



The NRM Adaptation Checklist: Supporting climate adaptation planning and decision making for regional NRM

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Image: River, by L Gener, SA MDB



ADAPT NRM

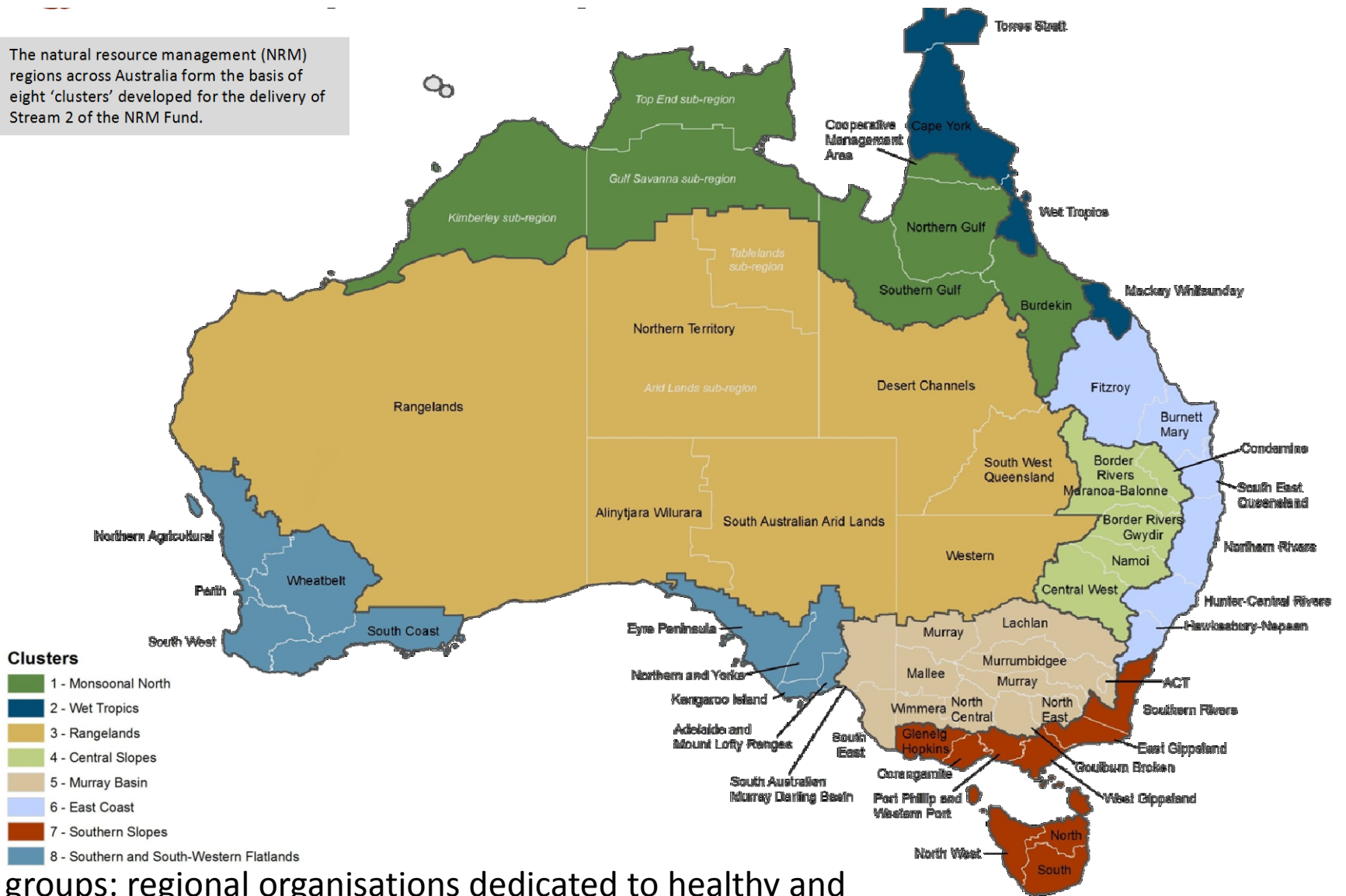


Background

- Australian government invested \$43.9M to improve regional planning for climate change
- 53 regional natural resource management organisations updating existing plans
- Climate projections, climate change information and guidance to support update of plans



The natural resource management (NRM) regions across Australia form the basis of eight 'clusters' developed for the delivery of Stream 2 of the NRM Fund.



NRM groups: regional organisations dedicated to healthy and productive country, viable communities and sustainable industries. Tackle problems at the landscape scale.

