The Australian Rangelands Initiative

A joint proposal to increase landscape health, groundcover, biodiversity and knowledge of the Australian rangelands

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 Initiative is a blueprint that provides a basis for the long term investment by Government, industry, communities and producers in these natural resources. The National Rangeland NRM Alliance (made up of the 14 rangeland-based Natural Resource Management (NRM) bodies), together with industry, agencies and communities have compiled this document.

Rangelands cover some 81% of Australia - more than 6 million km$^2$. The rangelands are home to many of Australia’s Indigenous people and are culturally important for most Australians.

The Australian rangelands are popularly known as the Outback and are referred to in the Australian Government’s Caring for Our Country Business Plan as ‘Remote and Northern Australia’. The rangelands, with their characteristically varied landscapes, still contain relatively intact ecosystems and much of Australia’s biodiversity. It is critically important that future land management, and the policies and programs supporting this management, continue to preserve these intact ecosystems.

The ARI will deliver in two key areas:

1. Building the National Rangelands Agenda

Creating a national awareness of the importance of Australia’s rangelands. The strategies are:

- 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.

2. Ground Cover and Biodiversity

Develop programs for improving ground cover and biodiversity habitat values across the extent of the Australian rangelands. The strategies are:

- Implement management decisions based on regionally applicable thresholds utilising ‘resilience thinking’.
- 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, biodiversity and environmental accounting systems.
## Australian Rangelands Initiative Investment Proposal

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<th>Key Partners</th>
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<td><strong>Program: Groundcover</strong></td>
<td>(Delivery through education, mentoring, demonstration, national TGP management pilot trials, knowledge dissemination, collaboration, incentives, land administration, policy direction)</td>
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<td>- Groundcover for healthy communities and ecosystems</td>
<td>Increase in overall landscape function</td>
<td>NRM Alliance</td>
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<td>- Soil protection - groundcover as a Public Benefit</td>
<td>Well informed and motivated land managers</td>
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<td>- Advisory</td>
<td>Landholders implementing TGP - 20% in five years, 70% in 15 years</td>
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<td>- Total Grazing Pressure (TGP)</td>
<td>Regional groundcover targets achieved on 90% of country</td>
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<td>On property ground cover monitoring by 50% landholders</td>
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<td>- Feral animal control</td>
<td>Reduced seasonally adjusted frequency of dust storms (30% less over 15 years)</td>
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<td>- Pest plants</td>
<td>Reduced on-site soil erosion</td>
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<td>- Grazing Systems</td>
<td>Reduced feral/invasive pests</td>
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<td>- Cultural Heritage values- links to Indigenous ‘Caring for Country’</td>
<td>Water resources protected for long-term use</td>
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<tr>
<td>- Ecosystem/Social/Economic services delivered by native vegetation management</td>
<td>Key aquatic systems stable</td>
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<tr>
<td>- Water resources &amp; aquatic ecosystems</td>
<td>Increase in public health outcomes</td>
<td>(See Appendices)</td>
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**Program: Biodiversity** (Delivery through incentives, market based instruments, education, policy)

- Rangeland Trust for Enterprise Based Conservation (Wilson, 2008)
- Invasive Animal control
- Native vegetation community (biodiversity habitat) maintenance

Further 10% of land managed for conservation
Predator pests ‘removed’ from key sites
25% improvement in habitat values

**Program: Monitoring** (Delivery through collaboration, national standards, Information systems, modelling)

- 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

**Program: Education, media & information** (Delivery through national collaboration, common messages, media, information systems)

- 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

**Program: Indigenous Land management** (Delivery through collaboration, demonstration, incentives, information exchange/systems)

- 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

**Program: Climate Change** (delivery through incentives, innovation, collaboration, information exchange)

- 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
**Value of the Rangelands to Australia**

The rangeland regions of Australia are important to the national economy, the national psyche, the national environmental health and the nation’s water supplies. This isn’t surprising when it is considered that they cover 81% of Australia’s landmass but it is more impressive to think that they are managed by approximately 3% of the population.

The rangelands of Australia serve multiple uses and functions. Land use is diverse and while pastoralism is the most extensive practice covering 60% of the rangelands they also provide food, fibre, minerals and gas, and experiences for tourists. They are home to Indigenous communities with strong linkages to cultural and spiritual history. In addition the rangelands host business and defence activity and are important for biodiversity and conservation.

