An aerial photograph of a coastal area showing several houses built on stilts. The houses are elevated on wooden posts, and some have balconies. The houses are surrounded by a sandy beach and a body of water. The sky is overcast and grey. The text "A Review of Planning Approaches for Coastal Climate Change" is overlaid in blue on the lower part of the image.

A Review of Planning Approaches for Coastal Climate Change

Professor Barbara Norman
Director Canberra Urban & Regional Futures
2016 Australian Coastal Councils Conference
6 May Rockingham, WA

Coastcare US: simple rules

- Do not build a house that will be underwater in the next 50 years
- Do not build a house that will be knocked down by a storm.

<http://coastalcare.org/sections/inform/poor-coastal-development/>

Global agreements

Following the adoption of the United Nations Sustainable Development goals and the 'Paris Agreement' on climate change (UNFCCC 2015) , the focus is now on implementation. Urban planning has been identified as a key strategy (United Nations 2015).

Climate projections

Harsher fire weather in southern and eastern Australia, less frequent but more intense cyclones in the northern regions, and sea level is projected to continue to rise beyond 2100 (CSIRO & Bureau of Meteorology, p8)

Coastal climate change

- 85% of the population living within 50 kms of the coast
- Planning for future coastal urban growth remains a priority
- Science on climate change now certain so primary focus must remain on mitigation
- Significant consequences from global warming already locked in so preparing for environmental change

