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Issues and challenges with inland waters and waterbodies

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INTRODUCTION

- **Outside the seas and oceans, there is the water spread over the land.**
- **all surface or groundwater present and circulated in the lands.**
- **Inland waters** are permanent water bodies inland from the coastal zone and areas whose properties and use are dominated by the permanent, seasonal, or intermittent occurrence of flooded conditions.
- Inland waters include rivers, lakes, floodplains, reservoirs, wetlands, and inland saline systems

INTRODUCTION

According to information center on water (CIE)
Inland water: two forms

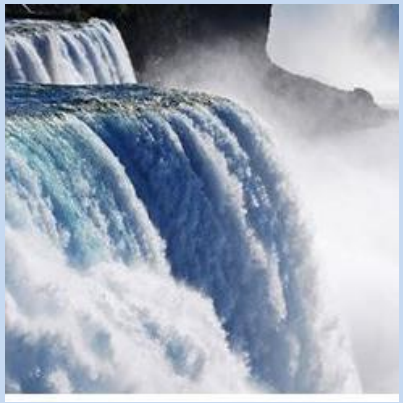
Solid (Continental Glaciers , Mountain Glaciers , Piedmont Glaciers)

Iceberg au Groenland (flickr) par Jabi – El de verdad

La Mer de Glace (glacier alpin) face nord du massif du Mont-Blanc (flickr) par robsimmon

Le glacier Malaspina (glacier de piémont) en Alaska. (flickr) par morenner57

Liquid (water courses, waterbodies, Groundwater)

