



The adaptation process

Coastal Climate Adaptation Decision Support (C-CADS)

Step 5: Take action

This step focuses on implementing adaptation plans. This includes overcoming barriers, implementing actions in a realistic sequence, obtaining funding, building partnerships, and ensuring engagement takes place throughout. It is also important to ensure funding is available for any maintenance that is required over the lifespan of actions. Evaluating your plan is essential.

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At a glance

This step of C-CADS focuses on implementing the adaptation plan that you have developed.

Your plan should be flexible to enable adaptation actions to be modified in response to changing conditions.

Stakeholders need to be aware of any changes to the plan and need to be involved in decision-making and implementation.

Certain actions can proceed directly from the plan if they have immediate and long term benefits (no regrets), and are already funded (or fundable) through existing mechanisms. Other actions may be more challenging to enact as they may require further consideration, detailed design, more effort to facilitate community understanding or buy-in, or specific business plans.

Other actions may be expensive to implement: consideration needs to be given to obtaining finance and to building the necessary partnerships to achieve outcomes.

To implement the plan, you need to make sure that you consider requirements and costs associated with maintenance.

You need to consider barriers that may affect implementation and how these can be addressed.

Main text

Purpose

In this step you will implement your Adaptation Plan. You will:

- continue to consider the sequence of actions that is required to achieve your outcomes (what should be done and when?)
- consider attracting funds or finance for actions
- develop collaborations and partnerships to support implementation.

This step of C-CADS focuses on

Introduction

implementing the adaptation plan that you have developed. Having achieved high-level organisation support and the resources necessary to implement your plan, you are in a good position to take the initial steps. It is important however that you realise that there are no guarantees that actions will be able to be delivered in the sequence that is outlined in your plan, and that the level of support may vary depending on available budgets and resources. Your plan should have been designed to be flexible to enable changes to be made in response to changing information, conditions and thresholds. It is important to recognise that changes made for the wrong reasons may be potentially maladaptive and should be avoided. Stakeholders should be aware of any changes to the plan and should be involved in decision-making and in implementation.

Certain actions in the plan will be easy to implement as they have immediate and long term benefits (no regrets) and are already funded (or fundable) through existing mechanisms. Others may be more challenging to enact as they may require further consideration, detailed design, or more effort to facilitate community understanding or buy-in. Other actions may be expensive to implement and so you need to consider how to obtain finance and to build the necessary partnerships to achieve outcomes.

Most organisations have excellent experience and capacity in delivering a variety of strategic and management plans that fit the needs of their organisation; yet there are many examples of adaptation plans which are implemented inappropriately, or not at all. Research to determine the barriers to implementation identified lack of leadership and resources, poor access to or no availability of information and knowledge. Lack of communication and engagement within and outside of organisations has also been an issue. Adaptation plans should include consideration of potential or actual barriers to action or implementation and how they can be addressed.

In this section, we provide information that will help you to implement your plan. Adaptation action requires funding and financing of options (and their maintenance long-term), and can be done more effectively by building partnerships. We provide information on each of these aspects.

What do I need to do and when? (sequencing your actions)

Your adaptation implementation plan should be fit for purpose. It can include high-level strategic plans and these tend to include a broad range of actions but will not include their detailed design. They will also not include comprehensive engagement plans or other such 'tools' that support implementation of various options. On the other hand, if required, your implementation plan, project plan or investment case could be very detailed and specific and can include design and steps for implementing a defined adaptation option. For example, say you need to stabilise dunes and prevent further erosion, your plan would include detailed engineering design of the proposed works, engagement strategy with relevant stakeholders, arrangement of funding and so on. The choice of the granularity of your plan depends on your circumstances, such as the resources and time available for the exercise, urgency of the issue and more.



Whatever the level of detail included in your plan, it will provide a sequence of different activities you will implement. This sequence of activities will be linked to thresholds or indicators that require monitoring. Monitoring thresholds of indicators will provide signals that trigger actions, an essential component of implementing your adaptation plan.

It is recommended that you consider thresholds for when to re-assess your planned actions rather than automatically implementing them. This enables you to investigate whether new approaches or technologies have become available, whether your selected option is still appropriate and feasible given the trajectory of the change in climate or the effect of climate change. CoastAdapt provides detailed guidelines on [Monitoring and evaluation](#) of adaptation activities highlighting the M&E rationale, how to select indicators and thresholds that needs to be monitored, how to gather data and eventually use them to make decisions.

It is possible that certain thresholds will not be reached for long periods and actions may not be required for some time. In this case your plan will have certain pre-specified review points for when to consider or incorporate new information about climate change, changing

demographics, adaptation methods, or other new relevant information. Remember, any major changes to your plan should be transparent to your stakeholders.

