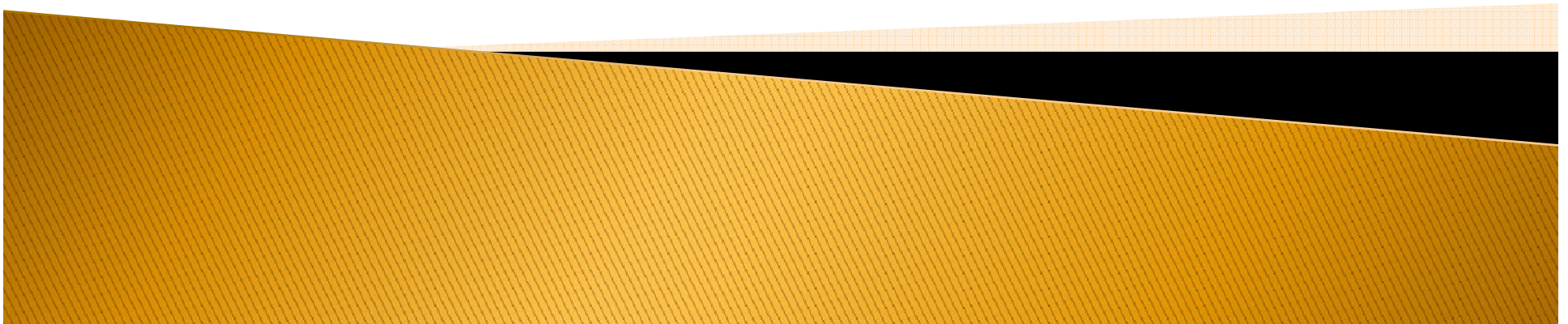


Science and water policy

Observations from the field

Ann Shaw Rungie

Adelaide 20 November 2008



Links

- ▶ Science
- ▶ Water policy
- ▶ Decision making
- ▶ The players

Out on the edge

- ▶ The coalface
- ▶ The interface
- ▶ The edge

- ▶ Complex, difficult, controversial
- ▶ pushing the edges (new science)
- ▶ Miracles and nasty surprises

- ▶ – the call to adventure (once upon a time)
- ▶ – great journey (until one day)
- ▶ – daring exploit (because of that)
- ▶ – resolution & return (until finally, the moral is)

