



Universiteit Leiden



# Rapid decline of lion population in Waza National Park; lessons learned for park management

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# Rationale

- Lion (*Panthera leo*) is a species of international importance, widely distributed in the past
- Keystone species, conserving lions help to conserve many other species and the huge habitat within which they live
- Flagship species that provides revenue through tourism and legal hunting

# Population trends

- Global lion population decline from over 100,000 in the 1980s to 50,000 in the 1990s and to 20,000 in the 2000s (National Geographic Society)
- The lion population in WNP, declining from 100 lions in 1962 (Flizot, 1962) to about 40-60 lions in 2002 (Bauer, 2003)

# Historic and current distribution of lions in Cameroon

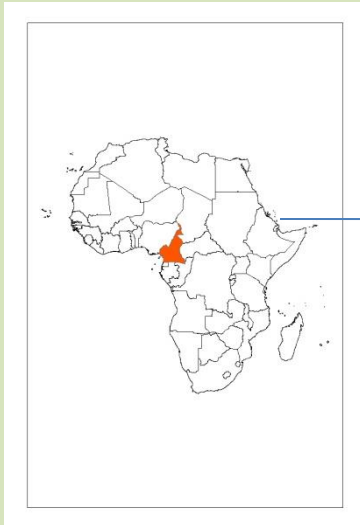
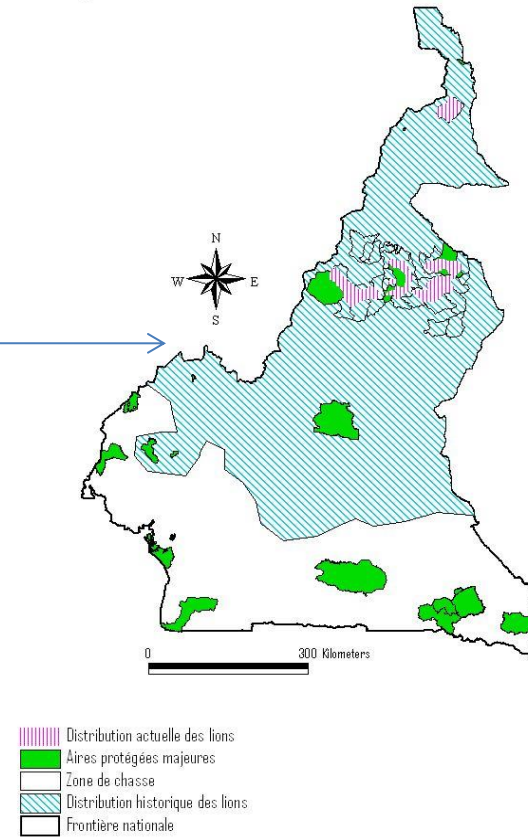
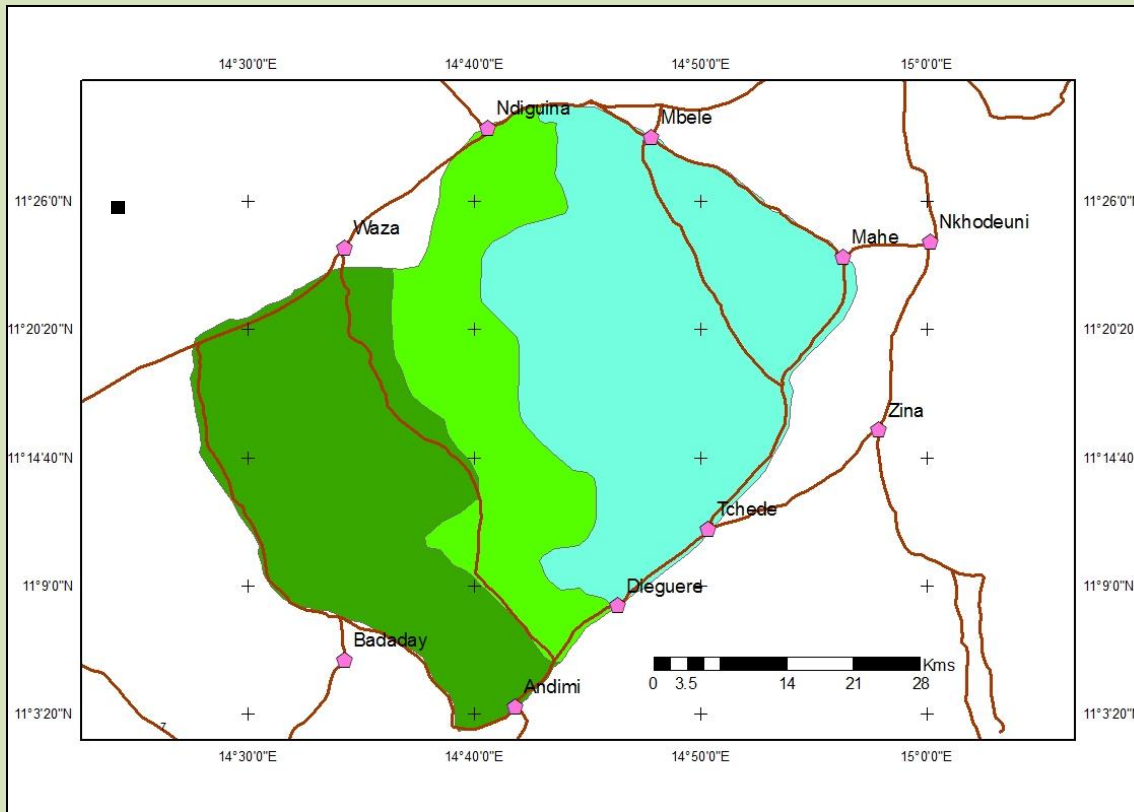







