

Wildlife-livestock interface in the SE lowveld of Zimbabwe: first results on distribution and contacts between wild and domestic ungulates



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RP-PCP: Research Platform “Production and Conservation in Partnership”

- **4 main scientific partners**
UZ (Vet. Faculty, CASS, GeoES, TREP), NUST (Forest and Wild managt), CNRS (Lyon, CEBC), CIRAD (AGIRs, System)
- **Several partners beneficiaries**
NPWMA (Gonarezhou, Hwange), Zim Veterinary Services...
EU, French Embassy, ANR
- **20 students (5 PhD and 15 Masters), 5 main projects**
- **Academic links with UZ, NUST, U.Pretoria, Competing Claims (U.Wageningen), U. Lyon...**

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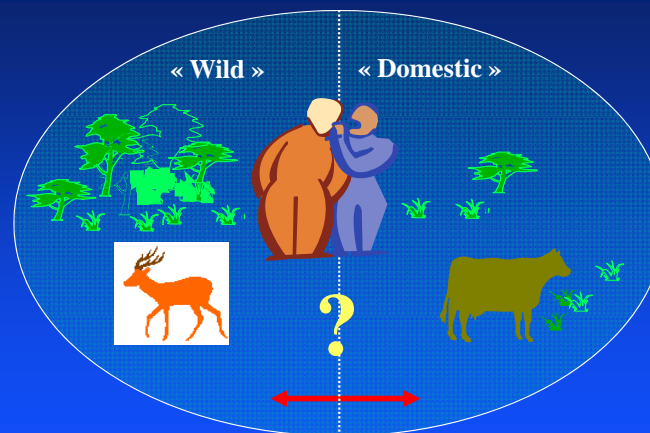
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RP-PCP: 5 thematic fields (“Petals”)

- **5 thematic fields:** Animal health, Ecology, Governance, CA and “Crosscutting”
- **3 main sites:** Hwange NP and periphery, Mid-Zambezi and GLTFCA



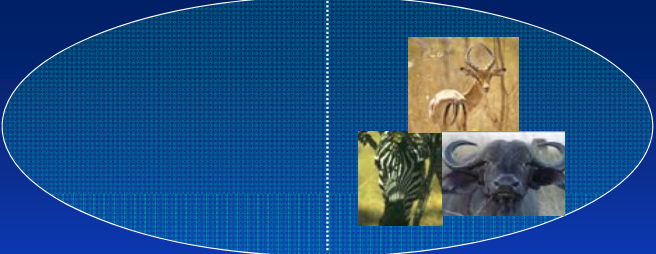
RP-PCP: 1 object of research “Wild-domestic interfaces”



■ Animal health issues at the livestock-wildlife interface of the SEL of Zimbabwe

Hypothesis: diseases of livestock mainly influenced by


- 1) Composition and dynamics of communities of wild/domestic ungulates
- 2) Frequency and intensity of contacts between wild/domestic ungulates



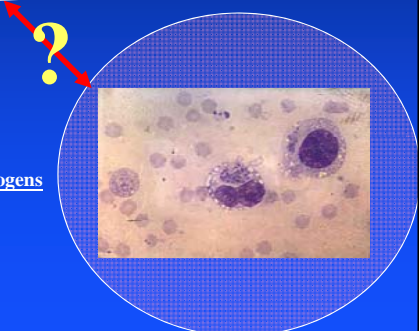
Communities of wild and domestic ungulates



