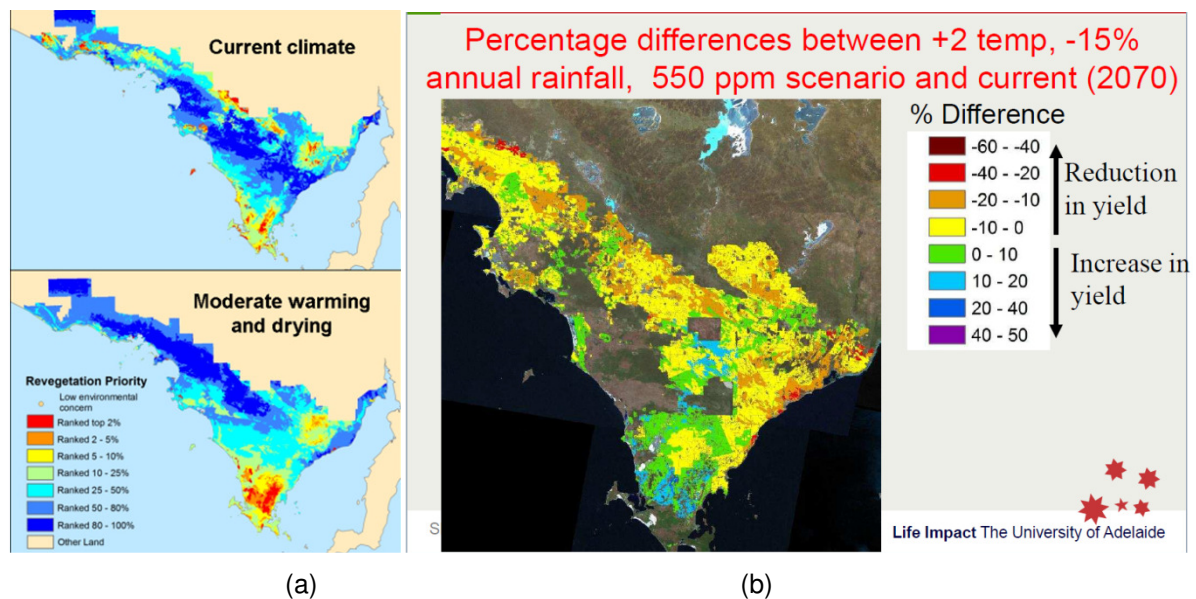


Adapted future landscapes – from aspiration to implementation¹.

The need for climate ready regional NRM plans

Helping regions in Australia plan and implement changes in the way they use land for food and conservation in the face of changing climate, markets and the interests of communities is important. This is especially true at the moment, with the Australian Government requiring the development of regional natural resource management (NRM) plans that are climate ready. Developing and implementing plans that will improve the condition of soil, water, plants and animals requires good information and innovative analysis.

Researchers have developed ways of bringing together regional information on soils, water, vegetation, land use, infrastructure, demographics and economics and then make projections about possible ways to change what is done where on the land. These tools help people make decisions about how to adapt land use into the future.



Potential distribution of land use in the Eyre Peninsula NRM Region when considering

- projected changes in endemic vegetation as the climate becomes warmer and drier and
- modelled change in wheat yields across the region as temperature increases (2 C) gets drier (15% less annual rainfall) and CO₂ has increased from the current 390 ppm to 550 ppm.

¹ This work is carried out with financial support from the Australian Government (through the Department of Climate Change and Energy Efficiency and the National Water Commission) and the National Climate Change Adaptation Research Facility. The views expressed herein are not necessarily the views of the Commonwealth, and the Commonwealth does not accept responsibility for any information or advice contained herein.

Previous work has shown that with careful planning it is possible to adapt to changing climate and to develop land use and economic buffers against the uncertainties of markets and costs in the future. To achieve this adaptation and buffering will require changes and hence policy incentives to guide and encourage what needs to be done.

Piloting landscape futures analysis in two South Australian NRM regions

This project will work with two NRM regions – the Eyre Peninsula and the South Australian Murray-Darling Basin to embed a planning and implementation process that is climate change informed and built on the best evidence of regional natural resource condition and community well being.

The project team will use organisational change processes to develop a high level of awareness of a regional NRM vision. With this guiding ideal the options for possible future land uses that give the region the best chance of adapting will be identified using computer based outputs. Maps of current resource condition and projections of possible future condition will also be generated.

A new software “tool” is to be developed that will allow NRM staff to pose “what if” questions using regional information and climate change scenarios. Maps will illustrate how the landscape will look and how it will function. Regional decision makers will be more informed about the effects and consequences resulting from planned implementation. They can then more reliably assess which options will be best for their region given the level of bio-physical, social and economic risk they feel comfortable with.

A process with broader applications

If this process is successful then its application to other NRM regions in Australia is relatively straight forward. This methodology provides a systematic way of gathering and presenting the information of what makes up an NRM region, what the condition of the resources are and what options are possible to guide successful adaptation. It is complementary to and builds on much of the data gathering that is being done.

With a greater emphasis on processes that develop ownership of the regional NRM vision (“what do we want our landscape to look like”) there is a much greater chance that regions will have more successful program implementation. The process leads to better evidence based decision making. It also provides a way of tracking more and less successful actions that will assist learning and responsive adaptive management. Regional areas and communities will be more “climate change ready” and have planning and implementation that is adaptive.

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Government of South Australia
South Australian Murray-Darling Basin
Natural Resources Management Board



Government of South Australia
Eyre Peninsula Natural Resources
Management Board