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TITLE: A national approach to building resilient rangelands.

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Abstract:

The National Rangeland NRM Alliance (The Alliance) is a collaboration of 14 rangelands natural resource management bodies representing some 81 per cent of Australia's landmass.

The Alliance is leading the development of the Australian Rangelands Initiative (ARI) to highlight the importance of productive and resilient rangelands. The ARI is a collaboration with rangeland organisations, agencies, land managers and interest groups working together to ensure the ARI encompasses national issues.

The ARI targets two key result areas.

1. Building the national rangelands agenda to create awareness of the importance of Australia's rangelands and a commitment to implement the '*National Principles for Sustainable Resource Management in the Rangelands*'.
2. To demonstrate how this can be achieved by targeting groundcover as a driver of soil leaving the landscape, biodiversity and carbon storage.

Introduction

The Australian Rangelands Initiative (ARI) has been developed to provide guidance for the ongoing management and protection of the natural resources of Australia's rangelands. The ARI is a blueprint for long term investment by Government, industry, communities and producers in these natural resources. Stafford Smith and Cribb (2009) argue for the rangeland voice to be recognised despite the low widely dispersed population with limited political influence. They argue a governance structure of support for rangelands being agreed to by the Australian people with the implementation to be carried out at the regional/local level.

Aims of the Australian Rangelands Initiative

The ARI is designed to demonstrate that the maintenance or improvement in rangeland health is an issue of national importance and to stimulate national investment which will be delivered at the regional level.

The ARI will deliver in two key areas:

Key Result Area 1 – Building the National Rangelands Agenda

Create a national awareness of the importance of Australia's rangelands, leading to a national commitment to implement the "*National Principles for Sustainable Resource Management in the Rangelands*".

The strategies of the ARI are to:

- Gain bipartisan support (across all states, territories and nationally and across all sectors of the community including conservation, industry and research organisations)
- Identify key advocates for rangelands action.

- Enlist Champions
- Build the business case for action
- Maximise the opportunities and timing for support.

Key Result Area 2 –Ground Cover / Biodiversity.

Develop programs for improving ground cover and biodiversity habitat values across the extent of the Australian rangelands. Achieving this will have a significant impact on protecting the vegetation and soil resources, including reducing the incidence and severity of dust storms and increasing carbon storage.

The strategies for the ARI are to:

- Implement management decisions based on regionally applicable thresholds utilising ‘resilience thinking’ (after Walker and Salt, 2006)
- Assemble the evidence base (Science/Economic/Social) for management decisions
- Address institutional barriers to good landscape management
- Implement appropriate grazing and biodiversity conservation land management practices
- Develop ‘climate ready’ actions to both minimize climate change impacts and to take advantage of climate/carbon sequestration options for the rangelands
- Engage key industry players
- Implement appropriate monitoring, evaluation and reporting for rangeland ground cover and biodiversity (see Bastin, 2008 and Eyre et al, 2011).

The key natural resource principle of the initiative is that maintaining an adequate level of groundcover is one of the main contributors to natural resource health in the rangelands. A good level of groundcover protects the soil resource from erosive forces, is a fodder resource for productive pastoral enterprises, protects waterways and riparian areas and underpins the stability of vegetation communities thereby protecting biodiversity and natural values. Groundcover is not the only indicator of landscape health however, as an indicator at the landscape level, it can be relatively easily measured by both ground and remote sensing methodologies and reported in a consistent and easily understood manner.

The principle that prevention of resource degradation is more effective than rehabilitation’ underpins the ARI and is of paramount importance to programs carried out. The scale of our rangelands means that management tools available to rangeland managers for implementation at the landscape level are limited. The two activities that can be applied broadly across the landscape are grazing systems management (including total grazing pressure management) and appropriate fire regimes.

Case for Strategic Intervention

A significant opportunity exists to implement the ARI and in doing so build on the current regional arrangements for managing the rangelands. This intervention is best achieved through a well-funded ‘whole of rangelands’ approach which demonstrates national leadership on issues of significance. This approach will be supported through coordinated action on current limitations, gaps and failures in management, programs and policy. The problems are many and varied and if tackled on an issue or individual region basis will not be overcome, regardless of resourcing levels. A coordinated approach is therefore essential.

