

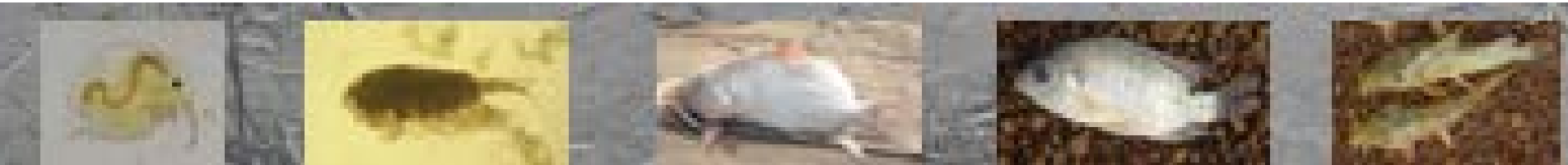


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**INSTITUT
FRANÇAIS**
AUTRICHE



Eau et biodiversité au Burkina Faso (Etat de la recherche)



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Laboratoire de Biologie et Ecologie Animales

UNIVERSITE DE OUAGADOUGOU

UFR / SCIENCES DE LA VIE ET DE LA TERRE

L A B O R A T O I R E

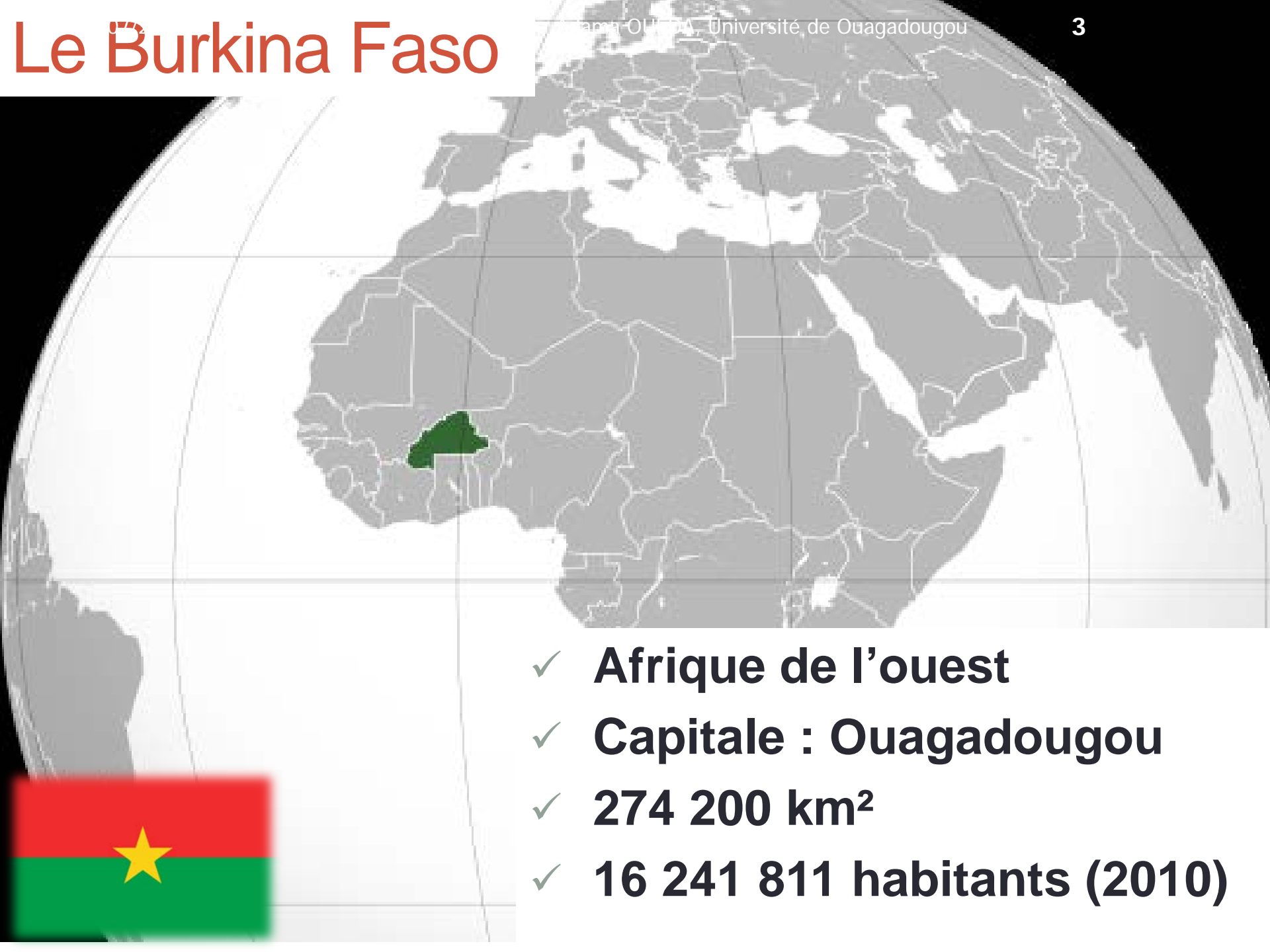


DE BIOLOGIE ET ECOLOGIE ANIMALES

Plan

1. Ressources en eau au Burkina Faso
2. Végétaux du Burkina Faso
3. Animaux du Burkina Faso
4. Importance de l'hydrologie sur la distribution des espèces
5. Quelques mots sur les pressions

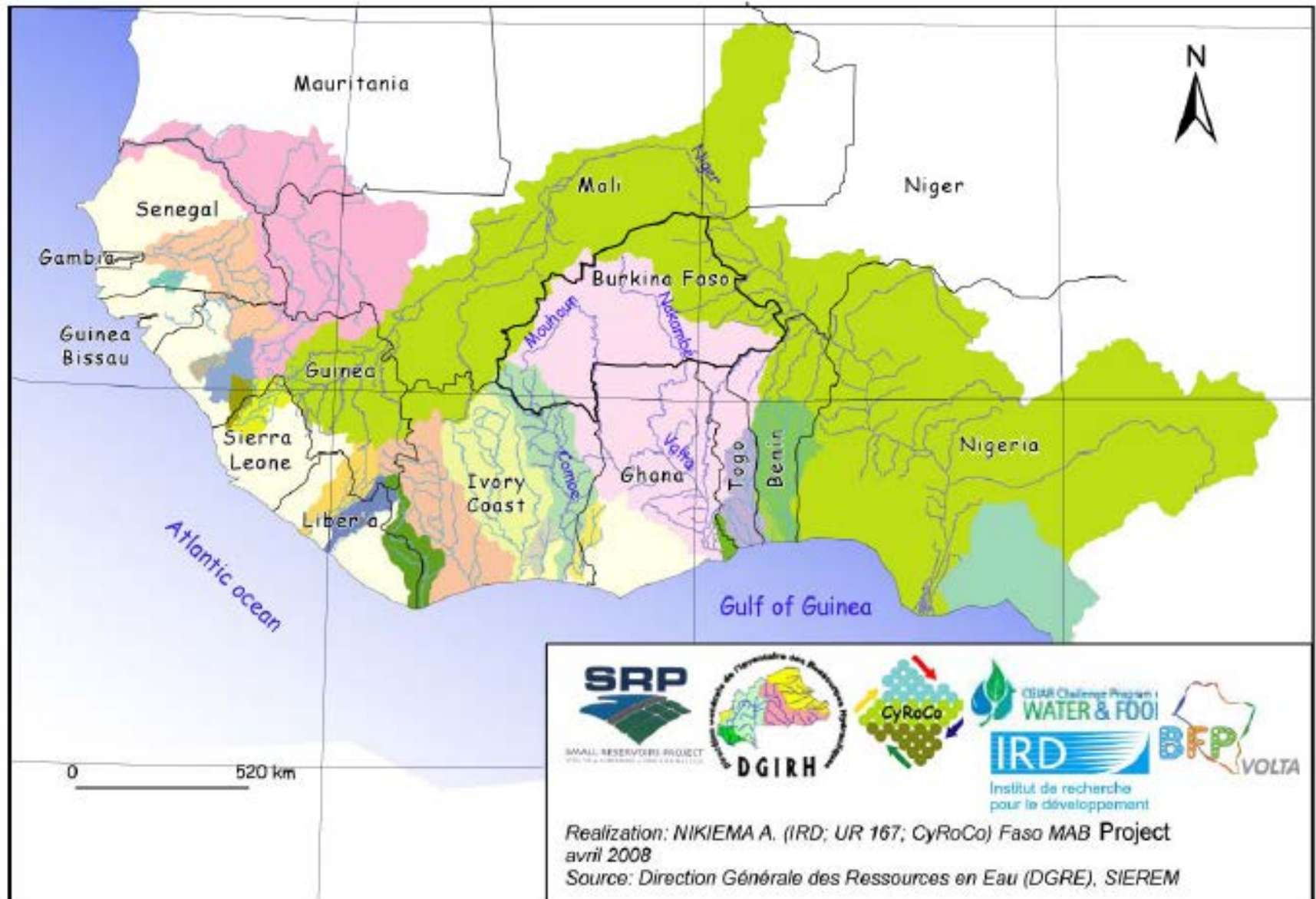
Le Burkina Faso

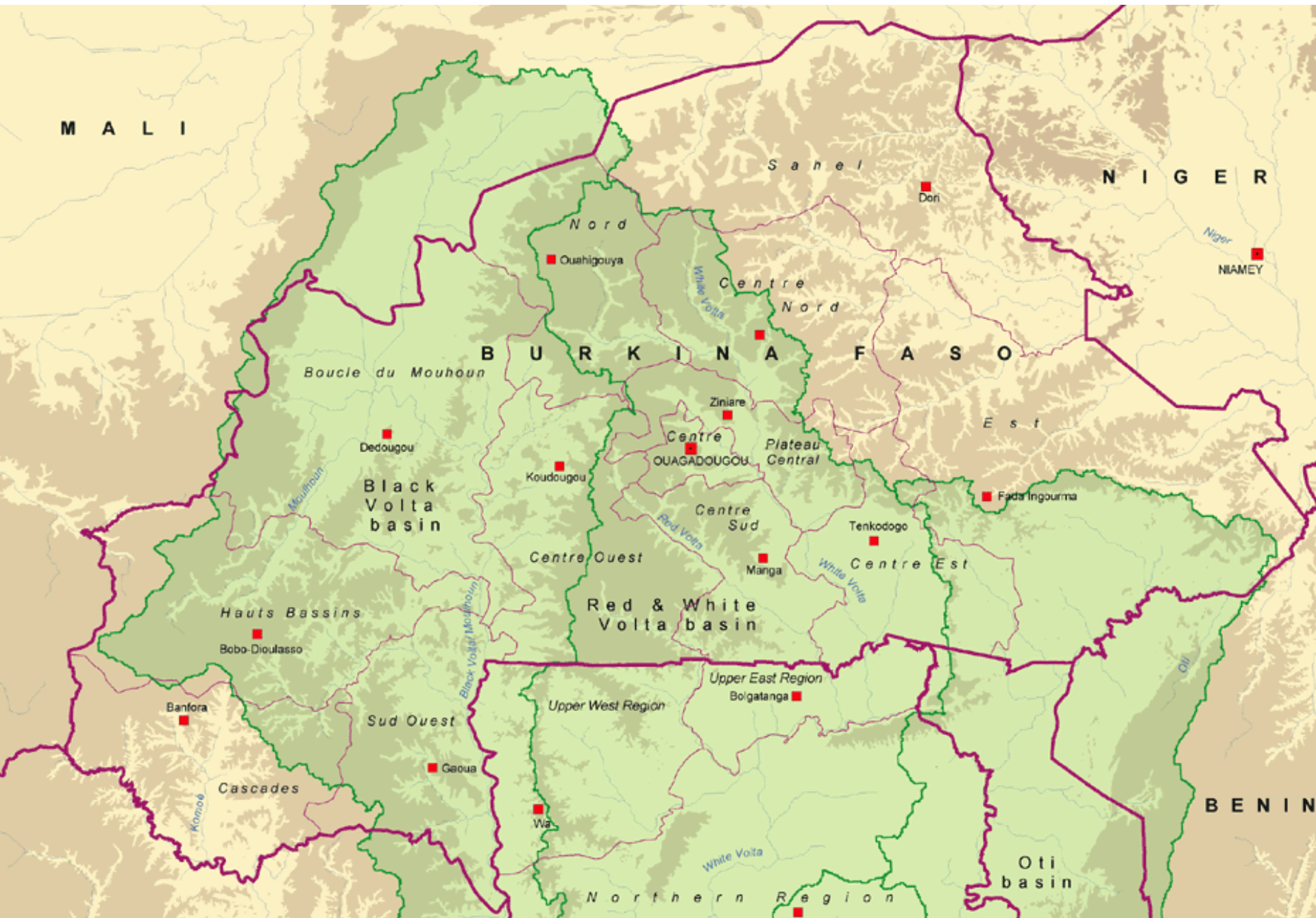


- ✓ **Afrique de l'ouest**
- ✓ **Capitale : Ouagadougou**
- ✓ **274 200 km²**
- ✓ **16 241 811 habitants (2010)**