Figure 4 : Fragmentation de l'aire de distribution des lions au Cameroun

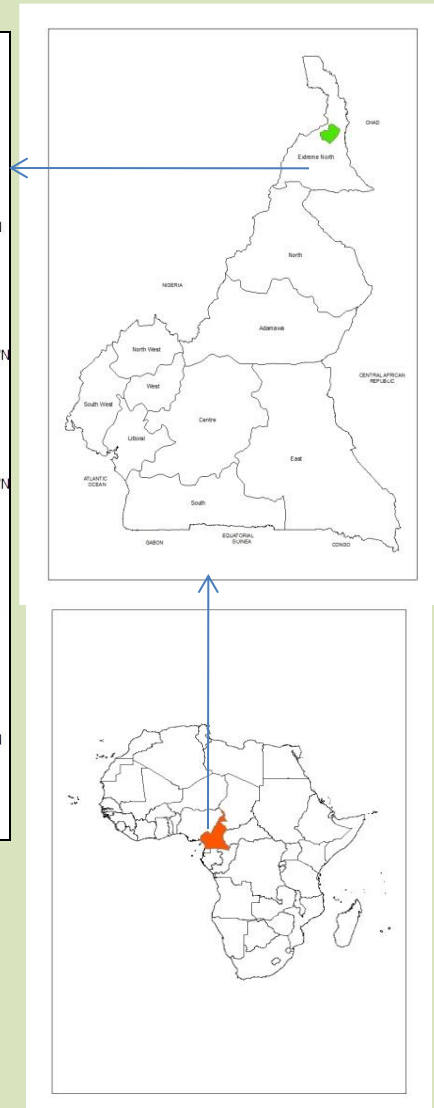


# Location of Waza National Park



## Legend

-  Villages
-  Road Network
-  Acacia seyal Savanna
-  Woodland Savanna
-  Floodplain Grassland Savanna



# Waza National Park

- High population density and habitat conversion around had edged park
- Large number of pastoralists enter the Waza Logone area each year resulting to the presence of a high density of livestock around the park
- Natural prey base for the lion seriously depleted

# Research

- Four lions (2 males, 2 females) were collared with GPS PLUS download collars equipped with a VHF transmitter
- Lion were regularly monitored through telemetry

