

Issues of wildlife's conservation in semi arid regions: Case of Burkina Faso biosphere reserves

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Aridity indicators in Burkina Faso

- The boundaries of some isohyets have moved southward over 50 Km.

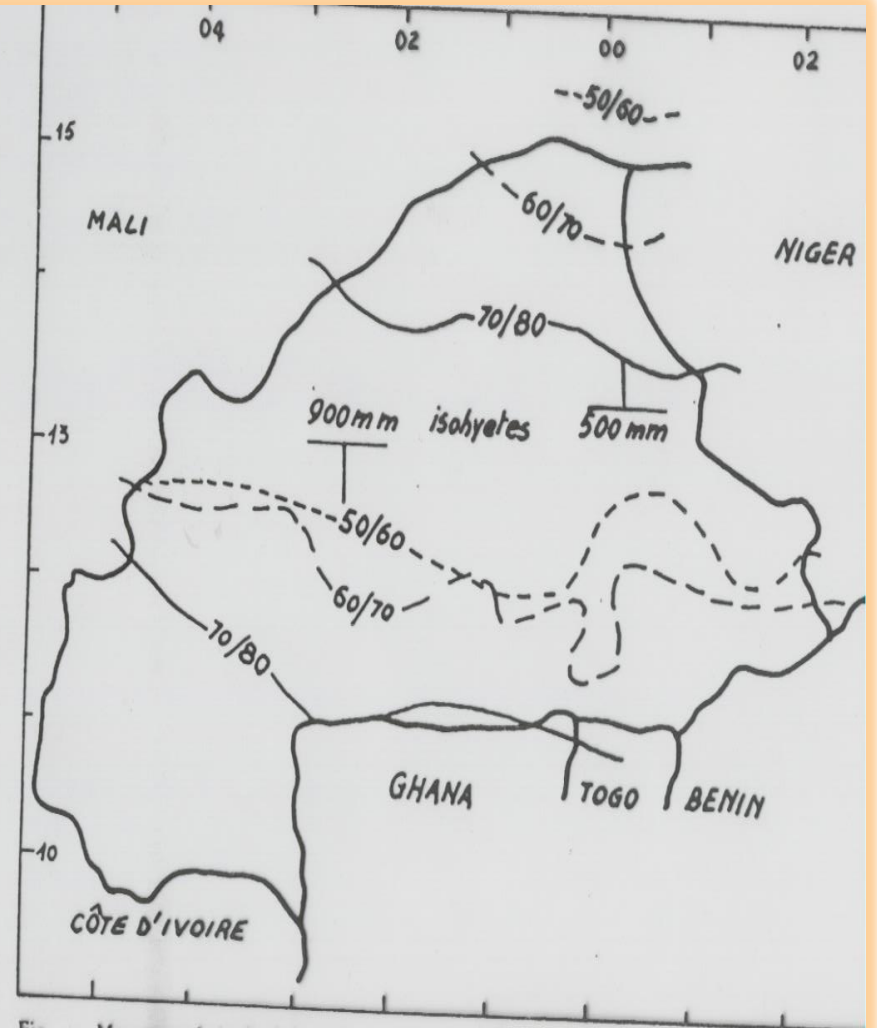
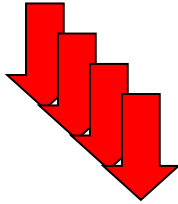


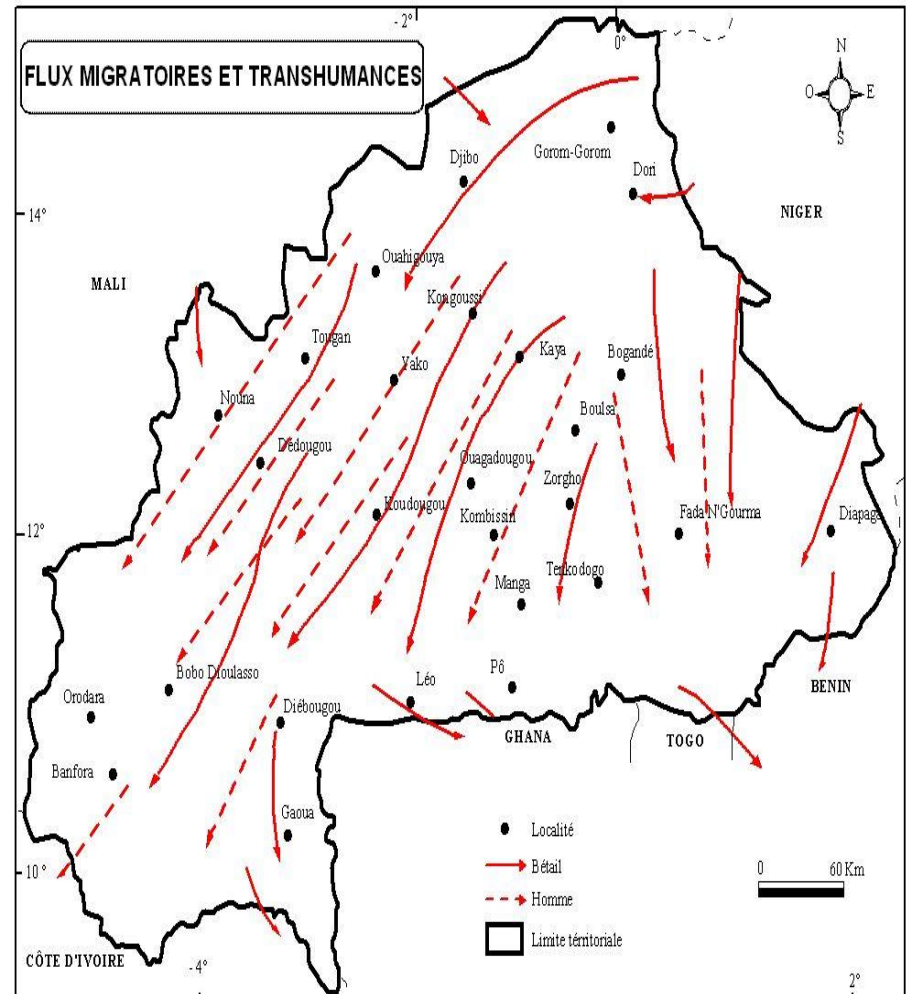
Fig . Mouvement latitudinal des isohyètes 500 mm et 900 mm au cours des trois dernières décennies.
Source: DAFR, 1984 (d'après ALBERGEL et al. 1984, simplifié).