**Return on Investment**

**Production Values**

Rola-Rubzen and McGregor (2008) estimated that the rangelands and its people generate some $91 billion annually in gross revenue (including $45 billion in Gross Regional Product). This income contributes to Australia’s economy through mining, tourism, land management, pastoralism, service industries, manufacturing and the arts. It is very important to note that all of these industries are based on the natural resources of the rangelands.

An investment of $2 billion over the period of 15 years would arguably protect and support a long-term return of $1,365 billion and in fact may enhance this return. This would represent an investment of only 0.15% at the current level of production from the rangelands.

**Leverage through NRM Bodies**

Government investments that are currently delivered through the members of the National Rangelands NRM Alliance have shown a considerable opportunity to leverage additional funds from other sources for concurrent investment in natural resource management at the regional and State level. Recent evaluations indicate that the Australian Government could expect better than a one hundred per cent additional investment from the Australian Rangelands Initiative Investment Proposal.

**Carbon Values**

The rangelands of Australia represent some 6,230,540km² and even a small relative improvement in soil or landscape carbon would translate into large net sequestration rates.

**Dust Storms**

Tozer (2012) found that the best estimate of the costs, only for Sydney, related to the ‘Red Dawn’ dust storm that hit the city in September 2009 was $330.8 million. Investment in land management that leads to increased groundcover would significantly reduce future dust storm events and save significant costs.

**Biodiversity Values**

The values associated with the protection of biodiversity in any environment are very difficult to assess in dollar values however the community valuation of biodiversity is very high. The investment in both biodiversity protection and in biodiversity monitoring would provide both a strong basis for estimating the return on investment from the biodiversity programs as well as providing further protection for the diverse species and landscapes of the rangelands.

**Tourism and Aesthetic Values**

The iconic ‘Outback’ underpins much of the International tourist industry for Australia and it is imperative that this resource is protected and supported in the maintenance of its diverse values. The open spaces, the Indigenous communities, together with the native plants, birds and animals provide a strong attraction to tourists from both overseas countries and the higher population regions within Australia. The monetary value of these national assets is very difficult to quantify.

**Monitoring and Measuring Change**

Due to the vastness of the rangelands using spatial systems and infrastructure is most cost effective way to capture and present resource condition change information to enable land managers to make more informed on-ground management decisions. It will also allow governments to better track the success of their investment in a relatively short timeframe in a cost effective manner. For these reasons, significant investment is required now to develop the spatial infrastructure to capture, interpret and delivery desired information.
How does the Rangelands System Work?

The rangeland system is complex and is based on the natural resource base of generally native vegetation, ephemeral waterways and nutrient poor soils. Because it is reliant on this base, rangeland productivity/health is directly determined by the condition of these natural resources.

The changes and/or impact on the natural resource base in rangelands can be incremental and difficult to quantify due to highly variable environmental conditions. Separating changes that are due to management from those that are due to the very high natural variability is an ongoing issue for rangeland management.

Policies and the Future for the Rangelands?

The Australian Rangeland Initiative is a long term, complementary/implementation strategy for many existing International Agreements and National policies such as the:

- UN Convention to Combat Desertification
- Convention on Biological Diversity
- Australian Weeds Strategy
- Australian Biodiversity Conservation Strategy 2010-2030
- National Wildlife Corridors Plan
- Australian Collaborative Rangelands Information System

Climate Change

The rangelands principles and experiences are likely to be of value far wider than the current areas of application under future climate change. Ferguson (2012) states ‘There are wider implications than simply sustaining pastoral enterprise economies while managing the local landscape. If the current climate predictions are correct, more of the world’s warm landscapes are going to dry out and potentially become rangelands’.

For More Information

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Who’s Involved?

This document has been prepared by The National Rangeland NRM Alliance in partnership with Industry Groups and Government Agencies:

- Meat and Livestock Authority
- Australian Wool Innovation
- Australian Collaborative Rangeland Information System
- CSIRO
- Bureau of Meteorology
- Bush Heritage
- Australian Conservation Foundation
- World Wildlife Fund
- Dustwatch
- Invasive Animals CRC
- Spatial Information CRC
- Indigenous Lands CRC
- Geoscience Australia
- State Agencies.

Descriptions of Australian Rangelands and their functional processes can be obtained from various National Land and Water Resources Audit publications (Bastin, 2008 and NLWRA 2001).

References

Bastin, G and the ACRIS Management Committee (2008) - Taking the Pulse, published on behalf of the ACRIS Management Committee by the National Land and Water Resources Audit, Canberra.


