

# Urban Water Security Research Alliance



## Knowledge Requirements for Water Management in SEQ

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# OVERVIEW

- Water – knowledge and institutions
- What are institutions?
- Research approach – understanding institutional change
- Research results
- Next steps



# INSTITUTIONS IN FLUX

- Challenges to traditional water management institutions
  - Knowledge (shared understandings)
  - Management (roles and responsibilities for action)
  - Organisation (regulating social interaction)
- What are the drivers of institutional stability and change?



# BUILDING RESILIENT INSTITUTIONS

- How can we build **resilient** institutions?
- Dependable, despite uncertain science

*How do diverse water practices become **stable** over time?*

- Dynamic, to adapt to changing social and environmental conditions

*How can institutionalised water practices **change** over time?*

An iceberg floating in a blue ocean under a blue sky. The tip of the iceberg is above the water, and the much larger base is submerged. The text is overlaid on the image.

## **ORGANISATIONS**

**How do rules affect individual behaviour?**

**How do norms, values and shared understandings set expectations about social roles and responsibilities?**

## **INSTITUTIONS**

# UNDERSTANDING INSTITUTIONAL CHANGE

- Framing the problem
- Strategies to deal with risk and uncertainty
- Role of science
- Limiting factors



# INTEGRATED APPROACH TO HEALTHY WATERWAYS

- Framing the problem
  - Schism between water quality and water quantity
- Strategies to deal with risk and uncertainty
  - Collaboration and coordination
- Role of science
  - New knowledge and expertise
  - Science–management interface
- Limiting factors
  - Cultural divides



# PRACTITIONER PERSPECTIVES

- **Quantity versus quality**

*... historically the different approaches being taken on water quantity and quality were very real. The water quantity ones were managed by – the paradigm was engineers and dam builders in the 70s, and that's all it was about.... There was no conceptual framework that linked [quantity and quality], and really there still isn't.*

- **Collaboration**

*I think the players at that time were of a nature to recognize that they could work – that by working together they'd achieve a balanced outcome. They had an attitude to do that compared to being completely adversarial. That was important.*

# SECURING WATER SUPPLY

- Framing the problem
  - Water as a ‘wicked’ problem
- Strategies to deal with risk and uncertainty
  - Share responsibility, spread risk
- Role of science
  - New knowledge and expertise
  - Risk-based planning
- Limiting factors
  - Gap between science and policy

**SAVING WATER IS  
EVERYONE'S BUSINESS**



# PRACTITIONER PERSPECTIVES

- **Shared responsibility, spread risk**

*The way water was being managed was like a lot of islands under different regimes of governance ... [not] integrated across the region.*

- **Science–policy gap**

*... those alliances and steering committees and so on that we had, they were useful in getting information together, but they weren't useful in making any decision about what we needed to do for water supply. And there was an extent ... because it was the responsibility of everyone there was no particular person taking ownership, particularly at a political level.*

# BUILDING KNOWLEDGE CAPACITY

- Toward “integrated” water management
  - Diverse knowledge and perspectives: **what?**
  - Knowledge interface: **who?**
    - knowledge transactions
    - knowledge brokers
  - Knowledge integration: **how?**
    - co-production
    - boundary organisations
- Learning, problem-solving, innovation

Thank you

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