

NSW GOVERNMENT Office of Environment & Heritage  
 Bronte, Tamarama and Bondi. Photographer: Hamilton Lund. Courtesy Tourism NSW

## 20th NSW COASTAL CONFERENCE "20/20 Retrospective"



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 Tuross Lake, South Coast. Photographer: Kerrie-Anne Benton  
 Courtesy Eurobodalla Coast Tourism

## Acknowledgements



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## Outline of Presentation

- Background
- Summary of CZM initiatives since 1990
- Reflections on the performance of key elements of the CZM framework in NSW
- Challenges and opportunities for the future
- Conclusions

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 South Head, Sydney Harbour. Photographer: Hamilton Lund  
 Courtesy Tourism NSW

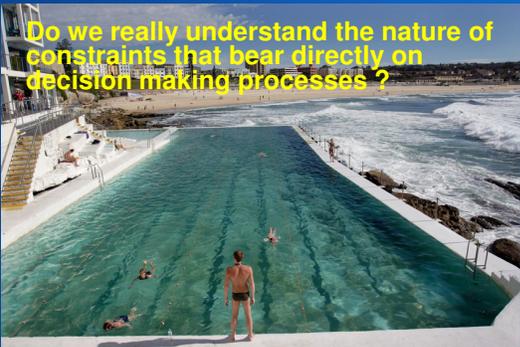
## What is Coastal Zone Management ?



Aquaculture      Development pressures  
 Strategic planning      Recreational amenity  
 Beach erosion      Water quality  
 Tourism      Surfing  
 Sea level rise      Boating      Fishing  
 Population growth      Resource utilisation

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 Bondi Baths (2005). Photographer: Sally Mayman  
 Courtesy Tourism NSW

## Do we really understand the nature of constraints that bear directly on decision making processes ?



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## Key constraints include:

- The landscape bounded by tidal waters and rivers have evolved (and continue to do so) on geological timescales
- Inter-tidal foreshores are subjected to large scale short-term dynamic responses (erosion, floods, etc)



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**Key constraints include:**

- The landscape bounded by tidal waters and rivers have evolved (and continue to do so) on geological timescales
- Inter-tidal foreshores are subjected to large scale short-term dynamic responses (erosion, floods, etc)
- Projected SLR will result in recession of unconsolidated foreshores at increasing rate into the future

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**Key constraints include:**

- Increasing population growth and associated development pressures
- Increased waste generation and pressure on resources due to population increase
- electoral cycles (3-4 years) compared to strategic planning horizons (50-100 years)
- Market prices of beachfront and waterfront property generally do not reflect the threat posed by coastal hazards and sea level rise

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**Key constraints include:**

- Property titling system built on providing certainty of tenure in perpetuity
- Inter-generational community expectations for amenity provision, standard of living and economic prosperity

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**Outline of Presentation**

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## CZM initiatives in NSW since 1990

- **1988 Coastal Hazard Policy**
  - Commitment to decision making based on an understanding of the physical coastal processes and hazards
  - Technical and financial assistance to prepare CMPs
  - Partnership between State and Local Government to deliver solutions to hazard problems
  - Commitment to indemnify state and councils for acting in "good faith"
- **Coastline Management Manual (1990)**
  - Formal, structured process for development of integrated management solutions for areas affected by coastal hazards
- **1<sup>st</sup> NSW Coastal Conference (Yamba, 1991)**
- **Coastal Management Grants Program (1990/91)**
- **Estuary Management Manual (1992)**
- **"Good Faith" Indemnity provisions (S733 Local Government Act 1993)**

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## CZM initiatives in NSW since 1990

- **Coastal Protection (Non-LGA) Regulation 1994**
- **1994 Draft Revised Coastal Policy**
  - Prepared under the auspices of the NSW Coastal Committee
- **Tweed River Entrance Sand Bypassing Act 1995**
  - Commitment in perpetuity between NSW and QLD to maintain navigability of the Tweed River entrance and artificially nourish the Gold Coast beaches
  - Single largest CZM capital works initiative in NSW to date

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- **NSW Coastal Policy 1997**
  - Based on broad principles of Ecologically Sustainable Development (ESD)
  - 9 Key goals, underpinned by objectives and strategic actions
  - An integration of management policies, programs and standards as applied to the Coastal Zone

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## CZM initiatives in NSW since 1990

