

Future Coasts

Preparing Victoria's coast for climate change



Background

Climate change is happening and although scientists agree that sea levels have and will continue to rise, the specific threats climate change poses to Victoria's coastal assets are not well understood.

A significant proportion of the state's population lives along Victoria's 2,000 kilometre coastline, which contains some of the most precious natural and man made assets. That is why a scientific understanding of exactly how climate change will impact Victoria's coastline is needed.

Under the *Victorian Climate Change Adaptation Program*, the *Future Coasts* project has been developed to assist the Victorian Government obtain an accurate understanding of the risks climate change presents to Victoria's coastline.

This knowledge will help identify types of risk to infrastructure, buildings, and coastal environments and identify ways to reduce these risks.

Future Coasts: Preparing Victoria's Coast for Climate Change

Future Coasts is estimated to be worth \$8 million and aims to assess the vulnerability of Victoria's coastline to climate change and develop strategies to help communities and industry respond and adapt.

The project will be managed by the Department of Sustainability and Environment (DSE), and will be guided by a committee of representatives from State, Federal and Local governments, the Victorian Coastal Council and the insurance industry.

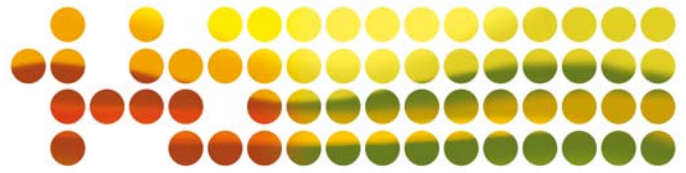
Future Coasts involves two stages:

Stage one

The first stage involves collecting the quantitative information needed to assess coastal risks from climate change.

To do this, an airborne laser system (LiDAR) will be used to capture a high resolution Digital Elevation Model (DEM) of Victoria's entire coastline, which involves data collection of sea depths and land coordinate points. The DEM will show





the lie of the land 10 metres above and 10m below sea level, at a scale and level of detail never previously achieved in Australia.

Concurrently, CSIRO will develop sea level rise and storm surge projections for Victoria's coastline.

CSIRO has already completed and published studies containing projections of sea level rise and storm surges for the Gippsland coast (www.gcb.vic.gov.au/climatechange.htm) and has been commissioned to produce similar reports for the rest of Victoria's coastline.

Stage two

The second stage involves conducting vulnerability assessments of Victoria's built and natural coastal assets.

The assessments will combine the information gathered from the DEM and CSIRO projections to examine coastal processes and geomorphology.

This component of the project will further improve the Victorian Government's understanding of areas of risks, which means stakeholders will be a better position to plan for future climate change.

Throughout the project, DSE will communicate regularly with the wide range of stakeholders involved in the project or interested in its outcomes. *Future Coasts* is expected to be completed by the end of 2009.

Project context

Future Coasts will extend the approach used in a recent Gippsland Coastal Board (GCB) study to the remaining Victorian coastline.

The GCB commissioned CSIRO to model potential storm surge and sea level rises for the Gippsland coast. This study found that extreme storm surges, which were previously considered to be 1 in 100 year events, may now become far more common.

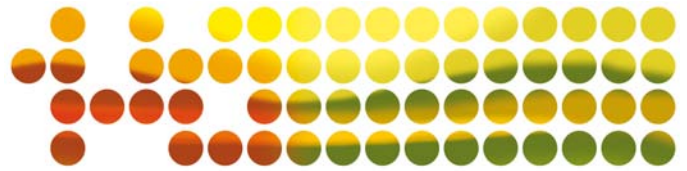
The GCB has recently appointed consultants to use the CSIRO work to examine the vulnerabilities of both human and natural assets along that section of Victoria's coast.

The Federal Government plans to carry out a five year assessment of Australia's coastal vulnerability, which will include a DEM for the whole of Australia. Future Coasts will work with the national study to ensure it provides stakeholders with as much high-level, local detail as possible.

What will be the benefits of the *Future Coasts* project?

A better understanding of the potential impacts of climate change on Victoria's coast will benefit everyone who lives on the coast or relies on it for recreation or livelihood.

Results from the studies undertaken will provide stakeholders with accurate information to assist them better protect coastal environments and habitats such as mangroves and salt marshes.



The project will provide information which can be used to:

- identify adaptation management strategies for the coast;
- inform infrastructure, land and marine use and planning and management decision making; and
- inform coastal planning policy and strategy development.

Who will benefit?

There are a wide range of individuals and groups who will benefit from the *Future Coasts* project, including:

- Victorian Government;
- Local Councils on the coast;
- Municipal Association of Victoria and Association of bayside municipalities;
- Parks Victoria;
- Catchment Management Authorities on the coast;
- Water authorities;
- Port authorities;
- Australian Greenhouse Office; and
- Planning bodies.

Contact

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