



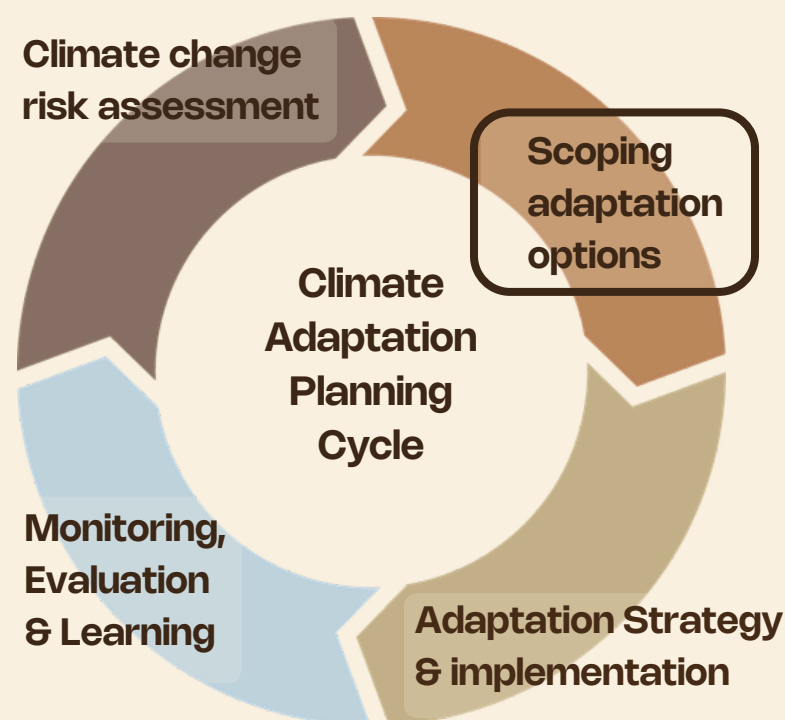
Exchange Commentary

Scoping Adaptation Options

Key Messages

- It is important to take the scoping, appraisal and timing of specific adaptation options seriously. This starts with honouring this part of the adaptation planning cycle as a distinct step and investing meaningful time for it.
- There are many considerations, path-dependencies and approaches for determining adaptation options that are context-appropriate.
- Justice considerations must be built into every step of option scoping; this begins by including others in the adaptation planning cycle from the start.

The Learning Exchange series and its corresponding Exchange Commentaries follow a Climate Adaptation Planning Cycle. This commentary dives into the intricacies of Scoping Adaptation Options.



Snapshot

Adapting well to climate change relies on careful analysis, appraisal and scheduling of possible adaptation actions. Various approaches to these tasks exist and they all have pros and cons. While a broad initial scope of possible adaptations is useful, for pragmatic and ethical reasons these generally need to be prioritised and streamlined into a smaller set of actions. These two stages of adaptation planning – opening up and then closing down potential adaptation options – raise numerous justice, equity and inclusion considerations. So too do decisions about which adaptation actions and processes to tackle and when. For all of these steps, involving stakeholders in generating, evaluating and prioritising adaptation actions is vital if a comprehensive, appropriate and realistic approach to adaptation is to be identified.

This Exchange Commentary provides an overview of these points, complemented by practical insights from practitioners and researchers grappling with the challenges involved.

Acknowledgement of Country



The Climate Change Exchange brings together scholars, practitioners, and policy-makers who are thinking, working, and acting towards justice and sustainability in a warming world. We therefore acknowledge that we live, work, and learn on Aboriginal land and that sovereignty was never ceded. We pay respect to all Aboriginal and Torres Strait Islander peoples and their Ancestors, and to all Traditional Owners and Custodians of all lands and waters with which we live, work, and learn. Through the Exchange, we invite conversations and work that seek to honour our reciprocal obligations to Country and each other.



