

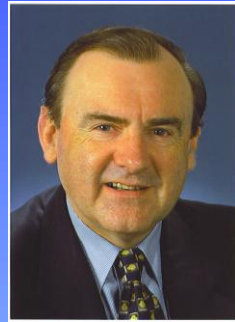
Ecosystem-based management

**- some lessons learnt about planning and managing
Australia's Great Barrier Reef**



Stockholm

September 2008

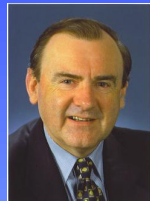


Outline of talk

- Introduction; overview of Great Barrier Reef including integrated management approach
- Comparison of Great Barrier Reef and Baltic; importance of GBR for Australia; Australia's Oceans policy
- Overview of the Representative Areas Program

Short break

- Community engagement; role of sectors
- Political aspects of rezoning; other Australian marine planning programs
- Implementation of the rezoning; outcomes



The Great Barrier Reef

- ~ 3,000 separate reefs
- over 900 islands

Princess Charlotte Bay

Cape Melville

GBRMP boundary

Lizard Island



Cape Flattery



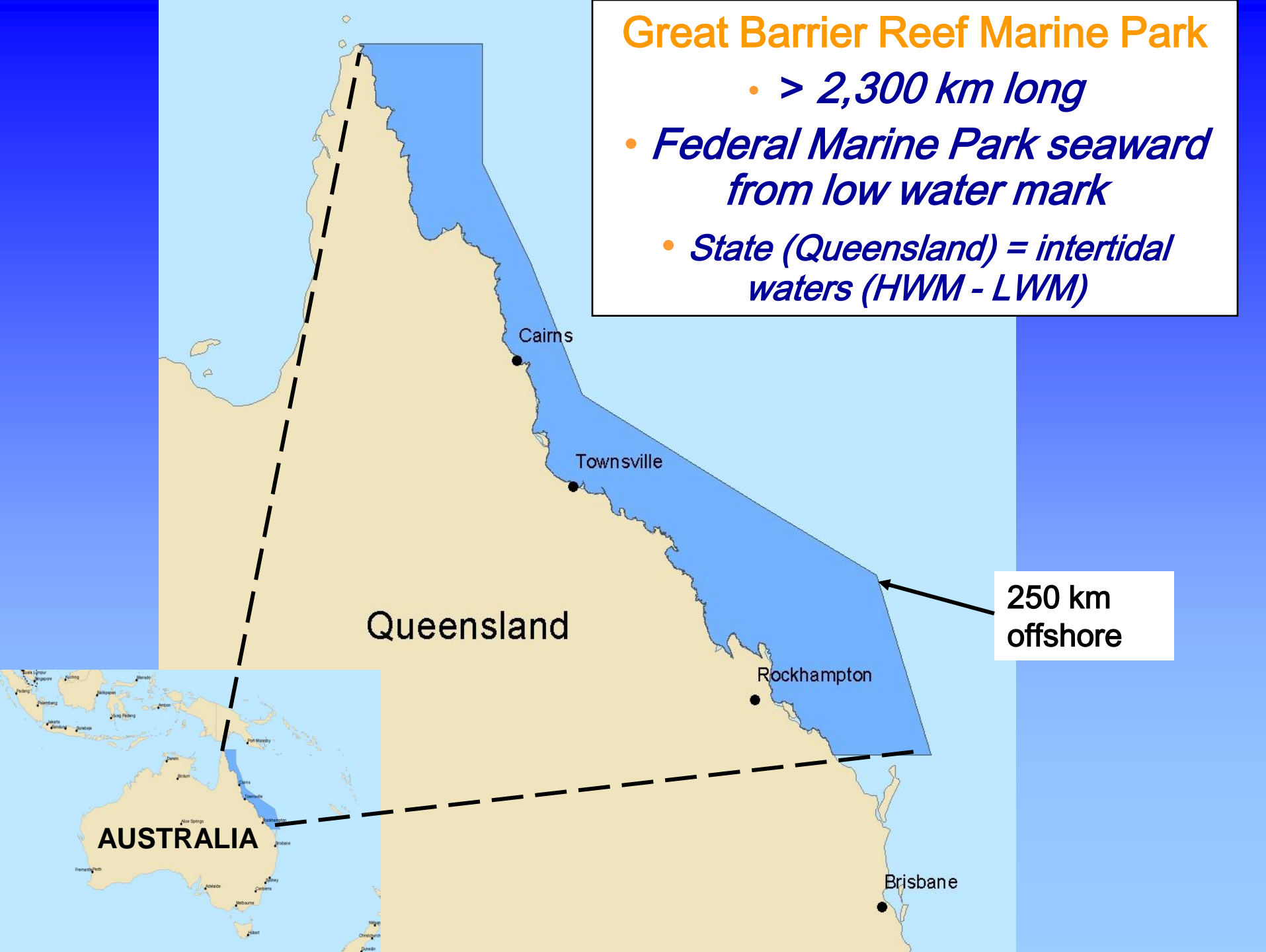


Some key dates - Great Barrier Reef

- 1970s – proliferation of mining leases, limestone mining, crown of thorns starfish
- 1975 - Act passed; mining in GBR prohibited; Marine Park declared (Park boundary only); GBRMPA established
- 1981 - inscribed on World Heritage List
- 1983-88 – completion of first zoning for entire GBR
- 1990 - declared world's first Particularly Sensitive Sea Area
- 2004 – new zoning plan (RAP) implemented

Great Barrier Reef Marine Park

- *> 2,300 km long*
- *Federal Marine Park seaward from low water mark*
- *State (Queensland) = intertidal waters (HWM - LWM)*



250 km
offshore

AUSTRALIA

Brisbane

Great Barrier Reef Marine Park

Always been a multiple use Marine Park

Most reasonable activities allowed in certain zones, including:

- commercial fishing, including trawling in some areas
- recreational fishing
- shipping/ports
- tourism
- aquaculture
- defence training
- indigenous hunting
- permitted works, including dredging

GBR – worth nearly AUD\$6 billion per annum



Great Barrier Reef Marine Park Authority (GBRMPA)

- **statutory authority established under Federal legislation with primary responsibility to manage the development, protection, enjoyment and wise use of the Marine Park**
- **small agency (< 200 staff)**
- **modest budget**
- **initially most staff were based in Townsville (small office in Canberra)**
- **Post RAP, regional offices established to build on community engagement**

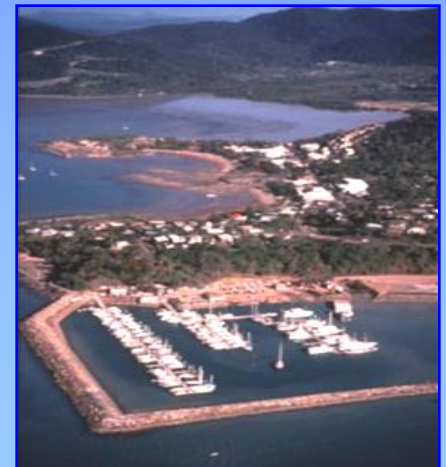
Complementary management

- Federal & State (Queensland) Government agencies cooperate under formal agreements in GBR field management
- State agencies include:
 - *Queensland Parks & Wildlife Service*
 - *Queensland Boating & Fisheries Patrol*
 - *Queensland Water Police*
- Federal agencies include:
 - *Customs*
 - *Coastwatch*
 - *Australian Federal Police*
 - *Commonwealth Department of Public Prosecutions*
 - *Australian Maritime Safety Authority*



In the mid-late 1990s, the pressures on the GBR included...

- downstream effects of landuse (water quality issues)
- fishing effort and impacts
- coastal developments
- shipping & pollution incidents
- tourism and recreation

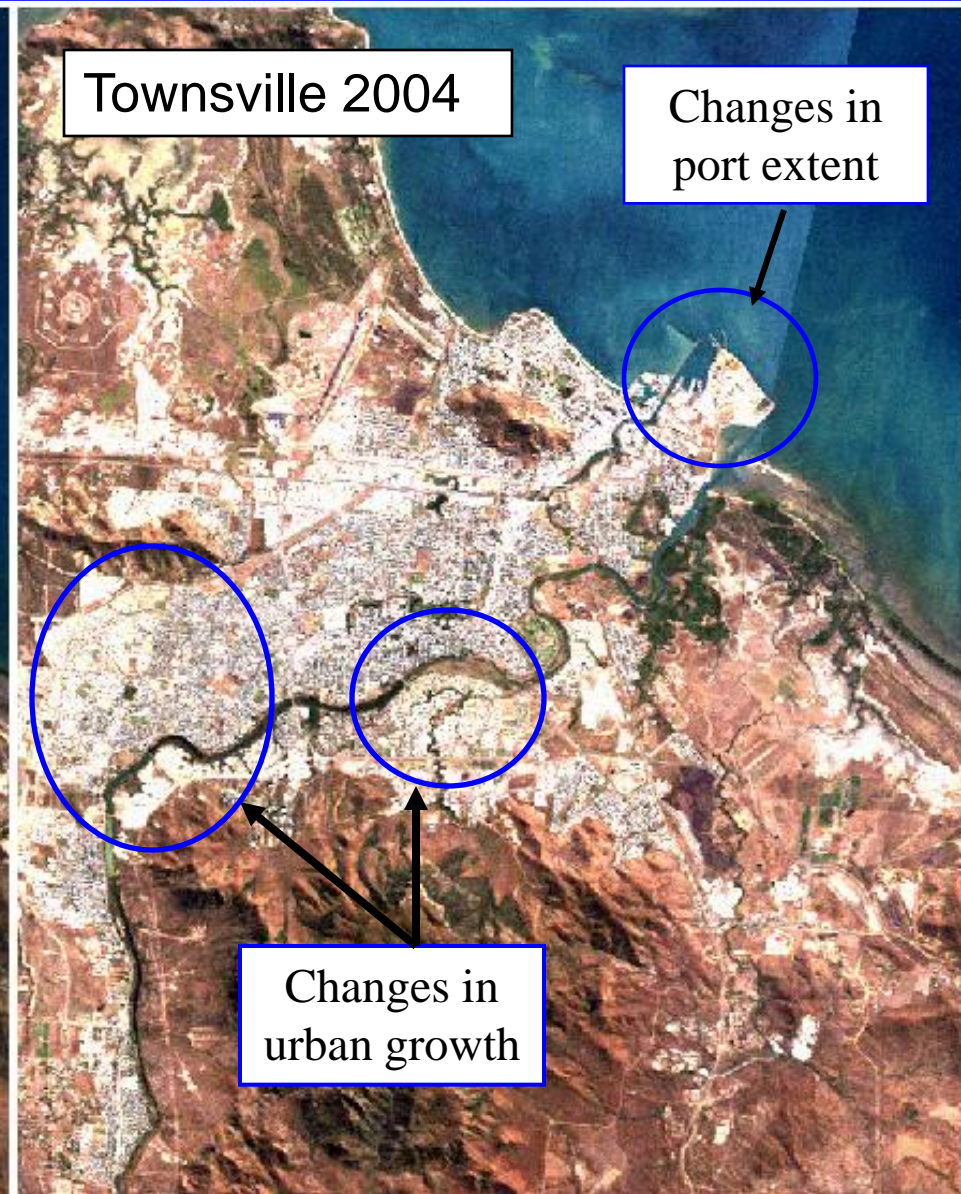


Changes in urban/industrial development from satellite imagery

Townsville 1989



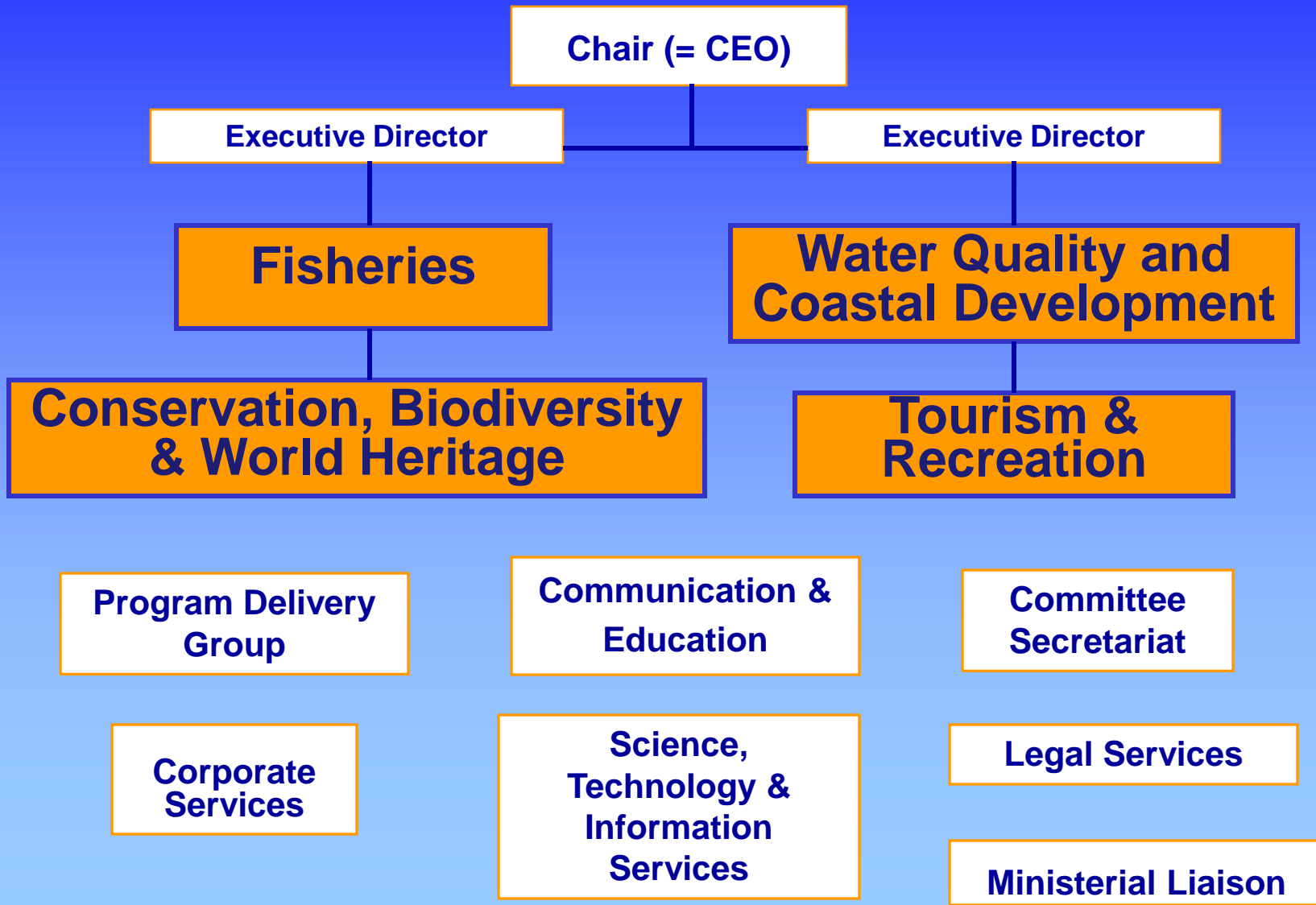
Townsville 2004



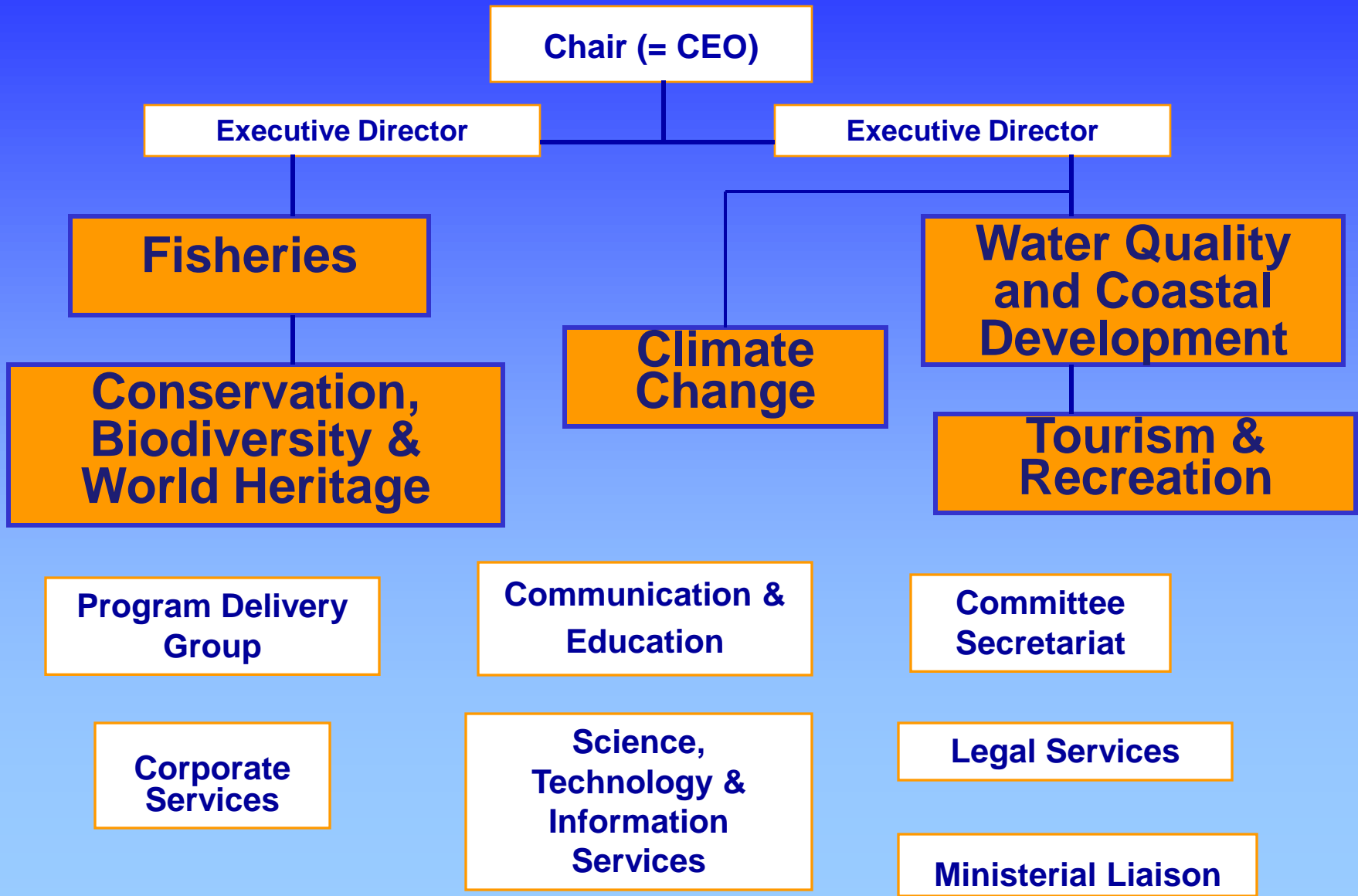
Changes in
port extent

Changes in
urban growth

GBRMPA - restructured in 1998 to support integrated marine management

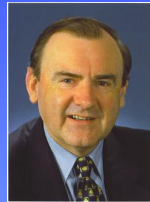


GBRMPA – climate change added



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The Great Barrier Reef – size roughly equivalent to 90% of the Baltic Sea..