AdaptNRM

A national project
.....delivering
adaptation
information at
a national
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Web and
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guides



www.adaptnrm.csiro.au/

Adaptation Planning

- Existing plans - a range of approaches with different levels of sophistication.
- Generally are based around adaptive management, risk frameworks, resilience frameworks.
- Many of the actions are appropriate for climate change. BUT there is a need for assessing plans and approaches with a **climate adaptation lens**.
- Enable self assessment, reflection and improvement.
- Take an enabling approach. Cannot solve all issues immediately and in one guide. Assist groups to start the (long) journey.

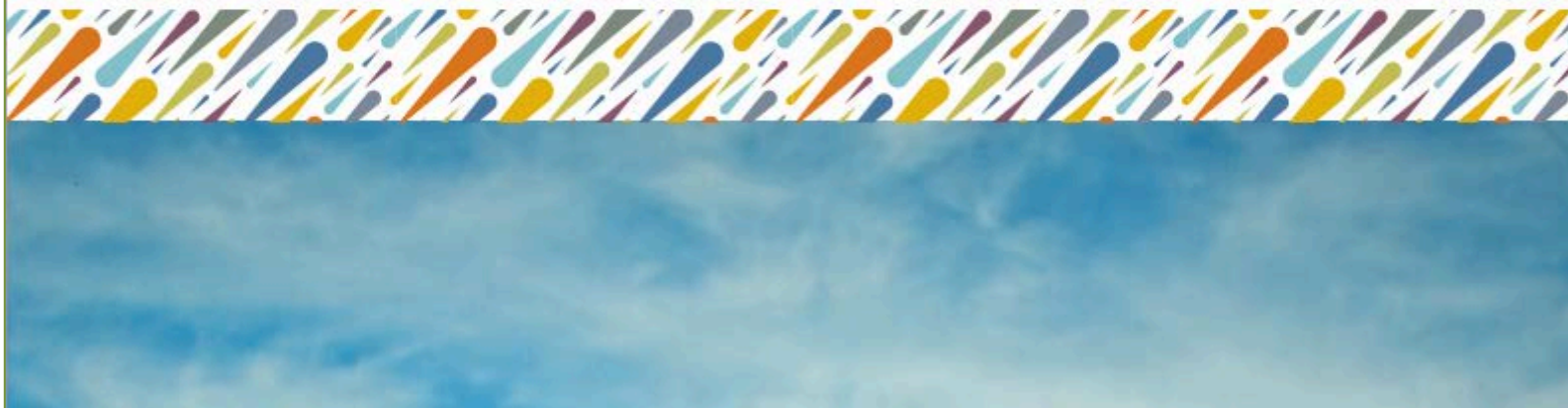




The NRM Adaptation Checklist

Supporting climate adaption planning
and decision making for Regional NRM

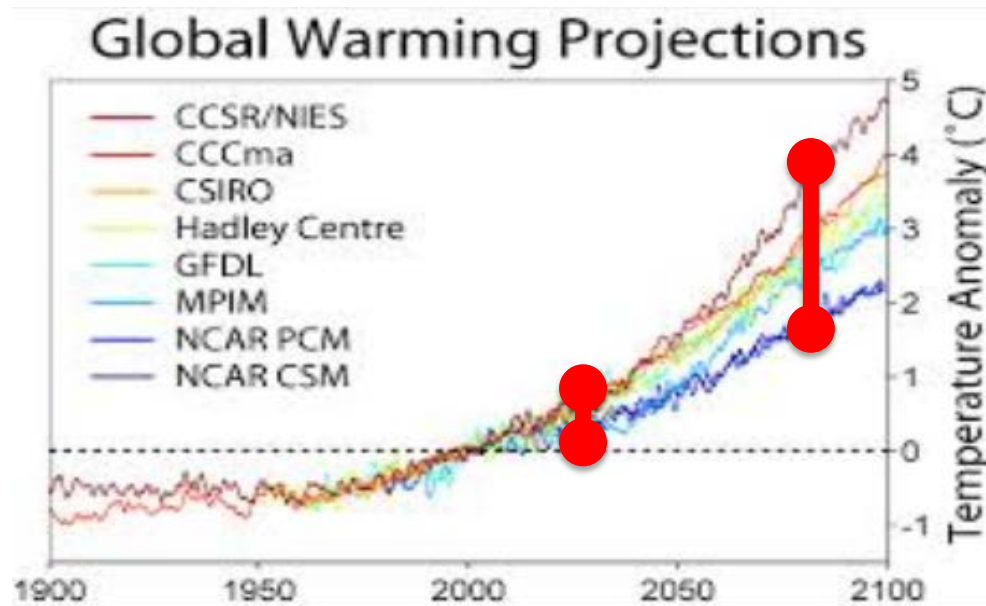
TECHNICAL GUIDE by Dave Rissik, Sarah Boulter, Veronica Doerr,
Nadine Marshall, Alistair Hobday and Lilly Lim-Camacho



Four key challenges

What makes adapting to climate change unique?

