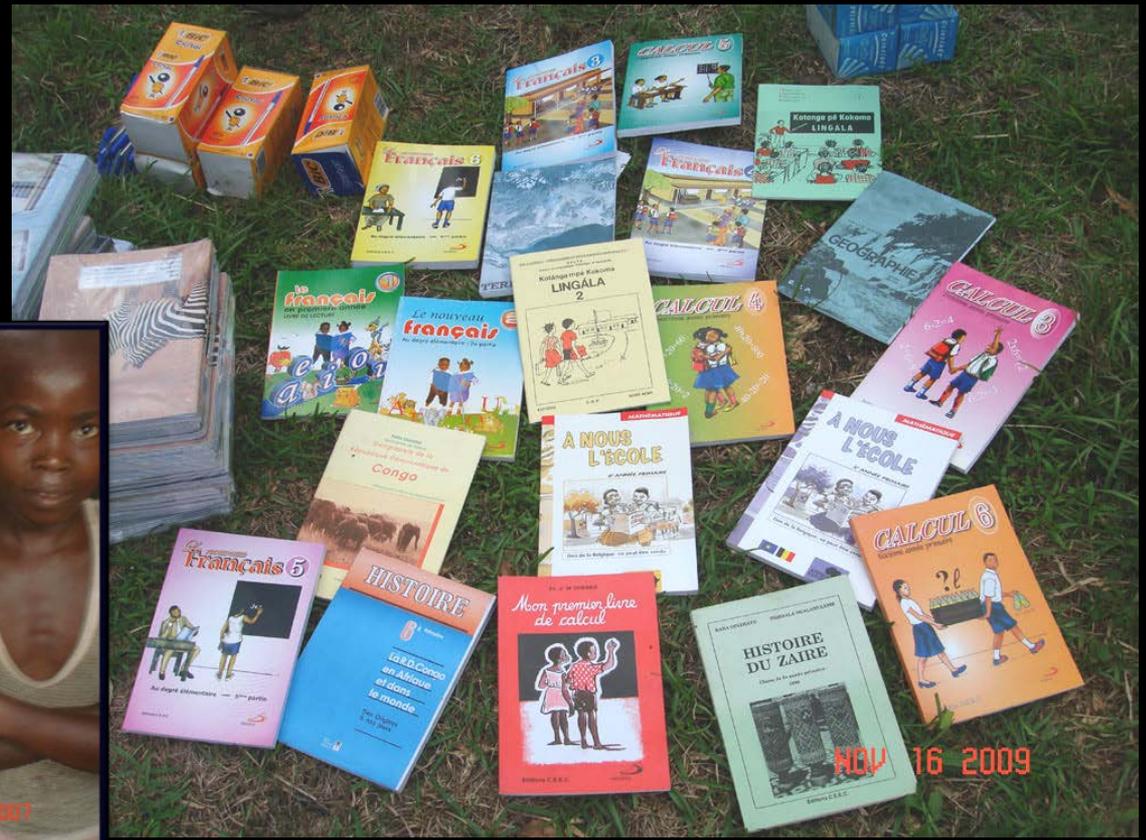
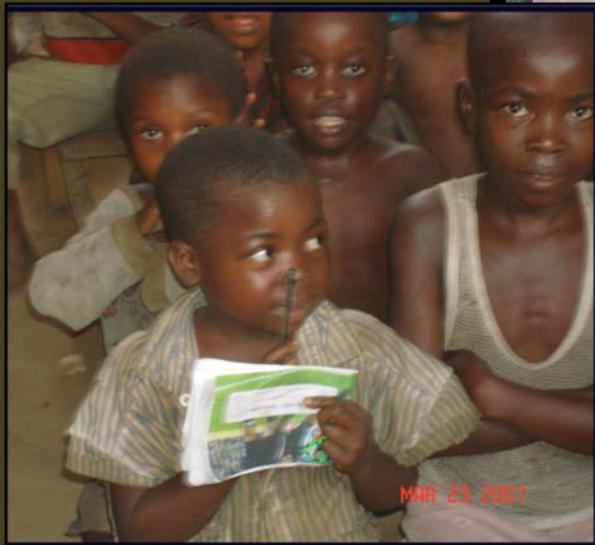