Aridity indicators in BRs

- Climatic changes
- demographic pressures
- Migration to the RB

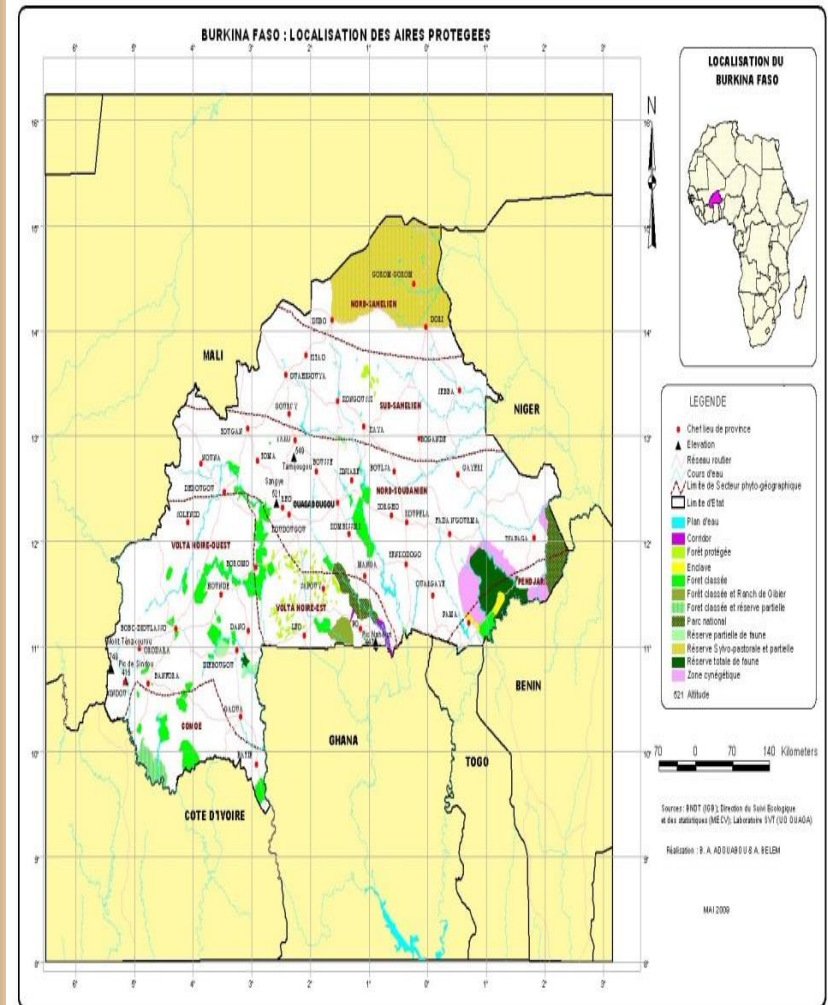


- **accentuated desertification**
- **overexploitation of RN**
- **threat of protected areas and RB**



Indicators: Biosphere Reserves

- Network of 77 protected areas including 27 in wildlife and two BRs
- 13% of the national territory.