Comparison of Baltic & GBR

	<u>Baltic Sea</u>	<u>Great Barrier Reef</u>
<i>Size (km²)</i>	— 390,000 km ²	— 345,000 km ²
<i>Adjacent States</i>	— 9 countries	— Federation
<i>Adjacent population</i>	— 90 million	— 1 million
<i>Regulatory framework</i>	— HELCOM, EU	— GBRMPA & EPBC Acts

Common issues:

***Shipping, water quality, fishing pressures,
climate change, tourism, maintaining biodiversity***

Australia's Marine Jurisdiction

- **Tropical to Polar** marine environments
- Exclusive Economic Zone - over **8 million km²**
- 2008 determination on **Extended Continental Shelf**
- **Wealth** of biodiversity, living and non-living resources

Diverse Marine Environments



A wealth of resources

- **Significant source of commercial and recreational resources**
 - **AUD\$26 billion to Australian economy (2004)**
 - **89% of Australia's gas resources**
 - **86% of Australia's oil reserves**
 - **Fisheries – AUD\$2.1 billion (2007)**
 - **20% of Australians aged 5 years and older are recreational fishers**

Complex jurisdictional arrangements

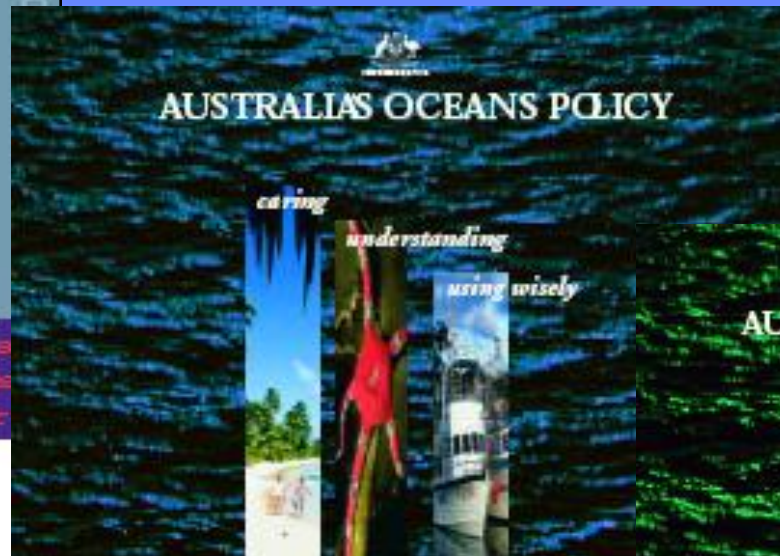
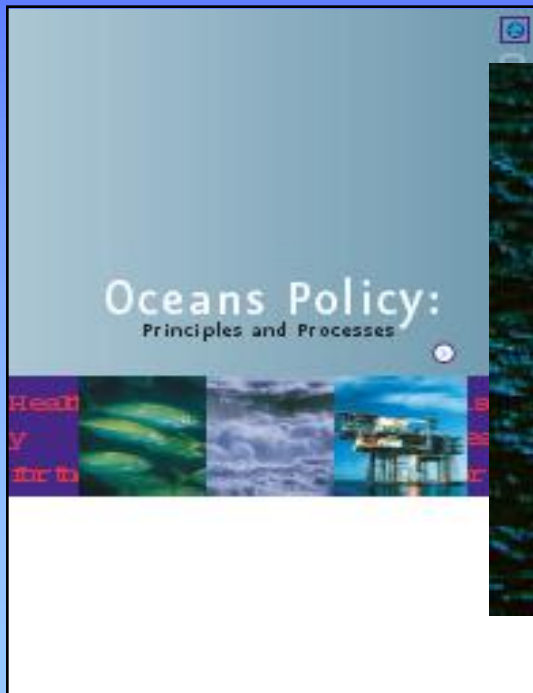
- **State and Commonwealth legislation**
- **Offshore Constitutional Settlement**
- **Indigenous interests**
- **Sectoral regulation**
 - **Fisheries & aquaculture**
 - **Oil & Gas**
 - **Shipping**
 - **Tourism**

Integrated marine planning around Australia

- **1998 - Australia's Oceans Policy**
 - National Oceans Office
 - Cross-sectoral ministerial arrangements
 - comprehensive bioregionalisation of Australia's oceans
 - first task – South-East Regional Marine Plan
- **2004 - South-East Regional Marine Plan completed; other Regional Plans commenced**

Australia's Oceans Policy

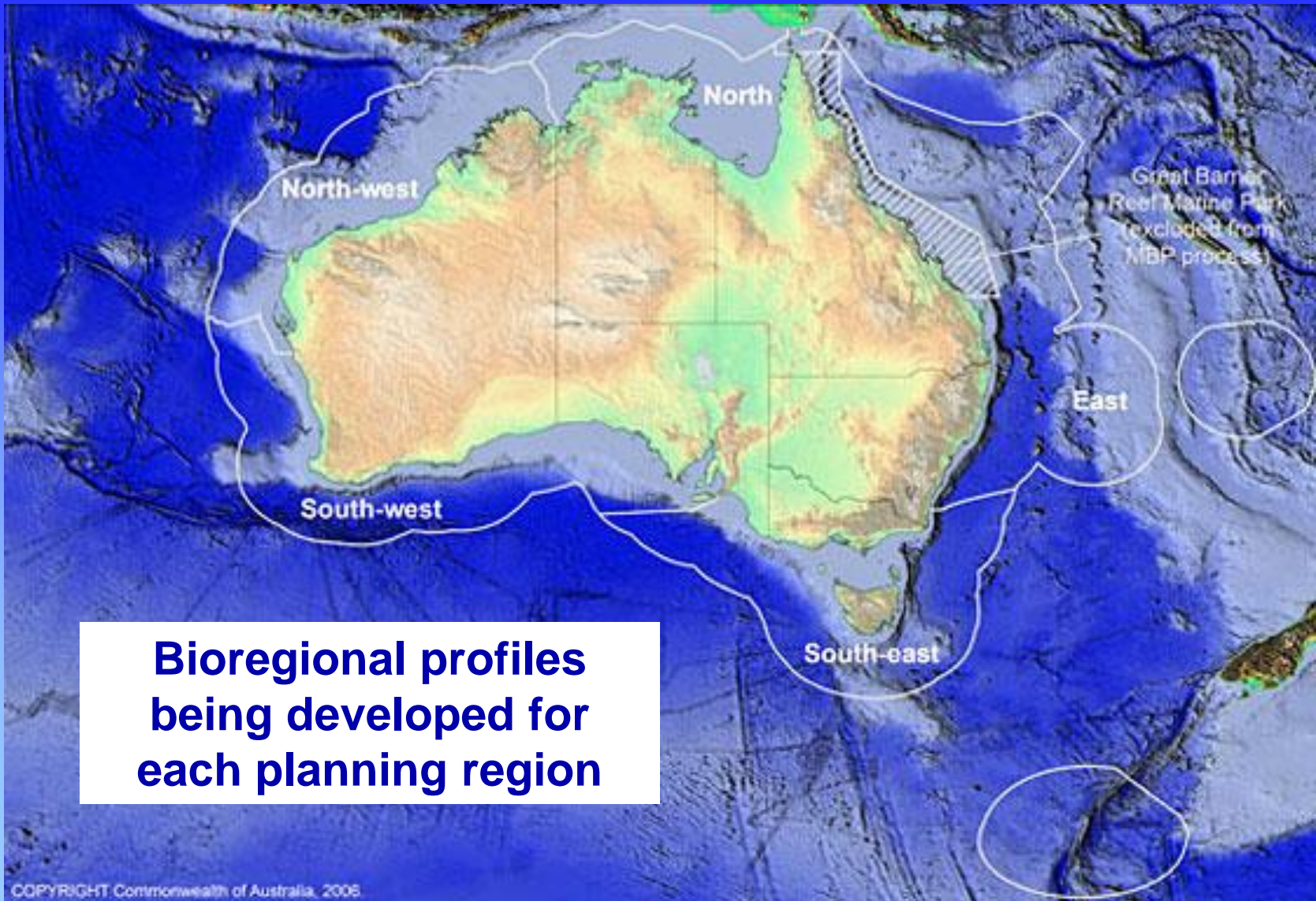
- Vision - “Healthy oceans: cared for, understood and used wisely for the benefit of all, now and in the future”.



Oceans Policy

- Broad goals included:
 - establishing integrated oceans planning and management
 - promoting ecologically sustainable economic development
 - identifying and protecting natural and cultural heritage
 - meeting international obligations and protecting Australia's rights
 - including community needs and aspirations

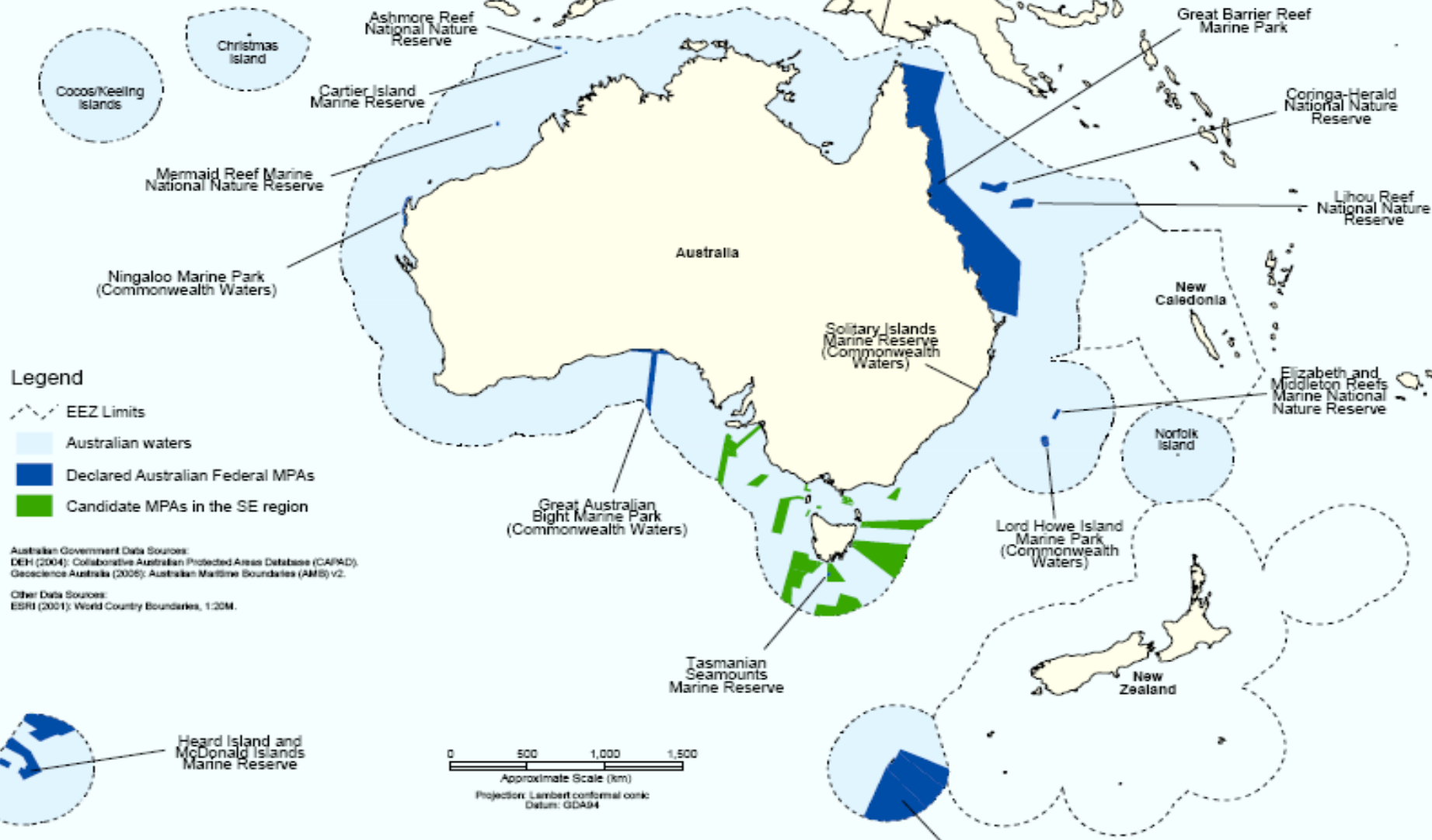
Australia's Marine Planning Regions



**Bioregional profiles
being developed for
each planning region**

Australia's Federal Marine Protected Areas

Australian Federal Marine Protected Areas

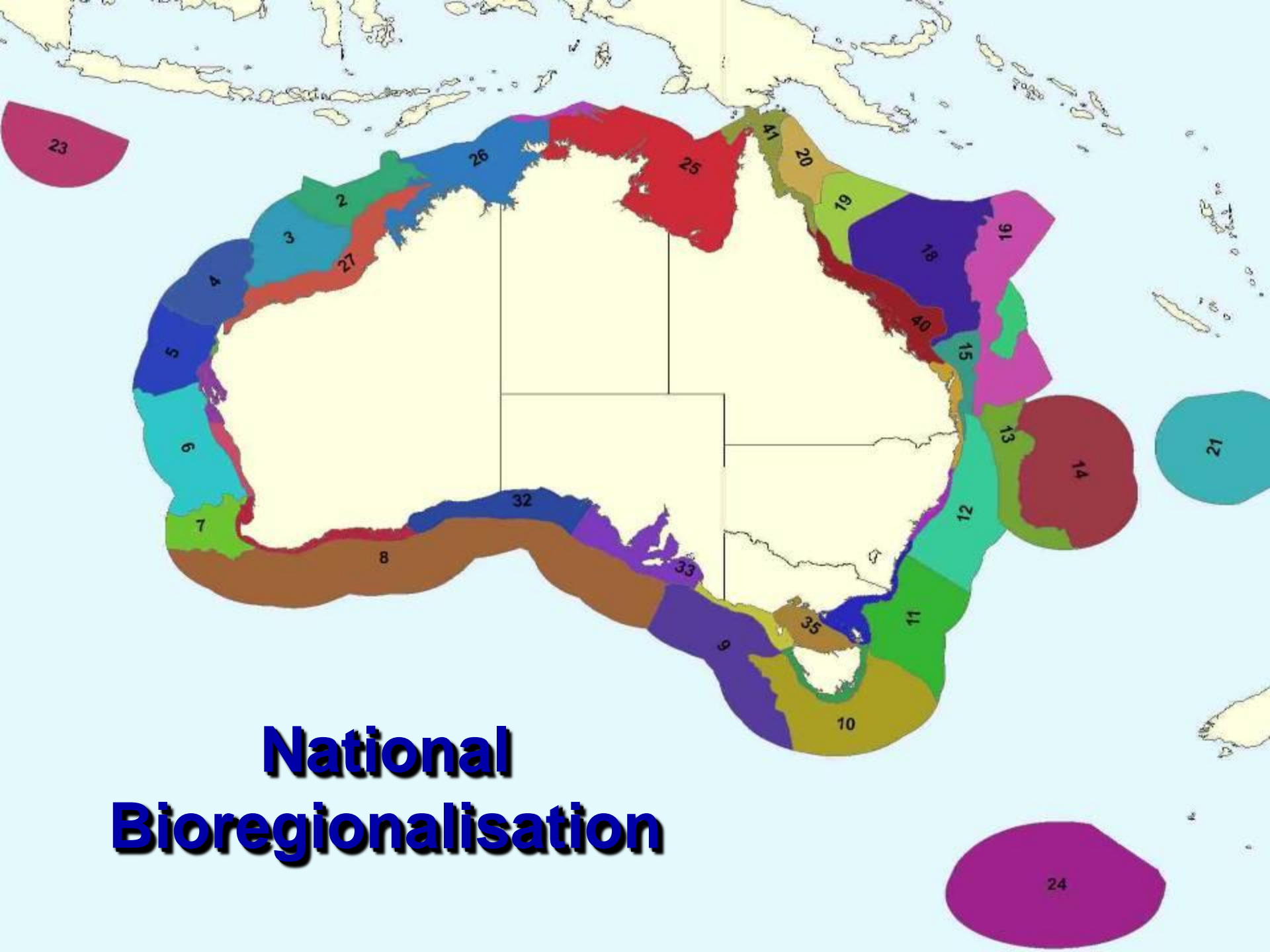


Effective marine conservation

- **Effective marine conservation requires a lot more than just marine protected areas**
- **Essential requirements for effective marine conservation include** *(after Thorne-Miller & Catena, 1991):*
 - 1. regulation of land-based and maritime sources of pollution;**
 - 2. direct regulation of marine resource use;**
 - 3. establishment of MPAs; and**
 - 4. integrated coastal zone management.**

