



In recent months, various key pieces of work have continued, allowing the Cape to Cape Resilience Project team to understand more about the region's coastal environment, local communities and their values.

Technical work update

Following work earlier in the year, to gather data, analyse data gaps and assess coastal geomorphology, the Coastal Hazard Assessment team has progressed the next stages of technical assessments in recent few months. This has included additional ground survey, extensive data analyses and the development, refinement and running of coastal models.

Additional elevation data

In the gap analysis, up-to-date ground surface elevation data (topography) of the coastline was identified as a critical data gap. LiDAR (light detection and ranging) survey, a remote-sensing technique using laser light to measure elevations of the earth surface, was used to fill this data gap. While border restrictions and site access proved challenging during lockdown periods, the specialist team was able to undertake the survey work in late August, providing elevation data to the team in late September for the Coastal Hazard Assessment.

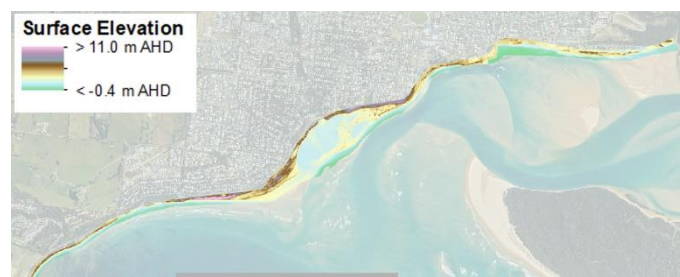


Figure 1. New LiDAR survey at Cape to Cape region (August 2021)

As the foreshore has experience recent change, particularly at Inverloch, this recent survey provides excellent present-day elevation data to use in the hazard modelling.

Model development and refinement



We recommend reading *Factsheet #3 Coastal processes and hazards* and *Factsheet #4 Coastal models* for extra context on this work.

To increase our understanding of the natural processes in the local coastal environment in the Cape to Cape region, the team has been developing and using computer models. This has incorporated a wide range of local measurements and data sets, including data on:

- local landscape and seascape
- local and regional meteorology (weather)
- metocean (coastal and ocean) conditions
- historical events and change

Over the past few months, the team has conducted extensive technical analyses on this data to understand trends and behaviours for the region. These results have been used to inform the setup of models and as input data for “running” the models.

The team has developed and refined numerous different coastal models. These have been used to examine current and future conditions for the region, including open coast areas, Anderson Inlet and the entrance, looking at:

- Storm-tide
- Waves
- Sediment transport
- Shoreline response (erosion / accretion).

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A range of conditions (scenarios) have been examined by the team. These include frequently occurring storm conditions, rarer / more extreme storm events, various sea level rise projections, and different catchment flows.

Analyses have also included particular focus on the understanding the recent change experienced at Inverloch Surf Beach.

Assessment outcomes so far

Technical analyses, including modelling outcomes from the Coastal Hazard Assessment, have recently been completed. These are currently being peer-reviewed by technical reviewers.

Our project team presented the assessment results, including modelling results, to the project working group, control board and technical reference group in early November.

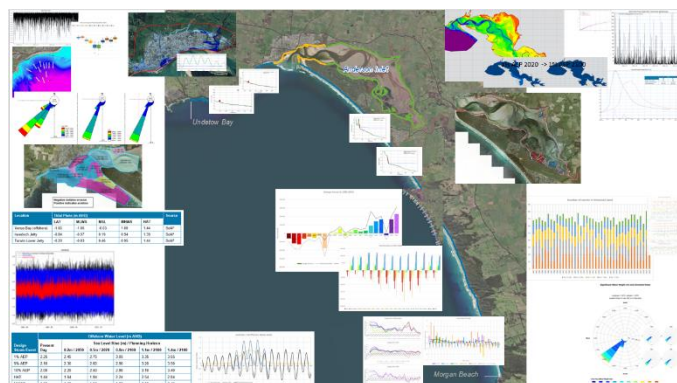


Figure 1. A snapshot of some of the many analyses undertaken so far to understand the Cape to Cape coastal environment

The team will use mapped outputs (“hazard extents”) of the model results, to look at areas of the Cape to Cape coastline that are currently exposed to or may be exposed to hazards in the future. This also includes examining the values and assets in these areas that may be impacted by current and future hazards.

We will use this exposure analysis to inform the risk and vulnerability assessment, determining where adaptation (hazard mitigation) might be necessary.



Upcoming factsheets will explain more about what we mean by “risk” how we use this information to assess and understand current and future hazards to inform development of adaptation options.