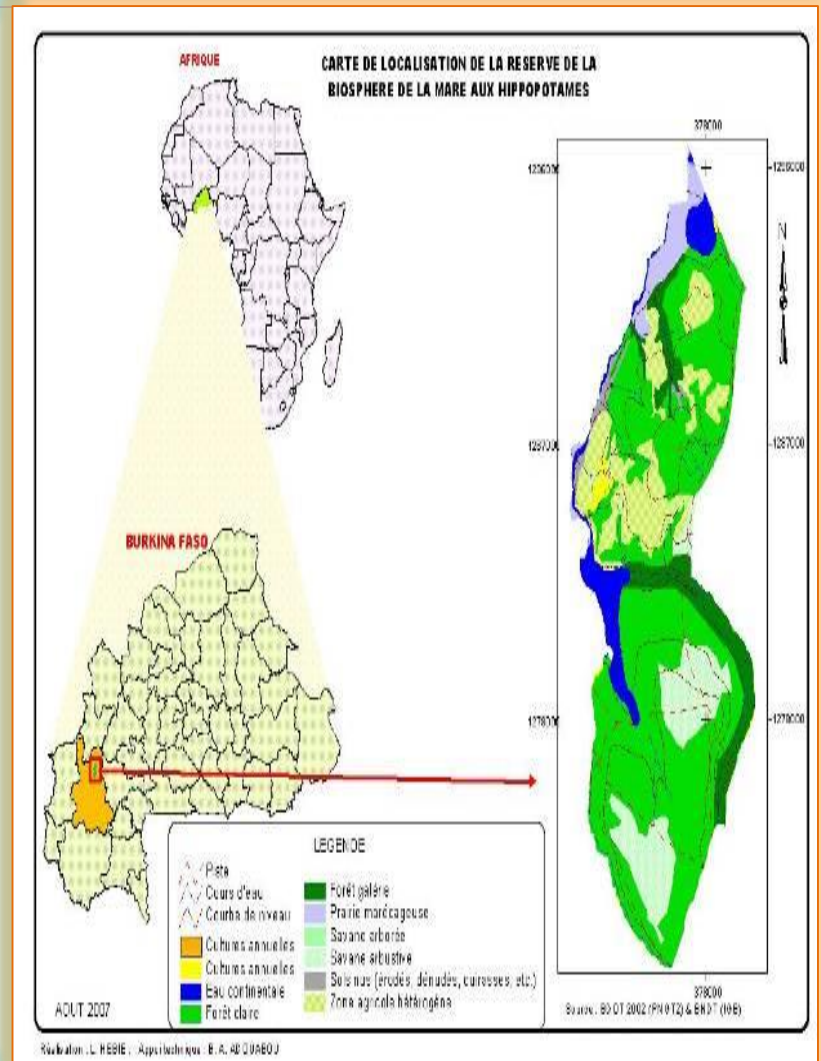


Biosphere Reserve of Mare aux Hippopotames

Classified Forest since March 26th, 1937 :
January 12, 1987: RBMH

Updated RBMH area = 66803.73 ha
Central Area = 6.518 ha
Buffer zone = 9836 ha
Transition area = 50 449.73 ha

Ramsar site: 1990



W Biosphere Reserve transboundary: Component BF

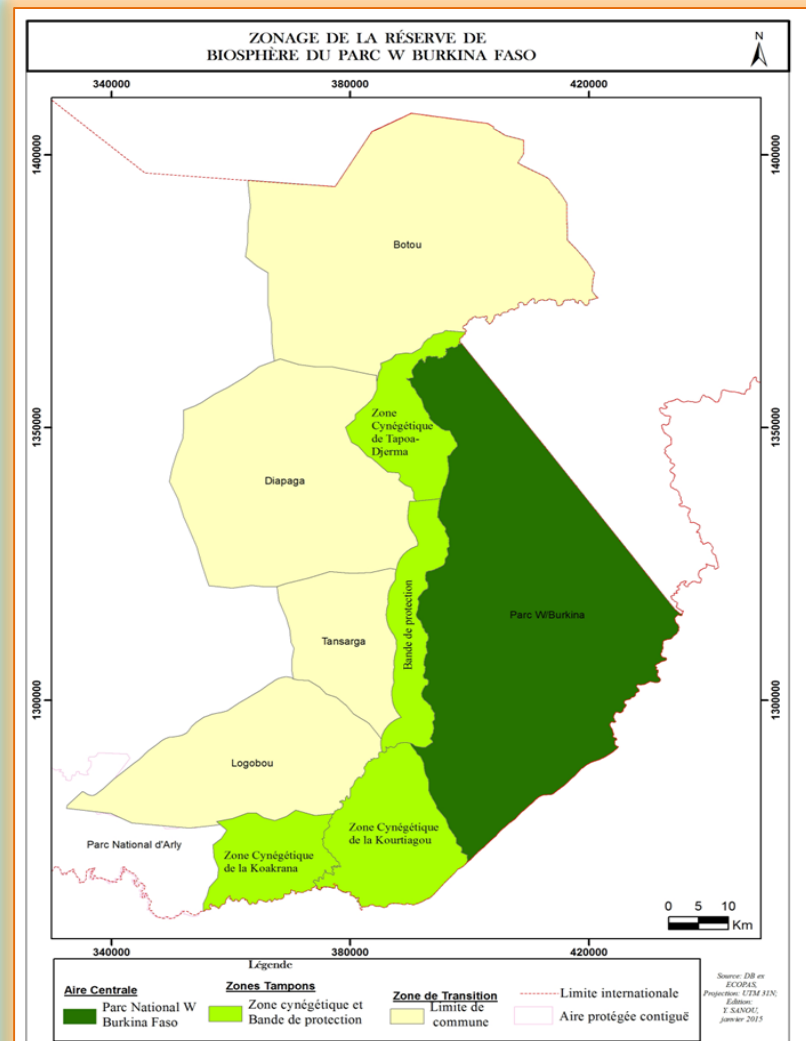
- 1957: National Park called W
- 2002: RBT W Burkina

