



BRIDGING HYDROLOGICAL AND SOCIAL ANALYSIS

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Excerpts from slides prepared for Water, Peace and Security tailor-made capacity development activities in Iraq. Please attribute authors when using materials.

Human Responses

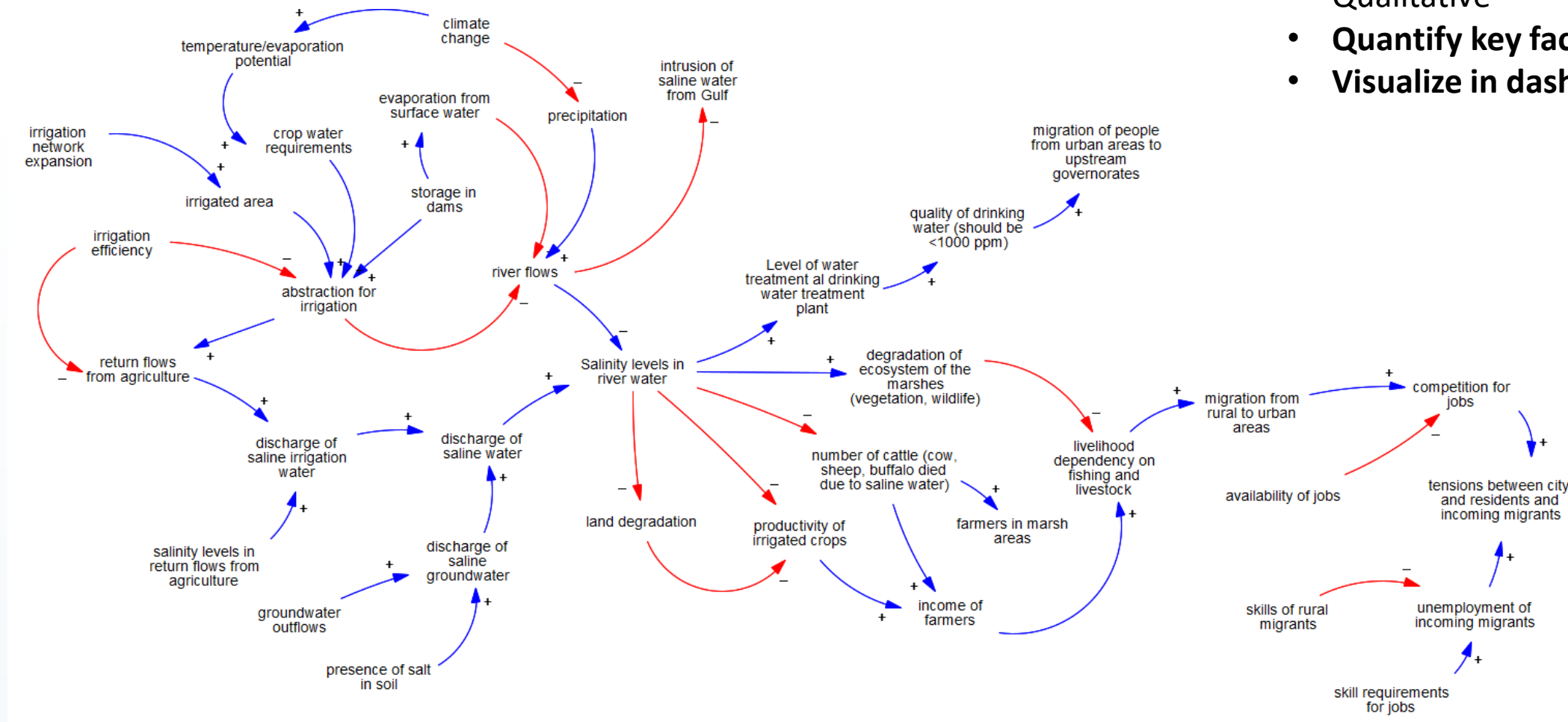
- Agent Based Model
- Filled with information derived from literature to be validated with stakeholders from the system
- Decision rules are formulated
 - i.e. when water availability is lower than x and there are no other options to adapt, migration occurs
- Data on changes in the water system and adaptive capacity
- Insights in water related migration mechanism