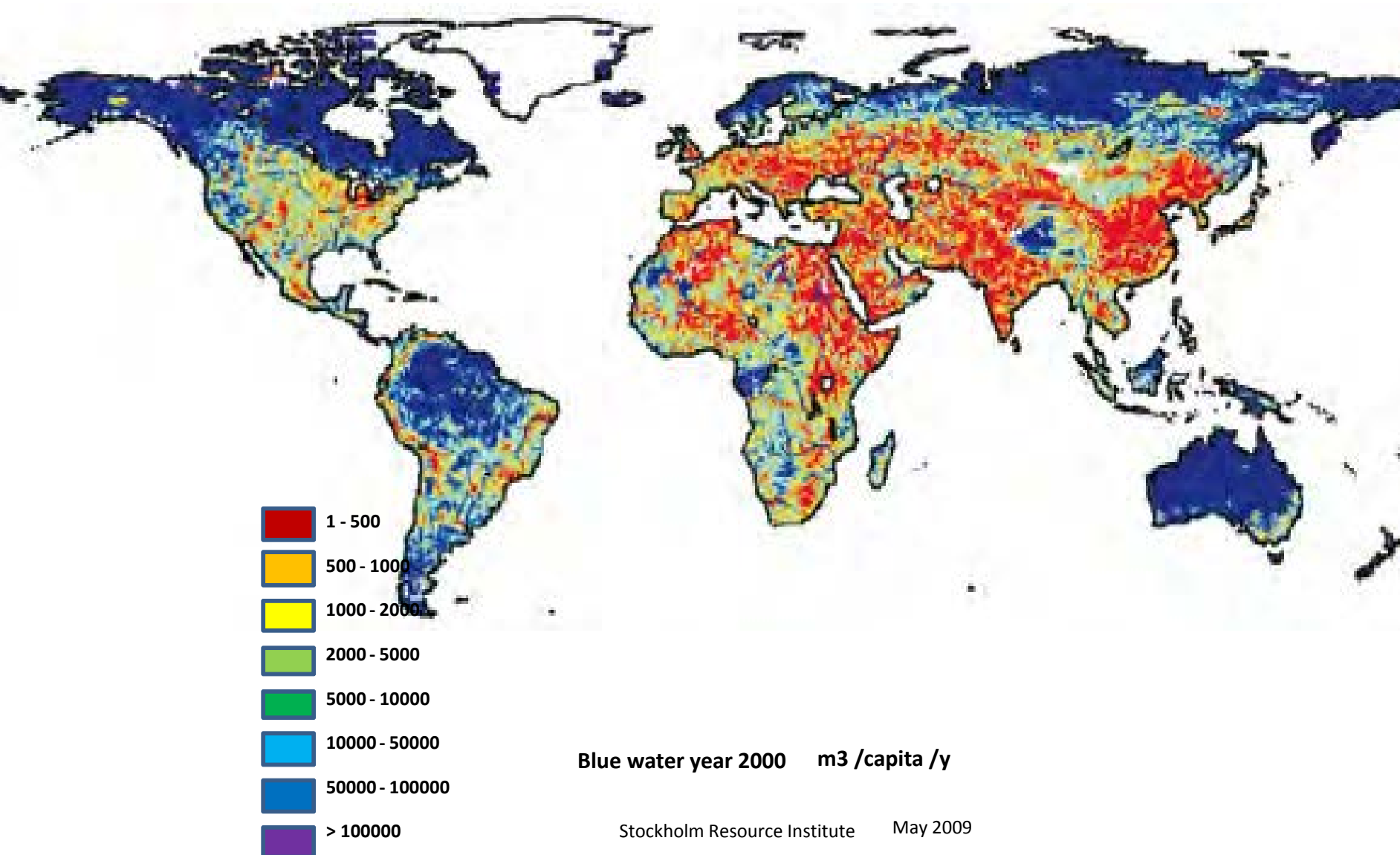


Grands bassins de l'Afrique de l'Ouest

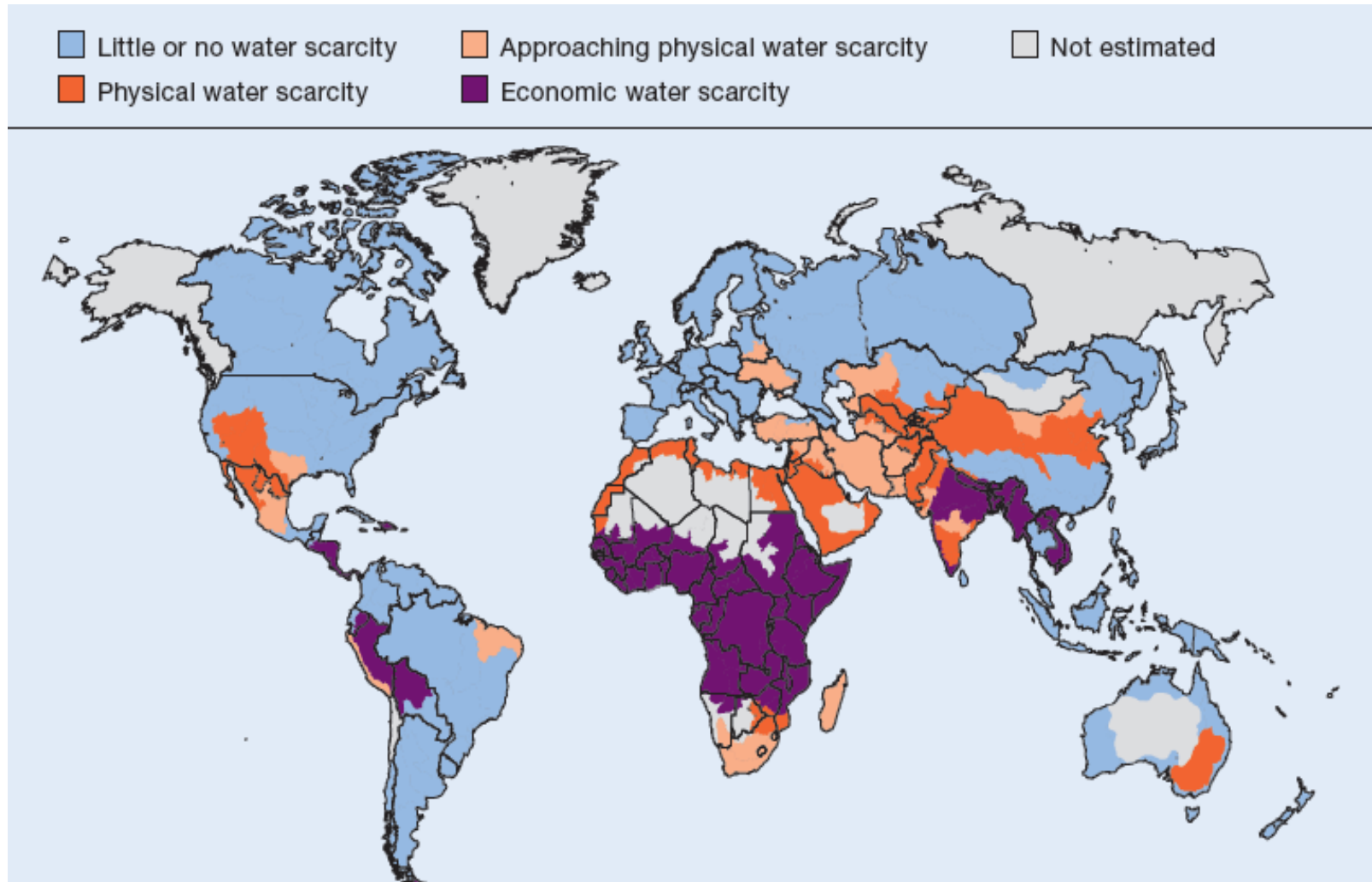




Ressource en eau dans le monde et au Burkina Faso

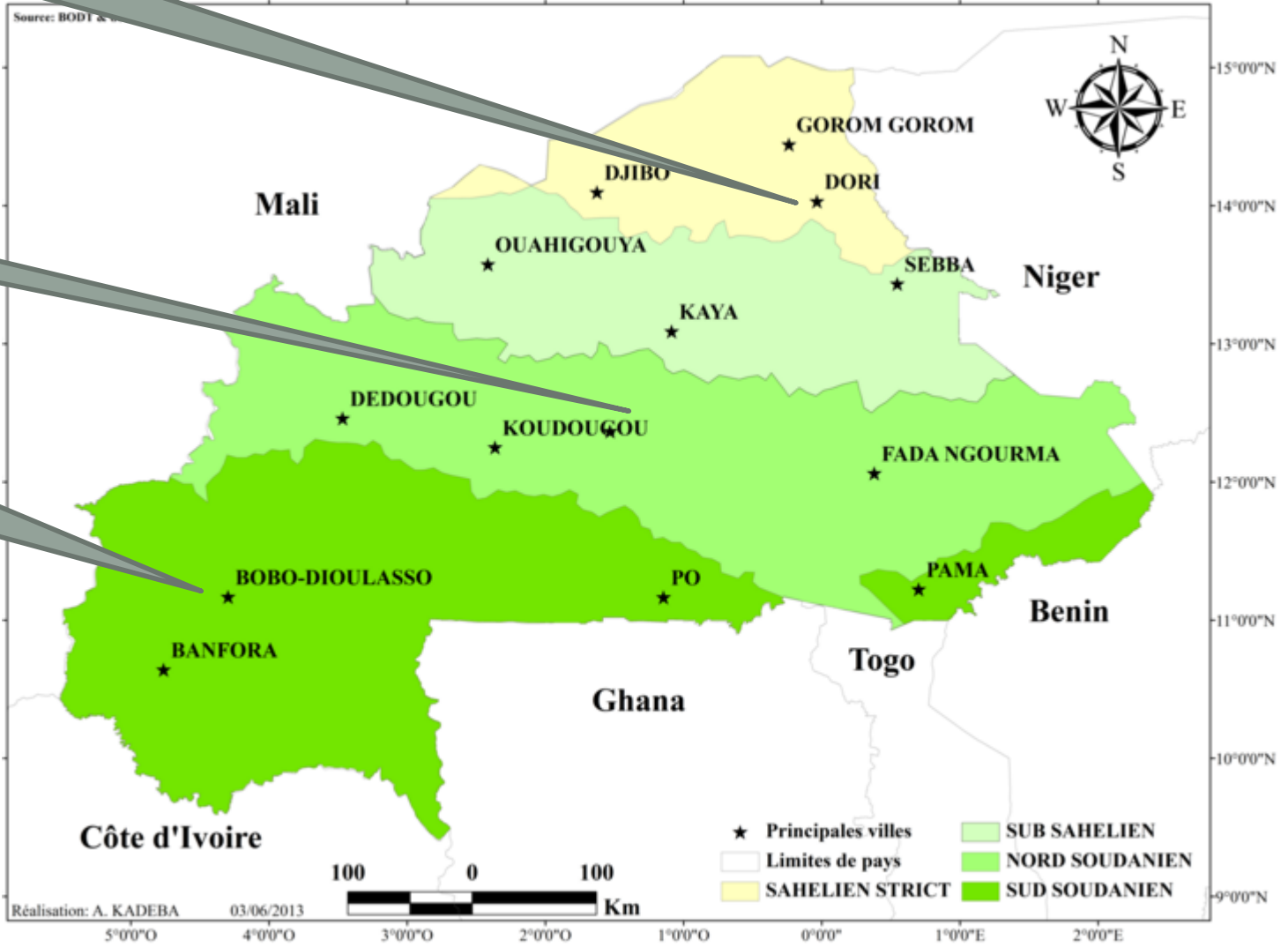
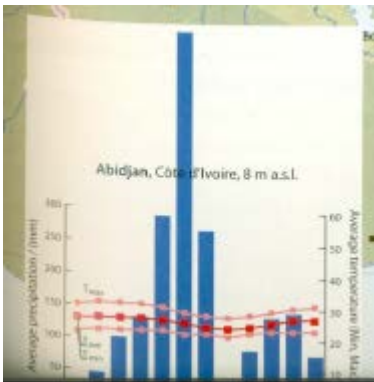
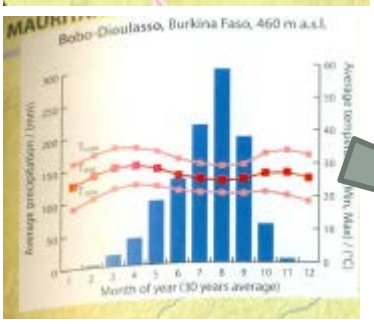
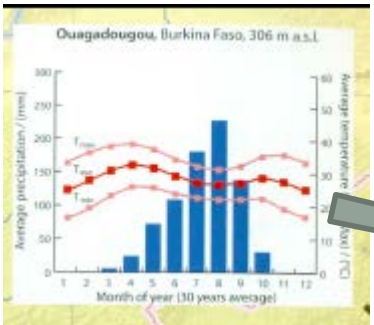
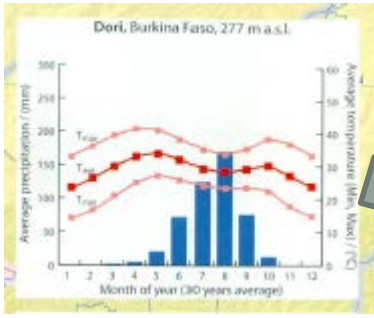


