



Australian Government
Department of the Environment and Water Resources



Marine and Tropical Sciences Research Facility

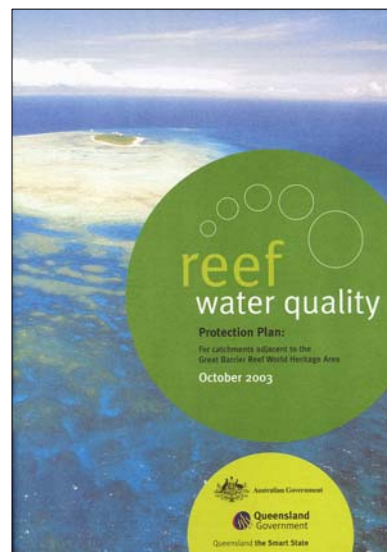
Halting and Reversing the Decline of Water Quality: Socio-economic integration with biophysical processes

Iain Gordon CSIRO

Marine and Tropical Sciences
Research Facility



*“Halting and reversing
the decline in water
quality entering the Reef
within 10 years”*

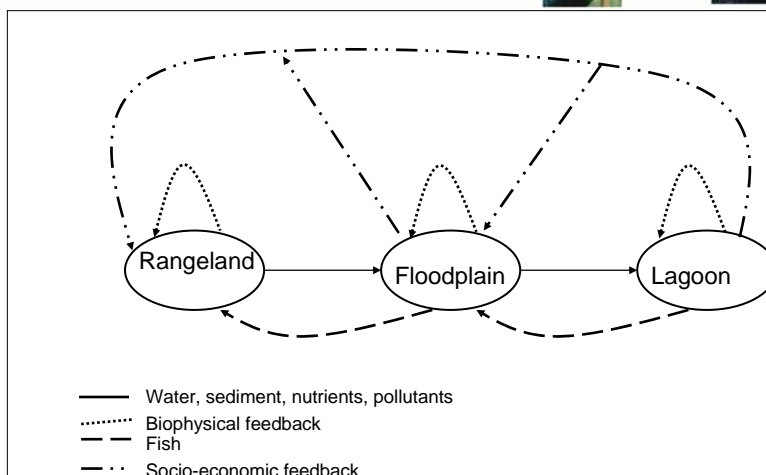


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Industry	Gross Value (\$m)	No. of people employed	Expected growth in output by 2020 (%)
Mining	7,052	10,380	- 2%
Tourism	4,269	47,660	51%
Mineral processing	1,392	3,918	36%
Beef	1,017	8,728	25%
Sugar cane	803	8,736	%
Horticulture	708	9,006	Na
Recreational fishing	240	Na	1%
Commercial fishing	119	641	-21%
Aquaculture	38	378	449%
	15,638	90,000 +	

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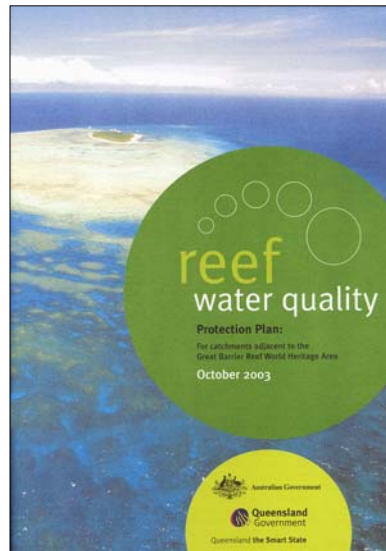




