

# Continental Water Sustainability: a new transboundary Master and PhD training programme within EUCOR - The European Campus

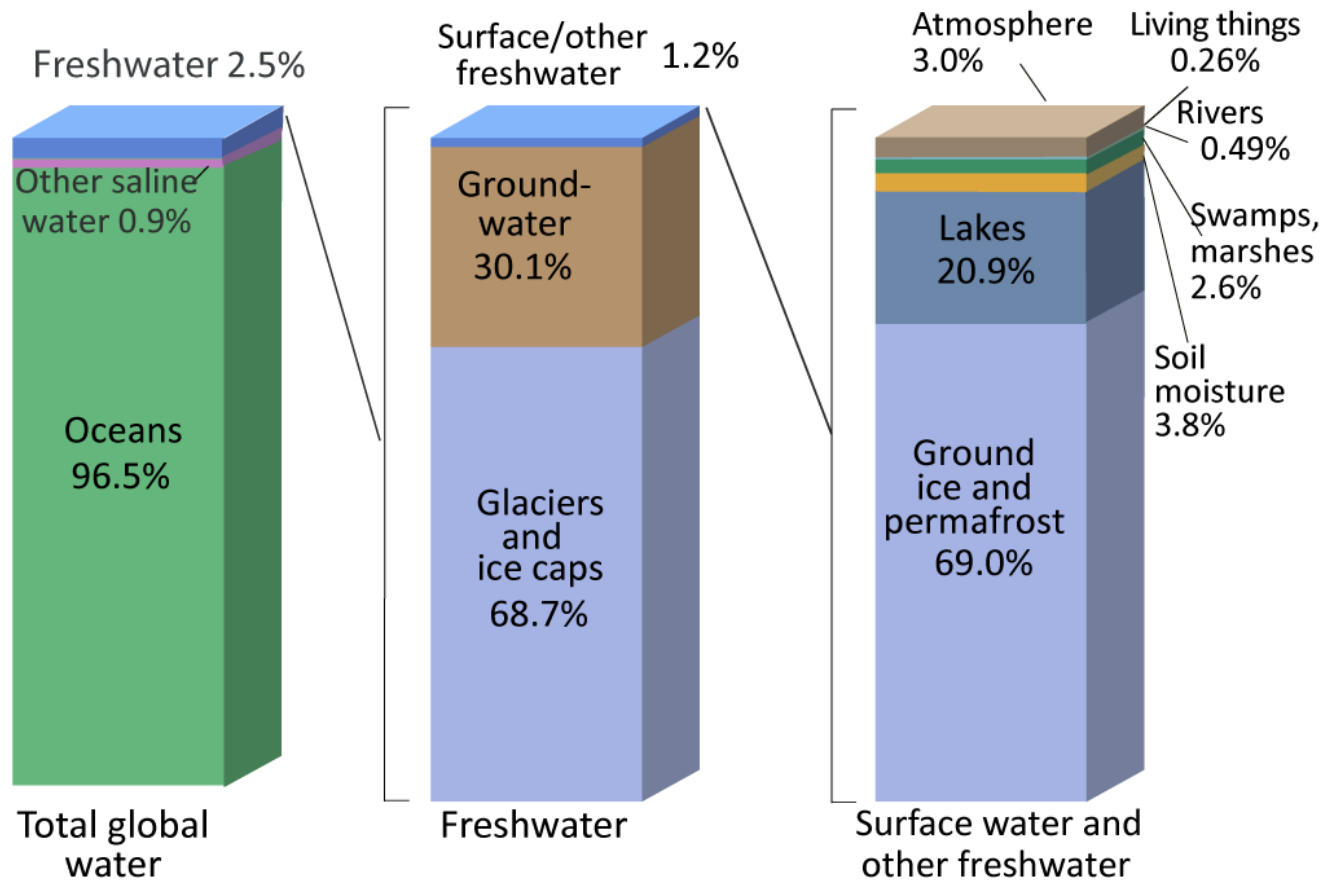
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EUCOR Excellence Chair Water and Sustainability,  
University of Strasbourg and KIT Karlsruhe



