

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

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In many countries of the world people have settled by the coast. In Australia more than 85% of the population live near the coast and our tourist beaches alone receive in excess of 100 million visitations every year. The beaches of Australia are favoured by locals and tourists alike for recreation whether for bathing, swimming, surfing, boating and a range of other activities resulting in significant social and economical value to Australia.

There are more than 11,900 beaches along the 56,000km coastline of Australia (incl. islands). While the coast attracts many visitors and residents, it also has inherent and largely unpredictable risk. The coastal processes are dynamic and the affects of extreme weather events continue to shape and change the coast and its beaches. To date, Australians have adapted to the changes (e.g. the development of the surf lifesaver) and have been resilient in the face of the extreme forces of nature (e.g. beach renourishment) that impact our coasts.

The science of climate change has predicted the impacts of climate change that include sea level rise and increases in severity of storm events. These will further impact the coast including changes to access to and size, shape and safety of our beaches. The loss of or adverse changes to Australian beaches through environmental influences could adversely impact Australia's 'beach culture'.

In the past 103 years Surf Life Saving has saved over 550,000 lives at our beaches across Australia and continues to rescue more than 12,000 people every year. The science of climate change is so relatively new when compared with the age of surf lifesaving facility construction. Climate change issues were unknown when decisions about where to place facilities were made. As a consequence, coastal environmental processes and government policies are impacting the maintenance, refurbishment and replacement of these facilities. This is likely to impact both economically and socially the provision of vital beach safety services.

Australia's coastal managers and lifesaving organisations will need to continually adapt to the environmental, social, economic and political changes by modifying its service provision techniques, and through greater inclusiveness in coastal policy and planning.

### Summary

The key points to be raised in this presentation include the following:

1. Australian beaches are well known across Australia and many parts of the world as being integral to Australia's outdoor lifestyle;
2. The impacts of extreme weather events continue to shape the coast and beaches often presenting hazardous conditions that create risks for beach users;
3. The impacts of climate change will put further pressure on the coastal communities and visitors to the beaches thereby influencing adaptation measures chosen by those communities or imposed upon them by governments;
4. Risk management, vulnerability mapping, preparedness and response planning methodologies will provide coastal dwellers and planners with a greater understanding of the actions that should be taken to protect the social and economic attributes of Australia's beaches;
5. Surf lifesavers and lifeguards have played an important role in beach safety for over 100 years, a role that is likely to increase as the impacts on our coast become greater;
6. Ongoing studies into vulnerability of beaches and changing community and tourism leisure needs resulting from the impacts of climate change will enable coastal managers to better understand the continual modifications to beach-based recreation and safety services to ensure Australians and tourists continue to receive the broad benefits provided through the use of the beach.

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