- **NSW Coastal Council reconstituted for 3 year term (1999)**
  - Replace NSW Coastal Committee
  - Provide independent advice to Government
  - Oversee implementation of the NSW Coastal Policy 1997 and report annually to Parliament
- **Unauthorised dumping of rock to protect properties at Collaroy (1998) and Byron (1999)**
- **Moratorium on MHWB boundary re-determinations (1999)**
- **Government Inquiry (NSW Coastal Council 2000)**
  - Review of emergency management practices relating to beaches
  - Review of MHWB re-determination procedures

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## CZM initiatives in NSW since 1990

- **\$11.7M Coastal Protection Package (21 June 2001)**
  - SEPP 71 (Coastal Protection)
  - Amendments to the Coastal Protection Act 1979
  - Comprehensive Coastal Assessment (CCA)
  - Other initiatives
- **Coastal Protection Amendment Bill 2002**
  - Modified doctrine of erosion and accretion (MHWB boundaries)
  - Ministerial approval of CZMPs
  - Emergency management provisions in CZMPs
  - Expanded Coastal Zone (including GMR)
- **Natural Resources Commission Bill 2003**
  - Establishment of Catchment Management Authorities (CMAs)
  - Natural Resources Commission and Advisory Council (NRAC)
  - Abolition of NSW Coastal Council (and other advisory bodies)

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## CZM initiatives in NSW since 1990

- Coastal Protection Regulation 2004
- NSW State Storm Plan 2007
  - Roles re-defined during coastal erosion emergencies for combat agencies and councils
- NSW Sea Level Rise Policy Statement (2009)
  - Planning benchmarks for SLR to 2050 and 2100
  - Advocates risk based adaptation planning
  - Funding assistance
  - Prioritisation of funding toward public assets and infrastructure before private property
  - Supersedes Coastal Hazard Policy 1988

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## CZM initiatives in NSW since 1990

- Coastal Protection and other Legislation Amendment Bill 2010
  - Established NSW Coastal Panel to provide advice to Minister
  - Facilitated Emergency Coastal Protection Works in "Authorised Locations"
  - Strengthened S733 "Good Faith" indemnity provisions (LGA 1993)
  - Provision for Public Authorities and landowners to construct erosion protection works (SEPP Infrastructure (2007))
  - Increased powers for public authorities to remove works and structures from beaches
  - Provision of 7 key objectives to be met prior to Ministerial certification of CZMPs
- Coastal Protection Regulation 2011
- Ministerial announcement of "Coastal Taskforce" (2011)
  - Terms of Reference to be announced

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## Key Successes.....

- Improved knowledge of processes and hazards
- Knowledge informing strategic planning
- Limited loss of houses, infrastructure
- Significant investment in amenity provision

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Coogee Beach, Sydney. Courtesy NSW PWD

### \$6M grant under Coastal Management Program



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The Esplanade, Newcastle, 28 October 2002. Courtesy Newcastle City Council



Before...

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The Esplanade, Newcastle. Courtesy Newcastle City Council

\$1.5M grant under Coastal Management Program

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## Key Successes.....

- Improved knowledge of processes and hazards
- Knowledge informing strategic planning
- Limited loss of houses, infrastructure
- Significant investment in amenity provision
- Tweed River Entrance Sand Bypassing Project
- King Tide Photo initiative
- Considerable policy and legislative reforms

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## Key “Challenges” .....

**CZMPs had no “statutory” context until 2002**

**Voluntary preparation of CZMPs until 2011**

- Open ended timeframes (some > 10 years)
- Limited finalisation and implementation of CZMPs (which affects capacity to inform LEP reviews, DAs, judicial processes, etc)

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## Key “Challenges” .....

**Challenges to finalising CZMPs**

- Considerable division and polarisation between views of beachfront property owners and the broader community (protection vs beach amenity)
- Uncertainty over legal position on various issues and threat of expensive and ongoing litigation
- Limited policy direction to date on accessing offshore marine resources for large scale ongoing artificial sand nourishment
- Limited funding assistance currently available to implement and maintain high cost capital solutions

NSW Office of Environment & Heritage  
Courtesy 123rf.com

Funding...

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## Key “Challenges” .....