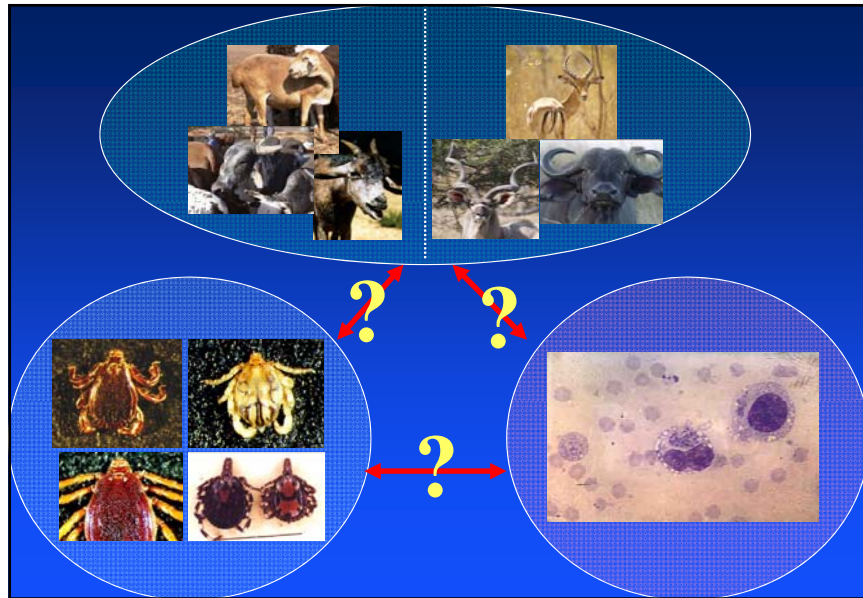
Communities of wild and domestic ungulates



Communities of wild and domestic ungulates



Communities of pathogens



SEL: comparison of 3 contrasted interfaces

- Site 1: Malipati/Mabalauta
- Site 2: Chizvirizvi/Malilangwe
- Site 3: Chikombedzi



■ Research activities 2008: Disease prevalence

- **Prevalence of main diseases and parasites in domestic ungulates**
120 cattle x 3 seasons
3 sites x 60 cattle/goats/sheep

- Zoonosis *AHE#1*
Brucellosis
BTB
- Ticks and TBD: *AHE#2*
Theileria spp
Boophilus spp/Babesia spp
Amblyomma spp/E.ruminantium
- FMD *AHE#3*
- Other viral diseases:
RVF, LSD, ...



■ Research activities 2008: Disease prevalence

- **Prevalence of main diseases and parasites in wild ungulates**
40 buffalo, 25 kudu, 40 impala

- Zoonosis:
Brucellosis
BTB
- Ticks and TBD:
Theileria spp
Boophilus spp/Babesia spp
Amblyomma spp/E.ruminantium
- FMD
- Other viral diseases:
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■ Research activities 2008:

- **Assessment of wild and domestic ungulates communities structures and dynamics**

■ Research activities in 2008

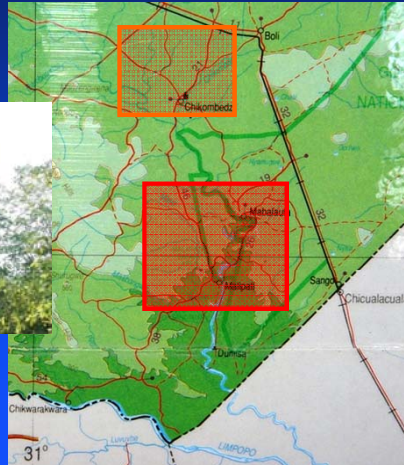
- Assessment of wild and domestic ungulates communities structures and dynamics

- Road counts: *Eco#1*

(3 times/year ; with DNPWM/NUST)

a) Malipati/Mabalauta area

b) Chikombedzi



■ Research activities in 2008

- Assessment of wild and domestic ungulates communities structures and interactions

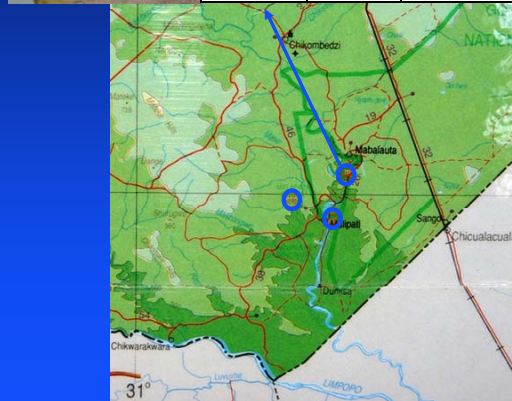
- Water hole monitoring *CC#3*

(12/24 hour counts, with DNPWM/UZ)

