

COASTAL LAW + CLIMATE CHANGE

lennox head 16 july 2011
environmental defender's office nsw northern rivers

today

- 9.30 Introduction
- 10 Planning + coastal laws + policies
- 11 Morning tea
- 11.15 Climate change + sea level rise
 - 11.30 Recent reforms
 - 12.30 Planned retreat
- 1 Lunch
- 1.30 Marine parks
- 2 Workshop: Ballina Island
- 3 Close

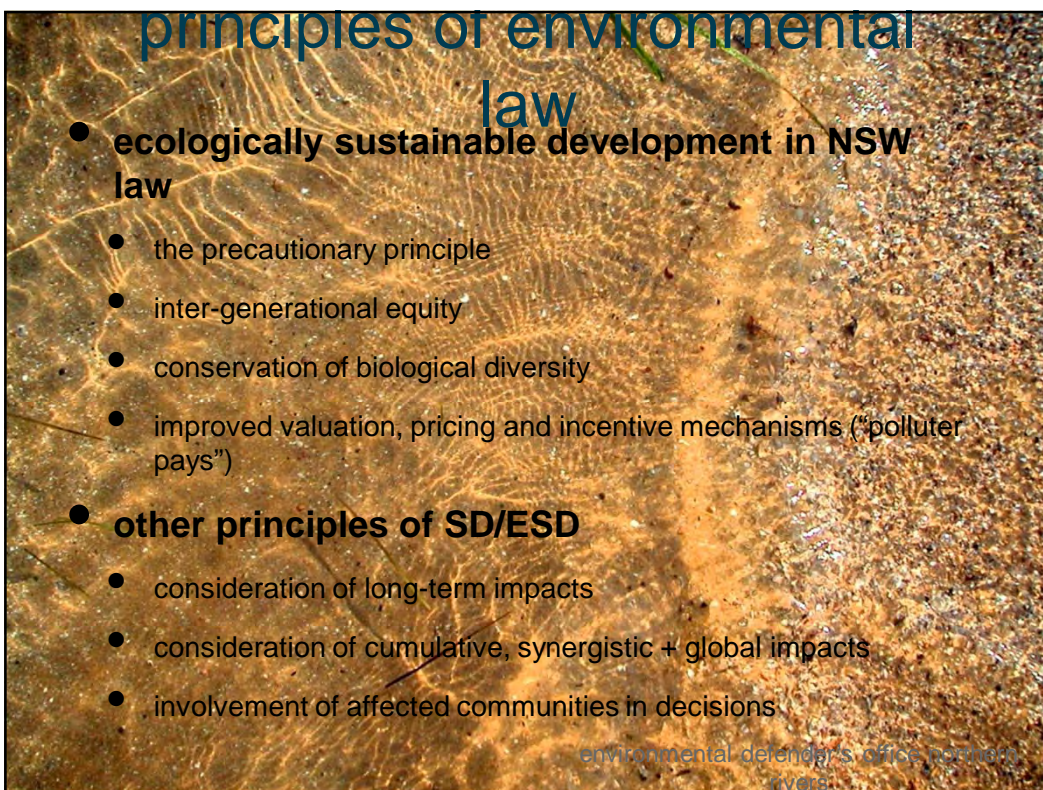
environmental defender's office northern rivers



about the edo

- “To promote the public interest and improve environmental outcomes through the informed use of the law”
- Legal advice and litigation
- Policy and law reform
- Community education
- Scientific assessment and advice

environmental defender's office northern rivers



principles of environmental law

- **ecologically sustainable development in NSW law**
 - the precautionary principle
 - inter-generational equity
 - conservation of biological diversity
 - improved valuation, pricing and incentive mechanisms (“polluter pays”)
- **other principles of SD/ESD**
 - consideration of long-term impacts
 - consideration of cumulative, synergistic + global impacts
 - involvement of affected communities in decisions


environmental defender's office northern rivers

edo; climate change + coastal law

- **climate**
 - submissions on carbon price, carbon farming etc
 - attendance at UNFCCC/Kyoto meetings
- **coasts**
 - submissions on SLR planning guidelines, erosion protection works, Sea Change Taskforce inquiry etc
- reports + advice for clients eg Sydney Coastal Councils
- **EDO Northern Rivers**
- litigation to prevent coastal overdevelopment
- advices to NGOs + groups eg Humane Society International

why today?

