Northern Territory Government

Pastoral Land Board

Annual Report 2009/10

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Chairman's Foreword

The Annual Report of the Pastoral Land Board for 2009/10 covers the period 1 October 2009 to 30 September 2010 in line with a seasonal reporting period approved by the Minister in May 2005.

The Northern Territory pastoral estate is about 606,000 km^2 in size. The gross value of production for the NT cattle industry was estimated at $261.8 million in 2008/09. This represents approximately 50.3% of the total value of the Territory's rural industries and fisheries production.

One of the important functions of the Pastoral Land Board is to monitor the condition and use of pastoral land to facilitate its sustainable use and the economic viability of the industry in accordance with the objects of the *Pastoral Land Act*. The Board is committed to the maintenance and, where possible, the improvement of the condition of the Territory's pastoral land.

For several years, the Board has been concerned that the momentum of the pastoral land monitoring programs has slowed. If the current level of monitoring is not increased it will take more than 10 years for all pastoral leases in the Northern Territory to be visited and this is insufficient to provide an assessment of land conditions throughout the pastoral estate. The table below summarises outputs for the Tier 1 monitoring program over the past six years.

Reporting Year 1 Oct – 30 Sept	Total No. of properties monitored	Total No. of monitoring sites re-assessed	New monitoring sites established
2004/05	86	774	37
2005/06	52	498	4
2006/07	74	673	20
2007/08	56	460	34
2008/09	22	254	-
2009/10	18	121	-

Ground based monitoring data provided to the Board for 2009/10 is limited to 18 properties in three pastoral districts (four Darwin properties, one Katherine property and 13 Sturt Plateau properties). The Board is unable to provide an objective assessment of land condition across all of the pastoral districts of the Northern Territory. Landscape function analysis has been provided for half of the properties in the Sturt Plateau District. Reports for the remaining districts are limited to rainfall records and comments on pasture growth as determined by AussieGRASS models.

Although the Board had no input into the review of the *Pastoral Land Act* during the 2009/10 reporting year it is timely to report that a bill to amend the legislation was released for public comment in March 2011. The Pastoral Land Board lodged a submission about the proposed amendments as well as the *Native Vegetation Management Bill*. The Board's submission supported the significant policy decision by the Northern Territory Government aimed at preserving healthy landscapes and providing some objective criteria for land clearing decisions. However, an issue of concern to the Board is the major changes to the *Pastoral Land Act* and role of the Pastoral Land Board, including the removal of the statutory requirement for monitoring of the pastoral estate. Other issues raised in the submission by the Board include the bureaucratic decision making model adopted and the need for objective criteria in land clearing decisions at the enterprise/property level.

Under the proposed amendments the Pastoral Land Board will have no formal functions and there will no longer be an independent body with any statutory responsibility for the pastoral estate. If the legislative changes are enacted in 2012 this will be the last report of the Pastoral Land Board as required by its current statutory obligations.

Finally, the Board would like to thank its Executive Officer, Ms Judy Bartolo. Judy has worked with the Board since its establishment in 1992. The Board has valued her knowledge, expertise and hard work during 19 years of excellent service. The Board wishes Judy well during her extended leave and future retirement.

Anthony Young
Chairman
Pastoral Land Board

9 August 2011

Membership of the Board

Chairman

Anthony David Young	3 year term – expiring 25 June 2013

Members

Colleen Marie Costello	3 year term – expiring 25 June 2011
Steven Craig	3 year term – expiring 25 June 2011
Michael Francis Quirk	3 year term – expiring 25 June 2013
Thomas George Henry Stockwell	3 year term – expiring 25 June 2011

Executive Officer

Judy Bartolo

Functions of the Board

Section 29 of the *Pastoral Land Act* outlines the functions of the Board:

[a] to report regularly to, and as directed by, the Minister, but in any case not less than once a year, on the general condition of pastoral land and the operations of the Board;
[b] to consider applications for the subdivision or consolidation of pastoral land and make recommendations to the Minister in relation to them;
[c] to plan, establish, operate and maintain systems for monitoring the condition and use of pastoral land on a District or other basis;
[d] to assess the suitability of proposed new pastoral leases over vacant Crown land;
[e] to direct the preparation, and monitor the implementation of, remedial plans;
[f] to monitor, supervise or cause to be carried out work in relation to the rectification of degradation or other damage to pastoral land;
[g] to monitor the numbers and effect of stock and feral and other animals on pastoral land;
[h] to monitor and administer the conditions to which pastoral leases are subject;
[j] to make recommendations to the Minister on any matter relating to the administration of the Act;
[k] to hear and determine all questions, and consider and make recommendations on all matters, referred to it by the Minister; and
[m] such other functions as are imposed on it by or under the *Pastoral Land Act* or any other Act or as directed by the Minister.

Other functions outlined in the Act include:

i. to determine applications for clearing pastoral land [section 38(1)(h)]
ii. to consider breaches of conditions referred by the Minister [section 41]
iii. to consider and make recommendations to the Minister on applications for conversion of term pastoral leases to perpetual tenure [section 62]
iv. to administer the access provisions of the Act, including nomination of access routes under PART 6
v. to determine applications for non pastoral use of pastoral land [PART 7].

Meetings of the Board held during 2009/10

Three meetings of the Pastoral Land Board were held during 2009/10. In addition to these meetings, 14 matters were determined out of session and six matters were considered by sub-committees of the Board with relevant property inspections.

82nd Meeting: teleconference held 30 November 2009

The Board gave further consideration to two applications to convert term leases to perpetual tenure and determined its recommendation to the Minister and gave preliminary consideration to a subdivision application. Approval was given to a clearing application and an application for non pastoral use. Other matters considered included land condition issues identified on one property with endorsement of a voluntary management plan, status of the Tier 1 monitoring program and the VRD feral animal program.

