

Coastal Climate Change Adaptation Planning for Councils

Module 3 Developing Adaptation Options



I. MODULE OVERVIEW

This module outlines the *developing adaptation options* phase of community-based coastal adaptation planning within council. The primary aim is to establish short (if required) and long-term adaptation options for the project area with involvement from the community.

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OBJECTIVES

- Determine short-term risk management options for the project area.
- Establish communication channels with the community in the project area about coastal adaptation planning.
- With the community, assess longer-term adaptation options and pathways and their associated costs and implications.



ACTIVITIES

- Presentation to elected council members.
- Hold a community workshop.



OUTPUTS

The outputs will be:

- an Interim Local Area Report containing the risk assessment work undertaken in Module 2
- a Final Local Area Report, which builds on the content provided in the interim report and also details the outcomes of the community workshop and recommended next steps for council.

2. DEVELOP SHORT-TERM RISK MANAGEMENT OPTIONS

If there are significant present-day risks identified during the risk analysis process, you should begin to consider short-term risk management options for the project area. Addressing present-day issues will most likely mean that the project area community will be more willing and able to think about options for future risks. A commitment to short-term works will help to allay anxiety about the immediate risks so that the longer-term conversation is more thoughtful.

The key to undertaking any short-term risk management actions for present day risks is to achieve short-term reductions in immediate risks with minimal cost. This is to ensure affordability and reversibility until a longer term approach can be agreed to.

INTERIM LOCAL AREA REPORT

The Interim Local Area Report (ILAR) will summarise the risk assessment work undertaken as part of Module 2: Risk Assessment, plus planning scheme review, cost of risk and value of risk analysis, as well as the assessment of possible adaptation pathways and options undertaken as part of this module.

The ILAR should comprehensively present the findings of these processes in easily-understood terms, including the maps generated, and tables demonstrating the number of public and private assets at risk and the associated cost of risk. The ILAR should clearly articulate at least two possible adaptation pathways (see below) for the project area to be discussed more broadly with the community. The findings contained in the ILAR should be presented to council senior management and elected members, and should form the basis of the presentation at the community workshop.

The presentation to elected council members should include an overview of how the community in the project area may adapt and plan for climate change, and should also introduce the key principles of community-based coastal adaptation planning, which are:

- developing risks need to be managed, and
- people cannot be subsidised to live in hazardous locations.

It is important to note with regard to the second principle that people may require, and should be allowed access to, assistance to adapt.

The presentation to elected council members should be used to confirm support for the project and the approach of the community workshop.

To assist in the development of the ILAR (including potential adaptation pathways) and the presentation to elected council members, the following examples and template are provided:

- Technical Adaptation Options List
- Example Interim Local Area Report
- Presentation on Interim Local Area Report template

www.dpac.tas.gov.au/divisions/climatechange/adapting/local_government/coastal_adaptation_planning/developing_adaptation_options/

3. DEVELOP LONGER-TERM ADAPTATION PATHWAYS

The community workshop is a forum in which to consider long-term adaptation options for your project area. Once the community members have had their say on the pros and cons of the potential adaptation pathways you will be able to generate the Final Local Area Report.

There are a broad range of options available when designing a long-term strategy to adapt to coastal risks from inundation and erosion. Some are suited to sea level rise – such as improving drainage or erecting flood barriers and seawalls – while others are better suited for adaptation to erosion – such as beach nourishment, artificial reefs and groynes. While some adaptation options may be complementary with each other, it is important to understand that some can potentially undermine the action of other options. For example, there is little value in building a sea wall if the plan is to retreat over time from a specific coastal hazard area. The effectiveness of adaptation options may also vary considerably depending on the location-specific effects of inundation and the physical features of the area (such as rocky or sandy coastline).