Total Area = 728,335 ha

Central Area = 235 000 ha

Buffer zone = 76 190 ha

Transition area = 417 145 ha

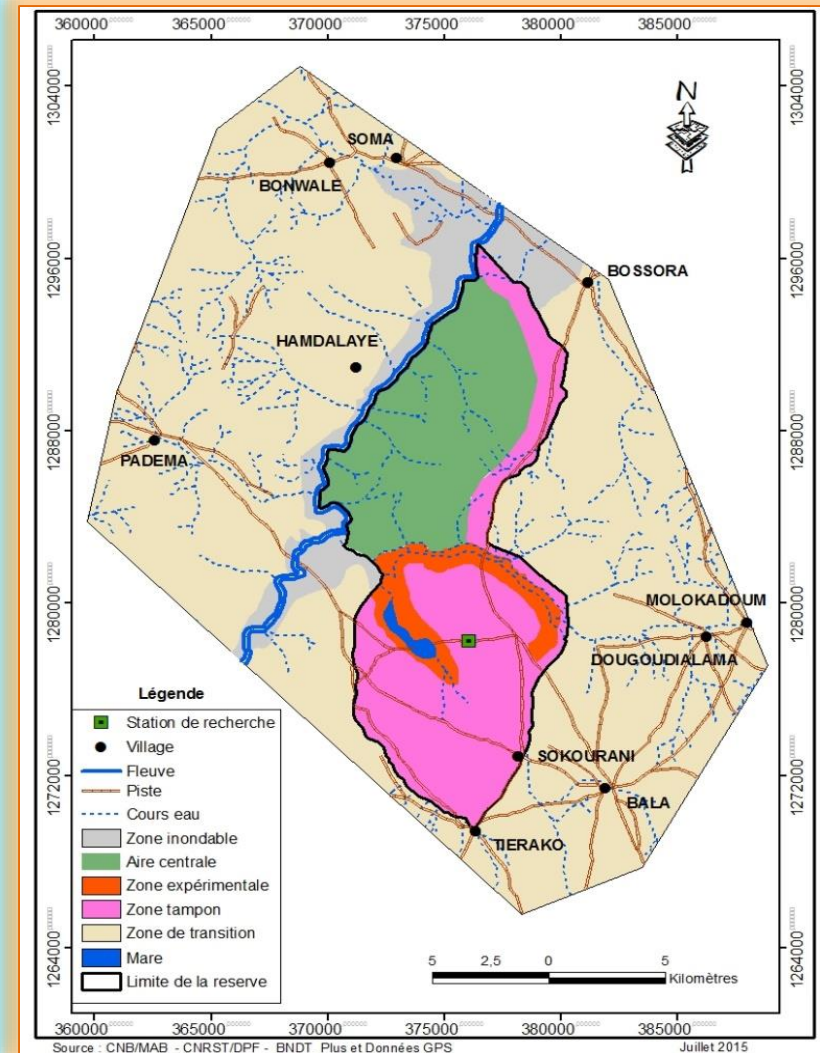


Methodology: Diversity, Human and Climate Impacts

Inventory:

collected data (2004, 2005, 2006 and 2007)

- Number of species
- Number of Herds
- Human activities (livestock, sleeves, traps, tree cutting, shot, look, died animals, bike tracks, ..etc.)



RESULTS

WILDLIFE CONSERVATION

Results: Wildlife Diversity

In Burkina Faso, wild wildlife includes 704 species such as :

- ✓ 128 species of mammals;
- ✓ 516 species of birds;
- ✓ 60 species of reptiles and amphibians;
- ✓ 1,515 species of insect fauna.

(reference: CBD 2010)

- Some species: elephant (*Loxodonta africana*), lion (*Panthera leo*), buffalo (*Syncerus caffer brachyceros*) or roan (*Hippopotragus equinus*) well represented and threatened by aridity

Types of wildlife Habitats

The first type of wildlife habitat is:

- ✓ the anthropic ecosystems village forests, fallow Silvopastoral open access areas (grazing, reduced fallows and pastures) could be taken into account in National Programs



Two types of wildlife habitats

The second type of wildlife habitat is:

- Classified forests and wildlife reserves (hunting dealer) and other RB with special status (poaching, bush fires) could be taken into account in National Programs



Positive Impact of Conservation

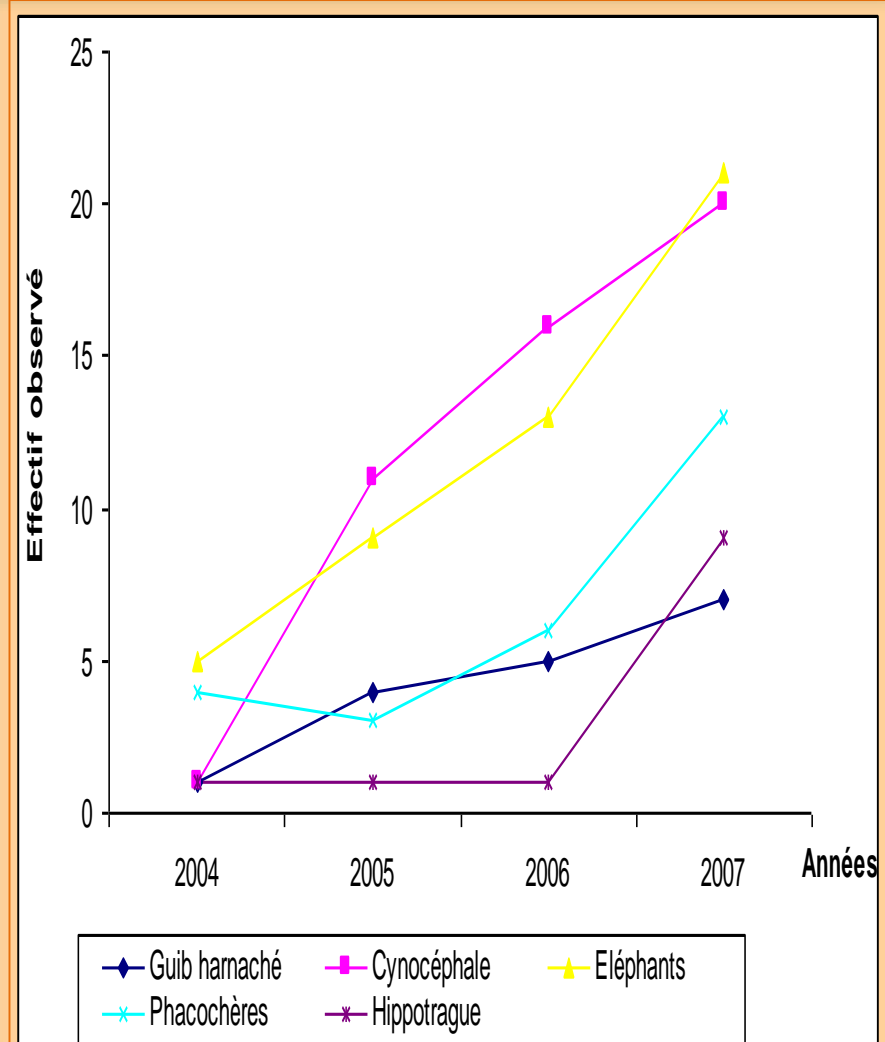
- GEF / MAB project in RBMH
- SUMAMAD project in RBMH
- Participatory approach AGEREF