Australia's National Marine Bioregionalisation

- **Spatial framework mapping biological and physical patterns in the marine environment - completed**
- **National datasets to produce bioregions for Australia's oceans**
- **Benthic and pelagic realms separate**
 - **benthic regionalisation**
 - **pelagic regionalisation**



National Bioregionalisation

The Bioregional Marine Planning Program 2006-10

- Brought under *Environment Protection and Biodiversity Conservation Act 1999*
- Five large marine regions
- Dual outcome:
 - Guide future legislative decision-making
 - Establish regional networks of marine reserves

Climate Change: an issue for most of the world's oceans

- **Increasing sea temperature**
- **Storm frequency & intensity**
- **Changing precipitation, drought & run-off**
- **Changing ocean circulation**
- **Sea level rise**
- **Ocean acidification**

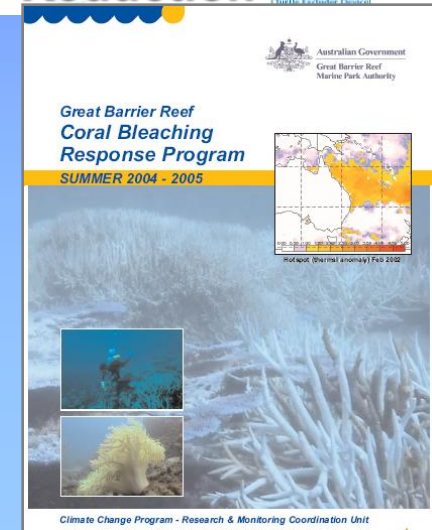
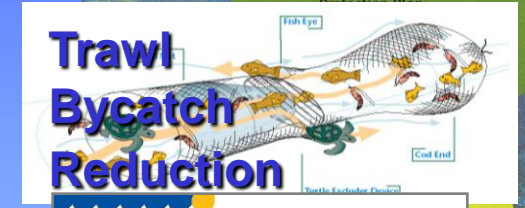
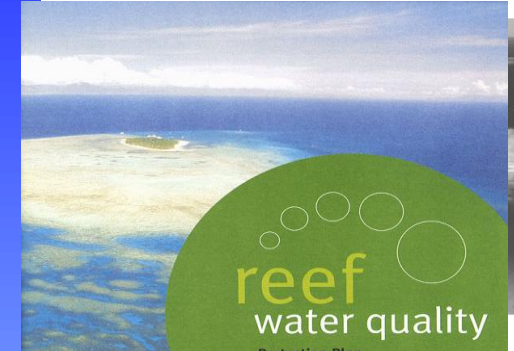
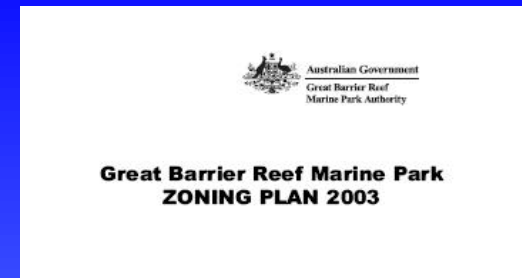
What can be done?

...management aimed at increasing the resilience by minimising or removing other pressures



Key strategies to increase the resilience of the GBR

1. Increase the extent of highly protected areas (*Representative Areas Program/rezoning*)
2. Improving water quality (*Reef Water Quality Protection Plan addressing runoff, land use, etc*)
3. Promoting sustainable fisheries (*Queensland Fisheries Management Plans*)
4. Developing sound policy re effects of climate change (*Climate Change Action Plan; Bleaching Response Plan*)

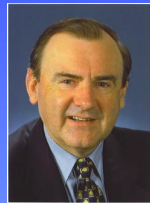


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Ocean Zoning

= spectrum enables multiple use

ACTIVITIES GUIDE

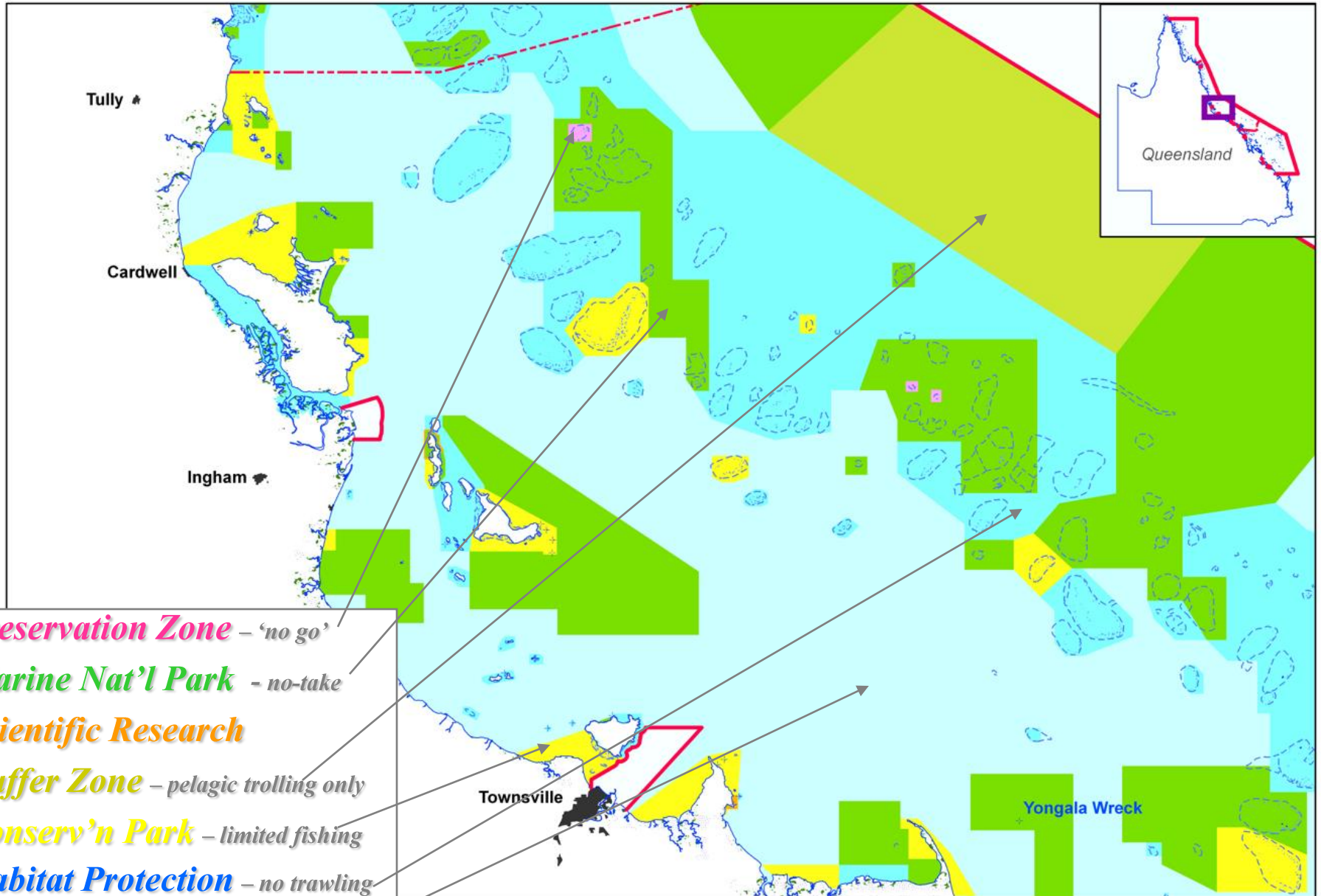
(see Zoning Plan for details)

	General Use Zone	Habitat Protection Zone	Conservation Park Zone	Buffer Zone	Scientific Research Zone	Marine National Park Zone	Scientific 'baseline' Zone
Aquaculture	Permit	Permit	Permit ¹	×	×	×	×
Bait netting	✓	✓	✓	×	×	×	×
Boating, diving, photography	✓	✓	✓	✓	✓ ²	✓	×
Crabbing	✓	✓	✓ ³	×	×	×	×
Harvest fishing for aquarium fish, coral and beachworm	Permit	Permit	Permit ¹	×	×	×	×
Harvest fishing for sea cucumber, trochus, tropical rock lobster	Permit	Permit	×	×	×	×	×
Limited collecting	✓ ⁴	✓ ⁴	✓ ⁴	×	×	×	×
Limited impact research	✓	✓	✓	✓ ⁵	✓	✓ ⁵	Permit
Limited spearfishing (snorkel only)	✓	✓	✓ ¹	×	×	×	×
Line fishing	✓ ⁶	✓ ⁶	✓ ⁷	×	×	×	×
Netting (other than bait netting)	✓	✓	×	×	×	×	×
Research (other than limited impact)	Permit	Permit	Permit	Permit	Permit	Permit	Permit
Shipping (other than in a designated shipping area)	✓	Permit	Permit	Permit	Permit	Permit	×
Tourism program	Permit	Permit	Permit	Permit	Permit	Permit	×
Traditional use of marine resources	✓ ⁸	✓ ⁸	✓ ⁸	✓ ⁸	✓ ⁸	✓ ⁸	×
Trawling	✓	×	×	×	×	×	×
Trolling	✓ ⁶	✓ ⁶	✓ ⁶	✓ ^{6,9}	×	×	×

Allows all reasonable uses

Scientific 'baseline' Zone

Current Zoning Plan – commenced 1 July 2004



Why a re-zoning?

In late 1990s recognition that:

- existing zoning did not adequately protect range of biodiversity; many biological communities were poorly represented in no-take areas.
- all plants, animals and their habitats play important roles in maintaining the health and resilience of the GBR ecosystem.
- need for a systematic planning program (the Representative Areas Program or RAP)

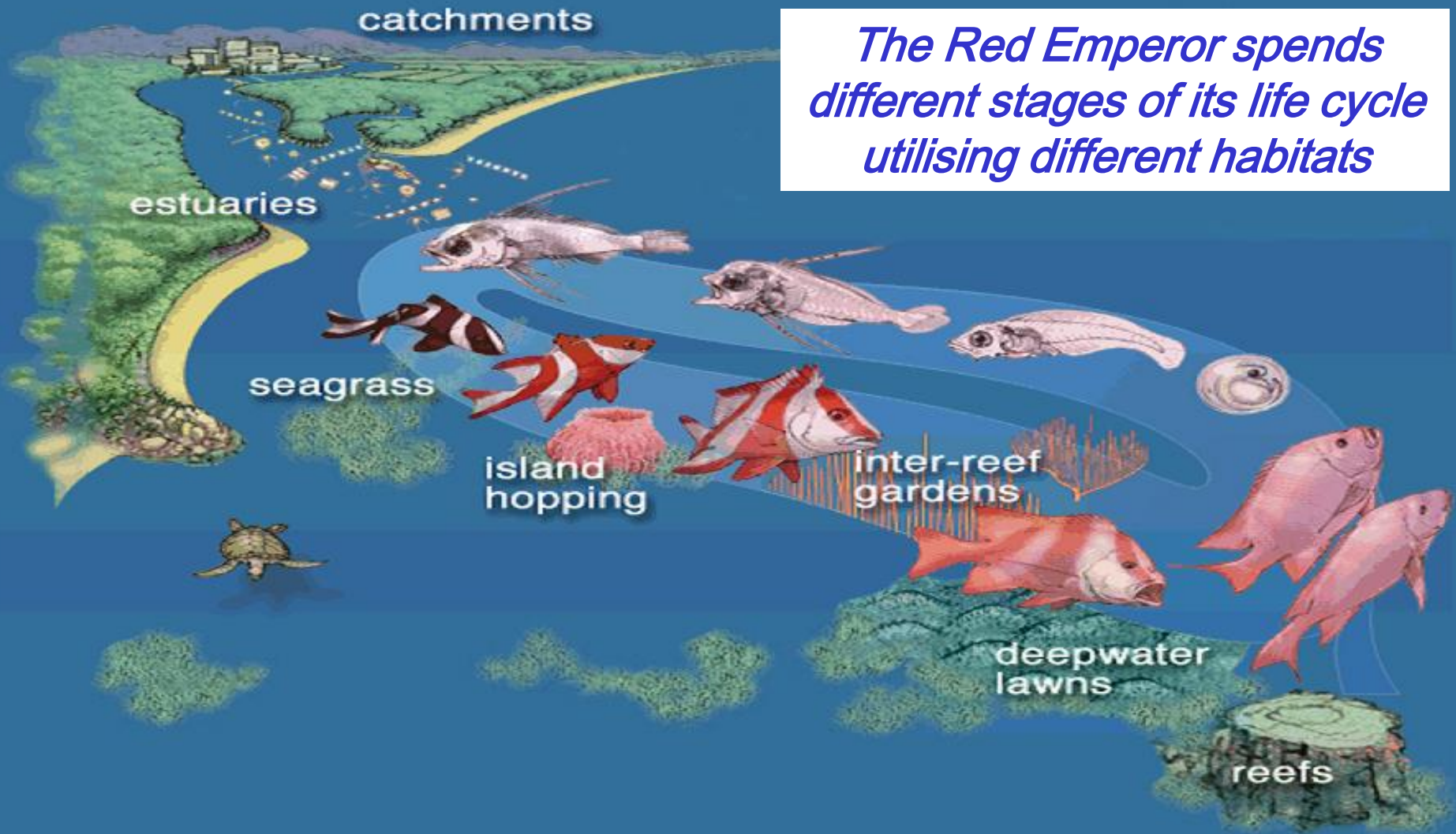
The GBR is diverse & complex

- It is more than just coral reefs (~ 6%) – *it includes seagrass beds, mangroves, algal beds, soft sediments, deep water areas, coral cays, islands, etc*
- Coral reefs are important ...but equally so are all other habitats; so we need to protect all habitats on which all species depend



Importance of marine connectivity

The Red Emperor spends different stages of its life cycle utilising different habitats



(Source: R Kelly, ACRS)

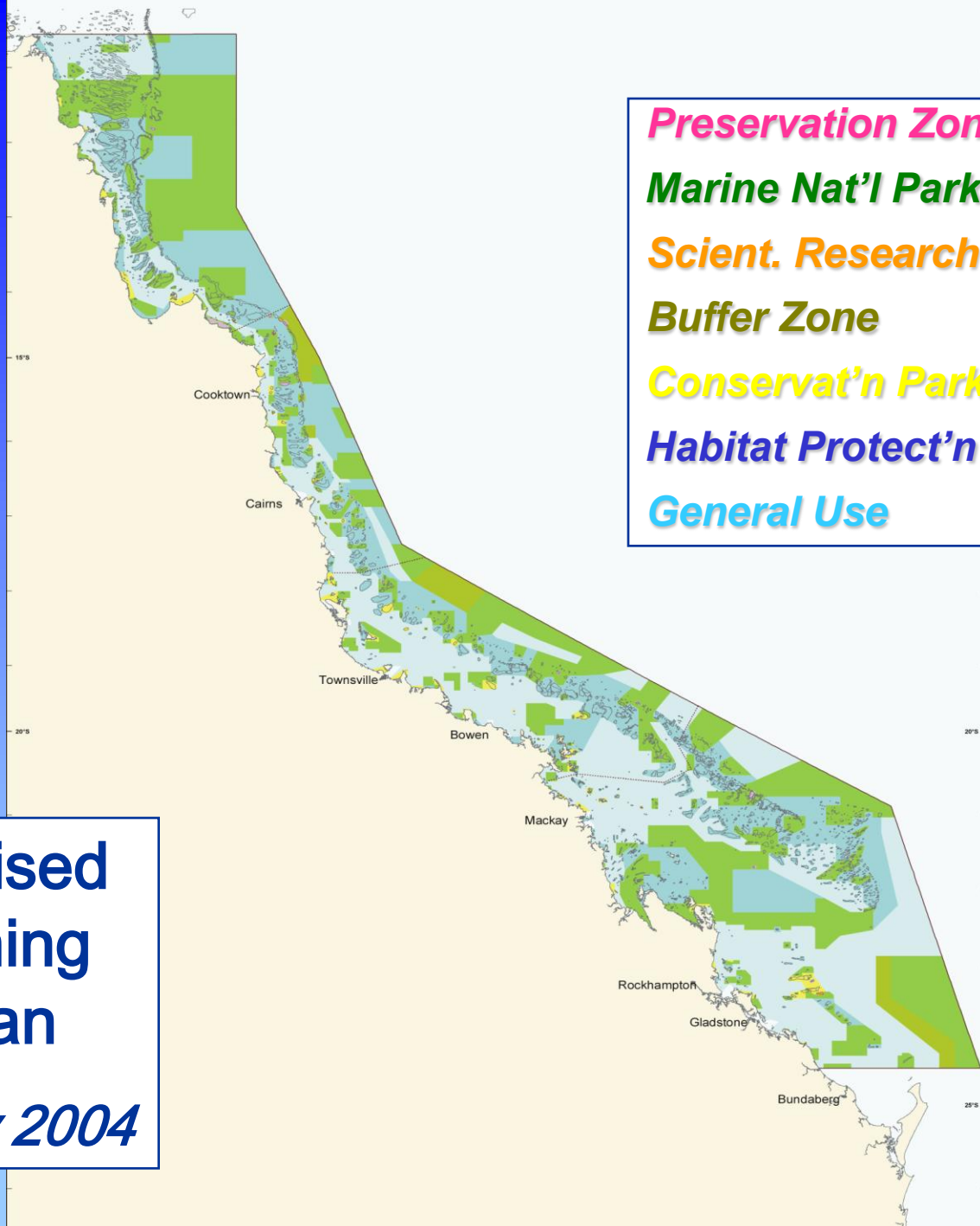
Pre - RAP Zoning *Late 1990s*



Permit	Permit	Permit 1	×	×	×	×
✓	✓	✓	×	×	×	×
✓	✓	✓ 2	×	×	×	×
✓	✓	✓ 3	×	×	×	×
Permit	Permit	Permit 1	×	×	×	×
Permit	Permit	×	×	×	×	×
✓ 4	✓ 4	✓ 4	×	×	×	×
✓	✓	✓ 1	×	×	×	×
✓ 5	✓ 5	✓ 6	×	×	×	×
✓	✓	×	×	×	×	×
Permit	Permit	Permit	Permit	Permit	Permit	Permit
✓	Permit	Permit	Permit	Permit	Permit	×
Permit	Permit	Permit	Permit	Permit	Permit	×
✓ 7	✓ 7	✓ 7	✓ 7	✓ 7	✓ 7	×
✓	×	×	×	×	×	×
✓ 5	✓ 5	✓ 5	✓ 5,8	×	×	×

Revised ZP Old ZP

Preservation Zone	0.2%	(0.1%)
Marine Nat'l Park	33.3%	(4.6%)
Scient. Research	0.05%	(0.01%)
Buffer Zone	2.9%	(0.1%)
Conservat'n Park	1.5%	(0.6%)
Habitat Protect'n	28.2%	(15.2%)
General Use	33.8%	(77.9%)



**Revised
Zoning
Plan**
1 July 2004

The Great Barrier Reef Representative Areas Program

an ecosystem approach to protecting biodiversity



1 Original Zoning Plan

1983 - 1988

2

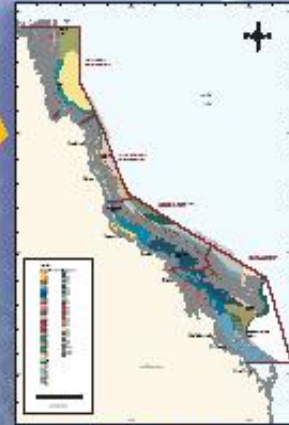
Realisation that existing Zoning Plans inadequate for the protection of biodiversity



3 40 Datasets

1998 - 1999

4 Maps of Bioregions



1999 - 2000

5

New Coastal Areas added to the GBRMP

Develop operating principles.