83rd Meeting: teleconference held 10 December 2009

The Board gave further consideration to a subdivision application and determined its recommendation to the Minister. Other matters considered included land condition issues identified on one property with a request to the lessee for preparation of a management plan.

84th Meeting held in Darwin 8 June 2010

The Board gave further consideration of an application to convert a term lease to perpetual tenure and determined its recommendation to the Minister. It gave preliminary consideration to two applications to clear pastoral land. Other matters considered included adoption of the NT Planning Scheme Land Clearing Guidelines, a briefing from departmental officers on monitoring methodology, land condition in central Australia, guidelines for subdivision of pastoral land and a review of the Pastoral Lease Administration unit and secretariat support to the Board.

Policy Issues and New Initiatives

Review of the *Pastoral Land Act*

The Board had no further input to the review of the *Pastoral Land Act* during 2009/10.

Guidelines for clearing pastoral land

In March 2010 the Minister advised the Board that the NT Land Clearing Guidelines had been amended and he asked the Board to adopt these guidelines for assessing land clearing applications under the *Pastoral Land Act* and where practical the definitions for native vegetation as used under the NT Planning Scheme.

The Board subsequently undertook a review of its Clearing Guidelines to identify inconsistencies with the NT Planning Scheme Land Clearing Guidelines.

In August 2010 the Board:

- Adopted the Technical Guidelines contained in the NT Planning Scheme Land Clearing Guidelines 2010 as the technical guidelines for all clearing on pastoral leases.

- Adopted the definitions for “native vegetation” and “clearing of native vegetation” under the NT Planning Scheme.
- Approved additional exemptions that do not require formal clearing approval on pastoral leases.
- Approved changes to the public notification processes so that applications requiring formal assessment under the *Environmental Assessment Act* do not require further public notification.
- Approved publication of revised Pastoral Land Clearing Guidelines 2010 and revised application form.

Pastoral Land Monitoring Programs

The Pastoral Land Board, the pastoral industry and the Northern Territory government are working together to maintain or improve the condition of the Territory’s pastoral land. This land, held as pastoral leases, comprises around 45% of the Territory. Maintenance of this natural resource in good condition is essential for a profitable and sustainable pastoral industry.

Monitoring and reporting on the condition of pastoral land is a key function of the Pastoral Land Board under the *Pastoral Land Act.* The Board is also responsible for instigating remedial action to restore pastoral land condition. In support of the Board, NRETAS operates a two-tiered pastoral land monitoring system. Both tiers of the monitoring program aim to assist pastoralists in making better management decisions.

The Tier 1 program uses photos and visual assessment of photo-point sites to assess pastoral land condition and changes in condition over time. Pastoralists are encouraged to use the photo-point sites to become more aware of pasture plants and the level of pasture use by stock. This in turn will help them better manage their livestock and land.

Tier 2 programs are designed to provide an objective assessment of pastoral land condition using remote sensing and ground-based assessment methods. Currently, only a small percentage of pastoral land is monitored and updated annually using Landsat satellite data. A project to develop a monitoring program across the whole of the NT using MODIS (Moderate Resolution Imaging Spectroradiometer) satellite imagery to provide annual updates of land condition commenced in March 2007. In 2009/10, ten properties were selected from five Pastoral Districts and specific land systems within each property were targeted as areas important for grazing. This project assessed the trend of indicators associated with land condition, primarily the response of ground cover to rainfall and the extent and proportion of bare ground. A scaled index of bare soil was produced for the study period of October 2009 to September 2010 at monthly intervals.

Establishment and Reassessment of Tier 1 Photo-Point Monitoring Sites

During 2009/10 a total of 121 monitoring sites were reassessed on 18 properties in the Darwin, Katherine and Sturt Plateau Pastoral Districts (refer Table 1).

Pastoral District	Total No. of Sites	No. of Properties [with Tier 1 sites]	Average Sites/Property	New Sites Established 2009/10	Reassessed 2009/10	
					Sites	Properties
Darwin 21 Pastoral Leases	**144**	**21**	**7**	**0**	**48**	**4**
Katherine 7 Pastoral Leases	**49**	**7**	**7**	**0**	**5**	**1**
Roper 10 Pastoral Leases	**51**	**10**	**5**	**0**	**0**	**0**
VRD 25 Pastoral Leases	**338**	**25**	**14**	**0**	**0**	**0**
Sturt Plateau 27 Pastoral Leases	**180**	**26**	**7**	**0**	**68**	**13**
Gulf 18 Pastoral Leases	**112**	**17**	**7**	**0**	**0**	**0**
Barkly 31 Pastoral Leases	**447**	**31**	**14**	**0**	**0**	**0**
Tennant Creek 8 Pastoral Leases	**80**	**8**	**10**	**0**	**0**	**0**
Plenty 14 Pastoral Leases	**157**	**14**	**11**	**0**	**0**	**0**
Northern Alice Springs 30 Pastoral Leases	**340**	**30**	**11**	**0**	**0**	**0**
Southern Alice Springs 26 Pastoral Leases	**278**	**24**	**12**	**0**	**0**	**0**
Other Tenure **All Pastoral Districts** Aboriginal Land and Crown Leases	**115**	**15**	**8**	**0**	**0**	**0**
Totals	**2291**	**228**	**10**	**0**	**121**	**18**

Table 1: Tier 1 Photo-point Monitoring Sites established and reassessed 2009/10 (1 October 2009 – 30 September 2010)

Pastoral District Reports 2009/10

General Definition of Land Condition

A general definition of landscape condition is provided by the Commonwealth Land and Water Audit (2001) "as a value judgement related to the worth of a landscape for a particular use". In the Northern Territory, where maintaining natural pastures is a primary goal of sustainable pastoral management, landscape condition is most usefully defined in terms of the ability of the land to maintain productivity for future generations. Land condition in the Northern Territory pastoral estate can best be described by three main indicators:

- The distribution of water and nutrients in a landscape often scarce in these essential components, which in turn affects,
- The productivity and composition of pasture plant species, and
- The presence of feral animals and noxious weeds.