Introduction

In the adaptation planning cycle, the steps between identifying the risks and then implementing adaptation actions tend to be glossed over, but they are complex and crucial.

'Determining how adaptation options are created, chosen, and implemented is a crucial step'
Woods et al. (2022: 464)

These steps – scoping, selecting and sequencing adaptation actions – involve balancing, on the one hand, imagination and aspirations and, on the other hand, pragmatic realities and the pressure for practical action.

The sections below highlight some important questions through each phase of adaptation planning with a focus on how we can conceptualise and consider justice and equity concerns at each step.

Phase	Justice questions
Problem framing & purpose setting	What values are guiding the adaptation process? Who is shaping these values?
Risk & vulnerability analysis	How are differential risk, causal factors and diverse knowledges shaping understandings of risk?
Option scoping	How can we design a process that is inclusive and builds legitimacy and accountability in the work?
Option appraisal	How are we considering the absolute and relative characteristics of options, exclusion criteria and fair trade-offs?
Sequencing and timing	Do adaptation choices lock-in/lock-out certain futures or recognise people's differential capacity?
Implementation, monitoring, review of adaptations	How are we monitoring, reviewing and learning? Is our process transparent, accountable and responsive to maladaptations?

Scoping adaptation possibilities

What counts as valid adaptation in a given context depends on how adaptation success is framed and what those involved are trying to achieve. How broadly adaptation is scoped, how it is oriented, depends on the starting point.

In current practice, three main starting points are evident. In the first one, adaptation options stem directly and linearly from a climate change risk assessment. In the second, cross-cutting, underlying factors are tackled, notably systemic vulnerabilities (e.g. economic inequalities, habitat loss). In the third one, adaptation is designed to manage uncertainty and enhance resilience.






Complementary approaches to generating adaptation options

Approach	Strengths	Limitations	Example
<p>Adaptations systematically address the climate change risks identified in a risk assessment Systematic risk-to-response mapping</p>	<ul style="list-style-type: none"> • Adaptation addresses all identified climate change risks • Highlights the role of exposure to changing hazards 	<ul style="list-style-type: none"> • Can be laborious • Relies entirely on the quality of the risk assessment • Can limit adaptation options 	Classic corporate risk matrix
<p>Adaptations address risk drivers (underlying causes) Adaptations tackle known risk factors (notably non-climatic, contextual vulnerabilities)</p>	<ul style="list-style-type: none"> • Can be systemic, efficient • Adaptations are not dependent on specific climatic changes • Can generate significant co-benefits • Can illuminate 'soft' adaptations 	<ul style="list-style-type: none"> • Can be conceptually complex • Can gloss over the need to address hazards, notably how many are partly generated by non-climatic human actions (e.g. land management) 	<p>Community sector e.g. ARC Justice, tackles systemic disadvantage</p> <p>Adaptation in nature conservation often strongly focuses on reducing human pressures (e.g. habitat loss)</p>
<p>Adaptations address uncertainties and enhance resilience Acknowledge some risks are unknown and unknowable Builds systemic flexibility and resilience through capacity building and learning</p>	<ul style="list-style-type: none"> • Supports broad, critical, long-term visions, planning and 'soft' adaptations (e.g. paradigm shifts) • Can stimulate imagination and encompass different knowledges • Can generate significant co-benefits including learning • Can reduce exposure to gaps and mistakes in risk assessments 	<ul style="list-style-type: none"> • Can be conceptually complex • Can require sophisticated analysis, support and long-term commitment 	Finland's National Adaptation Plan is centred on the vision of "Wellbeing, safety and security in a changing climate". It is complemented by a National Security Strategy centred on a vision of comprehensive, collaborative security and resilience.



Which adaptations are considered reflects who has a say. As with other change initiatives, adaptations are more likely to succeed if stakeholders are involved in selecting and co-designing them. Not only does this help generate buy-in, it helps to identify what is needed to enable a given adaptation. In particular, adaptations that demand substantial effort from other groups (e.g. local government, community members) need to be accompanied by appropriate support and resourcing (Rickards et al. 2025).



