

Lion-livestock conflict mitigation and large carnivore monitoring in West and Central Africa



Ecosystems Grants
Programme

EGP
THE NETHERLANDS



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Photo: Ralph Buij



CEDC-based large carnivore projects (2006-2010)

- Lion range use in Bénoué (de longh et al – 2006-2009) and Waza (Tumenta et al – 2007-2010) NP's
- Human-carnivore conflicts around Bénoué NP (2006)
- Large carnivore monitoring in the Bénoué complex, with special reference to Painted Dog status assessment (Feb 2007 – June 2010)
- ROCAL strengthening of network and Human – Lion conflict resolution in 4 W/C African countries (Nov 2008 – Aug 2010)

IUCN-NL/EGP funded ROCAL Project

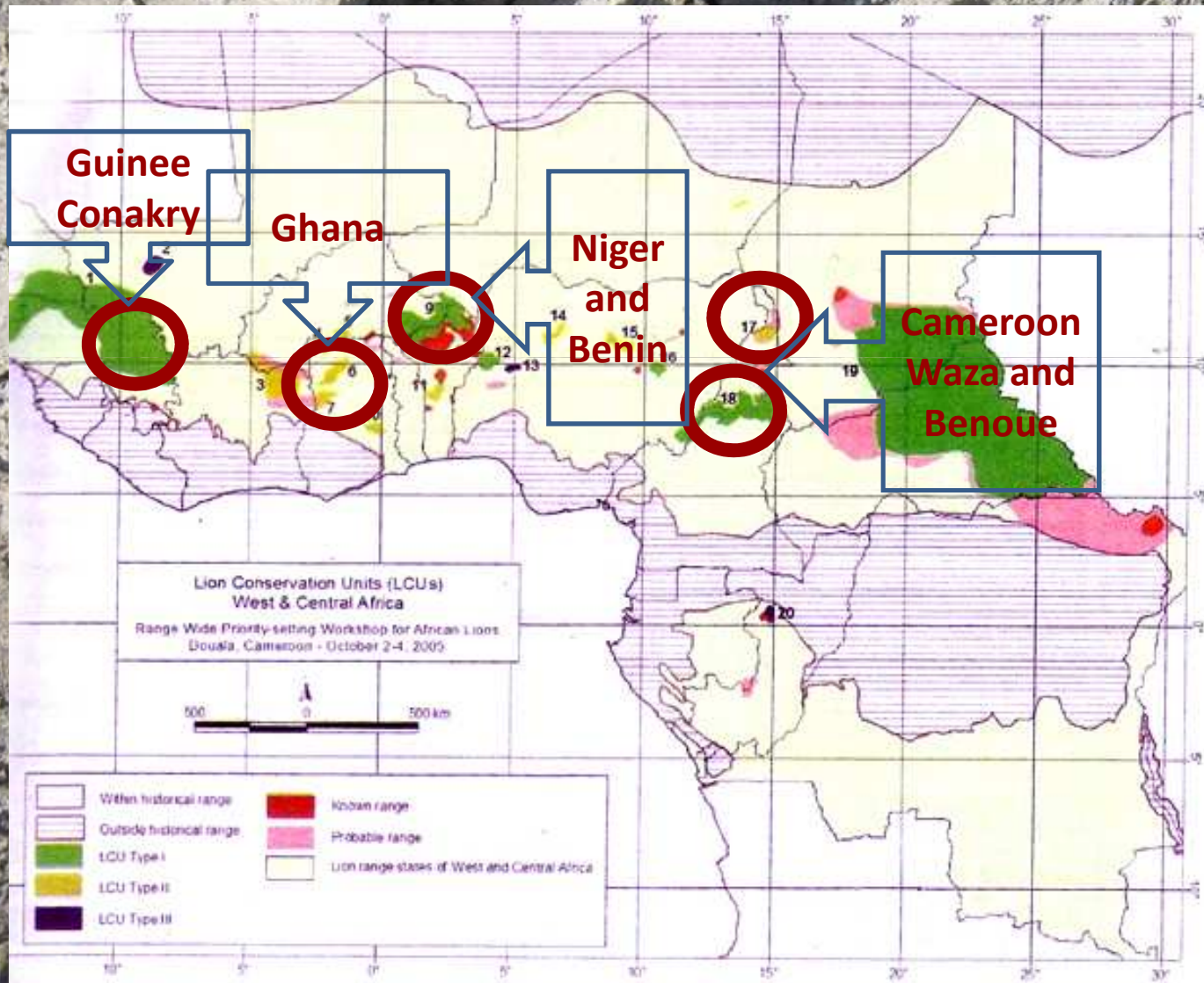
Dec 2008- Aug 2010

MAJOR AIM:

Strengthening a network for lion conservation (ROCAL) while practising human-lion-conflict mitigation in areas where further progress is needed

Lioness, Waza N.P. Cameroon, Dec 2008

ROCAL Human – Lion conflict resolution in 5 W/C African countries (6 Micro-projects)



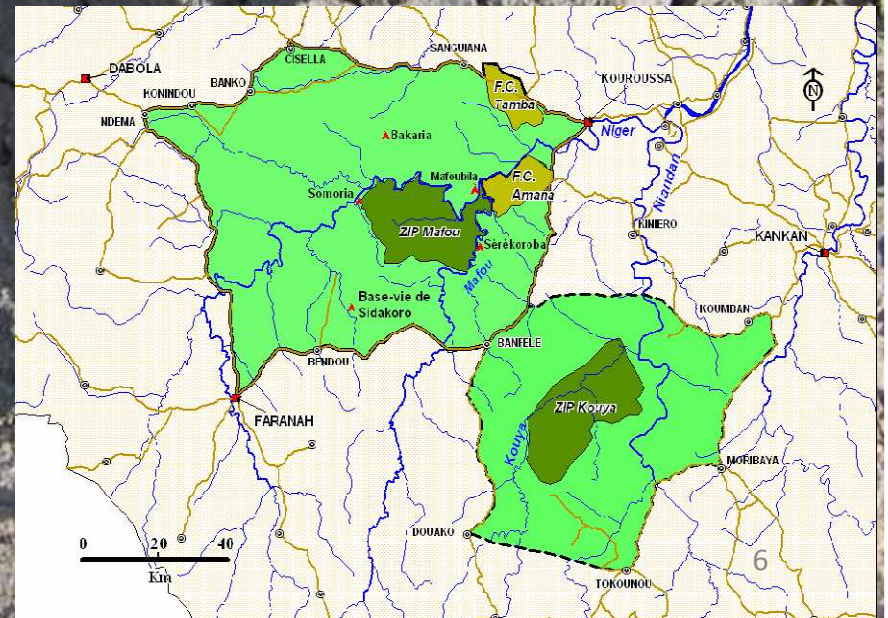
ROCAL Human – Lion conflict resolution in 4 W/C African countries (6 Micro-projects)

- MP Benin (Aristide Tehou) :
 - Focus on residential livestock holders around Pendjari NP
 - 2 new bomas constructed
 - 2 old bomas improved
 - 30 livestock owners trained in use of fertilizers from cattle dung for organic cotton production
 - 12 fertilizer basins built



ROCAL Human – Lion conflict resolution in 4 W/C African countries (6 Micro-projects)

- MP Republic of Guinea (Oulare Aboubacar):
 - Focus on communities around Biosphere Reserve Haut Niger and capacity building of park staff
 - 5 park staff trained in calling station method to monitor lion population
 - 30 communities instructed on how to use “lion chase method”
 - 8 enclosures built



ROCAL Human – Lion conflict resolution in 4 W/C African countries (6 Micro-projects)

- MP Niger (Hamissou Malam Garba):
 - Focus on communities around “W” NP
 - Training of “livestock protection brigade” (5 x 2 villagers): responsible for reporting and follow-up of each livestock predation event, communication with park staff
 - 85 project posters and 300 flyers distributed among 6 schools and 5 villages
 - 7 new enclosures built, 13 enclosures reinforced



ROCAL Human – Lion conflict resolution in 4 W/C African countries (6 Micro-projects)

- MP Ghana (Moses Kofi):
 - Lion numbers dropped dramatically in Mole NP
 - Lion presence not confirmed during camera trapping
 - 4 Eco-guardians trained in track surveys and camera trapping
 - Urgent protection measures required
 - Burton *et al* 2010



ROCAL Human – Lion conflict resolution in 4 W/C African countries (6 Micro-projects)

- MP Cameroon-Bénoué (Saleh Adam):