Making decisions for multiple possible futures



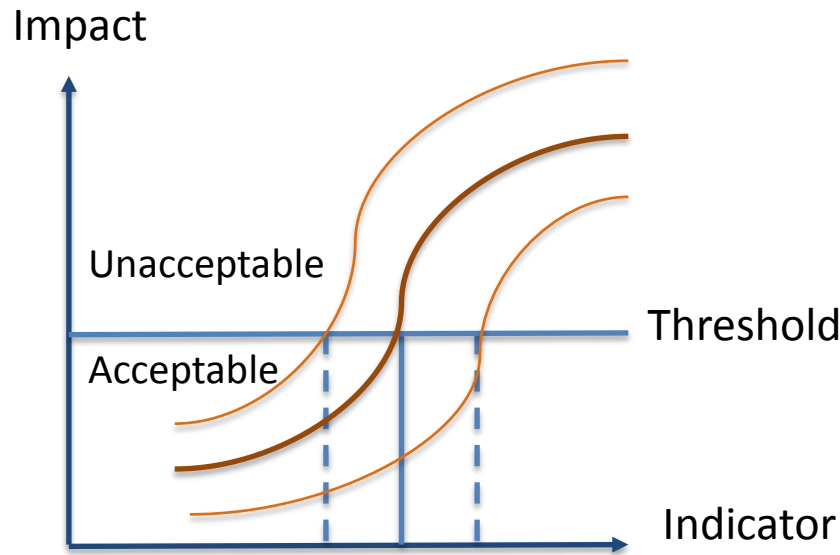
- NRM planners must find ways to plan that are consistent with a range of possible futures and desired outcomes.
- Involves uncertainty – but this does not have to be a barrier.

Employing flexible and adaptive planning processes

- New information will continue to emerge (climates, consequences, best practice).
- Plans must be flexible and allow for rapid change where/when necessary



Explicitly identifying and preparing for likely future decisions



- Plans need to enable us to make future decisions, and to distinguish between what decisions need to be made now versus those that can be made later.
- Identifying and monitoring triggers for new decision
- Gathering new information to support future decision making

Strengthening the adaptive capacity of people and organisations



- People and organisations manage or depend on natural resources.
- Successful planning and implementation depends on the capacity of people to be flexible and adaptive.

Planning Framework



Why might reflection need to be different?

- to reflect on success in terms of avoiding undesirable futures (rather than progress toward a single, desirable future)
- to decide whether it is time to address decisions that were previously delayed
- to reflect on adaptive capacity and ownership of the plan by your community

Why might assessment need to be different?

- to assess potential futures, not just current state
- to empower the community early in the planning process & build their capacity
- to effectively manage increasing quantities of information

Why might strategic planning need to be different?

- to plan for multiple possible futures
- to incorporate longer-term decision-making with short-term flexibility
- to facilitate solutions at a greater range of scales, especially larger cross-border scales
- to foster adaptive capacity through innovation and creativity

Why might implementation planning and action need to be different?

- to plan actions that are appropriate for multiple futures
- to consider different sequences of actions over time
- to explore the consequences of actions across domains to avoid perverse outcomes
- to build adaptive capacity through innovation, action and experimentation

Why might monitoring need to be different?

- to monitor which climate futures are eventuating
- to monitor trigger points for future decisions
- to more critically target monitoring of actions
- to build adaptive capacity through partnerships and helping people observe changes and success stories



Supporting self assessment

Key questions

Supporting self assessment

Key questions

- Why is the key question important?
- What if we have limited resources?
- What are the risks if we don't follow the suggested approach?
- Answers range from strongly yes to no.
- We provide advice and links to resources that may be useful.

4.4.5 Do you explore potential partnerships for building monitoring programs?

Other organisations may already collect data that can be built upon to develop an appropriate monitoring program with minor modifications or additions. Data collected may prove to be a sufficient surrogate for information needed to inform your plan. Furthermore, performing monitoring in partnerships, including with the community, can further foster a strong sense of engagement, connect people directly with climate change and the benefits of adaptation, and increase adaptive capacity.

Have limited resources? Building partnerships will involve some investment of time to discover and foster relationships. Consider existing contacts and what benefits might be derived for these potential partners and therefore their willingness to drive the building of the partnership.

Risks of not doing this: Failing to capitalise on existing resources and potential partners means you may risk doubling-up on effort and wasting limited resources to collect information that can already be accessed. Failing to fully engage the community at this step (assuming they were more deeply engaged in the planning steps) carries the risk that they don't experience the successes of planning and thus lose faith and interest in participating in the climate adaptation planning process.

IF YOU ANSWERED YES

You are likely to be selecting monitoring options that achieve good outcomes, are cost effective and are seen to be important by stakeholders. You can now begin to reflect on what you are learning.