Criteria used to assess Pasture Condition

Three condition classes are used to assess pasture condition (good, fair and poor). These classes are based on indicators of pasture condition such as the abundance of perennial plants known to increase or decrease following grazing, and ground surface indicators such as the exposure of bare soil to wind and water and its subsequent erosion. These indicators of pasture condition and associated assessment criteria have largely been determined from historical information, local knowledge, cross fence comparisons and stock grazing gradients out from water. The further from water the less intense the stock grazing pressure and the higher the condition class rating tends to be.

The condition classes can be described as follows:

Good: There is close to maximum diversity and cover of annual and perennial plant species possible for that pasture type with perennial species of various ages. There is no active erosion other than natural features and processes. Plant and litter cover protects the soil from wind and water in all seasons except following fire.

Pastures in good condition are stable and at or close to their productive potential. Pastoral managers should be aiming for good pasture condition, which necessitates careful management practices that maintain or improve pasture condition.

Fair: Reduced cover and regeneration of palatable perennial species and there has been some establishment of less preferred unpalatable plants. Productivity remains high in good seasons but is markedly reduced in dry seasons. Lower plant cover increases the susceptibility of soil to erosion in most seasons and there is evidence of moderate erosion on susceptible land types.

Pastures in fair condition are productive, but below their productive potential. They are sometimes actively eroding and can rapidly deteriorate to poor condition. Maintaining pastures in fair condition is not a satisfactory status quo, as long term damage to their productive capacity will result. They should be managed with the aim of improving condition and ultimately achieving good condition status.

Poor: The palatable component of the pasture is depleted and the pasture is dominated by annual, ephemeral and unpalatable perennial species. There is no, or markedly reduced, regeneration of desirable perennial plants, productivity is impaired and the seasonal response is poor. Soils are unstable and susceptible to erosion in all seasons and past erosion leaves the site susceptible to further soil movement if grazed.

Pastures in poor condition have severely reduced productivity, which is often especially telling during dry periods. They require a very long period of spelling to improve condition or mechanical intervention such as erosion control earthworks or reseeding may be required.

Change in Landscape Function (LF) Index

Assessing change in landscape function (landscape 'health') over time can assist in understanding if natural processes or grazing management practices are impacting upon pastoral district or individual station condition. Landscape function describes the capacity of landscapes to regulate (i.e. capture and retain, not leak) rainwater and nutrients, the vital resources for plant growth (Ludwig et al. 1997).

Functional landscapes have a good cover and arrangement of persistent vegetation patches (typically perennial vegetation) such that much of the rainfall is retained and is able to infiltrate the soil, and as there is little runoff, there is limited movement of sediment and loss of retained nutrients, organic matter (litter) and seeds. Similarly, the good cover and arrangement of vegetation patches minimises wind erosion and loss of nutrients in dust. As patch cover decreases and patches become more distant, runoff increases resulting in lower infiltration and increased nutrient loss in transported sediments (i.e. erosion). These eroding landscapes become progressively more dysfunctional, i.e. have reduced landscape function. The composition of species contributing to pasture biomass (dry weight basis) is estimated at Tier 1 sites. Estimates are adjusted for any grazing that has occurred. The percentage area of bare ground is also estimated so that % ground cover can be calculated as 100 - % of bare ground. These two data types have been combined to produce an index of landscape function, therefore potential 'health' of the pastoral district.

The Richards-Green Functionality Index (RGFI) is a procedure for deriving an index of landscape functionality from data collected at monitoring sites, in the absence of more robust data collected through formal landscape function analysis. The index is based on vegetation and soil attributes that, in combination, contribute to increased retention of rainwater and nutrients as resources for the growth and persistence of plants. These attributes include perennial grass density, vegetation cover and soil surface conditions favourable to water infiltration and retention, nutrient cycling and surface soil stability.

Estimated ground cover has been weighted by the proportion of perennial grasses present (i.e. cover comprised of a high proportion of perennial grasses is assumed to contribute more to improved landscape function than a site with an equivalent cover of annual or ephemeral species).

Darwin Pastoral District Report 2009/10

Rainfall Darwin District	
20 year district average 1255 mm	2009/10 district annual average 1256 mm
20 year district average summer (October to April) 1162 mm	2009/10 district average summer (October to April) 1209 mm
20 year district average winter (May to September) 93 mm	2009/10 district average winter (May to September) 46 mm

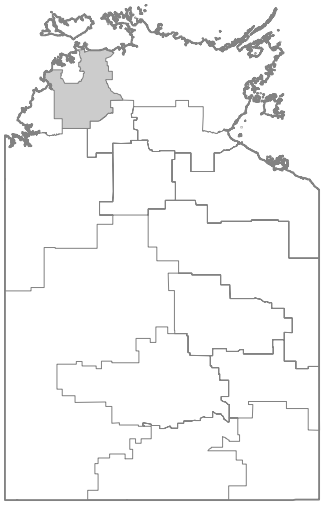

Figure 1: Location of Darwin Pastoral District

The Darwin Pastoral District experienced average to above average rainfall for 2009/10.

