

Review of the Northern Territory Pastoral Land Act 1992

Submission by WWF-Australia

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1. Introduction

WWF welcomes the opportunity to comment on the review of the Northern Territory Pastoral Land Act. WWF is one of the world's largest international conservation organisations. WWF works through collaboration rather than confrontation, in the belief that industry, people and nature can, and must, co-exist. WWF currently has six staff members based in the NT, five in Darwin and one in Alice Springs.

Grazing is recognised as the most common threatening process for threatened species in nine sub-bioregions within (or partly within) the Northern Territory¹. All other sub-bioregions within or partly within the NT have either feral animals, exotic weeds, changed fire regimes, changed hydrology, or pollution (including marine debris) identified as the most common key threatening processes. Excluding marine pollution, all of these threatening processes are the management responsibility of pastoralists on the pastoral estate, with some regional assistance from NT agencies (DIPE and DBIRD). As the NT Pastoral Land Act is the guiding legislation for all aspects of Natural Resource Management on pastoral leases (totalling 46% of the land-mass of the NT), the Act is one of the most critical pieces of legislation governing natural resources in the NT. WWF's view is that grazing in the rangelands is one of the most important environmental issues in Australia today, secondary only to broad-scale land clearing and climate change.

The Pastoral Land Act review paper² states that following the compilation of submissions, the steering committee will oversee the formation of working groups if required to investigate individual issues raised during the submission process. WWF would welcome an opportunity to participate in working groups relevant to any issues raised within our submission.

As demonstrated in the key issues paper², there are a diverse range of opinions amongst stakeholders on some of the issues being discussed in this review. The majority of the recommendations contained within our submission are based on information contained within available scientific papers or on actions or instruments that are already in place in other jurisdictions, and which are effectively contributing to ecologically sustainable development outcomes on pastoral lands in these regions.

¹ Australian Terrestrial Biodiversity Assessment 2002, National Land and Water Resources Audit. pg 58.

² Department of Infrastructure Planning and Environment 2004, *Review of the Pastoral Land Act 1992, Key Issues Paper, Part I: Key Issues, Part II: Precip of Submissions Lodges to July 2004, Discussion Paper*. Northern Territory Government.

We have restricted our comments to those issues raised in the issues paper² that we believe critically need addressing to achieve ecological sustainability goals on the pastoral estate in the NT. This does not imply that we either support or oppose recommendations or comments relevant to other issues covered in the issues paper that are not discussed within this submission.

Acronyms used within this submission are consistent with those used in the issues paper².

1.1 Summary of points and key recommendations

Please refer to relevant sections in this submission for further explanation and justification;

- 1) Adjusting the Terms of Reference and functions of the PLB, particularly to include a substantive increased role in extension and property/regional planning services, and removal of the role of development assessment (unless the PLB undergoes a significant reconfiguration). Otherwise the development assessment role should be transferred to a Pastoral Development Assessment Authority or equivalent (possibly EPA), incorporating all recommendations made in section 2);
- 2) Introduction of measures and mechanisms to shift the intent of the PLA from a reactive approach to land management towards a more proactive/preventative approach (eg. the introduction of safe carrying capacities, best grazing practice standards, and the requirement for accredited PMPs);
- 3) The introduction of a range of incentives to improve biodiversity conservation outcomes on the pastoral estate;
- 4) Incorporating a requirement for accredited Property Management Plans (PMPs), into term lease conditions and to accompany all development proposals;
- 5) The development and implementation of protocols and risk assessment processes for the use of any introduced pasture species (already in use or planned introductions to new properties) on pastoral properties to minimise the risk of spread of introduced pasture species into high conservation areas on the pastoral estate, or to other pastoral properties, or to adjacent lands;
- 6) The expansion of the PLA to include a responsibility of lessees to manage fire on their lease for both production and biodiversity conservation goals;
- 7) Incorporating the requirement for the development of any new artificial watering point on the pastoral estate to be based on the recommendations from CSIRO's Biograze project, and that any new proposals for AWP undergo a rigorous development assessment procedure (that considers the existing network of water-remote areas in reference to areas of conservation significance, or of low grazing resilience) and are accompanied by an accredited PMP; and
- 8) Expanding the Pastoral Land Board (PLB) membership to incorporate a more diverse range of stakeholders with interests in NRM outcomes on pastoral lands (particularly bringing in more significant biodiversity conservation representation)

2. Improving Development Assessment Procedures for NT Pastoral Lands

WWF recommends the introduction of a standardised and rigorous assessment process for all proposed developments on the pastoral estate. In this context development includes non-pastoral use and diversification, major development works, land clearing, subdivision, intensification, the use of introduced pastures, mining and petroleum exploration or extraction activities, and the establishment of additional artificial watering points. In the view of WWF, the current assessment processes in the NT are *ad hoc*, are out of alignment with development assessment procedures on non-pastoral lands, and are of insufficient standard to ensure ecologically sustainable resource use on pastoral lands.

Throughout the Key Issues paper ² there is reference to the possible creation of a *Pastoral Development Consent Authority*. Should such an Authority be established, WWF recommends that it be named a Pastoral Development Assessment Authority. WWF tentatively supports such an approach, but withholds any further comment until the suggested roles, functions, powers and composition of the Authority (and/or the proposed EPA) are provided.

Alternatively, WWF tentatively supports the incorporation and expansion of the development assessment role into the Terms of Reference of a significantly reconfigured Pastoral Lands Board, provided the composition of the Board was expanded to include effective representation of biodiversity conservation interests and Aboriginal land management interests, that membership was expertise-based, and that decisions were based on advice provided by a scientific reference panel.

WWF recommends that the assessment process for all pastoral lands development be based on an effective risk assessment that follows both Ecologically Sustainable Development principles and the use of the precautionary principle in the instances where there are insufficient data on which to assess risk to the environment. The assessment process needs to be publicly accessible and subject to public submission (following the model used in assessing development referrals under the EPBC Act), including public access to (and provision for public comment on) the development proposal, the results of the risk assessment, and the recommendations made by the assessment body.

