CMP - CCNet Adaptive Management Case Study

Case Study Title: Full-cycle adaptive management in Australia's arid rangelands

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Location: South Australia's arid rangelands - 31.96819°S 140.54686°E

Summary: Boolcoomatta is a conservation reserve that has been managed by Bush Heritage Australia for 10 years, during which time the management plan has cycled through three major adaptations based on analysis of implementation and results. This case study outlines some experiences and learnings from multiple iterations of the Open Standards cycle.

Public Overview of Case Study: Bush Heritage's 2015-16 Annual Report to supporters and regulators a 1-page case study of the impact of our conservation actions at Boolcoomatta (refer page 13).

Setting the Scene:

Boolcoomatta is located in the arid rangelands of north-east South Australia. The area has been home to the Adnyamathanha aboriginal people (pronounced Adna-mut-na) for over 40,000 years. In the early 1800's they were dispossessed when Europeans arrived and established large pastoral stations and mining activities. Boolcoomatta was established as a sheep station in 1845 and remained a productive operation until it was converted to a conservation reserve and acquired by Bush Heritage in 2006. The 64,200 hectare (approx 160,000 acre) property is located in a poorly-protected bioregion and was rated by the government as the highest priority for reserve acquisition in South Australia. It is home to 6 threatened vegetation communities and at least 23 threatened species, including the Critically Endangered Plains Wanderer and at least 22 other endangered species.

During its 160 years of pastoral activity, some areas of Boolcoomatta were heavily modified while other areas remained in reasonable condition. Early conservation actions focused on restoring natural hydrological function by removing many of the dams and levees that had been established to collect rainfall, and fencing off many mine-shafts that were a risk to animals and people. Some areas had been heavily grazed resulting in erosion and loss of top-soil that will take many decades to repair.

Later actions focused on reducing the impact of invasive species, particularly weeds and feral herbivores such as rabbits and goats, as well as feral predators such as foxes and cats. This work focused on building relationships with pastoral neighbours to encourage regional control programs, and building a large volunteer supporter base to increase community engagement and allow us to do more work than we could otherwise afford.

During this time we have also been building relationships with the Adnyamathanha people, providing capacity and assistance with conservation actions on some of their nearby lands, and seeking their support for management of cultural values on Boolcoomatta. In the near future we hope to have an Aboriginal staff member working on Boolcoomatta to assist in protecting culturally significant sites and artefacts and to incorporate traditional knowledge of land management into Bush Heritage activities.

The initial management plan for Boolcoomatta (Version 1) was developed in 2007 through a process loosely based on TNC's Conservation Action Planning. In 2011 progress was reviewed and the plan adapted to create Version 2, through a workshop of stakeholders using the Open Standards guidance. This opportunity was also taken to conduct an early pilot for using Miradi to capture and manage the project's information, including workplans and budgets and automated production of reports. Early in 2016 another workshop of stakeholders reviewed progress and adapted the plan to create Version 3, which will soon be signed off by management. This review has had access to 9 years of monitoring data to inform our analysis, assess the effectiveness of our plan, and measure our impact.

These 3 versions represent 3 major iterations around the full Open Standards cycle; smaller iterations have occurred each year to produce annual budgets that are exported to our finance system.

Results and Lessons Learned:

Key results from these three full-cycle iterations are summarized in the following graphics extracted from our latest Annual Report. The viability of most key conservation targets has improved gradually, illustrating the slow pace of ecological change in semi-arid environments. These viability ratings are drawn from measures, indicators and key attributes in Miradi's viability table. Most key threats have reduced although some (feral cats, and total grazing pressure) have increased and are the focus of renewed efforts in the latest iteration of the plan.

Key conservation targets	2006	2011	2016
Sandy dunes	Poor	↗ Moderate improvement	— No change
Rocky hills	Poor	↗ Moderate improvement	↗ Moderate improvement
Creeks and floodplains	Fair	— No change	— No change
Open plains	Fair	↗ Moderate improvement	↘ Moderate deterioration
Ephemeral wetlands	Poor	↗ Moderate improvement	— No change

Key threats	2008	2011	2016
Feral cats	High	↗ Moderate increase	↗ Moderate increase
Foxes	Very High	↘ Moderate reduction	↘ Moderate reduction
Rabbits	High	↗ Moderate increase	↘ Moderate reduction
Invasive weeds	High	— No change	↘ Moderate reduction
Grazing pressure	High	— No change	↗ Moderate increase
Goats	High	↘ Moderate reduction	↘ Moderate reduction
Soil erosion	Very High	↘ Moderate reduction	— No change
Climate change	High	— No change	— No change

Legend

Key conservation targets

Status	Trend
Very Good	↑ Significant improvement
Good	↗ Moderate improvement
Fair	— No change
Poor	↘ Moderate deterioration
	↓ Strong deterioration
	? Unknown (data lacking)

Key threats

Status	Trend
Low	↓ Significant reduction
Medium	↘ Moderate reduction
High	— No change
Very High	↗ Moderate increase
	↑ Strong increase
	? Unknown (data lacking)

This decade-long project has provided many insights and lessons for managing long-running projects.