6

7 Community Participation Phase 1
10 000 public submissions.
2002

ACTIVITIES GUIDE
For Revised Zoning Plan for Reef

	Green Zone	Yellow Zone	Orange Zone	Red Zone	Blue Zone	Black Zone
Commercial fishing	✓	✓	✓	✓	✓	✓
Recreational fishing	✓	✓	✓	✓	✓	✓
Boating	✓	✓	✓	✓	✓	✓
Submarine anchoring	✓	✓	✓	✓	✓	✓
Offshore oil and gas	✓	✓	✓	✓	✓	✓
Offshore mining	✓	✓	✓	✓	✓	✓
Offshore power generation	✓	✓	✓	✓	✓	✓
Offshore aquaculture	✓	✓	✓	✓	✓	✓
Offshore processing	✓	✓	✓	✓	✓	✓
Offshore storage	✓	✓	✓	✓	✓	✓
Offshore disposal	✓	✓	✓	✓	✓	✓
Offshore infrastructure	✓	✓	✓	✓	✓	✓
Offshore operations	✓	✓	✓	✓	✓	✓
Offshore maintenance	✓	✓	✓	✓	✓	✓
Offshore decommissioning	✓	✓	✓	✓	✓	✓
Offshore disposal	✓	✓	✓	✓	✓	✓
Offshore storage	✓	✓	✓	✓	✓	✓
Offshore processing	✓	✓	✓	✓	✓	✓
Offshore aquaculture	✓	✓	✓	✓	✓	✓
Offshore power generation	✓	✓	✓	✓	✓	✓
Offshore mining	✓	✓	✓	✓	✓	✓
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Offshore processing	✓	✓	✓	✓	✓	✓
Offshore storage	✓	✓	✓	✓	✓	✓
Offshore disposal	✓	✓	✓	✓	✓	✓
Offshore infrastructure	✓	✓	✓	✓	✓	✓
Offshore operations	✓	✓	✓	✓	✓	✓
Offshore maintenance	✓	✓	✓	✓	✓	✓
Offshore decommissioning	✓	✓	✓	✓	✓	✓

The objective of the RAP was to increase the protection of biodiversity within the GBRMP through increasing the extent of no-take areas (locally known as Green Zones) and to:

- maintain biological diversity of the ecosystem, habitat, species, population and genetic diversity;
- allow species to evolve and function undisturbed;
- provide an ecological safety margin against human-induced disasters;
- provide a solid ecological base from which threatened species or habitats can recover or repair themselves; and
- maintain ecological processes and systems.



11 Revised Zoning Plan

November 2003



9 Draft Zoning Plan

June 2003

10 Community Participation Phase 2
21 000 public submissions
June - Aug. 2003

8

Identify zoning options

13 Revised Zoning Plan submitted to Parliament
December 2003

12 Regulatory Impact Statement

14 New Zoning Plan in effect mid 2004

Phases of RAP

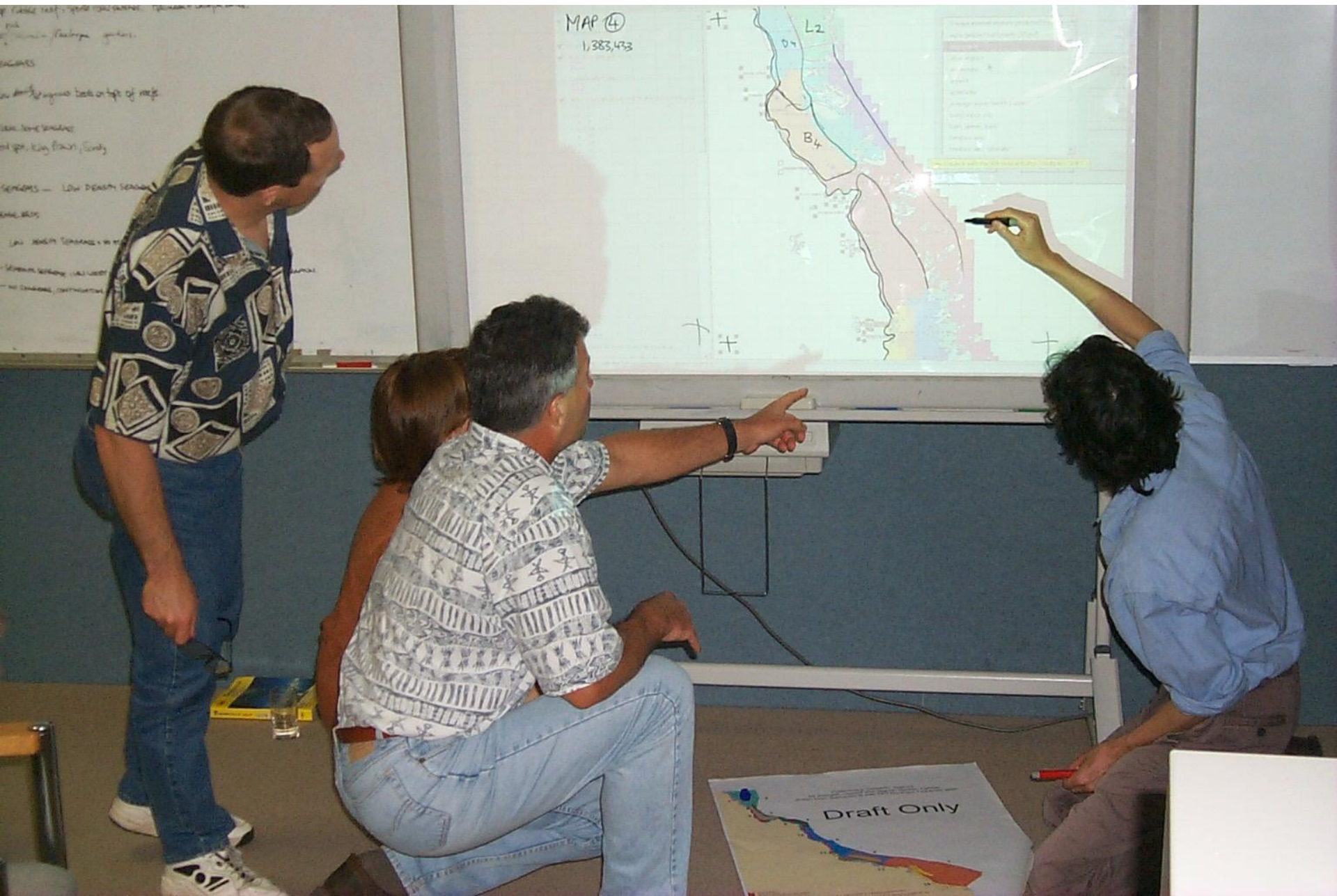
- Classification (*map biodiversity*)
- Review existing protection
 - Informal consultation with user groups
 - Formal Community Participation Phase 1
- Identification (*of possible network options*)
- Selection (*of most acceptable network*)
- Draft zoning plan
 - Formal Community Participation Phase 2
- Revision of draft based on submissions
- Ministerial & parliamentary approval

Used the best available scientific knowledge

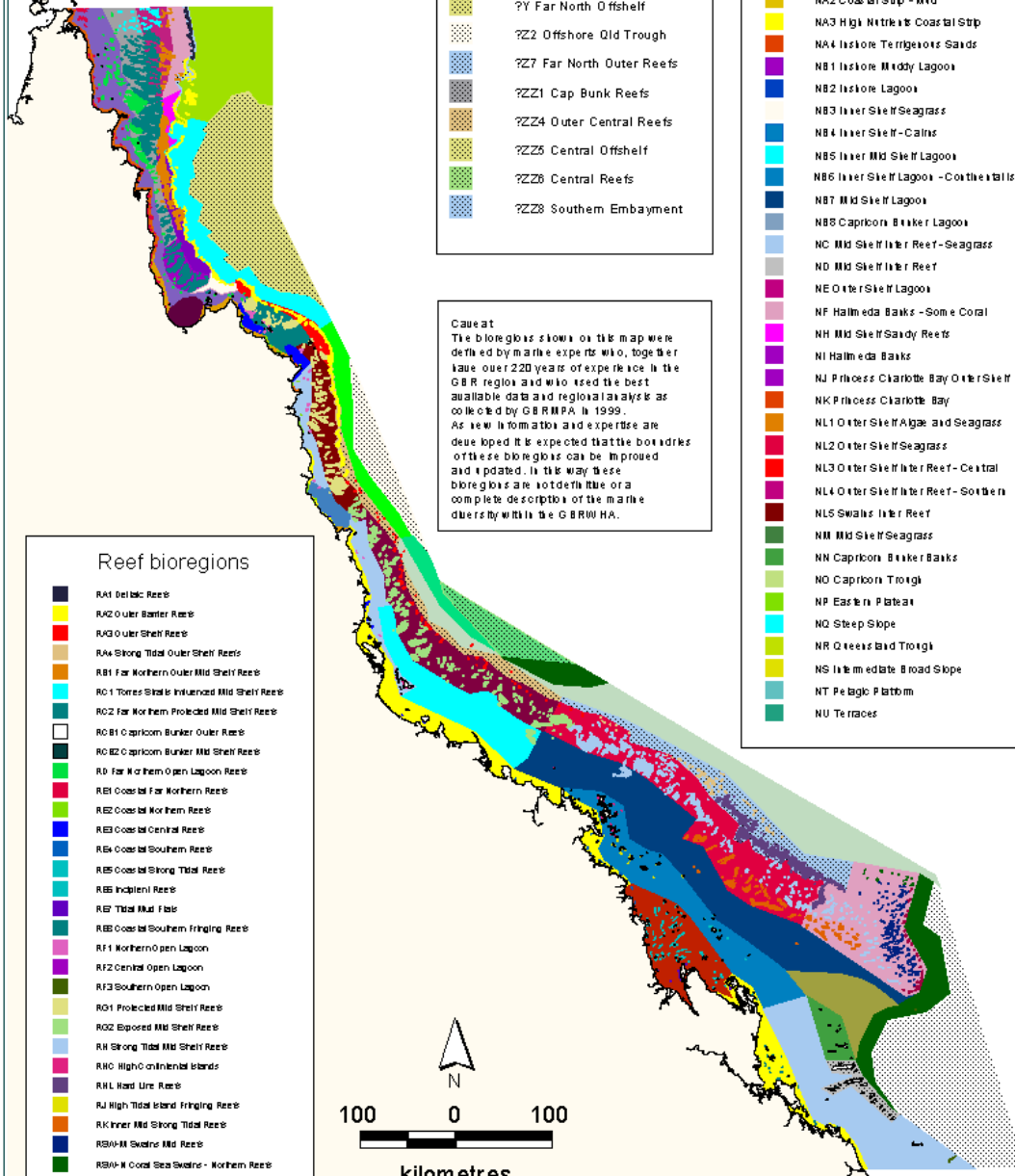
Independent scientific experts:

- Evaluated all available scientific information about the Great Barrier Reef
- Applied ~ 40 biological & biophysical datasets to map 70 different habitat types (= '*bioregions*')
- Determined minimum levels of protection necessary to protect the GBR (*eg. a minimum of 20% per bioregion*)
- Confirmed the value of no-take areas (= *green zones*) in protecting important habitats.

Expert workshops to develop bioregions



Reef and Non Reef Bioregions in the Great Barrier Reef World Heritage Area



Insufficient information to determine bioregion type

- ?? Far North Offshelf
- ??2 Offshore Qld Trough
- ??7 Far North Outer Reefs
- ??Z1 Cap Bunk Reefs
- ??Z4 Outer Central Reefs
- ??Z5 Central Offshelf
- ??Z6 Central Reefs
- ??Z8 Southern Embayment

Caution
The bioregions shown on this map were defined by marine experts who, together have over 220 years of experience in the GBR region and who used the best available data and regional analysis as collected by GBRMPA in 1999. As new information and expertise are developed it is expected that the boundaries of these bioregions can be improved and updated. In this way these bioregions are not definitive or a complete description of the marine diversity within the GBR WHA.

Non reef bioregions

- NA1 Coastal Strip - Coral Sand
- NA2 Coastal Strip - Mud
- NA3 High Northern Coastal Strip
- NA4 Inshore Terrigenous Sands
- NB1 Inshore Muddy Lagoons
- NB2 Inshore Lagoons
- NB3 Inner Shelf Seagrass
- NB4 Inner Shelf - Calms
- NB5 Inner Mid Shelf Lagoons
- NB6 Inner Shelf Lagoons - Continental Shelves
- NB7 Mid Shelf Lagoons
- NB8 Capricorn Bunker Lagoons
- NC Mid Shelf Inner Reef - Seagrass
- ND Mid Shelf Inner Reef
- NE Outer Shelf Lagoons
- NF Halimeda Banks - Some Coral
- NH Mid Shelf Sandy Reefs
- NI Halimeda Banks
- NJ Princess Charlotte Bay Outer Shelf
- NK Princess Charlotte Bay
- NL1 Outer Shelf Algae and Seagrass
- NL2 Outer Shelf Seagrass
- NL3 Outer Shelf Inner Reef - Central
- NL4 Outer Shelf Inner Reef - Southern
- NL5 Swains Inner Reef
- NN Mid Shelf Seagrass
- NN Capricorn Bunker Banks
- NO Capricorn Trough
- NP Eastern Plateau
- NQ Steep Slope
- NR Outer Shelf Trough
- NS Intermediate Broad Slope
- NT Pelagic Platform
- NU Terraces

Reef bioregions

- RA1 Relict Reefs
- RA2 Outer Barrier Reefs
- RA3 Outer Shelf Reefs
- RA4 Strong Tidal Outer Shelf Reefs
- RB1 Far Northern Outer Mid Shelf Reefs
- RC1 Torres Strait Influenced Mid Shelf Reefs
- RC2 Far Northern Protected Mid Shelf Reefs
- RCB1 Capricorn Bunker Outer Reefs
- RCB2 Capricorn Bunker Mid Shelf Reefs
- RD Far Northern Open Lagoon Reefs
- RE1 Coastal Far Northern Reefs
- RE2 Coastal Northern Reefs
- RE3 Coastal Central Reefs
- RE4 Coastal Southern Reefs
- RE5 Coastal Strong Tidal Reefs
- RE6 Inland Reefs
- RE7 Tidal Mud Flats
- RE8 Coastal Southern Infringing Reefs
- RF1 Northern Open Lagoon
- RF2 Central Open Lagoon
- RF3 Southern Open Lagoon
- RG1 Protected Mid Shelf Reefs
- RG2 Exposed Mid Shelf Reefs
- RH Strong Tidal Mid Shelf Reefs
- RIG High Continental Islands
- RIL Reef Line Reefs
- RJ High Tidal Island Infringing Reefs
- RK Inner Mid Strong Tidal Reefs
- RSW-M Swains Mid Reefs
- RSW-N Coral Sea Swains - Northern Reefs

Experts identified bioregions:

- 30 Reef
- 40 Non-Reef

Total - 70 bioregions

Planning 'principles' for new 'no-take' network

ELEVEN Biophysical Operating Principles

- minimum size
- replication
- minimum of at least 20% no-take per bioregion
- consider connectivity cross-shelf & latitudinal diversity
- incorporate examples of all community types & physical environments
- consider special & unique sites/ locations