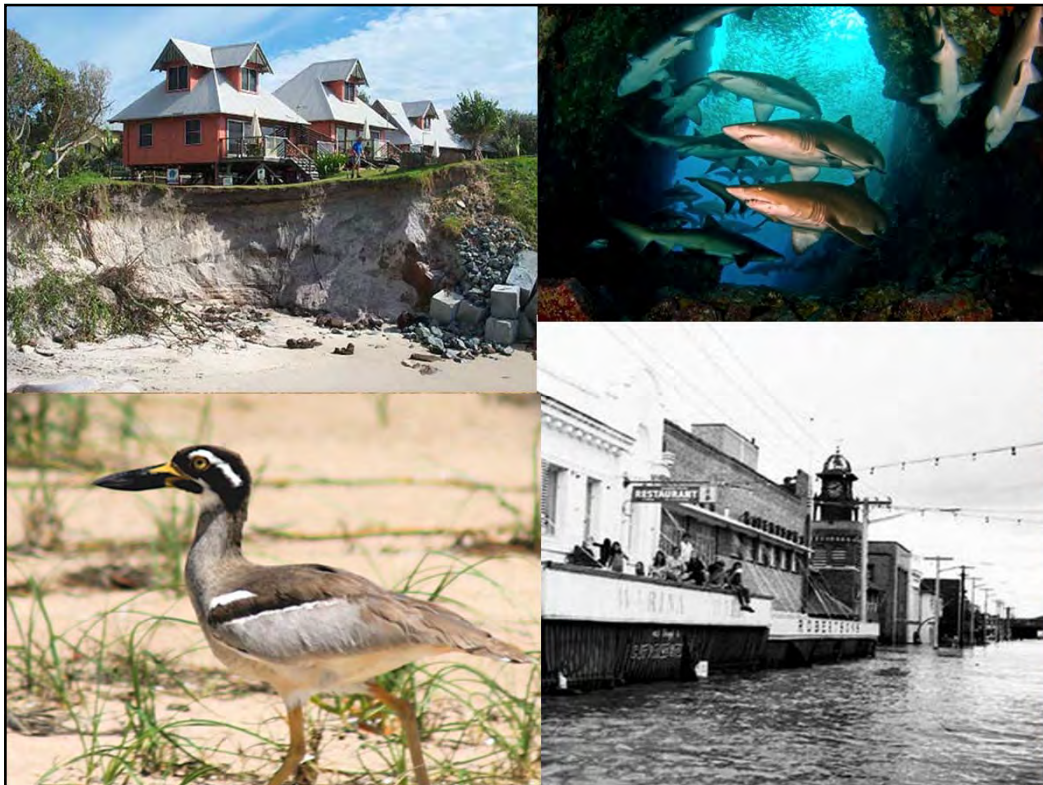

- inform about how state + local governments are responding to SLR
- explore longer term responses to climate change + coasts
- promote booklet



edo
CARING FOR THE COAST
A GUIDE TO ENVIRONMENTAL LAW FOR COASTAL COMMUNITIES IN NSW

why ballina-byron?

- coastal erosion at Belongil, Lennox
- extensive areas of flood-liaible land
- controversy over new + existing marine parks
- future issues - eg potential floating LNG plant



the challenge

- “The coastal zone is highly dynamic. Australia’s shoreline has shifted greatly in the geological past, and **climate change** will bring considerable further change to its position.
- Australia’s coast has been relatively stable over the past few decades, and **planning** in a number of areas has not taken into account the extent of observed shoreline instability...
- Extensive **ecosystems** of global and national significance are in the coastal zone, and the diversity of marine plants and animals in southern Australia is among the highest in the temperate regions of the world...”

environmental defenders office southern rivers

barriers

- high property values + populations on coast
- need for national leadership + coordination
- local government concerns about litigation
- uncertainty about climate change impacts
- biodiversity values often less important

international

commonwealth

state

local

environmental defenders office southern rivers

recent national work

- 2007 - National Climate Change Adaptation Framework, COAG
- 2009 - Climate Change Risks to Australia's Coast, DCC
 - modelled impacts of 1.1 m SLR
 - projected up to 250,000 homes at risk by 2100 worth \$63 billion (60,000 in NSW)
 - + 120 ports, 1800 bridges, 5 power stations, several airports, etc
- 2009 - Managing our Coastal Zone in a Changing Climate ("George Report")
- 2010 - Coasts and Climate Change Council report

environmental defenders office northern rivers

milestones in nsw coastal protection

- scenic protection zones in early planning schemes
- 1973 - Coastal Lands Protection Scheme
- 1979 - Coastal Protection Act
- 1980s - end of sand mining + creation of coastal national parks
- late 2000s - climate change reforms

environmental defenders office northern rivers

basic terms

- coastal area = land next to the sea + estuaries + adjoining or surrounding land
- coastal zone = land within 1 km of coast, lake/bay, estuary/river + coastal waters up to 3 nautical miles from coastline (additional laws apply)

environmental defender's office northern rivers

how is the nsw coast protected?

- **“hard law”**
 - EPA Act
 - state environmental planning policies (SEPPs)
 - local environmental plans (LEPs)
 - Coastal Protection Act + Regulations
 - Coastal Zone Management Plans
 - 2010 changes to CP Act re coastal erosion
- **“soft law”**
 - NSW Coastal Policy 1997
 - Far North Coast Regional Strategy
 - development control plans (DCPs)
 - sea level rise planning guidelines

environmental defender's office northern rivers

enviro protection in epa act

- **S5 Objects include**

- conservation of natural and artificial resources,
- protection of the environment
- ecologically sustainable development

- **S79(C) Matters for consideration include**

- coastal zone management plan
- likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality
- the public interest

environmental defender's office northern rivers

coastal sepps

- SEPP 71 – Coastal Protection
- SEPP 14 – Coastal Wetlands
- SEPP 26 – Littoral Rainforest

environmental defender's office northern rivers

local environmental plans

- Standard Instrument LEPs
 - Clause 5.5 – (compulsory for LEPs applying to land within the Coastal zone) requires Council to consider extra factors before consenting to development in the coastal zone, including
 - how biodiversity and ecosystems can be conserved
 - the effect of coastal processes and coastal, including sea level rise, on the proposed development, and arising from the proposed development
 - the cumulative impacts of the proposed development and other development on the coastal catchment
 - Council must also be satisfied will not be affected by, significantly impact on or increase the risk of coastal hazards

environmental defender's office northern rivers

coastal protection act 1979

- aims to protect the coastal environment for the benefit of both present and future generations
- defines boundaries of the coastal zone
- provides for councils to prepare 'coastal zone management plans' (CZMPs), including provision for
 - protecting and preserving beach environments and beach amenity
 - identifying coastal hazard zones
 - emergency actions
 - continuing and undiminished public access to beaches, headlands and waterways
- places additional checks on councils when assessing development applications

nsw coastal policy 1997

- guides and coordinates decision making in coastal areas
- aims to support the ecologically sustainable development of the NSW coastline
- sets broad goals, objectives and strategic actions for how this is to be achieved
- all LEPs applying to the coast must give effect to the Coastal Policy
- a council must consider the Coastal Policy when assessing a DA

