Byron Shire Council

Draft Coastal Zone Management Plan for Byron Shire Coastline

26 November 2010
Presentation Outline

- Brief Byron Shire erosion history
- What is a CZMP?
- Why Develop a CZMP?
- How do you develop a CZMP (NSW)?
- What does the CZMP aim to do?
- What does the Draft CZMP for Byron Shire Coastline contain?
- Where to from here?
The Byron Shire

Source: Byron Coastline Hazard Definition Study (WBM, 2000)
Immediate Coastal Development
Northern Byron Shire

South Golden Beach to Brunswick Heads

South Golden Beach
Road (~4m AHD) to erosion escarpment ~ 55m

Brunswick Heads
Road (~4m AHD) to erosion escarpment ~110m

New Brighton Beach
Road (~4m AHD) to erosion escarpment ~27m

Note: All following aerial images were captured in 2004.
Immediate Coastal Development
Mid Byron Shire

Byron Bay – Belongil Spit to Cape Byron

Belongil Beach
Several houses (~ 6-8m AHD) within 10-20m of erosion escarpment

Main Beach and Clarkes Beach
Road (~6m AHD) to erosion escarpment ~ 50m
Immediate Coastal Development
South Byron Shire

Cape Byron to Broken Head

Suffolk Park

Road (~6m AHD) to erosion
escarpment ~ 88m
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1888</td>
<td>First Jetty built (402 m long) in Byron Bay</td>
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<tr>
<td>1889-96</td>
<td>Numerous shipwrecks from easterly gales and storms</td>
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<td>1921</td>
<td>“MV Wollongbar” wrecked off Byron Bay in easterly gale</td>
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<tr>
<td>1928</td>
<td>New jetty built (610 m long) due to damage to old jetty from heavy seas</td>
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<tr>
<td>1933-36</td>
<td>Period of severe extensive beach erosion</td>
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<tr>
<td>1948</td>
<td>New jetty damaged and six fishing boats lost</td>
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<tr>
<td>1954</td>
<td>Cyclone, extensive erosion to beaches, damage to new jetty, all 26 fishing boats lost</td>
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<tr>
<td>1955-56</td>
<td>Period of severe beach erosion</td>
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<tr>
<td>1972-73</td>
<td>Severe beach erosion, remains of jetty removed</td>
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<tr>
<td>1974</td>
<td>February - Cyclone Pam: Beach erosion and property loss including Sheltering Palms Village</td>
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<td></td>
<td>May/June - Severe Erosion</td>
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<td>1975</td>
<td>NSW Government initiates a study of the coastline for the north coast</td>
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<td>1978</td>
<td>PWD Hastings to Byron Bay Study completed</td>
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<td>1988</td>
<td>BSC adopts planned retreat approach in Development Control Plan No.1 (1988)</td>
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<tr>
<td>2010</td>
<td>BSC adopts Draft Coastal Zone Management Plan for Byron Shire Coastline</td>
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</tbody>
</table>

Source: Byron -- Hastings Point Erosion Study (PWD, 1978)
Cyclones affecting Byron Bay to Hastings Point embayment 1956 -1978

Source: Byron Bay to Hastings Point Erosion Study (PWD. 1978)
In an effort to slow the beach recession rate, the local residents placed old car bodies along the toe of the scarp.

Source: Byron Bay- Hastings Point Erosion Study (PWD, 1978)
Sheltering Palms
Abandoned/Resumed in mid 1970’s

Brunswick Heads 19th March 1996

Courtesy: P Watson (DECCW)
Sheltering Palms, 1976

Courtesy: P Watson (DECC)
By late 1977 a total of 17 houses had been abandoned and purchased under the Government’s Coastal Lands Protection Scheme.

Courtesy: P Watson (DECCW)
Sheltering Palms, 28th August, 1977
All trace of the village has been removed. An artificial dune constructed by pushing sand from the washovers into a pile along the front of the beach is complete. This is intended to serve as a temporary buffer to prevent breakout of the river to the ocean.

Sheltering Palms, 1st June, 1977
Dwellings in the village are abandoned. During storms waves overtop the low dune moving sand into the river behind.

Sheltering Palms, 9th July, 1975
The village is already badly damaged by the beach recession during the storms of 1974.

Sheltering Palms, 28th August, 1977
All trace of the village has been removed. An artificial dune constructed by pushing sand from the washovers into a pile along the front of the beach is complete. This is intended to serve as a temporary buffer to prevent breakout of the river to the ocean.