Hydrologic models

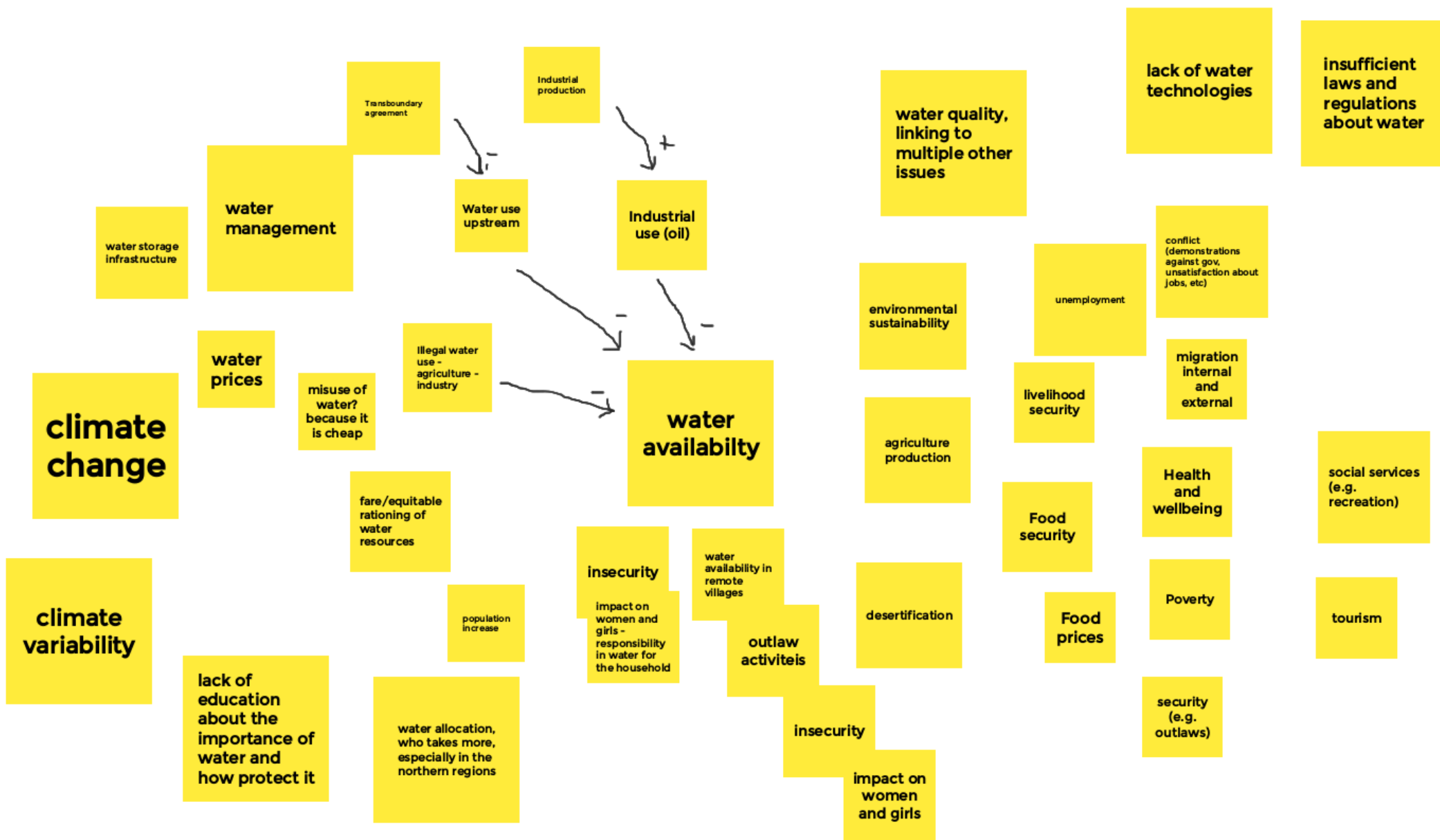
- Wflow – hydrological model / rainfall runoff model
- RIBASIM water resources model
- Data
 - Supply
 - Quantity, quality, costs of options
 - Demand
 - Population growth, irrigation, hydro power, environmental awareness



