



Department of **Planning,
Lands and Heritage**

Pastoral Lands Board

Pastoral Rangeland Monitoring Policy

**Approved by the Pastoral Lands Board
19 May 2016**

Government of **Western Australia**

Pastoral Lands Board of Western Australia



Page

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Acknowledgements

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Enquiries

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STRATEGIC CONTEXT

Pastoral leases cover 34 per cent of Western Australia. The Pastoral estate contributes significantly to State Gross Product and continues to play an increasing role in the global economy that is currently experiencing an upturn in the trade of agricultural commodities.

Section 95 of the *Land Administration Act 1997* (LAA) outlines the functions of the Pastoral Lands (Board). Of particular relevance to Rangeland monitoring, the Board is required to:

- Ensure that pastoral leases are managed on an ecologically sustainable basis (Section 95(c) LAA);
- develop policies to prevent the degradation of rangelands (Section 95(d) LAA);
- develop policies to rehabilitate degraded or eroded rangelands and to restore their pastoral potential (Section 95(e) LAA); and
- establish and evaluate a system of pastoral land monitoring sites (Section 95(g) LAA);

Rangeland monitoring is required to track land condition on pastoral leases in the Rangelands. It can also be used as an important tool for the management and preservation of the productive and environmental values of pastoral leases.

In order to determine if this is being achieved the Board requires a system which can be used to assess rangeland condition and trends to see if it is changing, for better or worse, in response to pastoral activities on leases.

This policy provides for the integration of remote sensing (satellite) imagery and on-ground evidence to provide indicators of changes in rangeland condition on pastoral leases. The Board supports the access of this information to pastoral lessees so they may potentially intervene early to take appropriate land management actions when and where required.

BACKGROUND

In accordance with section 108 of the LAA, there is an obligation for pastoral lessees to manage the rangeland using “*methods of best pastoral and environmental management practice appropriate to the area where the land is situated, for the management of stock and for the management, conservation and regeneration of pasture for grazing. Lessees must also maintain the indigenous pasture and other vegetation on the land under the lease to the satisfaction of the Board.*”

The Board has set out how it determines if a lessee is meeting their obligations with respect to section 108 of the LAA in its Rangeland Management Compliance Policy and Procedures. For example, the Board will be satisfied that a lessee is complying if:

1. The rangeland condition, inclusive of indigenous pasture and other vegetation, is improving;
2. The rangeland condition, inclusive of indigenous pasture and other vegetation, is assessed at an average rating of ‘fair’ and not declining;
3. The rangeland condition, inclusive of indigenous pasture and other vegetation, is assessed at an average rating of ‘good’ or better.

Similarly, the Rangeland Management Compliance Policy and Procedures also outlines how the Board will determine that a lessee is not complying. For example:

1. Rangeland condition on a lease declines due to identified land management practice, based on comparative rangeland inspection data.
2. There is any unlawful removal of indigenous pasture and other vegetation that disturbs or affects the soil; or
3. There is any sowing or cultivating of non-indigenous pasture and other vegetation on the lease; which is not otherwise permitted.

POLICY OBJECTIVES

The objective of this policy is to describe the arrangements to monitor and assess rangeland condition and trends on pastoral leases in Western Australia. It should be read in conjunction with the Pastoral Lands Board Rangeland Compliance Policy and Procedures.

Generally this policy aims to ensure that rangelands under pastoral lease are cared for in a way that maximises the benefit to land managers and the long term sustainability of the rangelands. Specifically this policy aims to provide general parameters around:

1. The requirements for monitoring sites to assess rangeland condition;
2. The number of monitoring sites required for each lease;
3. The establishment of a baseline for ground monitoring;
4. The integration of remote sensing into the overall monitoring of rangeland condition on pastoral leases;
5. Identifying trends in rangeland condition, both positive and negative; and
6. Identifying areas of the pastoral estate that require action to address declining rangeland condition.

POLICY PRINCIPLES

An integrated rangeland monitoring system is required to act as a management tool for both pastoral managers and the State, in order to ensure that the statutory requirement to manage, conserve, and regenerate rangeland condition is fulfilled.

- (i) On-ground monitoring methodologies are intended to be consistent, repeatable and objective, and to provide sufficient evidence, in conjunction with remote sensing, of changes in rangeland condition, so as to enable the Board to determine whether pastoral lessees are in compliance with their statutory responsibilities to manage the land appropriately.
- (ii) Any data collected in relation to a particular lease will be made available to the lessee of that leased land, in order to provide the lessee with data to assist with the appropriate management of the land under the lease.

