

# Stagiairothon

**Master 2: International Integrated Watershed Sciences**

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**Systemic exploration of water quality degradation in urban rivers under the impact of global urbanization**

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# What we do and how we do it ?

## Objectives



Characterize water quality alterations in urban rivers

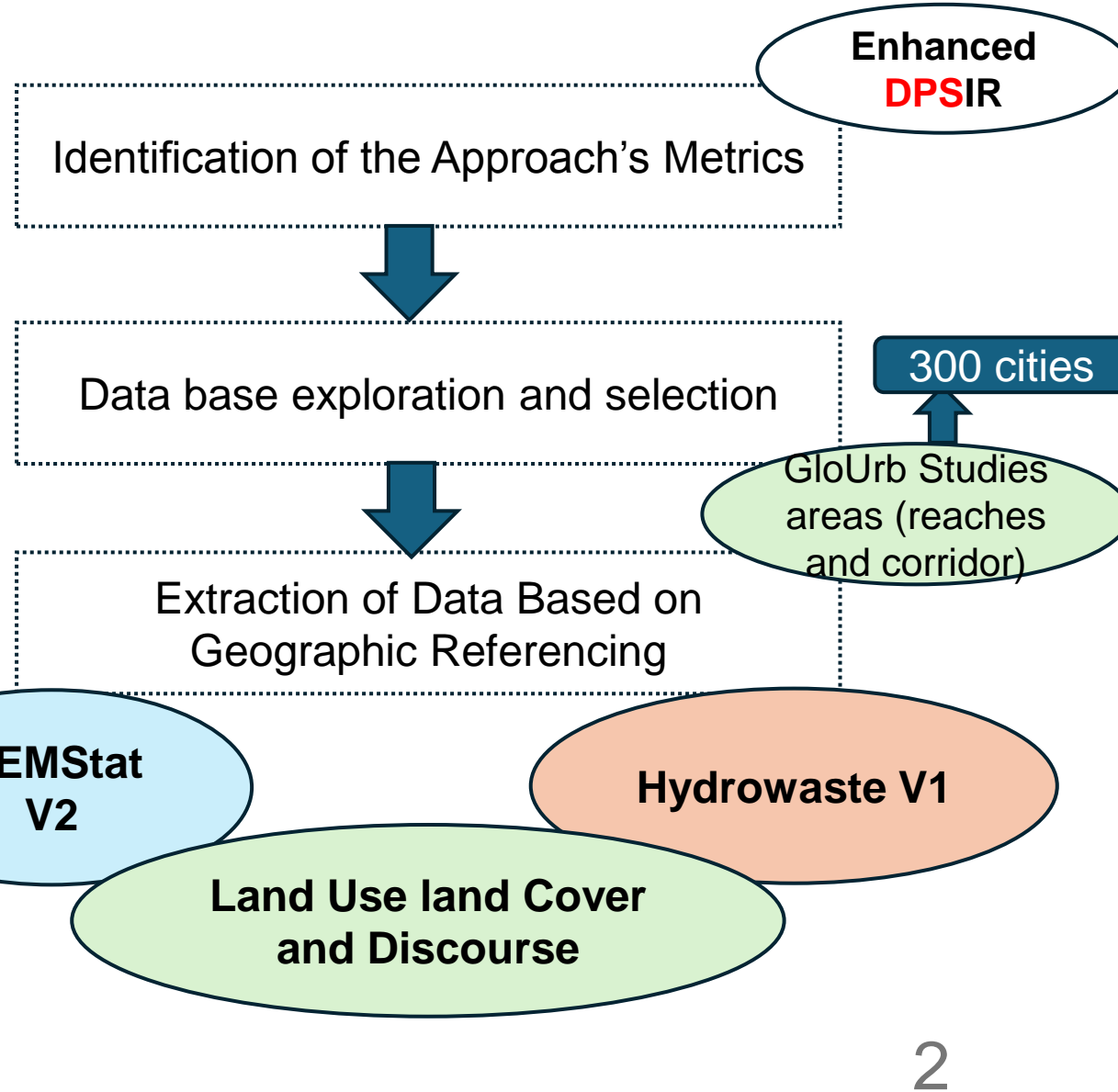
Assess the intensity of urban pressure on water quality



