Impacts of extreme weather events and climate change on coastal recreation and safety

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Australian Beaches

- **Facts and figures**
  - 37,000kms + of coast and 11,942 beaches (ABSAMP)
  - Annual beach visitation 100million

- **Benefits of beaches**
  - Social; e.g. health; both physical and mental
  - Economic impact and value
  - Environmental

- **Vulnerability of beaches**
  - Extreme weather events and sea level variability
  - Sea Change and trends;

- **Australia’s beach culture** – Est. $8billion+pa
  - E.g. Rip Curl, Quicksilver, Billabong and many others

- **Beach renourishment** – economic and social benefits
  - Adelaide
  - Gold Coast

- **Tourism; attraction of the beaches**
Exposure to extreme weather

- Australia’s East Coast
  - Population and tourism
  - Cyclones / East coast lows
  - Waves
  - also Tsunami
- Coastline and beaches
  - Hazards at present largely known
  - Change in hazards; extreme weather / sea level rise
  - Access to beaches
  - Size of beaches
  - Recreation opportunities will change
- Surf lifesaving built environment at risk
Beach Attraction

- Extreme weather can be an attraction during and after events
- Risks are taken by many, often without understanding the likelihood or the consequence
- Safety knowledge, skill and awareness are vital

Risk and Safety

Shifty sand cliffs a growing danger

by Steve Sprinks

Sand cliffs up to 3m high could collapse and bury unsuspecting beachgoers, however, few warned.

Dangerous cliffs from Main Beach to The Spit formed during wild weather last summer have been exacerbated further by recent high tides.

With Queensland, Victoria and now NSW enjoying school holidays, however, are concerned unwitting tourists may disturb unstable sand faces.

“They (the cliffs) don’t take much to collapse so we are warning parents especially to keep their kids from borrowing or digging or climbing over the steeper cliffs,” said Gold Coast Surf Lifesaving co-ordinator Stuart Houghen.

“The worst case scenario is that one could collapse, and bury someone and there wouldn’t be anyone around to help,”

Robina’s Michelle Hudson was amazed at how much of Main Beach had vanished when she visited recently with her children Caitlin, Emily and Jack.

“It makes you wonder where everyone will go in summer,” said Mrs Hudson.
Sea level rise – Narrabeen NSW
Impacts on beach use / safety

• Impacts on recreation and sport
  – Change in beach size, types, hazards and use
  – Creation of new beaches where national park and housing currently exists
  – Will the cost of participation change?

• Impacts to safety service provision
  – Access to and size of beaches
  – Damage to surf lifesaving buildings and infrastructure
  – Impact of loss of essential services; eg. Gas, sewage

• Legislation and Regulations
  – Change in planning laws with sea level rise benchmark
    E.g. NSW 40cm by 2050 and 90cm by 2100¹
  – Protection of property; allowed or not?
  – Impacts of protection of property on adjacent property

¹NSW Sea Level Rise Policy Statement, DECCW 2009
Surf Life Saving

- Popular beaches for both locals and tourists
- Not just safety services; community social capital
- $1.4 Billion pa value to community¹
- If no lifesavers; additional 837 deaths and 538 incapacitations each year¹
- Surf lifesavers and lifeguards often face difficult conditions to save others

¹Valuing an Australian Icon, Allen Consulting October 2005
Adaptation by Surf Life Saving

- Review the nature of lifesaving service provision
  - Flexibility; location, population, geography & topography
  - Infrastructure; Fixed, portable and a mix
  - Access to beaches

- Other adaptation actions by SLS
  - Lifesaving sport; beaches and events

- Insurability of infrastructure and assets

- Funding for at risk assets
  - Loss of Govt. and sponsor funding
  - Loss of funding from community

- Retreat or Defend
  - Retreat; to where?
  - Defend; is this permitted?
EcoSurf: a mitigation strategy

- EcoSurf policy (2005)
- Climate change mitigation
  - Water consumption reduction & recirculation of waste
  - Energy conservation plus solar & wind power generation
  - Reducing waste
- Reducing environmental impacts of facilities, infrastructure and activities
- Introduced environmental education to member education and training
- EcoSurf policy is currently under review to include latest developments, data and thinking.

www.ecosurf.org.au
Lessons learned

¹Planned adaptation is part of a balanced and prudent response to climate change.

Not all organisations have the knowledge, finances and expertise to respond to these challenges.

Now is the time to take a holistic view and work together.

¹ Climate Change Risks to Australia’s Coast – A First Pass National Assessment, Dept. of Climate Change, 2009