Furthermore, WWF recommends the following measures be incorporated into a revised development assessment procedure for all developments for pastoral lands:

- 1) The use of appropriate-scale vegetation mapping in the assessment of all land clearing, intensification and mining applications for pastoral lands. The present process lumps all native vegetation into a single category whereas there are obvious differences in the extent of occurrence and geographical range of particular vegetation communities - such that some communities are quite rare in either the NT or national context. These rare vegetation types need special consideration in all development assessments to ensure that their extent, range and condition are not impacted on (this is in addition to the riparian, monsoon vine forest or closed forest that are presently requested to be identified by the applicant in current land clearing applications);

- 2) Assessment of all development applications to be considered in a bioregional context to assess potential cumulative impacts on bioregional biodiversity;
- 3) The requirement for bonds or insurance (as used in the mining industry) to be paid by applicant pastoral companies and individual pastoralists to the NT Government or PLB, to ensure that any developments do not impact on neighbouring properties, crown land, Aboriginal lands or conservation reserves (particularly relevant for insuring introduced pasture species intending to be sowed do not escape);
- 4) The introduction of an Environmental Impact Assessment process for all major development proposals, undertaken by an accredited consultant with the cost borne by the developer (as in other natural resource use industries such as the mining industry). This would be undertaken in addition to, and incorporated into, the assessment process by either a reconfigured PLB, Pastoral Development Assessment Authority or EPA. WWF recognises that the term 'major development' needs to be defined and would welcome an opportunity to discuss this and develop guidelines/thresholds with the PLB and other stakeholders.
- 5) A requirement that all developments on the pastoral estate are only approved if the development results in a net conservation benefit. One example where this is currently being implemented (and effective) is in the south west of NSW in the Lower Murray Darling region. *'The Southern Mallee Project commenced in 1998 and involves landholders developing existing grazing country for dryland cultivation ie. growing cereal crops. Any development which takes place on the property must be offset with an equal or larger sized Private Reserve, within the property. For every hectare which is to be developed, at least one hectare of the same vegetation community must be placed in the private reserve, except for Chenopod Mallee where the ratio is 2.3ha placed in reserve for every hectare developed. These Private Reserves are de-stocked and all watering points are removed. Without the pressure of grazing, the reserves are allowed to rehabilitate back to the degree of diversity that existed prior to European settlement. The Southern Mallee Project encompasses the Buronga, Pooncarie and Balranald areas. Up to September 2003, 22 properties have been assessed and granted consents to develop 37,550ha. To offset this clearing 100,000ha have been placed in Private Reserves. The reserves are for perpetuity and will remain private reserves even if the property changes landholders³'.*

The following section details considerations and recommendations relevant to particular developments on pastoral lands.

2.1 Land clearing on pastoral lands

Broad-scale land clearing is widely recognised as the greatest threat to Australian biodiversity¹ and land clearing is recognised as a Key Threatening Process under the Commonwealth's EPBC Act. Whilst it can be argued that the total amount of land subject to clearance in the NT is relatively low, it is clear that rates of land clearing in the NT are increasing, whilst they are remaining static or decreasing in all other jurisdictions in Australia. Also, in the view of WWF *"the least stringent land clearing controls are in Tasmania, W.A, NT and ACT⁴"*.

³ Rangeland Management Action Plan website <<http://www.rangelandmap.org.au>> accessed 23/2/05

⁴ *Small Steps for Nature, A review of progress towards the National Objectives and Targets for Biodiversity Conservation 2001-2005*. WWF Australia and Humane Society International, Sydney, August 2004.

The recently revised guidelines for clearing pastoral land published by the PLB are welcomed by WWF, in particular the public notification and submissions processes and the availability of a register of determinations to be available for public viewing. Aligning land clearing guidelines for leasehold lands with those for freehold land is also welcomed. The recently introduced requirement for a PMP to accompany land clearing applications is also a positive step, however the standard of the PMP required is considered by WWF to be insufficient to address the scale of environmental impacts associated with clearing. PMP's are discussed in detail in section 3.

The scale of some recent land clearing applications on leasehold land (eg. application to clear 81.5 km² of native vegetation on Moroak Pastoral Lease in 2003) necessitates that pastoral land clearing be considered using a similarly robust assessment process required for development proposals within other major industries. WWF recommends the introduction of an Environmental Impact Assessment (EIA) process for all major development proposals on pastoral lands and that they are accompanied by an accredited PMP (refer to section 3 on PMP). It is unjustifiable from an ESD perspective to continue the current practice of having applications for the clearance of native vegetation from large tracts of publicly-owned land assessed by the PLB, with the majority of information being supplied by the applicant in the form of a brief, non-consultative, non-accredited PMP. For small-scale developments, an accredited PMP may only be required.

WWF also recommends the development and implementation of robust compliance monitoring procedures for all developments.

2.2 The use of introduced pasture species in relation to their potential invasiveness

Australian, State and Territory Governments have traditionally taken a reactive approach to weed and invasive animal problems, waiting until they became widespread and costly before acting. The major weakness in the current NT response to invasive species is the lack of preventative measures to ensure that weeds (both listed and unlisted plants with invasive potential) and pests do not enter, nor are deliberately spread within, the NT. Prevention rather than cure is the most effective and cheapest way to control the growing threat of weeds and pest animals on the Territory's biodiversity assets and production potential of lands. Under present NT legislation, introduced pastures can be sown on the pastoral estate with minimal consideration of the potential biodiversity impacts resulting from the spread of these introduced species into new locations.

WWF recommends that a thorough risk assessment of all introduced pasture species already in use or flagged for future use in the NT is undertaken to evaluate their invasive potential prior to any further approvals for "pasture improvement" or conversion (or augmentation) of native pastures. Furthermore, WWF recommends that all species identified as having a "moderate" or "high" invasive potential are banned from deliberate use within the pastoral estate (this includes all new sowings of existing introduced species) or elsewhere in the NT, and that measures are introduced to minimise the risk of accidental spread of species with invasive potential already established on pastoral lands.

The problems associated with introduced pasture 'escapees' are well documented. The text below is taken directly from a WA Pastoral Industry Working Group report⁵.

"Inappropriate plant introductions have the potential to damage the rangeland environment. Lonsdale (1994)⁶ found that of 463 exotic pasture species introduced to northern Australia only 21 became useful, with only four of those being useful without also being a weed. Forty eight (48) species became weeds with no recorded use. He found that a good persistent pasture plant was more likely to become weeds than plants that performed poorly in field trials. In the Northern Territory there is some now resistance to pasture improvement as some of the species introduced have become weeds that have affected biodiversity (Buffel Grass) in the arid rangelands or have been found to be unpalatable to cattle (Gamba Grass). A higher production of unpalatable grass may also add to the fuel load and lead to potential wildfire in the dry season".

WWF recommends the immediate introduction protocols for the use and management of introduced pasture plants on the pastoral estate and the introduction of bonds/insurance to insure introduced pastures do not escape onto adjacent lands.

2.3 Managing the proliferation of artificial watering points

WWF supports all points raised in the issues paper² in relation to the topic of artificial watering points (AWPs: Issue 42). The proliferation of AWPs in the rangelands is considered to be a Key Threatening Process for biodiversity because of the sensitivity of some native plant and animal species to disturbance pressures associated with AWPs^{7 8 9}. This issue is of particular relevance in the NT as there are conflicting positions even within NT government agencies - DBIRD promotes expansion of AWPs through its *Water Enhancement Scheme*, whilst DIPE (in addition to CSIRO) has reservations about likely biodiversity impacts of AWPs proliferation.

