Critical Review of Climate Change in Queensland Water Models: Enhancing outcomes

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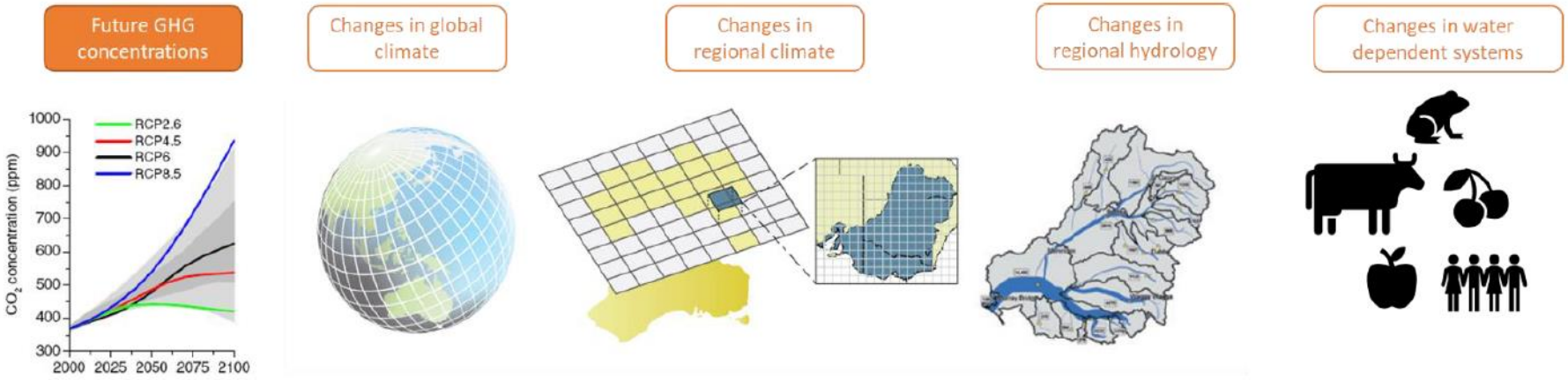
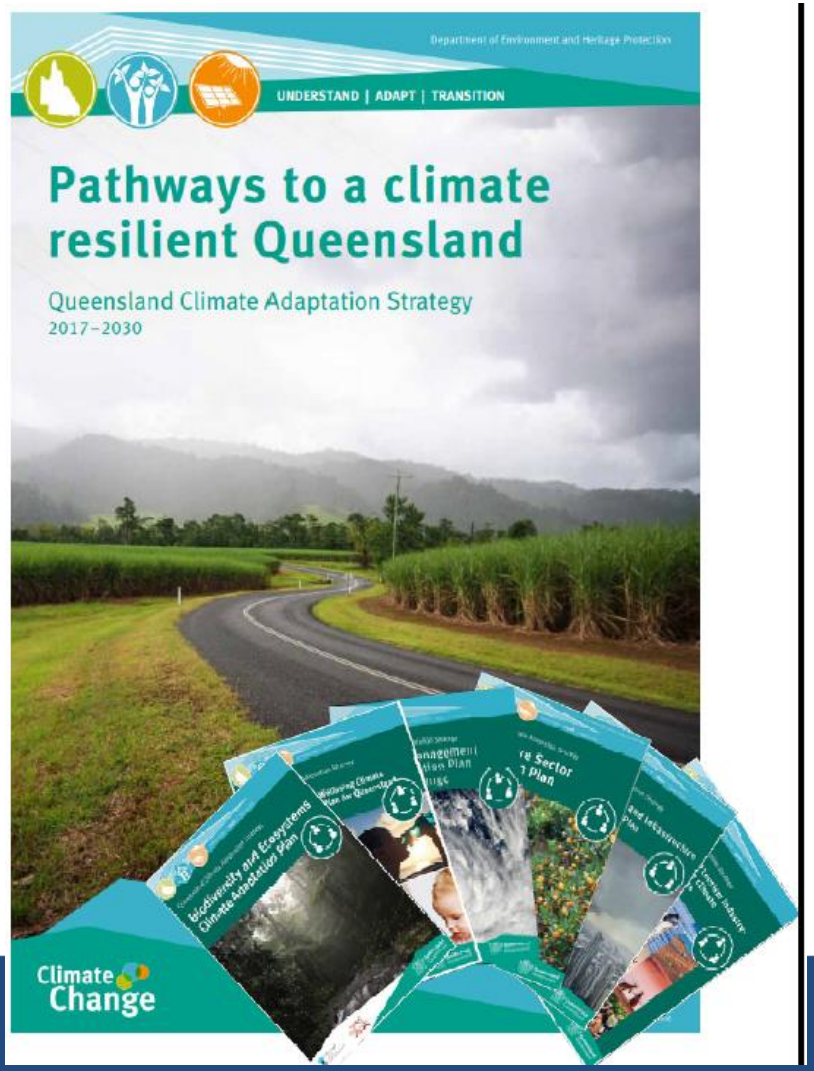