Ressource en eau dans le monde et au Burkina Faso



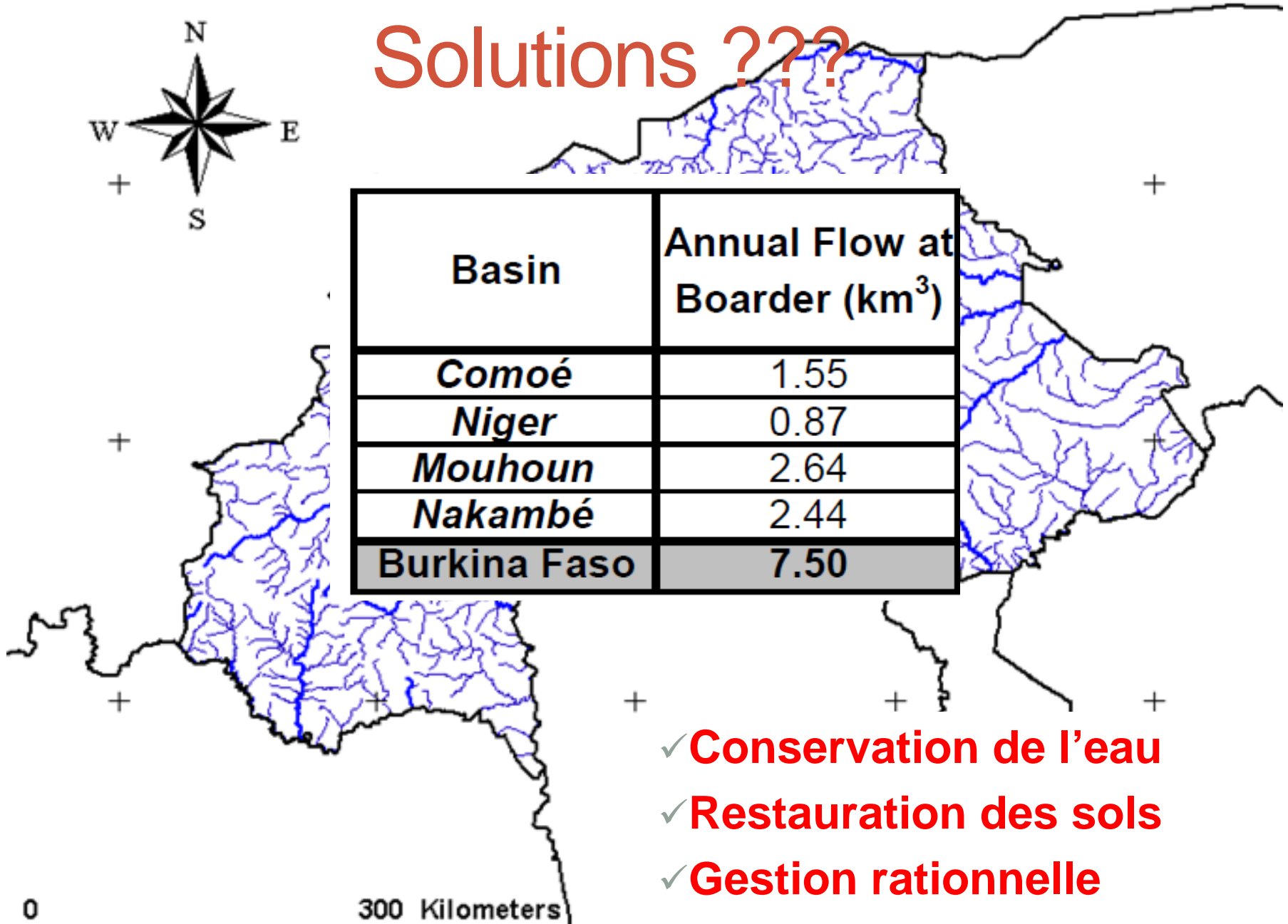
Source: Water for Food, Water for Life, IWMI, 2007

Climat et pluviométrie au Burkina Faso





Solutions ???



The image shows a map of West African river basins with a table overlay. The table lists the annual flow at the border for five basins: Comoé, Niger, Mouhoun, Nakambé, and Burkina Faso. The flow values are 1.55, 0.87, 2.64, 2.44, and 7.50 km³ respectively. A compass rose is located in the top left, and a scale bar (0 to 300 Kilometers) is in the bottom left. The text 'Solutions ???' is written in red at the top.

Basin	Annual Flow at Boarder (km ³)
<i>Comoé</i>	1.55
<i>Niger</i>	0.87
<i>Mouhoun</i>	2.64
<i>Nakambé</i>	2.44
Burkina Faso	7.50

- ✓ **Conservation de l'eau**
- ✓ **Restauration des sols**
- ✓ **Gestion rationnelle**