3 water holes (9 selected)



Species	Tot Num	Resid Time
Buffalo	10	29.0
Elephant	6	16.0
Impala	335	12.3
Kudu	51	13.8
Nyala	14	15.0

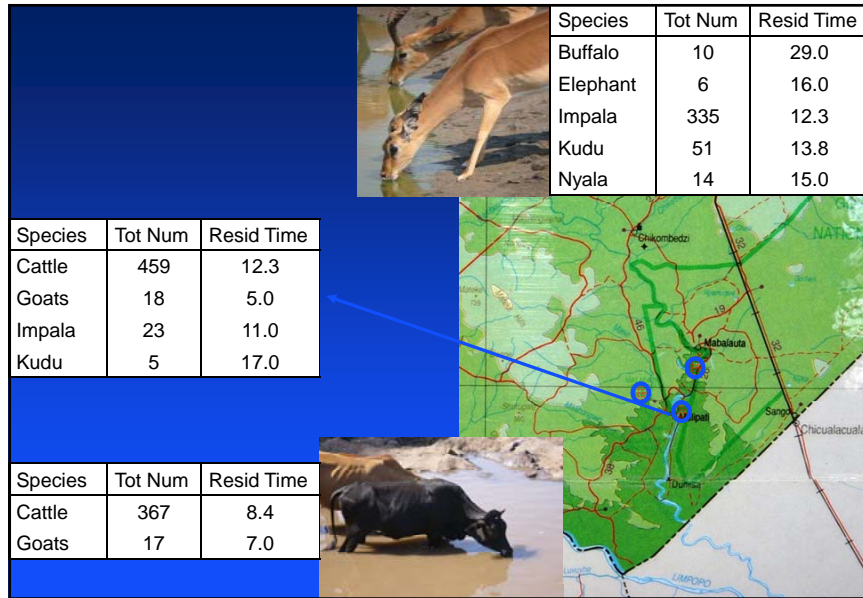


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Species	Tot Num	Resid Time
Cattle	367	8.4
Goats	17	7.0





■ Animal health issues at the livestock-wildlife interface of the SEL of Zimbabwe

- « What is this infamous wildlife-livestock interface ? »

■ Animal health issues at the livestock-wildlife interface of the SEL of Zimbabwe