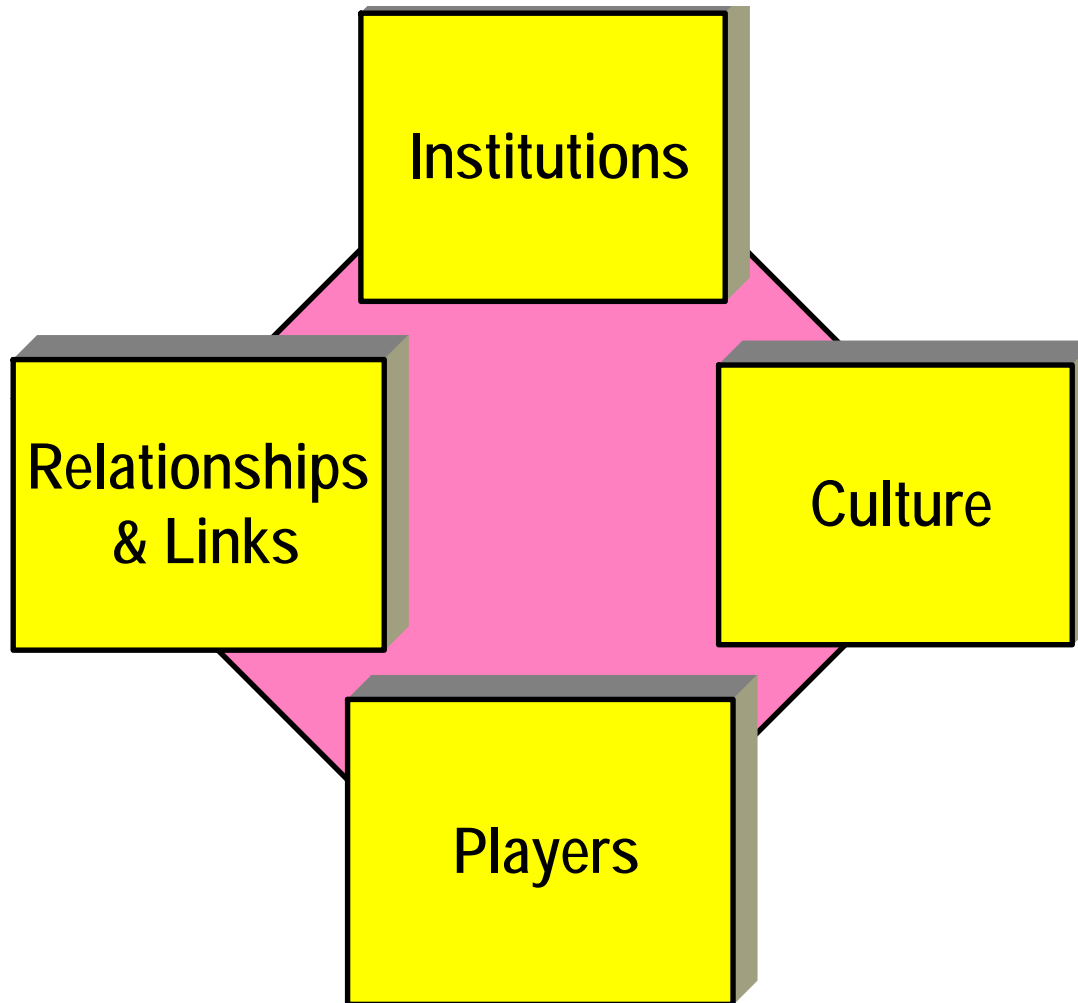
Outline

- ▶ Links between the players
- ▶ Irrigation and groundwater systems
- ▶ Water supply in pastoral lands
- ▶ Water sensitive cities

Change and uncertainty

- ▶ Rapidly changing expectations
- ▶ Changing balance of power between the players
- ▶ Planning for change is a constant

Developing a strategic policy approach



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Managing change

- ▶ Developing new policy involves helping the players embrace and understand change
 - Most people see this as an 'external' process
- ▶ Planning and managing engagement processes are key skills
- ▶ Risk management, controversy and conflict
- ▶ Not a purely scientific concept

Steps in policy planning

Public and political discussion of visions and goals

Professional analysis of options

Political adoption of goals and objectives

Professional communication and consultation

Public and political evaluation

Review and develop options

Professional communication and consultation

Public and political evaluation

Political adoption of selected option

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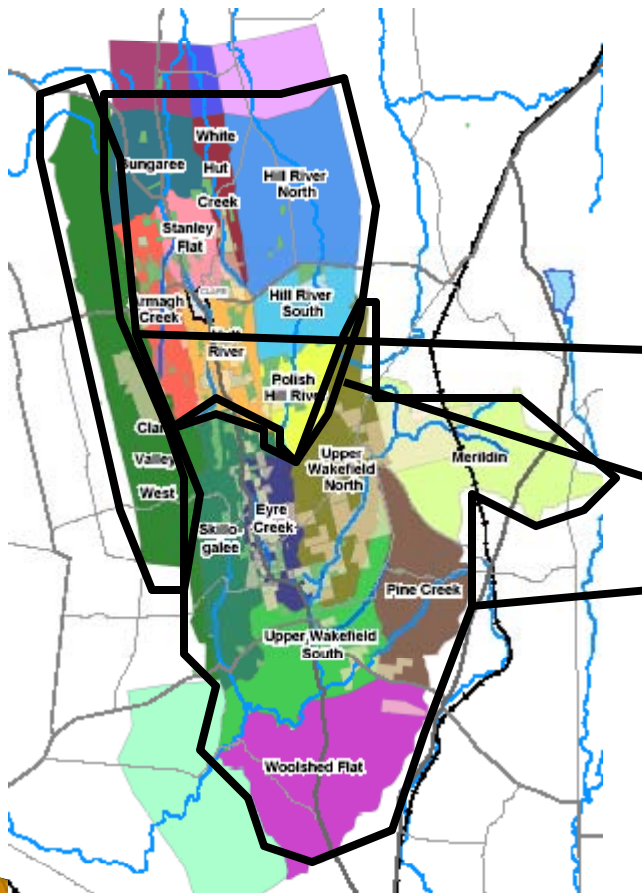
Components of decisions