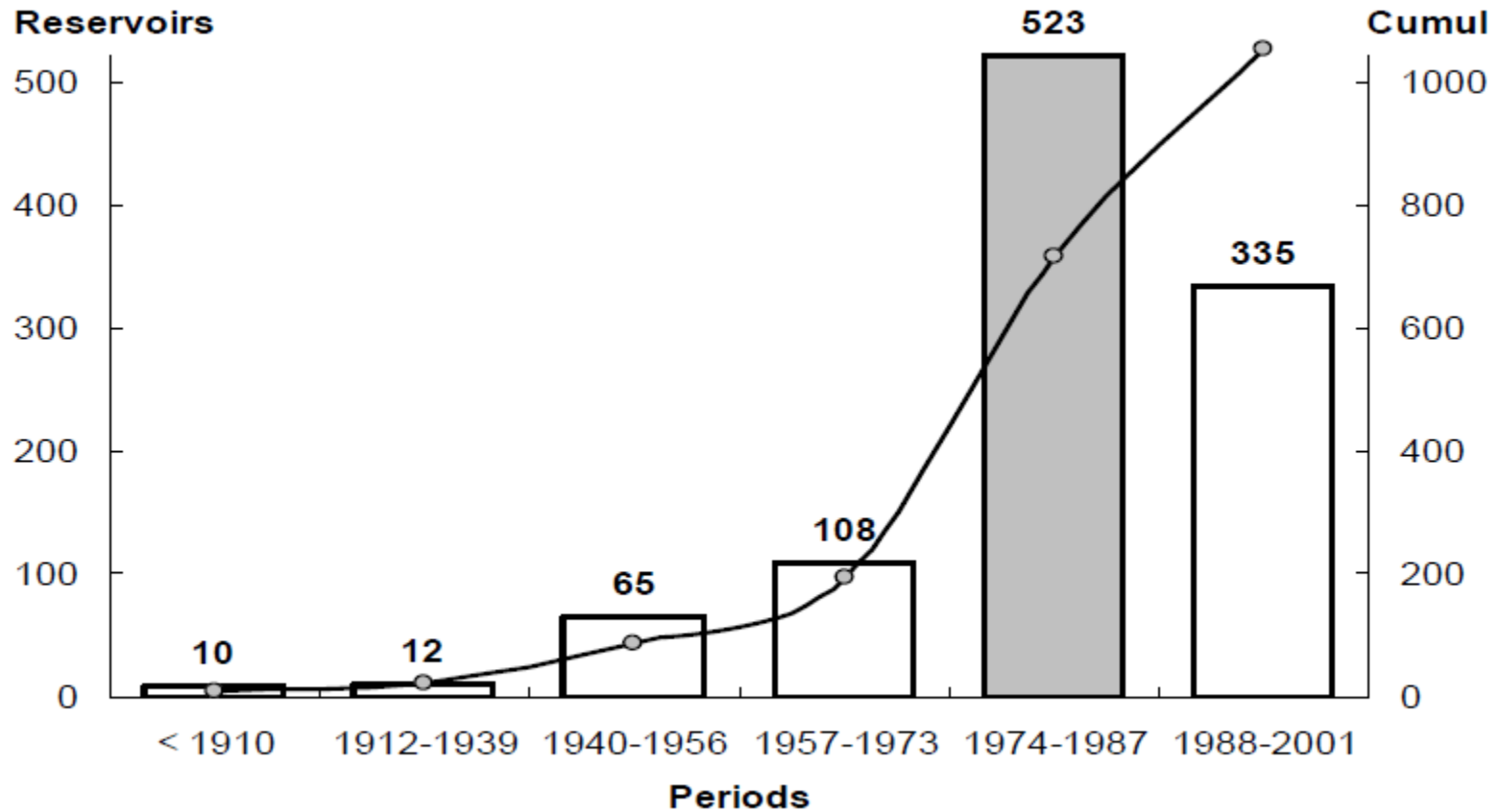
✓ Conservation de l'eau

na OUED

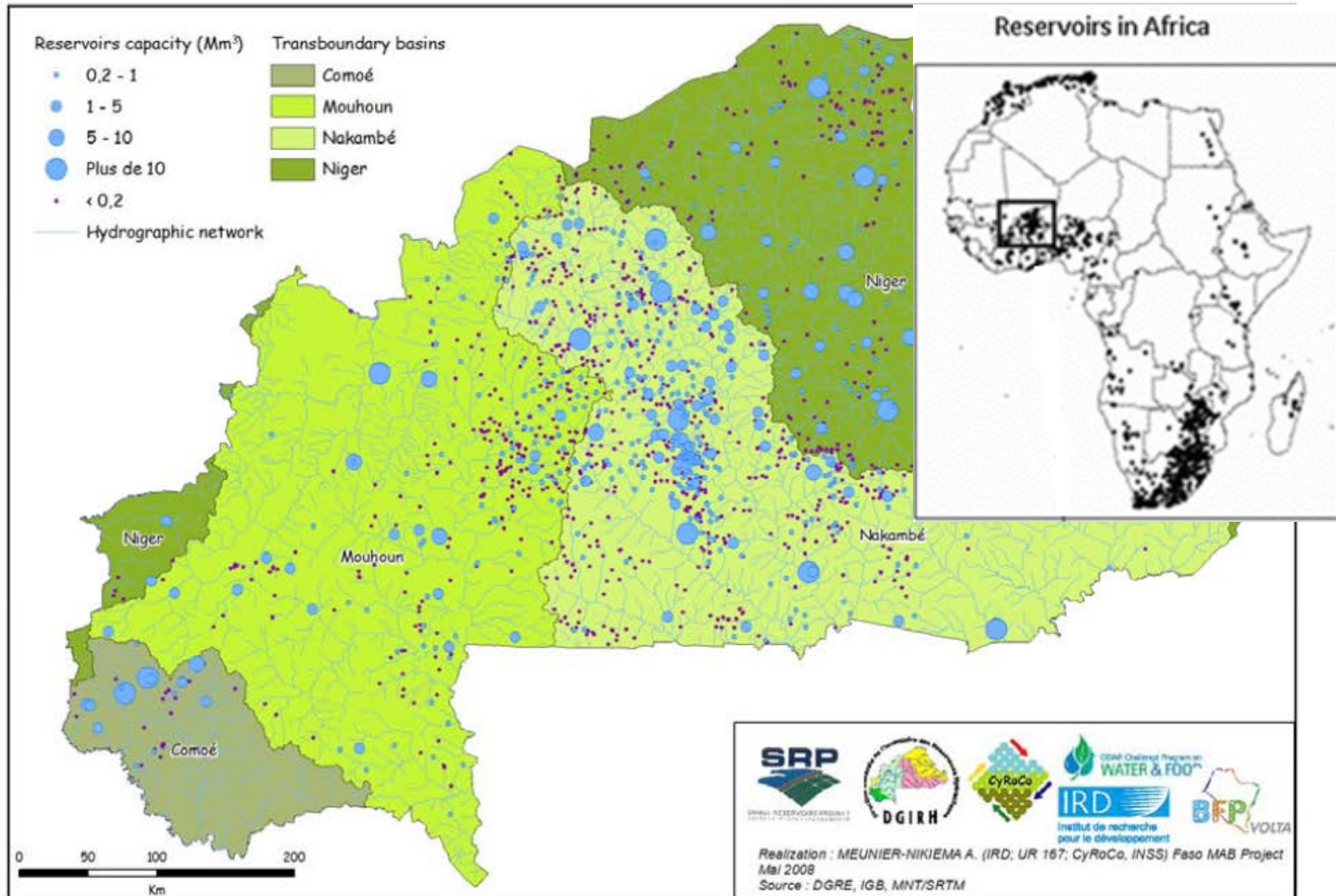
✓ Restauration des sols



Mobilisation de l'eau de surface



Mobilisation de l'eau de surface



Mobilisation de l'eau de surface

BURKINA FASO



**Small
Reservoirs
Volume: 0.6 km³**

Ziga Reservoir
Volume: 0.2 km³
2000

Bagre Reservoir
Volume: 1.7 km³
1992

Kompienga Reservoir
Volume: 2.0 km³
1984

GHANA



**Small
Reservoirs
Volume: 0.1 km³**

Bui Reservoir
Volume: 12.3 km³
2009/2010

Tono Reservoir
Volume: 0.1 km³
1980

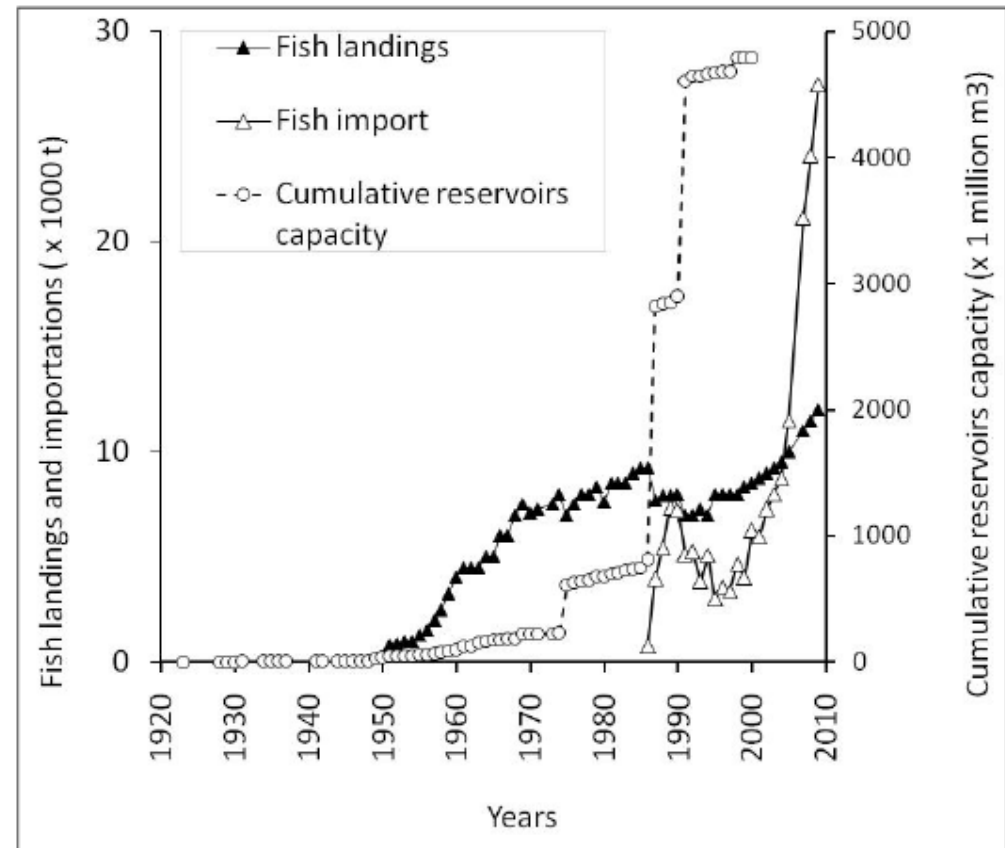
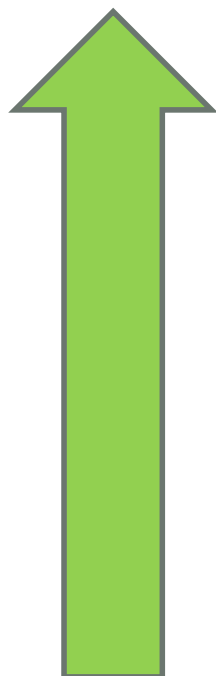
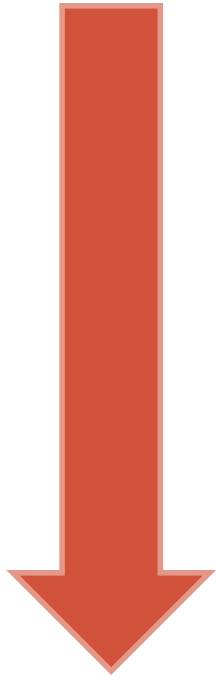
Kpong Reservoir
Volume: 0.2 km³
1982

**Lake Volta
Volume: 148 km³
1964**



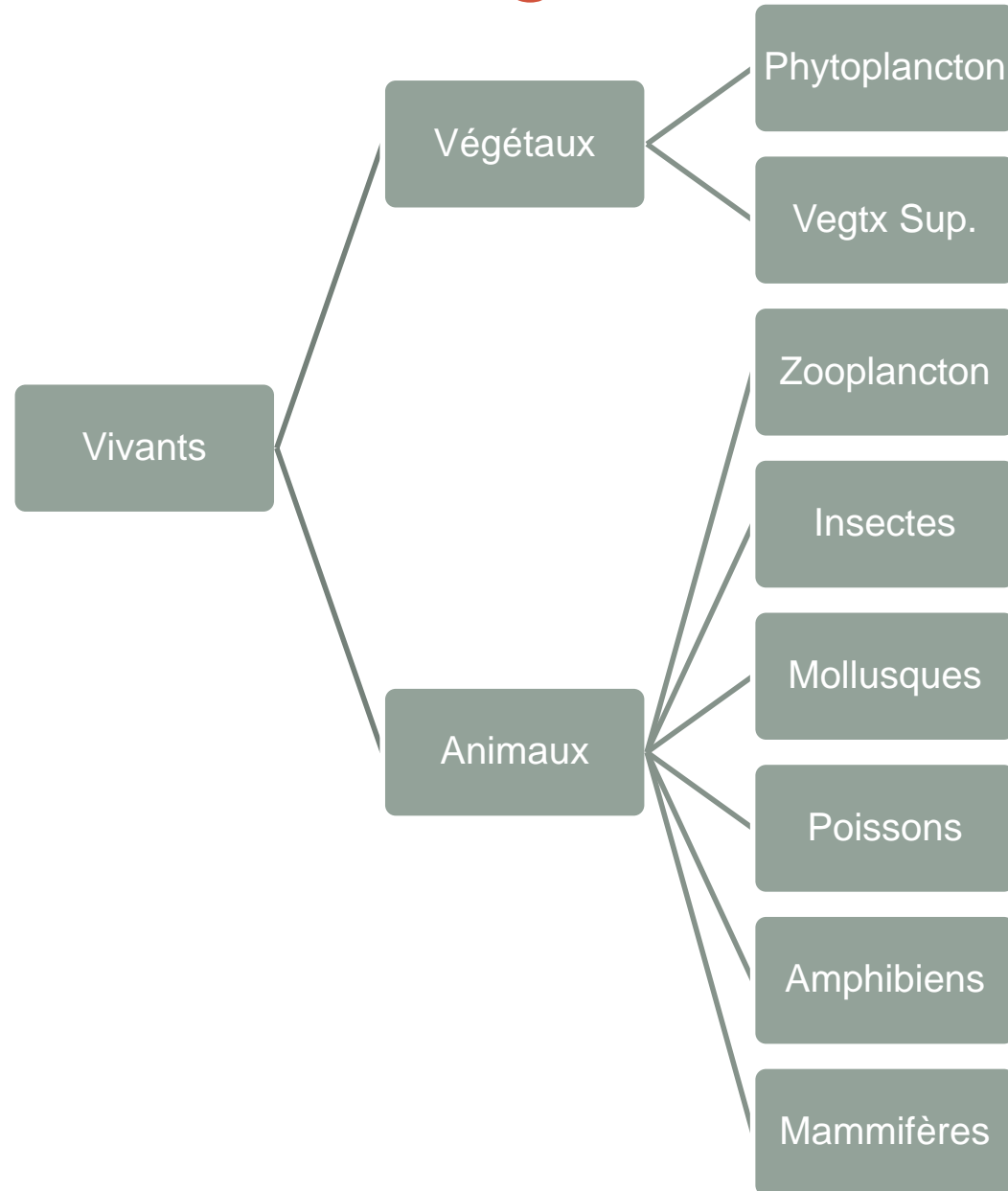
Quelques conséquences

Diversité
Productivité
(Abondance)



Reservoirs development and fish production

Les grands groupes



VÉGÉTAUX DU BURKINA FASO

Le phytoplancton

Embranchements Division	Familles Family	Nombre d'espèces Number of species	Nombre d'espèces/ embranchement Number of species/ division
Cyanophyta	Microcystaceae	15	68
	Chroococcaceae	13	
	Chroococcopsidaceae	1	
	Oscillatoriaceae	23	
	Pseudonabaenaceae	4	
	Phormidiaceae	5	
	Nostocaceae	5	
	Scytonemataceae	1	
	Woronicheniaceae	1	
Dinophyta	Peridiniaceae	4	4
	Coscinodiscaceae	7	68
	Acanthaceae	1	
Diatomaceae	6		
Heterokontophyta	Eunotiaceae	1	
	Naviculaceae	33	
	Surirellaceae	4	
	Bacillariaceae	6	
	Scilladiaceae	2	
	Pleurochloridaceae	8	
	Volvocaceae	9	
	Chlorococcaceae	10	
Chlorophyta	Radiococcaceae	8	432
	Oocystaceae	36	
	Micractiniaceae	4	
	Dictyosphaeriaceae	6	
	Scenedesmaceae	37	
	Hydrodictyaceae	8	
	Oodogoniaceae	49	
	Desmidiaceae	197	
	Closteriaceae	42	
	Mesotaeniaceae	8	
	Phacotaceae	1	
Gloeocystaceae	1		
Zygnemataceae	16		
Euglenophyta	Euglenaceae	69	69
Total	35	641	