WWF recommends that a requirement for the development of all new waters to undergo a rigorous assessment process be inserted into the PLA or is stated as a function of a reconfigured PLB or Pastoral Development Assessment Authority. WWF recommends that recommendations from CSIRO's Biograzing project be the basis for assessing all applications for new AWPs under the revised development assessment process discussed above.

As an alternative to assessing each AWP development on an application by application basis, WWF recommends the evaluation and mapping of all water-remote lands currently existing on the pastoral estate. Overlaying these data with spatial data on areas of conservation significance and low grazing resilience could produce a map

⁵ Pastoral Industry Working Group 2003, Pastoralism for Sustainability, Report to the Minister for Planning and Infrastructure from the Pastoralism for Sustainability Pastoral Industry Working Group Western Australia.

⁶ Lonsdale, W.M. 1994. Inviting Trouble: Introduced pasture species in northern Australia. *Australian Journal of Ecology* **19**. 345-354.

⁷ James CD, Landsberg J and Morton SR 1999, Provision of watering points in the Australian arid zone: a review of effects on biota. *Journal of Arid Environments* **41**, 87-121.

⁸ Landsberg J, James CD, Morton SR, Hobbs T, Stol J, Drew A and Tongway H (1997) *The effects of artificial sources of water on rangeland biodiversity*. Environment Australia and CSIRO, Canberra.

⁹ Biograzing (2000) *Biograzing: Waterpoints and Wildlife*. CSIRO, Alice Springs 13pp.

that shows critical areas for which no additional AWP development should be allowed. These areas would also be required be managed appropriately through measures identified in PMPs. This preferred model would provide a regional assessment of current and future AWPs, rather than a resource intensive property by property approach (or no assessment as currently is the situation).

WWF recommends that a minimum legislative requirement of 5-10% of 'water-remote' lands be implemented for all pastoral properties in the NT and that this specification is a requirement for PMPs to meet accreditation criteria or for any new developments to be approved. The figure of 5-10% is taken from Biograz⁹ data, where CSIRO recommends 10% of total area is 'water-remote' (lightly grazed or ungrazed) land for sensitive landscapes and habitats, and 5% is 'water-remote' in more grazing resilient habitats. The assessment of condition of these water-remote lands should be incorporated into improved monitoring systems for NT pastoral lands.

Discussions on development assessment requirements for proposed new AWPs are advanced in other jurisdictions. For example in S.A, the Department of Water, Land and Biodiversity have draft documents (that are still being discussed with relevant stakeholders) that outline possible future policy directions. At present, the policy statement is that *'The installation of new waterpoints in unwatered (ungrazed) country will be determined in accordance with an approved Water Point Development Plan or, in the absence of an authorised plan, by application on a case-by-case basis. Applications will be assessed against three criteria of Rangeland Management Principles, Water Resource Management Principles, and Native Vegetation Conservation. Approval will be conditional on adequate demonstration of significant environmental gain'* (not referenced as currently only draft discussion document used for internal purposes).

In addition to the above, the draft discussion document states that Rangeland Management Principles include to *'locate water where maximum landscape resilience to imposed Grazing regime is likely'*. Water Resource Management Principles include to *'preserve "Natural" wetlands (inc. mound springs and natural waterholes etc.)'* and to *'preserve natural flow regime of surface water catchment systems'*. Under Native Vegetation Conservation Principles, principles include *'consideration is given to the conservation of threatened, rare and vulnerable species or communities containing threatened, rare and vulnerable species'*. The definition of a 'significant environmental gain' (a condition of approval for any new AWP) is *'A significant environmental gain will be achieved by satisfying Regional Conservation Area Targets, ensuring that sound pastoral practices and sustainable stocking rates are adhered to and approved Management Plans that prevent further land clearance and protect Conservation Areas'*. WWF recommends that the NT follows the lead of S.A in developing a policy for the placement of AWPs (note: SA's policy is still in development stages).

2.4 Diversification and intensification of land use on pastoral lands

WWF's view is that diversification of land use based on ESD principles is potentially a preferred alternative to cattle grazing on pastoral lands, provided certain safeguards are in place (outlined in point 5. section 2, and below).

Such potential diversification of land use is only supported if it does not contribute to land degradation or biodiversity decline, nor prop up unsustainable grazing operations on marginal, degraded or high conservation value land. Diversification must be managed to attain a net improvement in natural resource condition and ecological function through restricting inappropriate types and scales of development, and through increased investment in improved management of biodiversity values over the whole lease. The WA Pastoral Industry Working Group identified that *'In many cases, the diversification is as a result of falling viability of the pastoral lease'*¹⁰. In all considerations of proposals for diversification of pastoral lands WWF recommends that assessments use triple bottom line criteria that take into account the costs and benefits to the environmental values as well as the economic values of the entire lease holding.

WWF recognises that diversification of leasehold land may assist a leasehold operation's viability. If development rights are to be increased on public land this needs to be accompanied by increased environmental management responsibilities.

WWF supports diversification on pastoral leasehold in the NT provided that:

- Guidelines are developed and implemented (in consultation with all stakeholders) that are based on ESD principles, and that specify both acceptable and unacceptable non-pastoral uses of leasehold lands. These guidelines would form the basis of criteria against which all diversification proposals are assessed as part of the Pastoral Development Assessment process (discussed in the preceding section). These guidelines and the assessment process would replace the present system where the PLB and the NT Minister for Lands and Planning have discretionary decision-making powers;
- Rigorous monitoring programs are put in place to detect changes in biodiversity values on pastoral lands subject to diversification of land use. One possible mechanism to ensure retention of biodiversity values is the introduction of a 'rolling permit' system, where a lessee receives a permit for non-pastoral use for a fixed term (eg. 5 years), which can then be extended if monitoring data show no decline in biodiversity values;
- An agreement is entered into (with insurance bonds, agreed thresholds and targets) with the lessee that the land that pastoral activities are discontinued on is managed to control the spread of weeds, feral animals and wildfire;
- A rental formula for non-pastoral uses is developed, taking into account the public benefit of some non-pastoral uses; and
- A requirement that all diversification projects on the pastoral estate are only approved if the development results in a net conservation benefit (described in Section 2).

WWF strongly advocates that biodiversity conservation is recognised as a legitimate land use on leasehold land and that provisions for this land use are included in the revised PLA.

¹⁰ Pastoral Industry Working Group 2003, *Alternative models of land tenure, Report to the Minister for Planning and Infrastructure from the Alternative models of land tenure* Pastoral Industry Working Group, Western Australia.