Planning 'principles' for new 'no-take' network

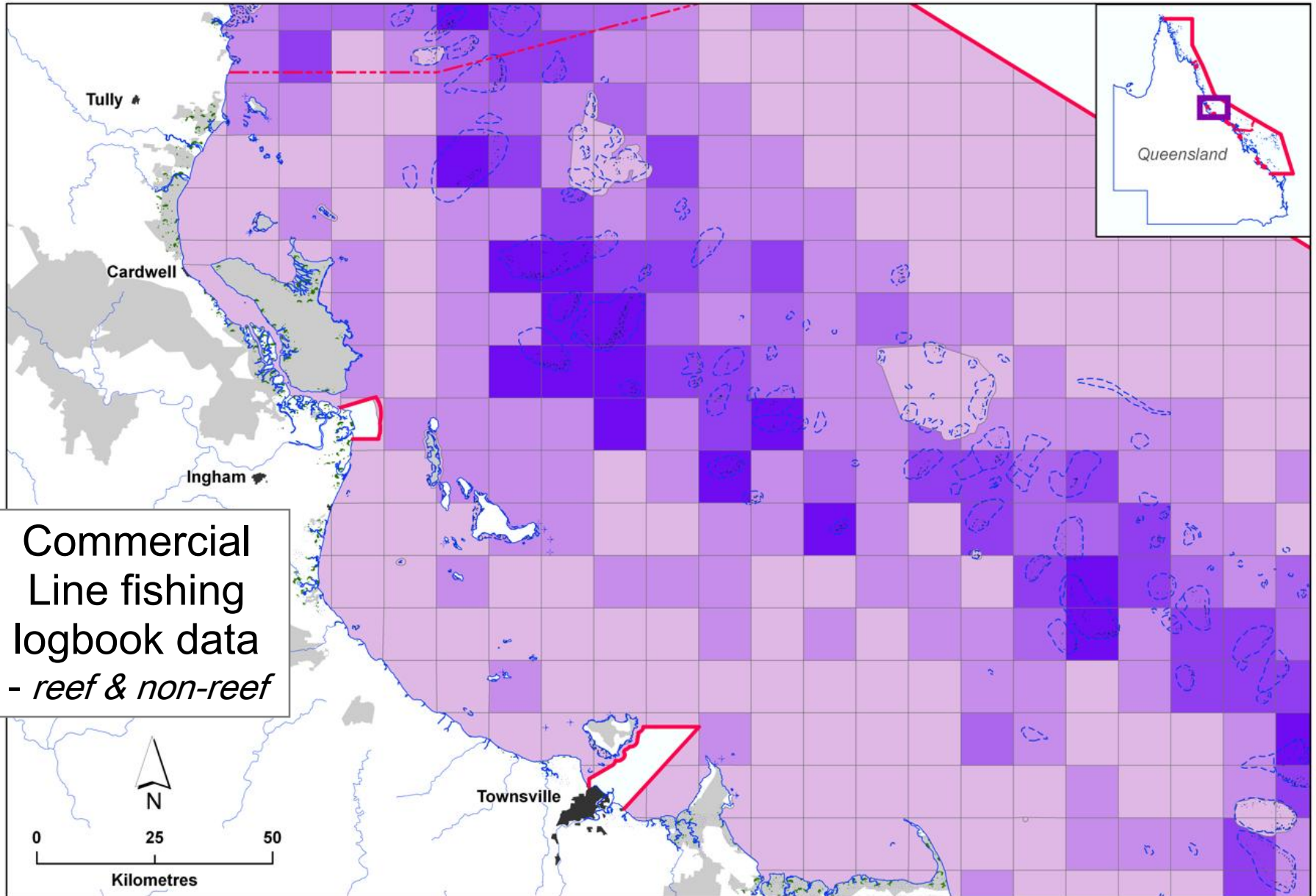
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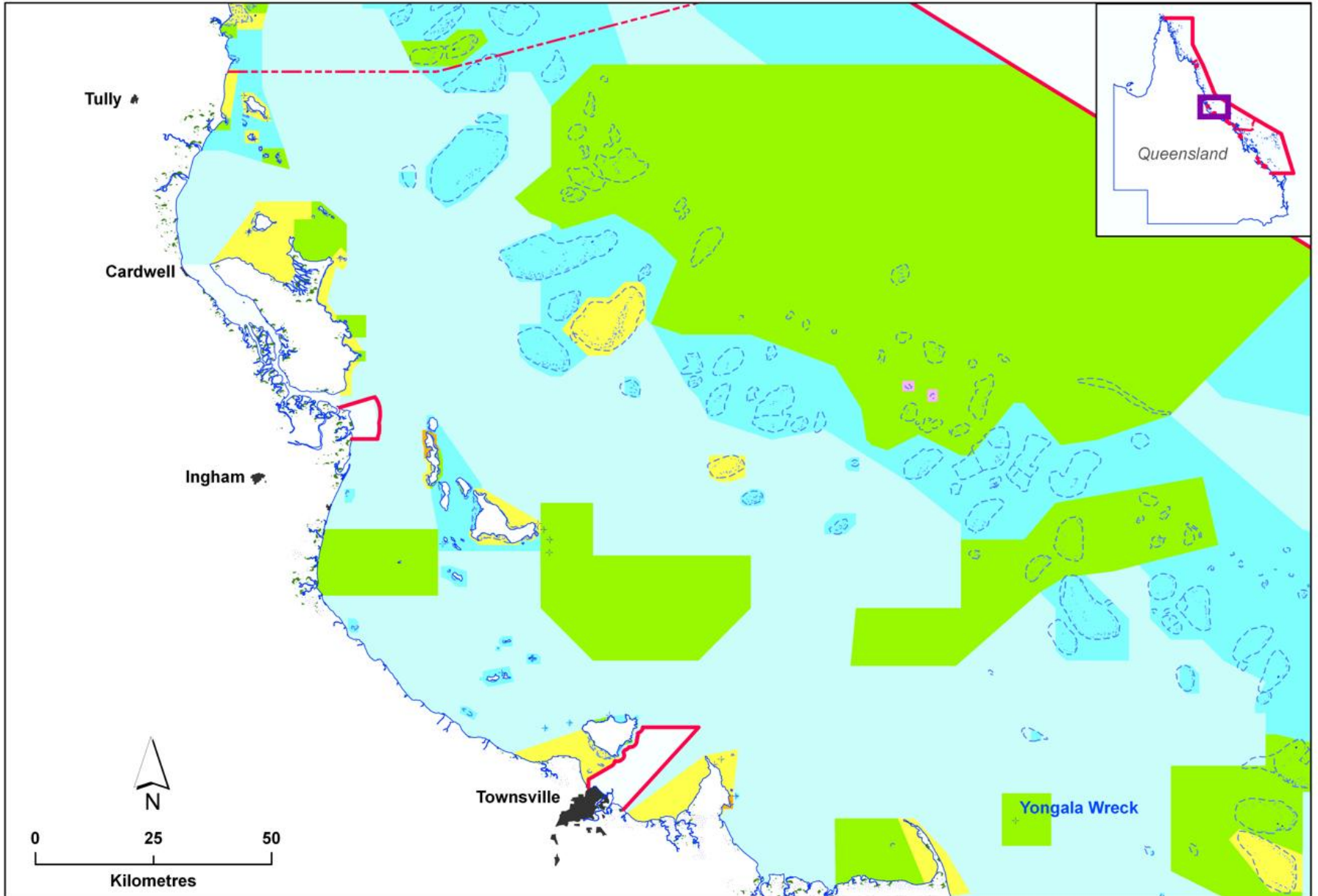
FOUR Social-Economic & Management Principles

- maximise complementarity with adjacent land/sea
- recognise social benefits and costs
- complement existing management
- maximise public understanding & enforceability

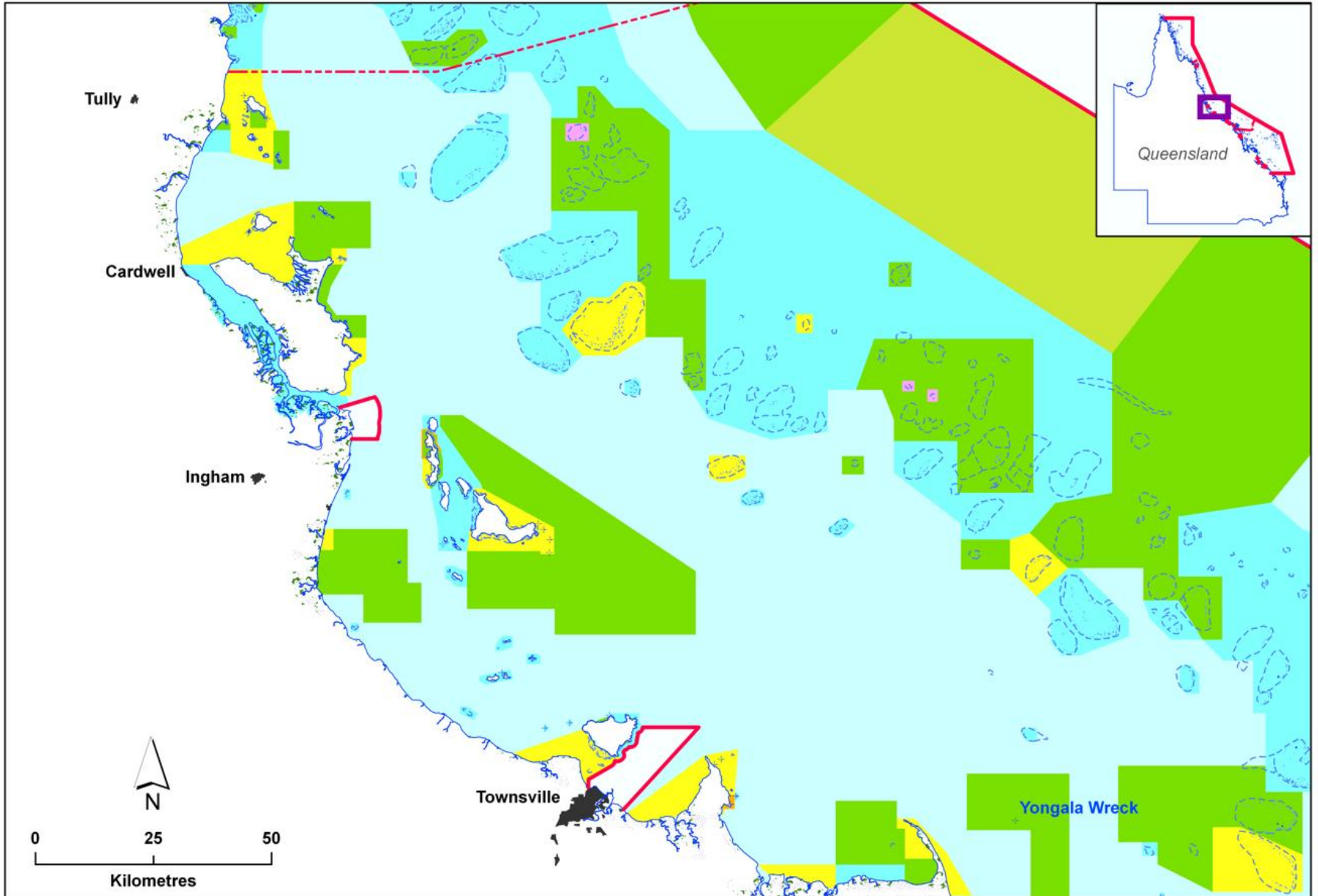
Social-economic datasets *eg. commercial fishing – grid data*



Draft Zoning Plan – mid 2003



Revised & final Zoning Plan 2004

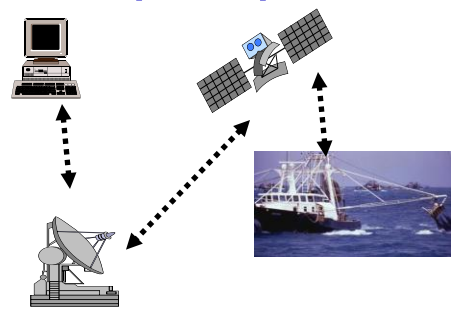


Zoning changes during RAP

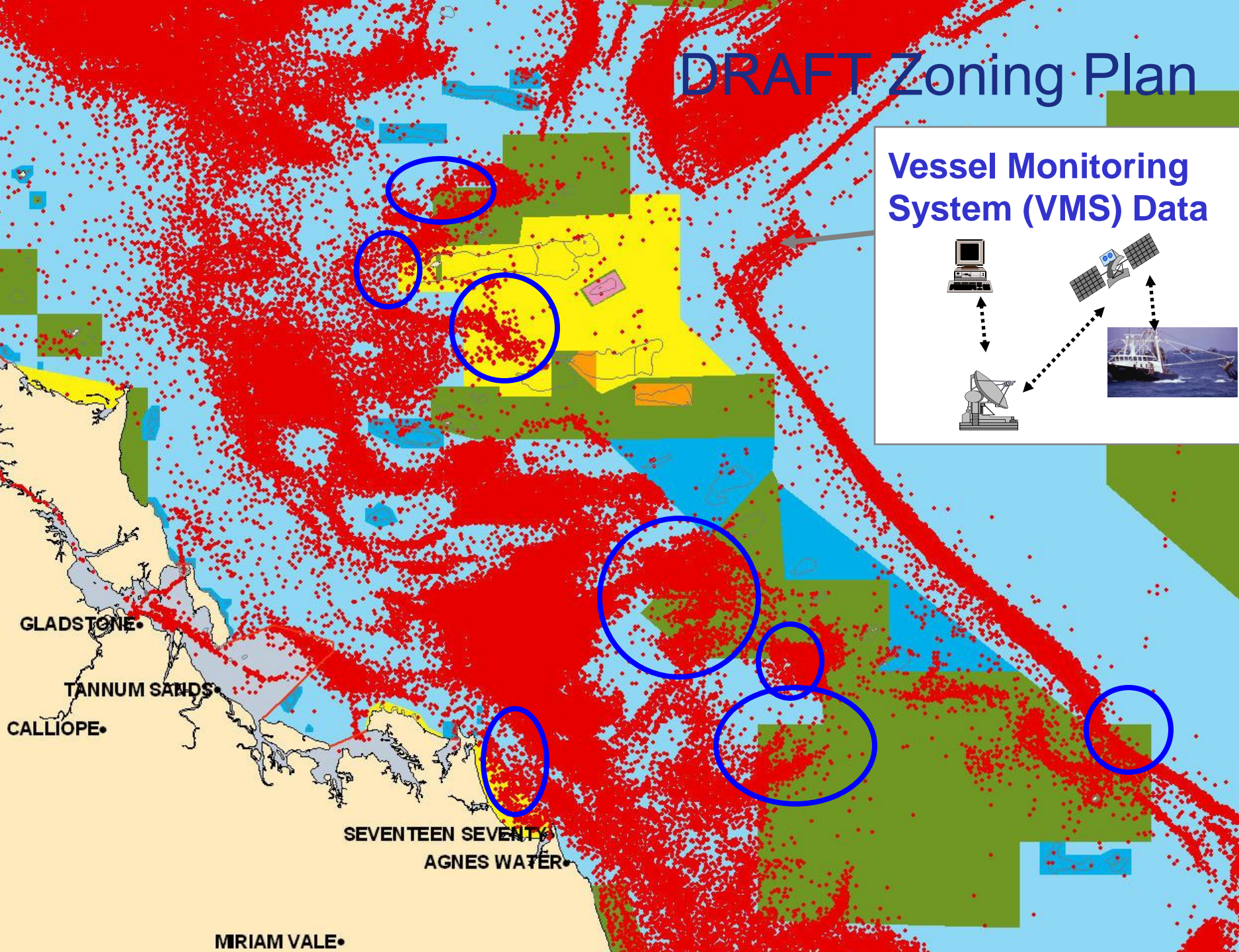
- Major changes did occur between:
 - Pre RAP zoning – *based on 10,000 public submissions*
 - The Draft Zoning Plan – *21,000 public submissions*
 - The revised Zoning Plan
- Changes were a result of the public submissions and the receipt of improved planning information during the planning process
- However... throughout RAP we maintained our key planning principles (*eg minimum of 20% per bioregion*)