**Funding issues**

- Traditional annual State Government funding ≈ \$4M/yr
- Level of funding from State has not increased over the years to accommodate the shift from lower cost “study” to higher cost “implementation” phases
- Annual State program with no certainty beyond current financial year (no rolling forward program)
- Numerous management solutions lie well beyond current capacity of Commonwealth, State, Local Government and private sector funding sources
- Need to identify new funding sources

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## Key “Challenges” .....

**Abolition of the NSW Coastal Council in 2003**

- No longer is there an independent body to oversight and benchmark implementation of the NSW Coastal Policy

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Bennetts Beach, Mid North Coast. Photographer: James Pipino  
Courtesy Tourism NSW

## Challenges and Opportunities



- Strong strategic direction for CZM**
- Sea level rise adaptation planning**
- Funding mechanisms**
- Offshore sand extraction policy**
- Planning for managed retreat**
- Research, data collection and data archiving**

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## Challenges and Opportunities

### 1. Strong strategic direction for CZM

**Strong guiding principles and objectives**

- Guide decision making, strategic planning, infrastructure, regional investment, accommodation of population growth, manage legacy issues, current and future threats
- Clear direction for how the Coastal Zone is to be managed over the long-term (say to 2100 and beyond)
- Strong capacity to benchmark progress

**Streamlining of relevant legislation and policies**

- Opportunity through planning system review and forthcoming work of the Coastal Taskforce to review and improve current CZM framework

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## Challenges and Opportunities

### 2. Sea level rise adaptation planning

**Moving beyond the emphasis on “planning benchmarks”**

**Detailed localised studies**

- Determine the amount of SLR that can be accommodated in specific locations
- Look at cost effectiveness of measures to absorb SLR
- Understand the nature of limiting “triggers” (access to houses and critical services, functioning of necessary infrastructure, etc)

**“Whole of catchment” long range adaptation plans**

**Flexible strategies that observe current uncertainties**

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## Challenges and Opportunities

### 3. Funding Mechanisms

**More flexible, innovative funding alternatives**

- Private/public partnerships
- Property purchase/lease back
- Broad based, low per capita contribution to perpetual “CZM” fund overseen by independent commission
- Others

**Leveraging Commonwealth funding**

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## Challenges and Opportunities

### 4. Offshore sand extraction

**Interest from Local Government Authorities and local communities in using offshore sand resources for beach nourishment**

Options include:

- State-wide investigation of economic feasibility
- Potential for commercial/public partnerships
- Consider the conditions under which offshore sand resources might be accessed
- Maximise integration of navigation dredging requirements with nourishment needs (where practical)

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## Challenges and Opportunities

### 5. Planning for managed withdrawal

**Minimise social and economic impacts**

**Development of practical, consistent "trigger" mechanisms**

- Model provisions for Standard Instrument
- "Triggers" could be based on proximity to hazard, access to property or capacity to maintain/provide essential services or infrastructure

**Associated policy development**

- Consideration of the circumstances under which such measures would be applied

**Incentive mechanisms**

- Encourage maximum use of land whilst deemed "safe"
- Discourage fortification of development in increasingly vulnerable margins

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## Challenges and Opportunities

### 6. Research, data and information

**Existing coastal data collection is critical**

- Required to be maintained and enhanced to detect critical climate change implications within the coastal environs
- Cornerstone of knowledge and understanding to inform decision making

**Embrace new data options to augment historical data sets**

**Archival of extensive historical (non digital) data sets**

- Photographs, maps, plans, reports, etc
- Incorporated into digital spatial information systems

**Increasing public availability of information**

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## Conclusions

- CZM in NSW has made significant progress since 1990
- CZMP preparation process remains a critical centrepiece of the CZM framework
- CZM framework has successfully resulted in improved knowledge of physical coastal processes and hazards to inform:
  - Land use planning
  - Development assessment
  - Design procedures
  - Development of management strategies

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## Conclusions

- Limited loss of houses due to coastal hazards since 1990 compared with preceding 50 years
- CZM framework has delivered substantial improvements to the amenity and public access within the Coastal Zone
- "Greenfields" planning in the Coastal Zone remains relatively sound and well informed
- Legacy coastal erosion issues remain difficult to resolve
- Need to address challenges in implementing CZMPs

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## Conclusions

- SLR adaptation planning is a critically emerging challenge for coastal zone managers which can be best resolved through cooperation across all levels of government

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## Thank you



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