environmental defender's office northern rivers

regional strategy 2006

- **Aims**
 - identify + protect important environmental assets...
 - limit development in places constrained by... high... conservation value...
 - cater for [an] extra 60,400 people...
- **Actions**
 - LEPs will protect + zone land with State or regional environmental,
 - agricultural, vegetation, habitat, waterway, wetland or coastline values

environmental defender's office northern rivers

development control plans

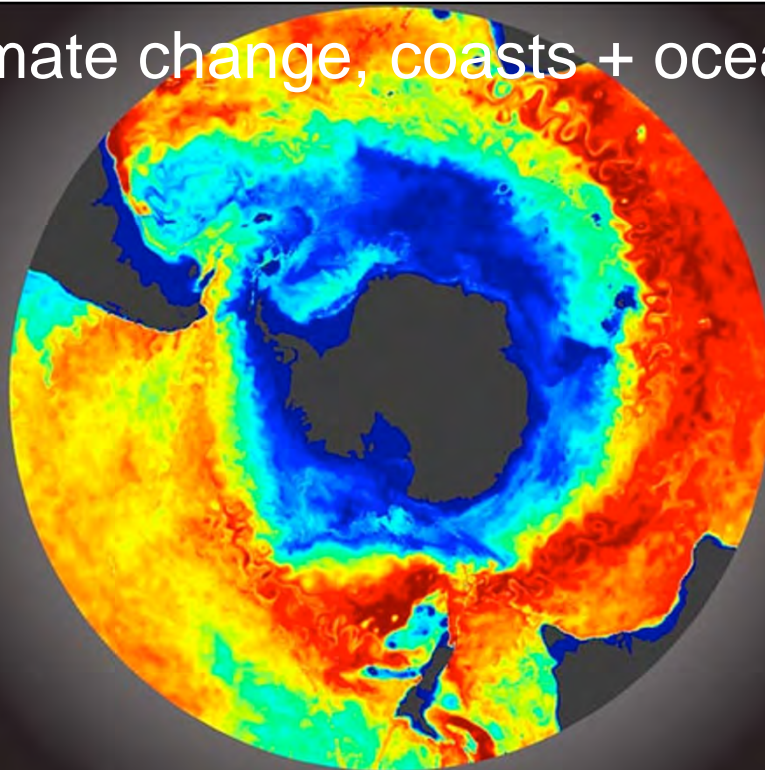
- **Byron Shire Council DCP 2010 (1988) Part J, Coastal Erosion Lands**

- if development is built as a relocatable design, it must be relocated/removed when the erosion escarpment encroaches to within 20m of the structure (or 50m where applicable)

- for development built as a non-relocatable structure, it must be removed when the erosion escarpment encroaches to within 50m of the structure



climate change, coasts + oceans



climate change impacts

- primary
 - sea level rise
 - higher atmospheric temperatures
 - > extreme weather events
 - > ocean acidification
- secondary
 - > coastal erosion
 - > "coastal squeeze"
 - > flooding of lakes + estua
 - < habitats + ranges for terrestrial + marine biodiversity

Tuttler, Photo. Tacoma, Wash.

environmental defender's office northern rivers

sea level rise

1. 0.09 - 0.88 m
2. 0.18 - 0.59 m (or - 0.79 m)
3. < 1.1 m
4. < 1.4 m
5. 0.5 - 1.5 m
6. 0.5 - 1.5 m
7. 0.75-1.9 m
8. < 2 m
9. 5 m +
10. 6 m +

(60-70 m)

sea level rise

“A plausible estimate of the amount of sea-level rise by 2100 compared to 2000 is 0.5 to 1.0 m. There is significant uncertainty around this estimate, the largest of which is related to the dynamics of large polar ice sheets.”

Climate Commission, 2011

“Australia is surrounded by oceans – four degrees sustained for a while would mean at least seven or 10 metre sea level rise; probably it would melt down all the ice on this planet. That accounts to 70 metres, seven-0 metres, in the long term.”

