Participatory Water Systems

Theme 2 WG 2.03: Decision-making on the shared-water systems

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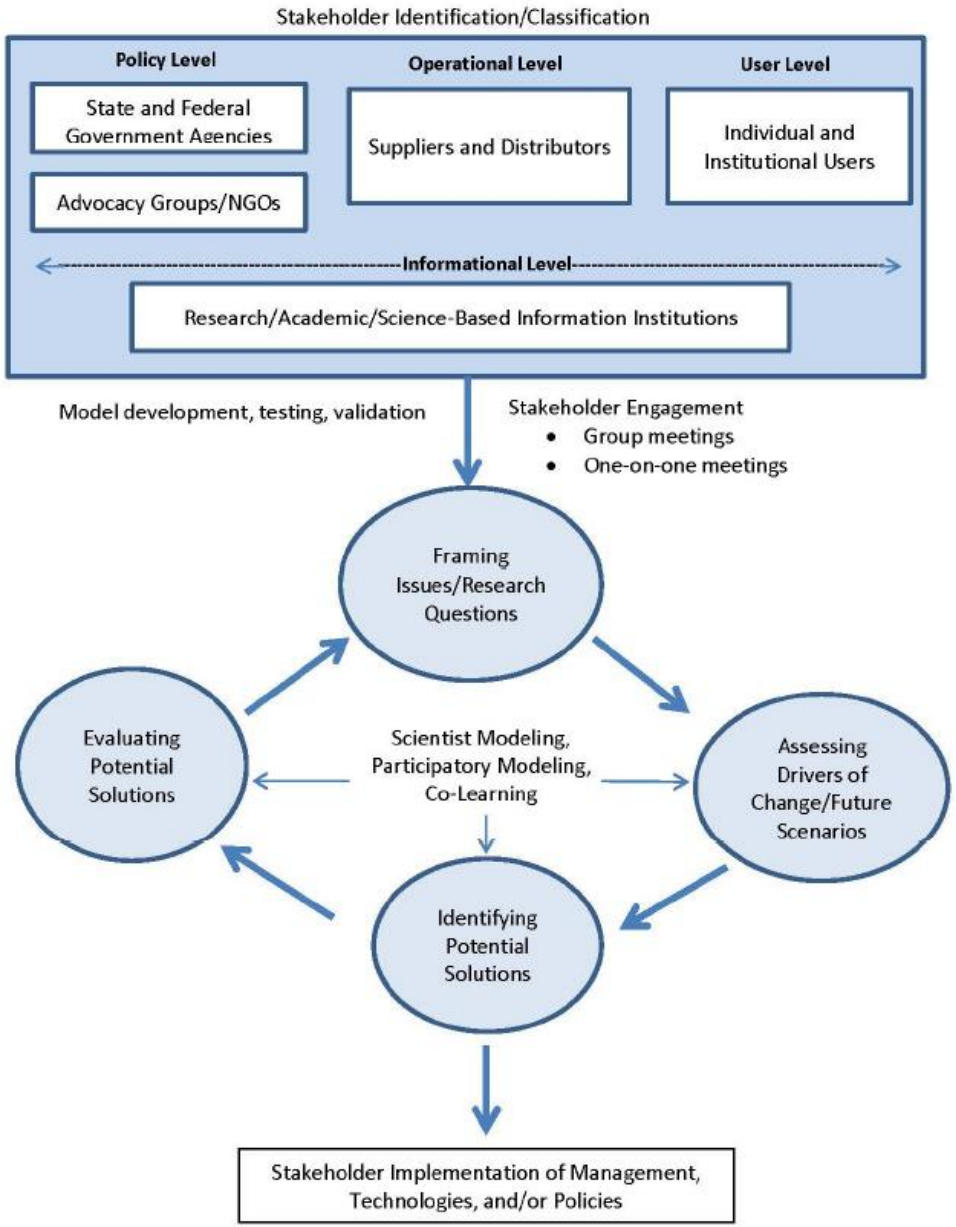

Theoretical framework for stakeholder identification and engagement in a participatory modeling

About Us

This HELPING group engages stakeholders in designing and developing decision-making tools and models to manage the allocation and distribution of shared water.

[Source: William and Heyman (2020). A Comprehensive Process for Stakeholder Identification and Engagement in Addressing Wicked Water Resources Problem. https://doi.org/10.3390/land9040119]

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Vision

Sustainably manage shared water resources to secure the future of water competing sectors.