Pasture growth for the district ranged from average to extremely low from October 2009 to September 2010 as determined by AussieGRASS models. The standing pasture biomass for May 2010 was extremely low for the Darwin district compared to historical records. The trend continued through to September 2010 with the standing biomass below average to extremely low across the district.

Tier 1 data collection was undertaken on four properties in the Darwin Pastoral District during 2009/10 with 48 sites re-assessed. Landscape function index was calculated for each of the properties. Declining levels of landscape function were recorded on two properties, improving landscape function on one property and high stable level of landscape function on one property.

Katherine Pastoral District Report 2009/10

Rainfall Katherine District	
20 year district average 995 mm	2009/10 district annual average 1077 mm
20 year district average summer (October to April) 946 mm	2009/10 district average summer (October to April) 1075 mm
20 year district average winter (May to September) 49 mm	2009/10 district average winter (May to September) 1 mm

The Katherine Pastoral District experienced above average rainfall for 2009/10.

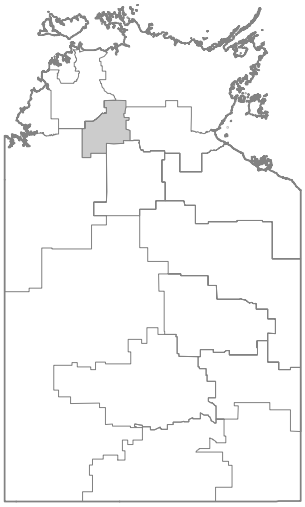

Figure 2: Location of Katherine Pastoral District

Tier 1 data collection was undertaken on one property in the Katherine Pastoral District during 2009/10 with 5 sites re-assessed. All 5 sites were considered to be in good land condition.

Pasture growth for the district was average to extremely low from October 2009 to September 2010 as determined by AussieGRASS models. The standing pasture biomass for May 2010 was average to extremely low when compared to historical records. This trend continued through to September 2010 with pasture biomass levels of below average to extremely low.

Roper Pastoral District Report 2009/10

Rainfall Roper District *	
20 year district average 641 mm	2009/10 district annual average 350 mm
20 year district average summer (October to April) 613 mm	2009/10 district average summer (October to April) 334 mm
20 year district average winter (May to September) 27 mm	2009/10 district average winter (May to September) 16 mm

* 2009-10 rainfall records for the Roper Pastoral District were limited to 3 weather stations as less than 10% of stations had consistent data collection for the recording year. Rainfall averages are significantly below the 20 year district average for the 3 stations used.

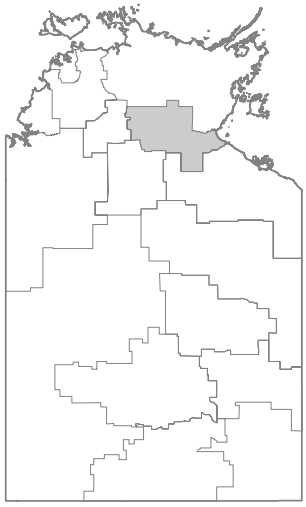

Figure 3: Location of Roper Pastoral District

No properties in the Roper Pastoral District were assessed under the monitoring program during 2009/10.

Pasture growth for the district was average to above average from October 2009 to September 2010 as determined by AussieGRASS models. Parts of the district experienced very high levels of standing biomass in May 2010, with levels exceeding 4000 kg/ha, with remaining areas experiencing average to just above average biomass levels.

VRD Pastoral District Report 2009/10

Rainfall VRD District	
20 year district average 730 mm	2009/10 district annual average 799 mm
20 year district average summer (October to April) 690 mm	2009/10 district average summer (October to April) 793 mm
20 year district average winter (May to September) 40 mm	2009/10 district average winter (May to September) 5 mm

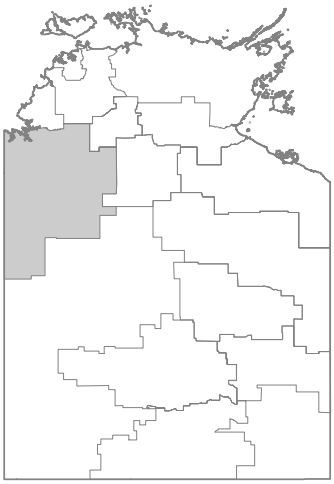

Figure 4: Location of VRD Pastoral District

The VRD Pastoral District experienced above average rainfall for 2009/10.

No properties in the VRD Pastoral District were assessed under the monitoring program during 2009/10.

Pasture growth for the district was average to below average as determined by AussieGRASS models, with some areas having extremely low pasture growth.

Sturt Plateau Pastoral District Report 2009/10

Rainfall Sturt Plateau District	
20 year district average 826 mm	2009/10 district annual average 860 mm
20 year district average summer (October to April) 787 mm	2009/10 district average summer (October to April) 859 mm
20 year district average winter (May to September) 38mm	2009/10 district average winter (May to September) 1 mm

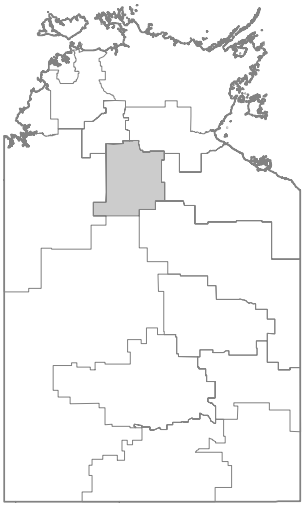

Figure 5: Location of Sturt Plateau Pastoral District

During 2009/10 the Sturt Plateau received average to above average rainfall levels with small areas of the district receiving below average rainfall.