DRAFT Zoning Plan

Vessel Monitoring System (VMS) Data

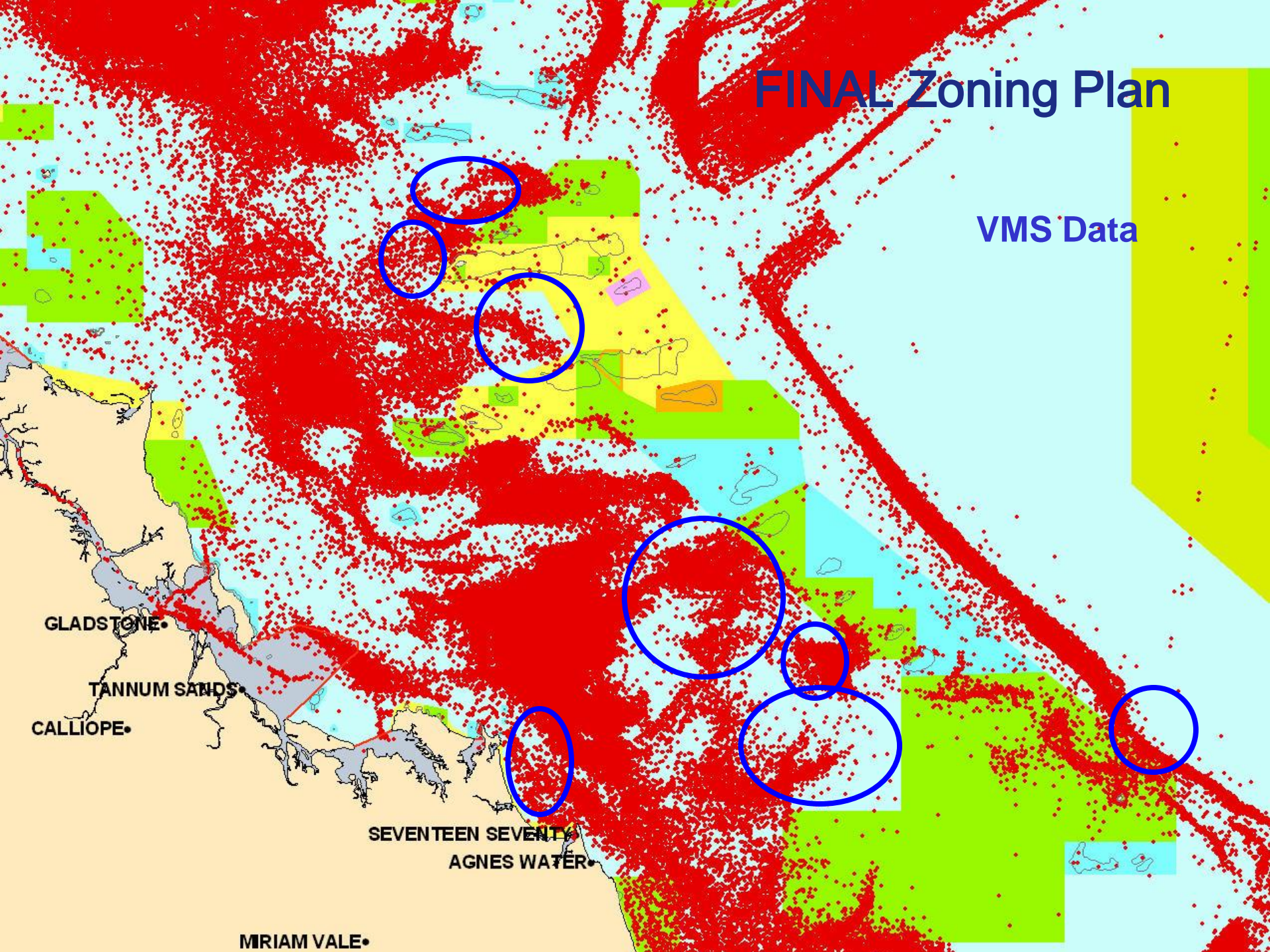


The diagram illustrates the Vessel Monitoring System (VMS) data flow. It shows a satellite in orbit receiving data from a vessel at sea and transmitting it to a ground station (antenna). The ground station then processes the data on a computer. Dotted arrows indicate the flow of data between these components.



FINAL Zoning Plan

VMS Data



Outcomes of RAP / rezoning

- Increased protection of the entire Marine Park, providing framework for conservation & sustainable use of GBR.
- Over 33% (>115,000 sq km) in highly protected 'no-take' zones.
- Creation of a new network of 'no-take' zones representative of all 70 bioregions (*at least 20% of every bioregion is now no-take*)
- Wide recognition of the planning process and the outcome as 'best practice'.

The main factors for the success of the rezoning?

The successful rezoning outcome relied heavily on:

- Using best available science knowledge
 - High level of public participation;
 - Effective leadership; and
 - Consequent socio-political support.
-
- All four aspects were essential, but the importance of the latter three cannot be emphasised enough.

Other key factors for the successful RAP outcome

- multi-disciplinary planning team
- good teamwork
- able to demonstrate that the best available socio-economic knowledge was applied
- effective public education/awareness
- compromise; and
- hard work!

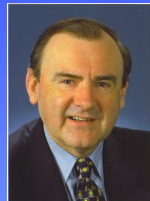
Questions of clarification?

Outline of talk

- Introduction; overview of Great Barrier Reef including integrated management approach
- Comparison of Great Barrier Reef and Baltic; importance of GBR for Australia; Australia's Oceans policy
- Overview of the Representative Areas Program

Short break

- **Community engagement; role of sectors**
- Political aspects of rezoning; other Australian marine planning programs
- Implementation of the rezoning; outcomes



Role of public participation

- One of the most comprehensive processes of community involvement & participatory planning for any environmental issue in Australia's history
 - Ongoing informal public consultation throughout
 - > 1,000 formal & informal meetings
 - Received written public submissions in two formal phases
 - Consultation provided information and political support



Written public submissions received for RAP

	<u>1st phase</u> <i>(May-Aug 2002)</i>	<u>2nd phase</u> <i>(June-Aug 2003)</i>
Queensland	6,725	16,050
NSW	1,357	1,371
Victoria	1,320	683
South Australia	288	185
Western Australia	259	324
Tasmania	96	66
Northern Territory	26	33
ACT	16	20
International	92	170
	-----	-----
TOTAL	10,190	21,300

Submission Form

Representative Areas Program - Draft Zoning Plan

To complete questions 1 and 2, you will need to consult the Draft Zoning Plan Maps. Maps are available at www.gbrmpa.gov.au or can be viewed at most local council offices or libraries.

1. While the Draft Zoning Plan has been created using input from a wide range of recreational and commercial users, scientists, councils, community groups etc, there may still be areas where you could recommend changes to the Plan. Have a look at the map for your area of interest and identify any specific locations on which you d like to comment. Most of the features marked on the maps have a unique identifier e.g. Cape Keppel on Curtis Island is CP-23-059b. Using these identifiers and the feature name please fill in the following table. Then tell us what CHANGES you would like made to these sites and why you believe such changes are necessary. You can repeat this process for as many locations as you like, attaching additional pages if you need to.

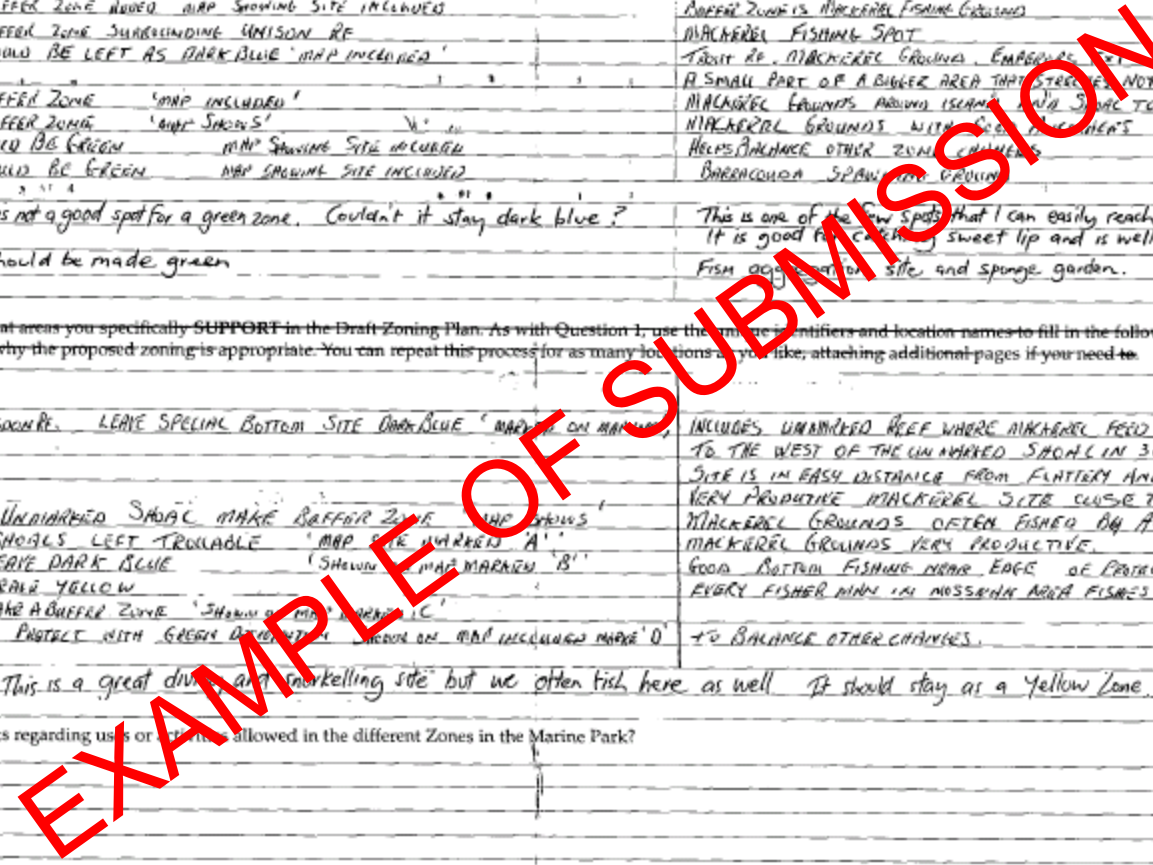
YOUR ZONE HERE	ZONE ID number	Name of feature (eg. reef or shoal) of interest	Changes that you would like to see made to specific sites in the Draft Zoning Plan	Reasons why you would like to see these changes made to the Draft Zoning Plan
	MNP13-40	COBBET REEF	BUFFER ZONE ADDED 'MAP SHOWING SITE INCLUDED' CHANGE IN BOUNDARY SHAPE	BUFFER ZONE IS MACKEREL FISHING GROUND CHANGE IN BOUNDARY MARKS NAVIGATION EASIER
	"	CLACK REEF	BUFFER ZONE ADDED MAP SHOWING SITE INCLUDED	BUFFER ZONE IS MACKEREL FISHING GROUND
	MNP13-42	UNISON REEF	BUFFER ZONE SURROUNDING UNISON REEF	MACKEREL FISHING SPOT
	"	14-056 REEF	SHOULD BE LEFT AS DARK BLUE 'MAP INCLUDED'	TROUT REEF, MACKEREL GROUND, EMPEROR FISH VERY ATTRACTIVE SITE THAT IS ONLY A SMALL PART OF A BIGGER AREA THAT STRETCHES NORTH AND WEST NOW FULLY PROTECTED
	MNP14-65	NYMPH ISLAND	BUFFER ZONE 'MAP INCLUDED'	MACKEREL GROUND'S AROUND ISLAND VIA SHOALS TO SOUTH EAST.
	"	LIZARD ISLAND	BUFFER ZONE 'MAP SHOWS'	MACKEREL GROUND'S WITH GREAT FISHERS HELPS BALANCE OTHER ZONE CHANGES
	PROPOSED	SHARK REEF	COULD BE GREEN 'MAP SHOWING SITE INCLUDED'	BARRACUDA SPAWNING GROUND
	PROPOSED	KING IS SITE	COULD BE GREEN 'MAP SHOWING SITE INCLUDED'	
EXAMPLE	MNP13-11	ABC REEF	This not a good spot for a green zone. Couldn't it stay dark blue?	This is one of the few spots that I can easily reach in my boat. It is good for catching sweet lip and is well protected.
EXAMPLE		20 km East of EFG Headland	Should be made green	FISH aggregation site, and sponge garden.

2. It is also important to let us know what areas you specifically SUPPORT in the Draft Zoning Plan. As with Question 1, use the unique identifiers and location names to fill in the following table. Please tell us why these sites are important to you and why the proposed zoning is appropriate. You can repeat this process for as many locations as you like, attaching additional pages if you need to.

YOUR ZONE HERE	ZONE ID number	Name of feature (eg. reef or shoal) of interest	Changes that you would like to see made to specific sites in the Draft Zoning Plan	Reasons why you would like to see these changes made to the Draft Zoning Plan
	MNP14-49	UN MARKED REEF WEST OF HELSOON REEF	LEAVE SPECIAL BOTTOM SITE DARK BLUE 'MAP ON MAP'	INCLUDES UNMARKED REEF WHERE MACKEREL FEED + EMPEROR-NANNY SPIKES TO THE WEST OF THE UNMARKED SHOAL IN 30 METERS OF WATER. THIS SITE IS IN EASY DISTANCE FROM FLATTERY ANCHORAGE.
	MNP14-49	ANA BANK		VERY PRODUCTIVE MACKEREL SITE CLOSE TO GOOD ANCHORAGE.
	MNP14-49	EAST OF BEDFORD CAVE	UNMARKED SHOAL MAKE BUFFER ZONE 'MAP SHOWS'	MACKEREL GROUND'S OFTEN FISHED BY ALLIANCE SUNDRIE.
	MNP15182	EAST OF FRODOUR REEF	SHOALS LEFT TROUBLE 'MAP FOR MARKEN A'	MACKEREL GROUND'S VERY PRODUCTIVE.
	MNP15182	WEST OF PAPUNUM PASS	LEAVE DARK BLUE 'SHOWING MAP MARKEN B'	GOOD BOTTOM FISHING NEAR EDGE OF PROTECTED ZONE EASILY INCORPORATED EVERY FISHER MAN IN MASSIVE AREA FISHES HERE CLOSE AT YOUR FEET.
	MNP15184	NORTH AT SANDER ISLAND	LEAVE YELLOW	
	PROPOSED	EAST OF CHURNS REEF	MAKE A BUFFER ZONE 'SHOWING MAP MARKEN C'	
	PROPOSED	SOUTH EAST OF CHURNS REEF	PROTECT WITH GREEN ANCHORAGE 'SHOALS ON MAP INCLUDED MARK D'	TO BALANCE OTHER CHANGES.
EXAMPLE	CP16-200	KY2 REEF	This is a great diving and snorkelling site but we often fish here as well	It should stay as a Yellow Zone.

3. Do you have any additional comments regarding us or things allowed in the different Zones in the Marine Park?

NO! THANK YOU.



Some elements of success

1. Be clear about the problem
2. People needed to understand there was a problem before accepting a solution is required
3. Follow up on suggestions, submissions and advice
4. No successful campaign can be conducted from your office
5. Demonstrate decisions based on best available science and knowledge and be prepared to refute contrary claims
6. Actively engage the scientific community

Further elements of success ...

7. Work to obtain political support
8. Try to ensure known supporters are disciplined and unified
9. Find 'Champions'
10. Support can sometimes come from unlikely areas
11. Don't ignore those stakeholders who choose to remain silent
12. Commission polling to determine real level of support

Sound science and technical advice

- **Scientists publicly supported their advice**
 - Public letters of support
 - Special symposia
 - Media interviews
 - Briefing for members of Parliament
- **RAP was not about managing fisheries, but rather about protecting all biodiversity.**
- **Science in the community now imbedded at GBRMPA**

Polling

- Established extent of public awareness and support for change
- Contracted independent polling in regional centres; also some interstate capital cities
- Conducted over several years
- 70-80% support for greater protection

Champions

- Part of ‘Let’s keep it Great’ campaign
- Enlisted high profile and well regarded locals with a strong association with the GBR
 - Cathy Freeman
 - Popular fishing guide
 - Local basketball team
- Also WWF was a champion
- Roman Catholic church – an unexpected champion
- Marine tourism industry

Role of Queensland

- **Queensland responsible for:**
 - intertidal waters (HWM to LWM)
 - Other State waters (bays, inlets)
 - Ports
 - Most islands
- **Need for cooperative approach, especially during rezoning**
- **Head of Premier's Dept on Board; high level officers on GBR Consultative Committee**
- **Complementary zoning**

Key factors critical to our success?

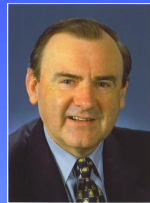
1. Restructure gave us expertise and focus
2. Communication campaigns
3. An ecosystem approach
4. Commitment to community participation
5. Response and follow through
6. Gaining political support....

Outline of talk

- Introduction; overview of Great Barrier Reef including integrated management approach
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Short break

- Community engagement; role of sectors
- **Political aspects of rezoning; other Australian marine planning programs**
- Implementation of the rezoning; outcomes



Political context

Rezoning – a complex process provoking political conflict; I needed to be convinced:

1. Difficulties apparent from recent Trawl Plan
2. Need for major new planning exercise needed to be demonstrated
3. High potential political costs if not successfully completed
4. Iconic nature of GBR meant it would be high profile – significant international interest

Comparison of political contexts

GBR

- Iconic area
- Politically savvy leadership in GBRMPA
- GBR largely subject to single authority (*with obligations to co-operate with Qld*)
- Developed a sound scientific basis for the rezoning
- Level of community engagement & awareness
- Negotiations around knowledge values were to be protected

SE Regional Marine Plan

- Less of an icon
- National Oceans Office - a bureaucratic agency
- NOO not responsible for the area; required complex inter-agency support
- SERMP did not have a clear basis for planning (eg. no established bioregionalisation)
- Little engagement of community in SERMP
- Negotiations with industry alone

Key lessons

1. **Support at highest levels needed**
 - Overcome agency disinterest
 - Control interest pressures
 - Secure planning environment
2. **Public support essential to manage political pressures**
3. **Consultation involving all major stakeholders must be genuine – up to last possible minute if necessary**

Key lessons *(cont)*

- 4. Clear principles/goals needed to manage pressures**
- 5. Environmental/ecosystem goals key basis**
- 6. Strong legislative framework to encourage agreements**
- 7. Industry adjustment dealt with early in process**

Structural adjustment issues

1. Important that affected interests have some certainty during the planning process
2. In the GBR these expectations were not clear, resulting in an expensive buy-out
3. Many lessons learnt – establish up front what will and will not be provided.

Importance of best available science

- Using best available science vital for political support (recognising science is never complete)
- Clear goals based on science (eg identify values to be protected)
- Recognise it is not about exact percentages

Review of marine planning (2005)

- **Significant achievements**
 - Consolidation of science
 - Awareness/communication
- **Lessons**
 - Need for stronger focus and legislative basis
 - Clear roles and clear rationale for planning

Models for integrated planning...

