

Project 4.9.7

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Understanding and Enhancing Social Resilience to Water Quality Change in the Great Barrier Reef region

Project Leaders:

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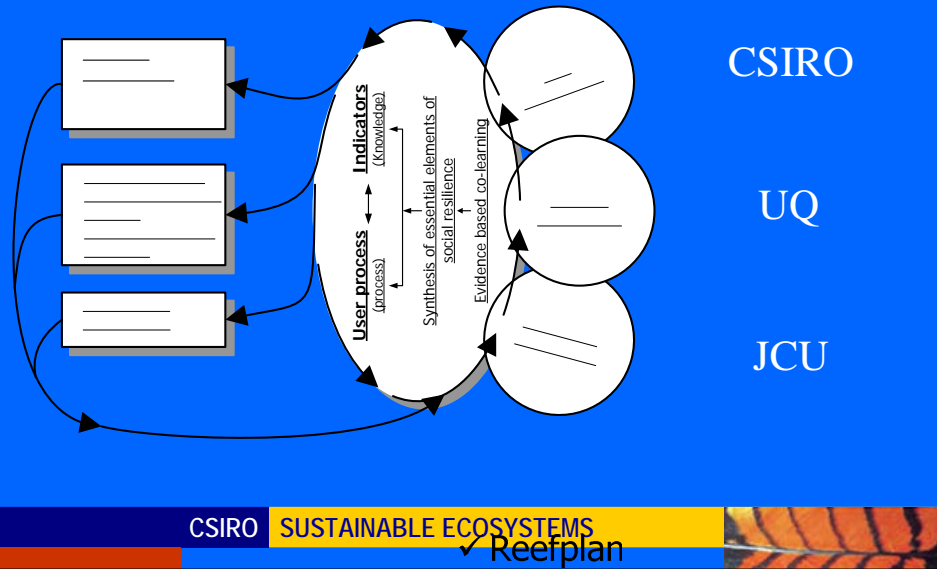


Objectives and outputs

- Develop indicators of social resilience to WQ change designed to meet the needs of specific decision makers in specific decision making contexts
- Develop and test processes for developing, using and updating the indicators

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Project conceptual framework



GBR scale outline

Tim Lynam, Erin Bohensky, Samantha Stone-Jovicich, Kostas Alexandridis

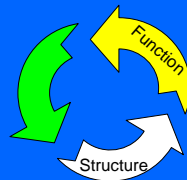
1. Ensure useful conceptualisation of social resilience:
Theory + end users + case studies
2. Develop rigorous understanding of water quality change:
Typology of WQ change events
3. Develop data sets of WQ change and social system response:
Confront models + learn
4. Indicators of social resilience to WQ change at GBR Scale embedded in learning process

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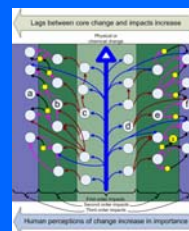
1. Useful conceptualisations of social resilience: GBR scale Conceptual framework

1. Indices are contingent on context
2. Two complimentary models:
 1. Classic resilience – of what to what?
 2. Thresholds based – thresholds of potential concern for social resilience at GBR scale

Of what?

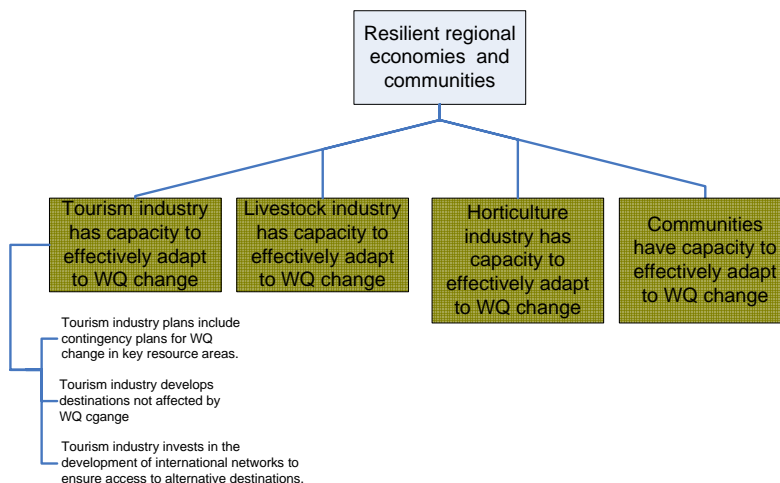


To what?



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1. Useful conceptualisations of social resilience: Example objectives hierarchy for TPC's



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1. Useful conceptualisations of social resilience: What users think

KEY QUESTIONS

- What is 'social resilience' (to WQC at GBR scale)?
- What social, economic, political, and cultural factors
 - (1) contribute to/enhance
 - (2) inhibit/erode
 social resilience?

END USERS TO BE INTERVIEWED (April-May 2007)

- GBRMPA
- WTMA
- FNQNRM
- Industry (tourism)