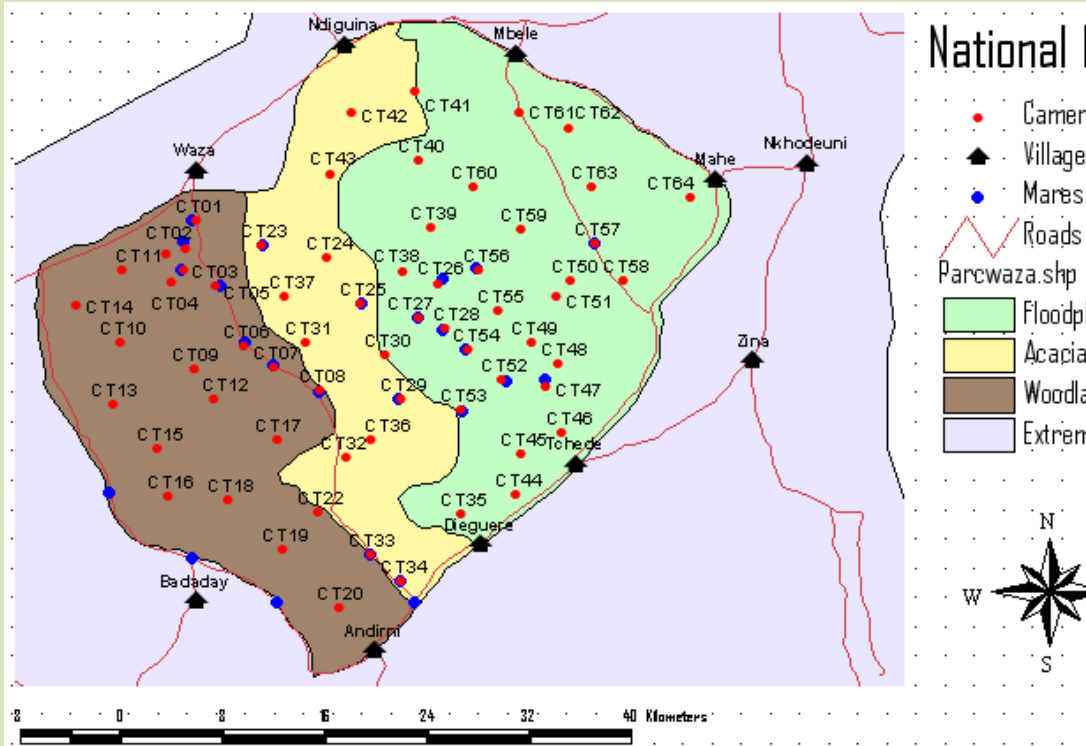


# Testing radio receiver for lion research in Waza NP

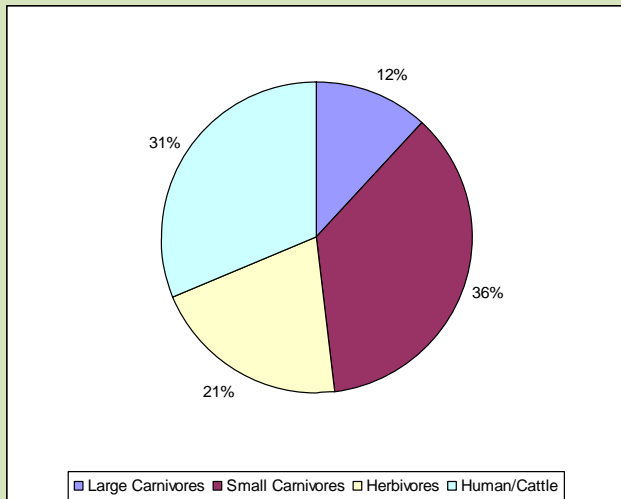
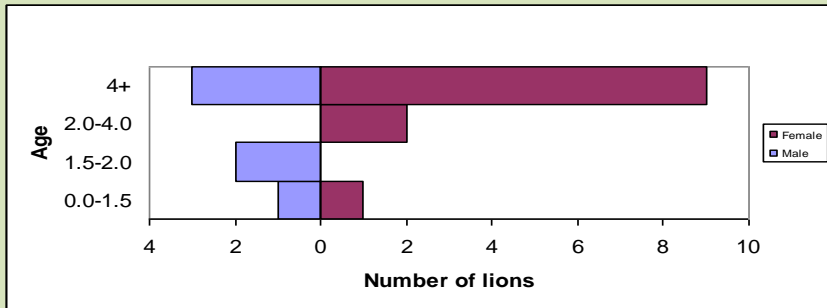




# Camera trapping



# Results



- 14-21 adult individuals counted in 2008 (Tumenta et al.,2009)
- 3 large carnivores, 9 small carnivores & 7 herbivores
- High intensity of illegal activities in the park

# Results

- 31% of photograph taken during camera trapping survey to count lions were humans and cattle
- Poaching was alarming, every waterhole in the floodplain had a poacher camp, barbecue and a hideout for shooting prey animals



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# Results

- Two out of the four collared lions were killed within 11 months after collaring by pastoralists
- Collars of killed lions recovered through telemetry near pastoralists camps but no carcasses were recovered
- 60% reduction within five years of lion population