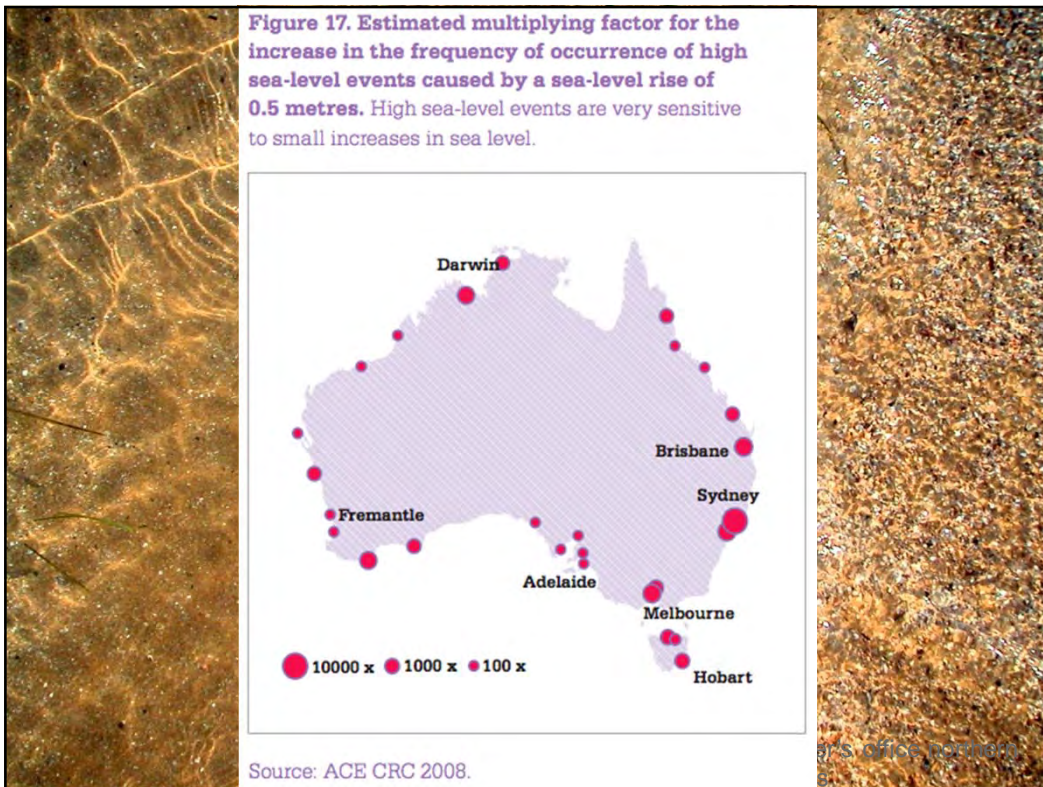
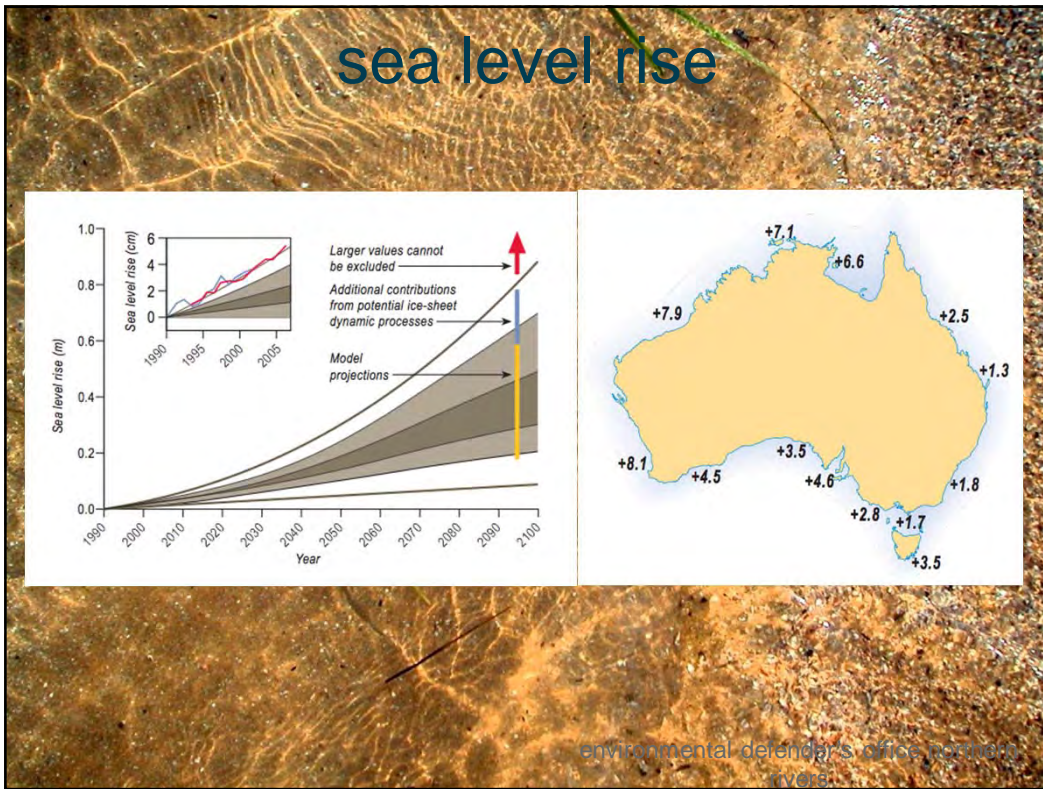
Schellhuber, Potsdam Institute, 2011

environmental defenders office northern rivers

sea level rise

“Many people imagine that sea level will rise gradually, like water rising in a bathtub. This is unlikely. Coastal waters will continue to be affected by extreme tides, storm surges and storm tides, which may become increasingly severe in many places as a result of climate change. These factors will interact with sediments in coastal systems. The combined effect of rising sea levels and changes in extremes will produce much greater risks in the coastal zone than any single factor.”

environmental defenders office northern rivers



impacts of sea level rise

- increased tidal inundation of land by sea water
- recession of beach + dune systems
- changes in tidal behaviour in estuaries
- salt water intrusion into fresh water estuaries
- higher salt water tables
- increased severity of flooding in storms

environmental defender's office northern rivers

what's at risk?

- 80% of Australians live < 50 km from coast
- 711,000 properties close to water
- 157,000-248,000 properties worth \$41-63 billion potentially exposed to inundation with SLR of 1.1 m (includes 41,000-62,000 in NSW)
- 39,000 properties within 110 m of soft shorelines (includes 3,600 in NSW)

environmental defender's office northern rivers

planning issues

- at what point does protecting public infrastructure become too expensive?
- is 2100 the best timeframe for planning to adapt to SLR?
- should governments adopt a benchmark or a risk assessment approach – or both?
- what should be done about land already zoned for development in the erosion/SLR zone?
- how should biodiversity protection be included in SLR planning?

legal issues

- do governments have a duty to protect private foreshores?
- do residents have the right to protect their own foreshore properties?
- do landowners have a right to compensation for being prevented from developing their properties or being forced to move?
- what liabilities might councils incur by either developing or prohibiting development in slr zones?
- is there a legal mechanism for including biodiversity buffers, corridors + refuges?



legal principles

- right to use + enjoy private property
- public trust doctrine
- erosion + accretion
- “where benefit lies, so does risk”
- liability of public authorities limited
- ecologically sustainable development



responses to climate change risks

- **in theory**
- protect - eg coastal protection works
- adapt - eg building higher
- retreat - eg planned retreat
- **in recent practice in nsw**
- SLR Policy 2009
- Coastal Planning Guidelines 2009
- changes to CP Act to allow protection works
- special rules for hotspots
- planned retreat in DCPs + CZMPs

nsw sea level rise policy 2009

- current benchmarks based on prediction that sea levels will rise along the NSW coastline by an average of 40cm by 2050 and 90cm by 2100
- “adaptive risk-based management approach... recognises that there are potentially significant risks from sea level rise and that the accuracy of sea level rise projections will improve over time.
- Planning and investment decisions should therefore consider the sea level rise projections over timeframes that are consistent with the intended timeframes of the decision.”