# Support for schools

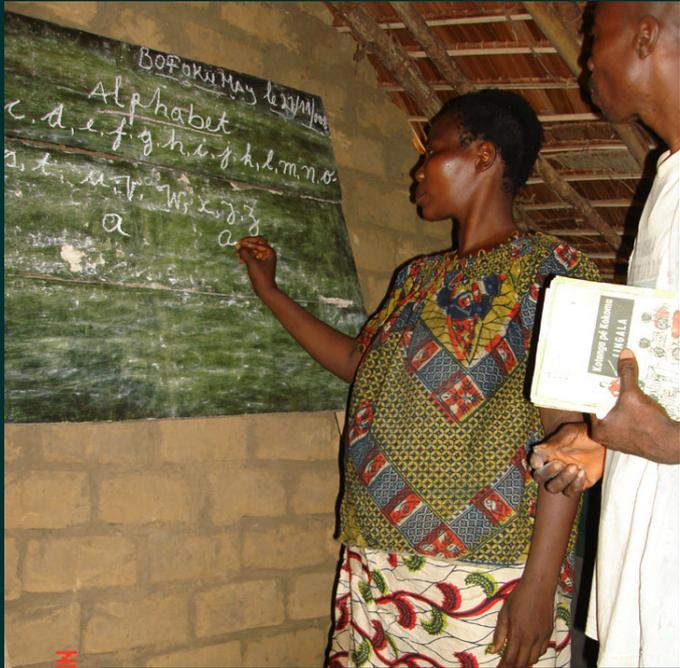




4 Primary Schools  
(10 Teachers salaries, materials)



## 2 Adult Literacy Schools



~100 continuing students  
90% women

# Agricultural Development



Horticultural Training  
2010- 2012





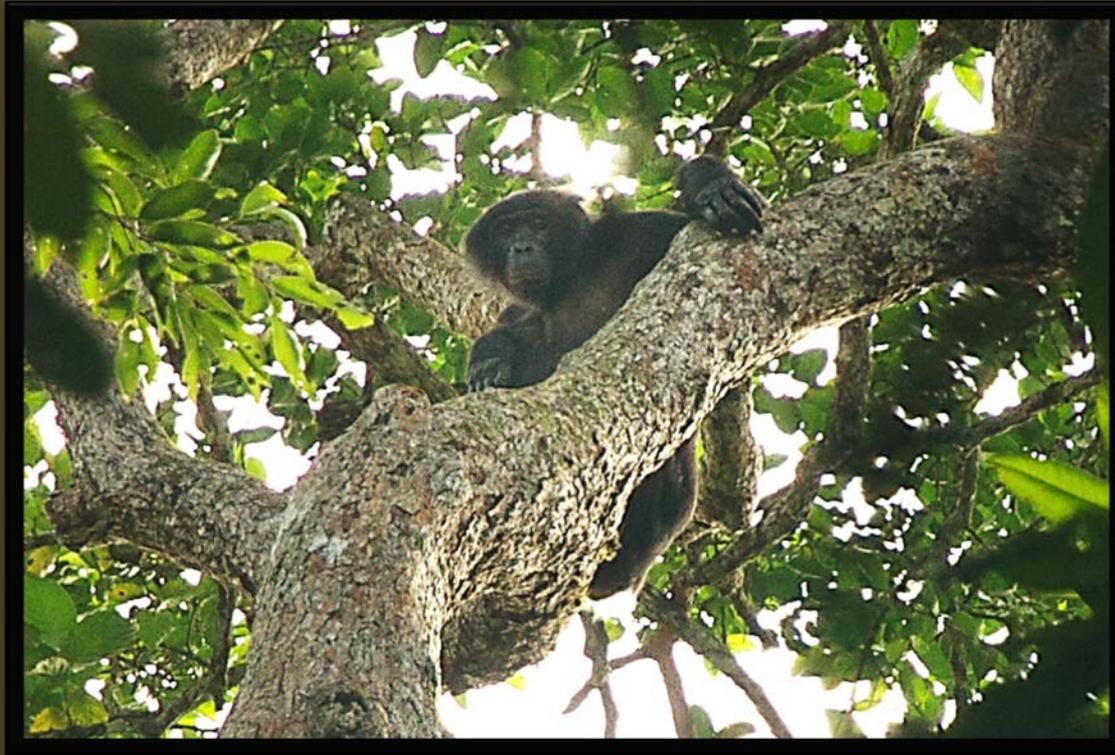
**Tompoco/Watsi Market - Guard Rations  
\$21,000 annual trade**