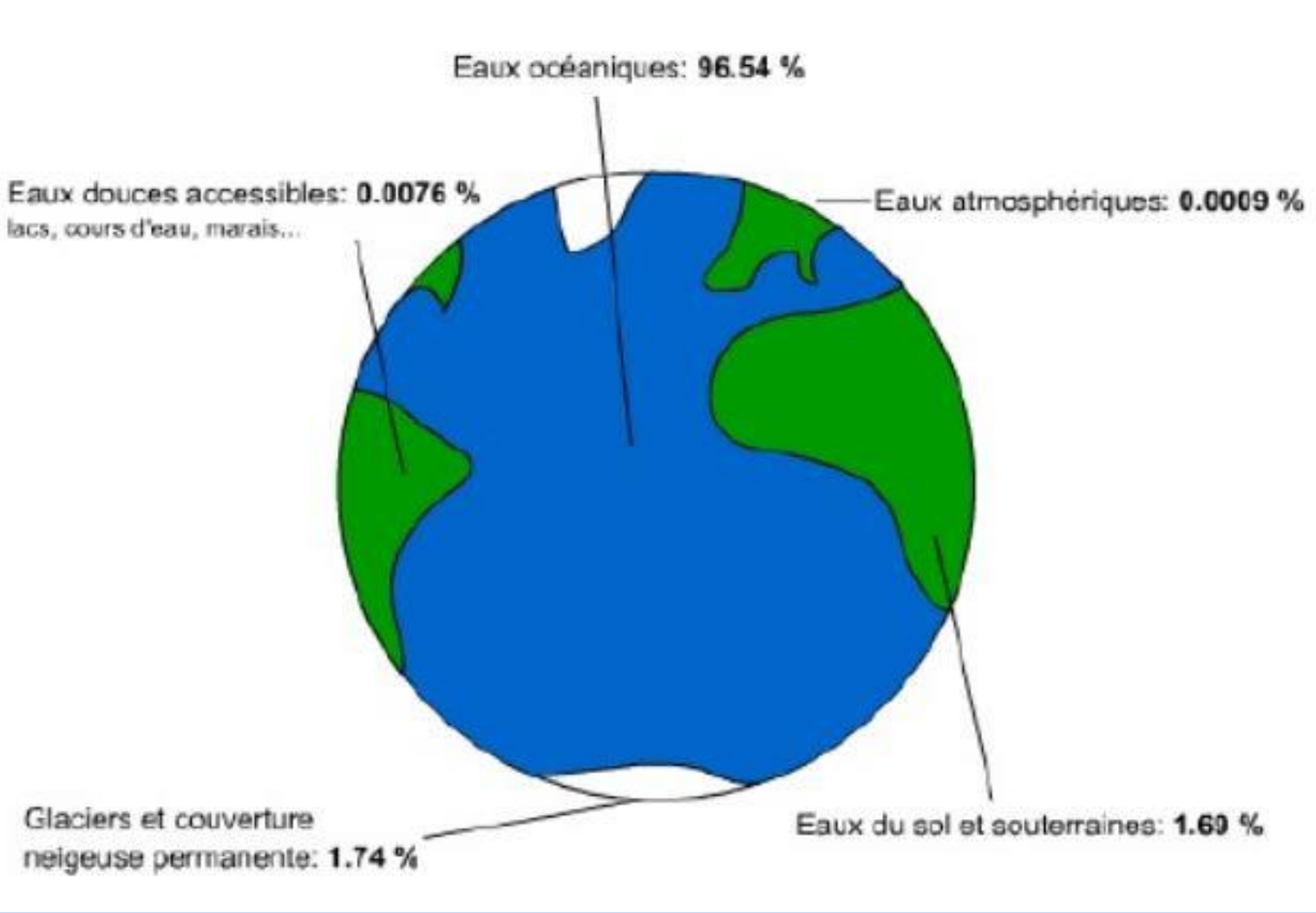


Les grottes de Choranche sont situées près de Choranche (parc naturel régional du Vercors (flickr) par grosgerard58