Maintaining stakeholder and community buy-in

During the implementation of your plan, it is essential to establish and maintain continual engagement with your stakeholders and community and to seek buy-in for individual actions. It may not be challenging to get 'approval' for no-regrets or existing actions. However other adaptation options, particularly those which affect the status quo, or which are controversial (such as sea walls or retreat), may cause concern and could require considerable and sustained engagement (and sufficient commitment of resources) over a long period of time to ensure affected communities (not just affected individuals) are accepting of the need for (and type of) action.

Continuous and effective engagement with stakeholders and community should mean there are few surprises, there are constructive relationships established, and that stakeholders and community are more open to any changes that may result from adaptation. The community and its aspirations may change over time which is why it is important to engage regularly as you move forward.

A good idea is to work closely with any committees you formed to support the development of the plan. These committees can help to bring people together and can help to drive the plan's momentum. With the change from planning to implementation, you may wish to think about the composition of committees and ensure that the range of skills and the stakeholders involved remain appropriate for achieving the most effective outcomes. Further guidance on community engagement is available in the CoastAdapt [Information Manual 9: Community Engagement](#).



Funding and financing mechanisms for implementing adaptation plans and actions

Implementing adaptation plans can be resource intensive. In previous steps, while evaluating and selecting your adaptation options, you estimated implementation costs of an adaptation action and, in some cases, may also have indicated possible sources of financing or funding. It is useful to consider these even before deciding on the particular details of planned actions (such as staging components). At this stage you should investigate whether funding or financing is secured for implementation and, if not, what is required to do so? Many no-regrets actions—particularly those identified in existing plans or linked to high priority outcomes—generally will be easier to fund. Actions that are expensive, complex, controversial, or that may only realise benefits in the longer term, are likely to present additional challenges to achieving outcomes.

What is the difference between funding and financing?

'Financing' and 'funding' are terms that are often used interchangeably but they are not exactly the same. Implementing adaptation initiatives requires immediate human and financial resources, while the benefits that justify those costs accrue over longer time periods. This is not a new dilemma for governments and traditionally the costs of projects, with long-term paybacks, are met by expending taxation revenue.

- **Funding:** money available to spend, which may or may not be subject to an agreement. For local governments this covers taxation, user-charges and grants, etc.
- **Financing:** money available on the basis of an agreement with the expectation to be repaid via funding (often with interest, usually provided by an external entity (e.g. financial intermediary).

Increasing public, but particularly private sector, engagement to finance adaptation seems to be viable and is arguably a necessary exercise. Therefore the question is, to what extent can financing mechanisms assist with the implementation of adaptation needs and how?

Examples of finance mechanisms in action

There are limited examples of finance mechanisms for climate change adaptation projects; most existing financing mechanisms are not aimed at financing adaptation (with the exception of resilience bonds, an emerging, potential finance mechanism to enhance community resilience to



climate change and other stresses). However, various mechanisms that are currently used to fund mainstream (non-adaptation) projects could also be used to finance adaptation. This is because, when structured as a project, the characteristics of some adaptation initiatives are similar to (non-adaptation) projects financed by the private sector in many ways. For instance, large adaptation infrastructure projects resemble green infrastructure projects from a financiers' perspective.

Engaging with financiers

One way to engage in meaningful conversation with financiers is to highlight the features of adaptation initiatives in a way that makes sense to financiers. Table 1 shows what those features may include—but keep in mind that it may not be possible to identify all the features in detail, particularly if planning is at an early stage (which is arguably the best time to approach potential financiers).

Table 2 shows the various finance mechanisms that exist in Australia and around the world that have been, or could be, used to finance adaptation. These mechanisms have been selected because they either i) specify adaptation in their mandate (such as green and climate bonds) or ii) have been used to finance adaptation projects in past, or iii) are currently used to finance mitigation projects only, but could potentially be easily expanded to also apply to adaptation. Table 2 briefly describes the usual type of activities linked to financing mechanisms and outlines the limitations of these instruments. For instance, green bonds/climate bonds or municipal bonds only suit large-scale projects (or bundles of projects) over a longer (project and investment) timeframe. It is then possible to pair adaptation initiatives (based on features relevant to financing in Table 1) with certain finance mechanisms (Table 2).

Despite the wide range of possible finance mechanisms showcased, it is likely that many adaptation initiatives may not be suitable for financing at all. Note that government funding is likely to be required for many adaptation projects and that even where finance mechanisms are available the finance will still have to be funded. Further information can be obtained from [Financial resources](#) and the [Role of insurance](#).

