CMP - CCNet Adaptive Management Case Study Template
Case Study Title: Yourka Reserve – A unique tropical savanna ecosystem
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Summary:

Yourka is a conservation reserve that has been managed by Bush Heritage Australia since 2007. This case study outlines some results and lessons learned during this time.

Public Overview of Case Study:

See Yourka page on Bush Heritage website, and key project details on Miradi Share

Setting the Scene:

Yourka is part of the traditional lands of the Jirrabal and Wurrungu People. It is located in north east Queensland, Australia in what is referred to as the Einasleigh Uplands.

Yourka is approximately 43,000 hectares of good quality habitat that protects a landscape extending along a moisture gradient from the border of the Wet Tropics World Heritage Area through to moist eucalypt woodlands and dry sclerophyll forests and woodlands to basalt areas and alluvial lowlands with tall blue gum and paperbark woodlands.

Our vision states:
"The environmental gradients of Yourka, from the Herbert River to the Wet Tropics, deliver climate change resilience by providing refugia and healthy functioning ecosystems for the unique tropical savanna ecosystems and wildlife that occur within the Einasleigh Uplands."

The land tenure of this property is complex and Yourka is held by Bush Heritage Australia as a 50-year Term Lease over State Land. In 2016 it was declared a Nature Refuge for the duration of the lease so from here on it will be managed in accordance with the Nature Refuge Agreement.

The Nature Refuge Agreement has identified five items as the Significant Natural Resources of the Land, namely:

1. A largely intact and unaltered natural landscape with landscape connectivity to the adjoining National Parks and Forest Reserves;
2. Known habitat for significant animal species (supporting at least 8 animal species listed under State Regulation as endangered or vulnerable);
3. Catchment protection for the Herbert River and its tributaries and associated wetland ecosystems
4. A complex mosaic of vegetation types (including nine regional ecosystems classified as 'endangered' and 15 classified as 'of concern' conservation status); and
5. All other Natural Resources of the Land.

Yourka was managed as a cattle station prior to Bush Heritage acquiring the property in 2007.

A Management Plan was developed for the reserve in 2008/9 and this was followed by an ecological review in 2013. Work is about to commence for a second five year evaluation review.

Results

The works undertaken during this time included:
- the repair or establishment of roads and tracks, boundary fences, workshop and visitor accommodation;
- control of Siam weed using herbicide and fire;
- identification and treatment of additional Siam weed infestations in upper catchments;
- fire management to protect assets; to establish a mosaic of mixed burn intervals across the landscape and prevent wide scale, unplanned fires; to modify vegetation structure in the Eucalypt Woodlands and Forest to benefit small birds and other fauna, and to assist Siam weed control; and
- re-routing tracks and bank stabilization has improved the integrity of billabongs.

In 2014 a summary Scorecard was produced to provide a representation for the status of the key targets and threats (see Legends at end of document).

Key Conservation Targets	Status & Trend	Confidence Level
Riparian forests and alluvial flats	↗	▂▄▆
Dry forests and woodlands	▬	▂▄▆
Moist eucalypt forests	↗	▂▄▆

Key Threats * (* relative to time of acquisition)	Status & Trend	Persistence
Livestock grazing and cropping	⬇	✓
Feral herbivores: stray cattle	↘	$
Feral herbivores: pigs	⬇	~
Weeds: Siam weed	↘	$$
Weeds: lantana	▬	$
Weeds: grader grass	↗	$
Soil erosion	↘	$

Lessons Learned

Since the completion of this review the **targets** have been revised and now include:
- Riparian areas and associated alluvial flats;
- Eucalypt Woodlands;
- Eucalypt Forest;
- Fauna Assemblage; and
- Aboriginal cultural values

Learnings
- The ability to make amendments to targets is acceptable and it provides a greater opportunity to succeed when updated and or additional information is incorporated.
- The addition of "Fauna Assemblage" from a nested target to a target outright is a deliberate response to a perceived knowledge gap and desire to prioritise time and resources to better understand the existing fauna assemblage and relationships with current management practices.
- The addition of an Aboriginal Cultural Values target is a reflection of Bush Heritage's strategic goal and strengthening commitment to use traditional knowledge and engage Aboriginal traditional owners in conservation land management with dual conservation and human wellbeing outcomes.

The **goals** have been modified as knowledge gaps previously identified have provided more detailed information.

Learnings
- It is ok to modify the goals as more knowledge is acquired.
- Initial goals naturally focused on the mitigation of commonly understood threats to general ecosystem health. This allowed conservation actions to commence and intermediate results were achieved while reserve staff and ecologists developed a better understanding of how to define and measure the health of the conservation targets.

The **threats** have generally remained the same during this period although the ratings have changed.

Learnings
- The identification of threats was undertaken comprehensively at the commencement of this project and their irreversibility was generally well-understood.
- Threat ratings were refined as staff understood more about the severity of threats and as their scope changed as a result of management actions e.g. Grader Grass was found to be more invasive (faster spreading) than siam weed in this particular landscape and the actions such as fire management and roadworks increased its scope. As a result Grader Grass threat rating was upgraded during the management plan review process.

The **objectives** have been developed significantly as more information has come to light on what is realistic to measure within the constraints of the project.

Learning
- It is ok to modify the objectives as more knowledge is acquired.

Reserve management staff has remained on the property for this time however, there have been changes to support staff including Ecologists and Regional Managers. On occasion **resources** have been inadequate to manage the planned activities.

Learning
- The use of volunteers has been incredibly valuable, adequate resources are always going to be a challenge but maximise the effectiveness of the planning may help in reducing the negative impacts of limited resources.

Scalability and Transferability:

Bush Heritage is in the process of enhancing indicators and further developing methods across all reserves where appropriate. The intention of this is:

- to streamline the capture of our monitoring data into systems, to better support long-term evaluation and reporting;
- to allow project data to be rolled up where this may prove useful; and
- to have confidence in making direct comparisons across reserves, if required.

Legend for Target Ratings

Status Rating		Trend		Confidence Level	
Excellent	(green)	Strong increase / improvement	⇑	Very High	
Good	(light green)	Mild Increase / improvement	⬈	High	
Fair	(yellow)	Steady	—	Medium	
		Mild decrease / degrading	⬊	Low	
Poor	(red)	Strong decrease/ rapidly degrading	⇓		
Uncertain	(grey)	Unknown/Uncertain	?	Very Low	

Legend for Threat Rankings

Status Rating		Trend		Persistence level	
Low	(green)	Threat reduced significantly	⇓	Permanently removed	✓
Medium	(light green)	Threat reduced moderately	⬊	Ongoing vigilance required	~
High	(yellow)	No change	—	Ongoing investment required	$
		Threat increasing moderately	⬈	Increased investment required	$$
Very High	(red)	Threat increasing significantly	⇑		
Uncertain	(grey)	Unknown/Uncertain	?		

Key Words:

Key Words *(select all that are relevant)*	Put x if Relevant
Stages in Adaptive Management Cycle	
- Conceptualize the situation	
- 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	
- Evidence-based conservation	
- 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	
- Marine conservation	
- Freshwater conservation	
- Terrestrial conservation	
- Other _____	