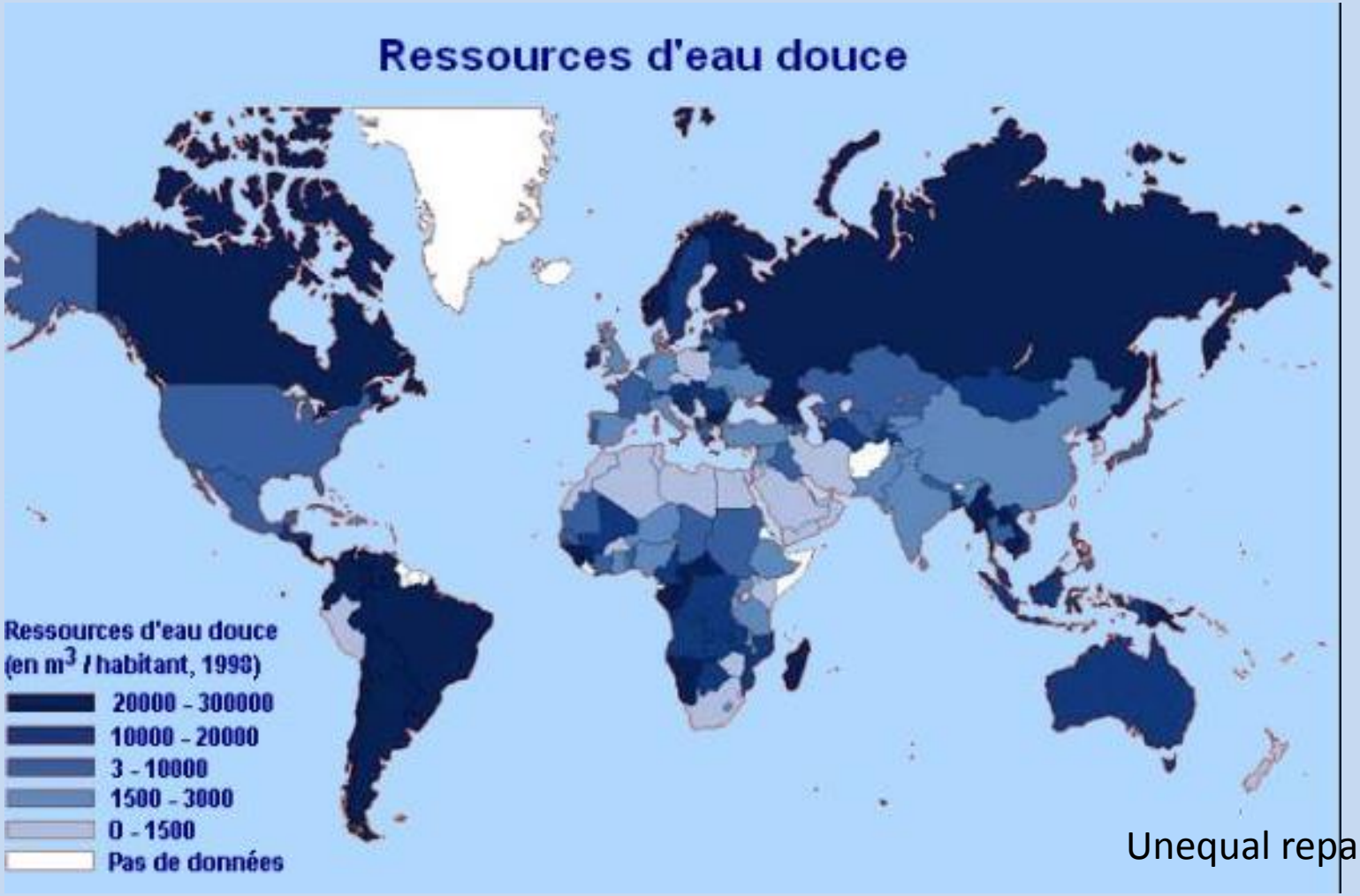
Inland water situation in world

75% surface globe couverte eau
70% occupé surface par océan
97% des masse d'eau par océan

03% Freshwater /world water total volume



Inland water situation in world



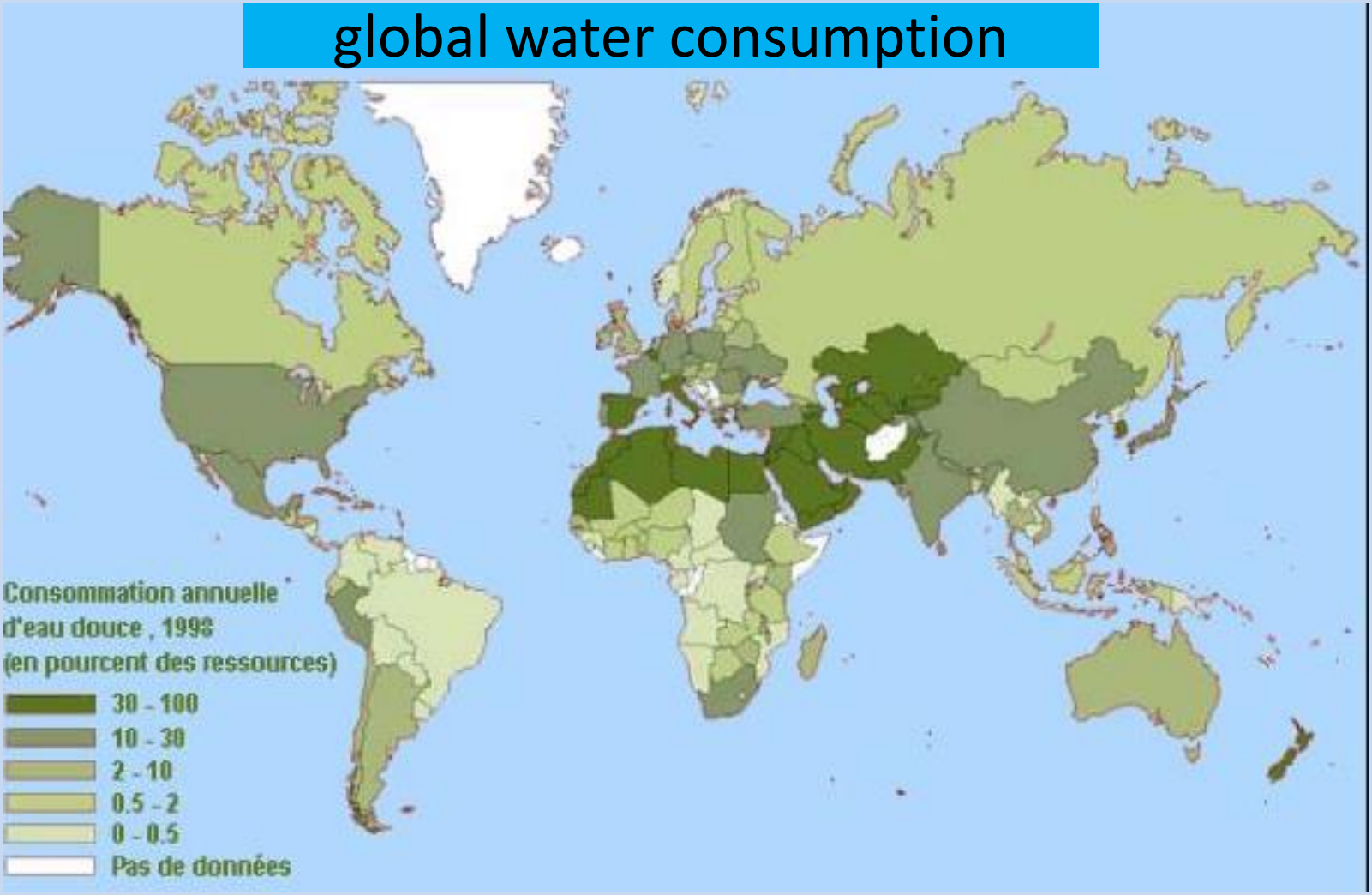
Unequal repartition

water covers about 3/4 of the surface of the planet,
less than 1% of the total volume can be used directly by humans.