Establish the links between urban pressure and ecological degradation

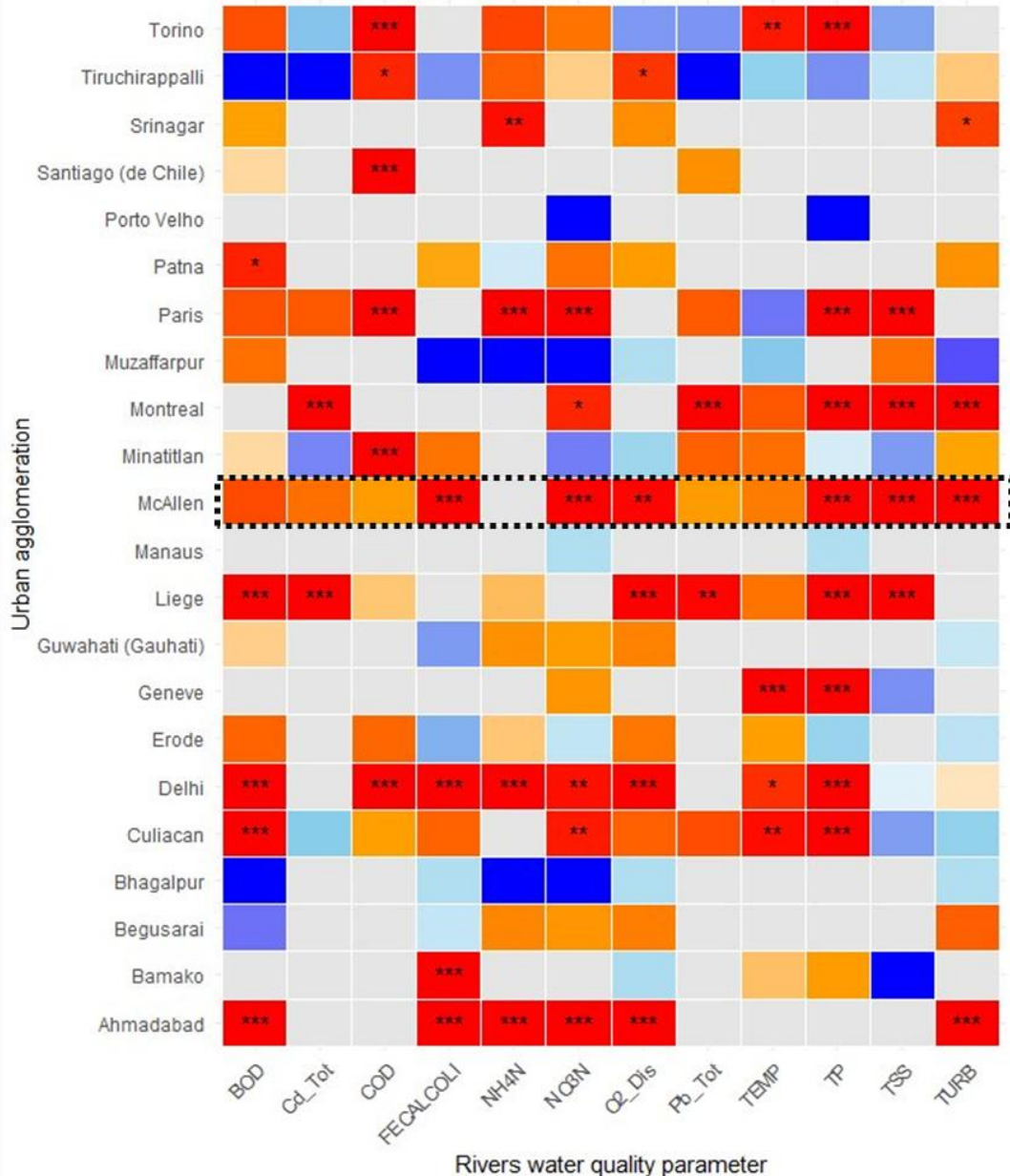


What materials did we use & How did we process?

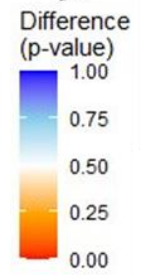
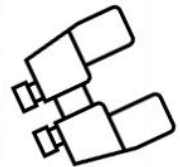