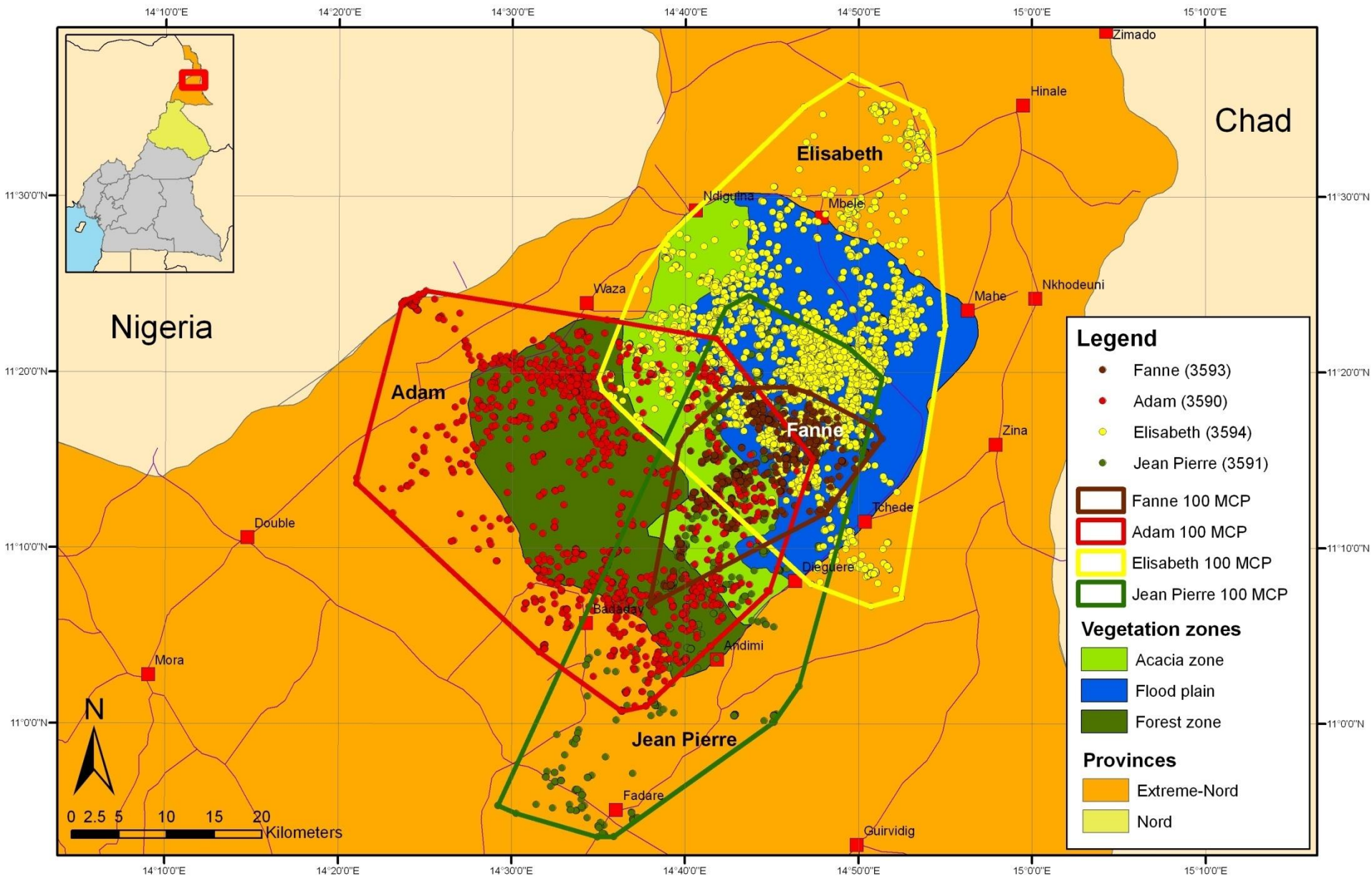
# Observations

- 2008 witnessed an increase of intrusions to a few waterholes within the floodplain
- 2009 permanent presence of cattle at most waterholes, as well as active poachers camps
- During research period very few and irregular anti-poaching patrols were organized
- Lack of a continuous monitoring of park resources

# 4 kobs poached a day



# 100% Minimum convex polygons of lion locations of four lions (Tumenta, 2010)







# Conclusions

- Human-lion conflict is the main factor contributing to the decline of lions in Waza National Park, coupled with the depleted natural prey base
- Probable trade of lion parts, carcasses of the killed lions not recovered
- Lack of park protection and the organized involvement of local populations have played a major role in the degraded state of the park

# Recommendations

- Immediate and effective conservation efforts needed to save the lion and other wildlife in this park
- Awareness, education and encouraging the use of preventive measures including non – lethal deterrents and good livestock husbandry practices

# Acknowledgements

- Institutions: CML, CEDC, UDs
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# Thank you