Whose solutions are on the table?

-  Are affected groups involved in defining adaptation options, not just reviewing them?
-  Are enabling options included (changes to governance, services, social support)?
-  Are community-led and Indigenous-led options explored, including the changes required to enable them?



Red flags

-  Pre-defined option lists
-  Participation limited to consultation






Prioritising and selecting adaptation options

Common tools

-  Cost-Benefit Analysis
-  Multi-Criteria Analysis

Common foci






-  Individual options
-  Set of desired options
-  Final set and sequence of chosen options

Once a long list of possible adaptation options has been considered, the task is to prioritise them. Such prioritisation will only become more important as climate change constrains available time, energy and resources.



In the process of choosing which adaptations to pursue, stakeholder involvement is especially important. Also important are transparent criteria for the prioritisation (e.g. adaptations that tackle the most serious risks, or the needs of the most vulnerable groups; adaptations that generate co-benefits including learning; adaptations that reduce the risk of maladaptation; adaptations that meet pragmatic considerations such as high visibility, low up-front costs or high benefit to cost ratios over time). Common tools such as Cost-Benefit Analysis tend to exclude many valid considerations (e.g. non-economic costs) and include many assumptions (e.g. discounted future values) so need to be used cautiously in adaptation work.

Besides using criteria to select individual adaptation options, justice frameworks can be used to help select a portfolio or bundled package of adaptation options that meet the needs of a wide range of groups.

Are we choosing fairly, not just efficiently?

-  Do any options violate people's rights or dignity, and are these therefore excluded?
-  Are options assessed on **who** wins and loses, not only net benefits?
-  Are distributional impacts including residual risk explicit?
-  Are justice criteria (equity, vulnerability reduction, group's priorities) weighted transparently?
-  Are trade-offs discussed openly with affected groups?

Red flags





-  Single "optimal" option presented as rational
-  Equity discussed only qualitatively or as side concern





Sequencing adaptations

In addition to (or instead of) what adaptations to pursue is the question of when to do what. In some cases, more substantial adaptations can be postponed to the future. For example, Adaptation Pathways approaches set out triggers for making progressively larger changes, such as retreat from a coastline as sea levels rise. However, some substantial adaptations (e.g. new infrastructure) have long lead times and so need to be started well in advance of climate-driven urgency and some (e.g. changing land use planning, reducing poverty) are already urgent. Any adaptation that is delayed means that the associated risks are left unaddressed, potentially deepening inequalities.

What futures are we locking in?

-  Does the option preserve future choices and avoid unjust lock-in?
-  Are near-term and long-term justice impacts considered together?
-  Does the pathway rely on vulnerable groups carrying interim risks or losses?
-  If incremental action entrenches injustice, is transformational change considered instead?

Red flags

-  Short-term fixes that normalise long-term harm
-  Assumed future adaptation capacity





Learning from Experience

The Climate Change Exchange held a second **Learning Exchange** on Scoping Adaptation Options in April 2026, where we heard rich perspectives across community, local government and academic research.



Acknowledgement

Thank you to all those who participated in the Scoping Adaptation Options webinar and shared their insights. Thank you in particular to our panellists: Rachel Bucknall (Wyndham Park Community Centre), Cara Horner (Western Alliance for Greenhouse Action) & Annah Piggott-McKellar (Queensland University of Technology).

Current Experience



Risk assessment processes often generate a large volume of risks and potential actions, requiring consolidation into more strategic groupings.



There is a shift from purely analytical approaches to adopting structured methods like adaptation pathways that can integrate collaborative approaches, lived experience, local knowledge and strengths-based thinking.



Effective approaches emphasise shared understanding, relationship-building and capability development (“moving slow to move fast”) starting small while thinking long-term, building confidence, ownership and momentum.