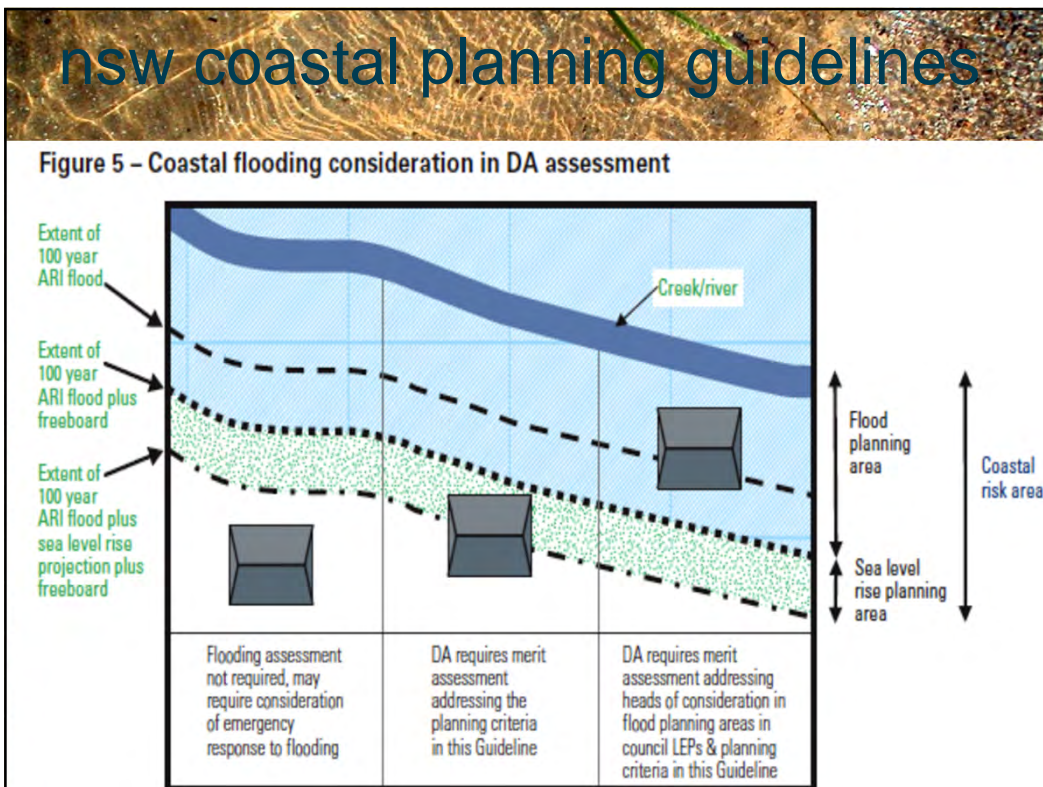
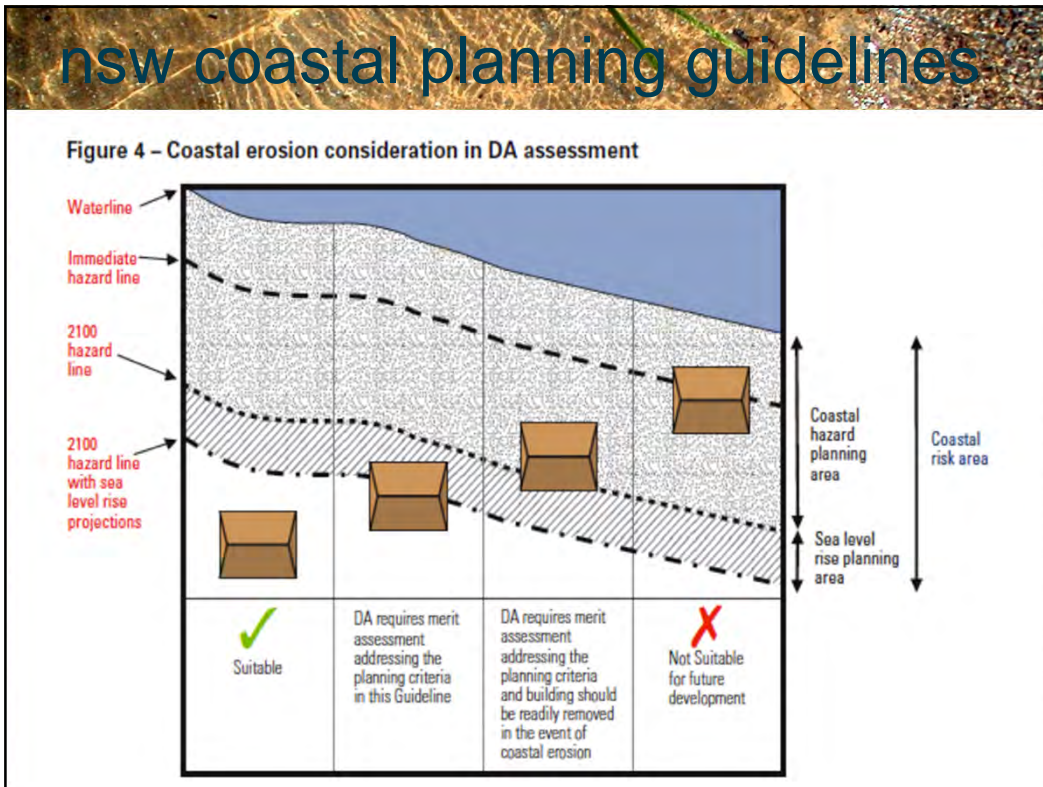
environmental defender's office northern
rivers