REEF WATER QUALITY PROTECTION PLAN

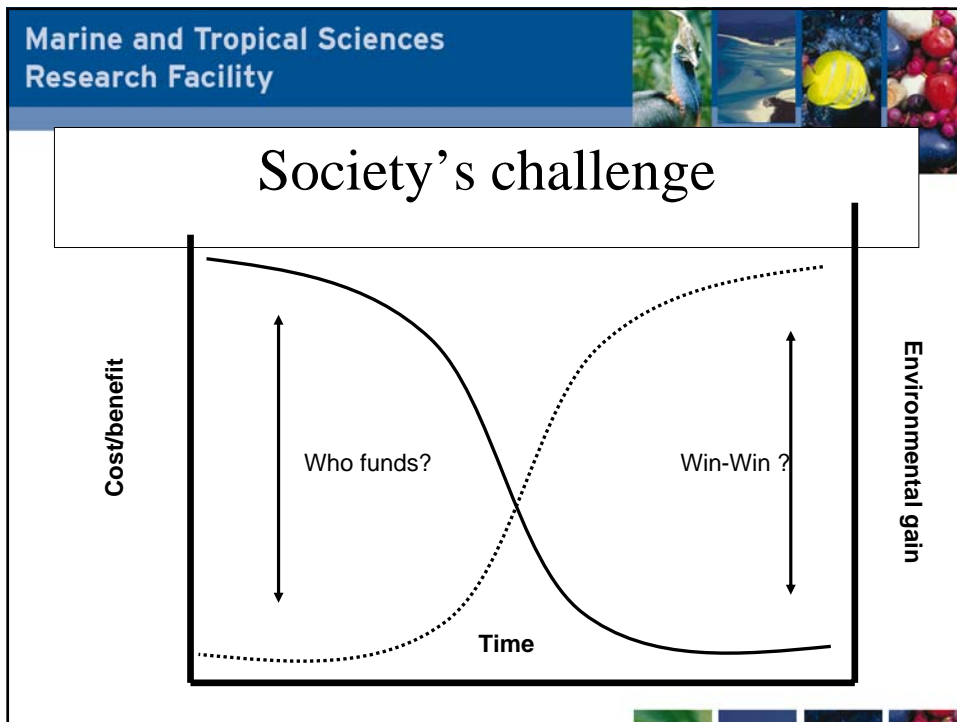
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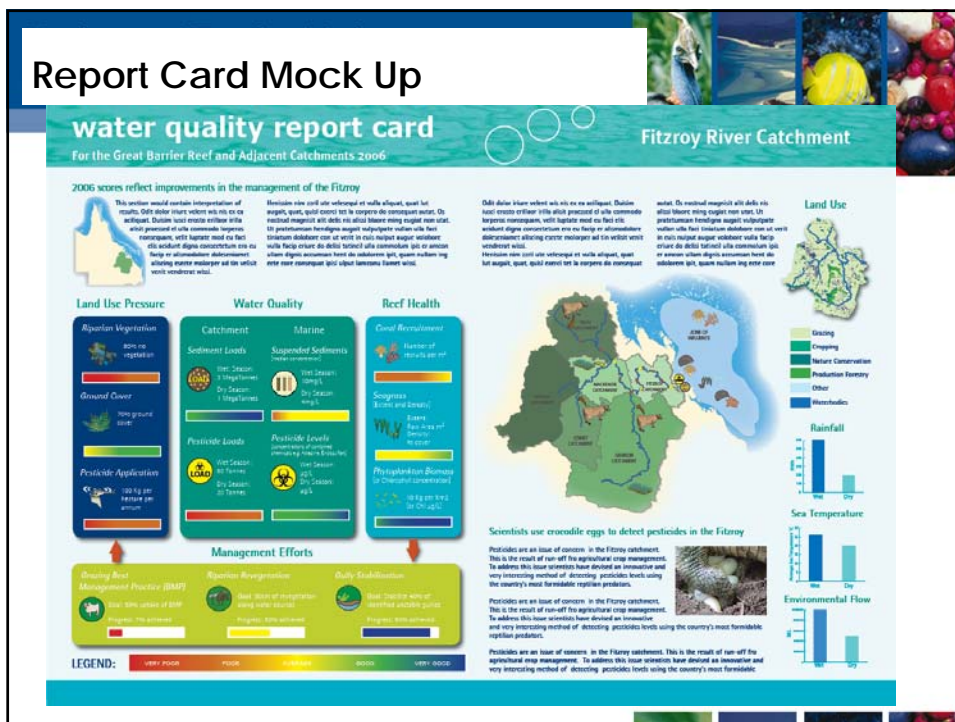
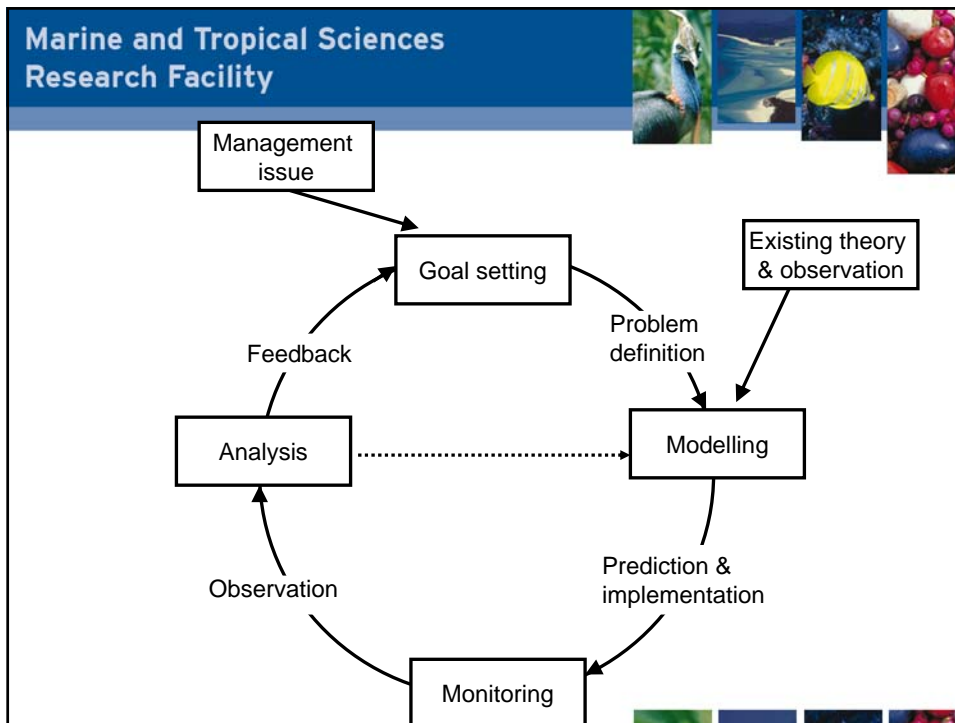
- **What needs to be done?**
 - **Where can be done?**
 - **How much will it cost?**
- **How do we know if we’re getting there?**