Queensland Government

Queensland Climate Change Response (QCCR)



Integrate:

Queensland Climate Transition Strategy (QCTS)

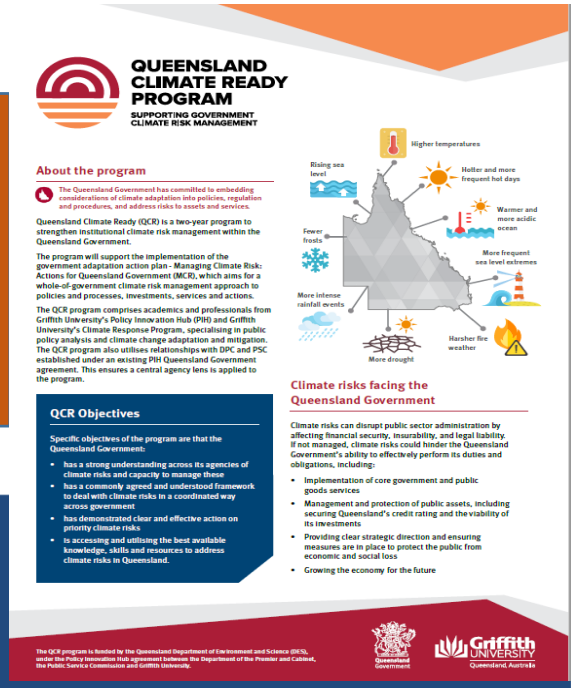
Collaborate:

Sector Adaptation Plans (8)
… infrastructure - agriculture - health - biodiversity - emergency management …

Equip:

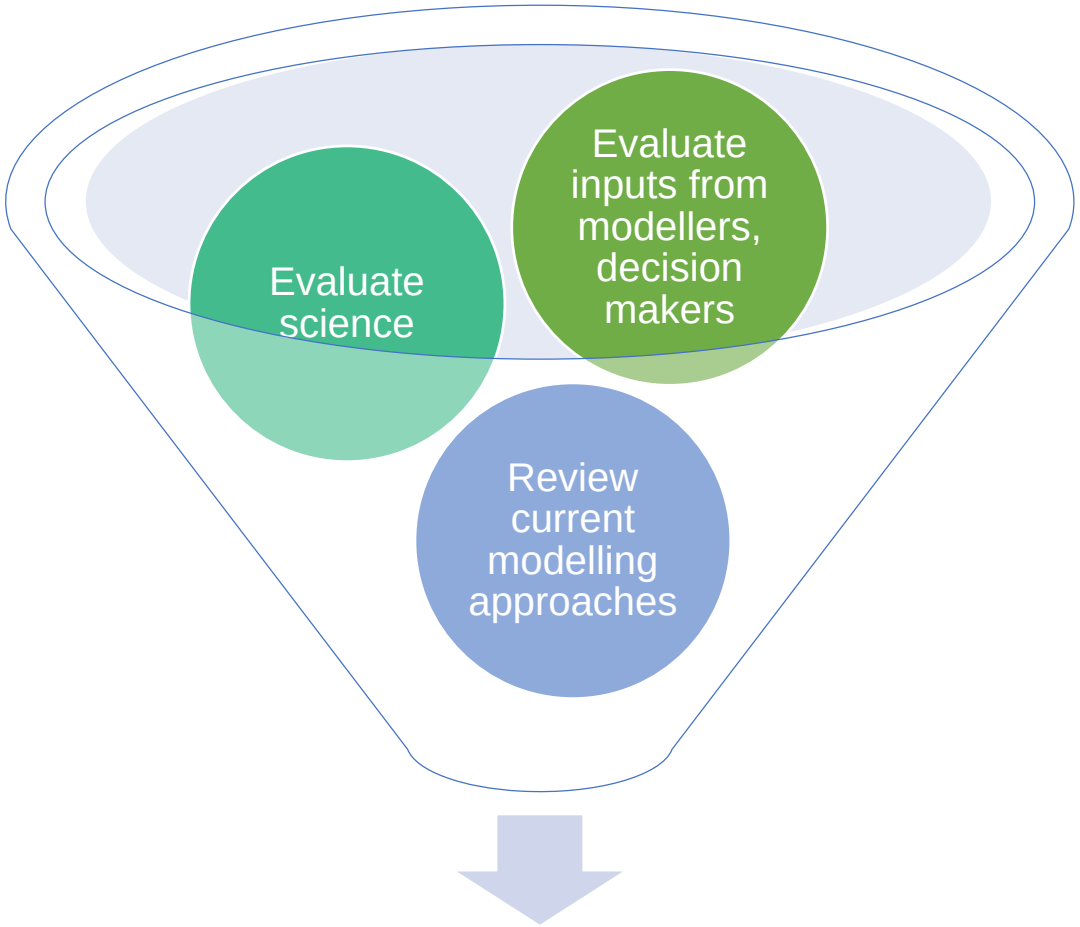
Qld Climate Change Science Plan

Managing Climate Risk: Actions for Queensland Government
(in preparation)



Recognise

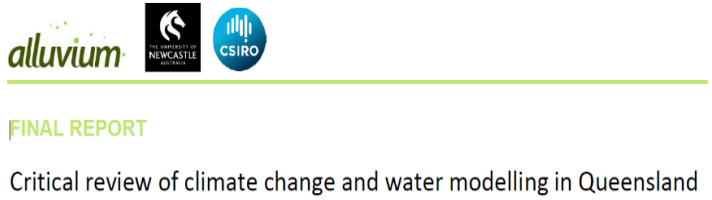
Critical review of climate change and water modelling in Queensland



Strategic investment portfolio to better account for existing climate variability and future climate change.

Queensland Water Modelling Network

Strategic Priority: Climate Change and Variability



Opportunity: conversations to scope problem, test ideas, consolidate directions and response

Governance

- Project Steering Group (Qld Govt, AIMS, BoM)
- Project Supporters Group (Qld Govt, researchers, nsw etc.)

Project workshops/forums

- April 2019 – gathering and sharing info
- June 2019 – presenting and validating

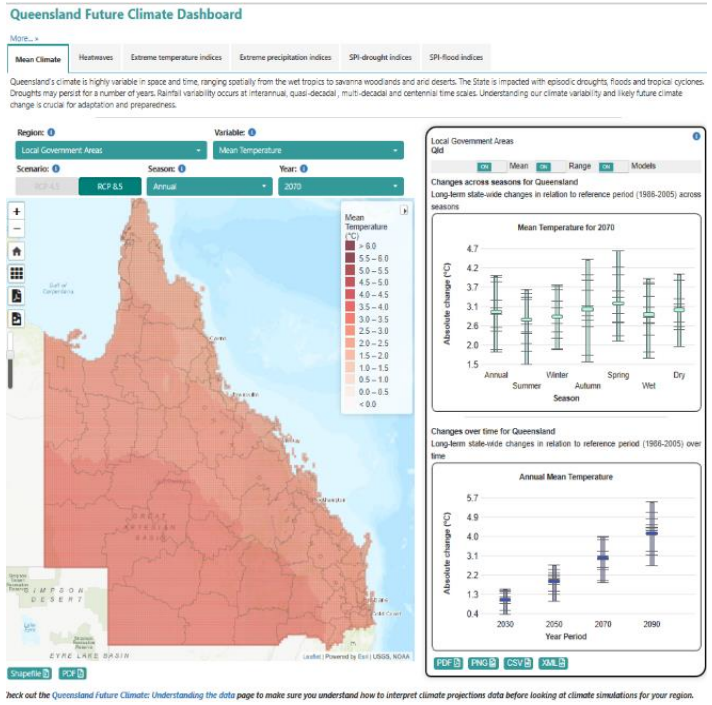
Climate Change Community of Practice Events