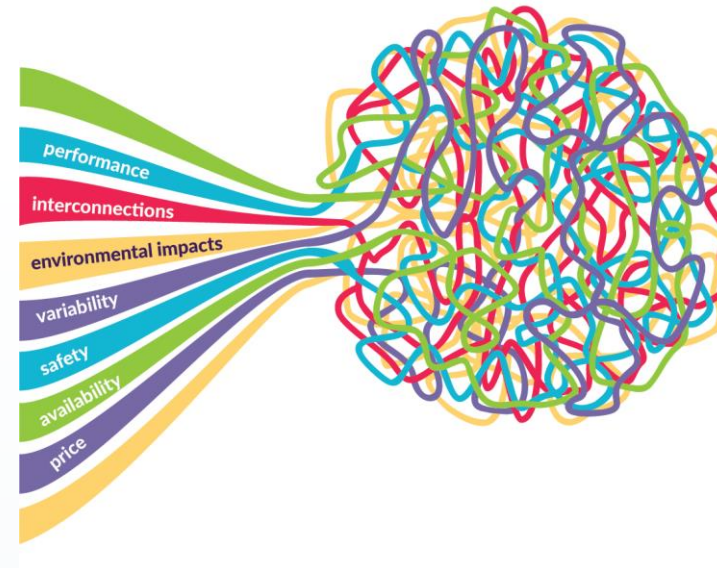
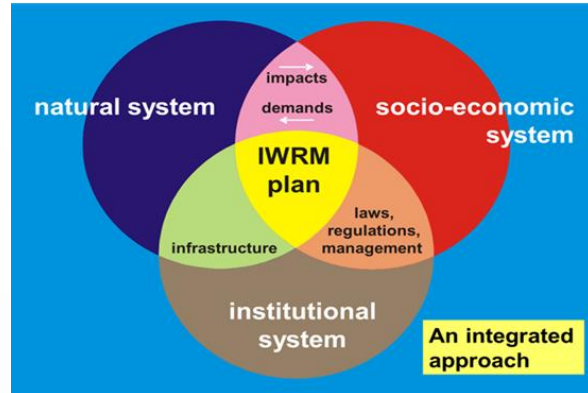
Causal Loop Diagram



- Group Model Building with stakeholders
- Shared understanding
- Qualitative
- **Quantify key factors**
- **Visualize in dashboard**

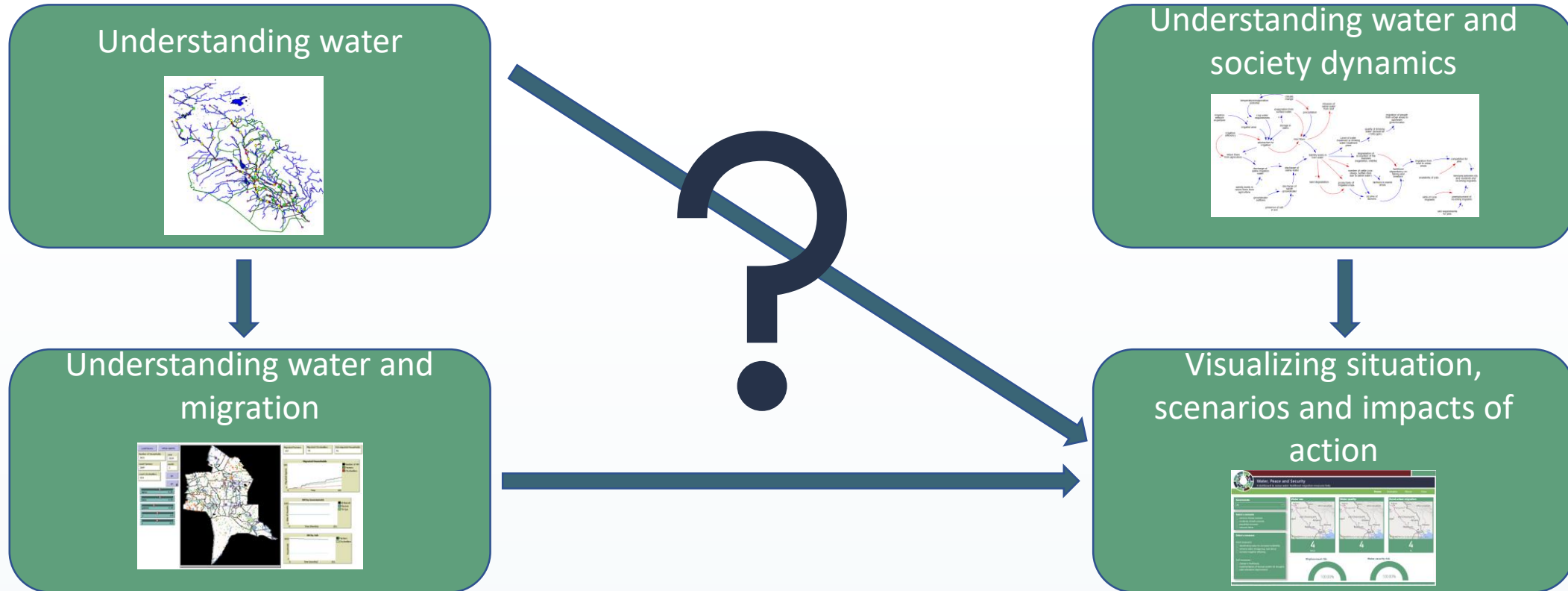


WPS Approach – Integrated Approach – Systems thinking



“When we are blind to systemic causes of problems, all the solutions we try will likely make matters worse”.

Bridging hydrologic and social analysis



How to understand to decide?