Positive changes in the workforce from 2004 -2007 species

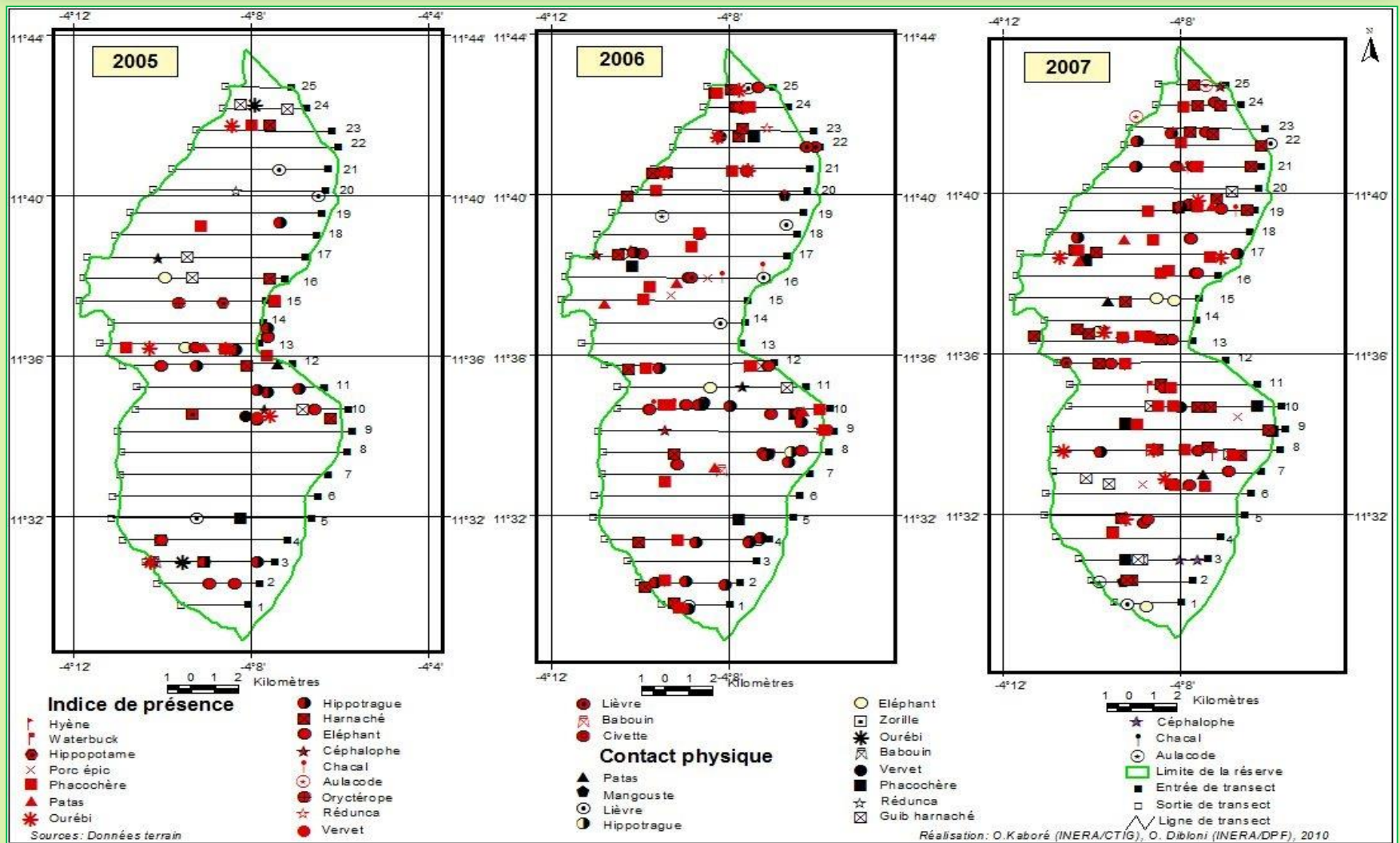
More than 15 species of mammals identified representing an annual growth rate of 36% :

Contacted: 17 in 2004 and 28 in 2007.