Pasture growth for most of the district was average to above average as determined by AussieGRASS models. Standing pasture biomass in May 2010 was average to extremely low when compared to historical records. This trend continued through to September, with pasture biomass levels below average to extremely low.

Tier 1 data collection was undertaken on 13 properties in the Sturt Plateau Pastoral District during 2009/10 with 68 sites re-assessed.

The landscape function trend of sites within the Sturt Plateau Pastoral Districts tends to indicate a high level of landscape function, with a general trend of minimal change in perennial biomass and cover suggesting land condition in the district is reasonably stable (Figure 6).

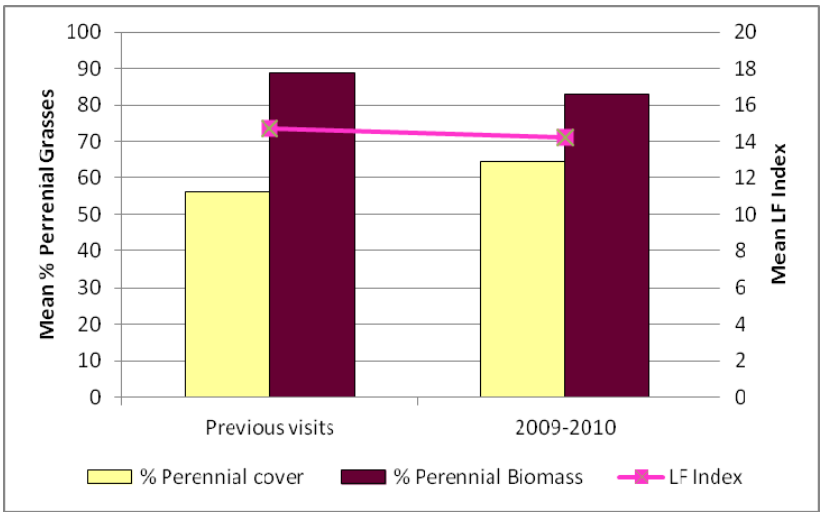

Figure 6: *Trend of sites assessed within Sturt Plateau Pastoral District of mean % perennial biomass, mean % perennial ground cover and mean Landscape Function Index for all properties from previous to most recent assessment in 2009/10.*

Gulf Pastoral District Report 2009/10

Rainfall Gulf District	
20 year district average 771 mm	2009/10 district annual average 793 mm
20 year district average summer (October to April) 724 mm	2009/10 district average summer (October to April) 784 mm
20 year district average winter (May to September) 46 mm	2009/10 district average winter (May to September) 9 mm

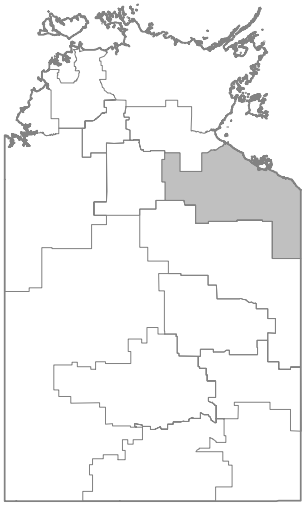

Figure 7: Location of Gulf Pastoral District

No properties in the Gulf Pastoral District were assessed under the monitoring program during 2009/10.

Most of the Gulf district experienced above average rainfall during 2009/10. Pasture growth for most of the district was average to above average as determined by AussieGRASS models. Standing pasture biomass levels were high, with some areas having in excess of 4000 kg/ha.

Barkly Pastoral District Report 2009/10

Rainfall Barkly District	
20 year district average 423 mm	2009/10 district annual average 404 mm
20 year district average summer (October to April) 386 mm	2009/10 district average summer (October to April) 403 mm
20 year district average winter (May to September) 36 mm	2009/10 district average winter (May to September) 1 mm

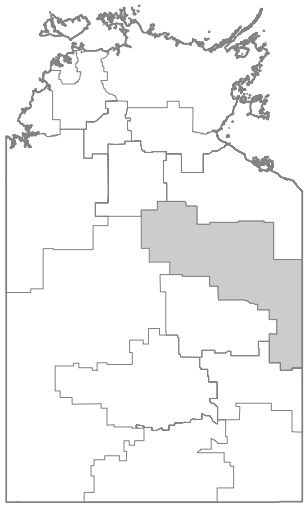

Figure 8: Location of Barkly Pastoral District

No properties in the Barkly Pastoral District were assessed under the monitoring program during 2009/10.

Much of the Barkly District received above average summer rainfall for 2009/10 (October to April).

Pasture growth for the Barkly district was generally above average, though some areas experienced poor growth with levels in the bottom 30% of recording years as determined by AussieGRASS models. Standing pasture biomass levels in May 2010 were average, with some areas having low growth and biomass less than 200 kg/ha. By September 2010, standing pasture biomass levels were above average to extremely high for most of the district.

Tennant Creek Pastoral District Report 2009/10

Rainfall Tennant Creek District	
20 year district average 319 mm	2009/10 district annual average 536 mm
20 year district average summer (October to April) 277 mm	2009/10 district average summer (October to April) 536 mm
20 year district average winter (May to September) 42 mm	2009/10 district average winter (May to September) 0 mm

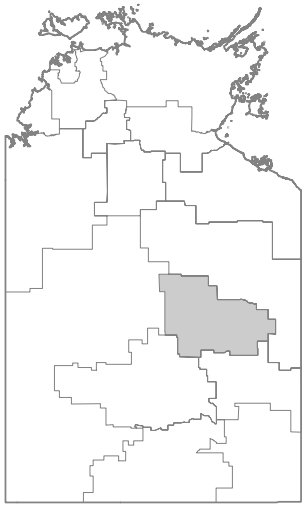

Figure 9: Location of Tennant Creek Pastoral District

No properties in the Tennant Creek Pastoral District were assessed under the monitoring program during 2009/10.