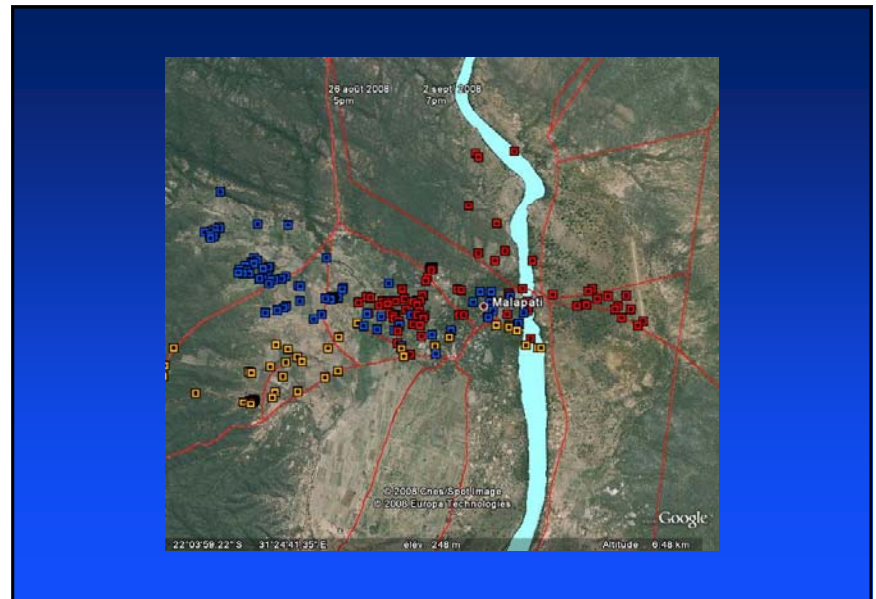
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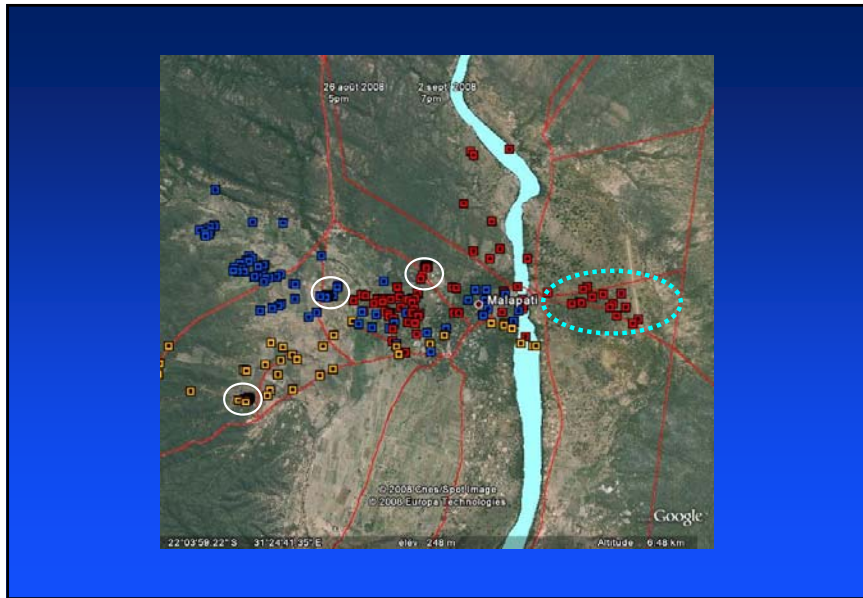
Quantifying movements of cattle

CC#2

The figure includes two photographs:

- Left:** A photograph of a cattle collar (CC#2) attached to a metal cage.
- Right:** A photograph of a man in a white shirt and hat standing next to a wooden structure, possibly a fence or part of a farm.





■ Animal health issues at the livestock-wildlife interface of the SEL of Zimbabwe

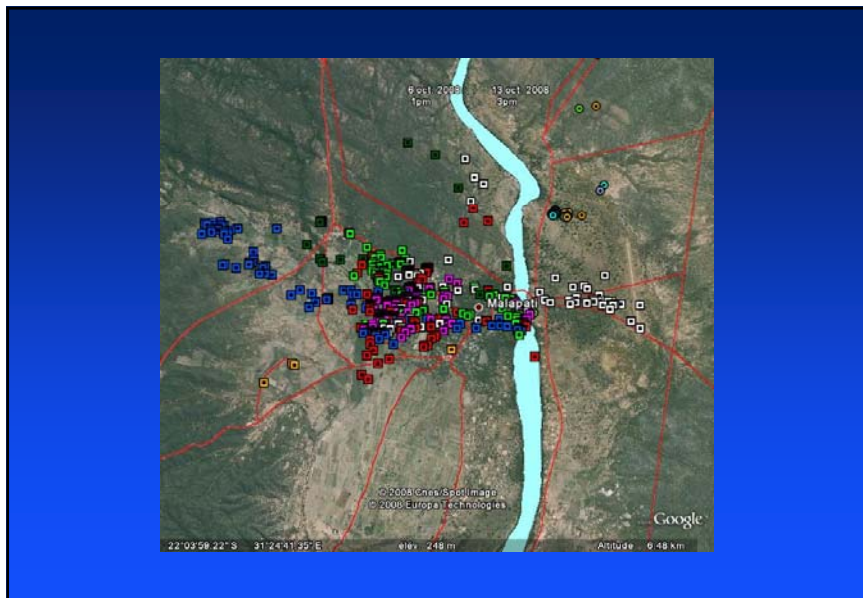
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Quantifying movements of cattle