Seen by employees: 45 in 2004 and 94 in 2007;



positive Indices of presence of wildlife species in the RBMH



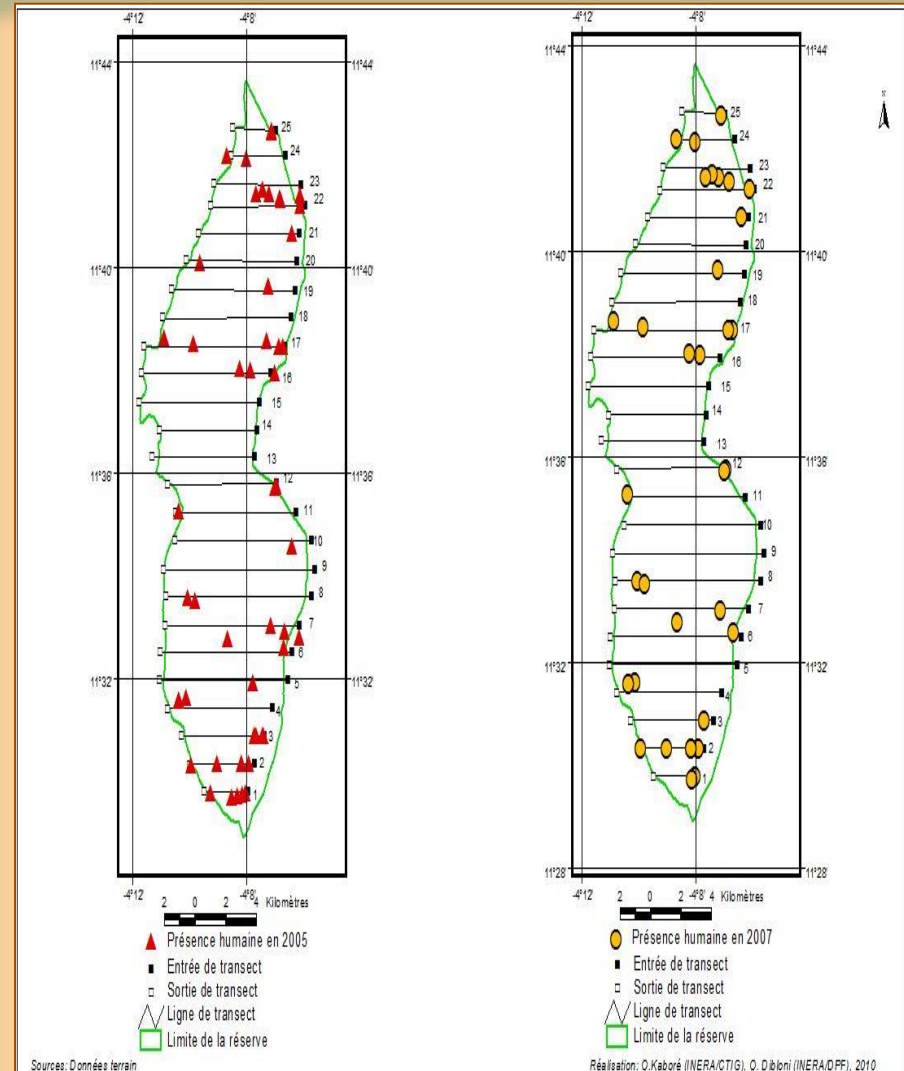
Human impact in RBMH poaching Indices



Human impacts in RBMH: poaching Indices 2005 to 2007

Steadily declining of poaching's indices decrease with a reduction rate of 44.30 % and 58.40 %

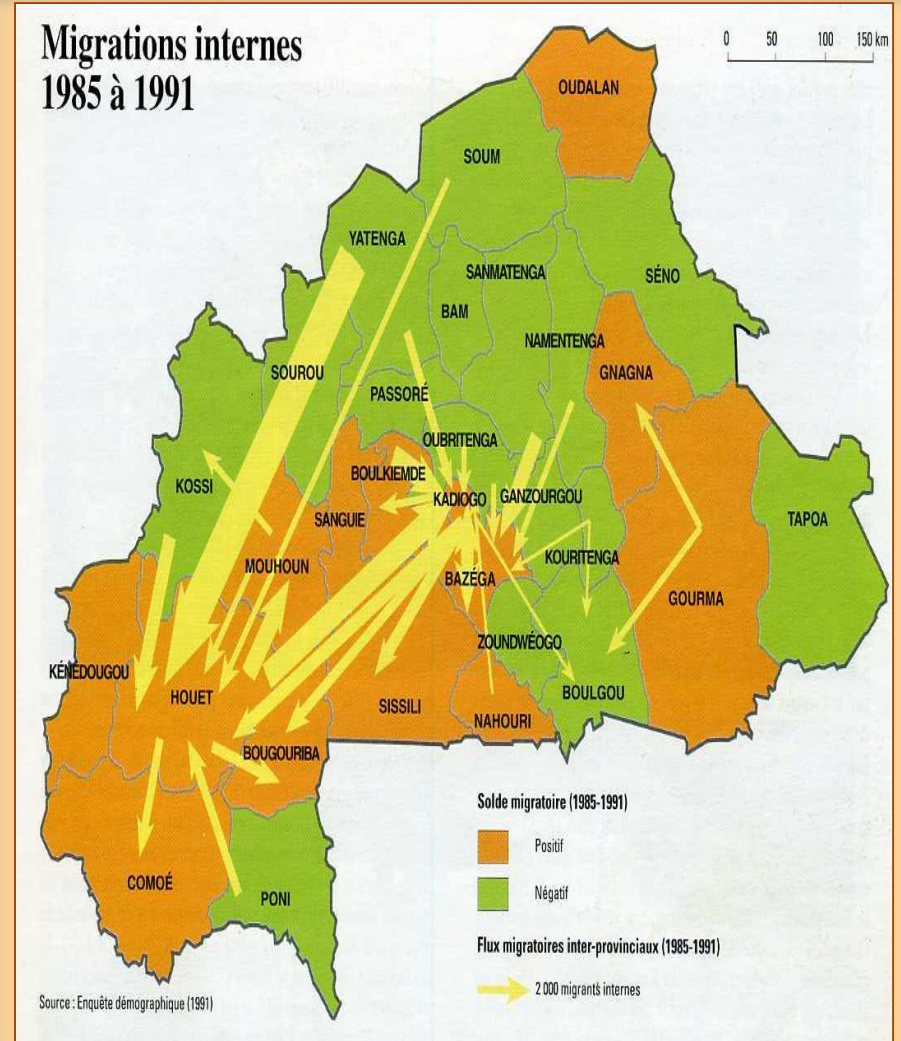
- ✓ 255 indexes recorded in 2005,
- ✓ 142 in 2006
- ✓ 106 in 2007.