- **Single agency plus co-operative agreements (eg. GBRMPA)**
- **Central authority with powerful legislation to force intervention (eg. Federal Govt EPBC Act)**
- **Inter-governmental agreements/ co-operative management**
- **Area Commission coordinating sovereign States (eg. Permanent Commission for South Pacific)**

2006 Review of GBRMP Act

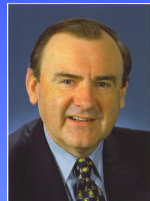
- **Two alternative stakeholder views:**
 - Highly supportive
 - Strong dissatisfaction
- **Greater transparency**
- **Clear communication of objectives and rationale**
- **Sufficient time for effective engagement**
- **Clear defensible basis and criteria for decision-making**
- **Led to amendments to legislation including requirement for 5 yearly 'Outlook Report'**

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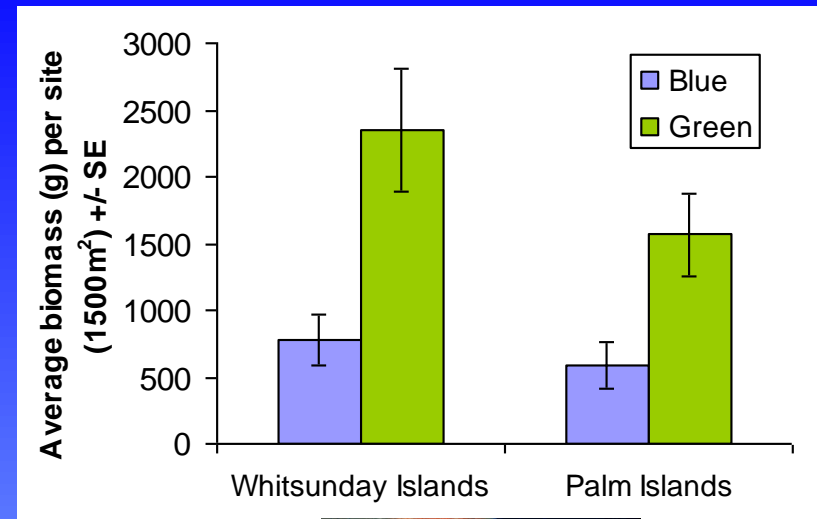
- Community engagement; role of sectors
- Political aspects of rezoning; other Australian marine planning programs
- **Implementation of the rezoning; outcomes**



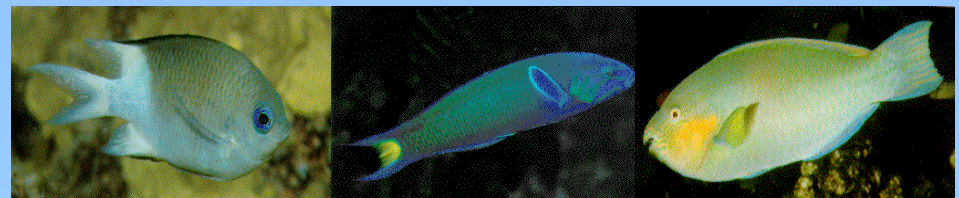
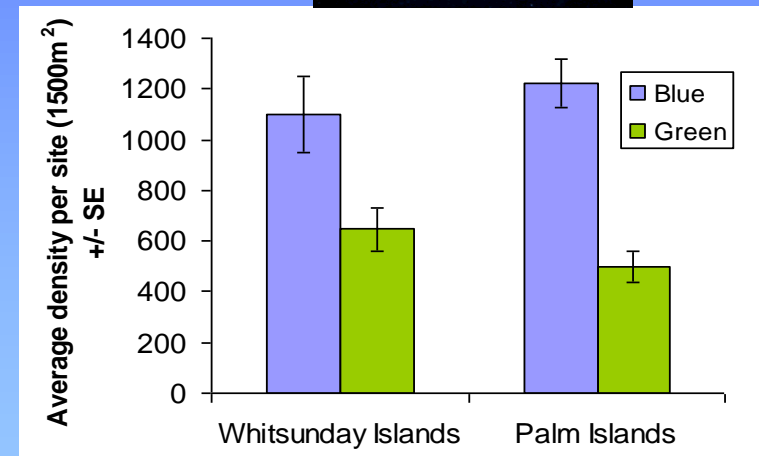
Key lessons learnt about role of science

1. Don't wait for 'perfect science' or data or you will never start.
2. The value of a robust regionalisation as a basis for planning *(note that experts alone will not develop a regionalisation useful for broad-scale planning eg. get 'hung up' trying to determine perfect bioregion boundaries)*.
3. A clear and transparent set of operating principles assists everyone.
4. The operating principles are not targets or 'ideal' amounts, and need to be considered collectively as 'a package'

- A 3-fold difference in trout biomass between zones (*top graphs*)



- A 2-fold difference in density of prey fish of coral trout (*bottom graphs*)

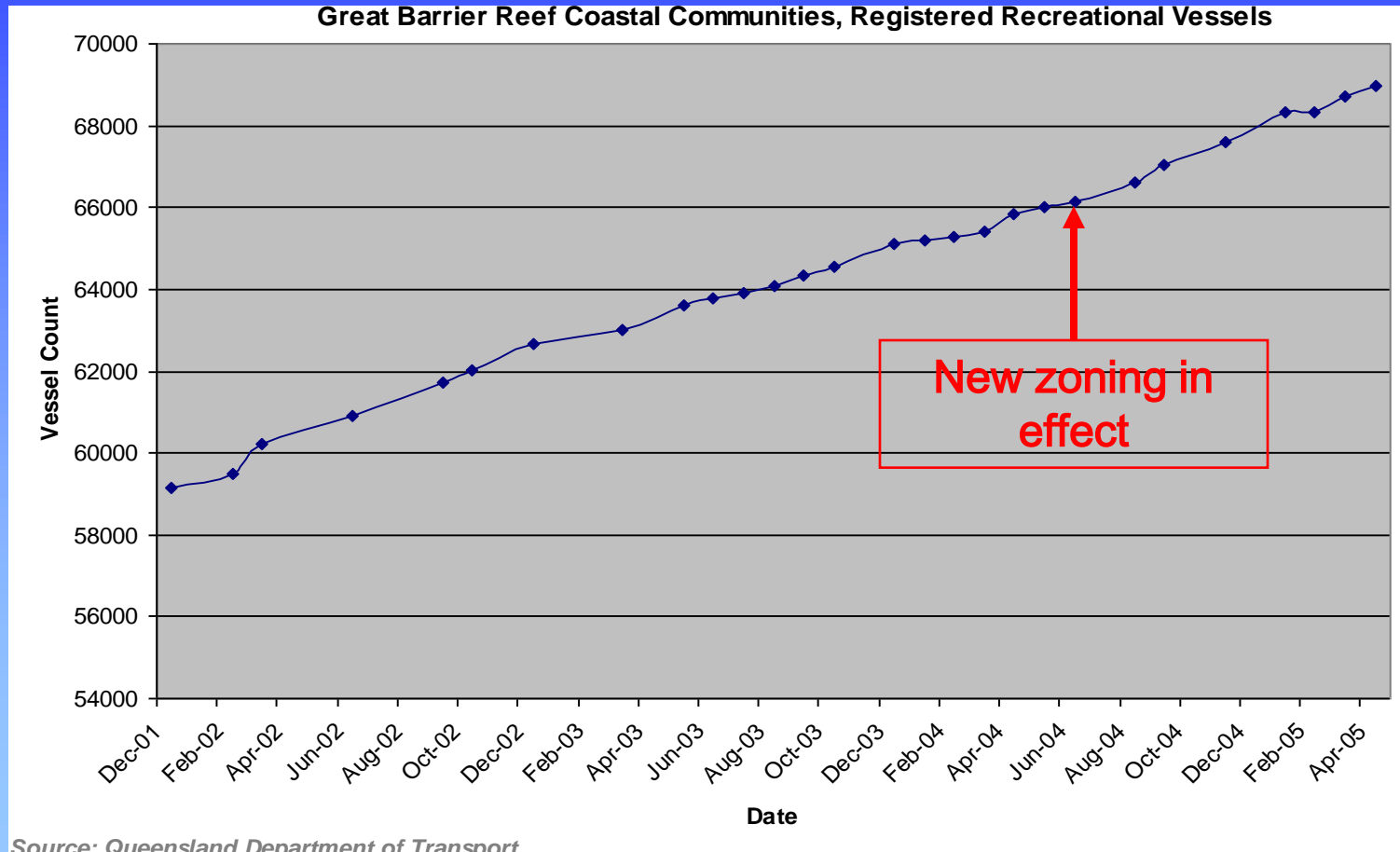


Crown of Thorns Starfish

- outbreaks less prevalent in new no-take zones

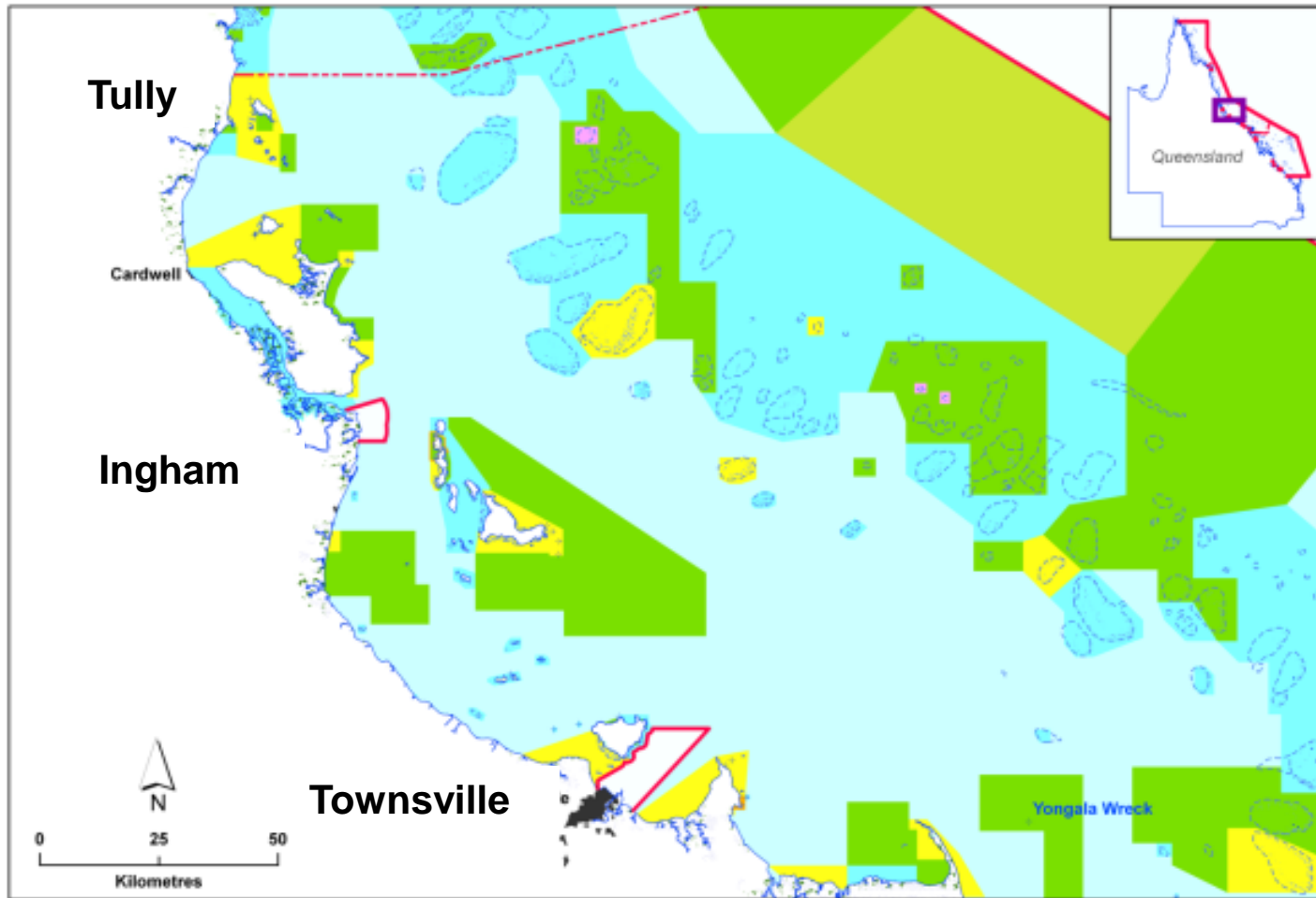


Monitoring – no. of recreational vessels (2001-2005)



Great Barrier Reef Coastal Communities refers to the twenty-six Local Government Areas from Bundaberg to Cape York that lie adjacent to the Great Barrier Reef Marine Park

Zoning Plan 2004



Biodiversity Protection

Tully #

‘Green’ zones protect examples of all habitat types

Card

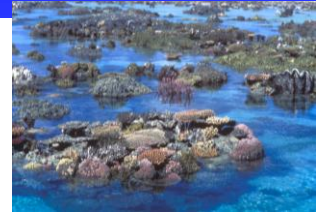
‘Pink’ Zones = examples of key habitats as undisturbed reference areas

All zones, other than ‘light blue’ zones, protect benthic habitat

Other management measures

- **Dugong Protection Areas**
- **Threatened Species Recovery Plans**
- **Mandatory use of Turtle Excluder Devices**
- **Bycatch Reduction Devices**

0 25 50
Kilometres



Management of fisheries

Main management measures

- Queensland Fisheries Management Plans and policies
- Seasonal closures
- Bag limits
- Size limits
- Gear restrictions

Zones also regulate where fishers, commercial or recreational, can or cannot fish

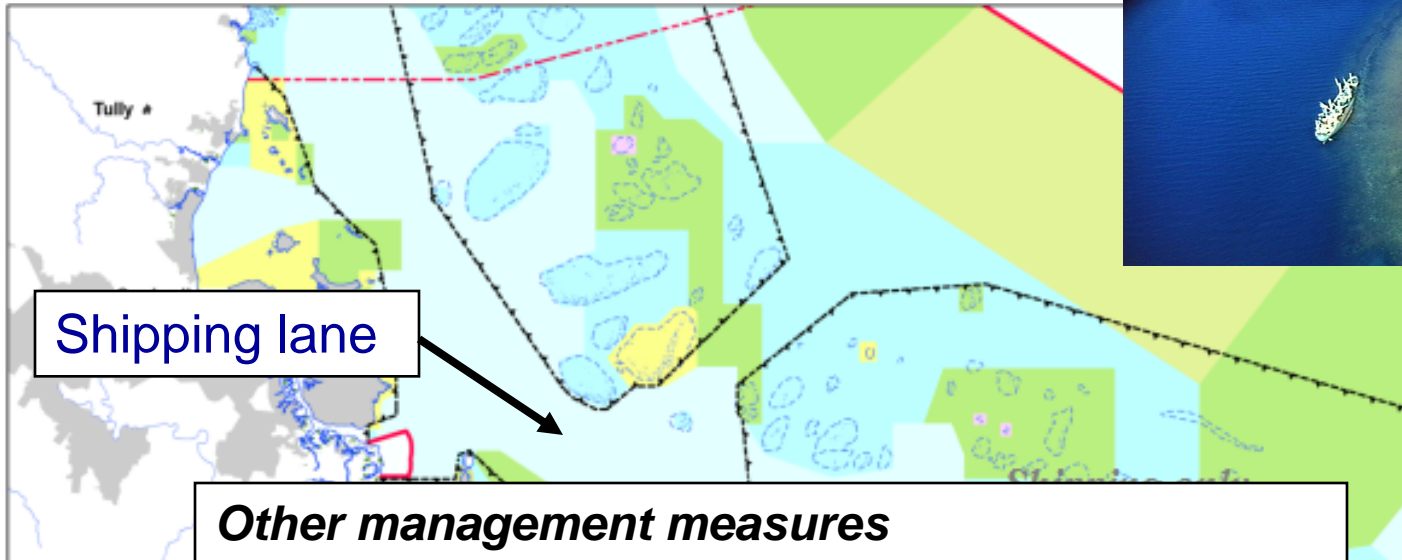
Zones define what types of fishing can occur in certain zones (e.g. trawling)

0

Kilometres



Management of shipping



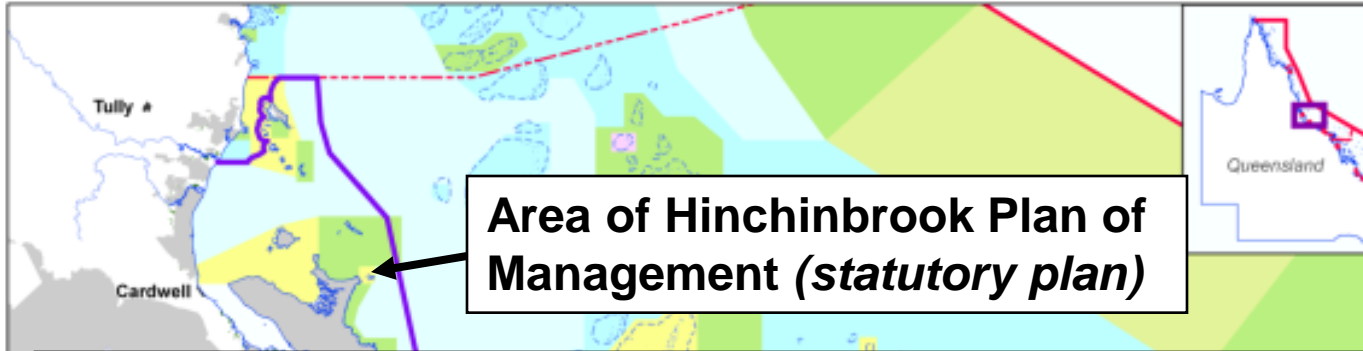
Shipping lane

Other management measures

- **Particularly Sensitive Sea Area (PSSA)**
- **Compulsory pilotage**
- **Mandatory ship reporting system (VTS)**
- **Cruise ship anchorages**