- November 2019 – sharing information, profiling capability

Collaborate and equip

Opportunity: multiple lines of response

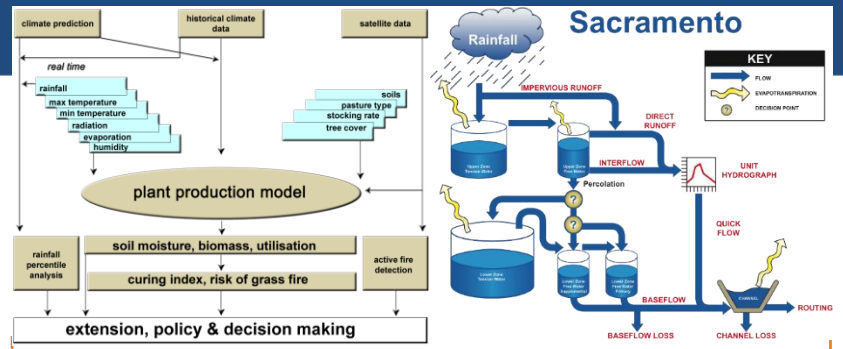
1. Review of climate science



Other jurisdictions
National products
Queensland specific products

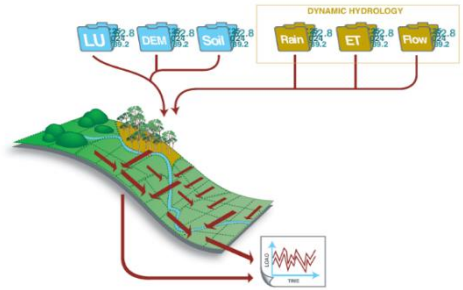
2. Evaluation Guide

- The modelling question
- Data inputs and forcing data
- Conceptual process representation
- Component models
- Model outputs



Case studies:

- Paddock to Reef WQ modelling
- AussieGRASS pasture model
- Queensland MDB Water Resource
- SEQ Water supply



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FINAL REPORT

Critical review of climate change and water modelling in Queensland

Queensland Government

3. Strategic investment portfolio

Enhance Queensland's ability to understand the impact of climate variability and change on water-related systems, to increase economic, social and ecological resilience

Outcome 1
Increase consistency and defensibility of risk assessment approaches

Outcome 2
Interpret and summarise the applicability of existing Qld climate science and datasets

Outcome 3
Address climate science gaps through targeted research initiatives

Outcome 4
Empower individuals and collectives, and facilitate collaboration

Training. Communication and guidance

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Opportunities

- ✓ PLATFORM: Mandate - mature conversation – common language
- ✓ COLLABORATE: Common needs – knowledge gap – solutions
- ✓ EQUIP: trans-disciplines, build capacity, extend conversations and inform
- ✓ SET DIRECTIONS: resources and response

Challenges

- ✓ COMPLEXITY: trans-disciplinary, where to start
- ✓ IMPLEMENTATION: relies on others and QWMN
- ✓ EQUIP: communication, R&D gaps, capacity building, tools
- ✓ MAINTAINING CONVERSATIONS:

Report to be released shortly:
https://science.des.qld.gov.au/government/science-division/water-modelling-network/projects