3. Accredited Property Management Plans for all NT Pastoral Leases

The concept of an Environmental Management Plan is raised in the issues paper². WWF supports the majority of points raised in relation to EMP in the issues paper, with an amended point 5 to read:

“After 2008, NHT or other public funding should only be available upon completion of a certified EMP or to assist in the formulation of an EMP”.

It is likely to be more acceptable to land managers if best practise EMP/PMP guidelines are developed with all stakeholders and an acceptable accreditation process is defined (discussed below), rather than having EMPs and PMPs being open to public comment prior to accreditation (fourth point on page 24, Issue 23, issues paper².)

To avoid confusion and duplication, throughout this submission we use the term PMP for both PMPs and EMPs.

WWF believes that a revamped and more rigorous PMP process will be a key component of ecologically sustainable management of the pastoral estate in the NT. The three issues that are pivotal to effective PMP are the components/guidelines of a PMP, the accreditation/assessment process, and how to insure adequate uptake across the pastoral estate. These are discussed below.

3.1 PMP guidelines and components

To be an effective tool PMPs need to address issues of productive capacity and ecological protection equally well, and be underpinned by planning for drought conditions rather than planning for the odd ideal season (particularly relevant in central Australia).

Crucial management issues such as the total number, location and operation of watering points; total grazing pressure; drought planning, feral animal and weed control, fire management, and wetland and riparian protection will also need to be covered in a standardised PMP. However, management measures will need to be tailored so PMPs are appropriately adapted to the specific ecosystem requirements of the property. WWF strongly recommends that the NT (through the PLB and other stakeholders) develop guidelines so that minimum acceptable standards for PMPs can be set and WWF would welcome an opportunity to be involved in this process.

As a guide, an effective PMP should include the following (taken directly from the *Qld Draft state rural leasehold land strategy*¹¹);

- **Definition of existing resource condition**—which will be used as a benchmark for measuring change.
- **Identification of issues affecting the property and its resources**— including natural and/or cultural heritage values and regional planning objectives.

¹¹ Department of Natural Resources & Mines (2003) *Draft State Rural Leasehold Land Strategy*. Queensland Government, March 2003.

- **Inclusion of management strategies and plans of action**— involving consideration of best management practices, codes of practice, regional plans, etc.
- **Inclusion of measurable performance targets**—including desired resource condition and indicators.
- **Development of an appropriate monitoring, auditing and reporting program.**
- **Identification of, and reporting on, the status of any measures or approved, predefined activities that qualified the rolling lease for upgrade or top up**— that is, activities that have been undertaken to protect environmental values (on-farm conservation), to recognise native title interests, and/or as part of ongoing environmental performance.
- **Where relevant, a P(R)MP should take into account regional/catchment natural resource plans, as well as relevant state policies, industry codes of practice and best management practices.**

In addition to the above, WWF also recommends the following points to be included for developing guidelines for PMPs:

- Property scale targets linked to catchment and bioregional targets and that these be tailored to the *resilience* of the property and its ecosystems to grazing. Targets need to be set based on drought conditions so that resources are not over-exploited or degraded because of overstocking in good seasons;
- Standardised robust biodiversity monitoring programs implemented to detect trends in condition of key habitats (threatened species refuge areas, rare vegetation communities, wetlands and riparian systems).

Refer to¹² for another example of standard minimum requirements for PMPs.

The current standard of PMPs required to accompany an application for land clearing on a pastoral lease in the NT is significantly inferior to the examples provided above. In addition, the current PMP requirements are also inferior to those that were being used to develop PMPs in the NT between 1995-2001 when DBIRD was delivering the national PMP framework (under *FarmSmart*). For example, in the PMP accompanying the land clearing application for Bunda Station (PPL 1027 - closing date for submissions 4/2/05) there is no requirement for the developer to include any measurable performance targets or to monitor the development's impact on any elements of the environment (nor report back to the PLB). The developer is also not required to consult with any relevant department or interested party (in contrast to this, in SA a PMP must be written in consultation with the soil conservation authority (see section 41, the SA S.A Pastoral Land Management and Conservation Act 1989, where PMPs are also approved and accredited by the SA PLB) Although the SA model in the view of WWF is not ideal as there should also be the requirement to consult with other relevant departments/authorities, it is at least an improvement on current NT requirements.

Presently in the NT, PMPs are also required to be submitted to DBIRD for financial assistance under the Water Enhancement Scheme for establishing artificial water sources. WWF is unable to comment on the standard of PMPs submitted under the Water Enhancement Scheme, as these are not publicly available.

¹² Department of Primary Industries, *Environmental Best Management Practise of Farms – Workbook 1 – farm self assessment sheets*. Victorian Government.

WWF recommends, as a matter of urgency, that best practice PMP guidelines are developed (with all interested stakeholder involvement) for the NT. WWF would welcome an opportunity to be involved in developing these guidelines.

3.2 PMP accreditation process

In addition to the development of PMP guidelines for the NT, WWF recommends that there is an accreditation process for PMPs. WWF recommends that PMPs should be accredited by a small panel comprising representatives from a major pastoral landcare group, NTCA, MLA and DIPE CNR, using agreed minimum criteria to guide the accreditation process.

3.3 PMP development timeframes and uptake

For PMPs to be effective it is crucial that good uptake and implementation is achieved. One way to encourage uptake is through the provision of incentives, such as rental subsidy for properties with an accredited PMP.

Gradual and targeted implementation of PMPs would allow for resources (government, extension officers, PLB) to be spread over time, and allow key areas to be targeted (eg. areas of high conservation value or low grazing resilience) and may possibly guard against widespread resistance which may result if an across-the-board implementation was attempted in a short time frame.

In Qld, financial assistance towards the cost of training in property planning is available from the Queensland Rural Adjustment Authority (QRAA) under the *FarmBis* Program and assistance in the form of information on mapping products is available via the Department of Natural Resources and Mines¹³. NSW has also recently begun reintroducing the *FarmBis* program. Between 1995-2001 DBIRD in the NT had a similar PMP delivery program operating under *FarmSmart*. WWF recommends that the NT Government and the PLB re-establish the PMP delivery program that was previously operating in the NT.

WWF recommends that best practise, robust, PMP guidelines are developed for the NT and that all properties are required to submit an accredited PMP (developed with relevant land and conservation authorities including Biodiversity Services) to the PLB within a designated time frame (staged over a number of years and prioritised for where pressures are the greatest).

Any properties submitting applications for any development should be required to submit an accredited PMP irrespective of the above prioritisation.

¹³ Qld Natural Resources and Mines 2003, *Property Resource Management Planning, Guidelines for Landholders, Land Management and Use*, Brisbane.