Estate Guard Camp and Field Day





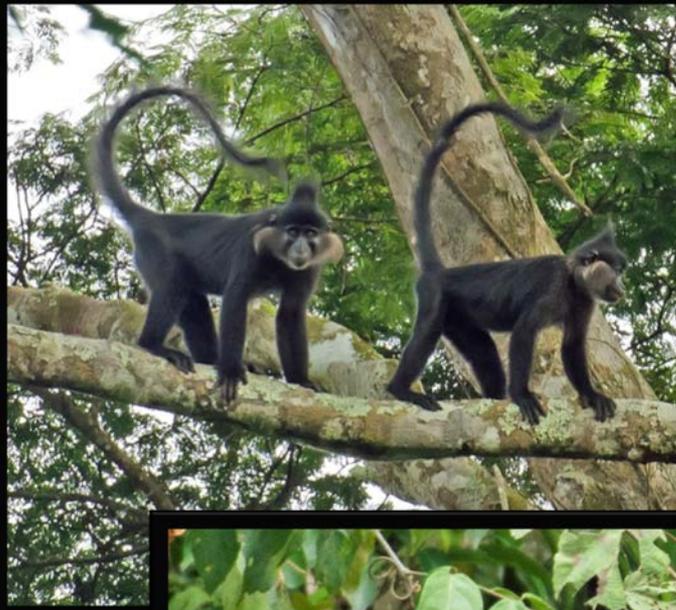
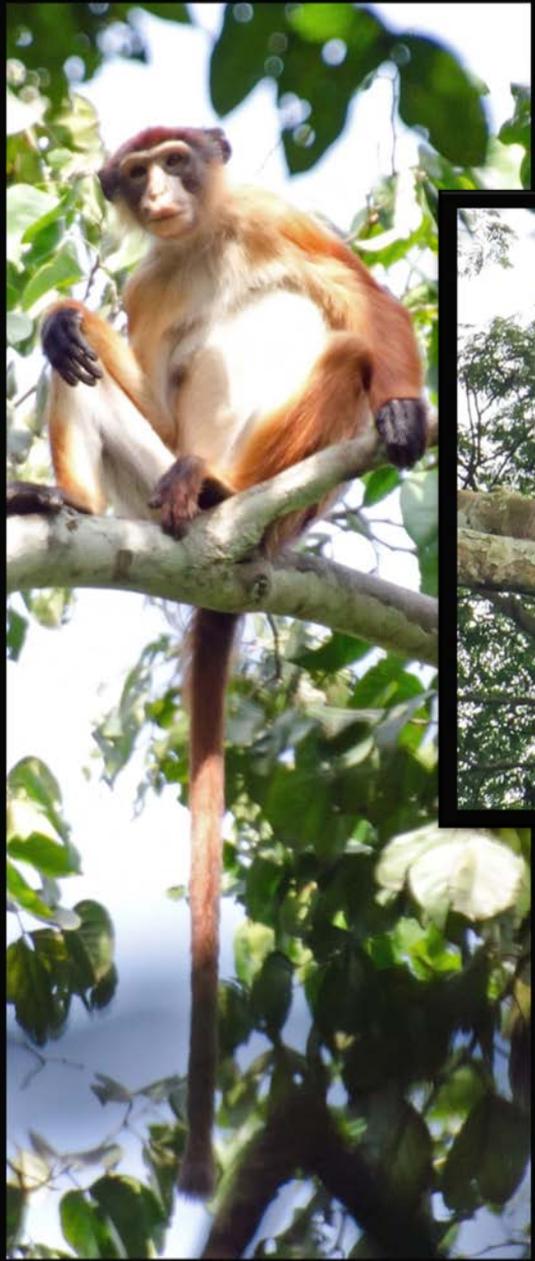
- Near zero poaching levels in the Etate surveillance area
- Discovered a large, continuous bonobo population, ~ 4,300 bonobos
- Expanded patrols over this area by ~60 times



**Elephant Bai on the Yenge**

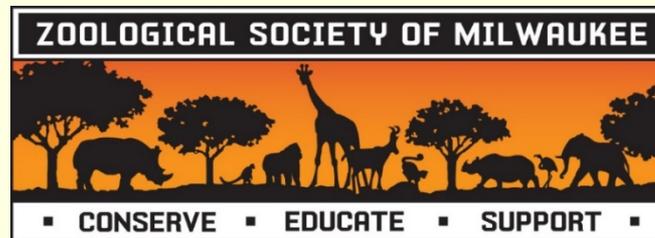


- Gaining control over the Yenge River and Dare Dare



- **Salonga National Park, 33,317 km<sup>2</sup> lowland tropical forest**
- **Holds >40% world's bonobo population**
- **Highest potential for forest elephant recovery in DRC**
- **Headwaters of Congo River system – its feeding the country**
- **Salonga merits our continued investment to become a fully functioning park.**

# Thank you for years of support to the Salonga National Park!



*We thank the following major contributors for their generous support*  
**2012-2015**

The Abraham Foundation

Anonymous

Antonia Foundation

AZA Ape Taxon Advisory Group

AZADV 2014 Conference

AAZK - Greater Cincinnati Chapter

Mary K. Brenner

William Disher

Olga Espira

The Felburn Foundation

Fort Worth Zoo

Vincent Gupta

Jacksonville Zoo

Jones Family Fund

Mary Kay Koerner

Caroline Krider

Mary Kurlinski

Laacke & Joys

Milwaukee County Zoo

Holger & Mary Beth Petersen

Pharmacal

Renaissance Foundation

Steven and Betty Rosenthal

Lacey Sadoff

Elizabeth Scanlon

David Schrupp

Laurens Silver

Steven and Julia Weeks

Wildlife Conservation Network (WCN)

WCN - Mary S. Boardman Conservation Fund

WCN - CGMK Foundation

WCN - Florence and Steven Goldby

Fred and Sandra Young

The Mohammed bin Zayed Species

Conservation Fund

Zoological Society of San Diego