IF YOU ANSWERED NO

You may wish to take steps to determine which other organisations in your region are undertaking monitoring activities and build relationships with them. This can support discussions about shared funding and can result in real partnerships.

There are several renowned monitoring programs based on the efforts of partnerships. These include the Healthy Waterways Program in South East Queensland.

www.healthywaterways.org

Citizen science is an increasingly useful tool for getting your communities engaged in monitoring. While it's not without its drawbacks, the UK's Environmental Observation Framework recently released a guide to getting the most benefit from citizen science:

http://www.ceh.ac.uk/news/new_s_archive/documents/guidetocitizenscience_version2_interactivweb.pdf



Assessment *(6 questions)*

Assessment

- Do you understand the range of future climates over time for your region?
- Do you consider how both your natural and social systems are likely to be impacted by the likely range of future climates?
- Do you assess the capacity of your natural and social systems to absorb these impacts?
- Do you work with your communities to identify what they value in the context of future climates?
- Do you reflect on whether your broad objectives are still appropriate under future climates, and whether your existing management levers will still work under these changing futures?
- Do you use all of the above information to decide where to focus your more detailed climate-adaptation planning effort?

Strategic planning *(5 questions)*

Strategic
Planning

- Have you developed a climate-appropriate vision for your region?
- Do you check whether the principles and objectives underneath your vision are also climate-appropriate and whether they are consistent with each other?
- Does your plan include goals related to building adaptive capacity?
- Do you explicitly incorporate flexibility into either your plan or the plan review process?
- Do you try to ensure your plan and the plans of your stakeholders are consistent?

Implementation Planning and action (8 questions)

Implementation
Planning
& Action

Assessment

- Do you assess whether our current high priority targets and actions are still likely to be your top priorities under future climates?
- Do you use a creative brainstorming process involving community and stakeholders to identify potential actions you might take?
- Have you considered taking an 'adaptation pathways' approach - explicitly planning to switch actions over time?
- Do you consider implementing actions in such a way that they can be modified in the future?
- When deciding which actions to take, have you thought about using a decision-making approach that considers uncertainty and risk in addition to cost and effectiveness?
- Are your sub-strategies or implementation plans strongly coordinated across domains and scales?
- Do you deliberately implement multiple different actions to address a given objective in order to 'experiment' and see which is most effective?
- Do you partner with the community and your stakeholders in both developing implementation plans and taking action?

Strategy &
Priorities

Monitoring

Implementation
Planning

Monitoring *(5 questions)*

Monitoring

- Do you track emerging climate futures for your region?
- Do you monitor triggers for future decisions?
- Do you consider whether monitoring is likely to give you useful information about effectiveness of your actions given monitoring effort and time frames, and then implement monitoring only where it will be useful?
- Do you monitor changes in your region's adaptive capacity?
- Do you explore potential partnerships for building monitoring programs?

Reflection (*3 questions*)

Reflection

- Do you reflect on where you are among the range of possible futures for your region?
- Do you reflect on the processes that you followed in preparing a climate adapted NRM plan, not just the plan itself?
- Do you reflect on whether it's time to consider shifting actions, based not just on monitoring their effectiveness but also based on trigger points for future decisions?

Climate change adaption tools and resources for NRM

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ABOUT ADAPTNRM



adaptnrm.csiro.au

Adaptation Planning

The NRM Adaptation Checklist has been developed to support NRM planners assess forms of action required to develop a climate-ready plan.



Weeds and Climate Change

This module delivers a summary of knowledge for adaptation planning for existing and future invasions by plant species. **Now available!**



Implications for biodiversity

Coming in late 2014. **Module outline available now!**



Adaptation of biodiversity

Coming in February 2015. **Module outline available now!**

Shared Learning

Coming in April 2015.



Type of uncertainty	Occurs in which general component of planning	How to handle this uncertainty in planning – i.e. implication for decision making
Natural variability	Assessment Strategic planning	Consider the range of possible states for a system when planning adaptation, which could be incorporated into multiple futures
Observation/Data error	Assessment	Improve observation base Use a range of conditions
System uncertainty	Assessment Strategic planning	Use a range of model configurations to make projection, if they all agree, on safer ground (this is underlying approach of climate futures framework of projections project)
Inadequate communication	All components	Consider explicit language and convey information clearly, and check how it is interpreted
Unclear objectives	Strategic planning Implementation planning & action	Define the objectives and check that measurable performance against the objectives can be obtained. If not, redefine objectives.
Outcome uncertainty	Monitoring Reflection	Cannot resolve this ahead of time. Requires careful monitoring of ecological outcomes and governance actions. Record clearly what actions were taken, such that we do know what might not have worked or been carried out. .