- ▶ Technical rationale
- ▶ Political compromise
- ▶ Community input
- ▶ Available budget

Clare

- ▶ Allocating imported groundwater for irrigation use
- ▶ Imported water study salt in sub-catchments
- ▶ Challenge to water allocation process

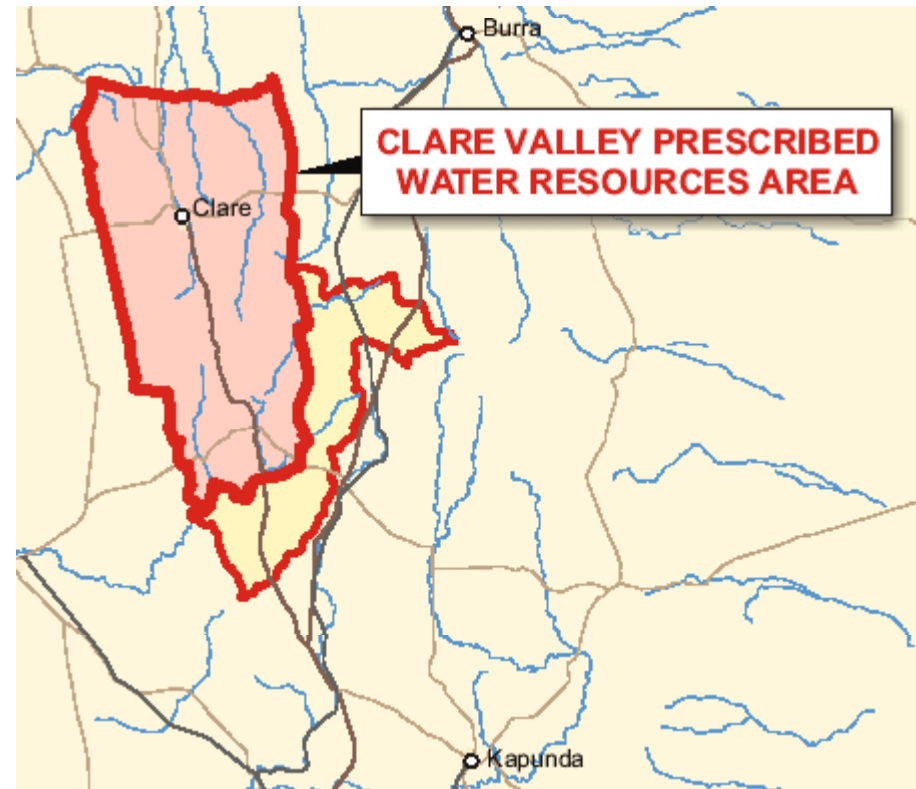
Sub-catchments of the Clare Prescribed Area