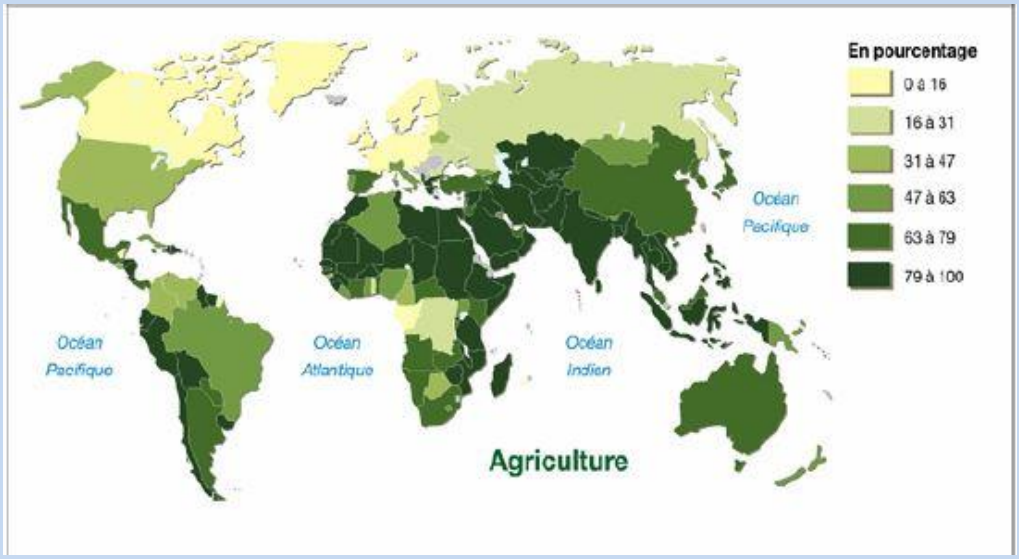
Indeed, oceans, inland seas and groundwater account for 97.2% of the water on Earth. Added to this are permanent ice and snow (2.1%) and freshwater available from rivers, reservoirs and shallow groundwater at 0.7%.