Source: Byron Bay – Hastings Point Erosion Study (PWD, 1978)
1999 Erosion – Belongil Beach

Photos courtesy: P Watson (DECCW)
Following a direction by NSW Police residents along Belongil Spit constructed a ‘temporary’ sea wall to protect their properties
2001 Erosion – Belongil Beach

Photos courtesy: P Watson (DECCW)
2009 Erosion – Belongil Beach, New Brighton Beach
What is a Coastal Zone Management Plan for the coastline?

- Prepared by local Councils under *Coastal Protection Act, 1979*
- Describes long-term management direction for the coastline
- Implements various NSW state legislation and policy including:
  - *NSW Coastal Protection Act, 1979*
  - *NSW Coastline Management Manual, 1990*
  - *NSW Coastal Policy, 1997*
  - *NSW Sea Level Rise Policy Statement, 2009* (supersedes the *NSW Coastline Hazard Policy 1988*)
  - *NSW Coastal Protection and Other Legislation Amendment Act, 2010* (once commenced)
How to develop a CZMP?

- Prepared by coastal Councils with support from the community and NSW State Government

- Prepared under guidance of a process outlined in the NSW Coastline Management Manual 1990
How to develop a CZMP? (contd.)

Process includes:

- **Formation of a Coastline Management Committee (1996)**
- **Coastline Values Study (completed 2000)**
  - Environmental, cultural and social
- **Coastline Hazard Definition Study (completed 2000)**
  - Defines hazards such as erosion and inundation risk
- **Coastline Management Study (completed 2004)**
  - Assesses options for managing the coast
- **Draft Coastal Zone Management Plan for Byron Shire Coastline (adopted 2010, currently before Minister for “Certification”)**
  - Describes how to manage the coast
What does the CZMP aim to do?

The CZMP is based on the goals of the NSW Coastal Policy 1997:

1. protect, rehabilitate and improve the natural environment
2. recognise and accommodate natural processes and climate change
3. protect and enhance the aesthetic qualities of the coastal zone
4. protect and conserve cultural heritage
5. promote ecologically sustainable development and use of resources
6. provide for ecologically sustainable human settlement
7. provide for appropriate public access and use
8. provide information to enable effective management
9. provide for integrated planning and management
Byron Shire Locality and Management Areas

- The Byron Shire Coastline is divided up into four “Management Areas”
What does the draft Byron Shire CZMP contain?

Divided into 3 Parts:

- **Part A** – The Plan
- **Part B** – Emergency Action Plan
- **Part C** – Supporting Technical Information
Part A – Draft Byron Shire CZMP

Part A of the draft CZMP includes:

- History of the area and planning decisions
- Values and issues
- The basis of the coastal management approach – Planned Retreat
- Recommended management actions
Management of Coastline Hazards

4. Coastal management approach

Byron Shire Council's approach to responsible coastal management, upholds that protection of human life and property is paramount.

For some twenty years, Byron Shire Council has been implementing a policy of planned retreat of human settlement from areas of immediate coastal hazards. In addition to placing foremost importance on protection of life and property, this approach also recognises the global and long-term significance of natural coastal processes, and the enormous financial and environmental costs of trying to change nature.

The coastal management approach adopted by this CZMP is based on the management framework, established by the NSW Coastal Policy 1997 and OEH draft Sea Level Rise Policy Statement 2005.

This coastal management approach is grounded in principles of ecological sustainability. As such, it promotes conservation of natural biodiversity and ecological integrity, inter- and intra-generational equity, and a precautionary, risk-based, approach to management of the coastline hazards.

Specifically, the management approach includes:

- Implementation of planned retreat for development and infrastructure located along Byron Shire coastline
- Resolution to protect Byron Bay Coastline by retaining the Jonson Street Protection Works.

4.1 Planned retreat policy

4.1.1 Definition

Planned retreat is a coastal management approach that acknowledges coastal processes and hazards as ongoing natural phenomena, and manages the threat to life and property by preventing and removing development from the immediate hazard area.

Planned retreat approach allows the use and occupation of the coastal land until coastline hazards threaten life and property, that is once the erosion occurrence encroaches within 20 m from the development.

In essence, planned retreat is a precautionary approach made up of a program of actions that use a rolling, 20 m development-free buffer so as to accommodate natural coastal processes and allow the immediate coastal threat along the coastline.