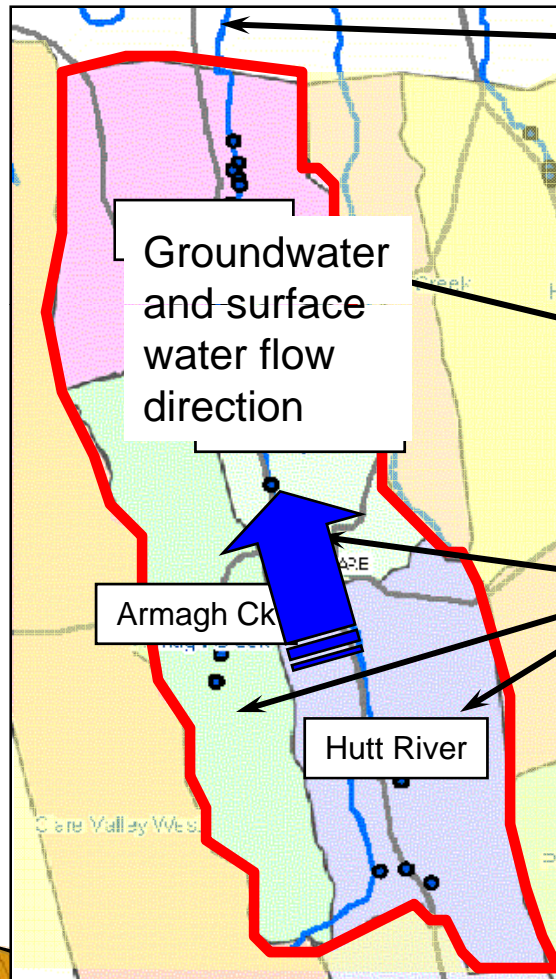
- ▶ Sub-catchment map
- ▶ 16 sub-catchments
- ▶ 1 Blythe Plains
- 8 Broughton Catchment
- 7 Wakefield Catchment

Existing Conditions

- Within Clare region
 - ◆ dryland salinity
 - ◆ altered stream flows
 - ◆ lack of biodiversity
- Outside Clare region
 - ◆ altered stream flows have reduced environmental condition of streams
 - ◆ land clearance has contributed to dryland salinity
 - ◆ lack of biodiversity

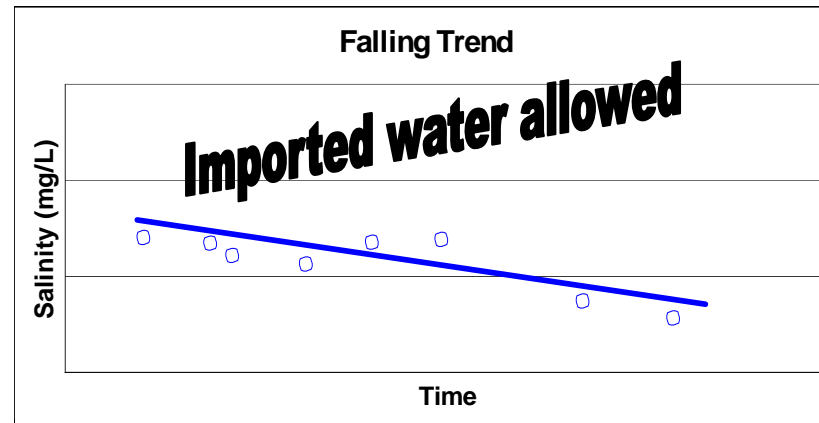
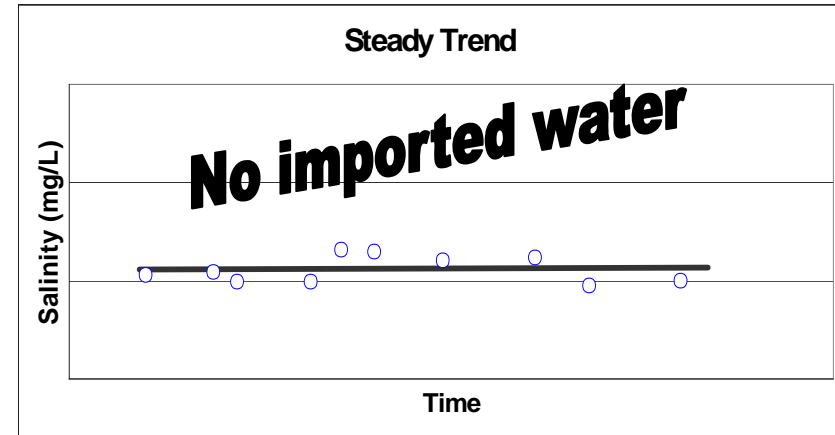
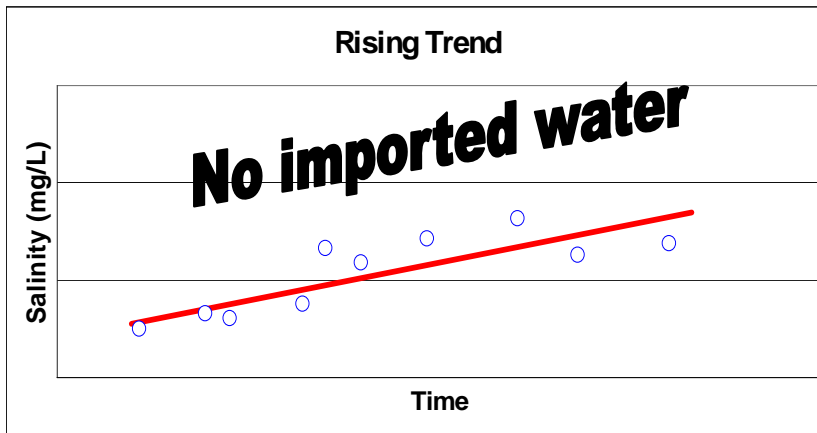