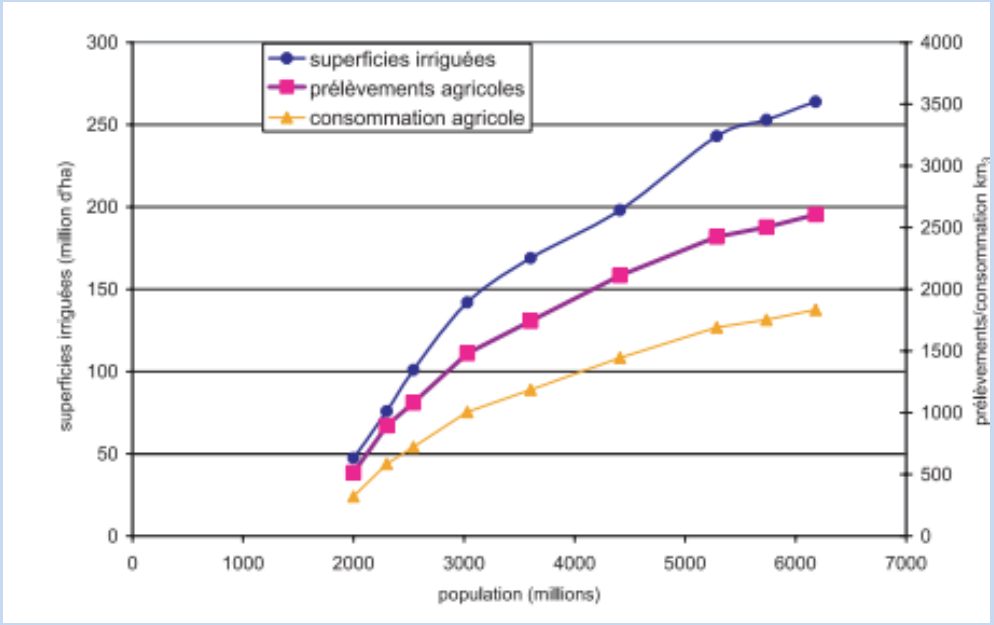
inland water and waterbody use

global water consumption



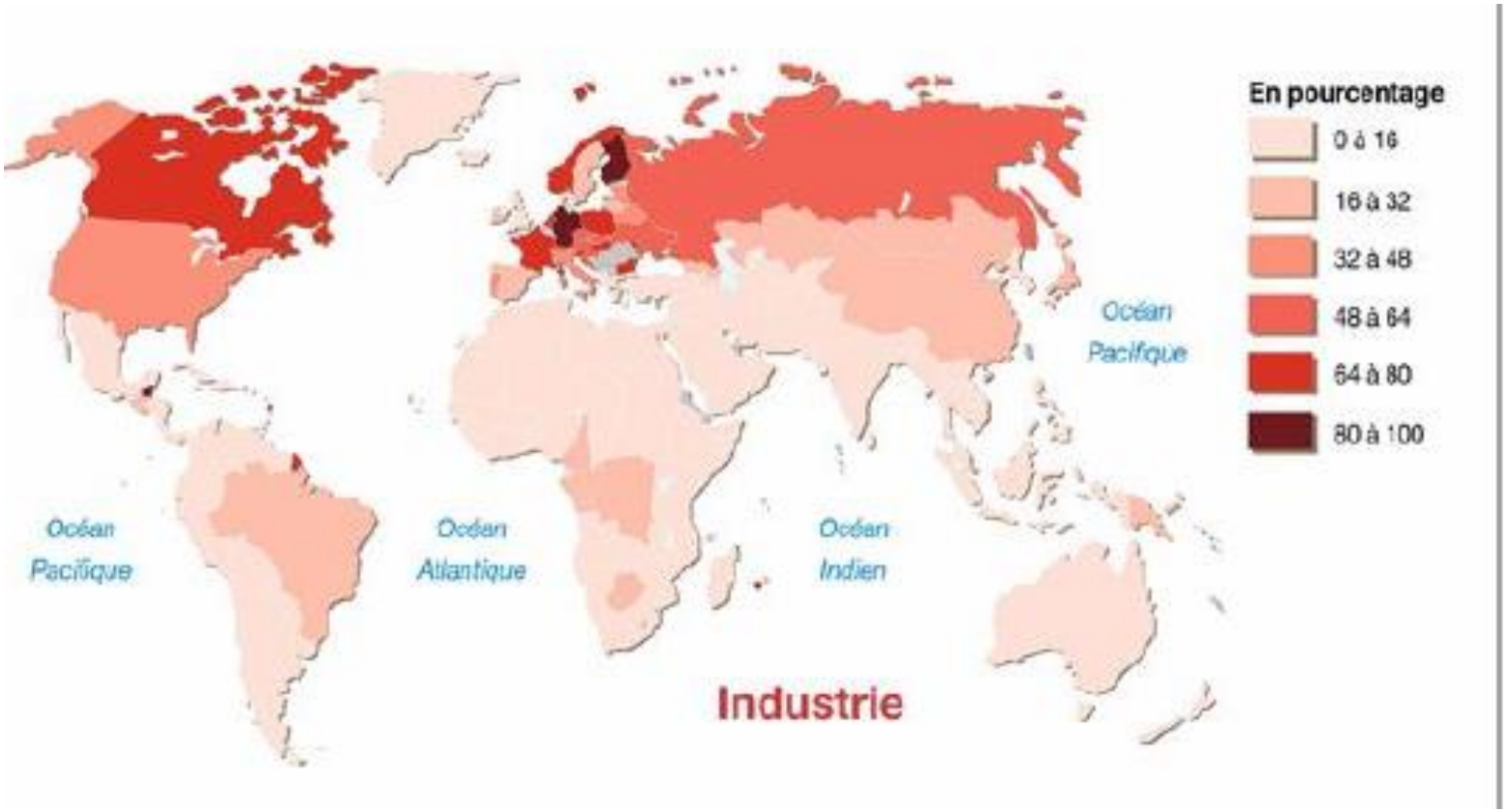
inland water and waterbody use





The total samples and consumption were multiplied by 7 and 6 respectively in a century (the population was multiplied by 3 at the same time).
The main user of water is irrigated agriculture (66% of withdrawals and 93% of consumption)