Specifically, it comprises:

- control of development on land threatened by coastal hazards
- removal of development and infrastructure under immediate threat
- removal of unapproved coastal structures
Key aspects of planned retreat

CZMP Definition – Planned Retreat:

- Allows a time limited use and occupation of lands subject to risk from coastline hazards
- If the escarpment encroaches within 20m or 50m from the development (depending on the type of development), required to be relocated, or removed
- A precautionary approach aimed at maintaining a rolling 20 m development-free buffer.
- Buffer is designed to accommodate natural coastal processes and reduces the level of risk associated with coastal erosion and inundation to persons, development and infrastructure.
Key aspects of planned retreat

Management approach:

- Controls development in “Coastal Planning Precincts” approved under EP&A Act, 1979 via planning controls under Byron Shire LEP, DCP’s, and the CZMP

- Provision of advice to purchasers of property via Section 149 planning certificates

- Removal or relocation of development and infrastructure under immediate threat

- Removal of unapproved coastal structures

- Development of supporting planning instruments and policies
Coastal Planning Precincts

Belongil Beach

Hazard Lines
- 1:50yr floodplain
- Precinct 1
- WRL 50yr worst
- WRL 100yr worst

Coastal Planning Precincts
- Precinct 1
- Precinct 2

Planning Precinct and Hazard Lines
Figure A23
Key aspects of planned retreat

Maintaining a 20 m buffer from erosion escarpment:

- Buffer distance of 20m is adopted in the CZMP based on:
  - it accommodates a significant storm bite (max observed storm bite in NSW is 18m)
  - its historical application in development consents
  - allows maintenance of natural processes.

- Considered overly conservative to require relocatable development to move back from the erosion escarpment at a distance greater than 20m from the escarpment.
Key aspects of planned retreat

Benefits of planned retreat:

- reduces risk to life and property
- flexibility for landowners in potentially hazardous location to remain in situ until the buffer is compromised
- protection of environmental values and natural amenity and access of beaches
- reduction in costs associated with emergency rescue of life and property
- limited maintenance costs (protection structures)
Key aspects of planned retreat

Planned retreat of existing development:

- Voluntary relocation or removal by property owners.

- Enforcement by Byron Shire Council of development consent conditions for development approved under the *Environmental Planning and Assessment Act, 1979*, once the specified trigger distances imposed in the consent have been realised.

- Enforcement by Byron Shire Council (demolition) under recognition of risk to people and the environment from possible dwelling collapse.
Key aspects of planned retreat

Existing development with conditions

- To maximise the amount of time coastal land can be utilised or occupied, it is proposed to implement a uniform 20-metre trigger distance for the relocation of relocatable development in Coastal Planning Precincts.

- Property owners of existing development, which currently has a 50-metre trigger distance specified in the development consent, may be granted (subject to consent) a 20-metre trigger subject to similar provisions as new development in this locality, such as relocatability.
Key aspects of planned retreat

Future development under CZMP:

- No new development in Coastal Planning Precinct 1.
- New Development permitted in Planning Precinct 2
  - 50 trigger for non-relocatable.
  - 20m trigger for relocatable
- DCP to be developed “for coastal planning precinct guidelines for Precinct 1 and 2 including provision for renovations” (CZMP Action 6.1.3)
CZMP Management Actions – Shire-wide

Byron Shire Coastline Management Actions

Locality and Management Units

Management actions applicable to areas identified as part of the PES comprise:

- Management of urban areas
- Management of rural areas
- Management of coastal areas
- Management of water bodies
- Management of wildlife areas
- Management of cultural heritage areas

These actions aim to protect and enhance the natural and cultural values of the area, while also ensuring sustainable development and conservation of the coastline.

Towards a sustainable future, the Byron Shire is committed to implementing these management actions to support the preservation of the coastline for future generations.

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Additional notes on the implementation of these management actions include:

- Collaboration with local communities and stakeholders
- Regular monitoring and evaluation of progress
- Adaptation to changing environmental conditions

These efforts are ongoing, and the Byron Shire is continuously striving to improve and enhance the management of its coastline.
South Golden and New Brighton Beach
Suffolk Park
Part B – Draft Byron Shire CZMP

Part B of draft CZMP includes:

- **Emergency Action Plan**
  - Describes roles and responsibilities during a coastal erosion/inundation event in absence of the SES
  - Provides Emergency Response Actions under the constraints of the Planned Retreat Policy described in Part A
  - Supporting plan to the Byron Shire Council Local Disaster Plan (DISPLAN)
Part C – Draft Byron Shire CZMP

Part C of draft CZMP includes supporting technical information on:

- Coastal Hazard Lines and Planning Precincts
- Council Resolutions
- Updated climate change issues
- Terms of Reference for Coastal and Estuary PRG
- Plans of Management analysis
- Consultation data
- Native Title claims and land use agreements
- Cape Byron Marine Park
- Legislation and Policy Framework
- Consideration of Planned Retreat in case law
- Technical report on Johnson Street Protection Works
- Coastal Policy Checklist
Where to from here?

- Council awaits advice from the NSW Minister for Climate Change and Environment on “Certification” of CZMP
- Publish CZMP in Government Gazette
Thankyou