- Focus particularly on nomadic livestock owners
- Reinforcement of livestock-corridors through sessions with herders
- Significant reduction of entries by livestock; wood gatherers and gold seekers remain a problem





ROCAL Human – Lion conflict resolution in 4 W/C African countries (6 Micro-projects)

- MP Cameroon-Waza:
 - Lion status assessment revealed dramatic drop in numbers (Tumenta et al. 2009): 17-20 individuals left in the park
 - Urgent need for increased protection measures
 - Vehicle repairs to continue patrols
 - Basic salaries for 3 eco-guards
 - Media campaign
 - Workshop to develop an emergency action plan (September 2009)





IUCN-NL/EGP funded ROCAL Project : Conclusions and Follow-up

- Effective conflict mitigation on a local scale
- Strengthening of anti-poaching capacity for 4 NP's in the region
- ROCAL Network is still growing
- Active fund raising should ensure future continuation of projects
 - LCI West/Central Africa
 - Lion Guard pilot project

Large carnivore monitoring in the Bénoué Complex



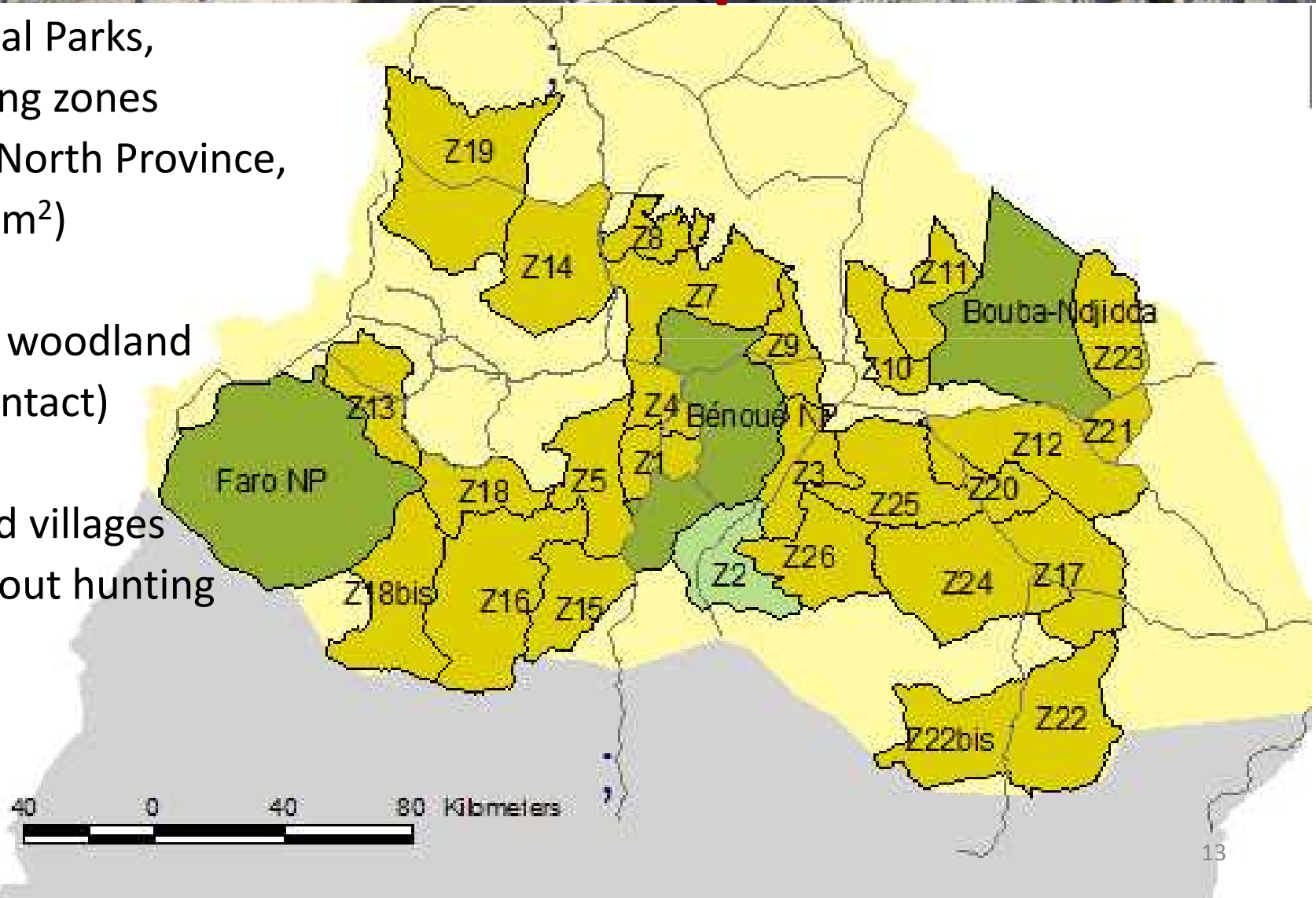
Lion Helias, Bénoué river, Jan 2008

Large carnivore monitoring in the Bénoué Complex

3 National Parks,
26 hunting zones
(44% of North Province,
22.000 km²)

Savanna woodland
(largely intact)

Scattered villages
Throughout hunting
Zones



Large carnivore monitoring in the Bénoué Complex

Objectives:

- Determine status of Painted dog and Cheetah
- Relate large carnivore distribution to:
 - Management regimes
 - Human disturbance
 - Habitat characteristics
 - Prey availability
- Develop cost-effective techniques for carnivore monitoring in large areas



Large carnivore monitoring in the Bénoué Complex

Methods:

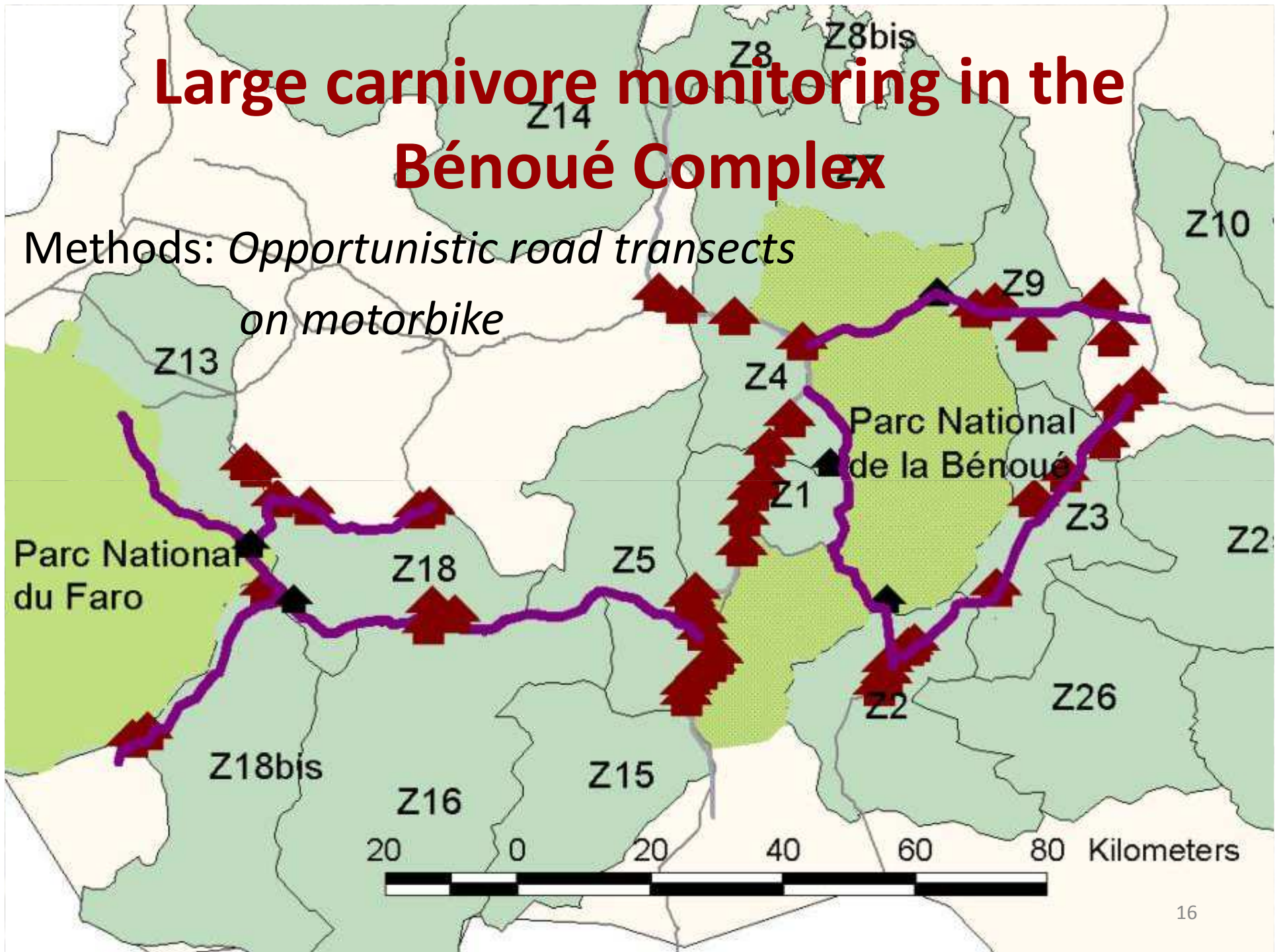
1) *Opportunistic road transects throughout the complex by a team of 2 eco-guards on motorbike with trackstick*