4. Developing Measures and Incentives for Improved Biodiversity Conservation Outcomes on Pastoral Lands

4.1 Biodiversity on the leasehold estate

The NT is fortunate in that it is still in a position to maintain significant amounts of the biodiversity in low-intensity land use areas. Most of the highest biodiversity areas in the NT occur outside of the pastoral estate, either within reserved lands or on Aboriginal lands in the Top End, but there are significant areas of considerable conservation significance also included within the pastoral estate. WWF recognises that there will always be some impacts to biodiversity on lands under pastoral production, but that in well managed operations these impacts are likely to be considerably less than in lands subject to more intensive resource use. Key biodiversity threats that need addressing within the pastoral industry are species loss attributable to land clearing, sustained grazing pressure impacts on ecosystems and species with low resilience to grazing, loss of species and ecosystem function through the conversion of native understorey to introduced pastures, the proliferation of artificial watering points, and the impacts of fire exclusion on certain fire-adapted vegetation communities.

In order to improve biodiversity conservation on the pastoral estate WWF believes it is more effective in the long-term to provide landholders with incentives to improve their management, than to legislate against certain practices.

WWF believes that a primary objective of the PLA should be to maintain biodiversity across the entire pastoral estate. For the pastoral industry, biodiversity conservation also has benefits as it '*...provides important services on which the pastoral industry depends. Across most of the Territory, the pastoral industry is dependent upon the stability and productivity of native pastures and also on maintaining water quality, preventing erosion, providing shade and timber, controlling insect pests and protecting soils...*'¹⁴

Appropriate management of the pastoral estate is also critical in order to conserve certain aspects of NT biodiversity. The pastoral estate contains ecosystems that are poorly represented in the formal reserve system or that support areas of high conservation value such as wetlands, riparian areas, sandstone heath communities and rainforest patches.¹⁵

WWF recommends that the theoretical basis of the PLA focuses on conservation of biological resources, rather than on those resources of direct economic relevance for pastoral enterprise (the SA Act is an example of this approach¹⁶). At present in the NT '*land administration is focused on conservation of the base resource for pastoral*

¹⁴ DIPE 2004, *Biodiversity Conservation and the Pastoral Industry*. The Northern Territory Parks and Conservation Masterplan, Issues Paper.

¹⁵ Refer to DIPE 2004, *Biodiversity Conservation and the Pastoral Industry*. The Northern Territory Parks and Conservation Masterplan, Issues Paper.

¹⁶ Australian Natural Resource Atlas website – Rangeland monitoring, accessed 18/2/05.

<http://audit.ea.gov.au/ANRA/rangelands/rangelands_frame.cfm?region_type=AUS®ion_code=AUS&info=monitoring>

purposes¹⁶. The lease conditions in the PLA do not include the need to manage for biodiversity and this should be amended in the revised PLA

WWF recommends that the objects of the PLA be expanded to include the term ecologically sustainable development. Below is an example of this used in another jurisdiction.

N.S.W Western Lands Act 1901 No 70

2. Objects of Act

The objects of this Act are as follows:

(e) to ensure that land in the Western Division is used in accordance with the principles of ecologically sustainable development referred to in section 6 (2) of the *Protection of the Environment Administration Act 1991*,

(f) to promote the social, economic and environmental interests of the Western Division.

4.2 Formal conservation reserves

The NT Government became a signatory to *'The National Strategy for the Conservation of Australia's Biological Diversity'* in 1997. An agreed national goal of the strategy is to *"Establish and manage a comprehensive, adequate and representative system of protected areas covering Australia's biological diversity."* In general, the agreed target was for 10-15% of each jurisdiction represented in the formal reserve system, including samples of all ecosystems across all bioregions as well as incorporating the special needs of rare or threatened species/communities and migratory species.

Currently, 3.7% of the NT is in formal conservation reserves. This is the lowest proportional area for all jurisdictions in Australia¹⁷. WWF recommends that the function of the PLB be expanded to include working collaboratively with pastoralists, government and non-government organisations to identify opportunities for land to be included in the formal reserves system. WWF recommends, as a first step, assessing 'uneconomic areas of crown-land' (section 65. NT Pastoral Land Act) and current 'water-remote' lands for their conservation value.

4.3 Off-reserve high conservation value areas

WWF supports all of the issues raised in the issues paper² in relation to protection of areas of high conservation value, rivers, wetlands, coasts and threatened species.

In addition to these points, the PLA and the PLB needs to integrate and align with targets and commitments to the National Water Initiative (NWI), to which the NT is party. The NWI commits the NT to a broad range of planning, institutional, monitoring and environmental reforms. In particular, the NWI requires the NT to develop an implementation program by June 2005, and achieve substantial progress towards implementing the NWI Inter Governmental Agreement by 2010 (NWI Inter Governmental Agreement, Schedule 3). In relation to the requirement to identify,

¹⁷ DIPE 2004, Appendices, Supplementary information for the Draft Integrated Natural Resource Management Plan for the Northern Territory

protect and enhance aquatic ecosystems of high conservation value pursuant to the NWI, two clauses are particularly relevant:

- The Parties agree that, once initiated, their *water access entitlements* and planning frameworks will...identify and acknowledge surface and ground water systems of high conservation values, and manage these systems to protect and enhance those values (Clause 25 x)
- Recognising the different types of surface water and ground water systems, in particular the varying nature and intensity of resource use, and recognising the requirements to identify *environmental and other public benefit outcomes* in water plans, and describe the water management arrangements necessary to meet those outcomes (paragraph 35.ii)), the States and Territories agree to... establish effective and efficient management and institutional arrangements to ensure the achievement of the *environmental and other public benefit outcomes*, including...any special requirements needed for the environmental values and water management arrangements necessary to sustain high conservation value rivers, reaches and ground water areas (Clause 79 1f);

The concept of wise use of wetlands is strongly supported internationally in the Ramsar Convention on Wetlands of International Significance, to which Australia and WWF International are signatories. WWF advocates for the “wise use” concept to be included in conservation agreements negotiated for high conservation value wetlands and riparian areas occurring on pastoral lands.

Protection of high conservation value areas can be achieved in a number of ways. WWF recommends protection of these areas through incorporation into the national reserve system, and/or through protected area agreements such as Ramsar listing, IPA declaration or through binding conservation management agreements placed on the conditions of the leases. Some of these measures are expanded on in the following sections.

4.3.1 Off-reserve conservation: incentives, conservation agreements and other measures

Why encourage off-reserve conservation?

It is widely accepted that the implementation of off-reserve conservation measures is vital for the conservation of biodiversity across the NT. Stafford Smith *et al* (2000)¹⁸ argue that, from a self-interested economic perspective, it is irrational for pastoralists to plan for sustainability in the distant future. Short to medium term profits are managed for, and in less resilient areas of the pastoral estate degradation continues to occur. In order to break this pattern there has to be some economic reward for practices that ensure the long-term ecological sustainability of leasehold lands. WWF recommends introducing a range of incentive and stewardship measures to achieve ecologically sustainability on NT pastoral lands. The introduction of a stewardship/incentive scheme is particularly relevant to the NT because:

¹⁸ Stafford Smith, D.M., Morton, S.R and Ash, A.J. 2000. Towards sustainable pastoralism in Australia's rangelands. *Australian Journal of Environmental Management*. 7:190-203.