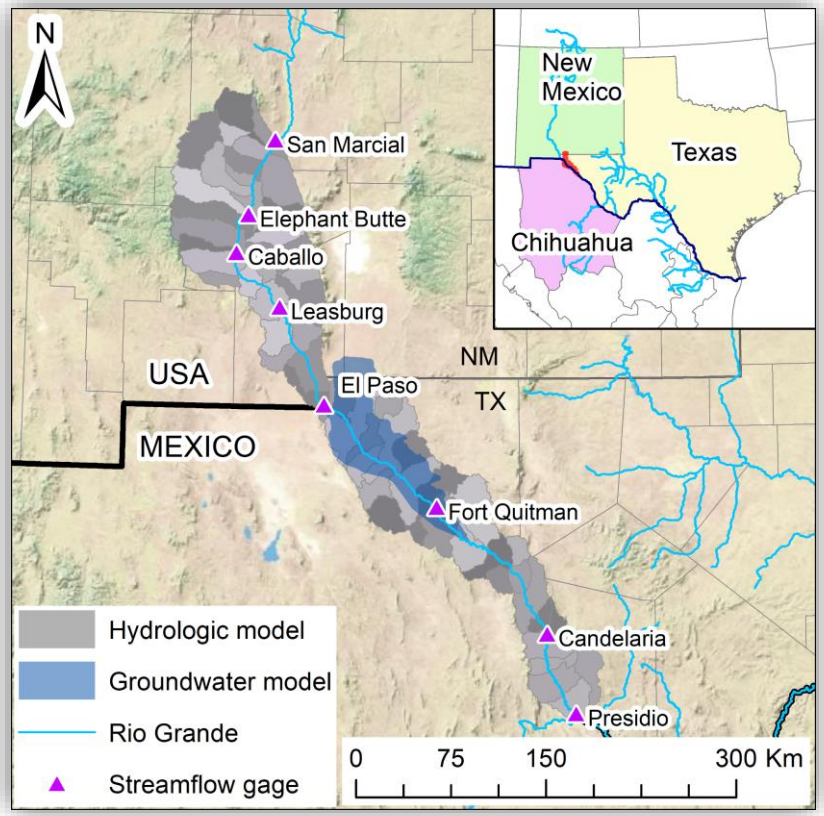
Objectives

- To develop a visualized model/tool/framework engaging stakeholders' opinions and perceptions representing real-world surface and groundwater connections for the shared water systems
- To design a model that can easily be modifiable and make new connections to better understand water resource dynamics over time
- To provide decision-making solutions capable of minimizing the rising impacts of environmental changes and demands on shared water resources
- To investigate the surface and groundwater interactions for effective management strategy

