



Scoping
Ecosystem
Accounts for the
Great Barrier Reef











- Introduce the area
- Previous studies
- Our experiences so far
- Lessons learned
- Possibilities for the future







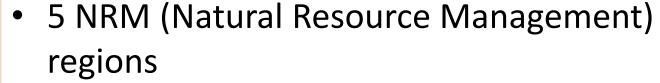




# **Great Barrier Reef region**





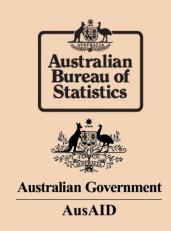




- World Heritage listed
- Economic activity











- Local and International area of interest
- Coral
- Sea grass
- Dugong
- Indigenous communities
- Industry











### Previous and ongoing work





- Land Management: Fitzroy and Livingstone
   Shires
- GBR Land Account (experimental)
- CTP work
- NRM ecosystem accounts? Wentworth?
- Land to reef process (Brodie)



NRM Region	Total suspended solids ktonnes/yr	Total nitrogen tonnes/yr	Total phosphorus tonnes/yr	PS11 herbicide kg/yr	
Cape York	2 388	2 998	1 516	na	
Wet Tropics	1 360	4 400	2 037	10 054	
Burdekin	4 738	2 446	2 555	4 911	
Mackay-Whitsundays	1 542	912	2 172	10 019	
Fitzroy	4 109	1 672	4 142	2 269	
Mary Burnnett	3 076	1 463	3 092	990	
Total Great Barrier Reef region	17 213	13 891	15 514	28 243	

Source: Brodie, J., Waterhouse, J., Lewis, S., Bainbridge, Z., and Johnson, J. 2010. Current loads of priority pollutants discharged from Great Barrier Reef catchments to the Great Barrier Reef. Australian Centre for Tropical Freshwater Research (ACTFR) report number 09/02.

#### Land Management Practices, by NRM region - 2008-09

	Wet Tropics	Burdekin	Mackay Whitsunday	Fitzroy	Burnett Mary	Total Great I
		Number				
of holdings	2 802.0	1 704.0	1 938.0	4 328.0	6 332.0	17
s growing sugar cane	1 527.0	39.0	1 321.0		747.0	4
s growing vegetables, fruit, berries or nuts ture)	547.0	192.0	32.0	106.0	793.0	1
s that prepared (sprayed, cultivated or had						
nd for broadacre crops and/or cotton between 1 8 and 30 June 2009	78.0	105.0	45.0	1 126.0	954.0	2
s keeping beef cattle	1 150.0	660.0	1 031.0	4 135.0	5 257.0	12
		Percent				
s undertaking soil testing for nutrients	34.9	21.8	36.7	6.5	12.5	
s applying fertiliser	68.7	46.2	70.1	10.7	34.5	
s using chemicals	77.3	72.4	81.6	50.1	57.8	
s actively controlling stock access to riparian	^15.9	^20.8	^19.4	^22.3	^21.4	
s ensuring at least 40% ground cover remained ocks at the end of the 2008 dry season	^43.6	^37.1	^43.1	^51.4	^39.4	
s irrigating between 1 July 2008 and 30 June	23.7	49.3	48.4	8.2	25.3	
s reusing tail water	^2.3	27.5	31.2	^34.3	^14.3	
ane holdings using zero till planters	4.0	20.9	*4.2		*8.6	
ural holdings using zero till planters	^3.0	^7.8		^17.2	^5.2	
re holdings using zero till land preparation tle holdings able to provide an estimate of the	**6.7	^51.3	*2.7	^26.0	^11.1	
f their ground cover at the end of the 2008 dry	77.0	72.5	72.5	77.3	69.8	
s with ground cover greater than 70%	68.0	31.8	^41.1	^34.8	42.3	

pplicable
ABS Land Management Practices in the Great Barrier Reef Catchments, Final, 2008-09 (cat. no. 4619 0.55 001)



### Stakeholder identification







- Identify who is responsible for enforcing Act
- Where can we fit in?
- Require support and utilization to continue work



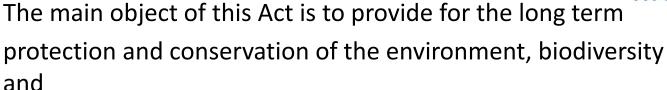




### **GBR Marine Park Act 1975**







heritage values of the Great Barrier Reef Region.