- 1) Currently, the Territory's formal conservation system comprises the lowest proportional area and is probably the least representative and adequate of all Australian States¹⁹.
- 2) A number of threatened species are found only on pastoral land, for example, the Carpentarian rock-rat only occurs in the wild on Wollogorang Station.
- 3) There is no mechanism under NT legislation for effectively encouraging or providing incentives for good land management performance. The only available mechanisms, Sections 73 and 74 of the *Territory Parks and Wildlife Conservation Act*, to date have resulted in only three formal conservation agreements.
- 4) Other jurisdictions already have numerous effective incentive schemes and off-reserve conservation measures in place that the NT can learn from²⁰.

This view of encouraging and facilitating incentive schemes is not held by WWF alone. The following text is taken directly from the WA Pastoral Industry Working Group⁵:

A key issue for the future will be to encourage and enhance private biodiversity conservation initiatives in the rangelands and for these to be incorporated into the productive pastoral lease system.

Off-reserve conservation areas can clearly become effective elements of biodiversity conservation, complementary to the formal conservation reserve system. In order to be truly effective, it will however, be necessary for such areas to be formally recognised to have adequate long-term surety, and be managed adequately. Otherwise, the good work of one lessee could be undone by a later lessee that does not share the same views. Formal legal protection of such private conservation initiatives is becoming increasingly important in this regard.

The working Group then makes the recommendation of (Recommendation 15, pg. 9):

We recommend that Government develops, as soon as possible, appropriate legal and tenure arrangements for the management of whole or part pastoral leases for biodiversity conservation purposes.

The primary aim of incentive/stewardship schemes is for the conservation of biodiversity, not the subsidisation of otherwise non-viable enterprises. Different measures are likely to be needed for different situations.

WWF recommends that a number of incentive measures that cover the different environmental and economic situations across the Territory are incorporated into the revised PLA. WWF recommends, as a priority before the PLA review is finalised, that the PLB, NT Government and other interested stakeholders undertake a critical evaluation of all available incentive options in other jurisdictions for their effectiveness and uptake, and make recommendations for models for use in the NT.

¹⁹ DIPE 2004, *Territory Parks System*. The Northern Territory Parks and Conservation Masterplan, Issues Paper.

²⁰ For example, refer to: Department of Environment, Department of Conservation and Land Management, Department of Agriculture WA, National Trust of Australia (WA), World Wide Fund for Nature, and Greening Australia WA, 2004. *Biodiversity Incentive Programs in Western Australia: A guide for facilitators and co-ordinators of natural resource management to assist landholders with biodiversity conservation on private land*

Pastoralists can view conservation agreements and incentive measures as a potential alternative income source, that can help to reduce variability of income and in some cases can actually raise profit levels. A further benefit to pastoralists adopting conservation management approaches is the potential for some form of biodiversity accreditation to allow better access to markets for products from certified properties²¹. The development of industry accreditation standards could eventually provide market incentives for pastoralists to undertake BMP.

Types of incentives schemes

A broad range of incentive schemes is required to cover all situations – there are many different models already operating in other jurisdictions. West 2000 Plus is an initiative currently operating in the pastoral regions of western NSW. Established in 1997, the program is a \$12 million rural recovery program, with \$3.85 million earmarked for natural resource management initiatives. It involves a partnership between the landholders of the Western Division, the NSW Government and the Australian Government Department of Agriculture, Fisheries and Forestry. Rather than advocating destocking of properties, the program is based on achieving positive conservation outcomes through active and adaptive management. The successful completion of agreed conservation-based management activities form the basis of landholders receiving a series of annual payments (refer to ²²). An evaluation in 2001 showed that the majority of landholders perceived positive economic and environmental benefits from the program, although grants could have been targeted better to promote regional outcomes rather than individual benefits²³.

Other direct economic reward systems that could be investigated for the NT are payments for provision of ecosystem services, in the form of an annual payment per hectare, a one-off payment based on market value of land, or a stewardship salary based on NT Parks and Wildlife Ranger rates for pastoral areas of high conservation significance. The Productivity Commission ²⁴ report into biodiversity regulations recommends that governments buy conservation services from landholders, ‘...preferably through voluntary transactions such as negotiated contracts or auctions.’ In an auction model a landholder bids for the provision of environmental services through conservation-based management of the natural resources on their properties. The governing body for the auction system then selects the bids likely to deliver the best environmental benefit and provides negotiated payment or rent-relief in exchange for these services. Contracts to provide environmental services are already being successfully used in Australia. WWF recommends that the NT adopts the ‘Bush Tender’ model that is currently being used successfully in Victoria.

Western Australia has embraced a very broad spectrum of tools to encourage off-reserve conservation¹⁶. Financial assistance is provided to landholders to preserve or manage bushland through either grants or subsidies, or reductions in taxes, local rates or other charges.

²¹ Binning, C, and Young, M D, 1997. Motivating people: using management agreements to conserve remnant vegetation. Paper 1/97. Bushcare and LWRRDC, Canberra

²² West 2000 plus website <<http://www.west2000plus.org.au>>

²³ URS Australia 2001. *The West 2000 Rural Partnership Program: an independent evaluation – final report, September 2001*, SA.

<http://www.west2000plus.org.au/Publications/View/WEST2000EvaluationSummary.rtf>

²⁴ Productivity Commission 2003. *Impacts of Native Vegetation and Biodiversity Regulations*, Draft Report, Commonwealth of Australia, Melbourne (pg. xxii).

Covenanting programs

Legal protection of land managed for conservation purposes is provided under the WA Department of Conservation and Land Management's covenant program. On application for a conservation covenant, the Department may offer landowners:

- up to \$500 to cover the owner's reasonable independent legal costs to check the covenant document;
- a contribution to fencing costs (up to \$1500 per kilometre where funding has not been sought from other funding sources); and
- a contribution toward other initial management costs to restore the land where past damage has occurred.

Since March 2000 Queensland has also implemented a statutory covenants program²⁵. Legislation was amended to allow statutory covenants to be registered on land titles for conservation purposes. Around 850 covenants have been entered into and registered by the Department of Natural Resources and Mines, although less than half have been for conservation purposes. In many instances where conservation has been the primary motivation for landholders, they have entered into agreements with a local government body.

In WWF's experience, the most important component of an incentive/covenanting scheme is the ability for the scheme to provide long term support or 'follow up'. The Victorian 'Trust for Nature' model, in the view of WWF, is the best currently operating in Australia as it does provide for extensive follow up for many years following the initial setting up of the covenant.