Approach

- Water System Dynamics modeling
- Bayesian Belief Network modeling

Example

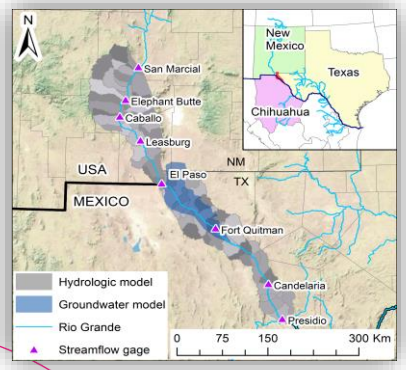


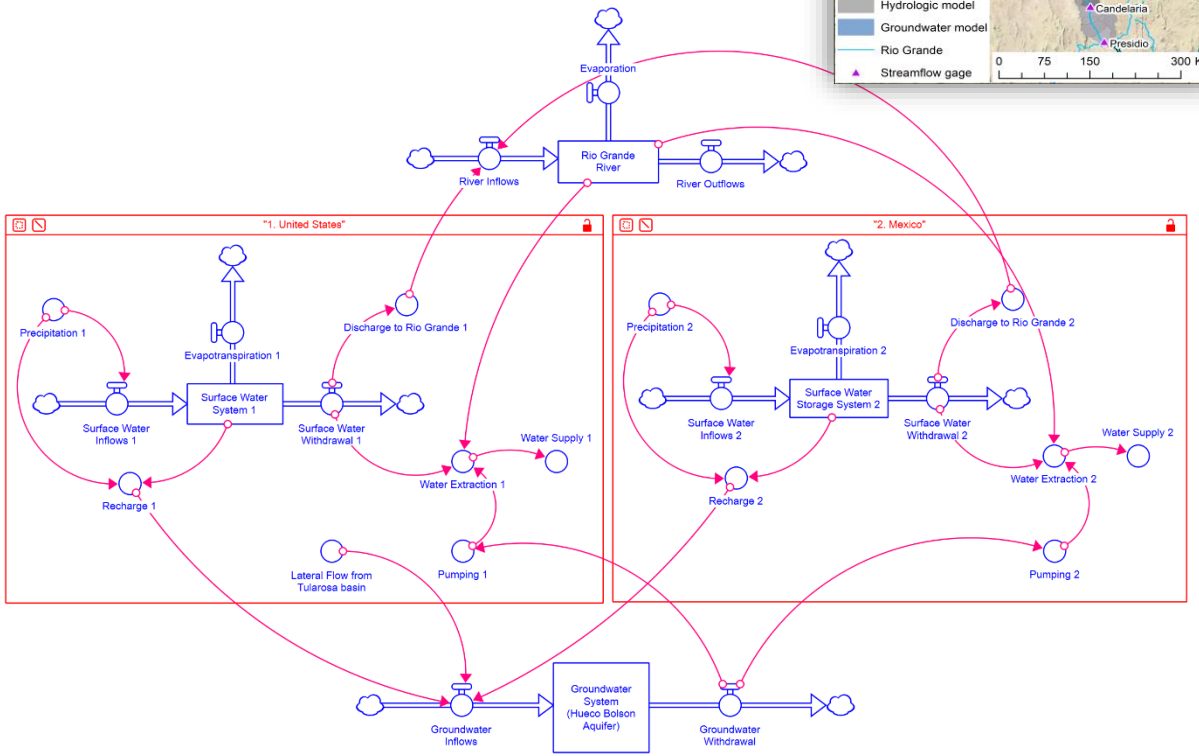
Vision

Sustainably manage shared water resources to secure the future of water competing sectors.

Example

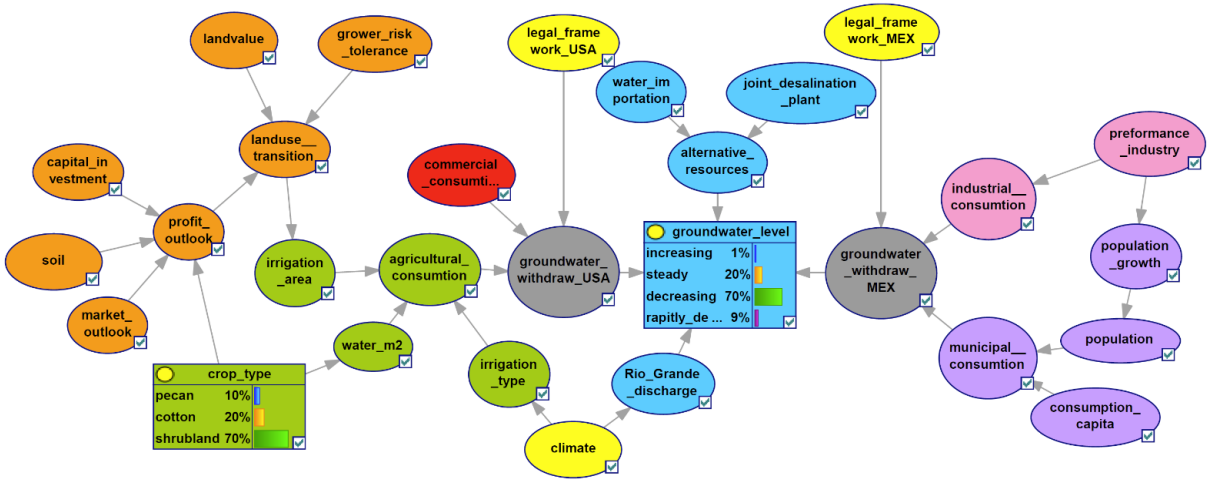
Water System Dynamics





Example

Bayesian Belief Network



[Source: Current status and future directions in modeling a transboundary aquifer: A case study of Hueco Bolson. Water 13, no. 22 (2021): 3178. https://doi.org/10.3390/w13223178]

Thank You

Santosh S. Palmate

+1-915-701-3067

santosh.palmate@ag.tamu.edu

https://elpaso.tamu.edu/people/palmate-santosh-subhash/