



Southern Gulf NRM



We get the benefit in more control over the country. There's been a slightly noticeable increase in grass coverage, but it will take a few wet seasons, especially since the 450mm of rainfall in the last wet season was below half the annual average. The groundwork is there to see a positive change in the next few years.

RANDALL HOLMES
WERNADINGA STATION MANAGER



Shorebirds at Gore Point



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Land Condition Monitoring

The results obtained through the pasture monitoring indicate that the improved management of the wetland area will increase productivity in the long term. Although not all sites saw an improvement in their classification, they all showed signs of increased pastoral value after one wet season spell. This included increased ground cover, soil stabilisation, increased diversity of forage species and presence of high value forage grasses. The initial results suggest that the implementation of the fence and improved grazing management practices are contributing to an increase in pastoral value throughout the wetland paddock while also not impacting the pastoral value of adjacent paddocks. Long term monitoring will improve the validity of the trends and reduce the impact of variable factors such as seasonal conditions.



'Before' November 2016



'After' May 2018



'Before' August 2017



'After' May 2018

Management Outcomes

In addition to the Prickly Acacia and feral pig management, the project has also provided additional planned platforms for the control of other pest plant species, including the use of increased fuel loads to control abundant Rubbervine infestations in the project area through fire management. To capitalize on the increased fuel loads, station management intends to implement a planned burn later in the year to manage this nationally significant weed.

Wernadinga Wetlands **CASE STUDY**

Integrating pastoral and conservation management for improved productivity and environmental outcomes.

Overview

Comprising 545,577 hectares, the Southern Gulf Aggregation is the largest estuarine wetland of its type in Australia. It is considered to be one of the three most important areas for shorebirds in the country. It meets all six requirements of importance as listed in the Directory of Important Wetlands of Australia (DIWA) and includes eight different types of wetlands. The Southern Gulf Aggregation holds immense value to the Aboriginal communities who have maintained this country for thousands of years and work to continue to protect and conserve these resources, notably through the CLCAC's Land and Sea Ranger Program.

In 2016, the Carpentaria Land Council Aboriginal Corporation (CLCAC) engaged with Southern Gulf NRM and AJM Pastoral to establish a project to protect the environmental and cultural values of the nationally important wetlands present on Wernadinga station. Funded by the National Landcare Programme, this project conserves and enhances critical habitats on the traditional lands of the Gkuthaarn and Kukatj Peoples by managing cattle movement and conducting biodiversity and land condition monitoring. The Carpentaria Land Council

Aboriginal Corporation, funded by the Queensland Indigenous Land and Sea Ranger Program and the Commonwealth Indigenous Advancement Strategy, led the project implementation. Co-investment from the Queensland Natural Resource Management Investment Program assisted with weed and pest management in the project area. Through the collective efforts of the partnership, the condition of 31,825 hectares of Southern Gulf Aggregation wetlands has been documented, monitored and managed effectively over 18 months. The achievements of the project are fundamental for long-term improvements to wetland condition and pastoral productivity.

Project Partners Southern Gulf NRM Critical Habitats Project, Carpentaria Land Council Aboriginal Corporation, AJM Pastoral

Activities outlined in this case study were funded through the Southern Gulf NRM through the Australian Government's National Landcare Programme and Queensland Natural Resource Management Investment Program, the Queensland Indigenous Land and Sea Ranger Program and the Australian Government's Indigenous Advancement Strategy, and AJM Pastoral.

FURTHER INFORMATION:

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Our mob was really impressed with the work we're doing out there, working on Gkuthaarn & Kukatj country. We do a lot of work all over the region but they were happy to see us spending more time out there working with Wernadinga.

PHILLIP GEORGE, RANGER COORDINATOR AND GKUTHAARN TRADITIONAL OWNER.

Background

Healthy wetlands are vital for productive landscapes and waterways. These fragile landscapes protect shorelines, absorb pollutants and improve water quality. The Southern Gulf Wetlands Aggregation is not only important for industry and native flora and fauna but also for the migratory species that travel vast distances along the East Asian-Australasian Flyway each year to their feeding grounds. Due to the cultural and environmental values, the CLCAC Normanton Ranger team identified the wetlands situated within Wernadinga station as an opportunity to implement practical management solutions that promote conservation and pastoral productivity.

This project included four main objectives:

- Establish biodiversity baselines for the project area and conduct monitoring throughout the project period.
- Monitor pastoral land condition to assess the impact of changed management practise on pastoral values.
- Improve environmental condition by implementing pest and weed management.
- Improve cattle management in the wetland area to recover and protect environmental values as well as improve pastoral productivity.

Implementation

Fence Construction and Wetland Spelling

Normanton Rangers and AJM Pastoral contractors constructed a 40.58km fence line to improve cattle management in the wetlands area. Once there was sufficient pasture growth in adjacent paddocks, the cattle were removed from the wetlands. The western end of the wetlands paddock was spelled from January to April 2018 allowing wetland vegetation to regenerate, while the eastern end continues to be spelled since the removal of cattle in December 2017. Once cattle were returned to the western end of the wetlands area, a conservative stocking rate was applied to control grazing pressure.