Demographic Pressures, Migration, Climate

Indicators :

- ✓ Intense desertification;
- ✓ Overexploitation of RN;
- ✓ Threat of protected areas;
- ✓ Confined Space;
- ✓ reducing grazing.



Agricultural pressures around RB

Agricultural and pastoral pressures close to cotton fields areas and grazing.



RESULTS

IMPACT OF CLIMATE ARIDITY

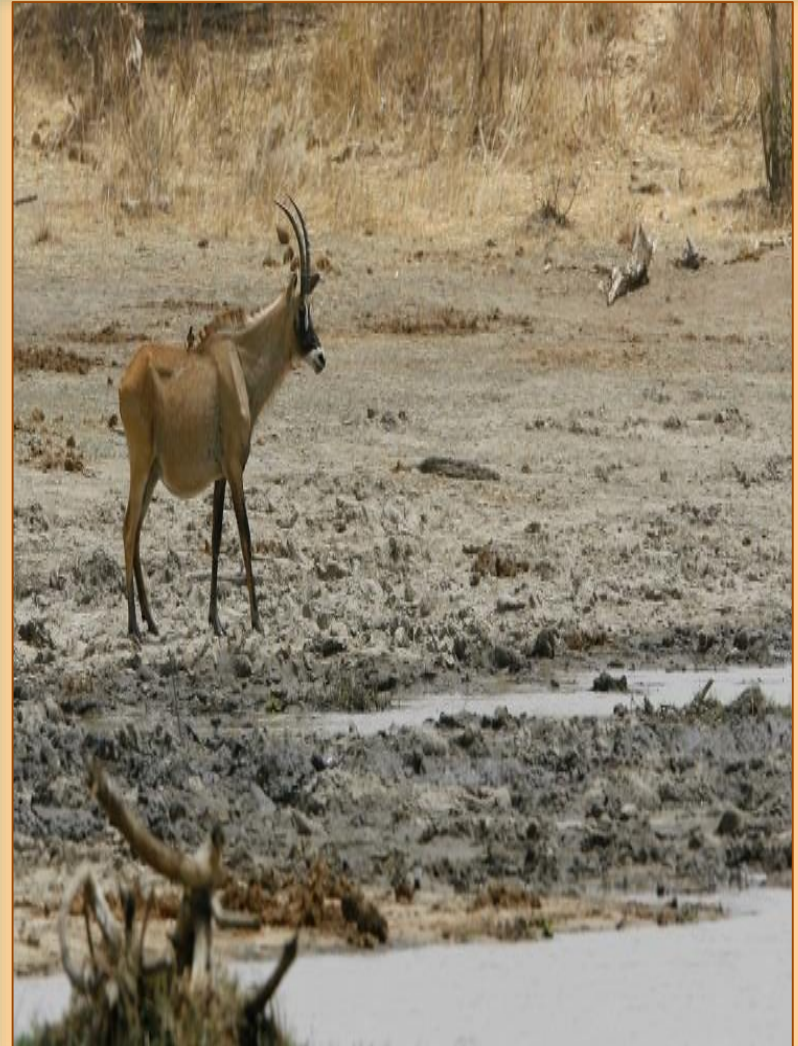
Wildlife: low resilience

➤ The vulnerable wildlife with poaching and degradation of pastures, has low resilience to face water stress



The aridity in RB

- Drying up of water sources (ponds);
- Competition around permanent rivers to the edge or boundary of RB



aridity indicators in RB

- Dead wild animal in the vicinity of the in dried ponds



The aridity in BR in Burkina Faso

- Very young and old debilitated animals abandoned on the trail:
- The survival of wildlife is a crucial and topical



Drying up of water sources

- Drying up of ponds and rivers ;
- Low reproduction due to the splitting of the herd



Aridity: threat in semi-arid areas

- The survival of large animals is a crucial and topical.



Impacts of aridity: competition over natural forests

Incursion of large fauna close to village areas in water's research leading to:

damage of crops and productions (old fallows)



Impact of aridity: Pesticides and Loss of invertebrate diversity utility

- Insects diversity is in correlation to the use of pesticides, especially by cotton producers.
- Pollination has strong consequences on the reproduction of flowering plants.



Some impacts related to drought

Reducing wildlife

- ✓ Reduction in hunting
- ✓ Decline in tourist flow
- ✓ Currency loss
- ✓ Loss of animal and plant biodiversity



APPROACH TO SOLUTIONS

IMPLEMENTATION CONSTRAINTS

Approach to solutions

- Creation of corridors leading to the water points: this action will contribute to the recovery of fallow and village forests

