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)

**Liquid** (water courses, waterbodies, Groundwater)
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

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).
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)

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inland water and waterbody use
PROBLEM WITH INLAND WATER AND WATERBODIES

- Population growth
  - Urbanisation

Water Need increase to

- Climate change

Industry
- Agriculture
- Energy
- Drinking water
- Maintains the biodiversity
- Livestock

- decrease in rainfall
- Increase temperature
- Flooding
- Earth movement

Result

SILTING/DEWATERING
POLLUTION
INLAND WATERWAY REDUCE
WATER QUALITY AND QUANTITY REDUCE
ECOSYSTEM DISAPPEAR

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PROBLEM WITH INLAND WATER AND WATERBODIES

SILTING/Dewatering waterbodies:
example LAC TCHAD

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PROBLEM WITH INLAND WATER AND WATERBODIES

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
CONCLUSION

- 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