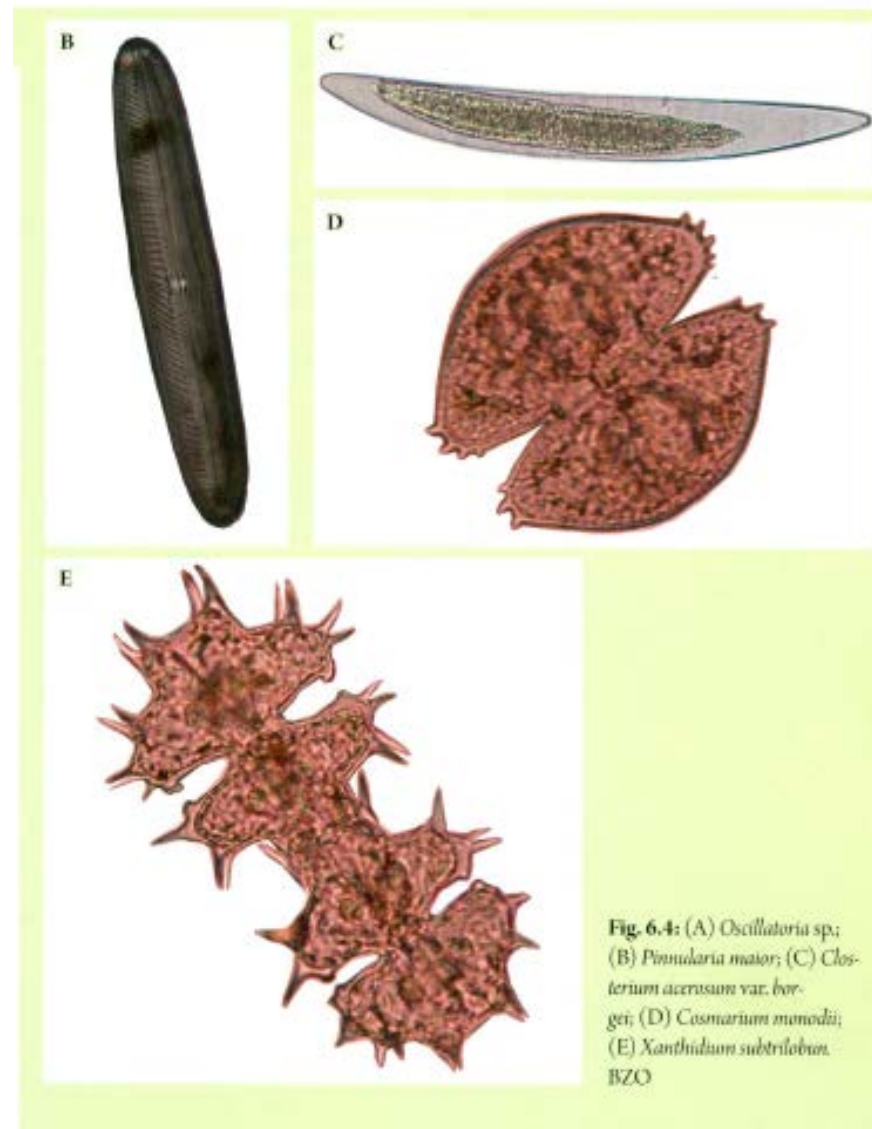


Fig. 6.4: (A) *Oscillatoria* sp.; (B) *Pinnularia maior*; (C) *Closterium acerisum* var. *borgeri*; (D) *Casmarium monodii*; (E) *Xanthidium subtrilobum*. BZO

Les végétaux supérieurs

Familles	Nombre d'espèces
Families	Number of species

Poaceae	268
Fabaceae (sensu stricto)	214
Cyperaceae	128
Asteraceae	85
Euphorbiaceae	81
Rubiaceae	79
Malvaceae	50
Convolvulaceae	43
Acanthaceae	40
Mimosaceae	38
Other families (149)	889

Total	1915
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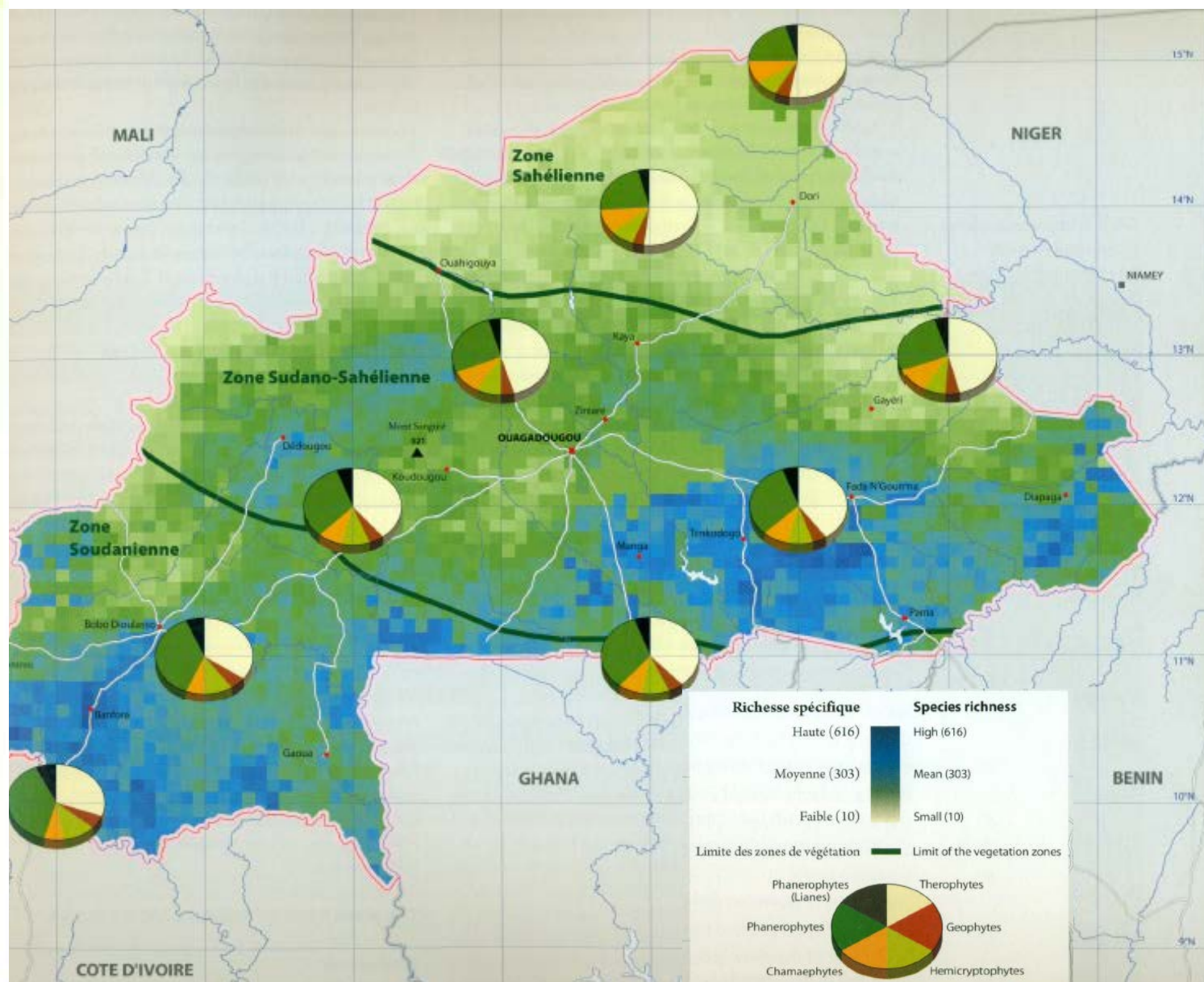




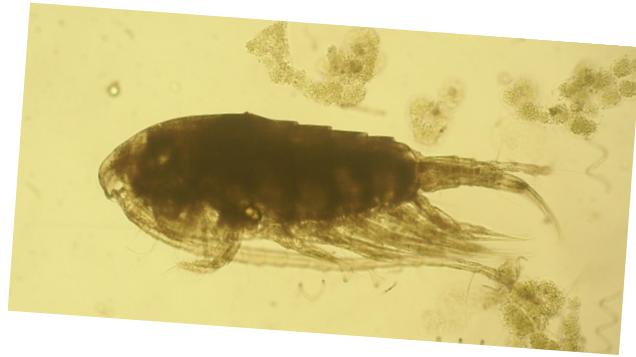
Fig. 5.1: Steppe à *Acacia* spp.
Steppe with *Acacia* spp. SSA

Fig. 5.2: Brousse tigrée.
Tiger bush. JBO

Fig. 5.3: Savane arborée avec
un tapis graminéen très com-
bustible en saison sèche.
Tree savanna with a grami-
naceous carpet which is very
combustible in the dry
season. OOU

ANIMAUX DU BURKINA FASO

Le zooplancton



Copépodes | Copepoda

7 espèces

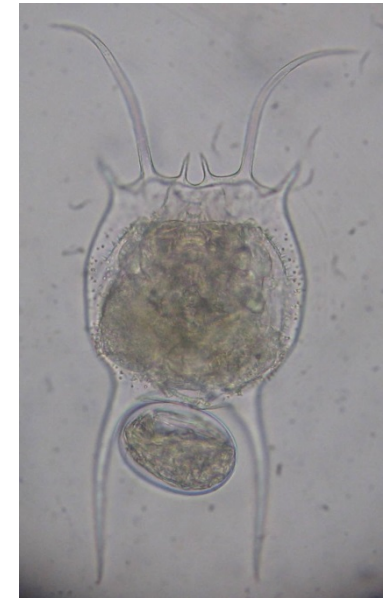
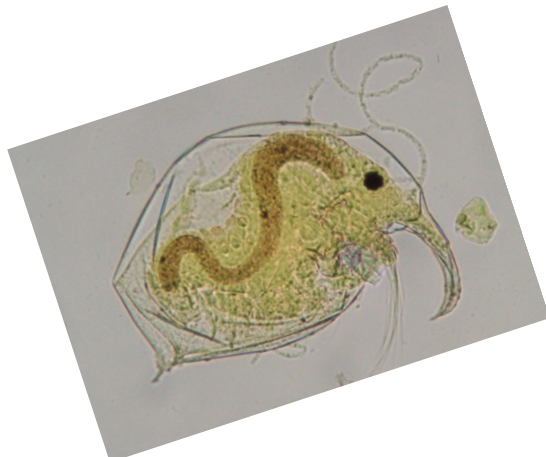
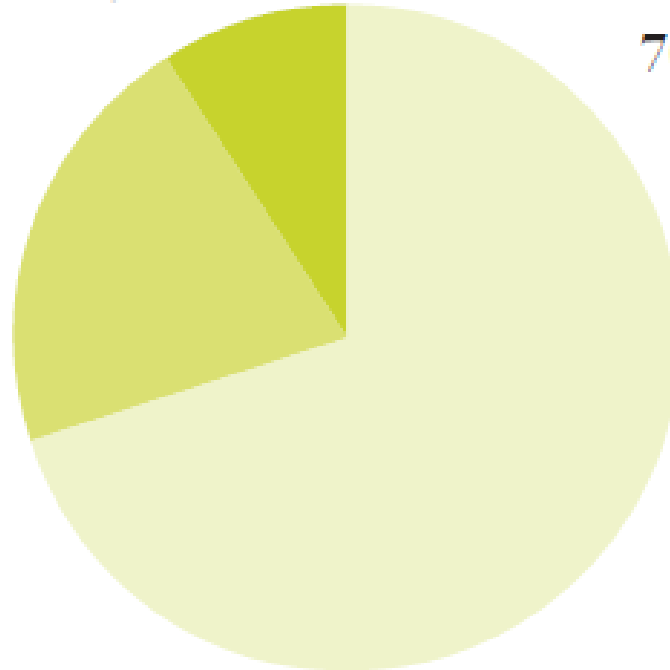
9 %

Rotifères | Rotifer

70 % 55 espèces

Cladocères | Cladocera

16 espèces 21 %



Les insectes

Tab. 6.15: Diversité des insectes connus au Burkina Faso (A partir des données recueillies par Ouedraogo (1996) [116] complétées par celles de Guenda (1996) [51] et du Rapport UICN (2008) [52]). | Diversity of insects in Burkina Faso (From the data gathered by Ouedraogo (1996) [116] completed with that from Guenda (1996) [51] and UICN Report (2008) [52]).

Ordre Orders	Familles Families	Nombre d'espèces Number of species
Collembola	1	
Dermoptera	2	
Lepidoptera	4	
Cheuloptera	1	
Diptera (Flies)	20	
Orthoptera	4	
Hymenoptera	5	
Trichoptera	6	
Ephemeroptera	1	
Heteroptera	19	
Coleoptera	1489	

- 1489 espèces
- 152 familles
- 19 ordre

Diptera, Trichoptera, Ephéméroptera, Hétéroptera, Coleoptera, Odonates, Plecoptera, Lepidoptera

Les mollusques

19 espèces

Sphaerium sp.

Coelatura aegyptiaca

Coelatura sp.

Mutela rostrata

Mutela sp.

Lymnae natalensis

Biomphalaria pfeifferi

Biomphalaria sp.

Bulinus senegalensis

Bulinus camerunensis

Bulinus forskali

Bulinus globosus

Bulinus jousseaumei

Lanistes ovum

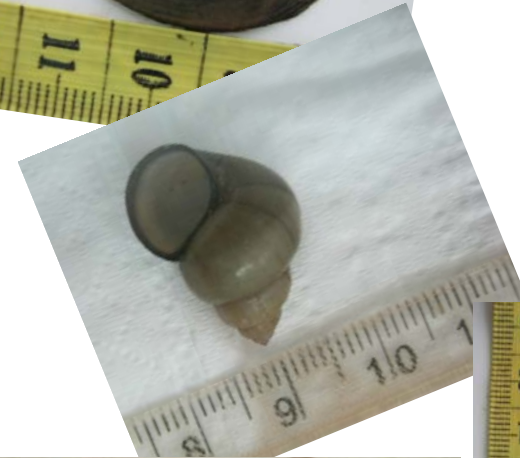
Lanistes varicus

Bellamyia unicolor

Cleopatra bulimoides

Cleopatra sp.