Table 1: Key features of adaptation projects/initiatives from a financing perspective. Source: Balhalmi-Zakar et al. 2016

Feature	Spectrum		
Size/capital requirement	Small	Medium	Large
Lifespan of project/initiative	Short-term	Medium-term	Long-term
Physicality	Soft measure/initiative (e.g. plan, community capacity building etc.)	Scheme (e.g. partnership)	Concrete structure
Discreteness	Part of new structure	Upgrading existing structure	New stand alone investment
Beneficiaries	Single/few companies/individuals	Some (countable)	Many/wider community
Financial return	Unable to generate	Able to generate/unable to distinguish/quantify	Calculable and demonstrable
Return on investment timescale	Short-term	Medium-term	Long-term
Risk reduction	Difficult to demonstrate risk reduction	Small scale risk reduction compared to overall project/business	Demonstrated ability to reduce substantial risk
Insurability	Uninsurable	Partly insurable	Insurable

Table 2: Key features of adaptation projects/initiatives from a financing perspective. Source: Balhalmi-Zakar et al. 2016

Finance mechanism	Main features	Used in Australia?	Used elsewhere?
Green Bonds/ Climate Bonds	Targets energy efficiency projects	No (but issued by Australian financial institutions)	Yes for mitigation (renewable energy including possible adaptation/resilience)
Municipal Bonds	Issued by a municipality or state to finance capital and operating costs, usually tax exempt	Not as such (only public bonds with no tax free incentive)	Yes, particularly US including resilience
Catastrophe (CAT) Bonds	Issued by insurance company, short-time frame (3 yrs). No payment if catastrophe occurs	No	Yes
Resilience Bonds	Linked to CAT Bonds but "proceeds" must be used for resilience	No (not yet)	No (not yet)
Corporate Bonds	A bond issued by private corporations which may be "green/climate bonds"	Yes, for mitigation (renewable energy)	Yes
Green revolving funds	Internal fund of an organisation used for sustainability purposes. Can even be used to finance capital works	Yes, but usually not for climate change	Yes
Corporate financing	Balance sheet based finance (typical)	Yes	Yes

Maintenance of adaptation actions

Funding/financing is often focussed on implementing a specific action and then any required maintenance costs are covered through other avenues within the organisation. If these costs are not considered from the outset, there is potential that there may be insufficient funds available resulting in problems arising in the future. While evaluating your options in the previous step, you may have considered required maintenance costs and may also have identified which areas of your organisation are responsible for such costs.

Building partnerships for action (working with others)

The effects of climate change and resultant adaptation may not be straight forward and are likely to occur at scales at odds with those that are currently considered in planning and management (e.g. local government boundaries). Therefore, it can be useful to build partnerships with organisations that have similar interests and challenges in terms of climate change adaptation. Such partnerships across sectors and across political boundaries can introduce a regional perspective to decision-making and help prevent maladaptation. Collaboration can also support adaptation through sharing of resources, costs and risks. Additionally, collaboration between organisations can also support collection of data to enable understanding and/or monitoring of climate risk or generation of new knowledge to support adaptation through research and so on.



It is important that opportunities for collaboration are considered in implementing your adaptation plan. Collaboration between government and the private sector can result in access to and use of good information and guidance and opportunities for financing such as the development of public-private partnerships. For more information see [Partnerships for adaptation](#). We also provide a case study on [The SCCG experience](#).

Collaboration can result in adaptation actions being taken at the scale of the issue rather than at the scale of governance. Innovative arrangements such as working with local academics can help with gathering data, leveraging funds for research, and undertaking monitoring and evaluation. Similarly opportunities for working with community groups can help monitoring and also support community engagement (see [Information Manual 9: Community Engagement](#)).

Checklist for Step 5 of C-CADS

Key considerations in the *Take action* step

Yes

Are you following and testing your sequence of actions/adaptation pathway, and regularly considering what actions are required at particular thresholds?

Are the timeframes and triggers for each action clear and agreed in your organisation?

Have you identified barriers that may be preventing you from taking adaptation action?

Have you considered the costs associated with each action and identified funding and financing mechanisms for actions

Have you considered and accessed funding for maintenance of actions?

Are you continuing your engagement with stakeholders to ensure buy-in and support?

Have you developed partnerships with appropriate stakeholders to help with cost effectiveness of options and to ensure that adaptation actions are being implemented at the right scales?

Critical Success Factors

- On-ground actions implemented as pre-identified thresholds are reached
- Engaged and informed stakeholders
- Options supported and funded/financed
- Good structures and processes in place for partnerships and collaboration.

Next Steps

- Determining whether thresholds have been reached to stimulate implementation of additional actions
- Measuring and evaluating the performance of actions in the short, medium and long term
- Reporting to internal and external stakeholders
- Establishing a framework to support ongoing changes to the Adaptation Plan during the next cycle.

Step 6 - Monitor, evaluate and review

Source material

hide 

Banhalmi-Zakar, Z., Ware, D., Edwards, I., Kelly, K., Becken, S., and Cox, R., 2016: Mechanisms to finance climate change adaptation in Australia. National Climate Change Adaptation Research Facility, Gold Coast. https://www.nccarf.edu.au/sites/default/files/tool_downloads/Finance%20Report%20Final.pdf

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