Ce projet est soutenu au titre du Fonds Recherche du Contrat Triennal 2021-2023 "Strasbourg Capitale européenne"



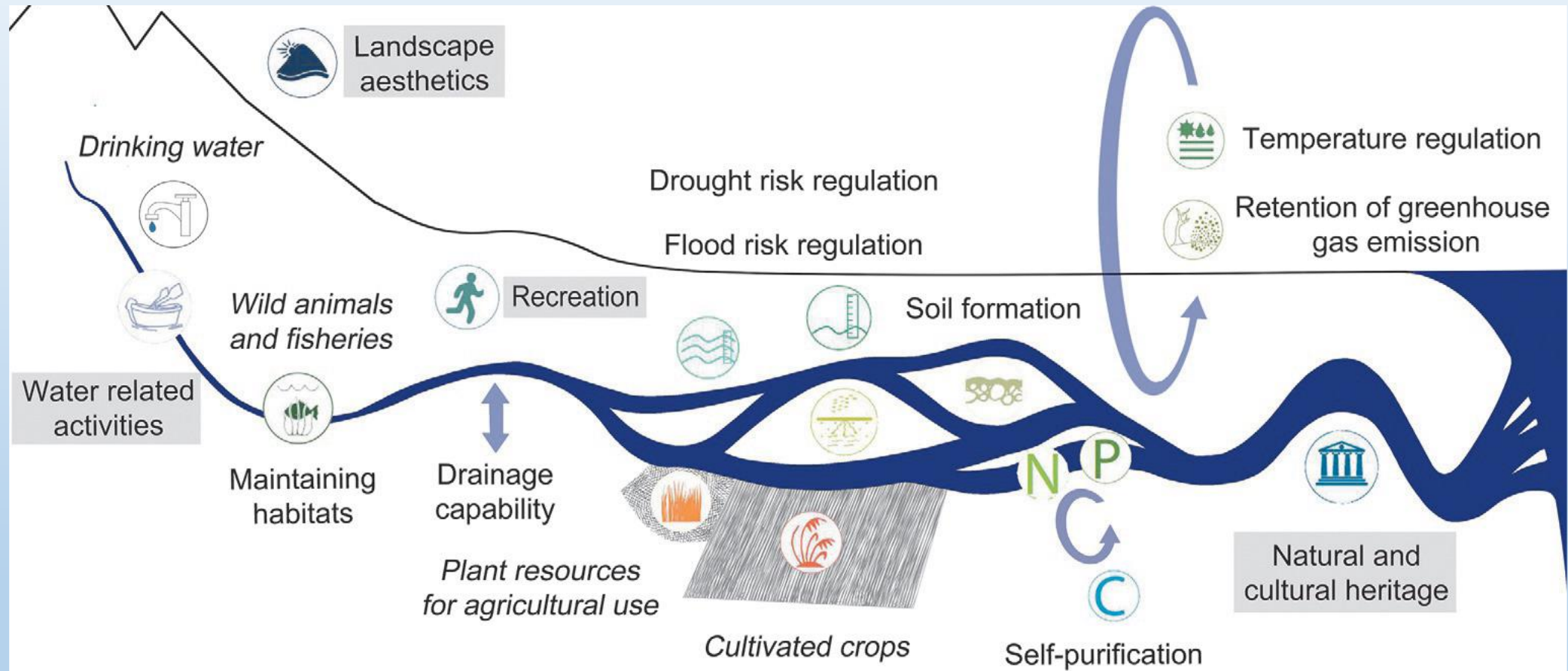
# A 'blue planet'? Biologically available freshwater is rare: 0,0067 %\*



Source: Igor Shiklomanov's chapter "World fresh water resources" in Peter H. Gleick (editor), 1993, *Water in Crisis: A Guide to the World's Fresh Water Resources*. (Numbers are rounded).