Approach to the Salt Load Capacity Study - Example



1. Constrained by capacity of downstream receiving catchment to accept additional salt
2. Sets upper limit for “new” salt from Bungaree sub-catchment
3. Made up of salt entering from upstream sub-catchments and salt applied in Bungaree

Salinity Trends at Sub-catchment Scale



Outcomes

- ▶ Community shock
- ▶ Considered policy engagement process
- ▶ Closer relationships and understanding
- ▶ Taking responsibility

Great Anabranh of the Darling

- ▶ Stock and domestic water supply
- ▶ Remote pastoral area
- ▶ Water supply policy 1960
- ▶ COAG water reform
- ▶ The Living Murray
- ▶ Science – pipelining, water allocation

Great Anabranh of the Darling

- ▶ Save approximately 47,000 megalitres of water each year
- ▶ Clean and secure water supply
- ▶ Improve landholder viability
 - maintaining or enhancing natural resources, biodiversity and cultural heritage
- ▶ Improve health of the Anabranh environment
 - return stream to an ephemeral water way

Water Sensitive Urban Development

- ▶ Incentives to drive innovation in uptake
- ▶ Section 92 (v) NWI
- ▶ Role of Research and Development
- ▶ Drivers for success

WSUD issues

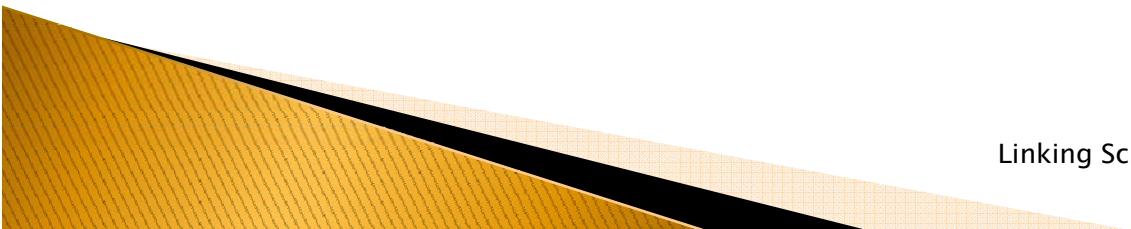
- ▶ Investment by agencies with CRC based on enduring relationships
- ▶ Entered each other's work space
- ▶ Fellowship and respect
- ▶ Recognition of the role of governance
- ▶ Consultants and academics
- ▶ Small but significant policy community

WSUD implementation

- ▶ Patchy
- ▶ Drainage based thinking
- ▶ Silo based thinking
- ▶ Catchment based vision allows resilient locking in concepts