inland water and waterbody use



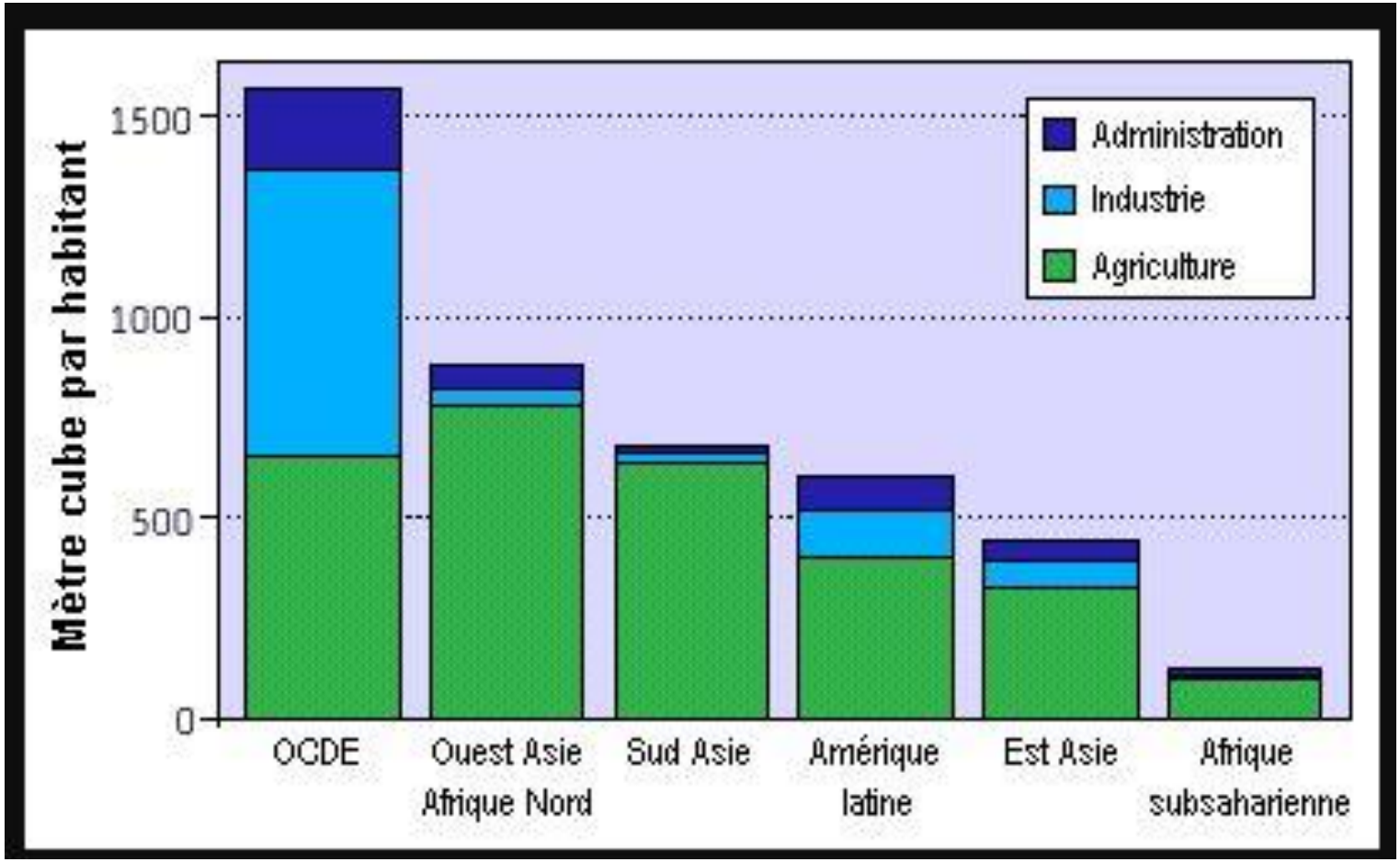
Industrial uses represent 20%
The industry uses large quantities of water.
But all is not necessarily consumed
The most water-intensive industries are the processing industries.