- Project 3.7.5: Socio-economic Constraints to and Incentives for the Adoption of Land Use and Management Options for Water Quality Improvement. (Peter Roebeling & **Martijn Van Grieken**, CSIRO)
- Project 4.9.7: Understanding and Enhancing Social Resilience to Water Quality Change in the Great Barrier Reef region. (Helen Ross UQ, Margaret Gooch JCU, **Tim Lynam**, CSIRO)
- Project 3.7.7: Integrated Report Card. Conceptual and Statistical Framework for the Water Quality Component. (Andy Steven, Bronwyn Harch & **Petra Kuhnert**, CSIRO)





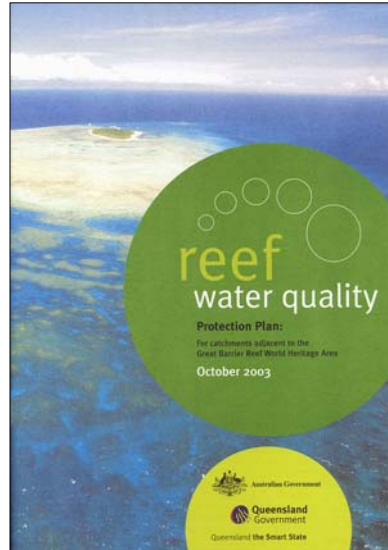




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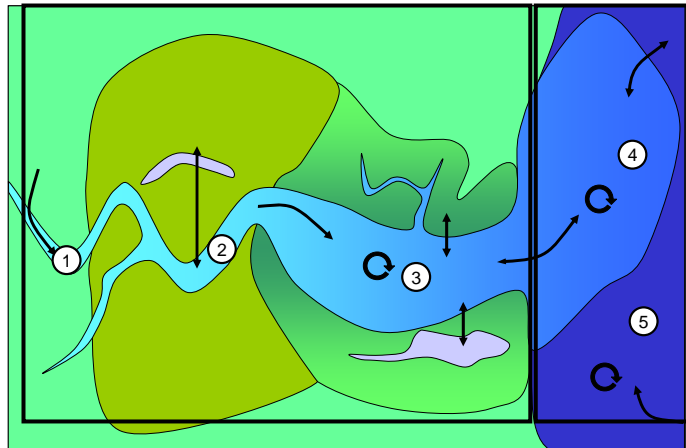
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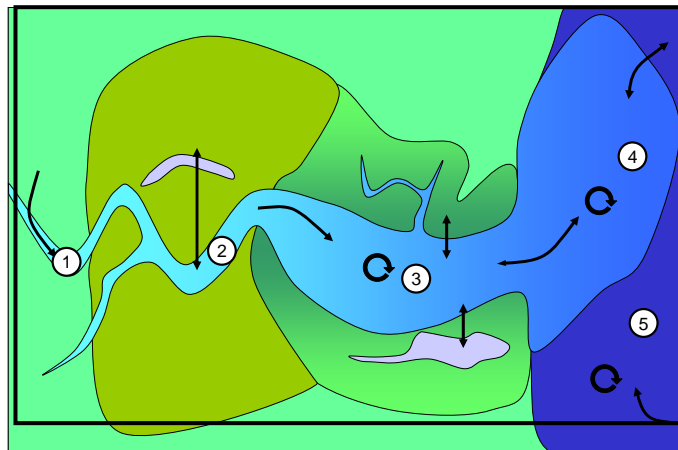
NRM Body

GBRMPA





Marine Catchment Basin Management



- Will what we are doing meet the Reef water quality targets?
 - Integrated socio-biophysical-ecological models (Project 2.5i.4)
- How will we target limited resources?
 - Catchment scale cost/benefit analyses
- How will we get land managers' involvement?
 - Incentives vs legislation
 - Adaptive management
- How do we know how we're going?
 - Linking freshwater & marine indicators
 - Report card
- What will be the effects of climate change? ((Project 2.5i.4))
- Do we have the institutional structures in place to meet the objectives?
 - Sub-catchment cooperation
 - Integrated whole of catchment