- Records of all encountered tracks (Lion, leopard, sp hyena, “dog”)
- Placement of camera traps at reported “painted dog den sites”
- Awareness raising through Flyers



Large carnivore monitoring in the Bénoué Complex

Methods: *Opportunistic road transects
on motorbike*



Large carnivore monitoring in the Bénoué Complex

Preliminary results

1) *Opportunistic track surveys on motorbike:*

- 1 700 km surveyed
- 6 Trackers trained
- Motorbike can navigate difficult terrain
- Tracksticks are effective tool



Large carnivore monitoring in the Bénoué Complex

Preliminary results (continued):

1) *Opportunistic track surveys on motorbike:*

- Interviews: 24 village chiefs, 20 trackers, 19 nomadic cattle herders
- 30 % claimed Lycaon observations
- No evidence found of Lycaon
- Negative perception of Lycaon by professional hunters
- Spotted hyena relatively common, lion sparsely distributed, leopard relatively common but evidence found of illegal hunting of leopard

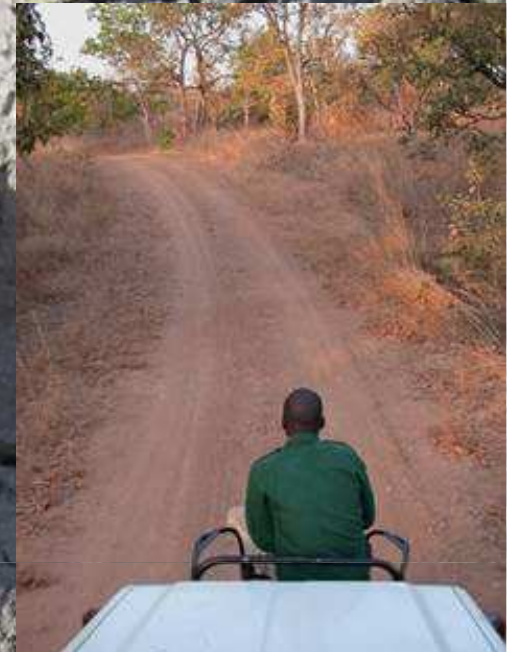


Large carnivore monitoring in the Bénoué Complex

Methods:

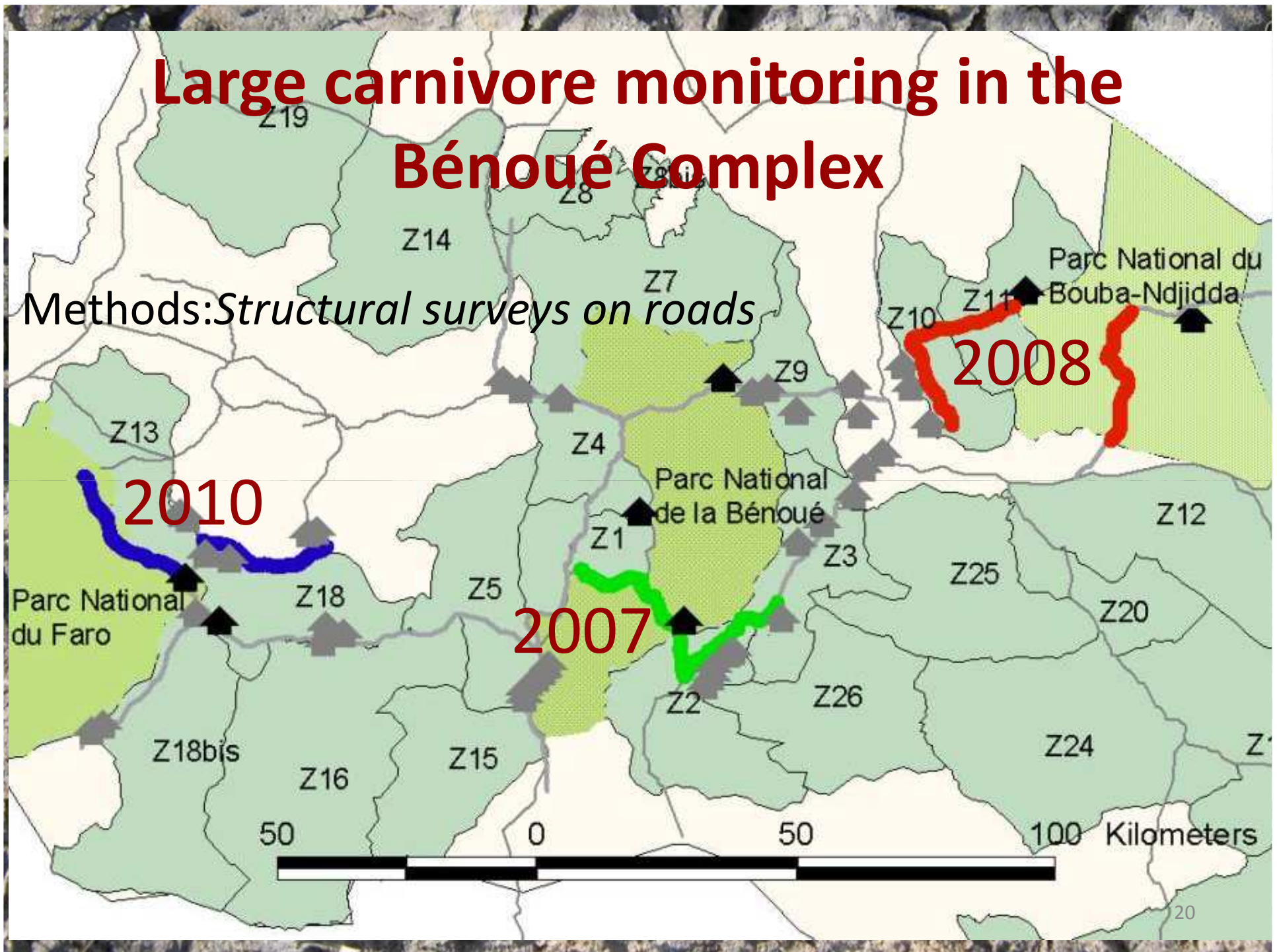
2) *Structural surveys on roads in 3 national parks and surrounding hunting zones:*

- Track counts on 25 km road transects (by car)
- 6 x 10 baited Camera trapping sites
- Herbivore counts
- habitat characteristics