# Do we really find urban pressure ?

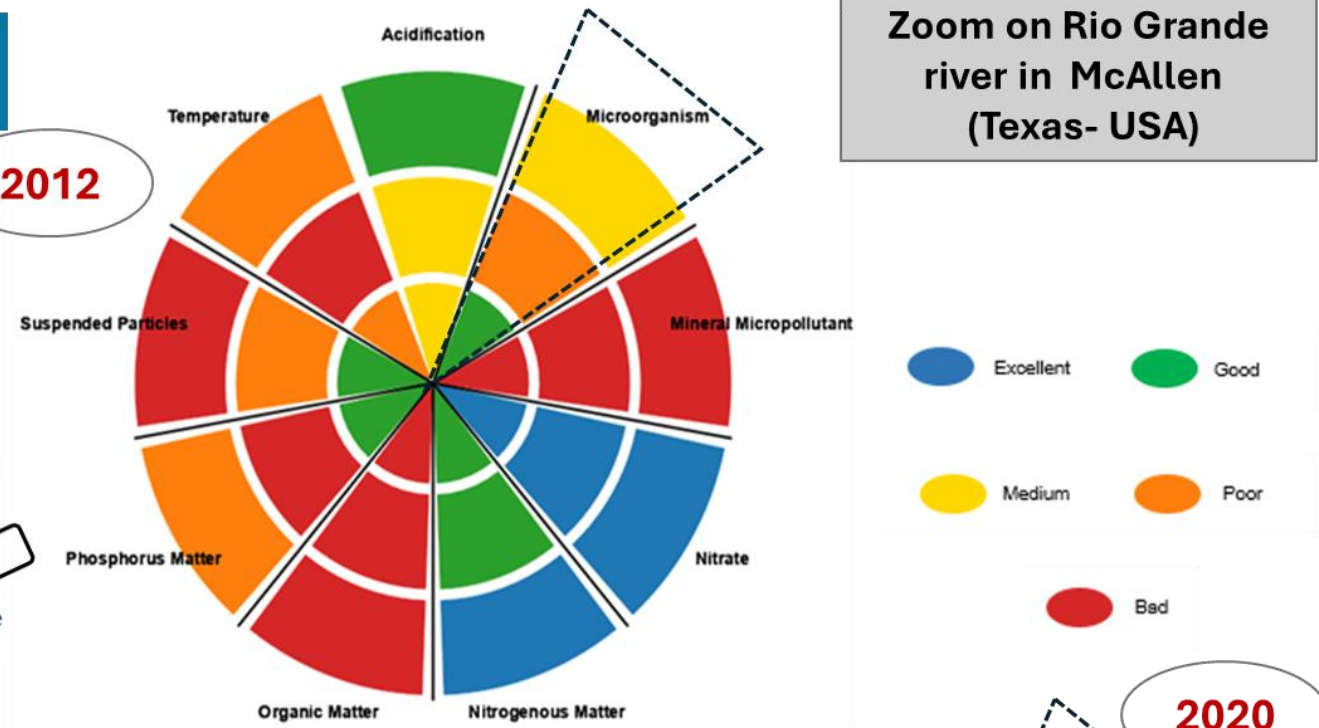
Upstream vs Downstream



2012



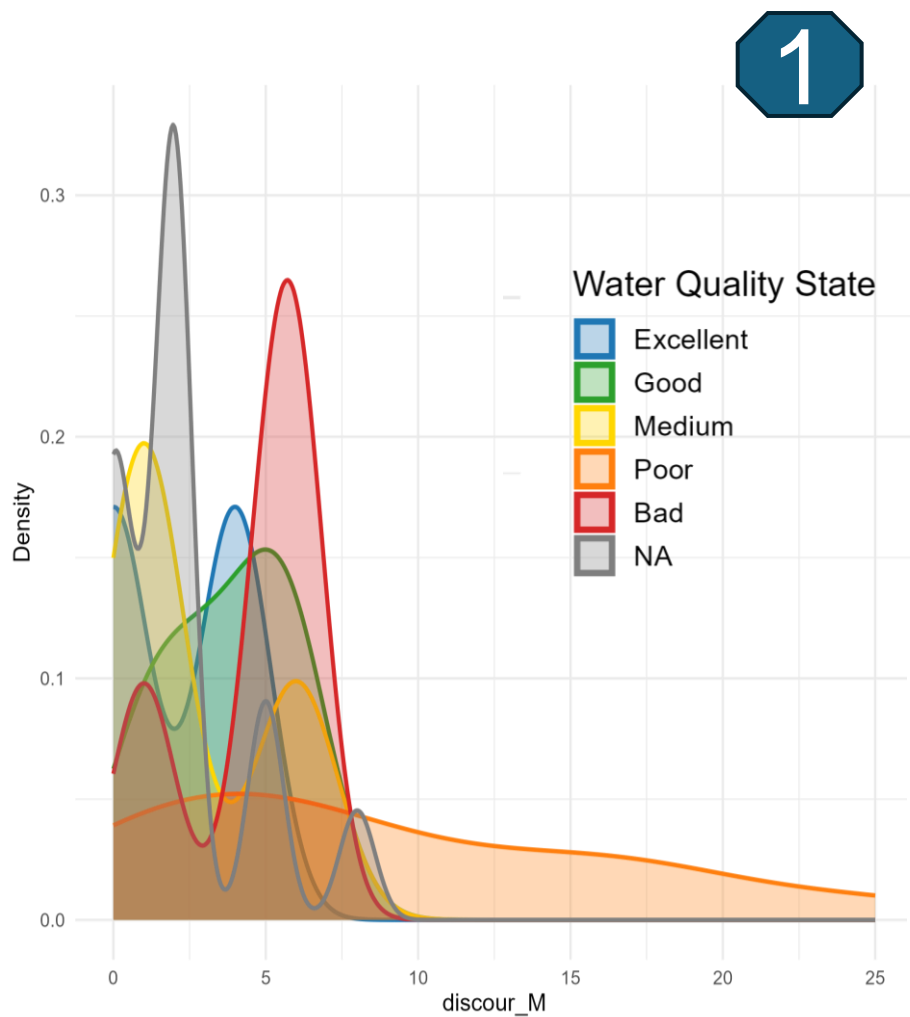
Zoom on Rio Grande river in McAllen (Texas- USA)



