NASA ROSES project: Decision-making in water resource management

Tracy Irani, University of Florida

Purpose of the study

The purpose of this study is to assess perceptions about the processes, barriers and other components that may affect water resource management decisions. Findings will will help guide future scientists and water resource managers' decision-making with respect to adoption of climate science information.

RQ1: How do public water utilities and water resource management leaders make decisions as to incorporating high resolution climate forecasts into existing decision-making structures and tools?

RQ2: What are the factors that influence decision-making, as well as the barriers and enablers that influence adoption?

Methods

Develop two case study comparisons of two public water utilities – Tampa Bay Water and Peace River Manasota Regional Water Supply Authority

- Collect descriptive data via online survey of decision makers within each utility
- Develop case study comparison modeling decision making around climate information adoption

Determine how water resource professionals, academic researchers, engineers and consultants perceive decision making around climate science

- Administer online survey to members of the Florida Water and Climate Alliance
- Present case studies and survey results to members at upcoming meetings and solicit feedback

Results

Despite COVID restrictions, online descriptive survey results showed high interest levels in the potential of climate data and tools to reduce uncertainty, but adoption constrained by perceived risks (demand-supply imbalance and making inaccurate water projections) with a strong favorability toward scientific collaboration and pilot testing as a means to manage any downside risks

• Water managers are much more willing to integrate new data into their systems if scientists can prove to them the new data is better.

Next steps: Semi-structured key informant interviews with respondents representing other participants in the system – planners, consultants, academics, water management district, etc.

If our team contacts you, please try to participate if you can – phone interview, at your convenience, via Zoom.

Thanks in advance for your help!