During 2009/10 the Tennant Creek Pastoral District experienced above average rainfall. Pasture growth for most of the district was average to above average as determined by AussieGRASS models. Some areas experienced extremely high levels of standing biomass, exceeding 4000 kg/ha. Compared to historical records, in May 2010 standing pasture biomass levels were average to well above average. High levels of biomass continued throughout the dry season with September 2010 levels being average to above average.

Plenty Pastoral District Report 2009/10

Rainfall Plenty District	
20 year district average 254 mm	2009/10 district annual average 309 mm
20 year district average summer (October to April) 198 mm	2009/10 district average summer (October to April) 305 mm
20 year district average winter (May to September) 56 mm	2009/10 district average winter (May to September) 4 mm

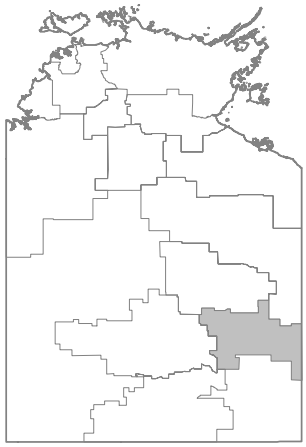

Figure 10: Location of Plenty Pastoral District

Rainfall for the Plenty Pastoral District for 2009/10 was above average with the majority of the district receiving above average and well above average rainfall.

No properties in the Plenty Pastoral District were assessed under the monitoring program during 2009/10.

Pasture growth for most of the district was well above average as determined by AussieGRASS models. Standing pasture biomass levels in May 2010 were in excess of 1000 kg/ha, indicating a good summer season. Compared to historical records, the district experienced average to above average levels of biomass. High levels of biomass continued through to September 2010 with above average to extremely high levels across the district.

Northern Alice Springs Pastoral District Report 2009/10

Rainfall Northern Alice Springs District	
20 year district average 295 mm	2009/10 district annual average 349 mm
20 year district average summer (October to April) 220 mm	2009/10 district average summer (October to April) 345 mm
20 year district average winter (May to September) 75 mm	2009/10 district average winter (May to September) 4 mm

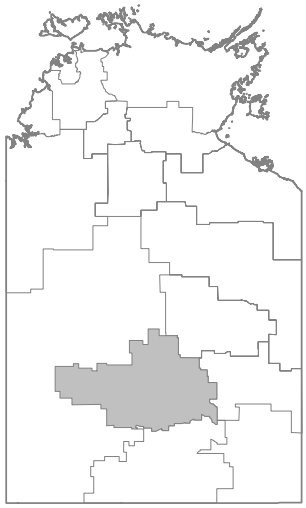

Figure 16: Location of Northern Alice Springs Pastoral District

No properties in the Northern Alice Springs Pastoral District were assessed under the monitoring program during 2009/10.

During 2009/10 above average rainfall was recorded for most of the Northern Alice Springs Pastoral District, with the majority falling in the summer growing period.

Pasture growth across the district ranged from average to extremely high as determined by AussieGRASS models. Very high levels greater than 4000 kg/ha were experienced across some areas of the district. High levels of biomass persisted through to September 2010, with the district experiencing above average levels when compared to historical records.

Southern Alice Springs Pastoral District Report 2009/10

Rainfall Southern Alice Springs District	
20 year district average 213 mm	2009/10 district annual average 297 mm
20 year district average summer (October to April) 148 mm	2009/10 district average summer (October to April) 294 mm
20 year district average winter (May to September) 65 mm	2009/10 district average winter (May to September) 3 mm

No properties in the Southern Alice Springs Pastoral District were assessed under the monitoring program during 2009/10.

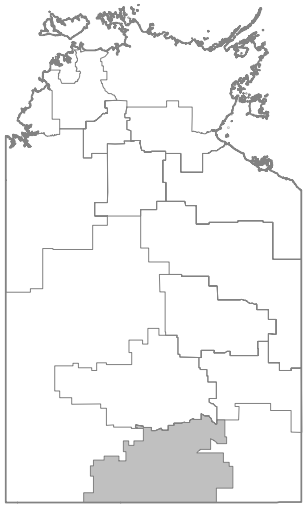

Figure 18: Location of Southern Alice Springs Pastoral District

During 2009/10 above average rainfall was recorded across the majority of the Southern Alice Springs Pastoral District, with most falling in the summer growing period.

Average to extremely high levels of pasture growth were experienced across the district as determined by AussieGRASS models. When compared to historical records, the May 2010 biomass was average to above average, with some areas of low levels below average. The trend of high levels of standing pasture biomass continued through to September 2010, with most areas having above average to well above average levels.

Specific Land Condition Issues

Implementation of Management Plans to address Land Condition Issues

In cases where specific land condition issues are identified on a pastoral property, the Pastoral Land Board may request the lessee to prepare a management plan detailing the action to be taken to address the land management issues which have been identified. It is a basic tenet of the *Pastoral Land Act* that pastoral lessees acknowledge their duty to adopt sound management practices and their responsibility to address any land condition issues that may arise. In line with this philosophy, the Pastoral Land Board seeks voluntary collaboration with pastoral lessees to address land condition issues and implementation of rehabilitation programs.