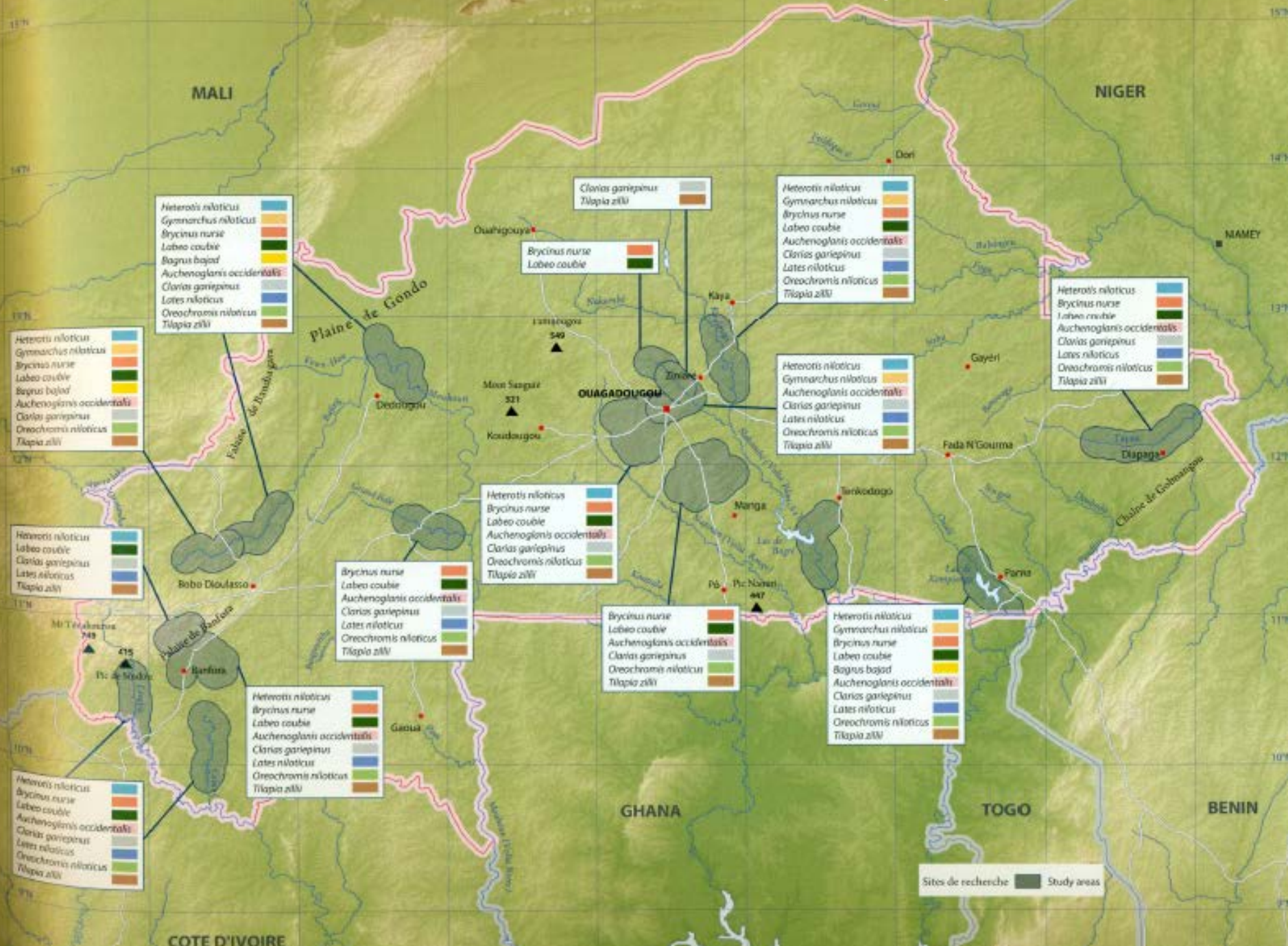
Potamoda sp.



Les poissons

- ✓ Fishbase : 108 espèces
- ✓ Roman 1966 : 118 espèces
- ✓ Total : 145 espèces





Les amphibiens



3.13



3.14

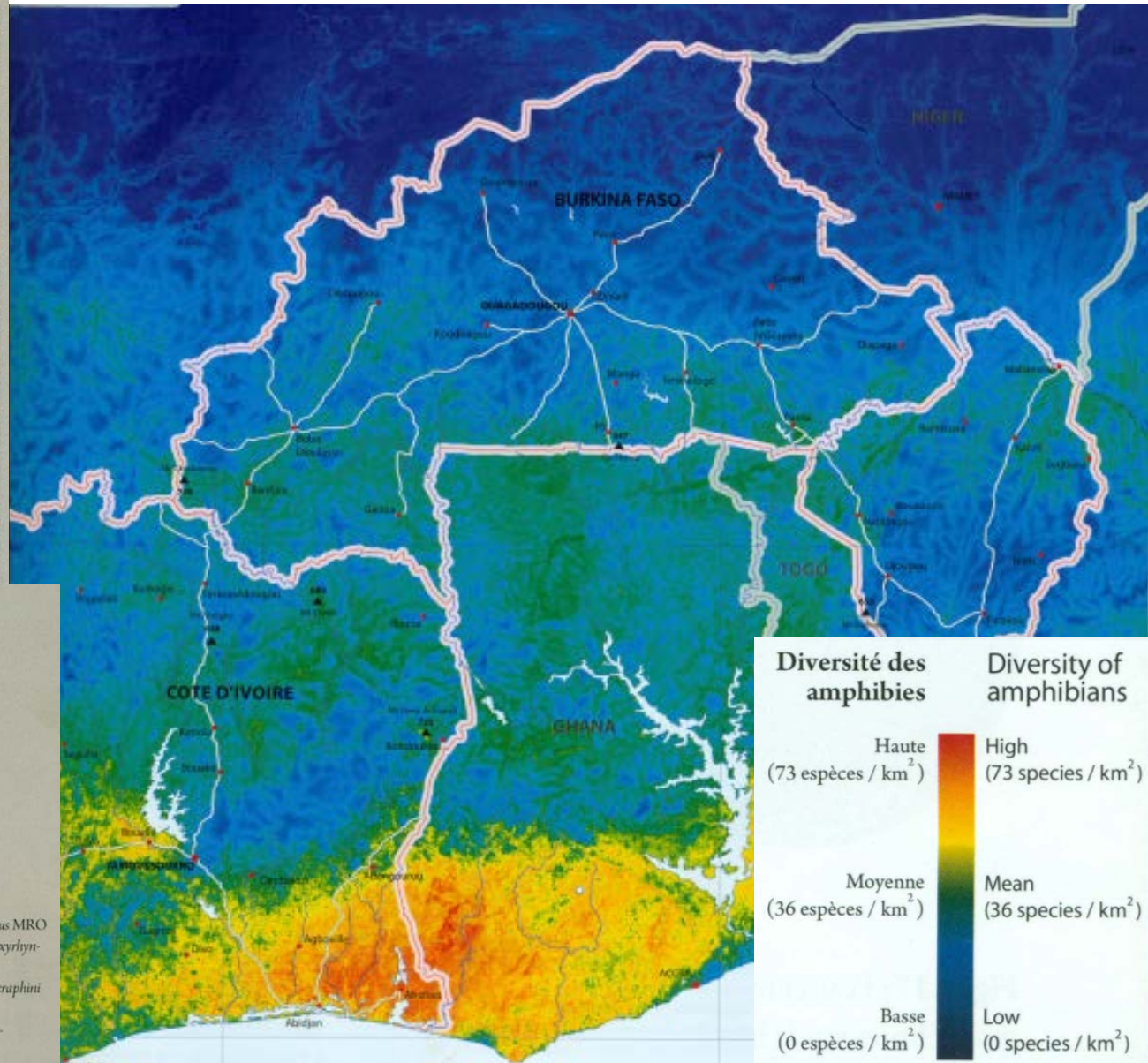


3.15



3.16

Fig. 3.13: *Bufo maculatus* MRO
 Fig. 3.14: *Ptychoadena oxyrhynchus* RER
 Fig. 3.15: *Geotrypetes seraphini* MRO
 Fig. 3.16: *Morerella cyanophthalma* DMA



Mammifères | Mammals

Ordre Order	Famille Family	Genre Genus	Espèces Species
Proboscidiens Proboscidea	1	1	1
Artiodactyles Artiodactyla	3	15	19
Siréniens Sirenia	1	1	1
Pholidotes Pholidota	1	1	3
Hyracoïdes Hyracoidea	1	1	1
Rongeurs Rodentia	5	20	29
Lagomorphes Lagomorpha	1	1	2
Carnivores Carnivora	6	21	27
Primates Primates	3	6	6
Insectivores Insectivora	3	3	3
Chiroptères Chiroptera	9	25	46