2020

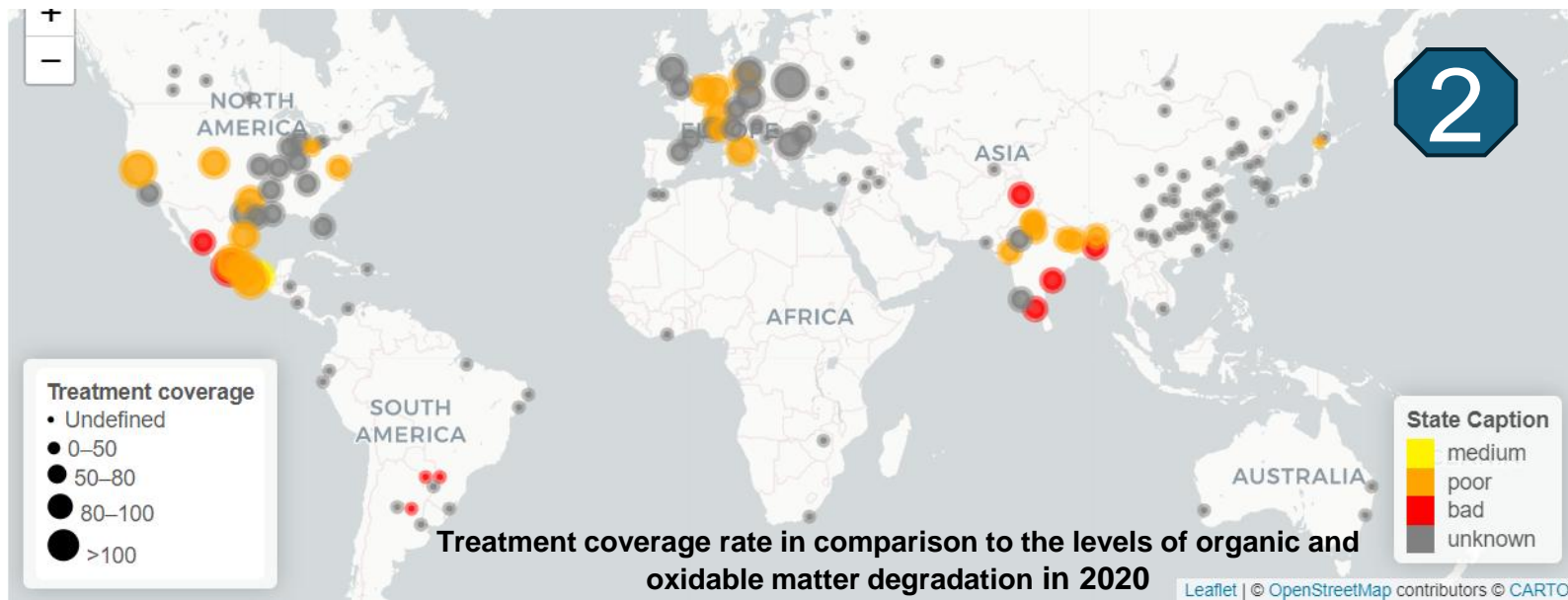


# What have we noticed ? (2/2)



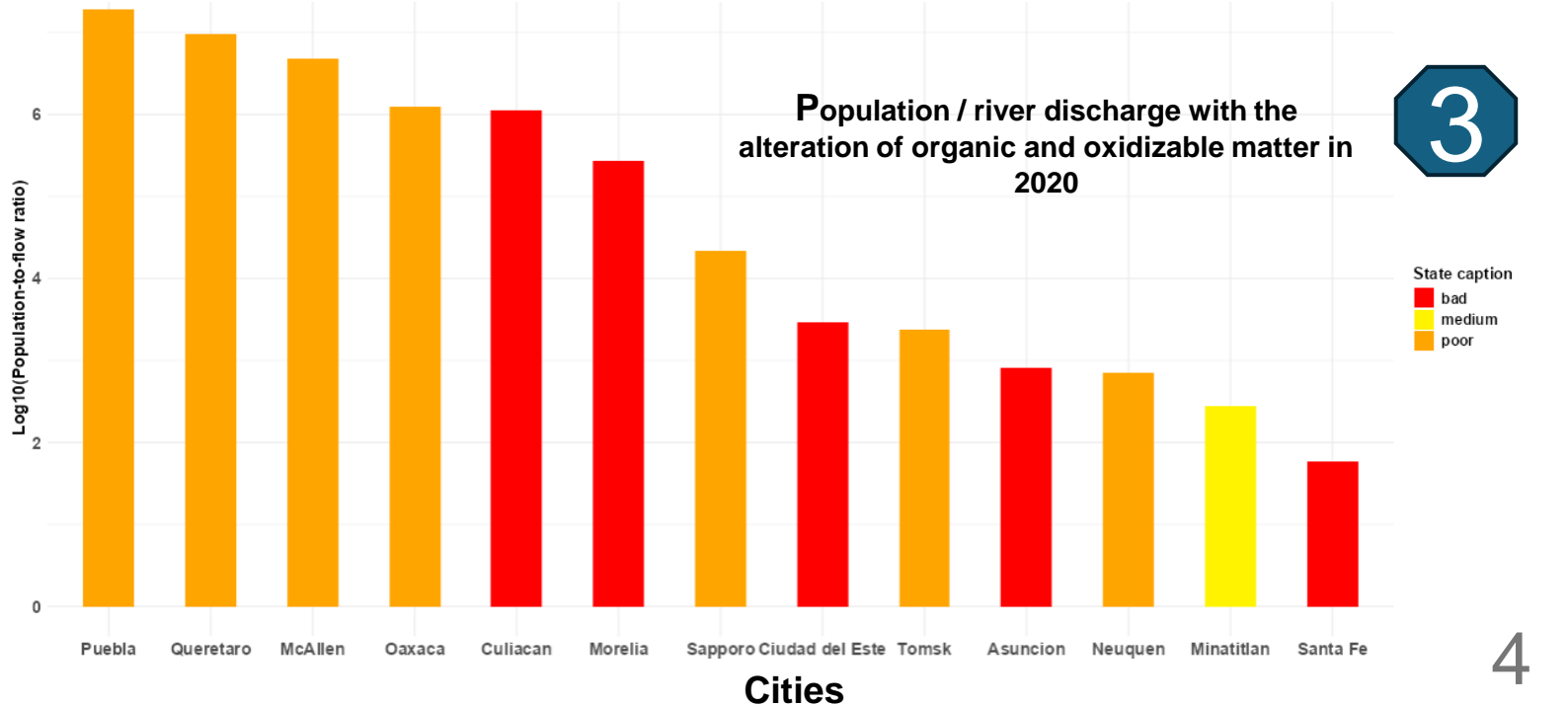
1

Distribution of discourse occurrence according to the year 2020 microorganism water quality state



2

Treatment coverage rate in comparison to the levels of organic and oxidizable matter degradation in 2020



3

Population / river discharge with the alteration of organic and oxidizable matter in 2020

# what can we learn from the study ?

- **Interdisciplinarity** facilitates a large-scale integrative approach
- They are **limitations of the large-scale approach** for characterizing water quality in urban rivers
- The impact of **wastewater treatment plant discharges on the ecological status of watercourses is huge** and today represents the **main pressure** from **urbanization**.
- They are **indices for approaching or alerting** the ecological status of rivers that are not popularized by current assessment scientific literature and policies: **discourses from non-scientific sources, the proportion of ecological flow per inhabitant**, etc.