\* 93,113 km<sup>3</sup> water in lakes, rivers, wetlands out of 1,386,000,000 km<sup>3</sup> global water in total

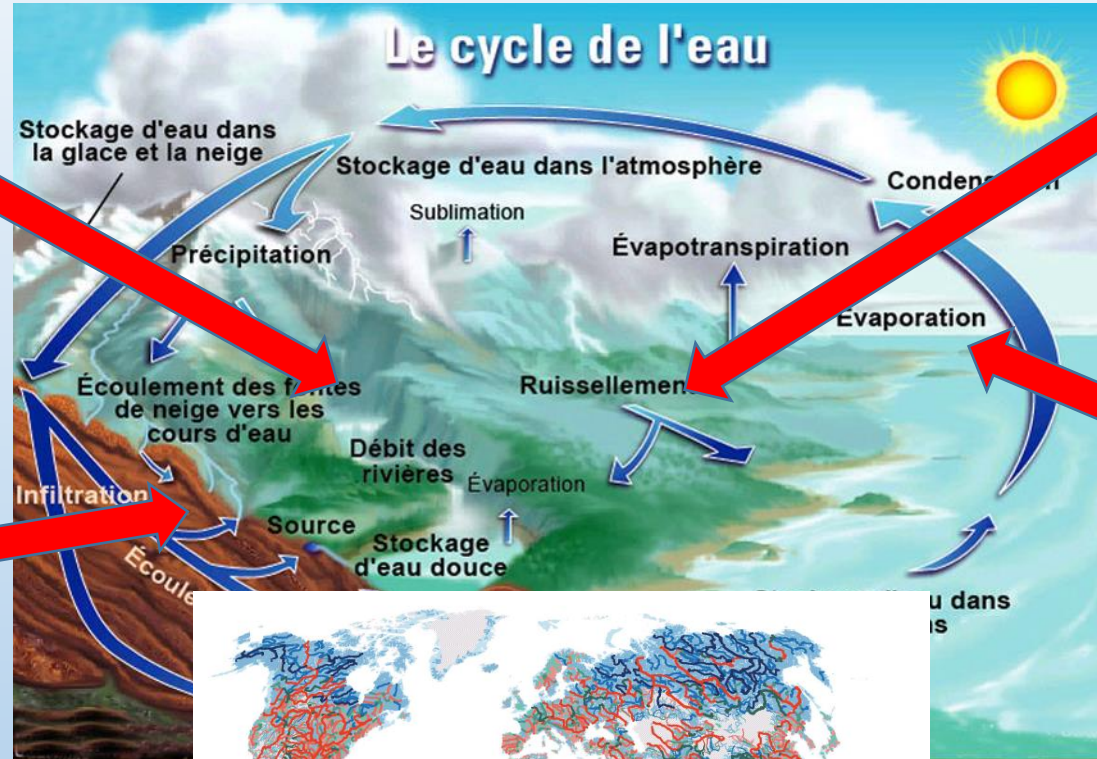
# "Ecosystem services" from rivers and lakes: ... essential for survival of humans (and non-humans!)



Jähnig, Sonja C.; Wantzen, Karl M.; et al.. (2022): *Ecosystem services of river systems - undervalued, irreplaceable, and at risk*. In Tockner, K. & Mehner, T. (eds). Encyclopedia of Inland Waters, 2<sup>nd</sup> ed.