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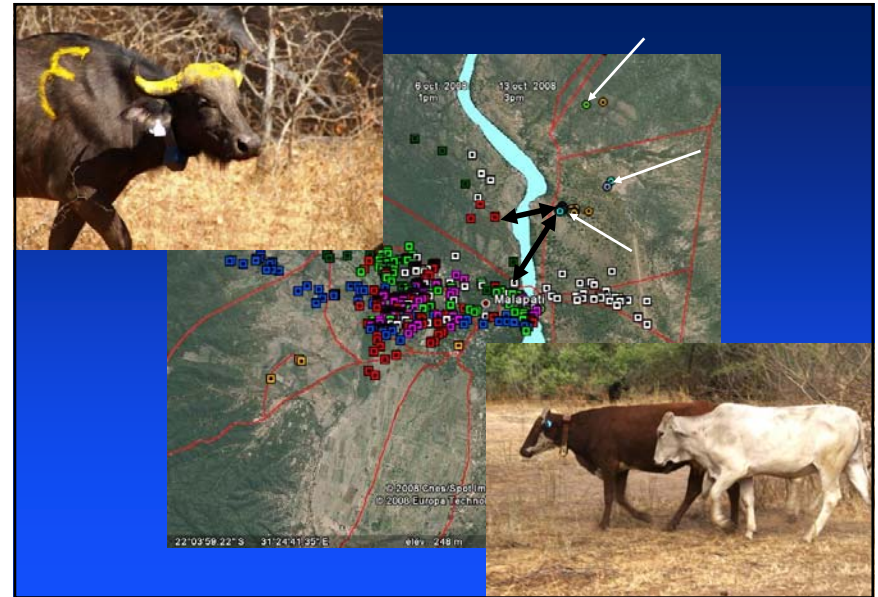
Quantifying movements of buffalo

EU-PARSEL



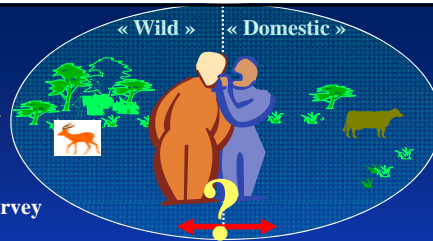
■ Animal health issues at the livestock-wildlife interface of the SEL of Zimbabwe

- « What is this infamous wildlife-livestock interface »
 - Quantifying movements of cattle
 - Quantifying movements of buffalo
 - Quantifying direct contacts (GPS collars, water hole monitoring)



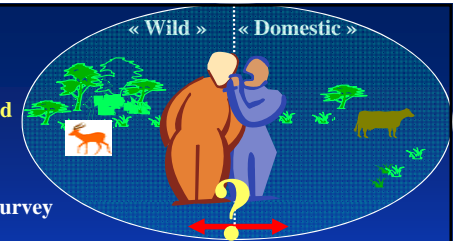
■ Human dimension

- Perception of constraints to livestock production and problems/hopes associated with GLTFCA (paper in prep)
- Perception of livestock diseases and epidemiological role of wildlife (free-list survey in progress)
- Scenario planning and Iterative Assessment in selected communities in Beitbridge (CBNRM#2)
- Zimbabwe component of AHEAD funded “Pathogens, Parks and People” by Cameron, Geoghegan et al (AHE#5)



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■ Applied perspectives

Our ambition is also to contribute to improvement of livelihoods in the SEL by improving livestock management (alleviate pathological constraints)

Ongoing negotiations with stakeholders of 12 dip tanks for efficient and sustainable veterinary services (EU-PARSEL)

Thank you!!

