

# CSSI ELEMENTS: DATA: HDR: SWIM to a Sustainable Water Future

PI: Natalia Villanueva Rosales, Co-PI: Deana D. Pennington

Institution: The University of Texas at El Paso



Advancing water sustainability research capabilities through the integration, execution and interpretation of water models and participatory reasoning processes.

### **SWIM-SEM**

- Formally described semantics and knowledge graphs
- Enhanced execution and understanding of data and models
- Data-to-model and model-to-model integration

## **Broader Impact:**

- Convergent research
- Integration of data knowledge, theories, and methods
- Data and model-enabled reasoning at the human-technology frontier

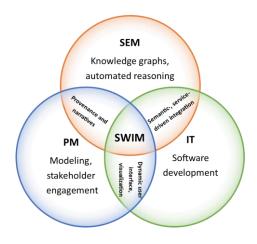


Figure 1 Scope and integration of SWIM subprojects

#### **SWIM-PM**

- Participatory analysis of the socioenvironmental water system
- Data- and model-based reasoning with biophysical and social models
- Stakeholder engagement

## **SWIM-IT**

- Cyberinfrastructure to advance research in water sustainability
- Usability, reproducibility and sustainability of SWIM products