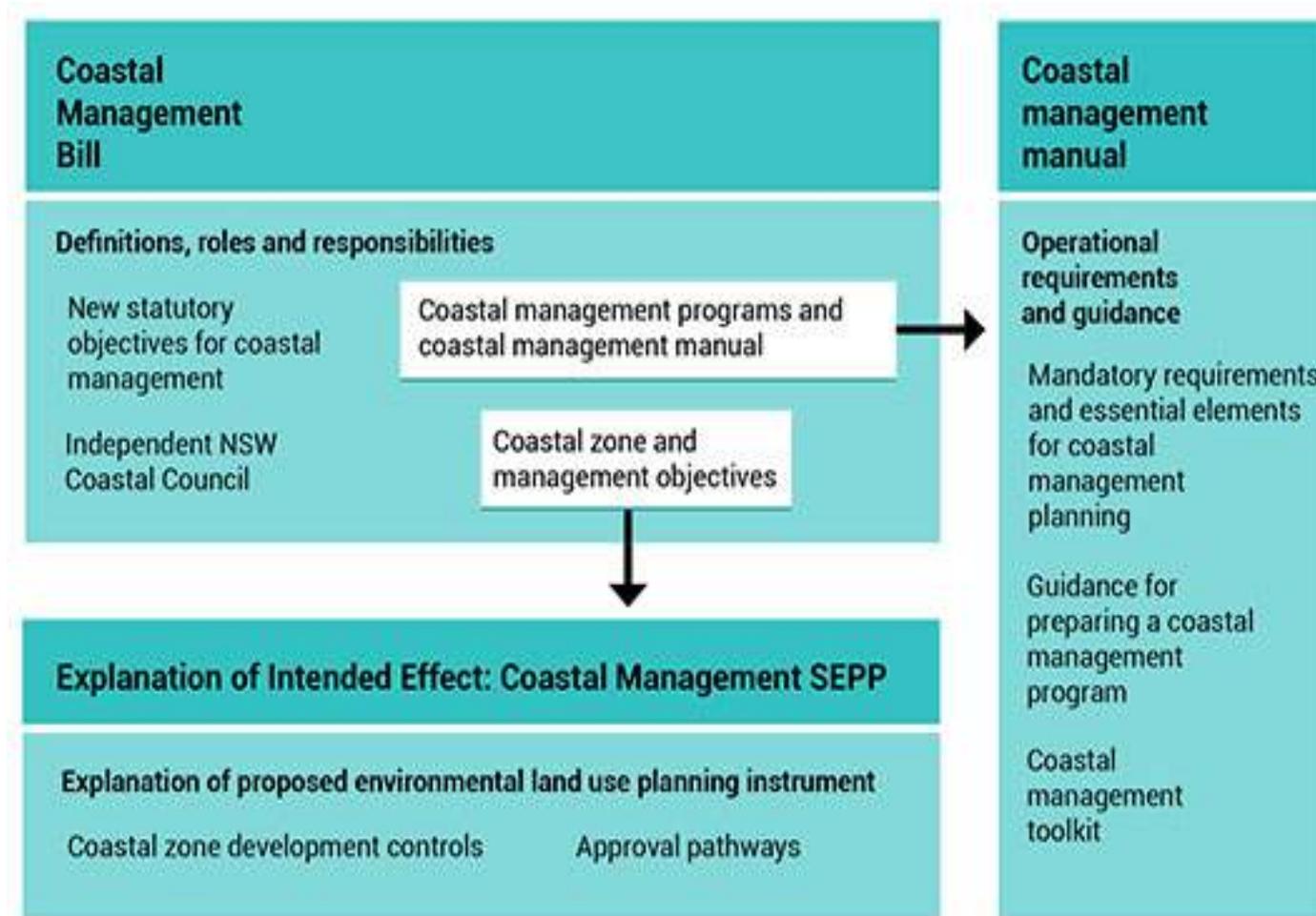
Climate ready

- There are significant consequences from global warming already 'locked in' and the coastal community will need to prepare for environmental change.
- Preparing our coastal urban settlements to be *climate ready* will require a change in how we plan and design our cities and regions.

Sharing of information and experience

- NCCARF suite of information manuals and policy guidance briefs
- 'Planning instruments and approaches to enable adaptation to long-term climate risks'