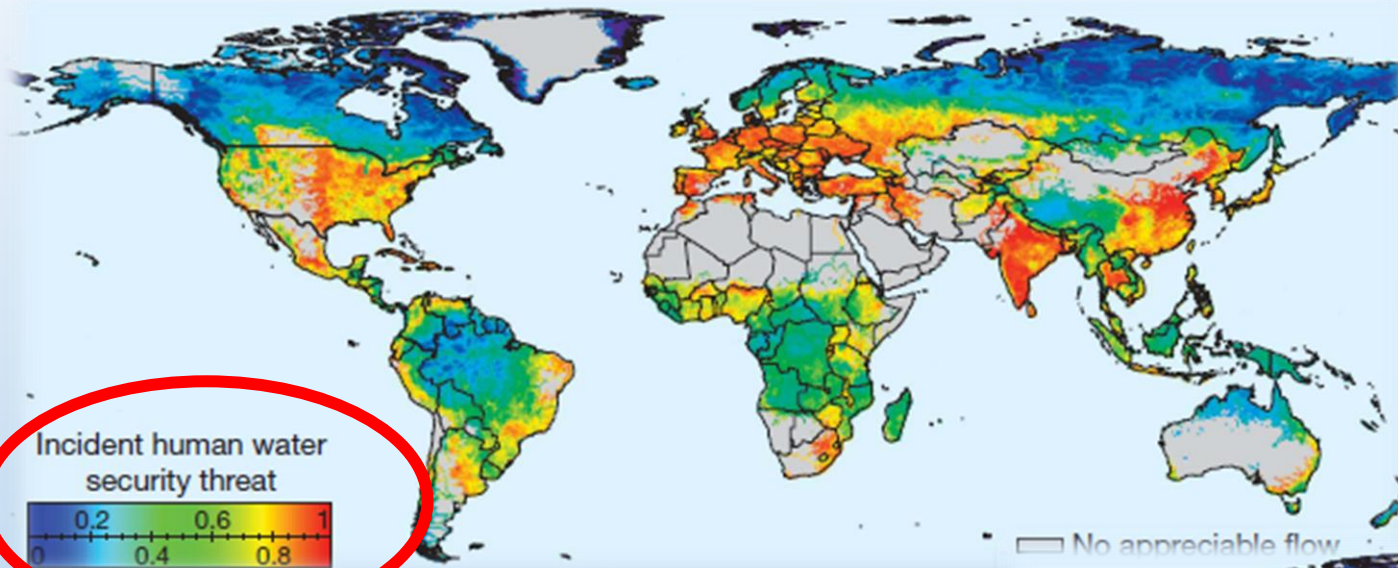


# The global water cycle has circulatory diseases

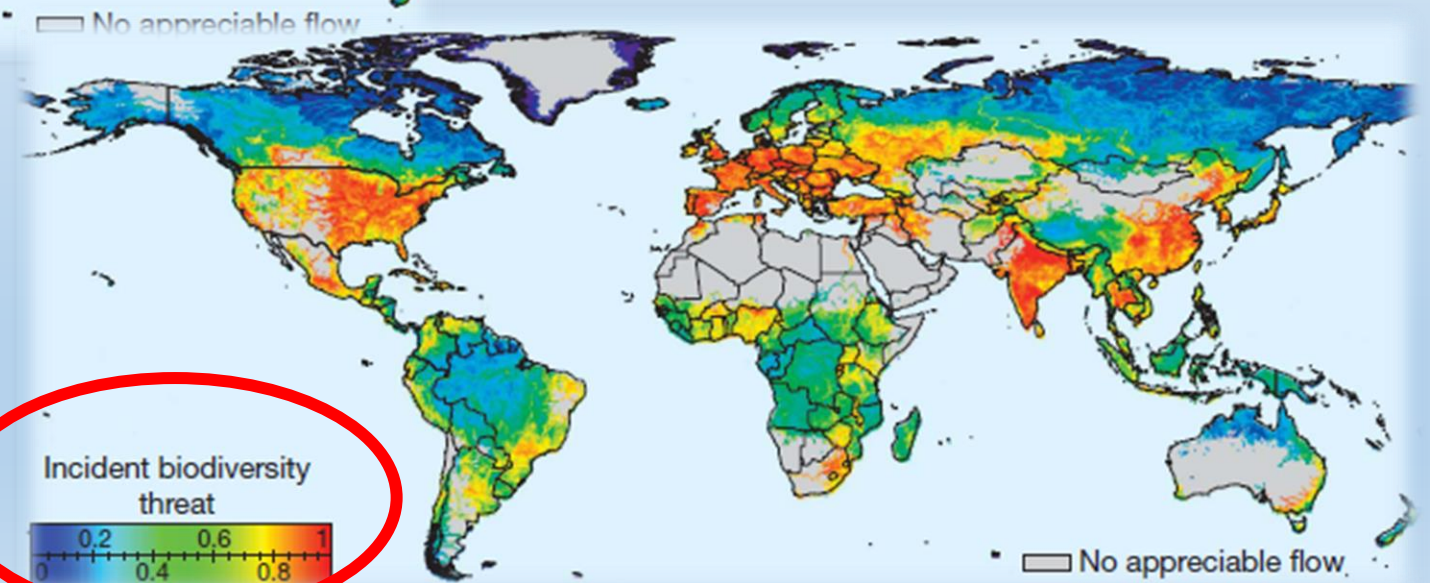


Grill et al. Nature 2019

# Do you see any difference between these two maps??



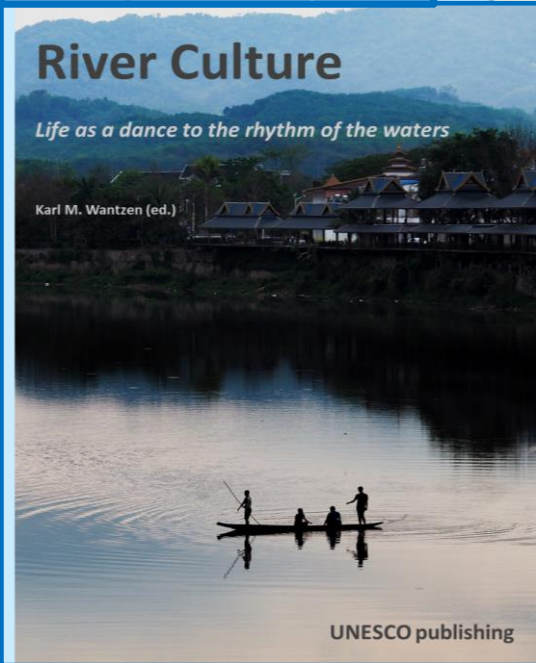
*... quod erat demonstrandum*



Vorösmarty et al. 2010, Nature



# How do people live with their rivers? Global similarities in patterns, processes, threats ... and initiatives!



map: [https://en.wikipedia.org/wiki/File:World\\_location\\_map\\_\(equiangular\\_180\).svg#file](https://en.wikipedia.org/wiki/File:World_location_map_(equiangular_180).svg#file)

