

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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NSW GOVERNMENT Office of Environment & Heritage
 Tuross Lake, South Coast. Photographer: Kerrie-Anne Benton
 Courtesy Eurobodalla Coast Tourism

Acknowledgements



Mike Geary
 Prof Bruce Thom
 Doug Lord
 Mark Moratti

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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

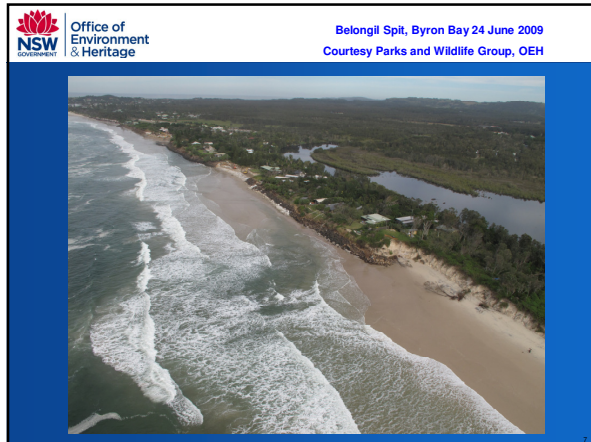
Do we really understand the nature of constraints that bear directly on decision making processes ?



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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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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
- **1st NSW Coastal Conference (Yamba, 1991)**
- **Coastal Management Grants Program (1990/91)**
- **Estuary Management Manual (1992)**
- **"Good Faith" Indemnity provisions (S733 Local Government Act 1993)**

13

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

14

Tweed River Entrance Sand Bypassing Project, April 2010
Courtesy NSW Department of Primary Industries



15

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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

16

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

17

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)

18

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

18

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

19

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20

Key Successes.....

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

21

Coogee Beach, Sydney. Courtesy NSW PWD

\$6M grant under Coastal Management Program



22

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



Before...

23

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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

21

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22

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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**

23

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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

24

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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

25

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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

26

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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)

27

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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

28

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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

29

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30

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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

31

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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

32

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

43

Thank you

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44