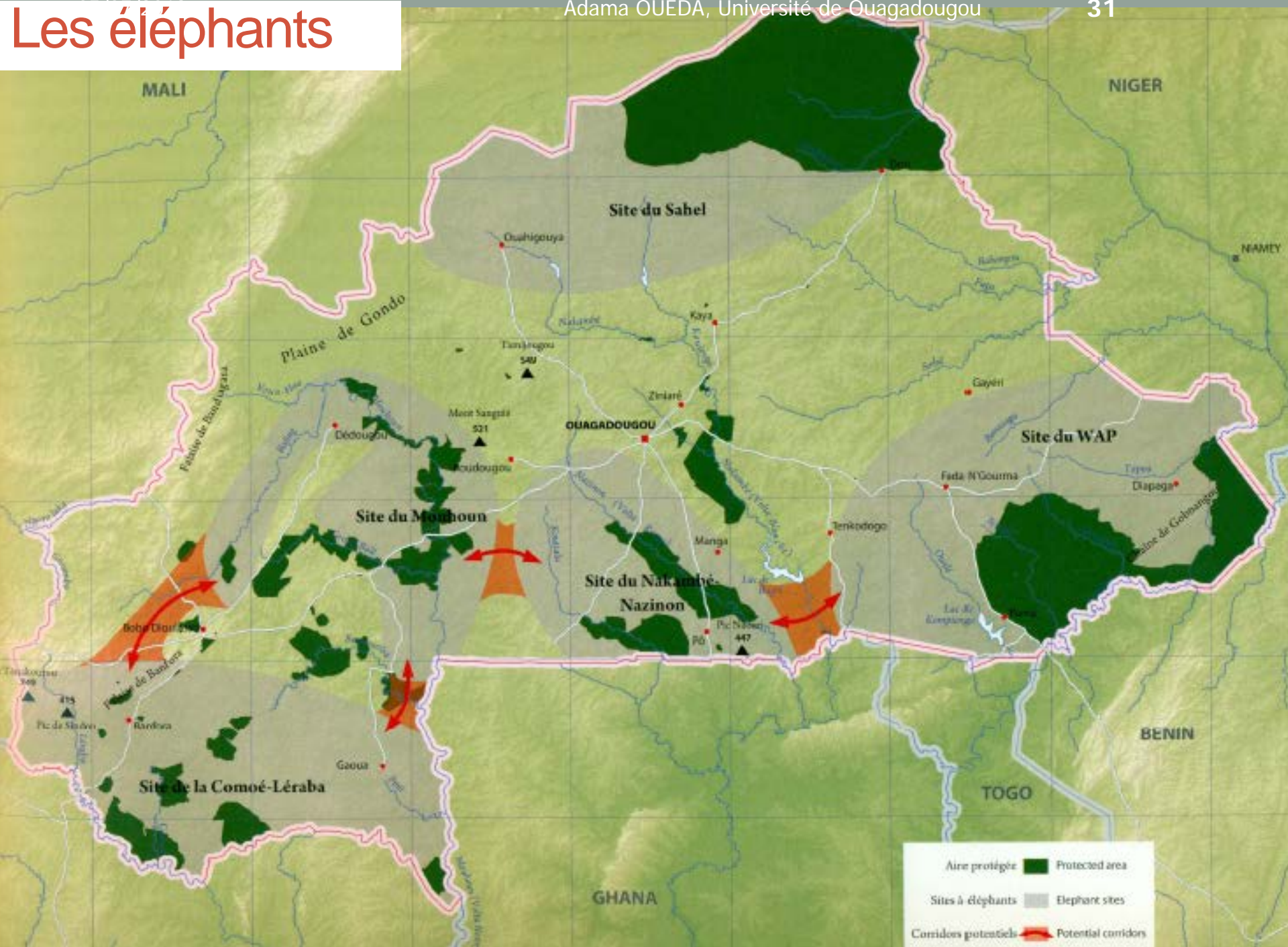
Les mammifères

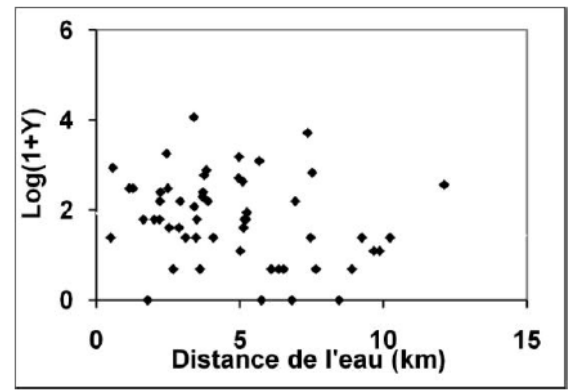
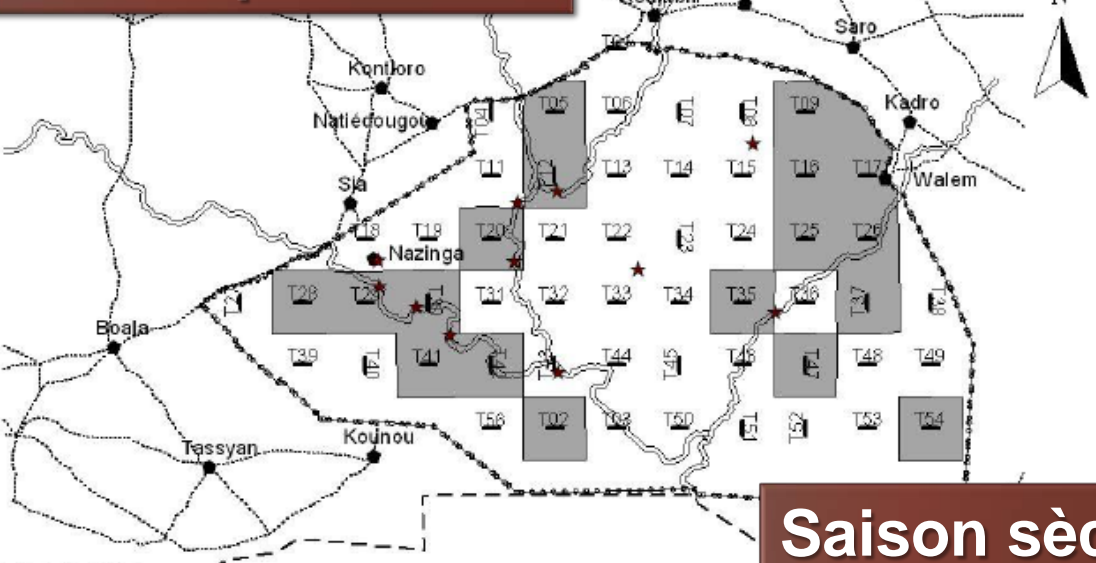
- 138 espèces
- 34 familles

Reptiles, amphibiens et oiseaux

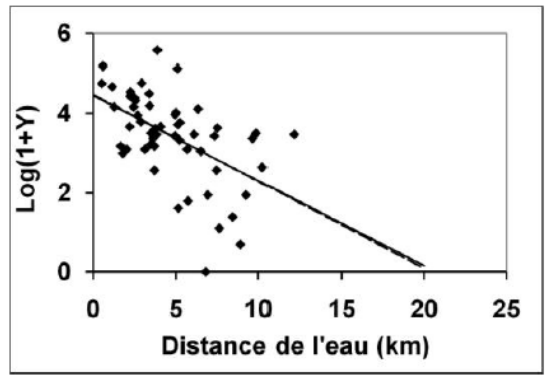
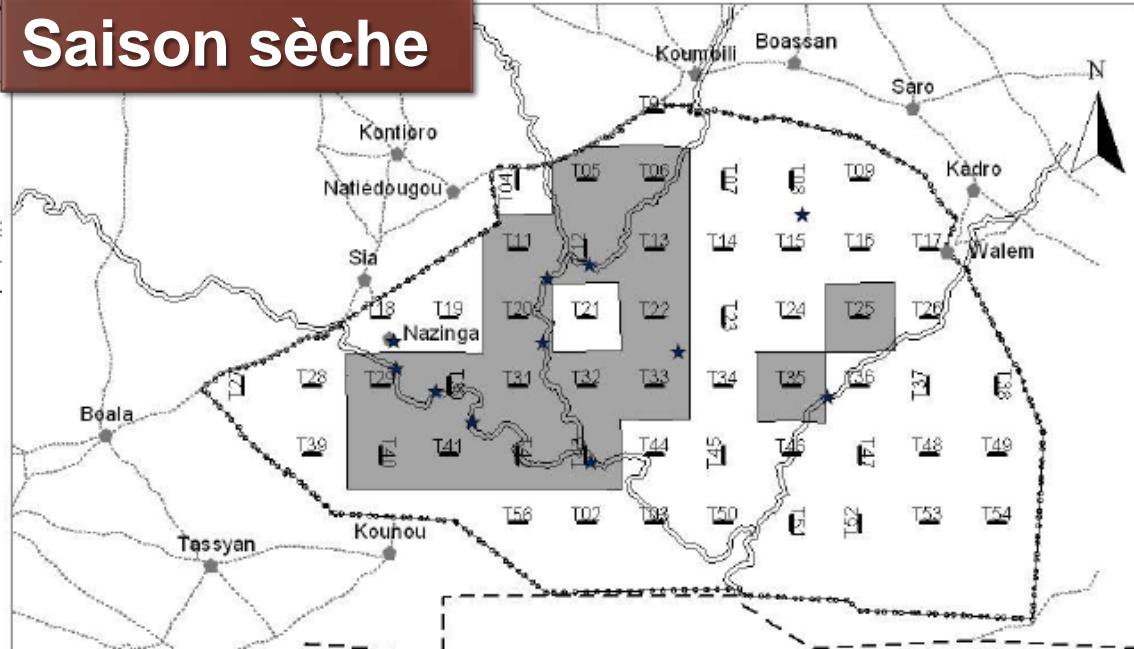
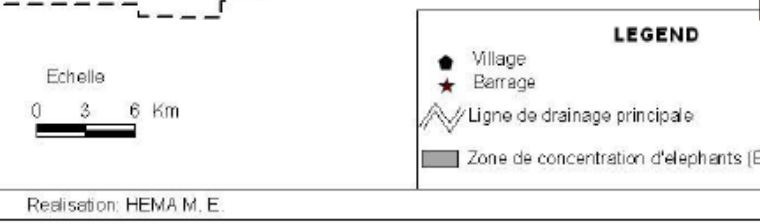
Ordre Order	Famille Family	Genre Genus	Espèces Species
Crocodyliens Crocodilia	1	2	3
Tortues Testudines	1	6	7
Varans Squamata (family Varanidae)	1	1	2
Serpents Ophidia	7	30	57
Batraciens Batrachia	5	16	30
Oiseaux Aves	87	278	518