(2) The other objects of this Act are to do the following, so far as is

consistent with the main object:

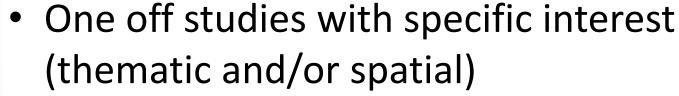
- (a) allow ecologically sustainable use of the Great Barrier Reef Region for purposes including the following:
- (i) public enjoyment and appreciation;
- (ii) public education about and understanding of the Region;
- (iii) recreational, economic and cultural activities;
- (iv) research in relation to the natural, social, economic and cultural systems and value of the Great Barrier Reef Region;





#### Marine data abundance





- Qualitative data
- Collection methodologies
- Marine/terrestrial contrast
- Retain focus repeatability, timeseries

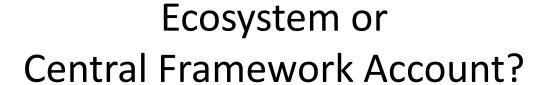










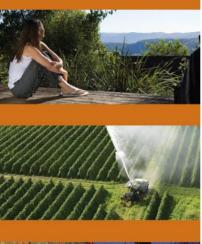




- Rapid Assessment tool
- Policy questions
- Distribution of benefits and residuals
- Multi-faceted data needs

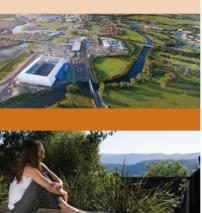














# Services and Assets – How far can we go?

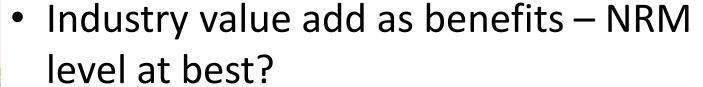


- Ecosystem assets, physical measures, extent and condition
- Ecosystem services, physical measures
- Valuation?
- 2014, 1 year after SEEA EEA publication



# Small area economic and social information





- Process of accessing data BIT and BAS
- Census data Regional Profiles incl. employment, income, etc.
- Ag survey



AusAID









**Australian Government** 

AusAID



### National Regional Profile

→ Region	South Mackay ▼					
→1 Frequency	Annual					
→! Time	2007	2008	2009	2010	2011	
7 I line	ΔΨ	<b>∆</b> ₹	<b>∆</b> ₹	<b>∆</b> ₹	۵₹	
→ Data Item						
■ ECONOMY						
NUMBER OF BUSINESSES - at 30 June						
BUSINESS ENTRIES - year ended 30 June						
BUSINESS EXITS - year ended 30 June						
□ NUMBER OF BUSINESSES BY INDUSTRY - at 30 June						
LABOUR FORCE STATISTICS - 2011 Census						
■ YOUTH (15-19 years) ENGAGEMENT IN WORK/STUDY - 2011 Census						
TAXATION STATISTICS - year ended 30 June						
a recently divining - year chief of daile						
SELECTED GOVERNMENT PENSIONS & ALLOWANCES - at 30 June						
■ ESTIMATES OF PERSONAL INCOME - year ended 30 June						
•						
WAGE AND SALARY EARNERS BY SEX - year ended 30 June						
WAGE AND SALARY EARNERS BY AGE AND SEX - year ended 30 June						
■ WAGE AND SALARY EARNERS BY AGE - year ended 30 June						
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# Multi-disciplinary nature





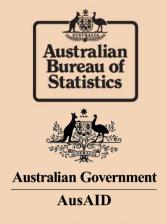
- Scoping managers, ecosystem accountants, economists
- Physical data ecosystem accountants, connections to research network
- Services data Scientists,
   economists, ecosystem accountants





### Next Steps

- Second round of stakeholder consultation
- Develop structure of end product
- Documentation
- Utilisation







- The GBR is an important asset for Australia and the world
- A lot of work done already
- Application of framework to test EEA
- Second and third accounts, utilisation











# Questions?







# Acknowledgements



- This and other contributions are made possible by funding from Australian Aid (AusAID) and the World Bank.
- The Australian Bureau of Statistics and AusAID are pleased to be partners in the WAVES program, and in particular assisting with the implementation of the SEEA in the Asia-Pacific.