A preliminary assessment of adaptation options and the costs of executing them is useful to inform the community about the adaptation pathways available. Based on the identified coastal hazard for the project area, potential adaptation options should be identified that are consistent with the cost of risk. Consistent and reinforcing options are combined to form a potential pathway of short- and longer-term actions. These are then portrayed as different scenarios that describe how an area may change in future if this pathway is followed. The content of each scenario may be supported with photographs to illustrate how the area may physically change as a consequence of following a particular pathway. These scenarios should inform the content presented at the community workshop.

Past experience of community-based coastal adaptation planning has shown a strong desire among communities to protect existing properties and investment for as long as possible. It is wise, therefore, to consider longer-term adaptation options such as seawalls and coastal hardening, offshore breakwaters, and prohibiting development in areas where adaptation options may have an undesirable environmental impact.

It is also desirable to consider the interests of the wider community – not just local property owners and occupiers – who may place a significant value on recreation assets, boating, fishing, beaches or environmental assets. This wider perspective needs to be articulated and presented in considering alternative pathways and their implications.



COMMUNITY WORKSHOP

The aim of the community workshop is to inform residents of coastal hazards, their associated risks – both at present day and in the future under climate change projections – and to engage them in discussions about possible adaptation options and pathways for addressing the risks in both the short and longer terms. For these discussions short term might be considered as a 0–10 year timeframe and longer term considered as a 10–40+ year timeframe.

The community workshop should consist of two components:

- an introductory session to present the ILAR and discuss the possible ways that communities might adapt to the risks from coastal hazards in a changing climate;
- a series of interactive sessions to explore possible adaptation pathways. Pathways should be explored as a group, looking at the abovementioned timeframes and considering possible future scenarios under the pathways. Participants should be asked whether they think the pathway is plausible, achievable or preferred. They should also be asked what they think is required in order to achieve the pathway (for example, who will pay?).

The use of pathway planning is an effective method of introducing challenging and complex information to residents who may be directly affected by coastal hazards. It is important to note that the future scenarios considered as part of the pathways are not predictions, plans or recommendations – they are used to allow residents to question and explore the possibilities of various situations and outcomes. At the outset, it should be explained that no particular pathway has the support of council and that they are simply methods of exploring possible futures (scenarios) using different compatible combinations of adaptation options, in some cases rolling out over time for the project area.

When planning for the community workshop it is important to consider the timing of the event (i.e. weekend versus weekday/night) and the location – ideally the workshop should be held at a public venue within the project area.

FINAL LOCAL AREA REPORT

The Final Local Area Report (FLAR) builds on the ILAR, but also contains analysis of the community workshop, including the preferred adaptation pathway for the community, and their thoughts on how the pathway might work. The FLAR should also include a discussion on the next steps for council, with a focus on the long-term strategic approach to community-based coastal adaptation planning. This would ideally include reference to any further technical work that might be required and funding issues and/or allocations.

To assist in the development of the FLAR, please refer to the [Example Final Local Area Report](http://www.dpac.tas.gov.au/divisions/climatechange/adapting/local_government/coastal_adaptation_planning/developing_adaptation_options/). www.dpac.tas.gov.au/divisions/climatechange/adapting/local_government/coastal_adaptation_planning/developing_adaptation_options/

As per the ILAR, the findings contained in the FLAR should be presented to council senior management and elected members. For this presentation you will provide a refresher on the ILAR findings and then provide an overview of the key outcomes from the community workshop. To assist you prepare the presentation, please refer to the [Presentation on Final Local Area Report template](http://www.dpac.tas.gov.au/divisions/climatechange/adapting/local_government/coastal_adaptation_planning/developing_adaptation_options/). www.dpac.tas.gov.au/divisions/climatechange/adapting/local_government/coastal_adaptation_planning/developing_adaptation_options/

Briefing sessions should then be held with council elected members to report on the attendance and participation of the public forums, and to discuss any short-term actions that are required to investigate the feasibility of the preferred scenario, bearing in mind that it may require a detailed technical assessment of viability.



4. MODULE CHECKLIST

- Completed preliminary assessment of potential adaptation options, including their viability and cost
- Produced Interim Local Area Report
- Delivered presentation to senior management
- Held community workshop
- Produced Final Local Area Report



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