Large carnivore monitoring in the Bénoué Complex

Methods: *Structural surveys on roads*



Large carnivore monitoring in the Bénoué Complex

Preliminary results

2) *Structural track surveys and camera trapping:*

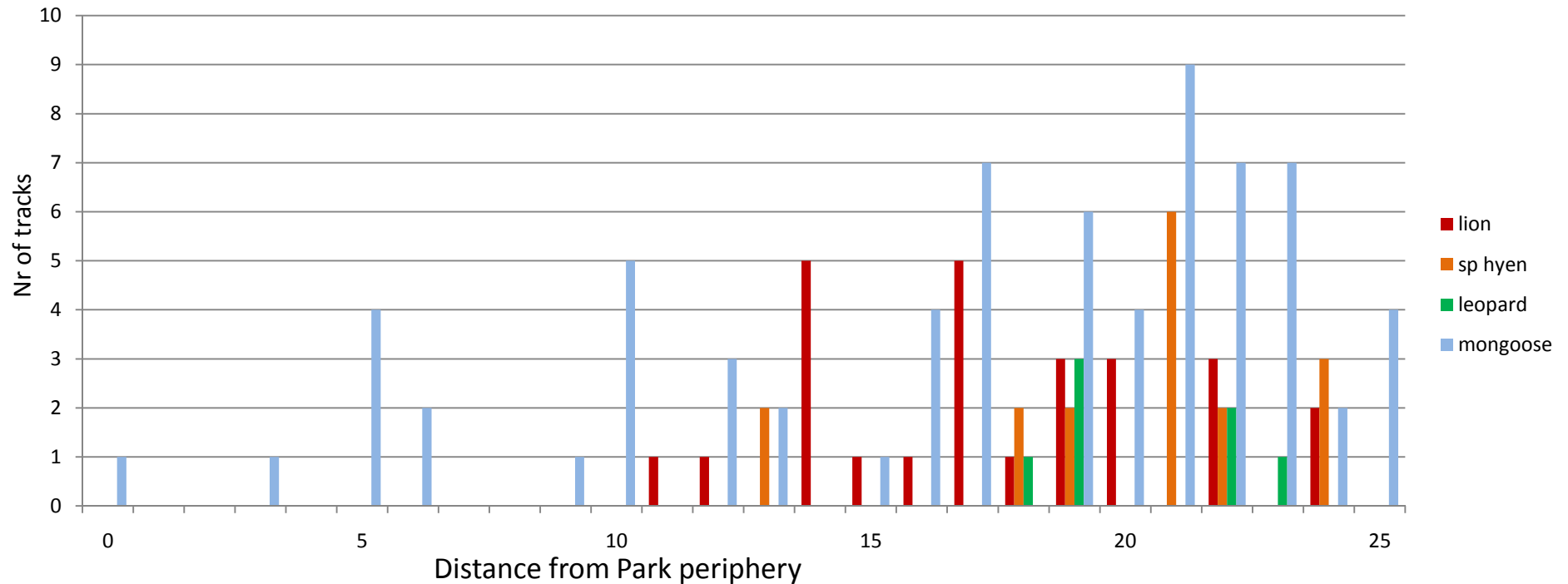
- Rel. Lion abundance (tracks/km) lower in Hunting Zones
- Herbivore abundance lower in Hunting Zones
- Spotted hyena and leopard avoid villages, agricultural lands
- Afr. Civet abundance higher near villages



Large carnivore monitoring in the Bénoué Complex

Preliminary results (continued)

- Gradient of higher occurrence towards central park area for almost all carnivores



Large carnivore monitoring in the Bénoué Complex

- Preliminary results (continued)

Average track densities (tracks/km²) on 25-km transect lines (x 16)

| | Benoue | Bouabandjida | Faro |
|---------|--------|--------------|------|
| Hyena | 0,12 | 0,03 | 0,21 |
| Lion | 0,03 | 0,17 | 0,02 |
| Leopard | 0,01 | 0,04 | 0,05 |

Large carnivore monitoring in the Bénoué Complex

| Camera Trapping | Track Surveys |
|--|--|
| Initially costly, but low-cost implementation | Costly due to fulltime trained trackers |
| Low frequency of photographic captures | Rapid sampling of large number of tracks |
| Higher species diversity, including rare species | Rare species are more often missed |
| ID up to species level usually possible | ID up to species level sometimes not possible (e.g. Mongoose, hyena, jackal sps) |
| Individual recognition sometimes possible | Individual recognition usually impossible |
| Effective in most habitats | Soil substrate and road accesability are limiting factors |



Large carnivore monitoring in the Bénoué Complex

Conclusions:

- Painted dog: *Functionally Extirpated*
- Less prey in hunting zones vs parks
- Lions follow this trend
- Less prey and carnivores towards peripheral zones
- Policies and perceptions have to change in order to conserve wildlife in an area where 75% is covered by hunting zones:
 - Create incentives for hunters and local communities
 - Reinforcement of laws
 - Use regular monitoring surveys to establish hunting quota



Large carnivore monitoring in the Bénoué Complex

Conclusions

- Track counts and camera trapping easily combined:

Best of both methods

- Protocol available for use in other areas

- Analyses ongoing:

in prep: Croes, Rasmussen, de longh and Buij, Status and distribution of large carnivores in the Bénoué Complex



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ECOLE DE FAUNE GAROUA

BENOUE NP

BOUBA NDJIDA NP

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