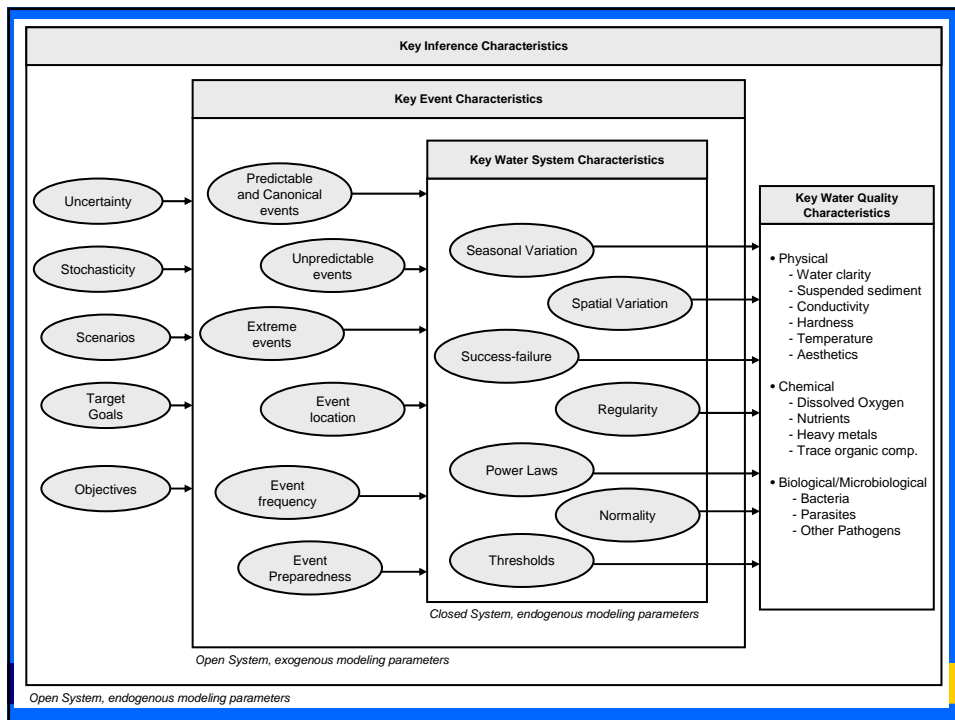
1. Useful conceptualisations of social resilience: Methods for understanding theoretical and end user perspectives

DATA COLLECTION METHODS	OBJECTIVES	OUTPUT
1. Literature review/ case studies (Erin)	Previous research findings on social resilience	List of draft indicators/ TPCs
2. Interviews with end-users	Capture stakeholders' experiential knowledge & perceptions	
Open ended questions + Structured questions (freelists, ratings)	Opinions of relevance of previous research findings to GBR scale	

2. Develop rigorous understanding of water quality change

- Developing a set of water quality change classifications (WQCC) for assessing social resilience indicators in the GBR region.
- Approach: 3 nested layers:
 - (a) key water system characteristics
 - (b) key event characteristics
 - (c) key inference characteristics

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3. Develop data sets of WQ change and social system response

- **Rationale:**
 - Much thinking about resilience draws heavily on theoretical work rather than empirical data
 - Numerous examples abound of situations where water quality or other environmental change have stimulated a response in the linked social system and have changed its structure, function or purpose

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3. Develop data sets of WQ change and social system response: Selection of Case Studies

- **Objective:** To broadly identify case studies and data sets where a change in the structure, function, or purpose of a social system has occurred as a result of water quality or other environmental change.
- **Criteria for Selection:**
 - The case occurs at a regional scale
 - The case is in Australia
 - The case is well-documented
 - Potential for follow-up exists

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Candidate Case Studies

1. Murray-Darling Basin
2. Lower Burdekin
3. Ord Irrigation Scheme
4. Central Wheatbelt, Western Australia
5. Queensland Agricultural Regions

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1. Murray-Darling Basin

Description of Water Quality (or other) Change

- Salinity
- Changing nature of agriculture in response to global economic change

Factors Related to Change in Social Resilience

- Loss of human capital in farm and non-farm sectors and social capital in rural areas
- Loss of the floodplain environment and iconic species (i.e. Red River gums)

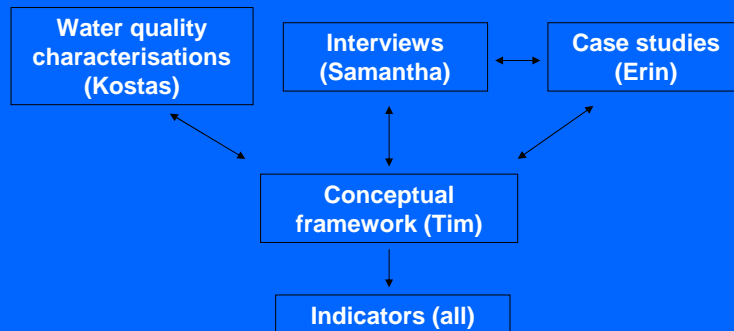
Source

- Murray Darling Basin Commission 2003 (TR 03-03)
- Institute for Rural Futures (Reeve & Stayner) 2004

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Link to Conceptual Framework

- Case studies will be used to confront the draft conceptual framework – how well do theory and empirical data (case studies + Samantha’s interviews) agree?



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Next Steps

2007	✓ Investigate data availability for cases and finalise selection; Acquire data and related documents	30 April 2007
	✓ <u>Interviews</u> with key end users at GBR scale	April 2007 to mid-May 2007
	✓ Produce case study metadatabase/report	10 June 2007
	✓ <u>Report</u> summarising findings of 1 st stage of research (definition & draft indicators)	10 June 2007
	✓ Phase out WQCC work	June-July 2007
	✓ <u>Additional interviews</u> with end users at different scales (e.g. NRM bodies, local government)	July-September 2007

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Next Steps

2008	✓ Develop partnership with end user to <u>test and adapt social resilience indicators and TPC process</u> for GBR region	June 2008
	✓ <u>Compare/test</u> indicators of social resilience from 2 sets of interviews & where appropriate <u>revise</u>	February 2008
2009	✓ Testable data sets available for use ✓ Revise TPC's and processes with user partners	30 June 2009
2010	✓ Final data sets available for use ✓ Final indicators, TPC's and processes available for extended delivery	30 June 2010