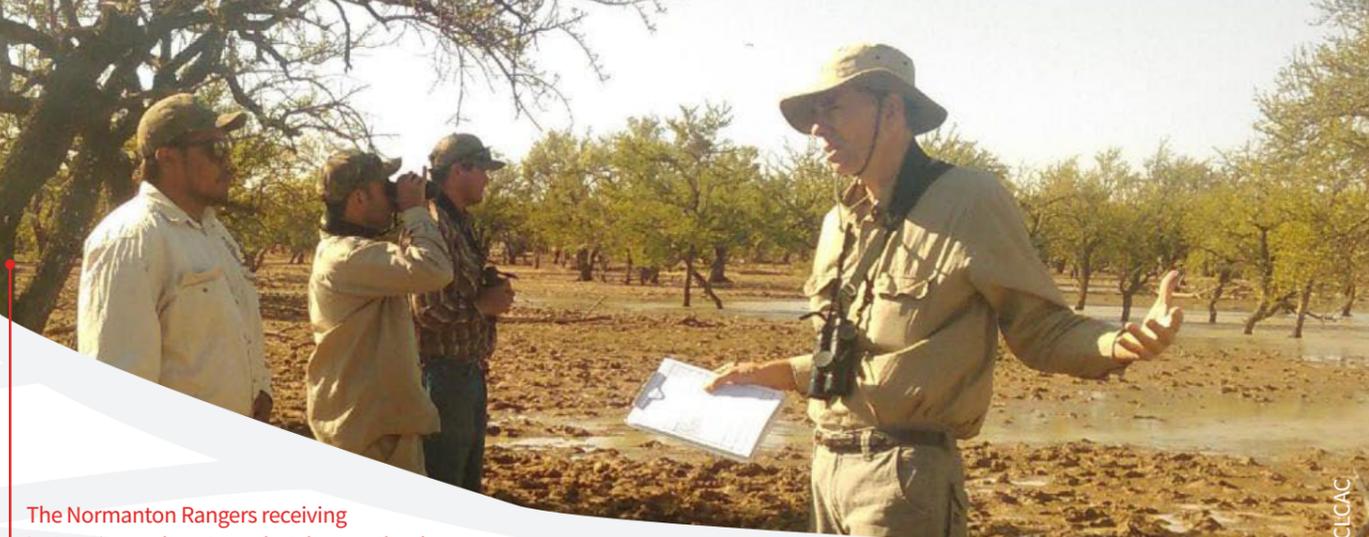
Weed and Pest Management

The Normanton Rangers were contracted through Southern Gulf NRM's Prickly Acacia Management Project to implement weed eradication throughout Wernadinga including 1,552 hectares within the Critical Habitats wetlands project area. An extensive four day aerial vertebrate pest cull was conducted in October 2017 by the CLCAC throughout the station removing a substantial number of feral pigs. These activities contribute to recovering the natural values of the wetlands.

Biodiversity and Land Condition Monitoring

The Normanton Rangers conducted extensive shorebird, wetland, vegetation and biodiversity surveys throughout the project area in collaboration with Roger Jaensch Ornithology and Conservation, the Queensland Herbarium and Faunaverse. Baseline surveys were conducted in September 2017 with further monitoring conducted in May and June 2018. In total, 42 sites were surveyed with paired reference sites established on either side of the fence.

Southern Gulf NRM established six pasture monitoring sites to assess the grazing land condition on either side of the newly constructed fence. Grazing land condition is the capacity of the land to respond to rain and produce useful forage. The Southern Gulf NRM Pasture Partners Land Condition Monitoring methodology was used to evaluate the sites. This includes assessment of the vegetation species present along with the soil condition.



The Normanton Rangers receiving instruction on how to undertake a wetlands survey from Roger Jaensch of Jaensch Ornithology and Conservation

Outcomes

The extensive network of monitoring sites and robust baseline data collected throughout the project has contributed valuable information to national databases improving the scientific understanding of the South-East Gulf of Carpentaria's biodiversity. It will take many years to fully understand the outcomes of the project with the recovery of natural value being a gradual process. Comparisons or trends are difficult to draw with accuracy until multiple years of survey data have been collected systematically. Complicating factors such as year to year variability in environmental conditions and cycles contribute to the challenge of developing a clear understanding of project outcomes in the short term. In the long term, it is anticipated that changes at dryland vegetation monitoring sites will be the first environmental responses to be observed with wetland condition to follow in later years. Having only received one wet season spell during the project period, subtle changes were identified during the 2018 monitoring which may be influenced by seasonal variability.

Biodiversity and Wetland Inventory Surveys

All biodiversity survey work completed in the Gulf Plains region is immensely important as the region is critically under-surveyed. The extensive surveys completed by the Normanton Rangers have established a better understanding, and in some cases, a baseline of the environmental values throughout the Wernadinga portion of the Southern Gulf Wetland Aggregation.

Approximately 275 plant and animal species were identified throughout the extensive surveys, expanding the list of wetland plant species that occur in the area. The data collected also improve the knowledge of the wetland regional ecosystems distribution contributing to Queensland Government Regional Ecosystem mapping.

The data accumulated from past and recent surveys of migratory shorebirds confirms the international importance of the coastline of Wernadinga. Previous surveys of waterbirds here indicated the presence of 26 species, including two migratory shorebird species, however the project surveys have indicated that this total has more than doubled to 55 species including eight migratory shorebirds which are considered Matters of National Environmental Significance under the EPBC Act. The data demonstrate that the surveyed sites are important to threatened migratory bird species such as the Black-tailed Godwit with 898 recorded in the project area, meeting the criteria of being a nationally important site for the species. One of the high tide roosting locations in the project area appears to be one of the most important sites for Eastern Curlew in the whole South-Eastern Gulf region. Even in winter, when most of the birds are back in Asia at their breeding grounds, 133 individuals were recorded at the site.



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Assessing wetlands as part of a larger wetland inventory and shorebird survey.