nsw coastal planning guidelines

Adopts 6 coastal planning principles for sea level rise adaptation

1. Assess and **evaluate coastal risks** taking into account the NSW sea level rise planning benchmarks.
2. **Advise the public** of coastal risks to ensure that informed land use planning and development decision-making can occur.
3. **Avoid intensifying land use** in coastal risk areas through appropriate strategic and land-use planning.
4. Consider options to **reduce land use intensity** in coastal risk areas where feasible.
5. **Minimise the exposure to coastal risks** from proposed development in coastal areas.
6. **Implement appropriate management responses and adaptation strategies**, with consideration for the environmental, social and economic impacts of each option.

environmental defender's office northern
rivers



c p act amendments 2010

- allows emergency coastal protection works under certain conditions
- allows permanent coastal protection works under certain conditions
- creates new NSW Coastal Panel
- allows for coastal protection service charge
- strengthens good faith defence for liability of councils

environmental defender's office northern rivers

erosion hotspots

- "... areas where five or more houses and/or a public road are located in a current (or immediate) coastal hazard area, as identified in a coastal hazard study."
- required to produce emergency plans by mid 2011, CZMPs by end 2011
- include areas where landowners may be able to place emergency coastal protection works under strict conditions

Local council area	Location
Byron Shire Council	Belongil Beach
Ballina Shire Council	Lennox Head
Clarence Valley Council	Brooms Head
Clarence Valley Council	Wooli
Port Macquarie-Hastings Council	Lake Cathie
Greater Taree City Council	Old Bar Beach
Great Lakes Council	Winda Woppa - Jimmys Beach
Wyong Shire Council	The Entrance North
Wyong Shire Council	Noraville
Wyong Shire Council	Norah Head
Gosford City Council	Wamberal/Terrigal
Pittwater Council	Bilgola
Pittwater Council	Mona Vale
Warringah Council	Collaroy/Narrabeen
Eurobodalla Shire Council	Batemans Bay

emergency coastal protection works

- must comply with gazetted Ministerial Requirements
- must comply with emergency sub-plans (subset of CZMPs)
- must obtain certificate from Council or OEH officer
- works must be maintained in accordance with requirements in guidelines, emergency subplans and certificate
- Council can order removal if works increasing erosion, limits public access or threat to public safety

environmental defender's office northern rivers

long term coastal protection works

- **Dec 2010 changes to Infrastructure SEPP**
 - Council is the consent authority where coastal zone management plan in place
 - Coastal Panel is consent authority where no coastal zone management plan in place
- **Dec 2010 changes to Local Government Act**
 - Landowners must pay Coastal Protection Service Charge if approved
 - Future owners must also pay charge
 - Council will maintain the works

environmental defender's office northern rivers

long term coastal protection works

- Consent under the *Environmental Planning and Assessment Act 1979* must not be granted unless satisfactory arrangements have been made for
 - restoration of beach or adjacent land
 - maintenance of the works (including adequate funding)
- In addition, works should not impede beach/headland access or threaten public safety

environmental defender's office northern rivers

good faith defence

- Enhanced exemptions for public authorities from liability under section 733 of *Local Government Act*
- Issuing an order under *Coastal Protection Act*
- Erosion/recession of coastal public land
- Failure to upgrade flood/coastal protection works to accommodate climate change
- Failure to remove illegal structures
- Providing climate change information

environmental defender's office northern rivers

risk categories

- **Risk Category 1**—that the land is, or is likely to be, adversely affected by the coastal hazard at the present time (a current coastal hazard),
- **Risk Category 2**—that the land is not, and is not likely to be, adversely affected by the coastal hazard at the present time, but is likely to be adversely affected by the coastal hazard in the year 2050 (a 2050 coastal hazard),
- **Risk Category 3**—that the land is not, and is not likely to be, adversely affected by the coastal hazard at the present time or in the year 2050, but is likely to be adversely affected by the coastal hazard in the year 2100 (a 2100 coastal hazard).

environmental defender's office northern rivers

planned retreat

- “...the precautionary principle suggests that planned retreat should be the key long-term adaptation response for human communities and to reduce biodiversity impacts...”
- Where planned retreat is not possible, other adaptation options should be considered including
 - development controls + planning measures
 - resilience building measures
 - early warning systems + emergency response plans
 - hard engineering solutions”

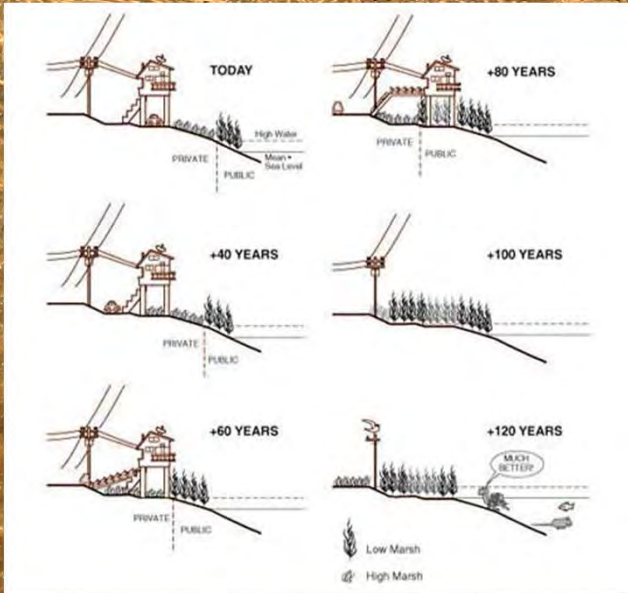
environmental defender's office northern rivers