During 2009/10 action continued in respect of implementation of management plans on a number of properties throughout the Territory.

Drought

Six properties in central Australia applied for drought assistance in 2009 and four of these were found to be eligible to receive financial assistance under drought assistance arrangements. All of these properties subsequently experienced good rainfall and pasture growth in 2010. Consistently good rain was received across the majority of the Alice Springs region in virtually every month in 2010. As a result of the good seasonal conditions, there were no applications for consideration of drought status in 2010.

Erosion on Roads, Fences and other Infrastructure

Erosion on roads, tracks and fence lines continues to be a significant soil management issue on pastoral leases throughout the Northern Territory. Officers of the Land Resources Branch, NRETAS adopt a co-operative approach to assist station managers with appropriate soil conservation earthwork design and construction. Voluntary management plans have been prepared by pastoral lessees and successfully implemented on a number of properties to address issues arising from the poor siting of infrastructure, and/or inappropriate maintenance techniques.

Feral Animals

Large feral vertebrates are a significant problem throughout the Northern Territory as a result of their negative impacts on the agricultural and natural environment. For instance, feral animals have been associated with:

- Declines in the abundance and diversity of native plant communities due to trampling and ingestion of seedlings.
- Increased soil erosion and sedimentation of natural waterways and water bodies as a result of trampling.
- Competition with native species for feed and habitat.
- Consumption of seedlings and plant materials, reducing the capacity for the ecosystem to regenerate.
- Increased spread and establishment of weeds.
- Decreased abundances and diversities of aquatic and terrestrial invertebrates.
- Decreased agricultural productivity by reducing the availability of feed for stock.
- Damage to fences and other infrastructure.

Feral Animal Control Program – VRD Pastoral District

In 2009/10 the Pastoral Land Board raised concerns regarding implementation of the VRD feral animal program and the need for accurate estimates of feral animal populations in the region. This concern persists.

Feral Camels in Central Australia

Feral camels occur in SA, WA, Qld and the NT. Aboriginal settlements in Central Australia and pastoral properties fringing the Simpson, Great Sandy and Tanami Deserts are experiencing increasing problems with feral camels as the size of the camel population increases.

The Desert Knowledge Cooperative Research Centre (DK CRC) research report on the management of camel impacts was released in December 2008. On the basis of this report, the DK CRC developed an Expression of Interest under the Caring For Our Country programme to implement a national programme to manage the impacts of feral camels. The funding bid was successful and the Commonwealth has offered $19M over four years to implement the project, with aims to remove upwards of 650,000 camels.

Weeds

Weeds threaten the sustainability of rural primary industries in the Northern Territory through increased costs, reduced efficiency and limitations on marketing. They also threaten water resources, freshwater fishing, and conservation of the natural environment, recreation, tourism and traditional hunting.

The Weed Management Branch, Department of Natural Resources, Environment, the Arts and Sport assists landholders to manage weeds by providing technical advice, assisting with weed management plans, carrying out surveys and controlling key infestations.

Major weed issues for each pastoral district are summarised below.

Weed Issues in the Darwin Pastoral District

Major weed issues in the Darwin Pastoral District are:

- Mimosa (*Mimosa pigra)*
  Mimosa continues to be the major weed impacting on the pastoral industry in the Darwin Pastoral District, with major infestations on pastoral land located in the Mary, Adelaide, Finiss, Reynold and Daly River catchments.
- Hyptis (*Hyptis* suaveolens)
- *Sida spp*
- Gamba grass (*Andropogon gayanus*)
- Mission grass (Pennisetum polystachion)
- Grader grass (Themeda quadrivalvis)
- *Senna spp*
- Bellyache bush *(Jatropha gossypifolia)*

Weed Issues in the Katherine Pastoral District

Major weed issues in the Katherine Pastoral District are:

- Bellyache bush *(Jatropha gossypifolia)*
- Parkinsonia (*Parkinsonia aculeate*)
- Grader grass (Themeda quadrivalvis)

Weed Issues in the Roper Pastoral District

Major weed issues in the Roper Pastoral District are:

- Bellyache bush *(Jatropha gossypifolia)*
- Lantana (*Lantana spp.*)
- Mimosa (*Mimosa pigra)*
- Parkinsonia (*Parkinsonia aculeate*)
- Grader grass (Themeda quadrivalvis)

Weed Issues in the VRD Pastoral District

Major weed issues in the VRD Pastoral District are:

- Bellyache bush *(Jatropha gossypifolia)*
- Mimosa (*Mimosa pigra)*
- Parkinsonia (*Parkinsonia aculeate*)
- Prickly Acacia (*Acacia nilotica*)

Weed Issues in the Sturt Plateau Pastoral District

Major weed issues in the Sturt Plateau Pastoral District are:

- Mimosa (*Mimosa pigra)*
  Infestation at Daly Waters on vacant Crown land.

Weed Issues in the Gulf Pastoral District

Major weed issues in the Gulf Pastoral District are:

- Bellyache bush *(Jatropha gossypifolia)*
- Prickly Acacia (*Acacia nilotica*)

Weed Issues in the Barkly Pastoral District

Major weed issues in the Barkly Pastoral District are:

- Mesquite (*Prosopis spp.*)
- Parkinsonia (*Parkinsonia aculeate*)
- Prickly Acacia (*Acacia nilotica*)
- Rubberbush (*Calotropis procera*)
- Parthenium weed (*Parthenium hysterophorous*)

Weed Issues in the Tennant Creek Pastoral District

Major weed issues in the Tennant Creek Pastoral District are:

- Bellyache bush *(Jatropha gossypifolia)*
- Parkinsonia (*Parkinsonia aculeate*)
- Rubberbush (*Calotropis procera*)
- Parthenium weed (*Parthenium hysterophorous*)

Weed Issues in the Plenty Pastoral District

Major weed issues in the Plenty Pastoral District are:

- Parkinsonia (*Parkinsonia aculeate*)
- Rubberbush (*Calotropis procera*)

Weed Issues in the Northern Alice Springs Pastoral District

Major weed issues in the Northern Alice Springs Pastoral District are:

- Athel Pine (*Tamarix aphylla*)
  Athel Pine is principally located south of Alice Springs along the Finke River catchment. Mature athel pine trees have been controlled north of Alice Springs.