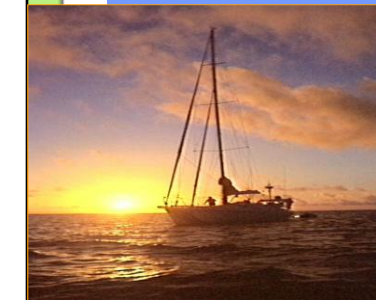


Tourism and recreation

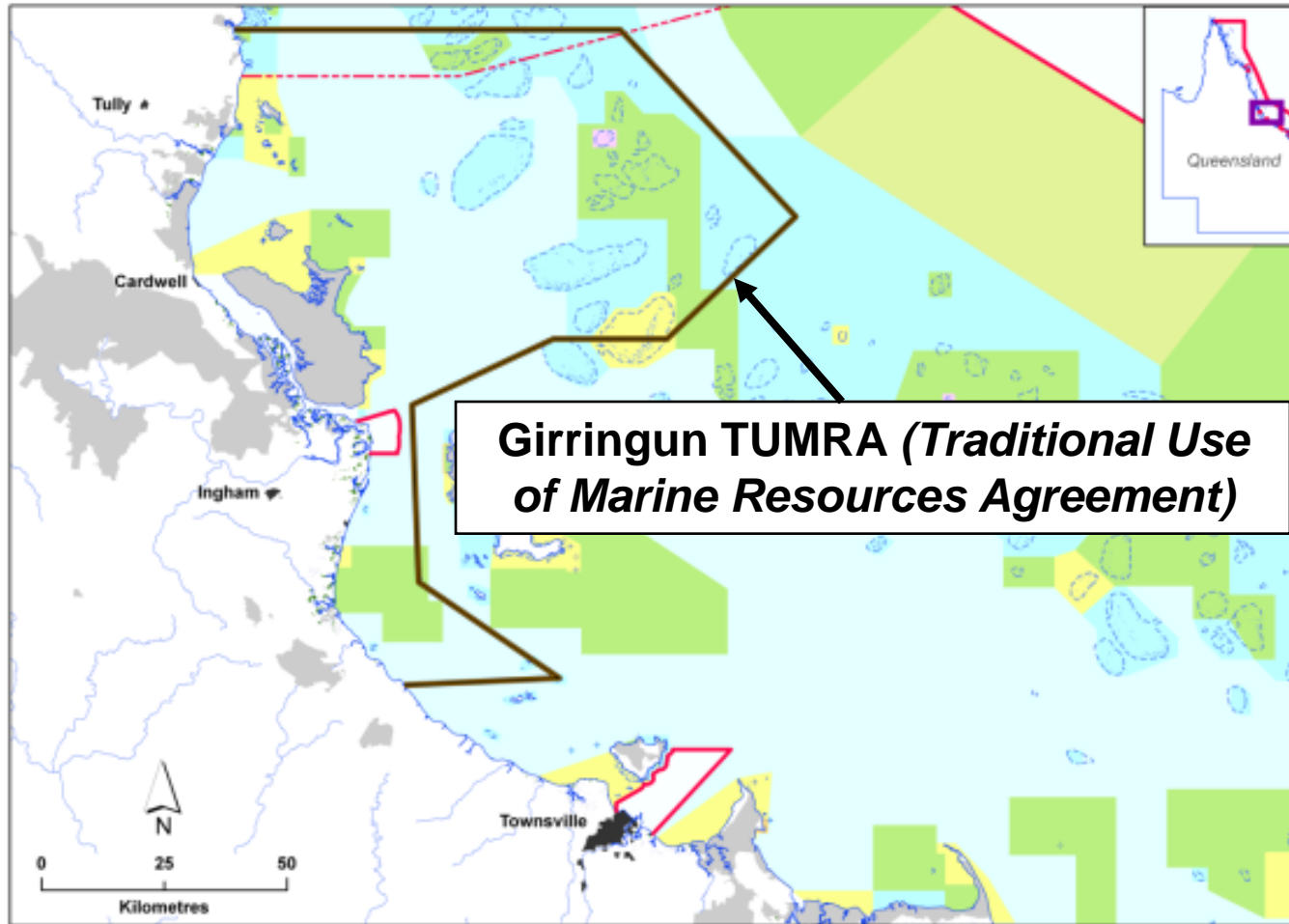


Other management measures

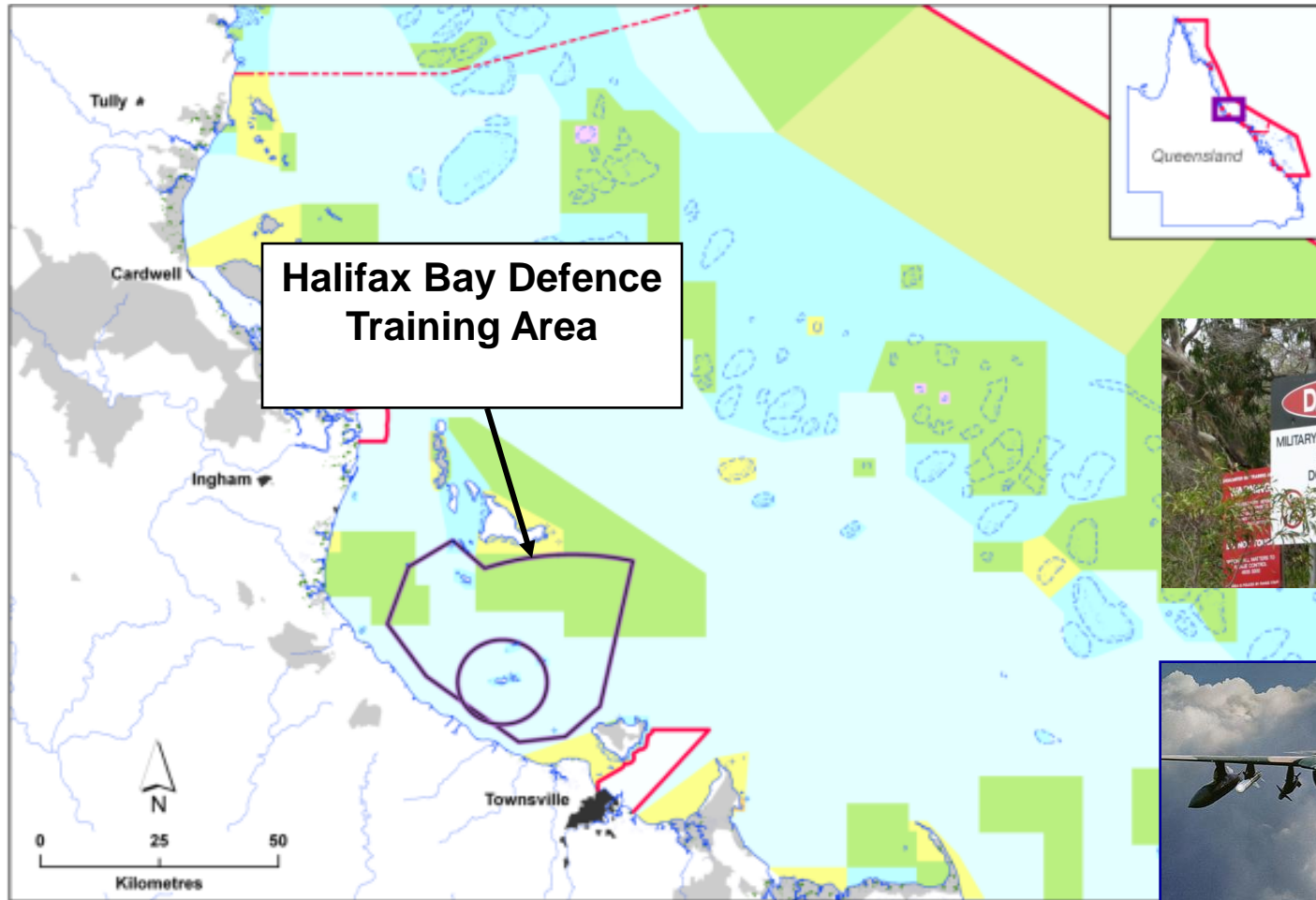
- Tourism permits (individually assessed and conditions applied)
- Policies and 'Best Practice' Guidelines
- Regulations (e.g. moorings and vessel-sourced sewage)
- Industry Codes of Practice
- Reef Protection markers and public moorings



Traditional use of marine resources



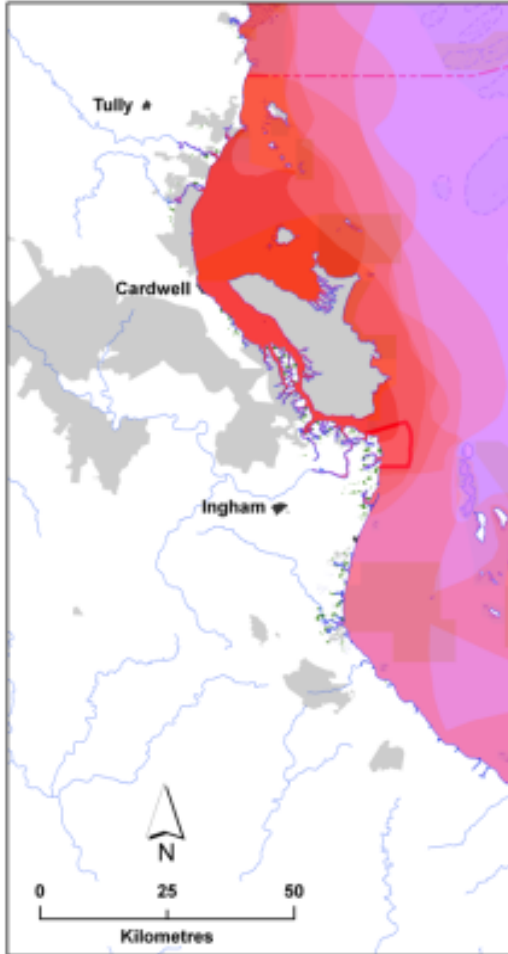
Defence activities



Halifax Bay Defence Training Area

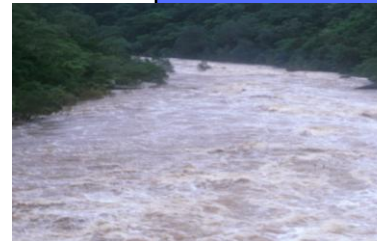


Water quality issues



Key management measures

- Reef Water Quality Protection Plan/Reef Rescue
- Regional Natural Resource Management Plans
- Water Quality Improvement Plans (WQIPs)
- Coastal and Local Government Plans
- Wastewater and sewage guidelines, policies, legislation and regulation
- Water Quality Guidelines



What is the Outlook Report?

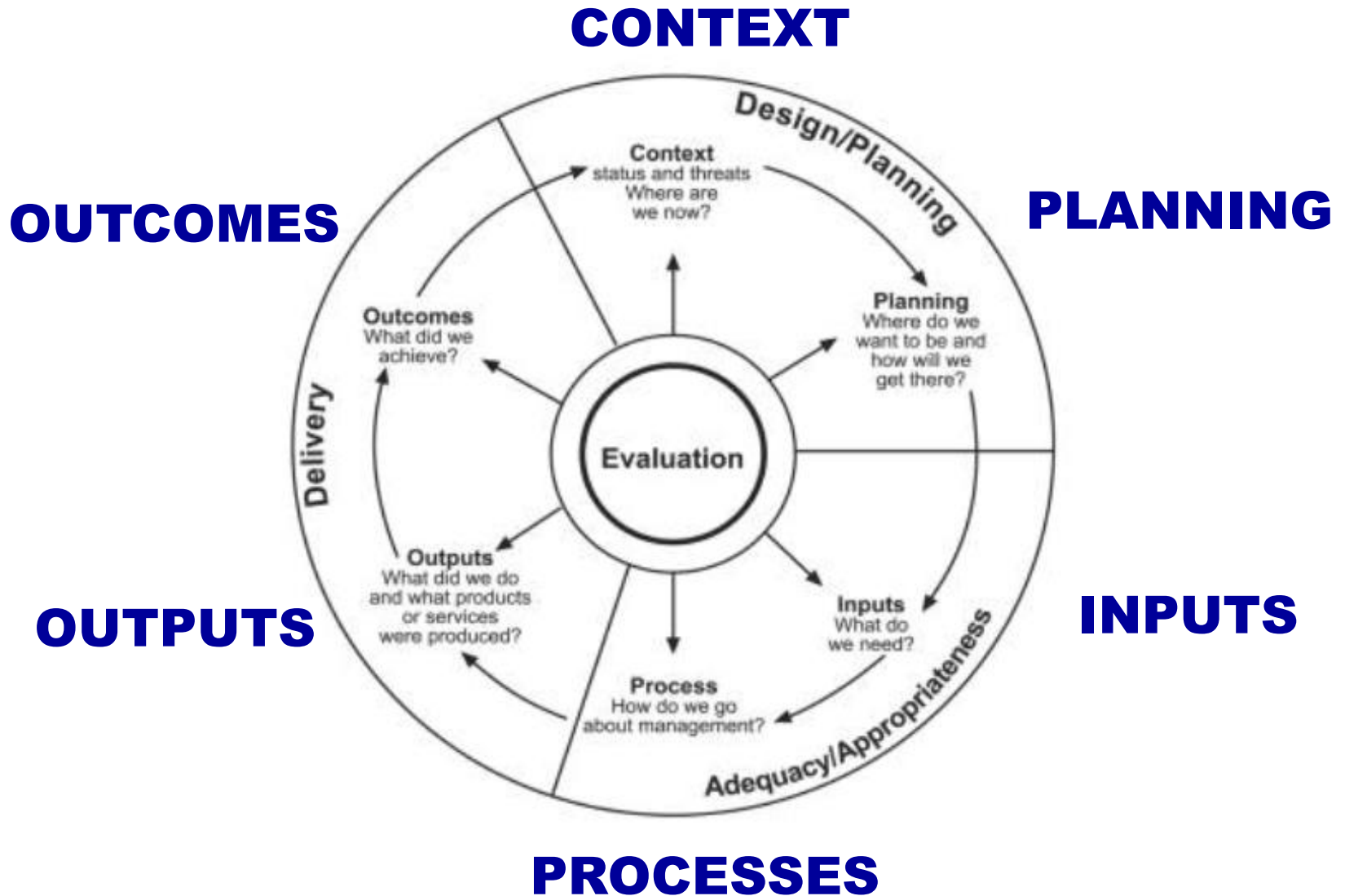
- Summary of:
 - Management and use of the Marine Park
 - Overall condition of ecosystem
 - Longer-term outlook
- A report to the Australian Parliament
- Every five years
 - First Outlook Report to Minister by 30 June 2009

Act requires...

The Outlook Report must contain 8 assessments:

- **Biodiversity**
- **Ecosystem health**
- **Ecosystem resilience**
- **Commercial and non-commercial use**
- **Factors influencing environmental, economic and social values (current & projected future)**
- **Management effectiveness**
- **Risks to the ecosystem**
- **Outlook for the Great Barrier Reef ecosystem**

Management Evaluation Cycle



Assessing management effectiveness

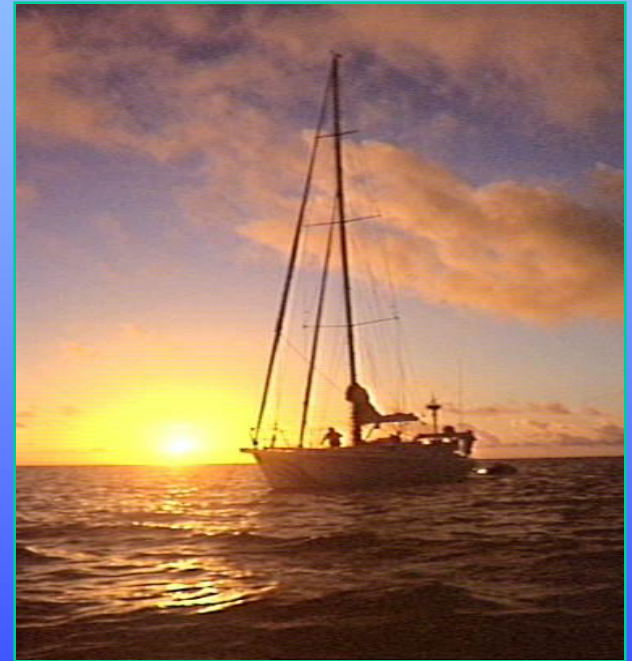
Context	Planning	Input	Process	Outputs	Outcomes
<p>What are the values?</p> <p>What are the risks/ threats?</p>	<p>Are the planning objectives clear and measurable ?</p> <p>Consistent across jurisdictions ?</p>	<p>Are current resources adequate?</p> <p>Is the necessary information currently available?</p>	<p>Are stakeholders / industry effectively engaged?</p> <p>Are national standards met?</p>	<p>Do the results accord with the planned work program?</p> <p>Has knowledge base increased?</p>	<p>Do the outputs ensure values are protected?</p> <p>Have outputs reduced the major risks and threats?</p>

Main reasons for effective management in the Great Barrier Reef

- political support
- a sound governance/legislative framework
- ecosystem-level management (EBM)... including management influence over a wider context than just the Federal Marine Park
- well developed/integrated management with all relevant Federal & State agencies
- widespread consensus that the GBR is important, with many industries depending upon its health
- effective research & monitoring programs, prioritised to provide information for management

Thank you

*Particular thanks to WWF Sweden,
Asa Andersson and
Vicki Lee Wallgren*



For more information:
www.gbrmpa.gov.au