planned retreat - wooli

- "...there are no viable long term coastline management options for the original Wooli Village, as it is predicated that the shoreline will have essentially receded to the eastern bank of the Wooli Wooli River by 2100"
- CVC Draft Coastline Management Plan 2010 recommends moving township inland from spit utilising land swap with Crown land
- landowners argue that "local knowledge of the environment and history of the coastline has not been considered in preparing the plan
 - the dynamics of the dunal systems have not been appropriately considered in preparing the plan
 - a range of viable options for sustainable management of the environment have not been appropriately considered
 - the community has not been



rolling reserves



environmental defender's office northern rivers

buy to lease

"Buy to Lease was being investigated as a way of an authority purchasing properties in danger of being lost to erosion between 2025 and 2050 - and leasing them back to the owners or someone else.

It would give the householders more security and scope to decide their future and remove the wider blight caused by lack of investment in doomed properties.

But officials have now say the council should not proceed with the scheme because of a raft of problems including that the long term risks and liabilities were too great."



principles for long-term adaptation

- risk
- finance
- use of public land
 - to protect private property from erosion + floods
 - to relocate
- biodiversity protection

environmental defenders office northern
ireland

state of the ocean report 2011

“...the world's ocean is at high risk of entering a phase of extinction of marine species unprecedented in human history.”



Threats: Climate Change
The biggest threat to our Ocean's health is climate change, with its twin super-dangers of rising sea temperatures and acidification.





Threats: Overfishing
Climate change aside, over-fishing represents the biggest threat to the health of our Ocean. The methods used - as well as the sheer scale of the plunder - are having devastating effects.



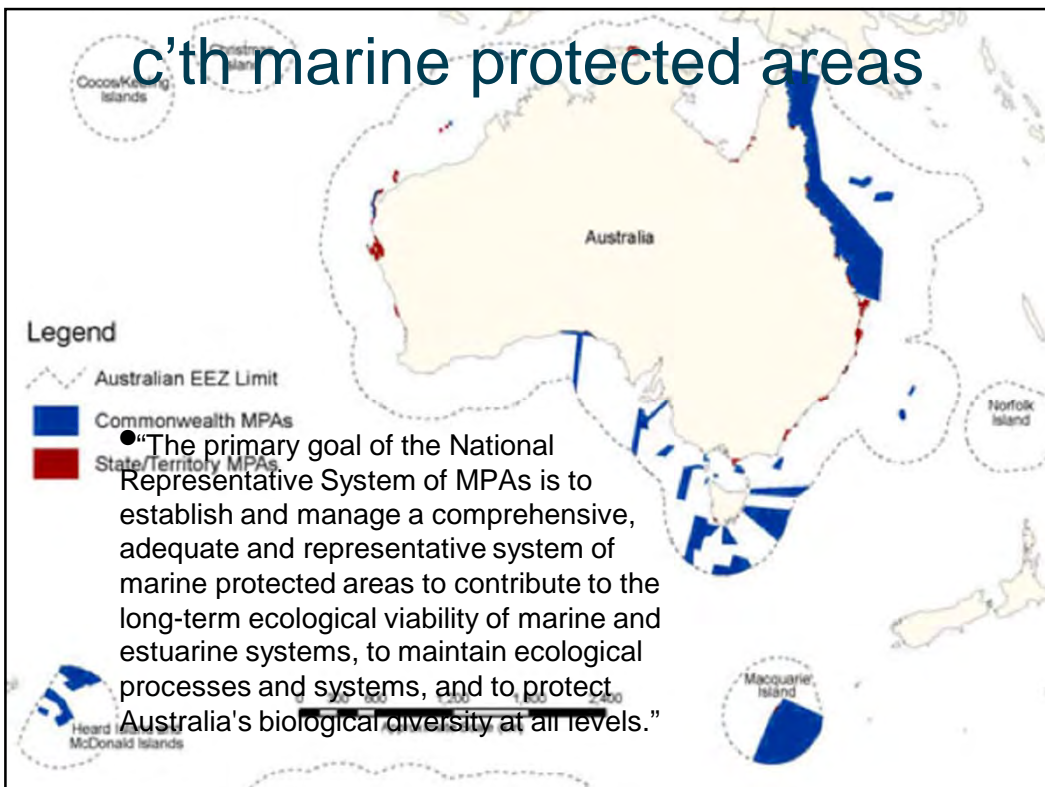
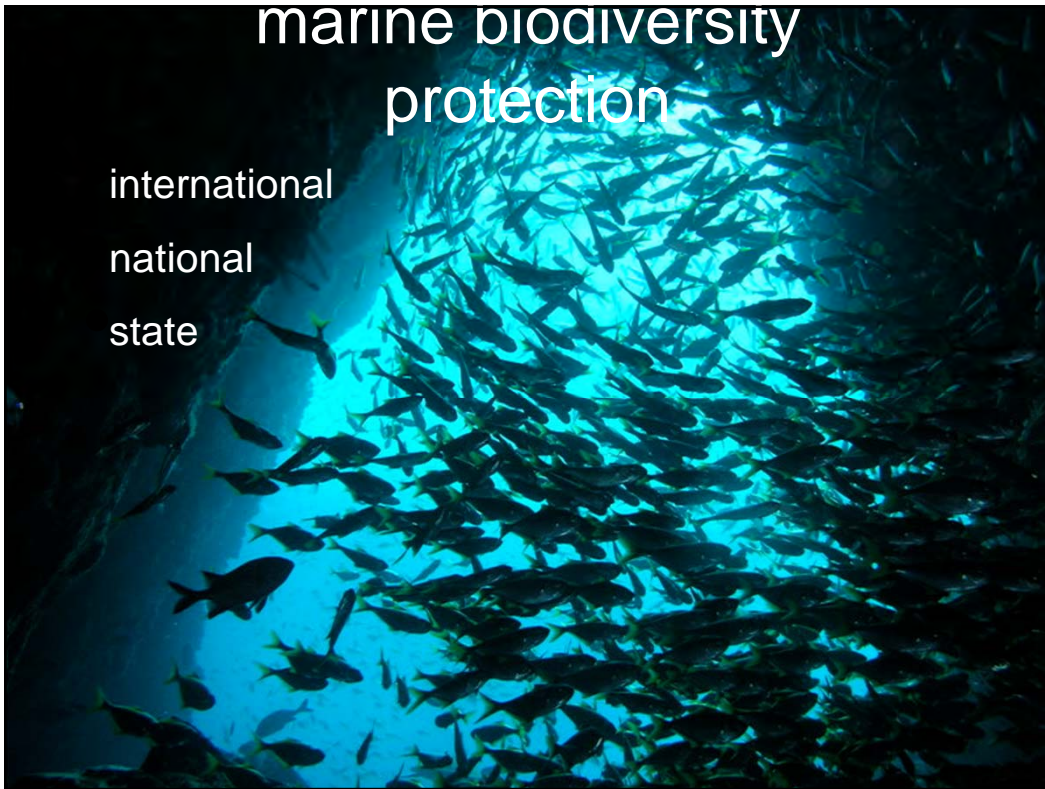
Solutions: Marine Protected Areas
IPSO believes that introducing wide-spread Marine Reserves is our single best hope for averting disaster at an Earth System level.