inland water and waterbody use

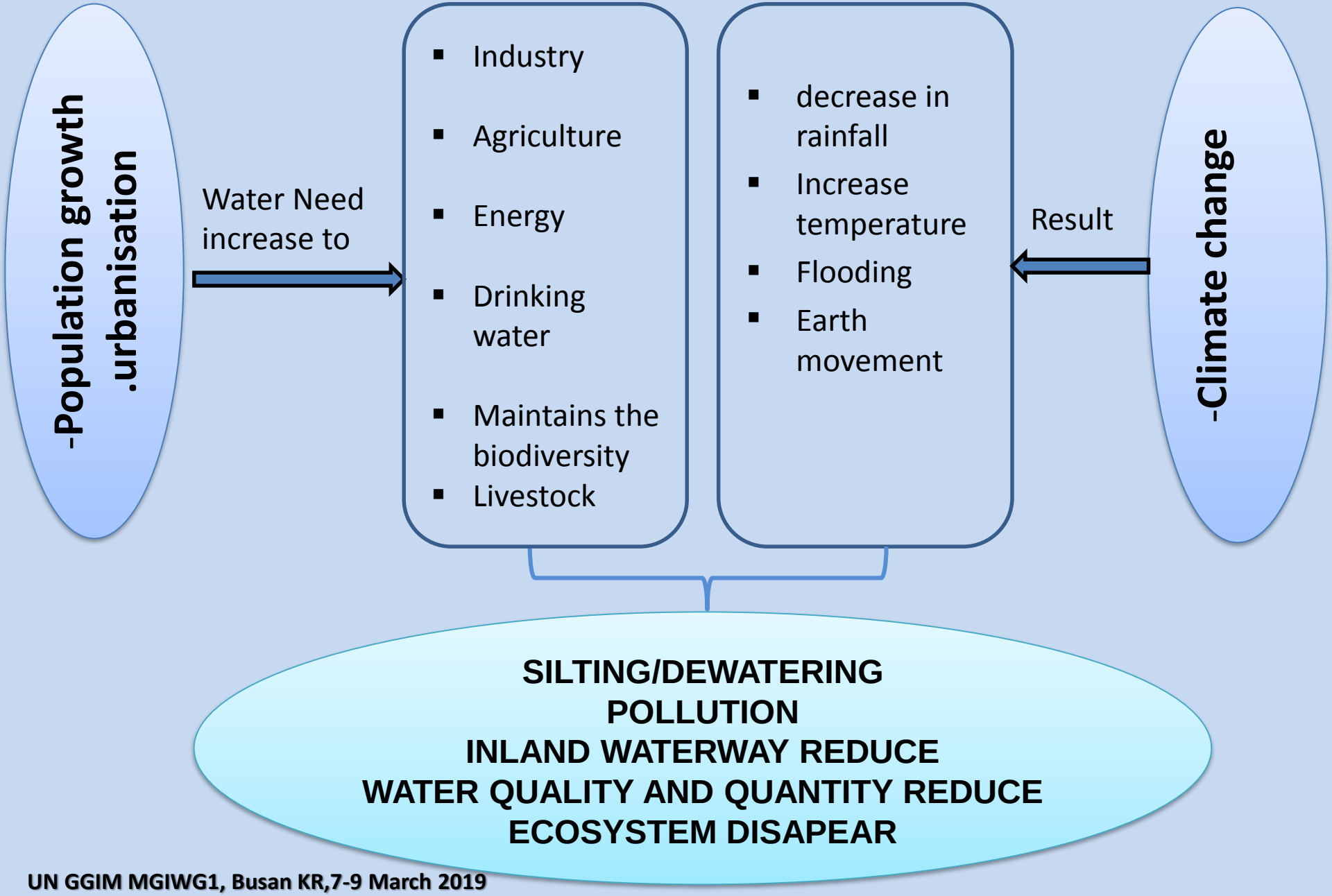
domestic uses represent 10%

"A minimum of 20 liters of water per day per person is recommended to meet the basic needs of hydration and personal hygiene. "
World Health Organization (WHO)