The proposal is for a commitment of funds of \$2 billion dollars (in 2013 equivalent dollars) over a 15 year period (\$133m per year) from 2013 to 2028. Change in the rangelands takes place over

long time scales and very large spatial scales, with high climate variability and low populations to implement change (Stafford Smith, 2008). Due to these issues monitoring of natural resources outcomes is unlikely to produce reliable indicators of change in periods of less than 10 years. There are Australian and State Government precedents for this type of long term commitment including the excellent Great Artesian Basin Strategic Initiative (GABSI) which has been funded over 15 years with reviews every five years. This long term and strategic program has produced a very good return on investment. The same approach is essential to produce permanent change in the rangelands of Australia.

The Australian Rangelands Initiative Investment Proposal

Table 1 has been developed through liaison by the Rangelands NRM Alliance with collaborators. The proposal outlines the programs and sub-programs identified as the key investment areas necessary to protect the natural resources of Australia’s rangelands into the future. Outcomes from these programs have been identified, together with relevant indicators and achievement targets (where possible).

While the total quantum of investment may vary, the ARI provides a blueprint for current and future government investment in the natural resource base of Australia’s rangelands.

Table 1. Australian Rangelands Initiative Investment Proposal

| Sub-programs | Outcomes (long term and current funding programs) | Key Partners |
|--|---|--|
| Program: Groundcover | | |
| <ul style="list-style-type: none"> • Groundcover for healthy communities and ecosystems • Soil protection - groundcover as a Public Benefit • Total Grazing Pressure (TGP) • Fire management regimes • Pest animal and plant control • Grazing Systems • Cultural Heritage values- links to Indigenous ‘Caring for Country’ • Ecosystem/Social/Economic services delivered by native vegetation management • Water resources & aquatic ecosystems | <ul style="list-style-type: none"> Increase in overall landscape function Well informed and motivated land managers Landholders implementing TGP - 20% in five years, 70% in 15 years Regional groundcover targets achieved on 90% of country On property ground cover monitoring by 50% landholders Reduced seasonally adjusted frequency of dust storms (30% less over 15 years) Reduced on-site soil erosion Reduced feral/invasive pests Water resources protected for long-term use Key aquatic systems stable Increase in public health outcomes | <ul style="list-style-type: none"> NRM Alliance MLA AWI ILC IACRC State/Territory Agencies |
| • Program: Biodiversity | | |
| <ul style="list-style-type: none"> • Rangeland Trust for Enterprise Based Conservation (Wilson, 2008) • Invasive Animal control | <ul style="list-style-type: none"> Further 10% of land managed for conservation Predator pests ‘removed’ from key sites 25% improvement in habitat values | <ul style="list-style-type: none"> NRM Alliance CSIRO, NFF |

| | | |
|--|--|--|
| <ul style="list-style-type: none"> • Native vegetation community (biodiversity habitat) maintenance | | ACF Bush Heritage |
| <ul style="list-style-type: none"> • Program: Monitoring | | |
| <ul style="list-style-type: none"> • Program Monitoring • Rangeland Biodiversity • Dustwatch • Pastoral monitoring • Birds Australia • Groundcover and water quality (sediment load); remote sensing • Climate monitoring | ACRIS coordinating state and national rangeland MERI Groundcover reports on National media Dust storm reports Status of rangeland species known | ACRIS BOM NRM Alliance Birds Australia State/national agencies Spatial Information CRC |
| <ul style="list-style-type: none"> • Program: Education, media & information | | |
| <ul style="list-style-type: none"> • Cultural communication • Non-rangeland audience • Pastoral community • Social-ecological system management during change • Address issues of national concern | Value of rangelands recognised nationally Informed and motivated communities/producers | |
| <ul style="list-style-type: none"> • Program: Indigenous Land management | | |
| <ul style="list-style-type: none"> • Cultural Heritage - links to Indigenous 'Caring for Country' • Cultural values maintained on all rangelands • Indigenous land management information system | Indigenous land management adopted where appropriate Indigenous information collected and valued | ILC Communities NRM Alliance ACRIS |
| <ul style="list-style-type: none"> • Program: Climate Change | | |
| <ul style="list-style-type: none"> • Carbon Farming in rangelands • Alternative Energy • Climate adaptability | Carbon sinks established Rangelands utilised as alternative energy sources Land managed under adaptable and resilient system | CSIRO BOM NRM Alliance NFF MLA/AWI |

Leadership & Collaboration

A key to the efficient implementation of the ARI is the ongoing goodwill and commitment of the various organisations who have and will be involved. This collaboration developed through a common interest to ensure that the rangelands are managed to protect their multiple values and ensure the Australian community provides support for this level of management to be possible.

Collaborative programs offer great synergy and can result in significant enhancement of natural resource outcomes and improved returns on investments. They require dedicated management to maintain the relationships and the joint activities that are fundamental to their success.

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