Other off-reserve conservation options

Revolving fund systems have also been set up to invest funds into properties with high conservation value. In this model a trust fund is set up to purchase high conservation value properties, place a covenant on the property title and then resell the property to raise funds for another purchase²⁶. A working example of this in Australia is The Trust for Nature (Victoria), a statutory authority established by the Victorian government in 1972 (see <http://www.tfn.org.au/>). Since then it has achieved 368 covenants and protected over 15,500 hectares. In 2001 New South Wales, following the Victorian model, set up a Nature Conservation Trust. In 2003 it received \$1 million of NHT funding, which was matched by \$1 million from the NSW Government, to go towards the revolving fund.

A new model for protecting fragmented ecosystems is called a Conservation Management Network²⁶. Whilst developed to protect the grassy ecosystems of south-eastern Australia where there are no suitable areas of sufficient size left to be reserved as a national park, the model could have application in Northern Australia with respect to the protection of remaining patches of monsoon vine forest, sandstone heath country or significant wetlands. Those landholders involved in the management network are able to share information, apply for funds and undertake biodiversity

²⁵ Statutory Covenants Working Group 2003. *Statutory covenants: guidelines for their use in Queensland*.

²⁶ Figgis, P. 2003. The changing face of nature conservation: Reflections on the Australian experience. In Adams, W. & Mulligan, M. (eds) *Decolonizing Nature: strategies for conservation in a post-colonial era*, Earthscan, London, pp.197-219.

protection initiatives as a group, provided that they have agreed to give their remnant patch some form of long-term protective status. An example in NSW is the Monaro Grasslands Conservation Management Network, which WWF helped to establish in 2003²⁷.

WWF recommends that the PLA is amended to include a range of measures aimed at improving conservation outcomes on the pastoral estate, and that the PLB facilitates a review of potential options for off-reserve conservation on pastoral land in the NT drawing on existing programs in other Australian jurisdictions.

4.3.2 Managing leases primarily for biodiversity conservation

A further mechanism for off-reserve conservation is the purchase of pastoral land by private conservation interests such as the Australian Bush Heritage Fund, the Australian Wildlife Conservancy and Birds Australia. There is only one instance of this in the NT - Birds Australia has leasehold rights over the 262,000 hectare Newhaven Station north-west of Alice Springs. Elsewhere, the Australian Bush Heritage Fund, funded mainly through public donations, has purchased 16 reserves covering over 345,000 hectares of land (see <http://www.bushheritage.org>). However, it has purchased only one area of land in Northern Australia, a patch of tropical rainforest in North Queensland, and none as yet in the NT. The Australian Wildlife Conservancy has protected 450,000 hectares of bush in various locations in Western Australia including important Gouldian Finch habitat in the Kimberley region (<http://www.australianwildlife.org>). These organisations should be encouraged to invest in the NT, and any obstacles in the PLA to managing pastoral lands primarily for conservation purposes removed from the Act.

WWF recommends an amendment to the PLA to encourage and facilitate property acquisitions by non-government conservation organisations by declaring 'biodiversity conservation' an acceptable non-pastoral use. WWF also recommends that the rent for a pastoral lease when being used for 'biodiversity conservation' (a 'public-good' use) is reduced to zero.

4.4 Management of fire on the pastoral estate

The issue of fire is absent from the current PLA. Fire is an important ecological process. Changed fire regimes is recognised as the most common threatening process for threatened species in 15 sub-bioregions within (or partly within) the Northern Territory¹.

WWF strongly recommends the revised PLA should (taken from the issues paper²):

- Include a specific statement about the responsibility of lessees to manage fire on their lease for both production and environmental goals;
- Include a specific statement about the obligation of lessees not to implement fire regimes that cause unnecessary environmental damage;
- Require lessees to include consideration of fire management in the EMP/PMP for their property.

²⁷ See: http://www.wwf.org.au/News_and_information/News_room/viewnews.php?news_id=27 (accessed 20/6/04).

WWF also recommends that the PLB plays a greater role in advocating the establishment of environmentally sustainable fire regimes across the pastoral estate. This could be achieved by developing incentive packages that encourage pastoralists to manage fire for biodiversity outcomes, not just production or infrastructure protection goals.

WWF also supports the point in the Issues paper that states that *'it may be appropriate for the PLB to have a formal role in working with the Bushfires Council and Regional Bushfires Committees to develop regional fire management plans that take into account production, environmental and safety considerations'*.

There are numerous examples of fire management tools and models available, the Kimberley Regional Fire Management Project brings all stakeholders around the table to plan fire management at a regional level. The recently introduced fire-fax technology by DOLA gives pastoralists advance warning of approaching fires. The Northern Australia Fire Initiative website allows access to fire scar mapping to help plan more effective fire management. The TS CRC have a current regional competitive project that is attempting to bring biodiversity data into fire management planning. The PLB should play a more formal role in educating land managers about these tools, and should work with all stakeholders in regards to regional fire management planning using some of the above tools.

5. The Pastoral Land Board: powers, functions, and composition

5.1 Composition of the PLB

WWF recommends expanding the PLB membership to incorporate a more diverse range of stakeholders with interests and expertise in NRM outcomes on pastoral lands (particularly bringing in more significant biodiversity conservation and indigenous representation). The PLB (or equivalent) in other jurisdictions already include either NGO or Indigenous representatives, examples are given below.

W.A Land Administration Act 1997

Division 2 - The Pastoral Lands Board

97. Constitution of the Board

- (1) The Board consists of a chairperson appointed by the Minister and 7 other members, of whom —
- (d) one is to be appointed by the Minister from among persons with expertise in the field of flora, fauna or land conservation management; and
- (e) one is to be appointed by the Minister from among Aboriginal persons with experience in pastoral leases.

S.A Pastoral Land Management and Conservation Act 1989

12—Establishment of the Pastoral Board

- (2) The Board consists of 6 members appointed by the Governor, of whom—
 - (f) one will be selected by the Minister from a list of 3 persons submitted by the Conservation Council of South Australia Inc. (*a non-government conservation organisation*)
- (3) At least one member must be a woman and one a man.

N.S.W Western Lands Act 1901 No 70

8B Western Lands Advisory Council

(1) There is to be a Western Lands Advisory Council.