inland water and waterbody use

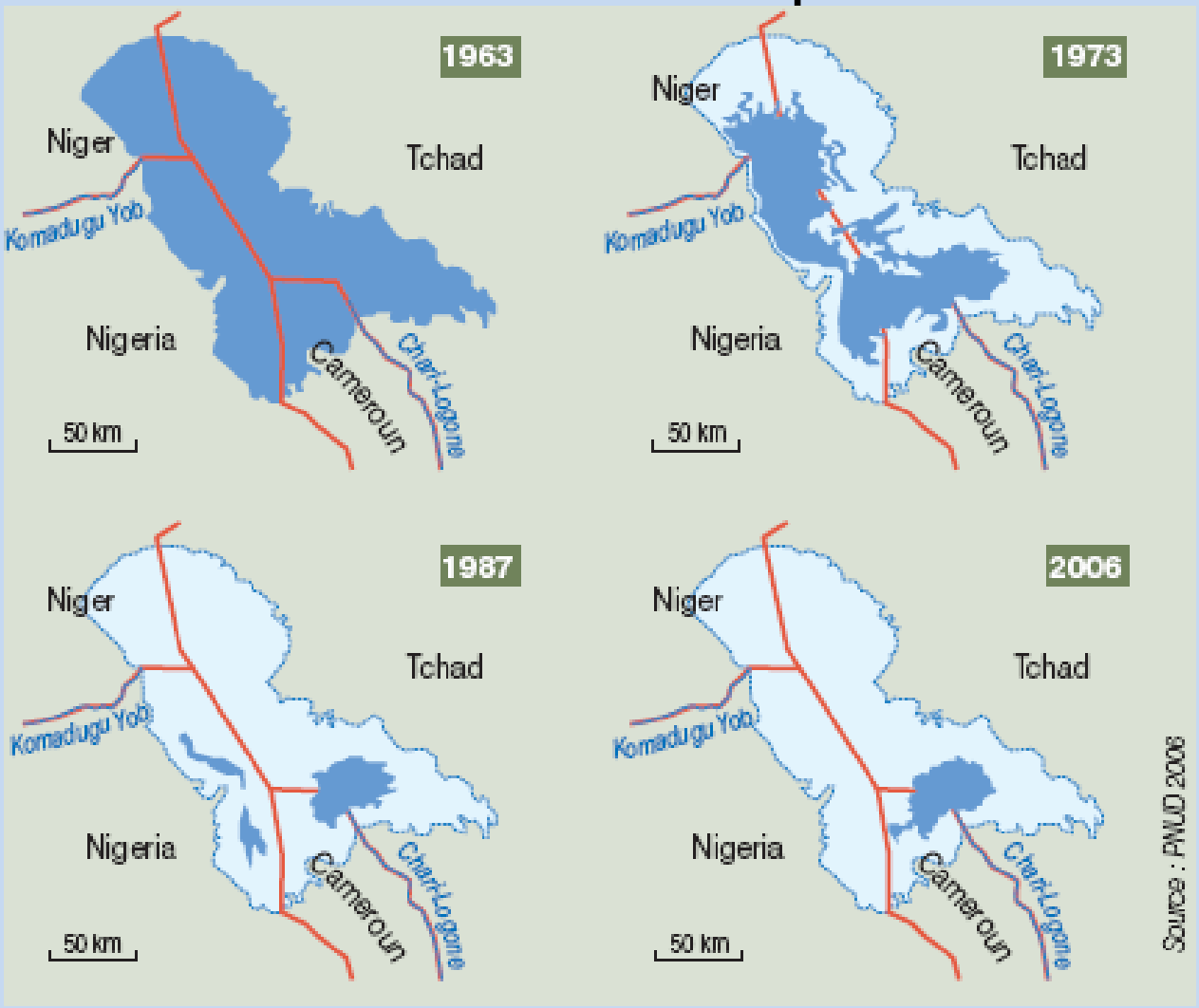


PROBLEM WITH INLAND WATER AND WATERBODIE



PROBLEM WITH INLAND WATER AND WATERBODIE

SILTING/Dewatering waterbodies: example LAC TCHAD



PROBLEM WITH INLAND WATER AND WATERBODIE

POLLUTION

origin:
to urban wastewater
water of industrial origin.
to pollution of agricultural origin

Fresh and Coastal Water in Interactions

Challenge : permanent availability of inland water and waterbody

Preservation of water and its ecosystem

Sustainable management of the resource (policy, coordination)

Example: Global Water Partnership (GWP), Integrated water resources management(IWRM), water-food-energy Nexus,….

→ SPATIAL DATA IS NECESSARY(Quality, permanently)

We can only manage what we know

to
-Detect
- evaluate
- follow
and prevent/reduce the problems

CONLUSION

- Inland water problems passed, present and future are realities
- Various origins
- They are transversal
- the problems do not have borders (affects country's, continents and the other resources in water sea and ocean, environment)
-the problems should be resolve in globally

the common point: All can be translated as geospatial information.

The reason for the existence of our working group

Suggestion: Extend the group to other specialists of the inland water and waterbodies