***We need to take action, before urgency measures threaten our liberty***

**Ecosystem stress  
resilience**

**Restoration costs**

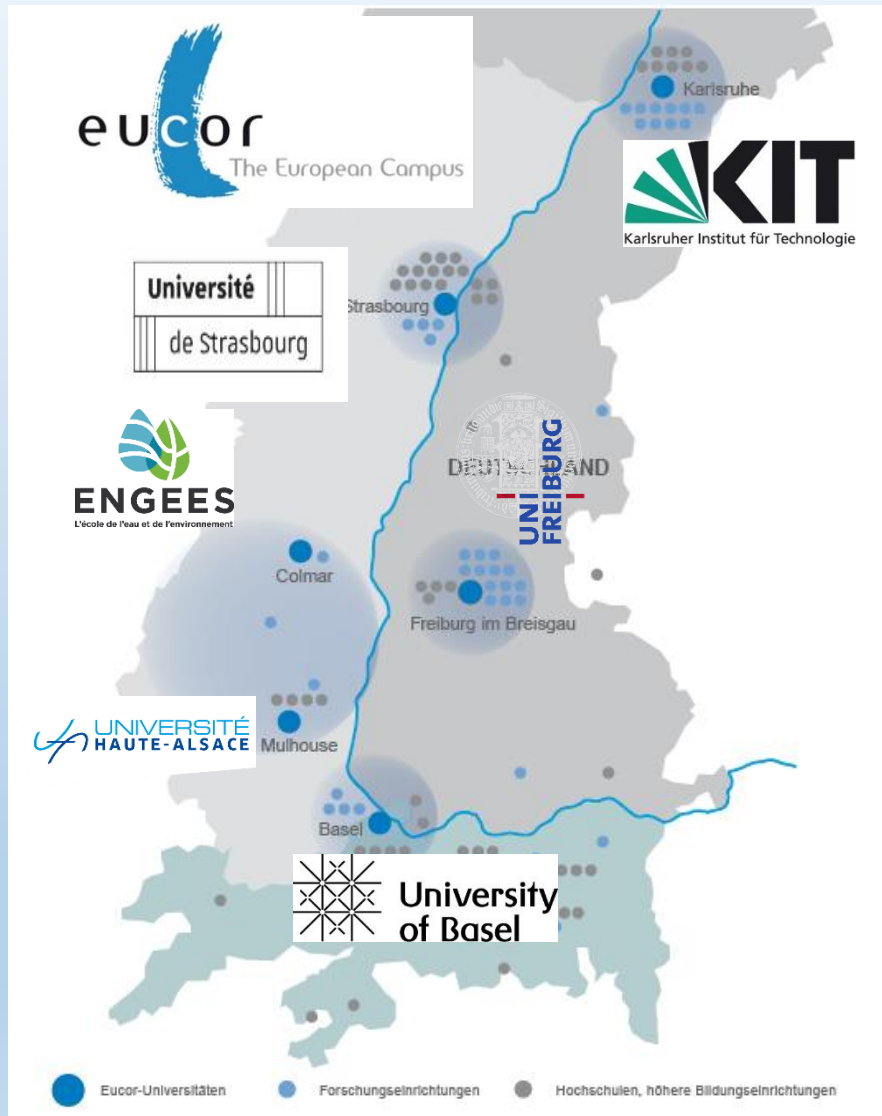
***Retarded willingness***

**to change...**



***Path-dependency hampers sustainability transformation!***

# EUCOR – *the European Campus*: high potentials for water and sustainability



- **'Water family'** with > 80 professors, 120 postDocs & PhDs
- 120,000 students, 15,000 researchers, 11,000 PhDs
- Excellent, **globally visible science** (R&D, teaching, cooperations)
- Upper Rhine Region: a **“living lab”** for European integration
- EUCOR's **strategic goals**: Chairs, students' mobility, sustainability



# One Chair, three targets, four fields of action



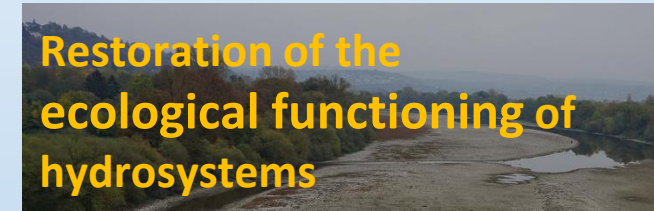
- I. Impact science**
- II. Co-developed projects**
- III. Innovative teaching**



**I. Water and sustainable cities**



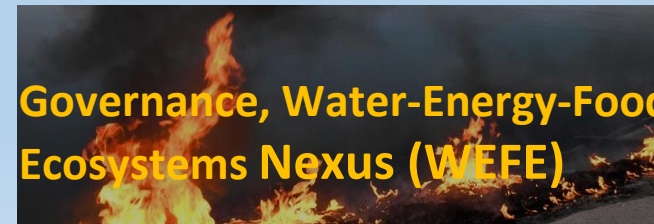
**II. Restoration of the ecological functioning of hydrosystems**