(2) The Western Lands Advisory Council is to have 14 members appointed by the Minister, and of whom:

(c) two are to be appointed to represent the interests of Aboriginal people, of whom one is to be appointed on the nomination of the New South Wales Aboriginal Land Council

(d) one is to be appointed on the nomination of the Nature Conservation Council of New South Wales to represent the interests of environment protection groups

5.2 Powers and functions of the PLB

WWF recommends that the functions of the PLB be expanded to include:

- Greater role in extension services. An example would be the PLB taking a lead role in distributing information about the CSRIO project *BioGraze*. This issue is of particular relevance in the NT as there are conflicting positions even within NT government agencies - DBIRD promotes expansion of AWP through its *Water Enhancement Scheme* (offering rebates up to \$10000 /yr) whilst DIPE has reservations about likely biodiversity impacts of AWP proliferation. Other examples would be for the PLB to disseminate information in relation to incentive schemes already available (eg, those provided under the *Income Tax Assessment Acts 1936 and 1997*) or to liaise with all stakeholder to develop NT appropriate incentive schemes.
- A formal role in working with all stakeholders in developing and implementing regional fire management plans.
- Assist in the development of accredited Property Management Plans
- Play an active role in initiating negotiations between conservation organisations (government or non-government) in relation to areas of high conservation value and potential conservation agreements.
- Developing policies and protocols (stakeholder inclusive) for pastoral issues in the NT (eg. management of introduced pasture).

WWF recommends that the development assessment duties of the board be transferred to a more appropriate body (eg. EPA or Pastoral Development Assessment Authority as identified in section 2).

5.3 Reporting and accountability of the PLB

Under the current PLA, the PLB is required to report to the Minister, not less than once a year, on the general condition of pastoral land and the operations of the Board. WWF recommends that a specific statement be inserted into the PLA that states that the PLB annual report will be made publicly available and easily accessible (eg. posted on the NT Government website). It is important that the PLB have auditable performance indicators by which its activities are measured and reported, and also that this is publicly available to allow public scrutiny of the effectiveness of Government policy and administration in this area. WWF recognises that in recent years the PLB annual report has been available to interested parties on request, therefore inserting the above statement should be acceptable to all parties.

6. Introducing Safe Carrying Capacity and Annual Stock Returns (Issue 16)

In the view of WWF, the current PLA relies more on monitoring to determine if degradation has already occurred, rather than being proactive in preventing degradation of the pastoral estate. WWF recommends that introducing a 'Safe Carrying Capacity' and the lodgment of annual stock returns would help in rectifying this, hence WWF supports all of the points raised in the issues paper² in regards to these two issues. Other jurisdictions in Australia have already incorporated SCC and Annual Stock Returns into their legislation (examples below). WWF recommends that SCC and Annual Stock Returns are done on a paddock scale, rather than the whole property scale.

W.A Land Administration Act 1997

111. Stocking of a pastoral lease

(1) The Board may from time to time determine the minimum and maximum numbers and the distribution of stock to be carried on land under a pastoral lease, based on its assessment of the sustainable carrying capacity of the land and having regard to seasonal factors, and the pastoral lessee must comply with such a determination.

113. Annual returns

(1) A pastoral lessee must, after 30 June in each year ("the return date") and not later than 31 December in that year, submit to the Board a return in an approved form of any information required by the Board relating to the land under the lease or the activities on the land.

(2) The return is to include —

(a) information as to stock numbers on the return date;

S.A Pastoral Land Management and Conservation Act 1989

22—Conditions of pastoral leases

(1) A pastoral lease will be granted subject to conditions and reservations providing for the following matters (but no others):

(b) land management conditions providing for—

(ii) the lessee's obligation to ensure that numbers of stock on the land or a particular part of the land do not exceed the maximum levels specified in the lease, except with the prior approval of the Board;

42—Verification of stock levels

(1) The lessee under a pastoral lease must, not later than 31 July in each year, furnish the Board with a statutory declaration as to stock levels on the pastoral land as at 30 June of that year.

7. Improving Monitoring of Pastoral Lands Condition and Trends (Issue 31)

For any program of natural resource management on leasehold land it is essential to have monitoring, reporting and compliance measures in place to ensure that the desired outcomes are being achieved. PMPs need to have robust standardised monitoring in place to ensure they are effective, and to allow for an effective adaptive management approach to improving targets and actions within these plans. A robust

monitoring program will also allow a leaseholder to demonstrate their performance to the wider community as well as demonstrating their compliance to government requirements. The recent 'Biodiversity Monitoring in the Rangelands' expert technical workshop identified nine reasons for implementing a biodiversity monitoring program in the rangelands, these being to²⁸:

- invoke management action;
- assess whether management actions work;
- improve ecosystem management;
- evaluate investment intended to improve biodiversity outcomes;
- increase formal and informal understanding of biodiversity-related processes;
- determine whether biodiversity targets have been achieved;
- involve communities;
- inform the public about biodiversity and its management;
- demonstrate achievement of compliance or accreditation standards.

Current land monitoring programs on leasehold land in the NT is a two-tiered monitoring program limited to monitoring pasture condition, with no monitoring of biodiversity components other than pasture species (there is no requirement in the PLA to monitor biodiversity). In addition to Tier 1 and Tier 2 monitoring, WWF recommends the addition of a robust biodiversity monitoring component into Tier 2, and the provision for a third-party auditing process to assess compliance and outcomes under the current model. This would bring current monitoring in line with that required for EMS certification under ISO 14000 standards, or in line with accreditation processes required for Marine Stewardship Council certification. A more rigorous, biodiversity-inclusive monitoring program on pastoral lands is also likely to assist with improved access to triple-bottom line driven markets.

WWF recommends that:

- The revised PLA should expand the scope of monitoring on the pastoral estate to encompass the nine core components for a biodiversity monitoring program as identified (as well as described, justified and procedures outlined) in Woinarski *et al.* 2000²⁹. The nine components are: Progress to a Comprehensive, Adequate and Representative reserve system, extent of clearing, landscape functionality, cover of native perennial grass / native perennial ground layer vegetation, exotic plant species cover, fire-sensitive plant species and communities, grazing-sensitive plants, susceptible mammals and susceptible birds. Many of the

²⁸ Smyth, A 2003, 'Introduction', in A Smyth, C James, G Whiteman, *Biodiversity Monitoring in the Rangelands: A way forward*, report to Environment Australia, vol. 1, Centre for Arid Zone Research, CSIRO Sustainable Ecosystems, Alice Springs, pp.1–10.

²⁹ John Woinarski, Rod Fensham, Peter Whitehead and Alaric Fisher, 2000, *Rangelands Monitoring: Developing an Analytical Framework for Monitoring Biodiversity in Australia's Rangelands. A manual for biodiversity monitoring*. A report to the National Land and Water Resource Audit by the Tropical Savannas CRC.

attributes of this proposed rangeland biodiversity monitoring program are consistent with elements of other, existing, monitoring programs (refer to ²⁷)

- The reconfigured PLB with expertise input should develop explicit guidelines for assessing condition of the above components;
- Reference areas (essentially control sites protected from grazing) should be established (identified in the PLA but not currently being implemented) within all vegetation types in each bioregion, that include 'water-remote' and non 'water-remote' areas.