Coastal planning legislation

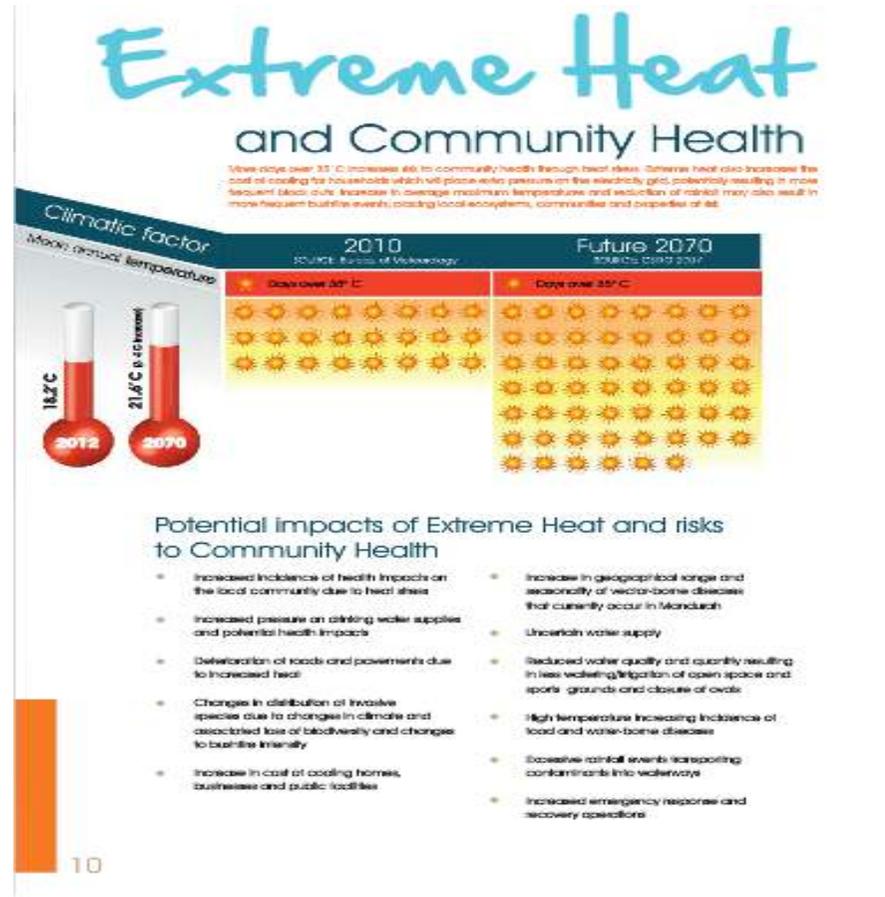


Proposals for a new Coastal Management State Environmental Planning Policy (SEPP) (NSW Planning & Environment 2015)

Hierarchy of Principles

VALUE & PROTECT	1 ENSURE THE PROTECTION OF SIGNIFICANT ENVIRONMENTAL AND CULTURAL VALUES <p>The starting point is recognising and protecting what we value on the coast, based on identification and sound understanding of coastal and marine features and processes, vulnerabilities and risks</p>
PLAN & ACT	2 UNDERTAKE INTEGRATED PLANNING AND PROVIDE CLEAR DIRECTION FOR THE FUTURE <p>This highlights the importance of having integrated policies, plans and strategies that respond to the major issues affecting coastal and marine environments, provide clear direction for protection, management and sustainable development, and involve coastal stakeholders and the broader community</p>
USE & ENJOY	3 ENSURE THE SUSTAINABLE USE OF NATURAL COASTAL RESOURCES <p>This emphasises that natural coastal resources are a limited and valuable public resource, and if developed or used, this should be done wisely and deliver proven net community and public benefit for current and future generations</p> <p>Only when the above principles have been considered and addressed:</p> 4 ENSURE DEVELOPMENT ON THE COAST IS LOCATED WITHIN EXISTING, MODIFIED AND RESILIENT ENVIRONMENTS WHERE THE DEMAND FOR DEVELOPMENT IS EVIDENT AND ANY IMPACTS CAN BE MANAGED SUSTAINABLY <p>This aims to ensure that development on and adjacent to the coast is of high quality design, sensitively sited, suitable and sustainable over the longer term. Development on coastal Crown land must have a demonstrated need to be located on the coast and a demonstrated public benefit.</p>

Mainstreaming across government



Mandurah City Council

Coastal guidelines

- Climate sensitive urban design in coastal regions will be a key adaptation response in the future
- 'Climate responsive (particularly passive solar design), site responsive (such as minimal ground disturbance through light footings), harmony with surrounding landscape (such as roofing -pitched for traditional look, skillion/curved/flat for contemporary and landscape responsive colours) and outdoor living (gardens, verandahs, decks and balconies)' (Shire of Surf Coast p11).

Planned retreat

“Planned retreat involves the design and construction of buildings that can be easily removed following the risk from coastal hazards reaching a certain “trigger point”.

Trigger points are linked to events such as beach erosion reaching a critical point or tidal inundation reaching a property on a regular basis. (Eurobodalla Interim Coastal Hazard Adaptation Code 2015).

Financing adaptation efforts

- Local Adaptation Pathways (federal)
- Queensland Government's Climate Change (Coastal Hazards) Adaptation Program (CHAP)
- NSW Coastal Acquisition program

Regional collaboration

Not all coastal planning and management is achieved through law and policy

- Peron Naturaliste Partnership
- South East Councils Climate Change Alliance
- Dhimurru Sea Country Plan

Collaboration over long term



Towards climate resilience

- *Neighbourhood resilience plans* being developed by New York City post Hurricane Sandy
- Strengthening communities



Future steps

- Scenario planning
- Soft barriers rather than hard barriers
- Local/neighbourhood resilience plans
- Backzoning to reduce future risks

Key messages

1. Planning for coastal climate change to adapt local and regional circumstances
2. Planning instruments need to working in concert to achieve the best outcomes
3. Strengthening community capacity to adapt is an important long-term action