IMPORTANCE DE L'HYDROLOGIE SUR LA DISTRIBUTION DES ESPÈCES

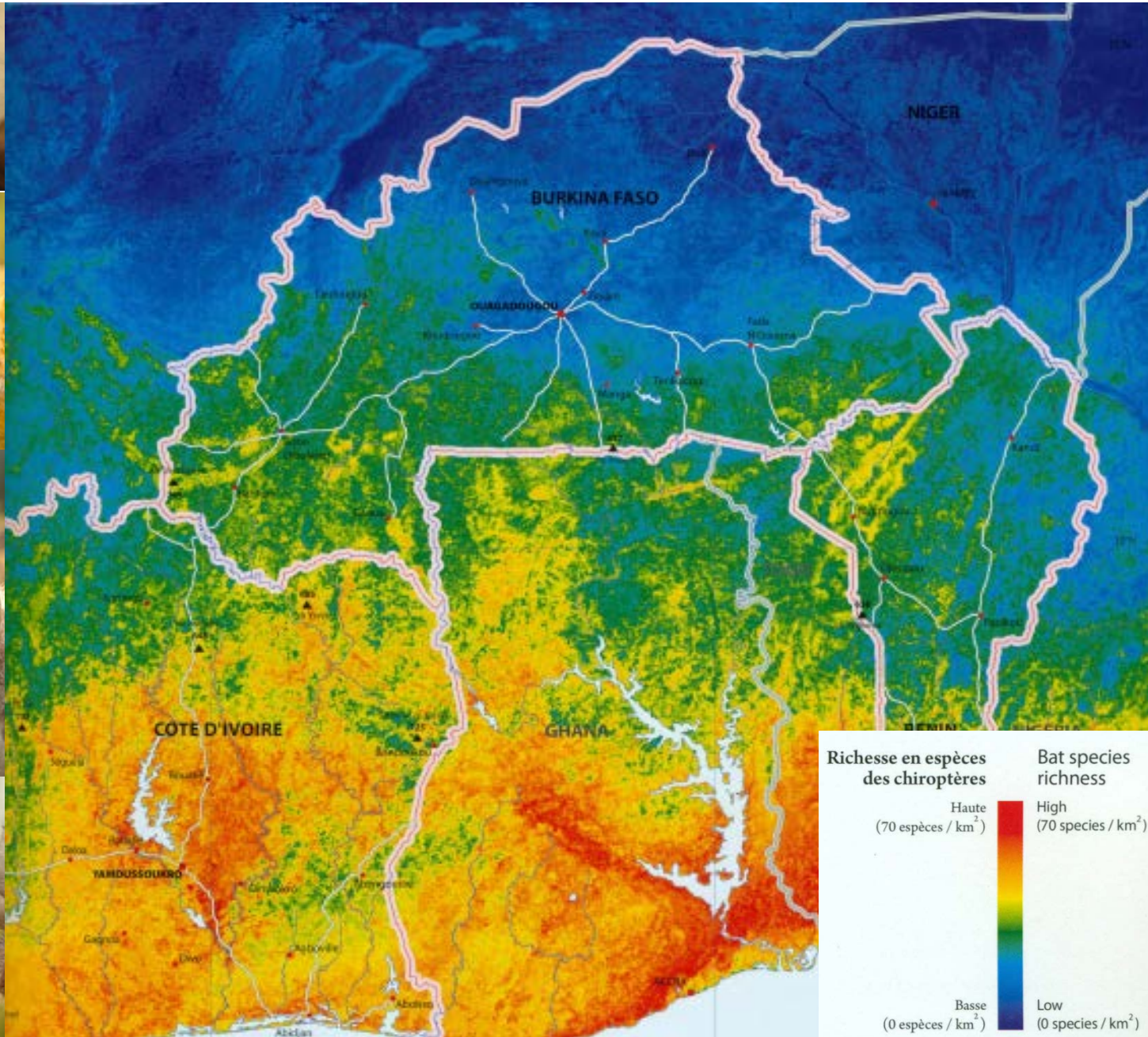


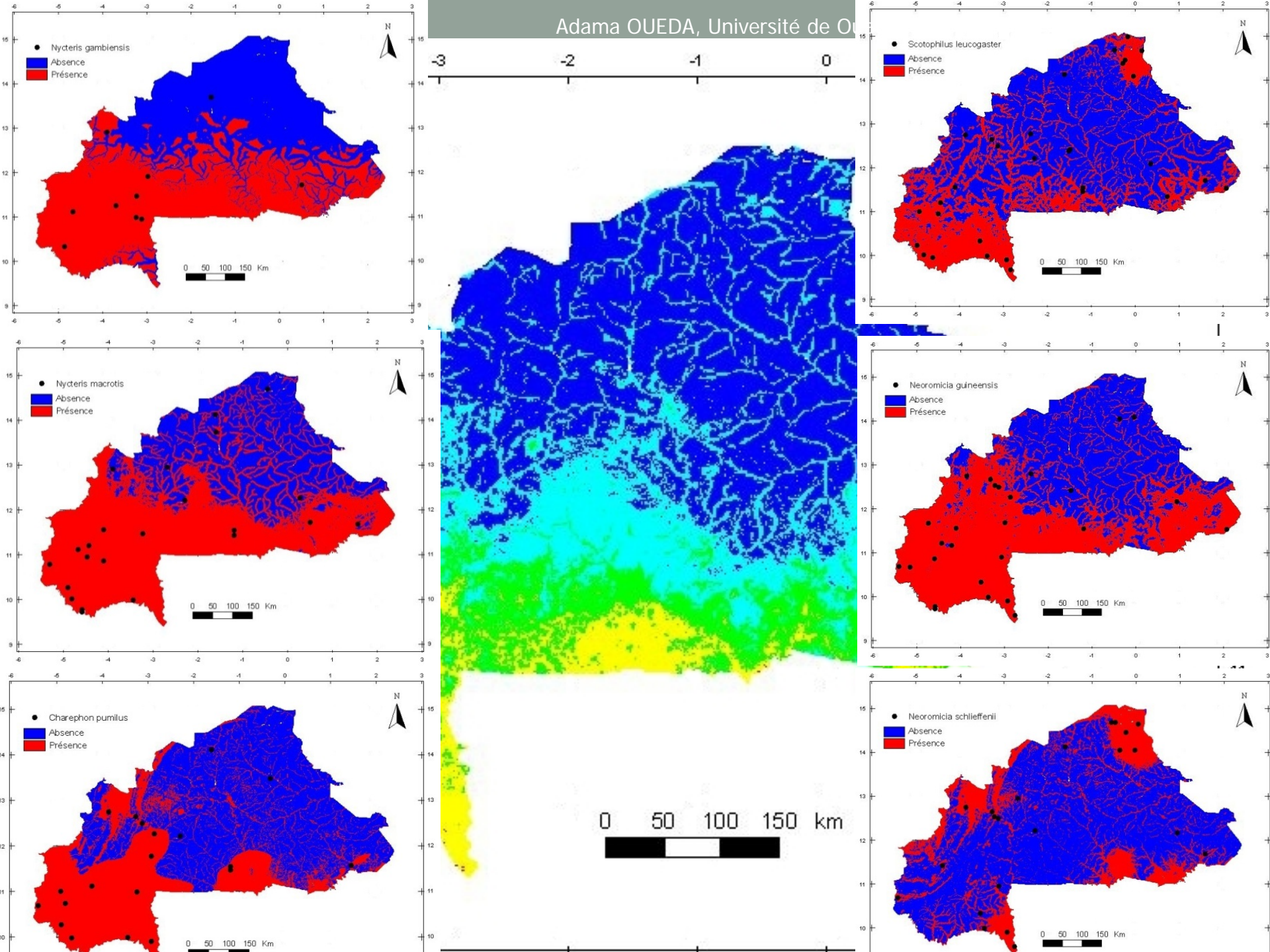


Saison sèche



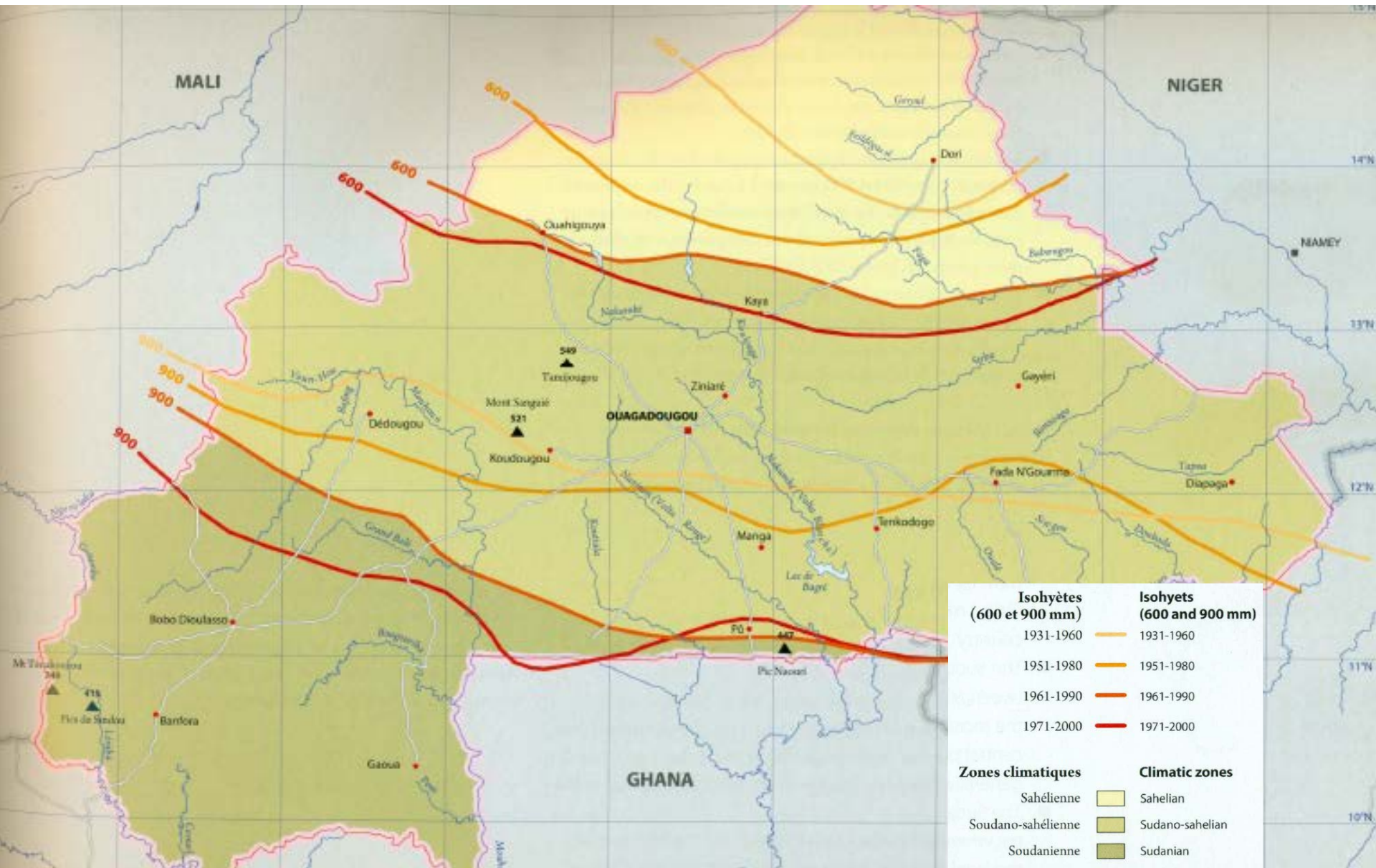
Les chauves-souris





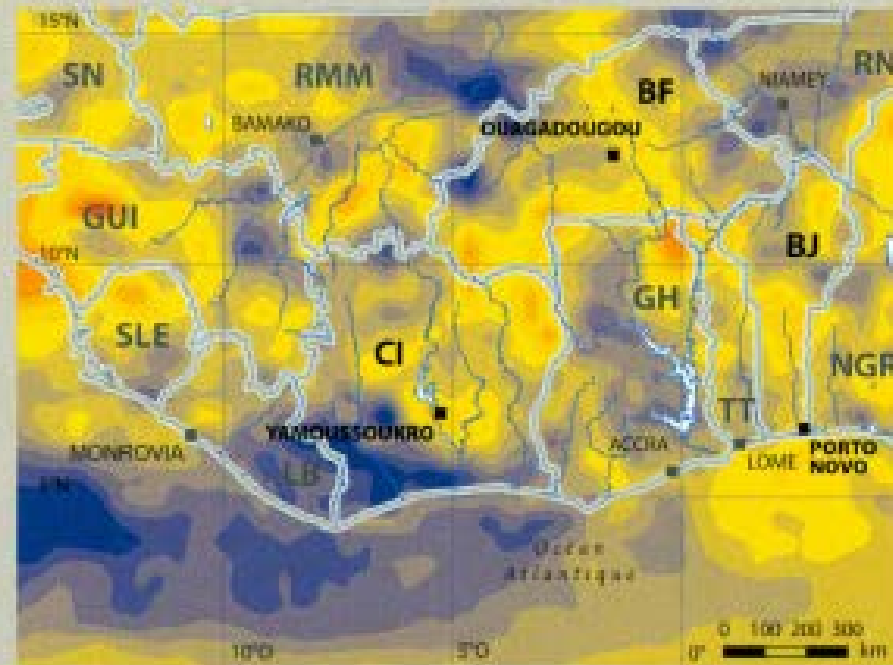
QUELQUES MOTS SUR LES PRESSIONS

Changements de précipitations observés

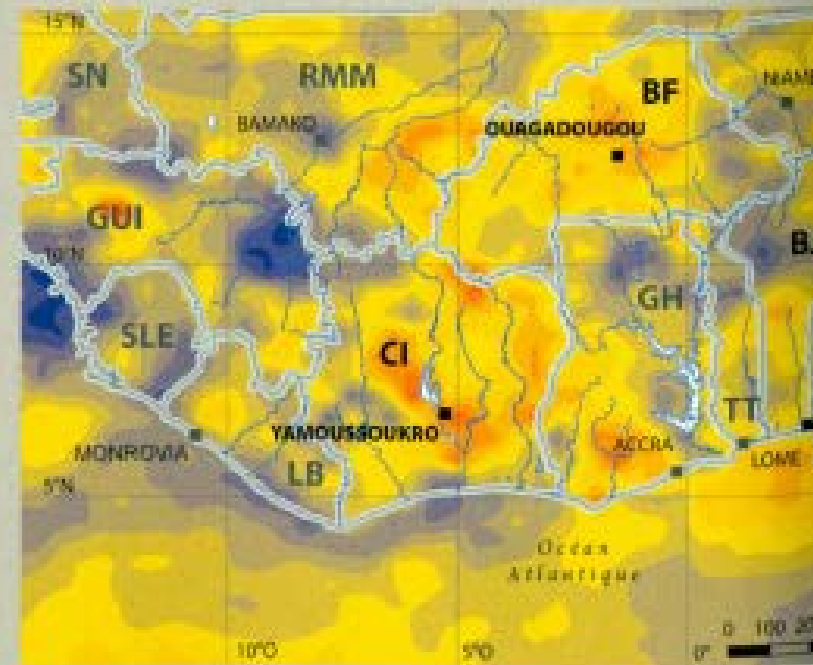


Prévision des changements de précipitations

A: 1990s - 2020s



B: 1990s - 2050s



Evolution du couvert terrestre dans la zone de Bagré

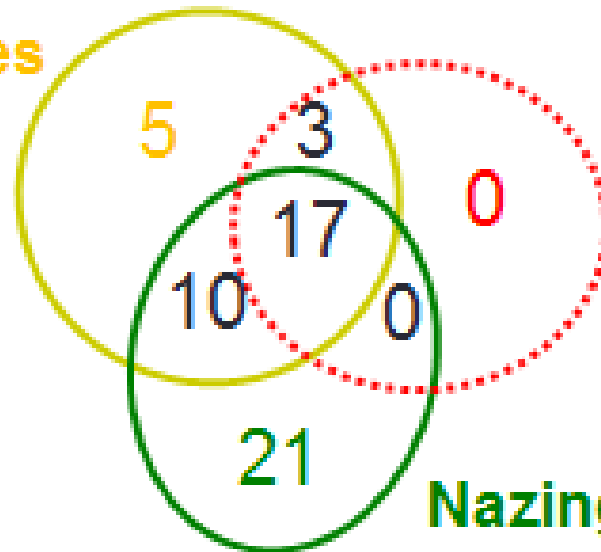


Pollution agricole et Eutrophisation



Koubri:
1300 ha
35 species

Bam:
2600 ha
20 species



Nazinga:
200 ha,
48 species

Total: 56 species for 3 sites



Effet de la baisse du volume d'eau sur le plancton

Loumbila
Saison pluvieuse

Loumbila
Saison sèche

Loumbila
Fin de Saison sèche

8

Taxa

11

Taxa

5

Taxa

Espèces de
Grande taille

Espèces de
Petite taille

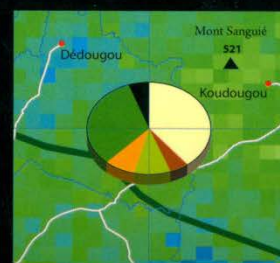
Espèces
Périphytiques



Atlas de la Biodiversité de l'Afrique de l'Ouest TOME II
Biodiversity Atlas of West Africa VOLUME II

Burkina Faso

Adjima Thiombiano & Dorothea Kampmann (eds)



Perspectives



05/07/2013



10/03/2012



Merci

