

# Public perception of droughts and water shortages and metropolitan willingness to pay for water saving measures to improve water security

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Jullian Sone<sup>1</sup>, Gabriela Gesualdo<sup>1</sup>, Dimaghi Schwamback<sup>1</sup>  
Edson Wendland<sup>1</sup>, Roy Brouwer<sup>2</sup>

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<sup>1</sup>São Carlos School of Engineering, University of São Paulo

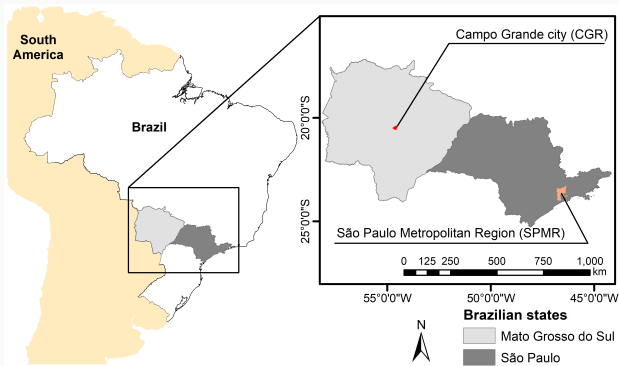
<sup>2</sup>Department of Economics and the Water Institute, University of Waterloo



## Objective:

Investigate how different experiences and perceptions of drought influence people's willingness to pay for conservation measures to improve their water security.

# Bayesian Networks for factors influencing people's WTP

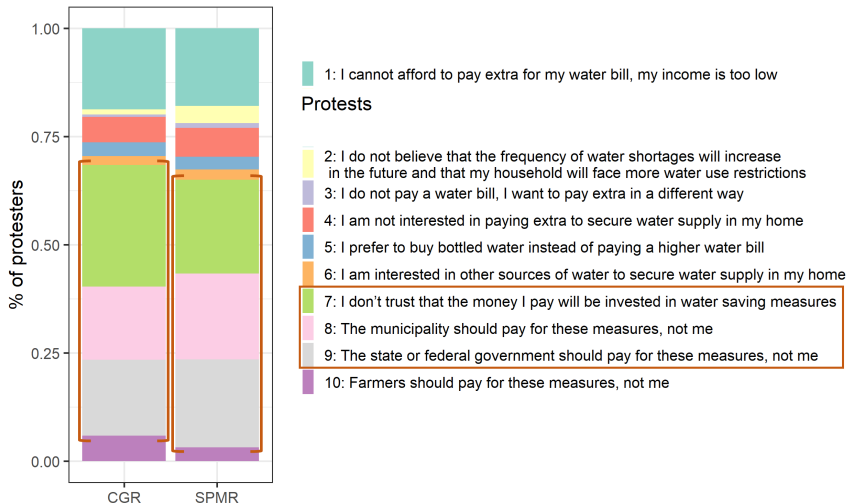


- Different water scarcity experiences: 36% from CGR and **77% from SPMR** faced water restrictions in the last 10 years.
- We interviewed **400 people** from each study site.
- We used Bayesian networks to assess the factors underlying public WTP for three conservation measures in the basins responsible for their water supply.
  - Water harvesting, agroforestry systems, and afforestation.

# Are people willing to pay for conservation measures?

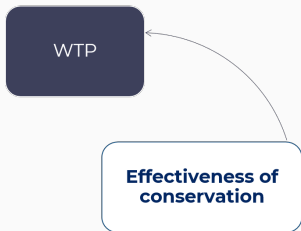
- Most respondents in CGR are **not willing to pay** for conservation measures (56%).
  - Share of **5% from CGR** have faced both restrictions and rationing over the last 10 years.
- Most respondents in SPMR **are willing to pay** for conservation measures (63%).
  - Share of **50% from SPMR** have faced both restrictions and rationing over the last 10 years.

# Understanding people's unwillingness to pay

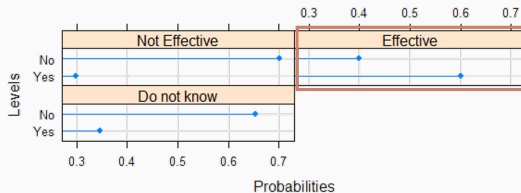


# What drives WTP in CGR?

## Bayesian network structure

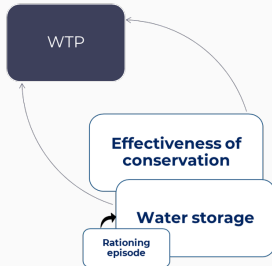


## Conditional Probabilities for Node WTP

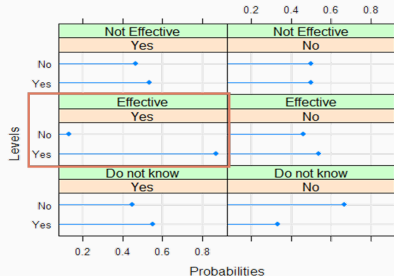


# What drives WTP in SPMR?

## Bayesian network structure



## Conditional Probabilities for Node WTP



- Storing water at home in anticipation of water shortages is related to recent and remote water rationing episodes (2013-2020).

# Key home message

- Public experiences of water scarcity events affected people's WTP for conservation measures to improve their water security.
  - The belief in the effectiveness of the measures was also driving people's WTP
- The distrust in the government actions was a significant protest against the proposed framework.



# Thank you!



julliansone@usp.com



@SoneJulian

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