Weed Issues in the Southern Alice Springs Pastoral District

Major weed issues in the Southern Alice Springs Pastoral District are:

- Athel Pine (*Tamarix aphylla*)

Value of the Cattle Industry to the Northern Territory

The pastoral estate of the Northern Territory covers around 606,000 km^2 comprising 45% of the area of the Northern Territory under 224 pastoral leases. Pastoral holdings vary from the smallest station of 198 km^2 to the Territory's largest station which runs cattle over 12,212 km^2.

The NT cattle population in 2010 was around 2 million head.

The estimated gross value of production from the NT cattle industry in 2008/09 was $261.8 million, a 22% decrease compared to the previous year. This was mainly due to a decrease in both the value of live cattle exports and cattle movements interstate.

Cattle contributed 50.3% of the total value of Territory rural industries and fisheries production in 2008/09.

The NT cattle industry's value adding contribution to NT Gross State Product in 2008/09 is estimated to be $159.3 million. The flow-on effects of the pastoral industry on the NT economy are estimated to be $214.8 million.

In 2008/09 an estimated 509,918 head of cattle were turned off from the Territory pastoral properties, a decrease of 24.4% on 2007/08. Of the total NT cattle turned off, 45.5% went interstate and 55.5% were exported live overseas. Less than 1500 cattle were processed in small domestic abattoirs. There is currently no large commercial abattoir operating in the NT. The interstate demand for cattle was significant in 2008/09 due to continuing drought conditions in Queensland, NSW, WA and SA.

More recent figures for NT live cattle exports through the Port of Darwin show that 291,048 head of NT cattle were exported in 2009/10.

Applications considered by the Board during 2009/10

Applications to clear Pastoral Land 2009/10

(i) Clearing applications approved 2009/10 – Purpose and Areas

Purpose of clearing	Number of proposals	Area approved
Research trials to study effectiveness of different regrowth control methods	1	80 ha
Totals	1	80 ha

Table 3: Purpose and areas of pastoral land clearing approved 2009/10

(ii) Applications to clear Pastoral Land 2009/10

Active Applications carried over from 2008/09	1
Applications carried over from 2008/09 as held in abeyance pending formal assessment under the *Environmental Assessment Act*	2
Total number of clearing applications lodged 2009/10	5
Applications approved	1
Applications lapsed/withdrawn	0
Applications carried over as held in abeyance pending formal assessment under the *Environmental Assessment Act*	2
Active Applications carried over	**5**

Table 4: Clearing applications determined 2009/10

(iii) Applications to vary Clearing Permits 2009/10

Purpose of variation	Number of proposals	Approved
To amend the clearing plan and regrowth control methods	1	1

Table 5: Variations to Clearing Permits 2009/10

Applications for Non Pastoral Use 2009/10

(i) Applications for non pastoral use 2009/10

Applications carried over from 2008/09	3
Applications lodged during 2009/10	9
Applications approved	7
Applications lapsed/withdrawn	0
Applications carried over	**5**

Table 6: Applications for non pastoral use determined 2009/10

(ii) Purpose of non pastoral use approvals 2009/10

Non Pastoral Use Activity	**No. of Approvals**
Tourism	4
Horticulture	1
Store	1
Mining rehabilitation	1

Table 7: Purpose of non pastoral use approvals 2009/10

Applications to Subdivide a Pastoral Lease into two or more Pastoral Leases 2009/10

Active Applications carried over from 2008/09	1
Applications carried over from 2008/09 as held in abeyance	1
Applications referred 2009/10	1
Applications considered by the Board with recommendation to the Minister	1
Applications carried over as held in abeyance at lessee's request	1
Active Applications carried over	**1**

Table 8: Subdivision applications considered 2009/10

Applications to surrender Term Pastoral Leases in exchange for Perpetual Pastoral Leases 2009/10

Applications carried over from 2008/09	3
Applications referred 2009/10	1
Applications considered by the Board with recommendation to the Minister	3
Applications carried over	**1**

Table 9: Applications to convert to perpetual tenure considered 2009/10

Report on Land Clearing previously approved

It is a requirement of the *Pastoral Land Act* that a lessee shall not undertake clearing on pastoral land without the written consent of the Pastoral Land Board. The Pastoral Land Board has included details of the number of clearing applications and purpose of land clearing approvals in each of its Annual Reports to the Minister since 1992/93. Since 1999/2000, the Board has also reported on progress with previous land clearing approvals. Table 10 below outlines whether clearing has proceeded and current status for individual determinations of the Board since the last report.

Year	Clearing Purpose	Area	Status at 30/9/2010
2007/08	Introduced pasture for grazing	1304 ha	Clearing completed.
2007/08	Introduced pasture for grazing	1613 ha	Clearing completed
2007/08	Introduced pasture for grazing	911 ha	Clearing completed.
2008/09	Irrigated pasture and hay production	82 ha	Clearing commenced.
2009/10	Research trials	80 ha	Clearing completed.

Table 10: Status of land clearing previously approved