

Deciding for the coast: implementing effective adaptation actions

Deciding for the coast will develop decision support tools and pathways for decision makers in adaptation actions around Western Port. With the tools developed through the **Deciding for the coast**, including options assessment criteria and decision checklists, a coastal planner can decide between alternative options and ensure that necessary decision-making steps for coastal adaptation are followed.

Councils surrounding Western Port completed one of five national integrated assessment projects in 2008. Working with CSIRO, socio-economic impact consultants Marsden Jacobs Associates (MJA) and risk consultancy Broadleaf International, Western Port councils have a comprehensive understanding of the risks to which they are exposed. These are presented in some detail in the *Impacts of climate change on settlements in the Western Port Region Climate Change Risks and Adaptation Report*

Deciding for the coast is the next step in the adaptation planning and implementation process. As a result of the risk identification, some councils ask for coastal hazards studies as preconditions for coastal development. The assessment of these studies and the implementation of the actions they recommend, with the associated balancing of social, environmental and economic factors, is problematic within the current expertise of local government, especially at a more strategic scale.

Optimal adaptation measures and the benefits of adaptation or the cost of inaction are rarely monetised and mainly expressed as the potential value of assets at risk in case of no adaptation. While a cost-benefit analysis will be of use in adaptation it will not provide a complete answer, especially if the costs and benefits are uncertain or occur a long time into the future. How do we decide what benefits and costs should be assessed? How do we assign value to them, especially if they are not expressed through markets? Over what time-scale are costs incurred or benefits realised? When should particular adaptation actions be implemented?

Coastal action plans based on responding to these and other questions can inform land-use planning for the coastal zone. **Deciding for the coast** aims to compile the comprehensive list of questions that are to be asked, it will generate the range of answers that are available to coastal planners and it will present decision-making pathway(s), supported by a range of tools to guide the decision-making through to implementing the selected adaptation option.

The planning tools to be considered include zoning capacities, the establishment of overlays, setting thresholds and trigger points beyond which actions might ensue, identifying when environmental, engineering or social responses should be considered, how coastal hazard assessments should be interpreted and used to inform the employment of tools as above. These tools will contribute to an effective decision-making process for use by councils in their adaptation actions.

The result will be a coordinated and integrated response to climate change threats and the establishment of consistent rules and regulations to manage future risk, not just at individual plot levels, but also at precinct, regional and landscape scale,

Project team and methodology development

A project team, to be convened and serviced by SECCCA and comprising planners, engineers and environment representatives of the four Western Port SECCCA member councils, will confirm the project brief, develop the project methodology and monitor its implementation. The project team will work with consultant Marsden Jacob Associates, with which SECCCA conducted *Impacts of Climate Change on Human Settlements in the Western Port Region: an Integrated Assessment*.

Selection of case studies

The project team will select case studies that exemplify the range of coastal impacts to which the four councils need to respond and the range of response options to address those impacts. Options are likely to range from engineering solutions, the nature of prescribed conditions attached to planning tools such as Section 173 Agreements and building community preparedness for considering the widest range of adaptation actions. A starting point for some of the case studies could be planning applications, including coastal hazards assessments that are before participating councils.

Assessment of options

Assessment will need to consider the full range of issues associated with adaptations options including:

- financial costs and benefits;
- implications of actions for natural values;
- social costs and benefits;
- technical and administrative feasibility;
- consistency with existing policy and planning frameworks;
- community acceptability;
- uncertainty associated with costs and benefits; and
- timing of response.

Criteria to assess options will be developed by the project team drawing on this list.

For each case study, the criteria will then be applied to assessing options, providing recommendations on how to manage the potential impacts and vulnerabilities associated with the issue.

Implementation plans

This will involve nesting the assessment process and recommendations within state planning provisions and developing the process for steering applications through the approval process within the relevant council. Having a number of councils involved will allow both generic and specific advice to be developed. The involvement of the decision-makers and the processes that they followed in each case would be made explicit and documented.

The implementation plans will then be applied to further case-studies to verify their applicability and to be analysed for the development of a decision-making pathway and the identification of appropriate trigger points that indicate when the process should be applied. The criteria to be used would be developed into a checklist with the available pathways that respond to specific aspects of the issue would be identified.

A series of community engagement workshops will be conducted at selected coastal venues to present proposed adaptation responses and gather community views. This will provide ground-testing for councils regarding their proposed actions. Further, state government would be invited to participate at relevant stages of the project to calibrate the work being conducted within local government for fit with state planning provisions and current and proposed work in the project Future Coasts, the Victorian Coastal Hazard Development Assessment and also Coastal Hazard Guidelines. This project will work within this stateside context to respond to the gap between specific local needs and these broad scale responses.

The output of the project would be a planning tool and decision pathway for use by coastal councils to enable robust decision-making with minimum environmental, economic and social cost.