**III. Relationships between humans and inland waters**

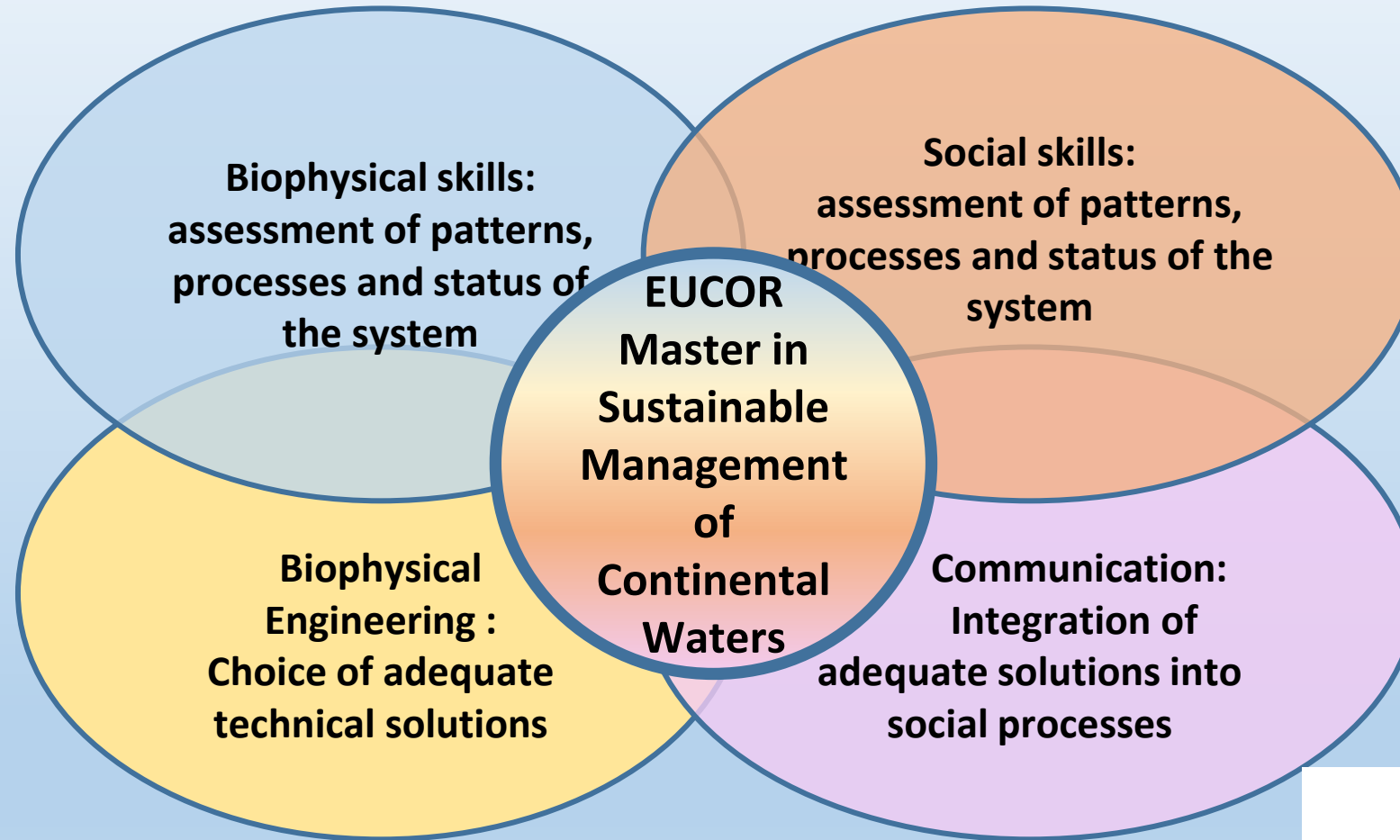


**IV. Governance, Water-Energy-Food-Ecosystems Nexus (WEFE)**



# "How to tackle complex water problems?"

## ❑ *EUCOR Master in Continental Water Sustainability' (2026)*





# EUCOR Chair Project : **TRAINING** (ongoing, opens Sept. 2026):

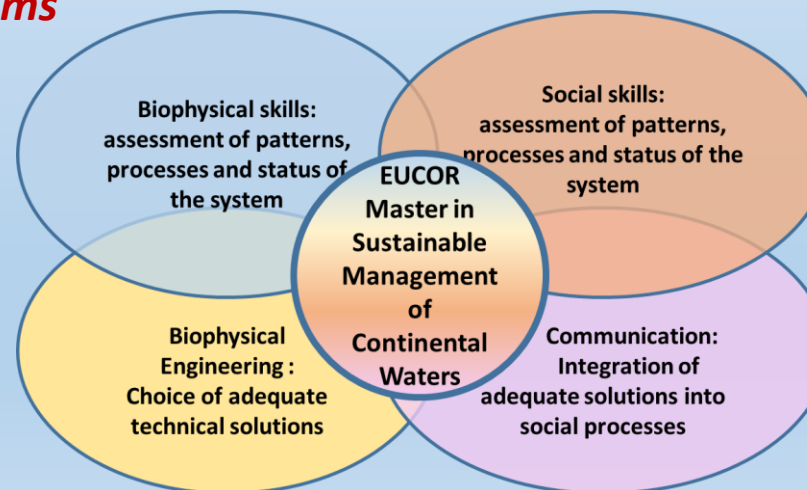
## 'EUCOR Master in Continental Water Sustainability'

### Our future graduates...

- *see connections between disciplines*
- *are skilled in conflict resolution*
- *get people to solve complex problems*
- *employing an evolutive project design*