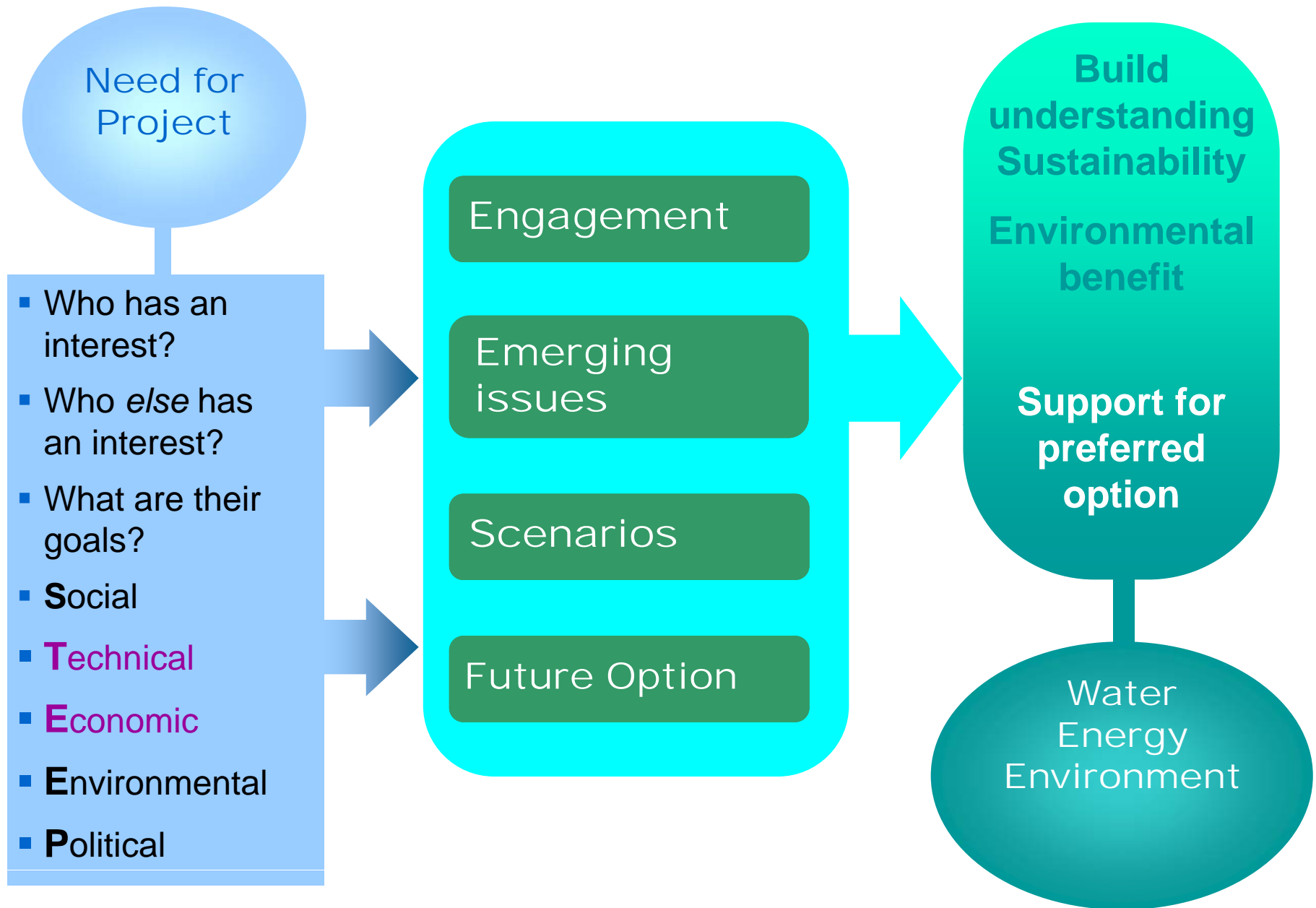
Common issues – lessons

- ▶ Multiple stakeholders
- ▶ Evolution of decision making frameworks
- ▶ Policy agencies need to deal with infrastructure agencies – engagement
- ▶ Investment in resilience and change
- ▶ Early engagement



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Increased water use efficiency project