Engagement update

Stage 1 Community Engagement

Over July, August and September, we focussed on gathering community perspectives to inform our Community Values Study. Due to Covid-19 restrictions, the community consultation activities were all online for this first stage of engagement.



Figure 2. Online community briefings were held in August 2021

Using a range of methods – a targeted survey and interactive map story board – we asked people to share their coastal perspectives, what they value most about the Cape to Cape region and what makes the region so special. We also hosted several online community information workshops with interactive discussions.



Have a look at our [Stage 1 community engagement summary](#) to find out things we heard during our recent engagement activities.

More detailed analysis of this feedback is presented in the Community Values Study.

These activities allowed our team to hear from many people who live in and visit the Cape to Cape region. We thank everyone who contributed to the activities and discussions, sharing their views, ideas and experiences. This feedback has been central to informing our Community Values Study.

Community Values Study

Community values have an essential role in adaptation and resilience planning. Using the community engagement responses from Stage 1 activities, and a range of previous coastal engagement activities and discussions, the project team has analysed community values, priorities and perspectives.

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These values are embedded in all investigations and assessments being undertaken as part of the Cape to Cape Resilience Project:

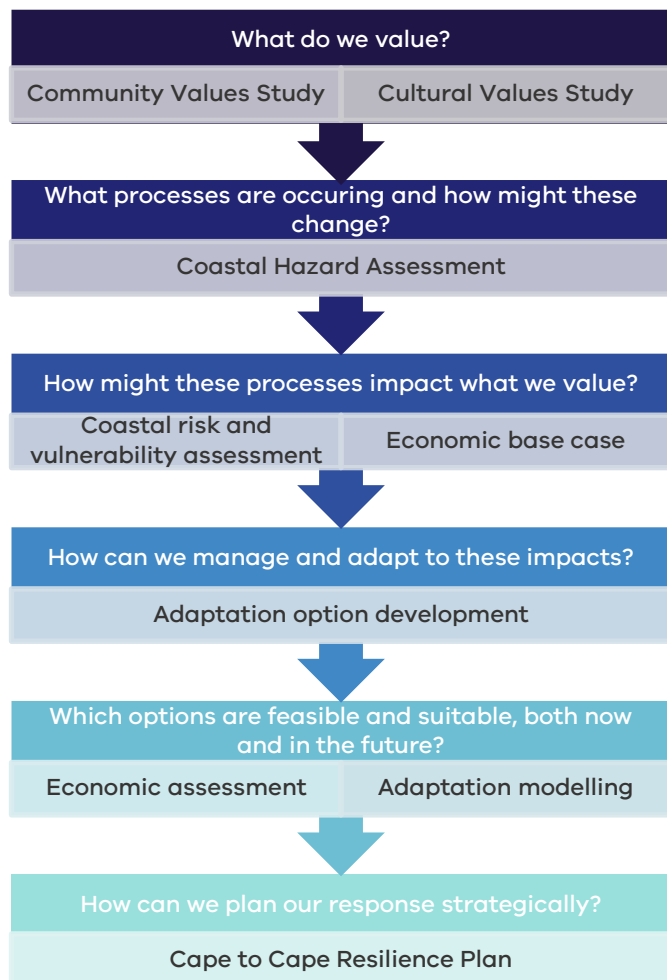


Figure 3. Community values inform adaptation and resilience planning through the many stages of the project



The Community Values Study will be available on the project website in December.

Next steps

Following peer review, the Coastal Hazard Assessment results will be used to examine exposure, risk and vulnerability for our coastal areas and assets in more detail. We will also be undertaking an economic assessment to understand potential costs of coastal hazards for the Cape to Cape communities if no mitigation or adaptation was undertaken.

Each assessment and stage provides the project team with important information to carefully develop suitable adaptation options. The economic assessment can also be used to justify investment in adaptation.

Over the next couple of months, we will be considering the range of available adaptation options for the Cape to Cape region. Option development, modelling of options and feasibility will initially explore ways to manage hazards at Inverloch Surf Beach and the coast adjacent to Inverloch.

The community continue to have a role in informing our adaptation approach, including options that we consider for managing hazards. Keep an eye out on the Cape to Cape Resilience Project website in the next couple of months for our latest factsheets, the Community Values Study, and upcoming engagement opportunities.

How can I get involved?

To ensure you keep up to date with the Cape to Cape Resilience Project and upcoming events and activities:

- Visit the project website at marineandcoasts.vic.gov.au/coastal-programs/cape-to-cape-resilience-project
- Sign-up to receive progress updates and notifications – email capetocape.project@delwp.vic.gov.au
- Read our latest factsheets via the website
- Ask us a question – email capetocape.project@delwp.vic.gov.au

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