- During this time there have been 4 different project leaders managing the Boolcoomatta project. This has highlighted the importance of collecting project information in a systematized way so that new managers can quickly pick up this knowledge and gain insight into the activities and experiences of previous managers. Progress Reports stored in Miradi is one way to support this. It also highlights the importance of clearly defining the roles and responsibilities of the project team.
- Full-cycle reviews of the management plan have highlighted the gap between the ambitions of the plan and the actual resources available to implement it. It's easy for planning sessions to develop high aspirations for achieving conservation outcomes, yet the resources actually allocated to the project can fall short of expectations. This creates pressure for team members who are highly committed to their work and often want to do more than what is physically possible. To minimize this issue there needs to be an overt realignment of objectives in the plan to fit with the resources available – this often means deferring the timeframes for achieving particular results, adapting the plan to address the highest priorities, and having information on desired actions readily available to take advantage of new funding opportunities. A fundamental need is to ensure the plan's objectives are SMART – with particular emphasis in the "R" – ensuring that the work can be "resourced".
- Through the development of the 2016 plan, many programs with many more activities were developed from ten years of learnings. For example, the review identified the need for increased efforts on collection of feral cat data, to inform ongoing management of or threatened and endangered species. By using Miradi, along with our other systems of management, we have been able to adjust our plan to reflect the on-ground priorities and redirect resources for improved conservation outcomes.

- Good monitoring requires resourcing – in terms of costs and time; often when resources are tight it's the first thing cut. But it's vitally important for analyzing results and adjusting the project's course. Careful selection of the right indicators – to monitor what matters most – and prioritising them, helps to ensure that monitoring still occurs when resources are limited. Collecting measures in systems and feeding the results back into the plan along the way helps to promote awareness of the value of monitoring.
- Building and retaining partnerships takes time and care. Projects like this require support from a lot of people – neighbours, traditional owners, government reps, politicians, other conservation groups – all of whom have their own priorities and objectives. These relationships need to be carefully handed over as new managers come into the project. In remote communities a shared cup of tea goes a long way.
- Most projects identify the threats at the start of the project, then set about reducing them. But long-running projects can have new and unexpected threats arise – such as a new uranium mine on a neighbouring property, and regional expansion of feral predators. This highlights the need to regularly update the plan to adapt to new threats and opportunities.
- The definition of targets and threats can often depend on who is in the room. Taking good records of discussions, and recording the rationale for selections, is of great use 5 years down the track when the plan is being reviewed by a different group of people. Keeping this information in Miradi and complimenting this with oral and written records (videos, photos, and databases) means it is available for all to see and truly understand the evolution of effort and association to the plan.
- Long-running projects mean project staff will inevitably change; this creates an on-going need to keep training new people in the Open Standards and Miradi. Having access to good reference and training material, and other people who can support them, is critical.
- Additional effort is required to communicate and share the project's results, but this pays back in many ways including increased donor, volunteer and community support for the project. Links at the end of this case study show examples of media stories that have shared our experiences.
- Miradi needs some refinements to cater for full-cycle iterations of plans. For example, there's no way to keep a record of a change in Threat rating - changing a high threat to a low one should be cause for celebration, but the information gets lost.

Scalability and Transferability:

One key benefit of using the Open Standards is the common approach and common language that it provides. Similarly, using Miradi to manage information for all projects helps people to build competency and to take this with them as they move to other projects. While we are all still learning, having a standard approach means our people can more readily move from one project to another, and comparisons can be drawn between projects. Also, by capturing similar information across multiple sites we can scale up to organization-wide outcome reporting. This requires regular and ongoing support from people skilled in Open Standards and Miradi to the users; supporting project team members to "learning by do" has proven more effective than isolated training. The lessons learnt from Boolcoomatta can be and are applied to Bush Heritage's other projects, and vice versa. There's value in finding ways to share lessons amongst the broader conservation community.

Further Information:

This blogpost summarises the 10-year anniversary event - http://blog.bushheritage.org.au/blog/article/10-year-anniversary-of-boolcoomatta-reserve

Further details and many more stories from Boolcoomatta are available on our website - http://www.bushheritage.org.au/places-we-protect/south-australia/boolcoomatta

Our Miradi file is publicly available on Miradi Share

Table of Key Words for Tagging Case Studies

These tags will be used to help other people find your case study on the web.

Key Words *(select all that are relevant)*	**Put x if Relevant**
Stages in Adaptive Management Cycle	
- Conceptualize the situation	x
- Plan actions and monitoring	x
- Implement actions and monitoring	x
- Analyze, use, adapt	x
- Capture and share learning	x
- Full cycle adaptive management	x
- Other_____	
Case Study Scale	
- Project-level	x
- Program-level	
- Organizational-level	
- Other _____	
Specific Tools/Approach Used	
- Evaluation / audit	x
- Evidence-based conservation	x
- Spatial conservation planning	
- Structured decision making	
- Status measures	x
- Effectiveness measures	x
- Passive adaptive management	
- Active adaptive management	x
- Other _____	
Specific Topics Addressed:	
- Human wellbeing	
- Climate change	
- Community-based conservation	x
- Marine conservation	
- Freshwater conservation	
- Terrestrial conservation	x
- Other _____	