how is marine life protected?

- the need to protect
 - ecosystems
 - habitats
 - species
- the response
 - estuary management
 - marine parks
 - fisheries
 - threatened species

environmental defender's
ryote.

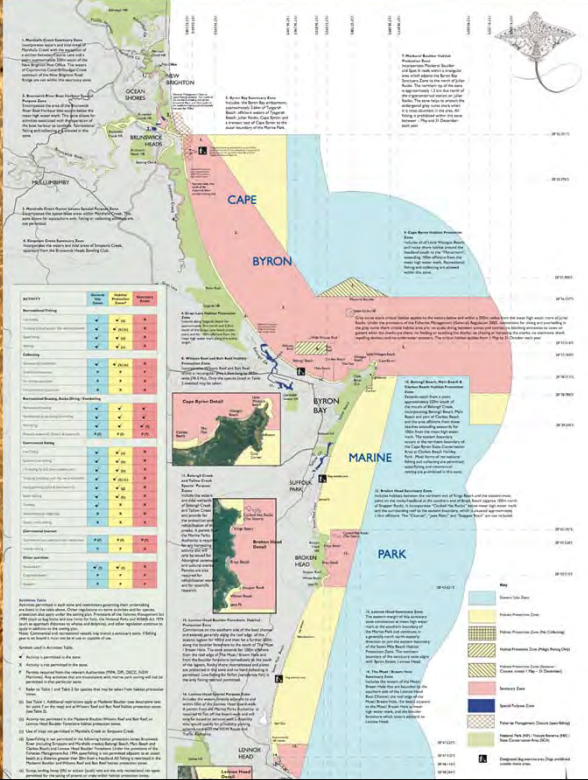


nsw marine parks


- Regulation
 - Marine Parks Act 1997
 - Marine Parks Regulation 2009
 - Marine Parks (Zoning Plans) Regulation 1999
- Implementation
 - 6 marine parks
 - sanctuary, habitat protection, general use + special purpose zones
 - 12 (smaller) aquatic reserves
 - < 7% of NSW coastal areas included
- Management
 - Ministers for Primary Industries & Environment jointly responsible
 - Marine Parks Authority
 - MP Advisory Council + committees



zoning



Activity	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Zone 9	Zone 10
Navigation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Boating	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Swimming	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Walking	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Other Activities	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y





marine parks issues

- do they work to protect marine biodiversity?
- are more needed to protect threatened species?
- do fishing + other uses reduce their conservation value?

"The enormous benefits of marine parks and no-take sanctuary zones for marine life and coastal communities have been demonstrated in scores of scientific studies from Australia and overseas. There is no reason to delay any longer the establishment of a comprehensive state-wide system of marine parks for NSW."

"Climate change impacts may be greatest on NSW managed waters than on any other Australian marine jurisdiction... The Australian marine biodiversity that has been estimated to be most vulnerable to climate change impacts is that of the East Central Marine Domain - the four marine Bioregions of the NSW **Tweed-Moreton**, Manning, Hawkesbury and Batemans Marine Bioregions."

environmental defenders
rivers

new nsw government reforms

- DECCW now an Office in Premier's Dept
- 5 year moratorium on new marine parks
- Independent Scientific Audit of Marine Parks
- revocation of 2011 fishing restrictions at grey nurse shark habitats
- review of grey nurse shark protection

environmental defenders office northern
rivers

whence ballina island?

“The Insurance Council estimates of the value of property in Australia exposed to the risks from rising sea levels and increased storm damage ranges from \$50 billion to \$150 billion.

- Last week the NSW Environment Minister, John Robertson, made public a list of 19 'hot spots' along the state's coastline where erosion is a growing problem.

“Ballina is one area that will see, for the first time, areas that will be flooded,’ Mr Robertson said.”

whence ballina island?

- information
 - what do we know?
 - what do we need to know?
- advocacy
 - what is already being done?
 - what more needs to be done? (our objective)
- campaigning
 - who do we need to influence?
 - how do we need to organise?

environmental defenders office northern rivers