- *and adaptive reorganization of teams*

### Public/private partners...

- *suggest thematics/teach/learn*
- *profit by solutions (MSc. theses)*
- *may recruit graduates*
- *accompany spin-offs*

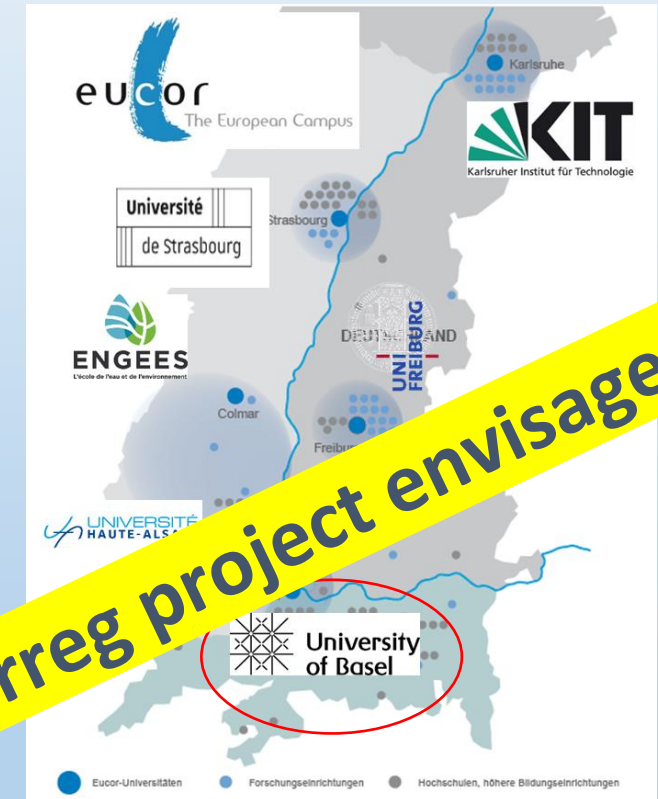


# 'EUCOR Master in Continental Water Sustainability (CWS)'


- Analysis of existing shareable courses
- Definition of the main water issues
- Definition of knowledge
- Definition of skills
- Detailed review of existing courses
- Identification of courses not identified to date
- Definition of missing courses

Completed

In progress







Thank you for your attention...

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