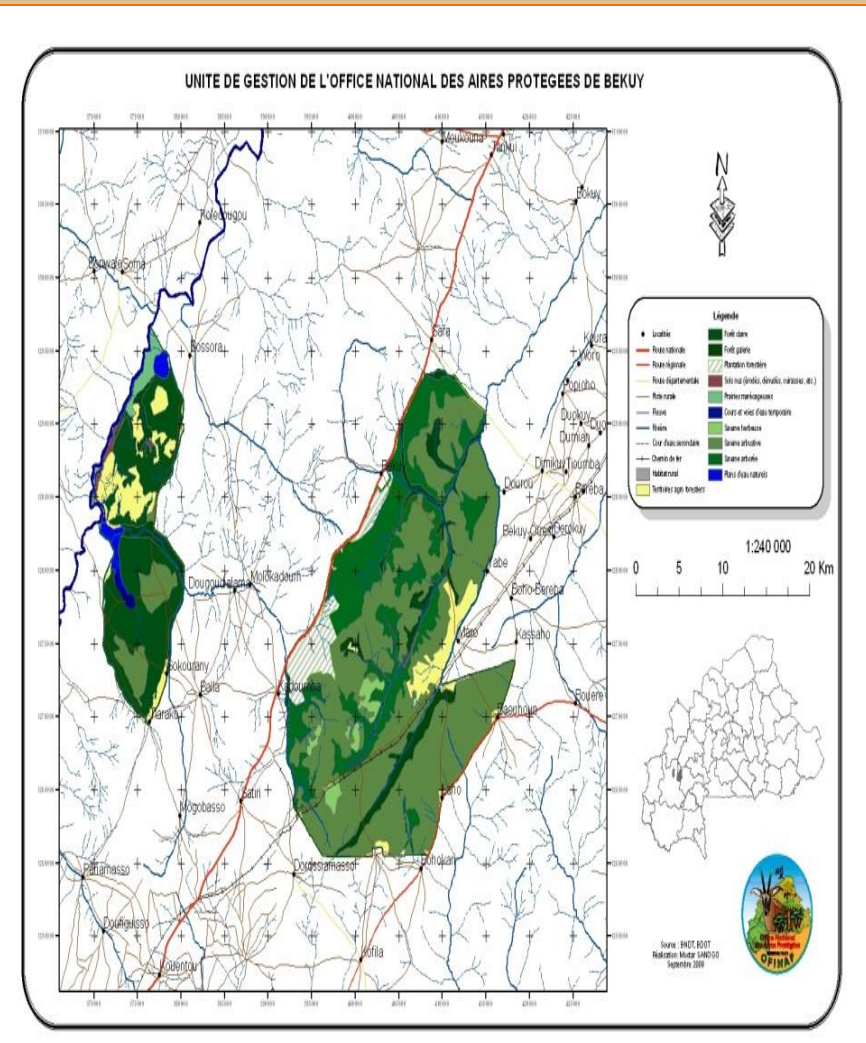


Human actions alternative solutions

- Development of water points (drilling and artificial ponds) including the central zone of BRs
- Provision of water tankers to the landscaped troughs
- These human activities on the natural environment, often linked to the environmental risk and the zoning concept

Other alternative

➤ The establishment of corridors for large animals between different classified areas leads to the easy access to water points.

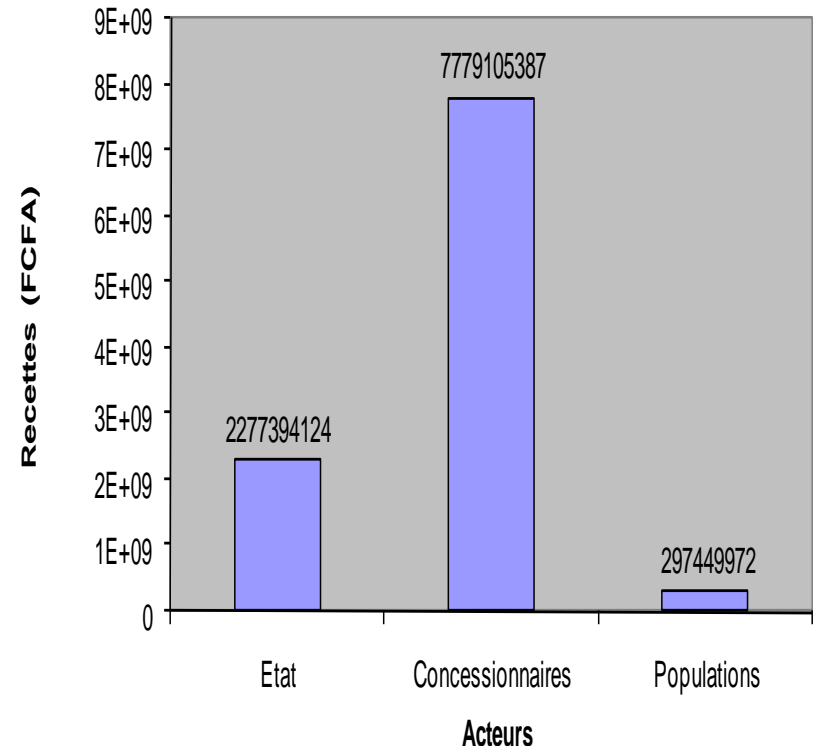


Implementation constraints: augmentation of population recipes

Distribution's rate of wildlife recipes:

- ✓ **Government : 22%**
- ✓ **Population : 3%**
- ✓ **Dealers : 75%**

Evolution des recettes fauniques suivant les principaux
acteurs de 1997 à 2007



Constraints and administrative departments OFINAP DF / DGEF

- RB of Mare aux Hippopotames management by OFINAP (national office of protected areas)
- TBR of W management by wildlife DG / EF



Opportunities

- Recommendations of the COP21 hold in November 2015;
- Mobilizations around the world for climate change
- Opportunities of Funds: Green Funds, FEM, AfriBio Fund initiative



**BRs facing the arid climate:
current issue**

**THANK YOU FOR YOUR KIND
ATTENTION**