Practical challenges



Large numbers of risks and actions create difficulty for decision-makers, especially under constrained budgets and resources including limited time and staff capacities.



Managing complexity, lack of clarity on triggers for action, sustained participatory processes and lack of standardised tools or guidance.



Implementation challenges involved in embedding actions into business plans and accountability structures and ensuring clear ownership, ongoing monitoring and investment in data gathering, analysis and learning.

Opportunities



Building capabilities and embedding adaptation into existing systems (business plans, contracts, governance) strengthens decision-making and accountability with clear trigger points and monitoring roles.



Participatory, strengths-based approaches unlock community knowledge, build ownership and lead to more equitable and locally relevant outcomes.



Momentum and agency can be sustained through well-designed processes with participants motivated to implement and even initiate their own plans.



Stories from practice

Cara Horner (WAGA) on her experience with Climate Risk Assessments at the City of Whittlesea:

Drawing on her experience leading a climate change risk assessment at the City of Whittlesea in 2020, Cara Horner reflected on the challenge of turning extensive climate risk information into practical and prioritised action within constrained budgets and competing organisational demands. Through an adaptation pathways trial and a series of optioneering workshops, staff were able to explore risks, opportunities and trigger points in a more manageable and strategic way. As she noted, "it's easy for those in charge to give up and say it's too hard when faced with a barrage of adaptation actions", highlighting the importance of breaking complex work into achievable stages. Key insights included the value of involving decision-makers early, embedding actions into business planning and accountability processes and using strong evidence and data to support investment and long-term implementation.

Rachel Bucknall (Wyndham Park Community Centre) on her experience with Resilience in House across Melbourne's West:

Drawing on her work coordinating the Resilience In-House program with Neighbourhood Houses across Melbourne's West, Rachel highlighted the importance of participatory, strengths-based approaches to climate adaptation that build relationships, trust and community agency over time. Through collaborative workshops, communities identify local risks, existing strengths and practical opportunities for action. A key principle underpinning the work is "moving slow to move fast", expressed as creating space for people to build confidence, shared understanding and momentum. Rachel also reflected on the challenges of sustaining participation in under-resourced community settings, while emphasising that communities already hold deep wisdom and often leave these processes energised and motivated to be part of the solution.

Concluding reflections

Scoping, selecting and sequencing adaptation options is sometimes glossed over, but it is not easy!

These processes require working and learning with others. As such, they can be a productive opportunity to build social connections and mutual understanding.



**The Climate
Change Exchange**



Contact us:

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The Climate Change Exchange exists to bring together research, policy and practice to build our collective capacity to create inclusive, just and transformative adaptation futures.

We create spaces for people to connect, grow their understanding and act to transform systems through building relationships and practicing adaptation together.

We focus on:



Strengthening the capability of organisations and communities to plan for, manage and recover from the impacts of climate change.



Increasing the use of relevant research to inform just adaptation planning.



Building a collaborative network of researchers and practitioners to share and promote innovative thinking and good practice in climate change adaptation.



Further reading

- Anhalt–Depies, C.M. et al. (2016) Understanding Climate Adaptation on Public Lands in the Upper Midwest: Implications for Monitoring and Tracking Progress. *Environmental Management* 57, 987–997.
- Haasnoot, M. et al. (2024) Lessons from a decade of adaptive pathways studies for climate adaptation. *Global Environmental Change* 88, 102907.
- Rickards, L. et al. (2025) Governance Technical Report : A technical report for the National Climate Risk Assessment. National Climate Risk Assessment. Australian Climate Service, Canberra.
- Woods, P.J. et al. (2022) A review of adaptation options in fisheries management to support resilience and transition under socio-ecological change. *ICES Journal of Marine Science* 79, 463–479.

Other resources

- Use of Multi-Criteria Analysis of Climate Change Adaptation Options for Whitsundays Regional Council
- https://mission-adaptation-portal.ec.europa.eu/index_en



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