POLICY MEASURES:

An integrated rangeland monitoring system will combine remote satellite imagery with analysis of ground based data in the following ways:

- 1. On-Ground Monitoring:** Lessees are required to monitor a number of sites previously identified by the Department of Primary Industries and Regional Development (DPIRD) based upon but not limited to:
 - a) Number of different land systems; and
 - b) Size of the land under the lease.

- 2. Method of Monitoring:** Lessees will submit one photograph annually of each designated site, unless otherwise directed by the Board. The photographs must be taken at approximately the same time of year (e.g.: same month); and the photographs should be taken in the same direction (e.g. facing south) each time.

Where further monitoring is required due to an identified issue with the land (whether that be as a result of a decline in rangeland condition or an increase in a declared species in a given area, or some other issue), pastoral lessees may be required to provide additional monitoring data, which may be in the form of:

- a) More frequent photographs at all or some of the monitoring sites; and/or
 - b) Plant/grass counts as per the Rangeland Condition Monitoring (RCM) methodology;
or
 - c) An alternative method proposed by the lessee, subject to approval by the Board.
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- 3. Establishing a Baseline:** With the technical assistance of DPIRD, the Department of Planning, Lands and Heritage (DPLH) will establish a baseline trend by accessing existing available data, including but not limited to:
 - a) Historic DPIRD rangeland surveys;
 - b) DPIRD rangeland condition assessments;
 - c) Available photos of rangeland condition; and
 - d) 15 years of MODIS (Moderate Resolution Imaging Spectroradiometer) satellite data.

Establishing a baseline will identify trends and establish change/stability of a region/lease over time as well as provide an understanding of what the "average" trend in vegetation cover is for particular regions in the rangelands. It will also indicate how a region responds to events (such as floods or fires) in order to understand better the cycle of rangeland condition across a given area.

- 4. Rangeland Condition Assessment:** the Board will seek the advice of relevant Government officers to:
- a) Identify areas where plant cover has declined. The advice will take into account seasonal conditions to ensure comparisons are made with like seasons;
 - b) Determine if there are readily apparent reasons for the decline in plant cover (such as poor seasonal conditions, fire or flood events and the like);
 - c) Request additional photos from the monitoring sites for further information and comparison;
 - d) Analyse other relevant data and risk analyses, including but not limited to:
 - i. seasonal conditions and quality;
 - ii. stocking rate trends;
 - iii. previous rangeland condition assessment data; and
 - iv. time series mapping of rangeland assessments.
 - e) Request an on-ground inspection by a rangeland inspector using the Rangeland Condition Review inspection template referred to in the Board's Rangeland Management Compliance Policy and Procedures.
- 5. Board Decisions on Rangeland Condition:** The condition of rangelands on a pastoral lease will be reported to the Board through the DPLH for a decision in the following manner:
- a) If the Board determines that a decline in rangeland condition on a lease is unacceptable and the lessee is in breach of section 108(2) or (4) of the *LAA* it will respond in accordance with the Rangeland Management Compliance Policy and Procedures;
 - b) Where assessment indicates that rangeland condition has declined, the Board may require the lessee to provide evidence to explain the decline in condition; and
 - c) Where the Board is of the view that the condition of the rangeland must be improved, the lessee will be required to demonstrate rangeland improvement over a period of time as set by the Board. While a lessee may demonstrate their own plan for improvement, they may be requested to use the basic RCM methodology of plant/grass counts combined with photos to demonstrate any improvement over time.
- 6. Information Availability:** Trend imagery summaries will be made available to pastoral lessees, highlighting changes in vegetation cover, if and when available. Annual satellite imagery is currently available through Landgate.

Review

This Pastoral Rangeland Monitoring policy will be reviewed in one year to coincide with the timelines associated with the Draft Rangelands Reform Bill and the activation of ORBIT - Objective Rangelands Business Information Tool.

Glossary

CROWN ESTATE – All land which has not been alienated.

CROWN LAND – All land except alienated land (includes reserved and leased Crown land, tidal waters, reclaimed land, river beds and lakes).

MODIS – Moderate Resolution Imaging Spectroradiometer

ORBIT – Objective Rangelands Business Information Tool